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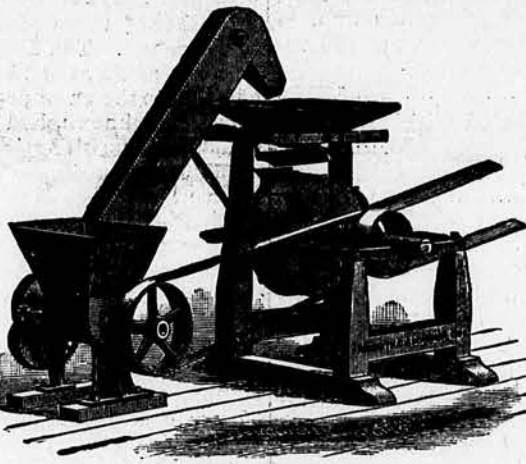
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Agricultural Matters.

CLIMATIC CONDITIONS, CROPS AND PRICES.

EDITOR KANSAS FARMER:—Notwithstanding the theory advanced at a recent farmers' institute, that the wheat crops of Kansas have deteriorated because of changes in both soil and climate, not a single fact beyond the meager character of the last three harvests was adduced in support of such an hypothesis. The change must have come with miraculous celerity, as the greatest crop, both in acre yields and in the aggregate, the State ever knew was probably that of 1892, while that of 1893 was about at the other extreme of the scale. The statement that the mechanical condition of the soil was at fault, and because it had long been in cultivation, is shown to be without foundation by the fact that wheat on sod land, on second sod, as well as on the oldest land, suffered alike in 1895. That the climate has not changed, appears altogether probable when we remember the droughts of 1860 and 1874, and other years, when neither wheat nor other grain grew in the State except in localities favored with local showers. A few years since the press attempted to "boom" the State by articles written expressly to show that breaking the sod and laying down a few bands of steel had so improved the climate as to carry the rain-belt to the Colorado line, where it came to a halt as sudden as suspicious. That theory was just as tenable as that propounded at Hutchinson.

Such masters of physical geography as Arnold Guyot and Elisee Reclus, show conclusively that climates change in a measurable manner only through the lapse of geologic ages; that they result from the combined influence of the relief (contour) of the continents, the proximity and extent of the ocean basins, and the incidence of atmospheric and ocean currents. It follows that unless we can move the oceans and the mountains, climates will remain stable over vast ages. The physicists lay it down as an axiomatic law that while meteorological conditions vary from day to day and from year to year, that observations made with unbroken regularity for nearly a century show permanent climatic stability. It is only needful to direct attention to the Nile valley. There the oldest of human monuments attest the stability of the climate, both of Egypt and of the equatorial regions of Africa; the rainfall in the African lake basins determining the volume of the deltaic harvests nearly 3,000 miles distant. But as such critics as Mr. J. M. Foy object to such distant examples, we need go no further than the nearest farm, as the crops of all Kansas depend upon the incidence of the atmospheric currents during the vernal season. These currents are the creatures of forces as constant as the oceans and the everlasting mountains.

While meteorological conditions vary widely, yet the variations are within well-defined limits, although they may include devastating floods on one hand, and destructive droughts on the other that end in the starvation of millions of human beings, as did the droughts of 1876-78 in India, and as may that now prevailing in that country. Usually it requires a succession of bad years to cause a destructive famine in India.

If the atmospheric current known as the "southwest monsoon," fails to bring the needed rains to the Gangetic plains and the southern slopes of the Himalayas, in September and October, the soil cannot be properly prepared and much of the seed sown perishes. That which germinates and makes a miserable start withers and dies as it is now doing in the Punjab, Oude and in the northwestern provinces. This region grows 45 per cent. of the wheat harvested in India; yet this year's Indian wheat crop covers, by reason of the failure of the monsoon, but three-fourths of the ordinary acreage, and promises the most meager harvest in thirty years. These facts are of importance to the Kansas farmer, as they show that he is, this year at least,

likely to have little or no competition from Indian wheat fields. And this because the atmospheric currents that first strike the western ghats have there been robbed of nearly all the moisture carried, and little has been deposited on the burning uplands of the Dekkan, the broad Gangetic plains and the slopes of the Himalayas. We are affected, because the rainfall affects directly the product from the dry farming of the plains of the Punjab, Oude, and the northwestern provinces, and determines the volume of water available for irrigation in the region of the five (Punjab) rivers. But then, the critics object to our looking so far afield for price-making factors, preferring to imitate the ostrich or the mole.

It is just 108 years since Capt. Arthur Phillip landed at Botany Bay, and, in the name of the British monarchy, took formal possession of the whole Australian continent. All except a narrow seaboard belt, averaging about 300 miles wide, has, through all time, been a waterless desert where comfortable human existence has been and still is impossible. Much of the littoral is of great fertility, the climate exceptionally salubrious, and both soil and climate of the southern third adapted to the growth of cereals.

Recent reports from Australia indicate that the drought of 1895 has not been equaled in forty years, if since the landing of Capt. Phillip in 1788. The result is that the wheat crop is, in acre yield, the smallest ever grown. This fact has a bearing upon the welfare of every wheat-grower in Kansas, as from 1880 to 1893, inclusive, exports of wheat from Australasia averaged about 9,800,000 bushels per annum. This considerable annual contribution to the importing world's supply must now give place to Australian imports of probably greater volume, as the requirements of that region—

For seed are about.....	5,500,000
For food about.....	27,500,000
Total requirements being about.....	33,000,000
Indicated colonial harvests are about as follows:	
Victoria.....	6,000,000
New South Wales.....	3,500,000
South Australia.....	6,000,000
Tasmania.....	900,000
Western Australia.....	100,000
Queensland.....	nil.
New Zealand.....	5,000,000—21,500,000

Indicated imports, less existing stocks 11,500,000
If Australia imports, because of crop failure, even 10,000,000 bushels, it will reduce the supplies ordinarily available by countries always importing in the measure of nearly 20,000,000 bushels. And this, not because of lacking *intensiveness* in culture, but because climatic conditions have been altogether *too intense*.

Again, notwithstanding the objections of those whose field of observation is confined to what comes under their visual organs, it may be well to look "to the ends of the earth," as that will enable us to see that the autumnal rains in Algeria and Tunis have been both late and meager, the result being, as in India, a reduction of the acreage, late sowing and an unfavorable seed-bed. Recent reports from that region portend an unsatisfactory harvest, the probability being that Algeria and Tunis will import wheat, instead of exporting about 4,000,000 bushels, as their exports have averaged since 1880. While the culture may not have been very *intense* or even ardent in those countries, yet meteorological conditions have there, as elsewhere, been the potent factors in reducing the output. In other words, there has been too much *intensiveness* of a certain kind, but of that kind which has, in all countries, far more to do with the volume of production than manual processes or fertilization. Irrigation, where possible, is the only effective remedy for such conditions as have obtained in North Africa during the last nine months. There intensive culture, as in Australia, would have been about as effective as whistling in opposition to a Kansas blizzard of the character of that which destroyed the wheat crop of the State a year ago to-day. In Algeria and Tunis minute fractions of the cultivated areas are fructified by irrigation, but these fractions are devoted to the production of dates and other fruits, and similar crops, the growth of cereals depending upon the

local rainfall. Thus the North African's competition, outside of Egypt, with the American wheat-grower depends upon local precipitation, and we are interested in this rainfall just as we are in that of India, Australia, that of equatorial Africa—as determining the grain and cotton production of Egypt, as we are of that of Argentina, Russia, and of every other country that competes with us in producing the grain and fibre required by the populations of European lineage.

Much as one naturally regrets the necessity which forces him to violate the prejudices of Mr. J. M. Foy (even if they are unreasonable) against excursions outside the district adorned by "our little red schoolhouse," we ought not to forego an inquiry into the climatic conditions recently obtaining in the wheat-growing regions of South America, and thus be enabled to form some just conception of the competition American wheat-growers will be subjected to from that source during the 1896-97 harvest year. This competition depends far more upon the character of the season in the regions of production than upon the *intensity* of the culture there obtaining. In other words, climatic conditions are far more potent in determining both the volume of production and the cultivator's remuneration than manual processes, no matter how *intense* they may be. And, by the way, what is this "*intensive culture*" about which it has become the fashion to prate?

The wheat crop of Argentina started off with a salvo from every dealer in hypothetical grain, and we were promised exports thence exceeding the 60,000,000 bushels of 1894, because, as was alleged, the acreage had increased 20 per cent. and the seeding season had been unusually favorable.

Neither of these statements proved to be correct. The first was palpably an error, as there had been no material addition to the rural population, which, it was well known, had been very fully employed in cultivating the area already under crops, and had no time to reduce as much as 20 per cent. more to cultivation.

Since October we have had a series of reports, more or less credible, reporting destructive droughts over much of the wheat belt, devastating frosts at the south, and sweeping floods in the riverain tracts, and the latest estimates are that the harvest will be 25 per cent. below an average in acre yield. This report, coming from those usually best informed, indicates a crop of not over 45,000,000 bushels, and as the entire decline will be operative in reducing exports, we may assume, if the crop is 25 per cent. below an average, that the exports will fall off much more. Last year's crop was somewhat above an average in acre yield, and, with reserves from the great crop of 1894, permitted exports of 38,000,000 bushels; hence we may reasonably conclude that the *intensiveness* of climatic conditions will have relieved the world's markets of much of the pressure exerted by this 38,000,000 bushels, and the same conditions will act in the same manner in reducing the exports of Uruguay, probably to the extent of two or three million bushels. That is, climatic *intensiveness* in South America has heretofore made for low prices for wheat in North America, but now this *intensiveness* has assumed a reverse character and seems likely to make for better prices in the Mississippi valley.

South Africa is a regular importer of wheat, the acreage employed in that region being small, and promising but little expansion, although there is much good wheat land, yet to be made productive, in the Transvaal. This year's crop is nearly a complete failure, and the imports must be increased from 2,000,000 to 3,000,000 bushels in all probability, as the population is increasing rapidly both in the Transvaal and in Mashonaland. Heretofore Australia has supplied most of the wheat imported by South Africa. Now it is going from San Francisco.

If it is true, as the data at hand indicates, that the exportable surpluses of India, Australia, Argentina and North Africa are to be reduced by 50,000,000 bushels, and the imports of these re-

gions increased by about 13,000,000 bushels; that the world crop of 1895, although 0.75 of a bushel an acre above the average yield of the last twenty-five years, and 137,000,000 bushels in the aggregate above an average crop, was quite 200,000,000 bushels below world requirements, then we may with reason hope that this year will see an absorption of nearly or quite the whole of the enormous reserves piled up from the great harvests of 1891, 1892, 1893, and especially in 1894, when 250,000,000 bushels more were garnered than in 1895. It can certainly do no harm to direct attention to these very well ascertained facts, even if we go "to the ends of the earth" for our data.

Natural causes have produced existing conditions; natural causes are vastly more likely to effect a restoration of conditions productive of remunerative prices than aught that our legislators will do, because it will take an indeterminate time, even if the legislators could provide a remedy, which is more than doubtful, to secure the desired action, while the addition of 6,300,000 new bread-eaters yearly assures an increased demand for the bread-making grains, such increase aggregating at least 40,000,000 bushels yearly, and there are no new acres being added to the world's wheat and rye-bearing areas; nor are such additions likely as will, at the same time, provide for these added mouths and make good a deficit of more than 40,000,000 acres now existing. That is, with no more than average acre yields throughout the world, the product of wheat and rye would be deficient in the measure of average net yields from more than 40,000,000 acres. Will the critics of the "little red school house" variety tell us how this acreage deficit is to be met in the interval that will be required to so improve cultural processes throughout the world—only upon less than 30 per cent. of the world's wheat area are the least improved of implements used—as to add 10 per cent. to the current acre yields while adding 1.25 per cent. annually to the wheat and rye-bearing lands in order to meet the requirements of the annual additions to the mouths to be filled?

And these critics! In your issue of January 23, Mr. J. M. Foy says that I have fallen into some error in relation to experiment stations; but in this he is as wrong as in his other readings after me, as, until now, I have never mentioned an experiment station. He also objects to my illustrations showing climatic conditions to be the most potent factors in soil production, because they carry us "to the ends of the earth." And he is unable to see what place a reference to Malthus' views has in a discussion of the relations of production and consumption (although Malthus' work was wholly devoted to the subject), as he does not happen to be acquainted with the Malthusian philosophy, because, forsooth the essay of Malthus "was not used as a text-book in our little red school house." In other words, Mr. J. M. Foy, being still content to draw inspiration from primary spellers and readers, all others should deny themselves the vast stores of knowledge to be found in the works of such men as Malthus, Adam Smith, Elisee Reclus, Arthur Young, Thomas Tooke, De Lavergne, Thorold Rogers, and hundreds of others who have devoted long and laborious lives to the accumulation and recording of innumerable facts bearing directly upon the work and welfare of the growers of soil products!

More recently, a Mr. Ellison has tried his hand at criticism, by repeating a long-exploded fable about alleged predictions of two-dollar wheat, and by attributing to me views I have neither held nor expressed.

These critics, supporting their bald statements by not one cognate fact, lead one to believe that answering such alleged criticisms involves the useless expenditure of time that might be better employed, and shows how correct was the diagnosis of Thorold Rogers, in his "Six Centuries of Work and Wages," when he said: "I know no time which is so thoroughly lost as that devoted to arguing on matters of fact with a disputant who has no facts but only strong convictions."

C. WOOD DAVIS.

The Stock Interest.

CORN STALKS AND CATTLE.

EDITOR KANSAS FARMER:—In your issue of January 30, there were two articles on the subject of cattle being killed by corn stalks. I will say to Geo. Briggs, if you feed no green cane or Kaffir corn, but feed dry corn fodder till you get your stalk field ready to turn in, then feed in the morning, so as not to have your stock starved, turn them in the stalk field at noon, yard them at night every night, and give them plenty of water, but never salt your cattle or horses in the winter time, except when fattening in a feed lot, turn them in the stalk field the next morning a little late, and you will never lose any more cattle or horses from corn stalks. The salt is probably what killed your cattle, though cane and Kaffir corn seed may have helped. Salt makes them drink too much and eat too much and that is all there is about that.

Will say to M. R. Davis that the corn cobs was what killed your stock. Grind your corn if you wish, but first shell it.

I always knock off smut heads when husking corn and never salt my stock cattle in the winter, or horses either, when running in a stalk field, and have never lost any cattle or horses from corn stalks when so doing.

Fostoria, Kas. W. S. MORSE.

EDITOR KANSAS FARMER:—Mr. Geo. Briggs, of Coldwater, Kas., wishes to know, through the KANSAS FARMER, what was the matter with his cattle. He simply left them in the field too long at a time. Whether there is anything besides impaction of the stomach or not, we know that in Kansas a person must not let his cattle fill their stomachs full in the stalk fields for at least one week, and I do not for about two weeks after I first turn them into the field. One lesson for me was sufficient. While I did not lose any that time, yet I had some to stagger around for two or three days. Now when I turn them into a stalk field they are never turned in until after they are fed and then but a few minutes at a time each day, gradually lengthening the time. Then, whether it is caused by eating too many dry husks, eating rotten corn, or some poisoning substance in the stalks, they get used to it by degrees. I believe that in nine cases out of ten it is caused by indigestion, as it is almost impossible for an animal to digest a large quantity of corn husks at a time, in this dry climate at least.

I believe that hog cholera is also caused a great deal by the feed that we give these animated lard cans, that we call the improved hog of to-day, as there are so many outbreaks of cholera that cannot be accounted for, unless it is the feed. Don't give the stomach too much matter that is almost indigestible, then go to the other extreme and give too much that is on the washy order, and especially do not go from one extreme to the other, but change gradually in all the changes, and with judgment, in order to be successful.

Fountain, Kas. M. WALTIRE.

EDITOR KANSAS FARMER:—I have often thought that I would like to write an article for your valuable paper, and my heart has as often failed; but, seeing some articles in your issue of January 30, about corn stalk disease, I thought I might add a word or two in explanation of the disease that has so mystified the poor farmers. First, some great expert tells us that death from corn stalks is caused by the growing corn secreting nitrate of potash. Then some one else says there is no such thing as corn stalk disease. I will give my observations along this line, and, if I see this in print, may write you again.

I believe there is a disease of horses and cattle caused by eating corn stalks, yet I do not know of any remedy. My rule is to use every preventive, and to feed them plenty of good hay all the time, then, like Mr. Shump, I let the stock in by degrees—only a few minutes the first time, and a little longer each time—until they get accustomed to the stalk field feed, then it will not hurt them to run in the field all the

time. Salt the cattle about once a week, and be sure that each gets all the water it wants to drink. A great many cattle have been lost in this (Jewell) county this fall with this disease. One of my neighbors lost eighteen head of young cattle, another six head, another eight head, one seven and one four head, while some of them have lost horses. I have raised cattle for eighteen years, and have never lost but one that I thought was caused by this disease, and that one died this fall. I left the rest in the same field with no bad results. I do not think that smut or rotten corn ever kills stock. I have always had both and never spent a minute's time to get rid of either, and have had no bad results. I have noticed that it was always the most thrifty ones that died, and I think Mr. Briggs was a little too careless in leaving his cattle in the field so long the first time. I think if he is a little careful he can pasture his stalks without danger. Mr. King, the neighbor that lost the eighteen head of cattle, turned into a new field after his cattle had been on corn stalks for six weeks. The eighteen all took sick and died at once, and died as fast as two men could skin them; he let the others in but did not lose any more.

This has been a bad year on us poor farmers, making the third failure in succession in this locality—one hail storm and two dry seasons. The ground has not been wet down fifteen inches in the last two years, and the subsoil is as dry as powder now. The fall and winter rains have wet down about a foot. Water for the stock is very scarce, most people having to drive off to water. I have lived in Jewell county for twenty-five years and have never seen the ground as dry as it is now. The corn in this part only made about five or six bushels per acre, wheat and corn were complete failures, except in the western part of the county, where corn was a very good crop.

M. M. KIRKPATRICK.

Formosa, Kas.

EDITOR KANSAS FARMER:—In the last three months I have been interested in a good many writing on corn stalk disease among our cattle. All appear to die about the same way. Have been looking to Prof. Mayo for some remedy, and after the stalks are about gone he writes and tells how the cattle die, which every farmer knows by experience.

As I have been a raiser of about 100 head of cattle and keep and winter, and buy fields of stalks, I shall tell my remedy, as the stalks are all about fed up for this year, and I have not lost any cattle by the disease for sixteen years, and have turned my cattle in the fifth stalk field this winter without any bad results. First, I never give any salt. A week or ten days before I turn in the first stalk field, I haul out two shocks of corn (fourteen hills square) for two days, and increase a little every day until I am ready to turn in field, then turn in. Leave about three hours the first day, a little longer every day for a week, then let them run in all day and yard them every night by a tank of water, and see that the tank is open in the morning before they are turned out. Another remedy is to have a few acres of tame grass that has made a good growth after cutting in July. Plenty of water and no salt is my remedy.

Have read in *Homestead, Gazette and Farmer* that all the cattle that have been examined were full of water. The corn that they found in the field made them feverish and the salt they ate made them thirsty and they overloaded themselves with water. When our pen-pushers read this they will howl "crank."

L. FARM-THE-LAND.

Oneida, Kas., February 7, 1896.

EDITOR KANSAS FARMER:—Having handled from fifty to 158 head of cattle in stalk fields for the last twelve years, thought I would give you my experience pasturing stalks. Have been quite interested in the different theories as to what kills stock, whether it be nitrate of potash, worm dust or a certain kind of mold which forms in the husks and shoots. But in regard to smut and rotten corn, while herding have known the lead cattle in a herd

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to eat it more or less all day long and never seemed to affect them.

What the brother farmers and stockmen want to know most is how they can pasture their stalks without losing their stock, and since adopting the following plan, I have never lost any horses or cattle: After the stock is taken off the grass, feed them, two weeks, sorghum, millet or corn fodder; oat straw is good. Before turning them into stalk fields, give them a load of feed. This year I fed cane mostly. After they have filled themselves turn them in the stalks for half an hour. Have plenty of feed in the racks when they come in and tanks filled with water. Next day leave them out about an hour. Increase the time a little every day, until the end of a week, when you can leave them out three hours. Always feed well before turning out and when they come in. The cured feed helps digestion and counteracts the poison or the effects of the corn stalks. Every stockman admits that it is the first roughness on the stalks that kills. For an example: If one would turn ten head into a hundred-acre field, there would be danger of losing them all through the pasturing stalk season. On the other hand, with a hundred head in a hundred acres, the danger would be over within ten or fifteen days.

It is best to use the same caution in putting stock into new stalk fields until they get the husks and shoots eaten off. Think it better to feed salt, but my forty-four head of cattle and twelve head of horses have not had a grain of salt this winter. I say this because some make a hobby of salt.

I disagree with the assertion that all cattle die from husks becoming impacted in the stomach. Of course there are cases of bloat from corn stalks, same as from clover or any other food eaten in great quantities, but that is a separate thing altogether from corn stalk poisoning. For instance, some years cattle don't die from pasturing stalks. If impacted stomachs kill the cattle, why don't cattle, and horses, too, die about the same every year? It seems that corn stalks are more fatal when we have wet summers, while there are years when the chinch bugs are thick and stalks injured by droughts and hot winds when stock will feed on them and live.

In 1891 I took 158 head out of pasture, filled the racks with prairie hay, that being all the cured feed I had. Commenced turning the cattle into the stalks half an hour at first. On the third day lost five head. Then I was more careful. Would not let them stay in the stalks so long at a time. After that I lost one or two at a time

until twenty-three were dead at the end of three weeks. By that time they had the first roughness eaten off. But it convinced me that prairie hay alone won't counteract the poison in corn stalks. Nor will feeding cattle corn do it. There was a creek of spring water where they could drink a hundred times a day if they wanted to. Salt and ashes were kept in troughs all the time, and hay in the racks. Cattle were in good condition. Examined the stomachs. Some had considerable corn and water, all moist, but the husks were packed and hot in them. My neighbor fed oat straw while his cattle were in the stalks and never lost any.

Hope this experience will help some one, although it is a little late in the season. But it will give you time to raise cane, millet and cut up your corn and save your oat straw for next stalk season.

S. A. HOPE.

Clearwater, Kas.

EDITOR KANSAS FARMER:—I have read with much interest the many articles on corn stalk disease vs. no corn stalk disease.

Although J. F. Shump says in his article in the *FARMER* of February 6 that all that has been said about corn stalk disease has no sense in it at all, and he hopes that will settle it, the fact still remains that some years in certain localities corn stalks are in a condition that will kill cattle with the best of care and the greatest possible precaution in watering, while in other years in the same locality cattle will run in the stalk fields with no care, except that they have plenty of water where they can run to it when they please, without any danger whatever.

During the past fall and this winter the farmers of Republic county have lost hundreds of head of cattle, representing thousands of dollars, but few farmers in this vicinity having escaped without some loss. To have it said that it was all through the carelessness of the farmer is a reproach upon the good reputation of the farmers of Republic county.

I have handled a good many cattle for several years (but not as many years as Mr. Shump, as I am not that old by several years), and have never lost a single head by running in stalks until this last season. My method has been to leave them in stalk field a short time—say two hours at a time, mornings and evenings (with plenty of good water where they could run to it)—for three or four days when first turning into a field, and then let them go and take care of themselves. This year I was forewarned of what was coming, as one of my neighbors had lost twenty-three head and another fourteen and

several others had lost a few, before I turned my cattle into the stalks. I took every precaution possible. I had a thirty-acre field of stalks, and in the field I left standing some Kaffir corn stalks and some sowed cane. I turned in for about an hour in the morning and the same in the evening at first, and then increasing the time to about two hours each time by the fourth day. As soon as I took them out of the stalks I drove them to a pond of good clear water that they had been used to running to and held them there until they had all drunk that would. They would then go back to where I had let them in the stalk field, and a tank always full of good clear water stood near by, where they could drink at their leisure. The fourth day after turning in I found a sick steer. It died in a few hours. The next day I found another and it died in about twelve hours. I had noticed that up to this time the cattle had eaten but little of the cane and Kaffir corn stalks, so, after losing these two steers, I took to herding them in the cane and Kaffir corn stalks for about an hour, mornings and evenings, and then let them run in the stalks about the same length of time at first, increasing the length of time each day until the stalks were pretty well eaten out, then let them go to suit themselves until that field was pastured down, without any more bad results. I then turned into a field of about 200 acres, using the same precaution as before. This time I fed all the cane hay the cattle would eat when out of the stalks. Everything went all right until I got to leaving them in the stalks two hours at a time, when I noticed that some of the cattle had eaten so much of the stalks that they would not eat the cane hay. Then two more died. After that I did not keep them in the stalks so long at a time for a while; then they would eat their cane hay. Kept feeding cane for about three weeks, then let them run at pleasure until they had pastured that field out.

There had been no cattle dying through the neighborhood for some time. A great many were afraid to turn in again and those that had but few cattle and plenty of feed outside of their stalks did not turn in at all. Some thought that after we had had cold and freezing weather for some time there would be no danger. My stalks were getting short at home. I bought a field on the creek bottom, where the cattle could have timber for shelter and plenty of running water. I did not feed cane, as the stalk field was about four miles from home. On the fourth day after turning in one died, and the next day another. I then took them home and have been feeding corn fodder ever since. I lost one cow that was feeding chop twice a day and cane hay at night. Let her run in stalks all day with rest of cows in separate field from the steers.

My loss has been light, according to the number of cattle handled, as compared with most of my neighbors. One of my neighbors lost thirty head, one twenty-four, and one ten out of fifteen one night.

Our corn this year was almost a total failure, only turning out from five to twenty bushels per acre, and that very badly worm-eaten and chaffy.

Some think the worm dust is what kills the cattle. I "snapped" my corn and fed it, worm dust and all, to my fattening cattle without any bad results. Some think it is a poison. If so it could be easily ascertained by having a stomach analyzed. Think the State Veterinarian should look after this matter. We will not accept Mr. Shump's settlement on this matter until he comes up and experiments on Republic county corn stalks.

We pasture our horses on the stalks without any danger. Now, Mr. Shump, why is it (if the stalks have nothing to do with it, and it is all in the care) that some years cattle will die in stalks and same years they will not?

J. M. RANDALL,
Bellville, Republic Co., Kas.

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Irrigation.

SOME DETAILS OF IRRIGATION.

By Edward M. Boggs, Irrigation Engineer of the Agricultural Experiment Station, University of Arizona.

The methods of applying water to the land vary greatly, being influenced by many important factors. The nature of the crop, character of the soil, quantity of water available, slope of the land, and its drainage facilities, and the area of the tract, are all to be considered in determining the best mode of irrigation. Whatever the nature of the crop or the method of irrigation adopted, it will pay well to grade the land properly. If flooding is to be practiced the surface of the land should be made smooth and sloping evenly, in order that the water may form a sheet of uniform depth. It should neither form ponds, where the water stands, to the injury of the crop, nor leave islands standing above the surface which are never watered.

For orchards or other crops where the small furrow system is to be used the land requires to be carefully graded in order that each small stream of water may flow steadily, neither cutting out at some places nor filling up at others.

In portions of southern California very great expense is sometimes incurred in placing land in perfect order for planting orchards. Instances are not few where the grading preparatory to planting an orange orchard has cost \$100 per acre, and in some cases as much as double that sum. Possibly these men were a little too particular about the sandpapered appearance of their lands, but the belief is general that it pays to have the land well graded. Sometimes an orchard is found planted just as the land originally lay, with the intention of grading afterward. Such a procedure is certain to result in disappointment; it never works well. The owners of such places give as an excuse their lack of means to do otherwise. It would probably have paid them better to properly grade and plant one-half their land rather than to plant it all in such a fashion.

The object of irrigation, of course, is to supply the moisture necessary to the profitable growth of plant life, and which is denied by nature. It must be remembered, however, that plants require air as well as water. It is a mistake to assume that the roots are intended to take in water and the leaves to secure the air. Air must be admitted to the roots also, and any method of irrigation which prevents this is faulty.

Irrigation is quite a new science to the American people. They have either learned its practice from the earlier inhabitants of the arid region or have invented methods for themselves. In the one case they have also learned the errors committed by their teachers. In the other case they have almost invariably committed the same errors themselves. In either case they have had to unlearn these faults and devise improved methods. The observant natures and reasoning powers of Americans have been equal to the task, and in a few years they have brought the science of irrigation to a higher state than had been accomplished by their predecessors in as many centuries. In some portions of the United States irrigation has been developed to a higher degree of perfection than in any other country.

The mistake most commonly made by the primitive irrigator, his modern imitator, and the novice who works out his own methods, is that of depending too much upon irrigation and not enough upon cultivation. The most important advance made by Americans upon the customs of their predecessors was the discovery that irrigation and cultivation must go together to secure the best results. It is about the last thing to be learned by the beginner. The primitive irrigator never realized its importance. There was, of course, a necessity that seed should be planted, or fruit trees set out, and that water must be provided. Beyond this nothing was done until harvest time came. In parts of old Mexico and among our

Indians examples of this practice may yet be found. Fruit trees will be seen standing in a sod which has never been broken; corn, root crops and other vegetables which have never been cultivated. That they yield crops under such treatment is due, not to the excellence of the system, but to the fact that any method of irrigation is far superior to none.

Almost every agricultural soil found in the arid region is of such a character that it will settle down smooth and compact when water is applied to it. Then the sun bakes it into a hard crust which is too dense and non-porous to permit the circulation of air. Unless it is speedily broken up by cultivation the plant suffers from lack of air at the roots. At the same time the water is rapidly drawn to the surface by capillary action through the infinite number of minute tubes which traverse the unbroken crust. The most advanced practice of the present time regards as an urgent necessity the thorough cultivation of the soil where the nature of crop permits. This is not alone on account of its value as a means of conserving moisture, but because of its allowing a free circulation of air.

It has been thought by many that nature's usual method of supplying water to vegetation—by rainfall—should be imitated as closely as possible in our irrigation practice. This has led to the adoption of the plan of sprinkling, as was familiar to us in the flower—and vegetable—gardens of the East before we personally knew anything of irrigation on a large scale. This method is successful in such cases, but it is not adapted to large areas. Among the orange orchards of Florida it has been used more extensively than elsewhere in America. There the amount of irrigation required is usually small, and the high value of the product justifies an expensive method of irrigation. In some localities in Florida where the land, though flat, is covered with "hummock," sprinkling is almost the only mode of applying water which can be successfully adopted. It has the advantage of getting the greatest possible "duty" from the water. No one is likely to over-irrigate where he uses this method. Care must be taken not to sprinkle during the heat of the day. Almost all plants will suffer from the application of water to the leaves and bark while the sun is shining hot. The high cost of the water supply under sufficient pressure, of the pipe system, and of the labor needed for operating such a system must always prevent the adoption of the sprinkling method save under exceptional conditions.

Much has been said and written about the superiority of sub-surface irrigation. The principal arguments in its favor are that by this method the moisture is applied directly to the roots where it is to be used, that the loss by evaporation from the surface is almost wholly prevented, that a minimum amount of water will thus be used, and that the roots are trained downward, where they should go, instead of upward, where they should not go. At first thought these claims are likely to be given more than their true value. Sub-irrigation has been tried on a more extensive scale in California than in any other region and nowhere has it proven to be a pronounced success. Where experimented with it has generally been abandoned. The heavy expense required for its installation is a serious objection to it at the outset. This expense would be allowable in many cases if the benefits were as



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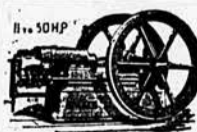
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great as has been claimed. Any soil which is loose enough to allow water to spread laterally from an underground pipe is also open enough to permit a quantity to sink downward too deep to be recovered by the roots, which is much greater than would ever have been lost by evaporation from the surface. In practice it is found that water does not seep laterally to the desired extent. The result is that the roots go to the pipe for the needed moisture. Any opening in a pipe large enough to let out water is large enough to let in roots, and the roots will surely find these openings. Nothing less than metal pipe with perfect joints is able to keep out roots. Neither permeable drain tile nor cement pipe, whether jointed or monolithic, nor vitrified sewer pipe, will long be able to resist the attacks of the roots of trees. Go with the engineer in charge of the sewer system here in Phoenix some day and see the solid mass of fine roots which completely fill the pipes in places. It is found that sub-irrigation is practically impossible for permanent growths, like orchards and vineyards. It may be found advantageous under some circumstances for annuals, but even then it is a question to be carefully considered whether its advantages justify its heavy cost.

For the watering of cereals and other sowed crops some form of sheet irrigation or flooding is almost universally used. The checks or compartments are rectangular where the ground is nearly level and slopes evenly. "Contour" checks must be used where the slope is steep and irregular. The size of the checks will be determined by the slope of the ground, nature of the soil, and the amount of water to be used. Where properly laid out on well-graded land, with carefully-constructed borders, a field may be irrigated by this method with a minimum of labor. Unless these conditions prevail, and a fair measure of care is exercised, more water may be lost by this method than by any other.

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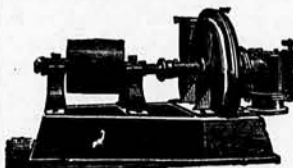
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gopher and squirrel holes would be amazing if it could be summed up. The interested spectator may watch until he tires, a solid stream, some three inches in diameter, disappearing down a gopher hole—the hole never gets full. It is no uncommon thing to see a large section of a field or a road flooded by the water which escapes from a ditch or an irrigated field through a single gopher hole. It is probable that more water is lost through the gopher and squirrel holes than all other agencies combined. Each hole should be carefully stopped when first discovered. Whenever these burrowing animals appear they should be pursued unintermittently. Traps and poisons would make short work with them if used in a general campaign by every farmer.

For orchards, vineyards, small fruits, vegetables, etc., the parallel furrow system is more generally used than any other, and, all things considered, is the best. But there are furrows and furrows. The best system is the one using small furrows; those made by a cultivator are better than those made by a plow. The water should not be allowed to run through them with high velocity, cutting out and washing away the most valuable components of the soil, or breaking over and flooding the intervening spaces. Some soils require that quite a large stream should be run through to the end in order to wet the furrow throughout; the stream is then cut down to just that amount which will show at the lower end, without causing any material quantity of waste. Many soils permit the forward motion of small streams with sufficient velocity, and they should be allowed to find their way through, even if twelve to twenty-four hours be required to cross a ten-acre field.

The best orchardists in California seldom run water in furrows farther than across a ten-acre field—a length of 660 feet—and by some people this is considered an extreme distance. Where the orchards are large it is customary to cut them up into ten-acre tracts by cross ditches and flumes and waste water ditches. The irrigation water is then handled with greater ease and security. The run-off from rains is intercepted by the furrows and carried in small streams to the waste ditches. It is thus prevented from massing into a large stream, seeking the line of steepest slope and causing much damage.

While orchard trees are small a single furrow down each side of the row is sufficient, but when they reach a considerable size the whole space between the rows should be occupied by furrows. The roots of the trees in an average orchard grow to cross the intermediate spaces and intertwine with those of their neighbors. There is as much reason for supplying water to the ends of these roots as nearer the trunk.

An orchard should be laid out with more regard for the slope of the land than for its boundary lines. California valleys generally have heavier slopes than those of Arizona, and many orchards in that State have so heavy a slope in some directions as to make it undesirable to irrigate by furrows parallel to the boundaries. Unfortunately, this fact is not often discovered until after the orchard has been planted and irrigated some years. Where the slope is excessive it is still more necessary to restrict the streams to the smallest possible size.

In this vicinity the slope of the land is more likely to be found too flat than too heavy, but this may be just as strong a reason for planting the orchard somewhat askew. It would be better to sacrifice a little of the rectangular neatness of appearance, even a few trees if necessary, in order to secure a grade neither too light nor too heavy.

Where the slope of the land is excessive it will be necessary to depart from the coveted arrangement of straight lines and adopt curves, called grade contours. It was once my duty to devise a system of irrigation for several hundred acres of valuable orange land situated on a series of ridges almost steep enough to be called bluffs, but where terraces were considered inadmissible on account of their cost. The

plan adopted was as follows: Water under pressure being available, a pipe line was laid down the backbone of each ridge; small stand-pipes were placed on it at frequent intervals, terminating in garden valves; trees were set on grade lines having a suitable fall away from the pipe line. Care was used in spacing the rows to occupy the ground to the best advantage. Where the slope of the ground changed materially, the horizontal distances between tree rows would, of course, likewise vary. These variations were adjusted so as to preserve as well as possible the desired interval between trees. When furrows were made at uniform distances from the tree rows they were also on true grade lines, and water ran smoothly through them from the hydrants to waste ditches or flumes at the lower end. These furrows were kept in good order through the rainy season to prevent damage by washing. Extra care had to be taken to prevent any furrow from breaking over and causing a series of breaks down the hillside. This system has worked satisfactorily and serves to illustrate what steep slopes may be made available for cultivation where the value of the product justifies the heavy expense.

Where water is very scarce, some form of the basin system may be necessary. The basins vary in shape and size from a small saucer-shaped receptacle to a large rectangular equivalent to one-fourth the area included between four trees. They are usually filled from furrows, but sometimes by hose or by water which has been hauled. Hauling water for orchards may seem an utter absurdity, but in many instances it has been done by hopeful pioneers who have discounted the future, planted orchards and established homes in advance of an irrigation system, to their final satisfactory profit. There are not a few localities in southern California possessing limited water supplies where orchards of considerable size are irrigated by basins filled by hose. Even when the basins are filled from furrows an astonishingly large duty is obtained for water. None of it is permitted to waste at the lower end of the field. All leaks are prevented and gopher holes will be hunted for and carefully stopped. When a season of unusual scarcity of water afflicts the Salt River valley the fruit farmers may be able to save their orchards and secure a good crop by temporarily adopting the basin system.

There are some soils which do not absorb water readily. There are some waters which carry so much silt that small furrows are soon coated with silt and made almost impervious to water. In either of these cases only a small portion of the water turned in is absorbed; the waste is enormous. In all such cases the basin system would secure satisfactory irrigation and economize water.

Whether the basins be large or small the water must not be allowed to touch the trunk of the tree. A mound should be formed in the center of the basin upon which the tree stands above the water level. It is equally important in any mode of irrigation that the water must not be permitted to form ponds or pools around and touching the trees.

One plan of basin irrigation for orchards which is highly commended by some is the following: The tract is divided into rectangular basins, one to each tree, with a large furrow between every alternate two rows of trees. Starting at the head-ditch the irrigator conducts the furrow full of water as far as the middle of the first pair of basins and turns it into the one on the right. When this basin is filled the water is cut off and carried forward to the second on the right, and so on down to the end of the row. When the last basin on the right side is filled, the water is turned into the last one on the left, and then in regular order back to the first basin on the left. It is then shut off from this first furrow and carried forward to the second furrow, where the same routine is followed, and thus throughout the orchard. It is claimed for this system that it permits perfect control of the water with a minimum of labor, and

that no unnecessary walking or loss of time is required.

Knowledge concerning the quantities of water necessary for various crops is of the greatest importance to the agricultural development of Arizona, but very little accurate information is obtainable. Several persons have informed me that twelve inches in depth during the year is sufficient for alfalfa. This seems incredible in view of the generally low duty attained for water in this region.

The experiment station is desirous of undertaking a series of systematic observations with a view to securing and publishing accurate data bearing upon this important subject, and to this end we invite your co-operation.

If a number of persons controlling fields of alfalfa, or other crops in good condition, will volunteer their assistance much very valuable knowledge may be secured.

There is nothing superior to Salvation Oil for the relief and cure of wounds of all kinds. Its effect is marvelous. 25 cents.

Publishers' Paragraphs.

We have received from E. Krauser & Bro., Milton, Pa., something less than a bushel of testimonials from those who have used their Liquid Extract of Smoke. They all speak of it in the highest terms, and it seems that this method makes the tedious old plan of smoking meat unnecessary. The smoke extract is simply applied with a brush direct to the meat. Nothing goes to the spot better after a hard day's work in the summer than a slice of nicely smoked meat. We advise our readers to look up this advertisement, which appears in this issue, and write to the address given, asking for particulars. Always mention the KANSAS FARMER in writing to advertisers.

The great "Lee of Virginia" series, in *Frank Leslie's Popular Monthly*, is continued in the March number with a picturesque and superbly illustrated paper devoted to Major General Henry Lee, of Revolutionary fame. This is "the dashing dragoon and splendid orator, the chosen of Patrick Henry and the beloved of Washington, classic scholar and impassioned patriot, brilliant scion of a long-distinguished race, Governor of his native State, and perfect type of the Virginia gentleman, rearing his sons in religion, morality and learning, solicitous above all that they should be taught to ride, shoot and tell the truth—General Henry Lee the 'Light Horse Harry' of his soldier contemporaries, and the father of General Robert E. Lee."

"ABUNDANCE."—A pamphlet published under the above title by the Armour Fertilizer Works, of Chicago, has been received at this office. By effective illustration, and still more effective statistics of actual results, it sets forth in a convincing manner great advantages obtained from the use of the various fertilizing agents manufactured by this firm. The superiority of the Armour fertilizers, they claim, is due to their production upon scientific principles, based upon an understanding of the chemistry of vegetable life. The aim has been to prepare "plant foods" for the particular crops whose growth is to be assisted. Such results as have been reported from actual field tests, though astonishing, are but the natural consequence of the application of well-known principles governing vegetable growth. The Armour fertilizers are claimed to be the best obtainable in this country, and the claim is backed by a record of actual experience which is well worth reading. Send Armour Fertilizer Works, Chicago, for copy of pamphlet, mentioning where you saw this notice.

Ask a Democrat

about the Republican party. Ask a competing agent about Deering roller bearings. They will talk much the same.

Ask a Republican

about Democracy. Ask a twine trust agent about Deering binder twine, and hear both denounced.

Ask a Prohibitionist

what he thinks of both other parties. Ask a competing agent's opinion of Deering roller bearings and Deering binder twine. Their answers will be much alike.

Ask Your Own Common Sense

whether Deering machines with Roller Bearings will not wear less and last longer than the old kind that have no way of overcoming friction. Ask your own common sense, too, whether it isn't reasonable that we make better twine in our big mills with our reputation than makers who have no reputation to sustain and who don't make binders.

Could we have built up the greatest binder trade in the world by making either poor binders or poor twine? In this, as in everything else, don't ask for disinterested opinions from interested people, but

Ask Your Common Sense.

Send for Catalogue. Free.

DEERING HARVESTER CO., Chicago.

STARK TREES TESTED 70 YEARS
BEARFRUIT Salesmen and club makers wanted for GOLD plum, etc. Stark, Louisiana. No., Rockport, Ill.

FREE SEED
Prettiest BOOK ever Printed.
ONE CENT A PACKAGE, and up. Cheap by oz and lb. A lot of extra packages with every order. Send for catalogue.
R. H. SHUMWAY, - Rockford, Ill.

PLANTING!
well begun is half done. Begin well by getting Ferry's Seeds. Don't let chance determine your crop, but plant Ferry's Seeds. Known and sold everywhere.
Before you plant, get **Ferry's Seed Annual** for 1896. Contains more practical information for farmers and gardeners than many high-priced text books. Mailed free. D. M. FERRY & CO., DETROIT, MICH.

TO SUM IT ALL UP THE **Rock Island CORN PLANTER**
has more good features than can be found in any other three on the market. Send for circular and find out all about it before concluding what to buy for 1896.
Rock Island Plow Co., Rock Island, Ill.

THOMPSON'S GRASS SEEDER
Sows all varieties of Clover, Timothy, Alfalfa, Red Top, Flax, and ALL KINDS OF GRASS SEEDS.
Sows any Quantity Evenly, Accurately
HOPPER for OATS—WHEAT. Send for Catalogue.
O. E. Thompson & Sons, 23 River St., Ypsilanti, Mich.
20 to 40 Acres a day. In wet, dry and windy weather. Weight, 40 lbs.

Trumbull Seed Co., (Gen. Agents, Kansas) City, Mo.

SALZER'S SEEDS
Over 250,000 Farmers, Market Gardeners and City men attest to the superiority of **SALZER'S SEEDS.**
We are the only seedmen in America making a specialty of Farm seeds, and are the largest growers of Oats, Wheat, Potatoes \$1.50 a bbl., Grasses, Clovers, Fodder Plants, etc., in the world.
1,000,000 ROSES, Plants and Small Fruits.
VEGETABLES. Enormous Stocks, Northern Grown Onion Seed only 90c. per pound. All prices low.
35 Pkgs. Earliest Vegetables, postpaid, \$1; 10 pkgs. Flower Seeds, 25c.
Mammoth Catalog and 10 pkgs. Grains and Grasses, 10c. Catalog free for 5c. postage.
JOHN A. SALZER SEED CO. LA CROSSE, WIS.

HENRY W. ROBY, M. D., SURGEON.
Office 118 Sixth Ave. West, TOPEKA, KAS.

The Home Circle.

To Correspondents.

The matter for the HOME CIRCLE is selected Wednesday of the week before the paper is printed. Manuscript received after that almost invariably goes over to the next week, unless it is very short and very good. Correspondents will govern themselves accordingly.

WHEN THE SNOW COMES OVER THE HILL.

When the snow comes over the hill,
The snow
First comes sailing over the hill,
Singing as it passes down
Through the leaves and grasses brown;
Willy-willy, so and so,
Where the red ash-berries grow;
Where the robin sits forlorn;
Through the yellow shocks of corn;
Where the frost-grape's clusters fall
Purple o'er the mossy wall;
Where the hectic flush still burns
On the hillside; where the ferns
Laugh defiant at the chill
Gloomy north wind on the hill;
As the snow comes down,
The snow
First comes sailing down.

When the snow comes over the hill,
The snow
In sheets comes over the hill,
Silent, fluffy clouds of white
Ushering in the early night;—
Grandma sits in the twilight dim,
Knitting a stockin' for baby Jim;
Her little boy blue's boy blue, and so
She smiles and sings as her needles go
Weaving a fabric soft and warm,
To keep his feet from the winter's storm.
In and out the needles speed,
Swift and deft with restless heed,
Weaving a kindly wish and prayer
Into each round of stitches there—
While the snow comes down,
The snow
In sheets comes drifting down.

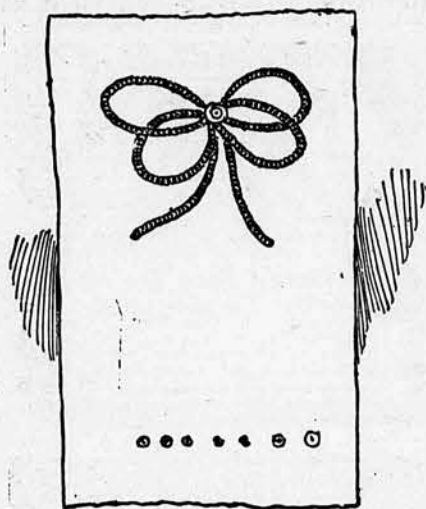
When the snow comes over the hill,
The snow
Comes drifting over the hill,
Bringing white beards to the pine;
Hiding every brown fence line;
Falling in a fluffy mass
Where the wood-road used to pass;
Making of the mountain spring
A fairy well with crystal ring
Curbed and curving up to where
Silent snowflakes fill the air;
Making of the old spruce woods
Praying monks with tasseled hoods;
Making all the world seem queer,
At this death time of the year;
When the snow comes down,
The snow
Comes slowly drifting down.
—Good Housekeeping.

SEQUIN EMBROIDERY.

Something for the Leisure Hours of Girls at School.

Your mother would call sequins spangles, and she will probably be able to show you how to do this fascinating kind of fancy work. It is always popular, because one "gets along so fast," and it is very effective. It can be used for many different purposes and will no doubt soon be employed by dress-makers and milliners.

Sequins combined with colored beads, those which resemble jewels, make brilliant ornamentation. An English magazine devotes considerable space to a



A BAND OF SEQUINS

description of the new embroidery, and from it the following directions are taken:

Sequins are most effective when massed, and one of the prettiest ways of doing this is by overlapping them. The little knot of ribbon shown in the illustration is adapted from an old French design and is a good example of a single line of overlapping sequins. It should be noted that certain loops of the bow pass under others, and that the center is formed by a moderately large sequin, in the middle of which is a small one, and a gilt bead on top of all.

To work this or any similar design stretch the material in a frame and lightly mark the desired outline. Bring a needleful of silk from the wrong to the right side of the work, lay a spangle with one edge touching the place where the needle came up, push the needle

through the central hole of the sequin and thus to the wrong side of the work, bring it up again half a sequin's length from the lower edge of the former sequin, lay another spangle close above the thread and push needle again back through the center hole to the wrong side of the work. Repeat from all along the outline.

The bow in the illustration was worked on white satin and with the tiniest gilt sequins procurable.

Written for KANSAS FARMER.
Pretty Bureau Scarfs.

Dust is always present in our living rooms, and fight it as we may it is continually settling on chairs, table and bureau, in fact, on everything, and scarfs and throws, unless made of washable materials, soon become unrepresentable. Linen, in some of the many colors in which it is now made, is the most suitable material from which to make bureau scarfs. And one made of white butcher's linen with inch wide hem-stitched hems on the ends and embroidered in Dresden design with wash silks, is one that is quickly made, and one that will be pretty as well as serviceable. The Dresden designs are tiny little flowers scattered all over the surface, and worked in different colors. This kind of work is particularly suited to the unskilled, as a few simple stitches make a flower, and odds and ends of silk thread can be used that were left from larger work.

A drawn-thread bordering above the fringed ends of a linen bureau scarf was made this way: Draw the thread each way so as to leave perfect little solid squares—two rows; puncture the center of the squares with a bodkin, and with a needle threaded with silk take up a few of the threads left between the squares into simple fagot stitch and carry the silk down to the center of the square and through the puncture to the other side, and take up some more threads in fagot stitch, and go back to the center of the square and through again, and continue thus until the square is covered with the silk and the bordering threads are all taken up in fagot or hem-stitching stitch. This is one of the simplest but most effective of all drawn-thread patterns, and one that is easily made, but its beauty depends entirely on the neatness with which it is done. If the number of threads taken up each time that a fagot is made is counted, and the thread carried smoothly down and through the little square, this is a most exquisite piece of work.

Huckaback toweling makes serviceable scarfs, as does also the red or blue checked linen which is called glass toweling. As the last is laid off in small, even checks it can be prettily worked in cross-stitch with some one of the heavier silk threads. Made with deeply fringed ends and with the old key pattern in cross-stitch above, this grade of linen makes a handsome and inexpensive scarf for the bureau or wash-stand.
Mrs. W. L. TABOR.
Crescent, Ark.

Soliciting Subscriptions.

Recently, in conversation with a gentleman of my acquaintance, I mentioned an item of important news which is going the rounds of the press, and of which most men are quite familiar, when, to my surprise, he informed me that he had no papers to read, and stated that he could not afford to take a newspaper. I feel inclined to assert the fact that there are many such men in this progressive country, having homes with wives and families, still claiming to be too poor to afford a paper or magazine, however cheaply they may be obtained.

I am reminded of an amusing incident in my experience of canvassing for newspapers in Shawnee and adjoining counties during the winter of 1881-2. I stopped, one morning, at a log house in the valley of the Wakarusa, where lived a good old-fashioned family in quiet seclusion. My gentle rap was answered by the ever-familiar words, "Come in." I entered and no one spoke, but all looked at me with an expression of curiosity. I briefly introduced my business, and the venerable mother exclaimed: "Well now, young feller, ye needn't put on any airs of importance over our folks, nor pervail on us to scribe fer papers and such stuff, fer the fact of the business is, we hain't able to afford such fool extravagance, an' if ye did but know it, us farmers has a heap to do besides readin' politics and such nonsense." I then proceeded with my simple speech (as agents will), and the good man of the house interrupted me. Said he: "Ah! no sree. We can't afford it. A dollar a year is too much an' we hain't got time to read 'em nohow. I am spendin' my spare time readin' a history of the war, which is a big book an' will last me all winter." As I left, the house the lady shouted to me, saying: "Don't go around tellin' folks as we don't read, for the ole man is readin' history an' Dave gits a paper from Indiana once in a while, an' we have a good old family Bible, good enough fer me an' the rest of the family."
JAY VEE.
Carbondale, Kas.

Highest of all in Leavening Power.—Latest U. S. Gov't Report

Royal Baking Powder

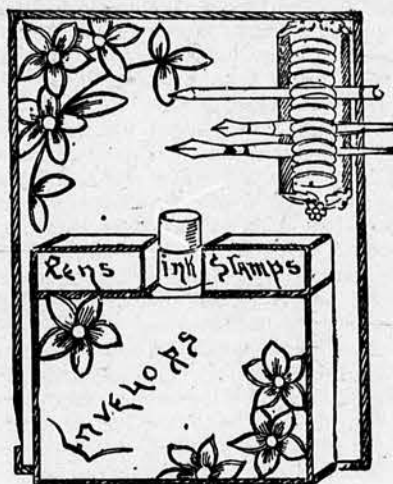
ABSOLUTELY PURE

HANDY LITTLE ARTICLE.

A Wall Pocket for Stationery Which is Easily Made.

This handy little article—especially for the person usually of the masculine gender, who can never remember where the ink and paper are kept—is made of gray linen. The variety sold as dress linen at 25 cents a yard, and which has a high polish, is best.

The size will largely depend on the size of paper and envelopes used. The back is made double to admit of slipping in a tablet or letter paper at the side. The pocket at bottom should be a trifle larger than the envelopes and of sufficient depth to hold 50 envelopes. A good quality of Bristol board may be used for the foundation, and the linen must be decorated before covering



WALL POCKET FOR STATIONERY.

the different compartments. The decoration is very simple for anything so effective, and consists of painting in the design with Chinese white, shading the centers of petals with green, and outlining with Japanese gold cord, couched down with yellow silk. It will be best to cut a pattern for the different parts of stiff brown paper, bend them to the required shape and adjust to position on the back. Now take your Bristol board—mark with pencil and rule

where the sides of compartments should come, and with a sharp knife cut partly through the board. They will now bend without breaking into the required box form. Cover with the decorated linen and line with the plain; sewing the edges together, over and over, with gray silk.

The two little boxes on top of envelope case have a rubber band passing from front edge of lid through the back, which keeps them closed. A narrow strip is fitted between them in circular form to hold a small patent ink stand. At the upper right-hand corner a spiral pen rack is attached and the different parts are joined firmly together with gray button-hole twist and finished with a twisted gold cord. If my readers desire to make this and are in doubt on any points, I shall be very glad to answer any questions they may direct to me, care Farm, Field and Fireside.

The Japanese gold cord and the twisted gold cord will be found at the fancy stores, and the Bristol board at the printer's or stationer's.—Ida D. Bennett, in Farmer's Review.

That the blood should perform its vital functions, it is absolutely necessary it should not only be pure but rich in life-giving elements. These results are best effected by the use of that well-known standard blood purifier, Ayer's Sarsaparilla.

COUGHS AND COLDS

ELY'S PINEOLA BALSAM is a sure Remedy for coughs, colds, sore throat and for asthma. It soothes, quickly abates the cough, and renders expectoration easy.



Consumptives will invariably derive benefit from its use. Many who suppose their cases to be consumption are only suffering from a chronic cold or deep-seated cough, often aggravated by catarrh. For catarrh use Ely's Cream Balm. Both remedies are pleasant to use. Cream Balm, 50 cts. per bottle; Pineola Balsam, 25 cts. Sold by Druggists.

ELY BROTHERS, 56 Warren St., New York.

THOS. B. SHILLINGLAW, Real Estate and Rental Agency, 115 East Fifth St., Topeka, Kas. Established in 1884. Calls and correspondence invited.

Neuralgia Torture.

The nervous system is weakened by the

Every nerve is strengthened in the cure of it by



FEMALE TROUBLES

Many of the disorders peculiar to women are caused by diseased conditions of the Liver, Kidneys and Bowels.

Restore these organs to a healthy state by using

Dr. J. H. McLEAN'S LIVER AND KIDNEY BALM

It will assist the female organs to perform their regular functions, and the sufferer will be strengthened and cured. Ladies from all parts of the country testify to its marvelous success in curing them

FOR SALE EVERYWHERE. PRICE, \$1.00 PER BOTTLE

THE DR. J. H. McLEAN MEDICINE CO., ST. LOUIS, MO.

The Young Folks.

THE ISLE OF MIGHT HAVE BEEN.

There's a beautiful Isle in the River of Time,
 And its verdure is ever green;
 Its flowers are fair—how its scented air
 Is ever a starry sheen.
 Its rivers are flowing over pebbles of gold,
 Their murmur is a joy to hear;
 The chime of bells in enchanted dells,
 Is sweet to the listener's ear.
 Oh, a magical spell hangs over the Isle
 That gladdens the heart within,
 For there we regain all we lost with pain—
 On the "Isle of Might Have Been."

We often return to that beautiful Isle,
 To bask in its evergreen shade;
 We take of its gold all our hands can hold—
 Or clasp to our bosom a maid—
 We climb to the top of the mountain of Fame
 And drink from the fountain of Joy,
 With music and song the days speed along,
 And sadness can never alloy
 The sweets that we tasted in years that have
 flown.
 We feast there upon them again,
 With no one to chide or turn us aside—
 On the "Isle of Might Have Been."

There are magical words that we might have
 said
 To comfort the weary and sad;
 We give them voice and the hills rejoice,
 And the heart of the giver is glad.
 The song that we never could fashion in
 words,
 Is sung with a magical rhyme—
 Its meter complete, its music is sweet,
 As it blends with the River of Time,
 The wreaths of glory we weaved for our brow
 And our laurels again we regain,
 For there we stand, as the first in the land,
 On the "Isle of Might Have Been."

Then up and away for that beautiful Isle,
 So free from all sorrow and care;
 'Neath the evergreen trees we'll take our
 ease,
 Or bask in the twilight there.
 We will float down its beautiful silver stream
 That murmurs o'er pebbles of gold,
 Or climb its mount and drink from its fount,
 And our hearts shall never grow old.
 Oh, a magical spell hangs over the Isle,
 That gladdens the heart within;
 For there we regain all we lost with pain—
 On the "Isle of Might Have Been."
 —George Clay Lloyd.

SAD FATE.

On the banks of the Marais des Cygnes,
 Near the town of Olivet,
 One day in the fall of the year
 A band of Indians met

Of the tribe of the Sac and Fox—
 Seventy-two of the band—
 They pitched their tent in the woods,
 Their old reservation land.

A peaceful civilized tribe,
 With no ambition to roam;
 The white man had crowded them out
 And driven them far from home;

Had allotted them a reserve,
 Driven them to it with pride,
 In a low malarious swamp,
 Where many sickened and died.

Sad fate of the Sac and Fox.
 The white man rules in his might.
 A detachment of soldiers came
 And drove them back in the night.
 Carbondale, Kas. JAY VEE.

His Dog Could Preach, Too.

"I have a dog," said a minister who had just heard a precocious story, "who is very sagacious. One Sunday he followed me to church and sat among the people and watched my movements in the pulpit. That afternoon I heard a terrible howling in my backyard, and, of course, went to see what it meant. I found my dog was in the woodshed, standing on his hind legs in a dry goods box. He held down a torn almanac with one paw and gesticulated with the other, while he swayed his head and howled to an audience of four other dogs even more sadly than I had done in the morning."

Good Joke on the Freshie.

One of the smallest New England colleges has for janitor a colored man, who has filled that position to the satisfaction of all concerned for over 25 years. It is not often that the students get the laugh on "Sam," as they familiarly and affectionately call him. One autumn day, just after the college had begun, when he was overseeing the burning over of part of the campus, a freshman coming along cried: "Well, Sam, that's most as black as you are!" "Yes, sah," promptly replied Sam; "and next spring it will be 'most as green as you are!'"

Hard Man to Interview.

It is said that Von Moltke was "silent in seven languages." Before the opening of a striking campaign he was walking the streets with head depressed, when some busybody approached him, determined to extort from him a word in regard to the campaign. "How are matters coming on, general?" he asked. "Well," said the general, "my cabbages are coming on very well, but my potatoes want rain!"

A VERITABLE PRODIGY.

Deaf, Dumb and Blind Boy Has Been Taught to Speak and Write.

Orris Benson was born in Grahamsville, Sullivan county, on September 7, 1881. At birth, and for two years and a half thereafter, he was a bright child, with the usual five senses and all his faculties. When eight years old he was sent by his parents to the New York state institute for the instruction of the deaf and dumb. He had become deaf, mute and blind by sickness.

No correct appreciation of what this boy has achieved can ever be had except by contemplating the obstacles he has had to surmount. He has been but six years in the Deaf Mute institute, and yet in that time he has been taught to write and to speak.

Enoch Henry Currier, the principal of the Deaf Mute institution, thus writes of young Benson: "He has been taught to write—I send specimen letter—and to speak. Yesterday I put a typewriter in his classroom. In 40 minutes he had mastered the keyboard, and I inclose you the first letter he attempted, as an indication of his ready mind and hand."

The first typewritten letter gives no indication of its unusual authorship, except that in the signature the last few letters are not in correct alignment. It is as follows:

MY DEAR MR. CURRIER—
 I thank you for you gave me this typewriter. I am a happy boy to-day.
 Your loving pupil, ORRIS BENSON.
 The following letter from the boy is written as legibly as as could be expected from a boy with none of the handicaps which Benson overcame:
 MY DEAR MOTHER—
 Please send me some note paper.
 I want some pretty paper.
 I am very sorry my baby brother is dead.
 I am glad Myrtle and Hazel remember me. I love them very much.
 Your loving son, ORRIS BENSON.
 If anyone fancies that it is an easy task for a blind person to write a letter,



ORRIS BENSON AND HIS TEACHER. A Deaf, Dumb and Blind Boy, Who Can Use the Typewriter.

let such a one make the attempt by blinding or conscientiously closing the eyes. Then write a letter of a couple of pages. You will have a good laugh at your miserable failure at keeping the lines straight, and at many other things. In short, the effort is full of ludicrous surprises.

Miss Bessie Myson is one of the oral teachers in the New York deaf mute institute. Orris Benson, in oral instruction, is under her care. The method of teaching Benson to talk is that known as visible speech. The letters by this system, or rather, the sounds which these letters represent, are labials, linguals and gutturals. By that extremely acute sense of touch which lodges in Orris Benson's finger tips he must learn the position in which to place his own tongue and teeth and lips that he may enunciate a sentence.

If he does not readily grasp the idea which his teacher wishes to impart, you may note him lean his head to one side, as though the better to hear, and then make another attempt. Sometimes it is necessary (his hands are always properly cleansed before he comes to his talking class, in anticipation of this emergency) for his teacher to let him put his fingers in her mouth and thus "see" the position of her tongue and lips. At other times she places his tongue and lips.

There are two things in thus learning to talk that the pupils must learn—first, to speak the word, and second, to know when he has that mastered, so that he can enunciate understandingly

for his hearers. There are now those at the New York institute who could not hear a pistol if it were fired close to their head, but who can yet speak as distinctly as anyone, and, moreover, read the lips of those who speak to them.—N. Y. Herald.

A TINY WHEELWOMAN.

San Francisco Claims the Smallest Bicycle Rider in the Country.

The smallest bicycle rider in the country is claimed by San Francisco. Her name is Valentine Larook Cornwell. She is but three years old and can manage her wheel, which was made



VALENTINE LAROOK CORNWELL.

specially for her, with as much skill as any veteran.

It took her all of two weeks to grasp the principles of equilibrium. She says it came to her suddenly, and, throwing aside the hands that steadied her, she commenced to cut figures of eight and grape vines on her own hook. Her little red knickerbocker suit is tailor-made; a sailor waist trimmed with white and a jaunty little red cap completes one of the cutest little figures seen on the boulevards and drives around San Francisco.

The entering wedge of a fatal complaint is often a slight cold, which a dose or two of Ayer's Cherry Pectoral might have cured at the commencement. Therefore, it is advisable to have this prompt and sure remedy always at hand to meet an emergency.

KENDALL'S SPAVIN CURE. Certain in its effects and never bilsters. Sold everywhere.

Southern Farms, Mills, Mineral Lands, Etc., for sale, rent and exchange. Geo. E. Crawford & Co., Richmond, Va.

MAY BE YOU CAN'T make \$40 or \$50 a week like some agents selling our 5-acre \$100 farms on installment of \$1 weekly, but almost anybody can earn half as much. Send for full particulars. D. L. RISLEY, 211 S. 10th St., Philadelphia, Pa.

Garnahan's Tree Wash and Insect Destroyer Destroys the bore worm and apple root louse, protects the plum from the sting of the curculio and the fruit trees from rabbits. It fertilizes all fruit trees and vines, greatly increasing the quality and quantity of the fruit. Agents wanted everywhere to sell the manufactured article. Address all orders to John Wiswell, Sole Mfr., Columbus, Kas.

Kansas Tannery ESTABLISHED IN 1889.

Does a general tanning business, including robes, rugs, etc. Tanning Galloway hides for robes a specialty. First-class work, reasonable prices. All kinds of leather in stock—best quality. Have you any oak bark? Good prices paid for it. Write me. M. C. BYRD, Lawrence, Kas.

Washburn College, Topeka, Kansas. For catalogue, address the Registrar, Washburn Academy. For information, address the Principal.

Commercial College And School of Shorthand, Typewriting, Telegraphy and Normal Penmanship.

The only Commercial College in Southern Kansas that teaches Actual Business Practice through the regular United States mail with all the leading colleges of America. This feature alone should decide where to get your Business education.

Over two hundred graduates and students filling good paying positions. Located in the beautiful Y. M. C. A. Building. (Incorporated). Fathers and Mothers, this is a safe place to send your sons and daughters, because the surroundings and influences are everything that can be desired. For Commercial Journal and Illustrated Catalogue, giving full information, address E. H. ROBINS, President, Wichita, Kas.

Topeka Business College TOPEKA, KAN. BEST BUSINESS, SHORTHAND, PENMANSHIP COURSES.

SPRAY THE EMPIRE KING. Our catalogue will tell you why it is the best. Send \$1.00 for postage and the catalogue is free. FIELD FORCE PUMP CO., 75 Market St., LOCKPORT, N. Y.

Nervous Prostration Cured by Dr. Miles' Nervine.

Prolonged derangement of the nervous system not only affects the brain and mental powers, but develops disease in some of the vital organs. The most dangerous of these indirect results is when the heart is affected. This was the case of the Rev. N. F. Surface, Fawn River, Mich., who writes under date of Feb. 14, 1895:



"Fourteen years ago I had a slight stroke of paralysis. Overwork brought on nervous prostration. I was exceedingly nervous and the exertion of public speaking caused heart palpitation that threatened my life. I used two bottles of Dr. Miles' New Heart Cure for my heart trouble, and two of Dr. Miles' Restorative Nervine for my nervousness and feel better than I ever expected to feel again. I can speak for hours without tiring or having my heart flutter as it formerly did, and I have you to thank that I am alive today."

On sale by all druggists. Dr. Miles' Book on Heart and Nervous Disorders FREE by mail. Dr. Miles Medical Co., Elkhart, Ind. Dr. Miles' Remedies Restore Health.

SMOKE YOUR MEAT WITH KRAUSERS LIQUID EXTRACT OF SMOKE. SEND FOR CIRCULAR. E. KRAUSER & BRO. MILTON, PA.

FRENCH BUHR MILLS. 28 sizes and styles. Every mill warranted. For All Kinds of Grinding. A boy can operate and keep in order. "Book on Mills" and sample meal FREE. All kinds mill machinery. Flour mills built, rollers or buhr system. Reduced Prices for '96. NORDYKE & MARMON CO., 285 Day Street, Indianapolis, Ind.

\$3 A DAY SURE. Send us your address and we will show you how to make \$3 a day; absolutely sure; we furnish the work and teach you free; you work in the locality where you live. Send us your address and we will explain the business fully; remember we guarantee a clear profit of \$3 for every day's work; absolutely sure; write at once. ROYAL MANUFACTURING CO., BOX A B, DETROIT, MICH.

"DO IT YOURSELF!" Washburn College, Topeka, Kansas. For catalogue, address the Registrar, Washburn Academy. For information, address the Principal.

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KANSAS FARMER.

ESTABLISHED IN 1863.

Published every Thursday by the

KANSAS FARMER COMPANY.

OFFICE:

No. 116 West Sixth Avenue.

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.**

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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 KANSAS FARMER free.

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

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

All 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.

The eleventh annual meeting of the Holstein-Friesian Association of America will be held at Iroquois hotel, Buffalo, N. Y., on Wednesday, March 18, 1896, for the election of officers and the transaction of any other business which may legally come before it.

A. D. Williams & Son, of Silver Lake, Shawnee county, have left at this office samples of white corn of which they last year produced 3,825 bushels on forty-five acres, or an average of eighty-five bushels per acre. The largest ear, weighed on our office scales, tipped the beam at eighteen ounces, and the others are not far behind it.

The fourth biennial report of the Kansas State Horticultural Society, being Volume 20, is just out. Owing to the meagerness of the funds available the report is confined to 100 pages. These are filled with selections made by acting Secretary Barnes from the abundance of materials at his command. The book is as valuable as a 100-page book can be made. Every horticulturist in the State should have a copy.

In a fulsome exultation over the vote in the House by which was defeated the Senate silver substitute for the House bond bill, Henry Clews remarks: "The men who make party policies should realize the fact that the great business community look upon this money question as the most serious issue that has been before the country for many years; that they are becoming very urgent for its prompt settlement; that they will tolerate no subordination of it to political expediency; and that, without regard to past party connections, they will give their support in the coming national elections to the side that most fully meets their demands in respect to sound money." There are numerous indications that financial influences in the coming campaign will be directed with little regard to past party affiliations.

GROW POTATOES, NOT VINES.—This year the farmers and gardeners of this country have an opportunity of getting a sweet potato that does not waste all its strength in growing yards and yards of vines, but pays proper attention to its legitimate duty—making a big yield of excellent potatoes. This is a novelty worth investigating. It will pay any up-to-date farmer to investigate, if only in a small way, with the new varieties of grain and vegetables and in choosing those best adapted to his soil. He is sure to profit by his enterprise and forethought. The Huntington Seed Co., of Indianapolis, Ind., whose advertisement also appears in this paper, are the introducers and sole owners of this wonderful new Gold Coin prolific sweet potato, and will gladly answer all inquiries. From present indications their stock will be exhausted early and those who have already received their catalogue should send their order in at once, and to those who haven't it, if sent for immediately catalogue may still be had, which will have many good things in store for you.

HOW WILL THE FARMER PRINCE FARM?

A Shawnee county farmer remarked to the writer, a few days since, that he had about concluded to let his land for this season. Tenants are anxious to take it at \$8 per acre, and, considering the risks, that is about all there is to be made, after paying for the labor. Information from various parts of the State, even beyond the middle line between the eastern and the western halves, is to the effect that the demand for farms to rent is a rapidly increasing one. A real estate firm in southeastern Kansas found it necessary to display a notice: "We have no more farms to let." This has its counterpart in the offices of many companies employing labor in which is posted the legend: "No more men wanted." These may not be the early indications of the crowded condition which is sure soon to exist in this country, as it has long existed in the older civilizations, but it is at least a foretaste of conditions different from those to which the middle-aged men of this generation and all their forefathers in this country have been strangers. It is not to be expected that all of the land will in the future be farmed by tenants. Indeed, as the demand for the use of land becomes more urgent, not unlikely many owners will discover desirable conditions in the occupying of the soil and in tilling it which were unseen when the most abundant of all things was land, when new land was to be had for the taking and the great cry was for settlers. The beauties and enjoyments of the rural home will become more fashionable when not everybody can enjoy them.

We have before remarked the strong tendency, amounting almost to predestination, by which American practices as to land follow in the grooves worn a few generations ago by English usage. Our laws are so modeled after the English and our customs as by heredity so easily revert to those of the mother country, that there appears now no force in our social existence capable of counteracting these influences. The effects were indeed largely neutralized when we had yet a great domain of free land to which the overcrowded centers could point their surplus populations for relief. But the disappearance of these by their total appropriation has been signalized by conditions which have transferred the titles, of areas great in the aggregate, to the ownership of the comparatively few with equal celerity to that of armed conquest.

In a recent interview published in *The Cable*, of London, England, Mr. Henry Marriage, a land-owning farmer of Essex, describes conditions not unlike what may easily be imagined as approaching in this country. He farms nearly 2,000 acres, most of which is his own. He hires about 500 acres. His method of farming is that of mixed husbandry so general in England. He feels the effects of American competition. Replying to an inquiry as to the number of bullocks he has, he said: "I used to fat several hundred, but since the American beef came in I have greatly diminished the number. I still keep a hundred or two."

"They are chiefly Short-horns, are they not?"

"Short-horns and Welsh. Formerly I kept Angus and Devon."

"Why did you make a change?"

"Because meat got so much cheaper, and I could not afford to buy the Scotch cattle."

As to rearing his own cattle he said: "I wean twenty-five pure-bred Short-horns a year and rear them."

He had given up dairying because of severe losses from anthrax and had not resumed it on account of the decline in the price of milk from 1s. 9d. to 1s. 4d. per gallon. The interviewer continued:

"How many sheep do you keep?"

"I have two flocks of half-bred ewes, cross them with a Hampshire Down ram, and make fat lambs, which I begin to sell before Easter."

"What is your system in regard to sheep?"

"The ewes are folded on the land in the spring, and the lambs are allowed to run forward. I feed them with cake middlings—offal from the mill—and old beans. My experience is that too many old beans kill them. Nothing, on the other hand, is so wholesome as linseed cake. It keeps them very healthy. Then we winter from 1,000 to 1,100 Down sheep. I begin to buy them in about the end of August."

Not a few persons think the details

of the care of farm interests irksome, and avail themselves of every agency to be relieved of these cares. With the coming increased popularity of farm occupation this is likely to be revised and the farmer will have a great pride in attending to these details. This English farmer of 2,000 acres, 1,500 of which are his own, speaking of the purchase of sheep for winter feeding, said:

"I get them from the West of England myself. No, I do not employ dealers to buy for me at all, though I am quite willing to sell to them if they like to purchase from me. All the wether sheep are sold by the end of January."

After a description of his methods of breeding hogs, he was asked:

"Have you suffered much from swine fever?"

"Not at all. I have never had a case of swine fever in my place. Yes, it is true that half the county is shut up with it, but there is very little in this neighborhood."

"To what do you attribute your entire exemption; to cleanliness?"

"No, not so much to cleanliness as to feeding. The chief cause of swine fever is injudicious food. Pigs are naturally dirty, and you cannot alter nature. Dirt does not seem to injure them."

"How do you feed yours?"

"I give them stuff from the mills. I also give them medicine once a fortnight."

"What sort of medicine?"

"Brimstone and Epsom salts. It acts on the blood."

He seems not to have kept up with the times as to the value of wheat for feeding purposes. Perhaps it was an ultra conservatism which led him to say:

"No. I am aware that since the price of wheat has been so low a lot of wheat has been given to pigs. But I am satisfied that it does not suit them. It does not suit horses either very well. At any rate, I only give them a little. Wheat is not a thing for animals; it only suits human beings."

He breeds from twenty to twenty-five foals each year and works sixty horses on the land—about one to thirty-three acres.

Discussing his system of farming, Mr. Marriage observed:

"I have had to alter my system since the price of corn has fallen so greatly. For instance, I have given up beans to a large extent, and peas entirely. I did not grow a single acre of peas last year."

"How about barley?"

"I grow a great deal. Last year I had upwards of 800 acres. I grow only a little less wheat."

"That is not the general practice?"

"The fact is, I make my wheat pay as well as anything else. I used to buy straw when wheat fetched a higher price, and now I sell it to make up the difference. Straw and hay have sold pretty well lately. Then I grow more roots for folding sheep, and potatoes."

Labor! O, no, there is plenty of that to be had.

"Have you any trouble in getting as many men as you require?"

"None at all. I adopt the principle of piece-work, even in threshing and picking up potatoes. The laborers are on piece, and the stockmen and shepherds on wages. The former earn from 11s. to 12s., and the latter from 13s. to 15s. a week."

Fixed charges have not been reduced in England to as great an extent as that by which prices have fallen. Still there appears to have been something attempted in that direction, especially as to the tithe, a burden fortunately unknown in this country. On this he said:

"A really great grievance is that tithe is so high in the poor lands. Although land has dropped 50 per cent., tithe has only dropped 25 per cent. In this locality the tithe question is regarded as most important. Tithe, you know, was based on wheat at 54s. a quarter, barley at 34s. and oats at 24s. a quarter. Now, wheat is 23s., barley 24s., and oats 14s., a quarter."

The aggregate of the taxes on land is something enormous.

"How much does the tithe come to in this district?"

"In our parish to 15s., and in several to 12s. an acre. I am aware that many people do not like to face the question. But my view is that it ought to be faced. The tithes are a regular burden to the land, and tend to drive it out of cultivation."

"And the land tax?"

"That is another burden. A tenant of mine says that his land tax comes to 3s. 6d. an acre. Another grievance is that the tenants have to pay the whole of the School Board rates. The landlord ought to have to pay half."

Some other questions were discussed, among which was the need of tariff protection for farm products. This is favored by the land-owning "Conservative" party much more than by the party of commerce, the traders, the "Liberal" party in England. But to the unprejudiced in this country it is a conundrum why the owner of 1,500 acres of farming land rents and farms 500 acres more if his farming needs protection to make it profitable.

In some such manner as shown in

SPECIFIC FOR SCROFULA.

"Since childhood, I have been afflicted with scrofulous boils and sores, which caused me terrible suffering. Physicians were unable to help me, and I only grew worse under their care. At length, I began to take



AYER'S

Sarsaparilla, and very soon grew better. After using half a dozen bottles I was completely cured, so that I have not had a boil or pimple on any part of my body for the last twelve years. I can cordially recommend Ayer's Sarsaparilla as the very best blood-purifier in existence."—G. T. REINHART, Myersville, Texas.

AYER'S

THE ONLY WORLD'S FAIR
Sarsaparilla

Ayer's Cherry Pectoral cures Coughs and Colds

this interview is the American farmer prince of the not distant future likely to farm. Around him for a time will be the less energetic or the less successful who each till a few acres of their own or of rented land, but the men who master their business and give it their attention are likely here in the future as they have in England in the past to absorb by purchase and by lease the right to till the land, while the less thrifty become hirelings—possibly hirelings by the piece, as in the case under review.

KANSAS STATISTICS AND THE ASSESSORS.

In furtherance of the law requiring Kansas township and city assessors to each year make an enumeration of all the inhabitants and collect statistical information of agriculture, horticulture, manufactures, mines, mining, etc., the State Board of Agriculture has just completed sending out the vast quantity of necessary blank rolls.

While this service as performed in Kansas is probably not surpassed in any State, Secretary Coburn is not at all satisfied with the slovenly work heretofore turned in by many of the assessors and thinks it can and should be immensely improved upon. To that end he has issued a personal appeal to each of the nearly 2,000 assessors to make his statistical work the most thorough and accurate possible, and urged the County Commissioners and Clerks to not accept such service or draw warrants for it until it complies with the law's requirements and the assessor's oath of office.

As the statutes make a failure to properly do the work a misdemeanor, for which there is a fine of from \$20 to \$100, and as the assessors are allowed \$3 per day for the necessary time, it would seem that these, with a proper pride and loyalty to Kansas, should be sufficient incentives to insure a very high grade of work. This, all along the line, would be of inestimable value to the State in many ways. Among other suggestions the Secretary makes in his letter are these:

"Make it clear to every individual that giving this information as to his possessions has nothing whatever to do with taxes or taxation. Be sure to obtain the statistics of all manufacturing and mining industries fully; among others the dairy interests have been too much overlooked heretofore; and the cheese, butter and milk items, for the factories as well as the homes, should be carefully looked after. All these statistics are for the benefit of Kansas and Kansans, and if gathered as they should be will make a splendid showing for the State and what it has, in spite of the depression. I want your hearty personal co-operation to help make our showing for your township, your county, and the whole State, when published, the very best the facts will justify. Do not slight any feature of it."

Howey's Sale of Pure-Bred Swine.

The public sale of thoroughbred swine, by V. B. Howey, at his farm, five miles southeast from Topeka, last Friday was a good one. After a sumptuous dinner, which did credit to the skill of Mrs. Howey and daughters, Col. Jas. W. Sparks, of Marshal, Mo., began selling as fine a lot of Poland-Chinas as has ever been offered in Kansas. Fourteen years ago Mr. Howey commenced breeding thoroughbred hogs, his foundation stock being selected from the best herds in the United States. His shipments have covered territory as far east as Indiana and as far west as Washington and southwest to New Mexico. His skill as a breeder was amply attested by the excellent herd offered. The Poland-Chinas brought the highest average ever made at a public sale in Kansas. Several noted buyers were present and purchased choice animals for their own herds. The average price was \$27.44.

The following list, arranged alphabetically as to buyers, shows the details of the sale:

J. A. Baxter, Waveland, Poland-China sow, farrowed May 11, 1895, sire Challenge 28795, dam Nancy Hanks 75704, \$29.50. Poland-China boar, farrowed May 5, 1894, sire Corwin Index 31459, dam Corwin Maid 78700, \$17.50. Poland-China sow, farrowed June 7, 1895, sire Dandy Jim Jr. 8493 S., dam Curly (Vol. 18), her sire Challenge 28795, dam Nelly 15791 S., \$23.50.

G. W. Berry, Berryton, Poland-China sow, farrowed June 7, 1895, sire Dandy Jim, dam Curly (Vol. 18), her sire Challenge 28795, dam Nelly 15791 S., \$55.

J. P. Bryson, Michigan Valley, Berkshire boar, farrowed May 12, 1895, sire Stumpy Duke 34307, dam Silver Tips XI. 29826, \$8.

P. W. Bundy, Auburn, Poland-China (not catalogued), \$25.

M. F. Chapman, Rossville, Poland-China sow, farrowed May 11, 1895, sire Challenge 28795, dam Nancy Hanks 75704, \$30.

W. R. Foster, Pauline, Poland-China sow, farrowed June 7, 1895, sire Dandy Jim Jr. 8493 S., dam Curly (Vol. 18), her sire Challenge 28795, dam Nelly 15791 S., \$19.

Alexander Gardner, Richland, Berkshire sow, Silver Tips XXII. 34314, \$26.

W. S. Jamleson, Rossville, Berkshire sow, Silver Tips XI. 29826, \$30. Berkshire sow, farrowed May 12, 1895, sire Stumpy Duke 34307, dam Silver Tips XI. 29826, \$14. Berkshire sow, farrowed April 27, 1895, sire The Poet, dam Flat Dutch, \$11.

J. S. Jordan, Wakarusa, Poland-China sow, farrowed May 5, 1895, sire Corwin Index 31459, dam Corwin Maid 78700, \$29.50. Poland-China sow, farrowed June 7, 1895, sire Dandy Jim Jr. 8493 S., dam Curly (Vol. 18), her sire Challenge 28795, dam Nelly 15791 S., \$27. Poland-China sow, farrowed April 27, 1895, sire Corwin Index 31459, dam I. X. L. 3d (Vol. 18), her sire I. X. L. 2d 25830 S., \$22.

H. M. Kirkpatrick, Connors, Poland-China sow, farrowed June 7, 1895, sire Dandy Jim Jr. 8493 S., dam Curly (Vol. 18), her sire Challenge 28795, dam Nelly 15791 S., \$23.

George Kupper, Belvoir, Poland-China boar, farrowed July 25, 1894, sire Challenge 28795, dam Nancy Hanks 75704, \$20.

H. W. McAfee, Topeka, Poland-China sow, farrowed May 11, 1895, sire Challenge 28795, dam Nancy Hanks 75704, \$28. Poland-China sow, farrowed April 27, 1895, sire Corwin Index 31459, dam I. X. L. 3d (Vol. 18), her sire I. X. L. 2d 25830 S., \$22.50.

J. B. Moffatt, Berryton, Poland-China sow, same breeding as last mentioned, \$26.50.

Mrs. A. Ostertag, Teyis, Poland-China sow, Nancy Hanks 75704 and five pigs, by Corwin Index 31459, \$62. Poland-China sow, Shawnee Girl (Vol. 18), \$36. Poland-China sow, farrowed May 5, 1895, sire Corwin Index 31459, dam Corwin Maid 78700, \$25. Poland-China boar, farrowed June 7, 1895, sire Dandy Jim Jr. 8493 S., dam Curly (Vol. 18), her sire Challenge 28795, dam Nelly 15791 S., \$17.50. Poland-China sow, farrowed April 27, 1895, sire Corwin Index 31459, dam I. X. L. 3d (Vol. 18), her sire I. X. L. 2d 25830 S., \$18.

John Page, North Topeka, Poland-China sow (not catalogued), \$13.50.

E. A. Reed, Tecumseh, two Berkshire sows, farrowed May 11, 1895, sire Stumpy Duke 34307, dam Black Girl XI. 33681, \$9 each.

W. H. Lumey, Pauline, three Berkshire sows, farrowed May 12, 1895, sire Stumpy Duke 34307, dam Silver Tips XI. 29826, \$19.50, \$10.50 and \$6.

W. S. Tucker, Leon, Poland-China sows, Corwin Girl (Vol. 18), \$36, and Fancy Girl (Vol. 18), \$33; sire of these, Challenge 28795, dam Nancy Hanks 75704. Poland-China sow, farrowed May 5, 1895, sire Corwin Index 31459, dam Corwin Maid 78700, \$30.

Mrs. P. D. Tyrrell, Topeka, Poland-China boar, Challenge 38795, \$26.50. Poland-China sow, farrowed May 11, 1895, sire Challenge 28795, dam Nancy Hanks 75704, \$32. Poland-China sow, farrowed April 27, 1895, sire Corwin Index, dam I. X. L. 3d (Vol. 18), \$19.50.

J. S. Tyrrell, Topeka, Poland-China sow, same litter as last above.

O. P. Updegraff, North Topeka, Poland-

China sow, farrowed May 11, 1895, sire Challenge 28795, dam Nancy Hanks 75704, \$26. Poland-China sow, farrowed April 27, 1895, sire Corwin Index 31459, dam I. X. L. 3d (Vol. 18), \$30. Berkshire sow, Flat Dutch 35485, \$15. Berkshire sow, sire Onward, dam Stumpy Express 32173, \$11.

One Poland-China boar, farrowed June 7, 1895, sire Dandy Jim Jr. 8493 S., dam Curly (Vol. 18), was put up with Mr. Howey's bid of \$40 and not raised.

The purchasers got excellent individuals as well as high breeding, and the KANSAS FARMER has no doubt the animals will give good accounts of themselves in their new homes. Mr. Howey is to be congratulated on the great success of his sale as well as his skill as a breeder.

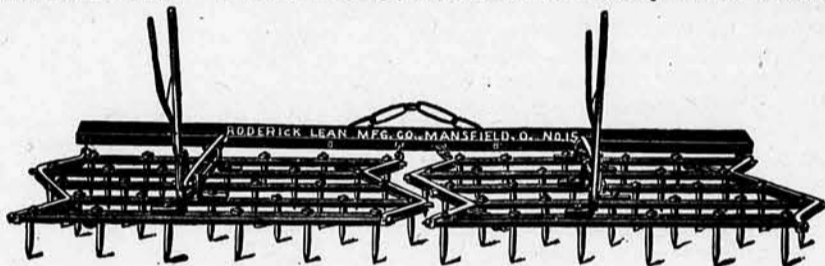
More Light on Hog Cholera.

EDITOR KANSAS FARMER:—Your issue January 23, wherein Crummer replies to mine of January 2, reached me in a round-about way, hence the lateness of my reply, and, if you will kindly give me a small space, I will try and clear this matter up.

Mr. Crummer sets me down as an accomplished theorist, who has had little experience with hog cholera. Allow me to state that, as far as theorists are concerned, Mr. Crummer and ilk are the ones, not I. Practical facts are what I deal with. Born and brought up on a stock farm, I have given this matter study for years, perhaps more than Mr. Crummer has. His own statement, where he says I jumped on him with both feet, and at the same time swept away all hopes of the gentlemen who are experimenting with inoculation as a preventive against hog cholera, is correct. They ought to be jumped on. There never was and never will be any satisfactory, practical results from inoculation. They are only trying to hoodwink the farmer, and send him to a drug store to spend his good money for nothing.

If these gentlemen would get down and give farmers practical means of ridding them of hog cholera, instead of experimenting and theorizing, they might be of some value; but, if they did, what would become of their position? It is about time farmers were catching onto this.

Further on, he says: "There is nothing



THE LEAN ALL-STEEL HARROW.

to show that hog cholera originates from filth." Where, oh! where, does it come from? Certainly not from the fields where the sun and pure air have access; he, himself, states the reason hog cholera becomes so prevalent in the hog yard or pen, is because the sun and wind are prevented from renovating and cleansing the ground. Herein, I state, he is not consistent, and is not trying to enlighten the farmer in reference to hog cholera.

The only thing that I acquiesce in with Mr. Crummer is the use of a special food, not drugs, calculated to keep hogs healthy. Every farmer knows that a healthy hog is less liable to disease, than if in a poor condition. I will state that I am in the food business, but that he in no wise tramples on my toes, and will again state that no food fed alone is sufficient to prevent and cure hog cholera; but I further state that hog cholera can be cured as well as prevented. This is not a theory or experiment; it has been tried, tested and proven—not once, but hundreds of times—that is, by killing the germ under the hog's feet with Bannerman's Phenyle, a germicide, and feeding Anglo-American food to the hogs.

Mr. Crummer says that thousands of the most practical hog men have disinfected their hog yards, when cholera was in their vicinity, only to have their hogs contract the disease, and, frequently, in the most virulent form. When he makes this statement, I do not believe Mr. Crummer knows what a disinfectant really is. Certainly no practical farmer ever used a disinfectant and germicide, much less a germicide, properly, and lost his hogs; and, just as soon as the State experimental stations come down from their theories on inoculation and feeding drugs to the use of a thorough disinfectant and germicide to kill the germ under their feet, and then feeding a special food, not drugs, they will be of some benefit to the farmers. In fact, some of the stations have started to do so. This is the thing we have been doing for the last two years with success.

The fact that some of the States have already decided that to feed drugs is of no value, and are looking to the use of a germicide, shows us that they are merely following our tracks, even if a little late.

For a further proof of the position we take, we will place at the disposal of the editor of this paper sufficient goods to cure

ten head of hogs, taken from a herd infected with the most virulent type of cholera, and cure them inside of three weeks, leaving them absolutely free at the end of the time from cholera. These goods will be delivered, f. o. b. here, without any string attached, with only one request—that the directions for use be followed implicitly, as will be given. These directions are simple, adaptable and reasonable.

We will further state that farmers have been using these goods in the worst infected cholera district in Iowa for the last two years, and have never lost a hog. Some farmers, who keep herds of from 2,000 to 3,000 state that they would rather be without food than the goods. The names of these parties will be sent to any person on application, the result obtained from the use of our goods to be published in this paper. Be it as it may, one way or the other, we will abide by it as far as we are concerned. We challenge the world to dispute us that we cannot cure and prevent hog cholera.

ALEX. ALLARDYCE.

113 Adams St., Chicago, Ill.

Gossip About Stock.

V. B. Howey, whose sale of pure-bred swine, both Poland-China and Berkshire, averaged \$27.44 for forty-three head, has still sixteen English Berkshire boars ready for use for sale at \$15 per head if taken soon.

J. R. Killough & Sons, swine breeders, of Richmond, Franklin county, Kansas, report their herd in the best of condition. They are expecting a fine lot of spring pigs, and to make room will sell some fine fall pigs at bargains. These pigs were sired by Upright Wilkes 13246, and J. H. Sanders Jr. 18729 S., and are out of first-class sows. They will also sell J. H. Sanders Jr. 18729. This is a chance to get a herd boar that is bred in the purple and a good breeder.

M. H. Alberty, of Cherokee, Kas., reports that he has some choice Duroc-Jersey male pigs, also Holstein-Friesian heifers and bulls, ranging from six to fourteen months. Fully 80 per cent. of his sales have been made to readers of the KANSAS FARMER, and he now desires their attention to what he has ready. He has some choice animals for sale which ought to be at the head of farmers' or breeders' herds. Mr. Alberty's animals are from the very choicest founda-

tion stocks and trace to the famous ancestors. It will be well to write Mr. Alberty for full information.

The successful breeder, T. A. Hubbard, of Rome, Sumner county, Kansas, reports a great shock to his constitution and by-laws when, the night before Washington's birthday, one of his \$1,000 Berkshire sows presented him with a litter of fifteen strong, smart pigs. He is not sure whether any got away in the dark. His hogs are doing nicely and are in the pink of condition. He has plenty of males ready, also some sows bred and not bred.

The attention of every swine breeder and stock hog-raiser is again called to the dispersion sale of the Sunny Slope farm herd of pedigreed Poland-Chinas. On reference to the announcement elsewhere in this issue, the reader will obtain some idea of the breeding and the character of the offerings that will go to the highest bidder. If further information be desired write for a copy of the free sale catalogue that is handsomely illustrated and contains the pedigrees of the 150 animals that will go into the sale. It is positively a closing-out sale, hence all the prize-winners will be included in the sale.

M. C. Vansell, proprietor of the Ashland stock farm, Muscotah, Atchison county, Kansas, reports through our field man that his herds of Short-horns and Poland-China swine are coming through the winter in excellent condition. The spring farrowings are coming right along and were sired mainly by the great breeding boar, Admiral Chip 7919 S. Quite a nice bunch of yearling sows bred to him could go out to new hands. Half a score or more of his daughters have been bred to a son of Chief Tecumseh 2d and will be priced right to those wanting something royally bred and extra good individuals as well. Mr. Vansell takes pleasure in answering inquiries and showing visitors at the farm the practical results of his work as a breeder of high-class live stock.

Exhibitors and visitors at the Nebraska State fair in 1893 and 1894 will remember the exhibit made by Mr. E. A. Bricker, then of Nebraska, but since an adoptive citizen of Kansas, and resides near Westphalia, in Anderson county. He reports, through our field man, that he has a nice lot of gilts sired by Guy Wilkes 3d 12181 S. and Tecumseh's Grand 9178 S. On an inspection of the extended pedigrees of these herd boars one finds them very strongly bred in the best of lines belonging to the two leading families. Their daughters above mentioned were bred to a son of King Perfection, the \$1,000 boar, and are due to

Cures

Prove the merit of Hood's Sarsaparilla—positive, perfect, permanent Cures.

Cures of Scrofula in severest forms, Salt Rheum, with intense itching and burning, scald head, boils, pimples, etc.

Cures of Dyspepsia, Rheumatism, Catarrh, by toning and making rich, red blood.

Cures of Nervousness and That Tired Feeling, by feeding nerves, muscles and tissues on pure blood. For book of cures by

Hood's Sarsaparilla

Send address to C. I. Hood & Co., Lowell, Mass.

Hood's Pills are the best after-dinner pills, aid digestion. 25c.

farrow in April or May. In order to make room for the expectant spring pig crop the gilts will be priced at \$15 to \$25. Both the old boars are for sale, as they cannot be judiciously longer used in the herd. Mr. Bricker desires a more extended acquaintance with Kansas people and will endeavor to please all his prospective patrons.

At no time since the first authentic importation of Hereford cattle into this country, in 1840, by Wm. H. Sotham, of New York State, have the "White-faces" been held in higher esteem or the demand equal to that of the present time, not only in this country but in South America and Australia. The attention of the professional breeder and those that contemplate an improvement of their beef cattle is called to the closing-out sale announcement found elsewhere in this issue, of the Rock Creek herd. By sending for a copy of the free sale catalogue the reader will find therein information pertaining to the breeding and history of the herd worthy the attention of the ambitious breeder the world over.

J. A. Worley, proprietor Pleasant View stock farm, Sabetha, Kas., advertises some fine breeding stock. He writes: "The Short-horn bulls that I advertise are good ones, solid red in color, and sired by Cruickshank-topped bulls, three of them by Monitor, a grand, good bull from the herd of John McCoy, of Sabetha, and as I have used him two years am offering to sell him at a bargain. He was 8 years old last September and is a good and sure breeder. The four young ones are all smooth and in good breeding condition, one of them being 1 year old last September and an extra fine animal. I also have Light Brahma and G. L. Wyandotte eggs for sale. My Poland-Chinas are coming on in fine shape. Have sixty head from eight sows and they are fine ones."

The Lean All-Steel Harrow.

Some years ago it was discovered by accident that the fall wheat might be harrowed early in the spring, not only without injury but with benefit. The mere drawing of a sharp, light, bright-toothed harrow over the field, freshened up the soil, killed the weeds and started a vigorous growth that added much to the yield. It seemed a rash thing to do, but when it was done, the result always satisfied the farmer. Since then it has been the custom to harrow potatoes or corn as soon as the plants have appeared above the surface and when the young weeds are in their tenderest condition.

D. K. Milhan, a prominent farmer of Williamson, N. Y., says that the Lean All Steel Harrow he bought last spring, is the best tool he ever saw for pulverizing the ground. It is a great weed-destroyer soon after they come up. He harrowed his corn and potatoes at two different times, also harrowed his root crops—carrots and mangel wurzel—and claims that the harrow more than paid its cost just on his corn, potatoes and root crops alone, in one season.

The illustration on this page is an exact reproduction of the Lean All-Steel Harrow referred to, and is made by the Roderick Lean Manufacturing Co., of Mansfield, O., whose advertisement appears from week to week in this paper.

This harrow is constructed on the zigzag principle, allowing the team to draw from the center, and being drawn straight, the sections are free to adapt themselves to the unevenness of the ground. The position of the teeth is controlled by a lever and may be adjusted to any angle, forward or backward, as best suited to the conditions of the soil or the requirements of the work. It can also be cleared of trash in an instant without stopping the team. This harrow is highly recommended for general farm and garden work, and since harrowing growing crops has become so general, it has made a wonderful demand for the Lean harrows, which are well adapted to general farm work.

Any of our readers who are in need of a harrow for this spring's work will do well to correspond with this firm before making their purchase.

Horticulture.

Winter Work in the Vineyard.

By A. Chandler, Argentine, Kas., read before the Missouri Valley Horticultural Society.

The subject assigned me is not one that I feel that I can do justice, but at any rate I will make a few remarks.

The work in a vineyard is generally left for a more convenient time, in which case the vineyardist suffers, as also does the vineyard. Pruning will first claim our attention. Without any attempt at a scientific explanation how, I will just say that three or four canes of thrifty new wood, securely fastened to a wire trellis five feet high, is sufficient. These canes will have from thirty to thirty-five buds, which is plenty if the vineyard is well up in fertility. If the land is then and overcropping has been allowed, one-half this number is ample. The time for trimming should immediately follow our Indian summer; then the leaves are off and the wood sufficiently matured. We will get well punished for delay if pruning is left until mid-winter or early spring. Mud and snow boot-top deep will be your portion with no mitigating compensation. But, on the other hand, you have induced bronchitis, neuralgia and rheumatism. Therefore, we say, stick to the old motto: "A time for everything and everything in its time." Prune vineyards in the fall, burn all the trash, thereby getting rid of fungi spores, injurious insects and insect eggs that are generally found in the accumulated debris. Adjusting No. 12 wire and tying up the canes can be attended to just before budding. All this done, much yet remains to claim our attention.

Soil conditions and fertility must be looked after and studied closely. We hear of many troubles in the vineyard. If the plants could talk to us we would hear them say: "I am hungry; can't you give me something for my starving rootlets?" If it can be obtained, the application of twenty tons per acre of barnyard manure will cure some of the diseases prevalent in our vineyards. I had numerous object lessons in very early life as to the value of wood ashes. I noticed particularly where log heaps were burned that the corn was higher and a deeper green; two ears were taken from a stalk, while adjacent hills had little or nothing. It is stated that ashes have little value. I have yet to be convinced of its truth. I verily believe that the application of 1,200 or 1,500 pounds per acre of unleached wood ashes that will yield 10 or 12 per cent. potash will cure the shelling and dropping complained of by so many the past season. Soil exhaustion is the bane of the fruit-grower and brings a multitude of evils in its train. Ashes will cost \$4 to \$5 per ton; hauling and applying \$3 more. This is "winter work." If neglected now it is liable to not be done at all. In emphasizing the liberal use of potash, it is not intended to detract from the value of phosphoric acid and nitrogen, which have their respective places. They must not be underestimated or overlooked. No amount of cultivation will remedy defective plant nourishment.

The history of the vineyard is as old as the history of the human race. It is not intended in this paper to review it, but it behooves this society to look well to the causes that have led to the extermination of vineyards in places in the old world, some of which is due to over-cropping and under-feeding. We notice that large areas have been planted in vineyards around Kansas City. With the neglect that follows this extensive planting, many of the evils in the history of the vine will be reproduced.

Now, to recapitulate the points of this brief paper: (1) Trim judiciously. (2) Feed plentifully with potash. (3) The following summer cultivate thoroughly and spray three times with Bordeaux mixture. Attend to these details, the production of a grand fruit will follow, the aroma and flavor of which is not excelled by any fruit that God has ever given to man.

No one in ordinary health need become bald or gray, if he will follow sensible treatment. We advise cleanliness of the scalp and the use of Hall's Hair Renewer.

Sulphur as a Preventive of Potato Scab.

EDITOR KANSAS FARMER:—A letter from A. T. Ellison, of Piqua, Kas., incloses a clipping from a report at an Eastern experiment station, in which it was shown that common sulphur had proved to be the best preventive for scab in potatoes, and says: "I hope you will be able to make proper use of it and let us hear of your results through the KANSAS FARMER. Success to you with your Coburn No. 1 and No. 2."

I am very much obliged for the clipping and have sent for the bulletin and will experiment.

This letter shows how one reader of the FARMER feels for and looks to the interest of the whole "Reliable" family.

This reminds me that I shall make a test of a great many varieties of potatoes this year, and any one who wishes any one variety tested can have it tested fairly by mailing me one or two tubers. I shall probably have some tests made in the Arkansas and Kaw valleys, also, in order to see if the Coburn No. 1 is earlier than the Ohio there as it is here. C. J. NORTON. Morantown, Kas.

Missouri Valley Horticulturists.

EDITOR KANSAS FARMER:—The Missouri Valley Horticultural Society held its monthly meeting, February 15, 1896, at the club room of the Coates House, Kansas City, Mo., J. C. Evans in the chair.

Orchards were reported in good condition. Stone fruit all right. Peaches uninjured so far. Cherry trees that bloomed in the fall unhurt; plenty of buds remaining. All kinds of small fruits have wintered well except the raspberry, which is badly affected with anthracnose, in places entirely destroyed. Vineyards in fair condition.

Papers by J. C. Evans, "Spraying Fruits;" M. L. Thompson, "Horticultural Literature;" A. Chandler, "Winter Work in Vineyards."

A discussion was opened in regard to peaches—natural fruit vs. budded. The consensus of opinion was that peaches would not reproduce themselves from seed when pollen from other varieties was allowed to come in contact.

A resolution was offered by J. C. Evans in regard to establishing three or more sub-experiment stations in the State of Missouri for the benefit of horticulture. Passed and referred to a committee.

Adjourned to meet March 21. A. CHANDLER, Secretary.

OUT OF WEAKNESS comes strength when the blood has been purified, enriched and vitalized, the appetite restored and the system built up by Hood's Sarsaparilla.

HOOD'S PILLS cure nausea, sick headache, indigestion, biliousness. All druggists. 25 cents.

Millions of Gold

In sight at Cripple Creek, Colo. Only twenty-three hours from Topeka by the Santa Fe Route, the only broad-gauge route passing right by the "Anaconda" and all the famous mines. See the nearest Santa Fe agent for all particulars, or write to Geo. T. Nicholson, G. P. A., Chicago, Ill., or W. J. Black, A. G. P. A., Topeka, Kas.

Nickel Plate Road,

the shortest line from Chicago to New York and Boston via Fort Wayne, Cleveland and Buffalo, operates a perfect passenger equipment with a first-class road-bed and an exceptional service of Wagner Sleeping and Buffet Cars. Rates always the lowest. For information as to rates, time of trains, etc., call on or address J. Y. Calahan, General Agent, Chicago, Ill. 50

Working Stony Ground.

The writer has for years past enjoyed the comfort of a smooth surface upon very stony land. Formerly the stones were a great impediment to working the soil, and any harrow used brought them all to the surface, no matter how carefully they were plowed under. But since using the "ACME" Pulverizing Harrow, Clod Crusher and Leveler the stones, carefully turned under and covered, remain undisturbed, and a clean, clear, smooth field is the result. A stony field sown with rye and grass and clover early last fall is now as smooth as if there were no stones in the soil, and there is no stone to be seen to disturb the mower when the field will be cut for hay. See advertisement on page 14.

Plant Trees and Orchards in 1896.



The old reliable Hart Pioneer Nurseries, of Fort Scott, Kas., have large supplies of choice stock for sale at special prices. 600 acres in nursery, 240 acres in orchard. Extensive growers for the wholesale trade. Write and obtain prices before placing your orders elsewhere. No transfer or exposure of stock. We take up, pack and ship from the same grounds. Send for our

Illustrated Planter's Catalogue and Price List.

We solicit your correspondence and invite inspection of our stock.

Reliable Agents Wanted.

Address

HART PIONEER NURSERIES,

FORT SCOTT, KANSAS.

Early Ohio Grape, Six Weeks Earlier Than Concord.

KANSAS HOME NURSERY

Grows the best New and Standard Fruits and Ornamentals. Own the largest and oldest experiment grounds in the West. Offer new Apples, Raspberries, Strawberry and Apple. Catalogues free. A. H. GRIESA, Box J., Lawrence, Kas.

Johnson White Seed Corn.

Our record of the Johnson White Seed Corn for 1895 is, forty-five acres yielded 3,825 bushels. Try it this year. It's a winner! Write for prices to

D. A. WILLIAMS & SON, Silver Lake, Kansas.

Trees, Shrubs, Plants, Bulbs!

Apple trees, large stock, \$40 per 1,000; special rates on large orders. Cherry, Pear and Plum, \$15 per 100. Strawberry, \$2.50 per 1,000. Raspberry and Blackberry, \$5 per 1,000. Concord Grape, \$1.25 per 100. Thirty Greenhouse Plants, \$1—mail or express. Price list free.

BONNER SPRINGS NURSERIES, Bonner Springs, Kansas.

A Full Supply of All Kinds of Nursery Stock in

Pear, Peach, Apricot

Apple, Cherry, Plum, Grape Vines, Small Fruits, Evergreens, Roses, Shrubs, etc.

Send for descriptive list and prices. Address J. F. CECIL, Nurseryman, North Topeka, Kas.

ALLIANCE Seed House GOVE CITY, KAS. Is acknowledged by all to be the Seed House on earth. Pkts. 2 to 30 cents each; other seed cheap in proportion. FREE on receipt of stamp. Catalogue mailed to all. Give us a trial!

EARLY KANSAS

437 bu. SEED POTATOES per acre. An enormous yielder, a great keeper and a splendid table potato. Endorsed by all who have tried it.

KANSAS FARMER one year and one bushel. \$1.75 Rural New Yorker " " " " 1.85 Practical Farmer (Ohio) " " " " 1.85 Practical Farmer (Pa.) " " " " 1.75 Journal of Agriculture (Mo.) " " " " 1.85

CLARENCE J. NORTON, Morantown, Kas.

GOO BUSHELS PER ACRE EASY SWEET POTATOS WITH OUR GOLD COIN VINEYER PROLIFIC IMMENSE YIELDERS. QUALITY SUPERB. Earliest Sweet Potato on earth. Earliest cultivated. Highest endorsement by best agriculturists in America. Thoroughly tested. Millions will want them. If you are after a MONEY MAKER you must have them. POTATOES that vines are what pay. Save ground, save time in digging. BETTER KEEPERS. Just what has been wanted for the LAST FIFTY YEARS. Have MORE MERIT than any novelty ever offered. Don't wait, but send two-cent stamp at once for catalogue that tells all about them; also our "BEN HUR" Irish Potato. Entire stock of both owned exclusively by ourselves. Our SEED CATALOGUE this year is A WONDER, so many GOOD THINGS and prices low. It is sure to interest you. Address THE HUNTINGTON SEED CO. INDIANAPOLIS, IND.

\$140 buys New Plano. Organs \$49. Catalogue Free. DANIEL F. BEATTY, Washington, N.J.

NEW IMPERIAL TOMATO

COLE'S Early Water Melon and Cincinnati Market Radish, three leading Vegetable Novelties, 1 pkt. each for only 10 cts. Or three Flower Novelties—Pansy Large German, Cosmos Giant Perfection, and Zinnia New Giant, 1 pkt. ea. for only 10c, or the two collections together with a pkt. of CUPID, the new dwarf Sweet Pea, for 30c, prepaid, worth 60c. Our Handsome Garden Annual Free. Write for it. COLE'S SEED STORE, PELLA, IOWA.

EVERGREENS. Largest stock in America, including Colorado Blue Spruce and Douglas Spruce of Colorado. Also Ornamental, Shade and Forest Trees, Tree Seeds, Etc. R. DOUGLAS & SONS, Waukegan, Ill.

EVERGREENS!

and Ornamental trees, Nursery grown. 250 Choice Evergreens, 10 varieties \$2. 400 Ornamental trees, 6 varieties, \$2; 5 other \$5 and \$10 bargains, 100 Scotch Pine, 2 ft. high, \$8; 1,000 10 to 12 inches \$10. All other varieties and sizes cheap. Local Agents Wanted. Send for Illustrated Catalogue. FREE. Evergreen Specialist, D. HILL, DUNDEE, ILLINOIS.



NEW CHRYSANTHEMUM SEED.

These charming new Chrysanthemums from Japan bloom the first year from seed. They embrace all styles, varieties and colors, including the exquisite new Ostrich Plume types, Rosettes, Globes, Fimbriated, Miniature and Mammoth. Sow the seed this spring, the plants will bloom profusely this fall. 25 cts. per pkt. For only 30c. we will mail all the following: 1 pkt. NEW JAPANESE CHRYSANTHEMUM SEED. 1 pkt. MARGARET PAGES, fine red colors. 1 pkt. MARGARET GARNATION, all colors, blooms in 3m. 1 pkt. VERBENA GIANT WHITE SCENTED, new fragrant. 1 pkt. FILIFERA or WEEPING PALM, a grand plant. 1 pkt. DWARF GIANT FLOWERED GAINA, mixed, ex. 10 Bulbs FANCY GLADIOLUS, all different colors. 2 " " NEW ORCHID GLADIOLUS, exquisite colors. 8 " " MAMMOTH OXALIS, different colors.

and our GREAT CATALOGUE, 126 pages, with magnificent colored plates and covers. These 7 packets of 50 Novelties and 15 choice Bulbs (worth \$1.50) will all flow this season, and we send them for 30 CENTS only! introduce our superior stock. Order at once.

OUR CATALOGUE of Flower and Vegetable Rare New Fruits is the finest ever issued. profusely illustrated with elegant cuts and colored plates. We offer the choicest standard sorts and finest Novelties. We are headquarters for all that is New, Rare and Beautiful. This elegant Catalogue will be sent Free to any who order or expect to order after getting it. JOHN LEWIS CHILDS, Floral Park, N. Y.

In the Dairy.

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

WHICH SHALL IT BE, OLEO OR BUTTER?

An Appeal to Dairymen, Farmers and Consumers.

Kansas has 525,000 cows, valued at nearly \$12,000,000. Such of these cows as are used for dairy purposes, brought to their owners in 1895 over \$5,000,000 in ready cash. The most of this vast sum was paid out through the 150 creameries and cheese factories in the eastern half of the State, and this might have been largely increased were it not for the competition and unrestricted sale of the spurious article under various aliases.

Dairy products are the only staples that have not suffered a reduction in price since 1895 came in. Hogs have gone down 25 per cent., cattle suffered a small decline, and all farm crops are the lowest ever known.

In those counties where dairying is the chief diversion, may be found the most prosperous farmers, the best tilled lands, and the least debt.

The unscrupulous methods resorted to by the manufacturers of oleo have been a constant menace to genuine dairying, and no permanent growth can ever be reached until the fraudulent article is confined to its own sphere. Will the farmers of Kansas still allow this gigantic fraud, that has been masquerading under the name of butter, to compete with a legitimate and growing enterprise that has the sanction of honesty and intelligence as its leading characteristic? It is surely time that a stringent law was drawn between colored grease and butter in order that the tolling millions in this country may know what they are eating. We don't object to the manufacture and sale of oleomargarine, but insist that it should be sold upon its own merit, and not as butter at the price of butter.

A measure was presented at the session of 1895, prohibiting the coloring of oleo to resemble butter. The bill also covered every point in dairying, from feeding and the sanitary condition of cows to disseminating such information as would be of service in producing a more uniform dairy product of higher grade and better quality, and also provided for a Dairy Commissioner to see the law enforced.

Through the mysterious interference of some one at a critical period, the Representative from Kiowa county, who was a member of the committee having the bill under consideration, and who had pledged his support, went square back on his written obligation, and the proposed law was defeated in the committee, 4 to 3. The same bill passed the committee in the Senate without opposition, was ordered printed and placed on the calendar.

Don't send a man to the House or Senate at the next session unless he pledges his earnest support to a bill prohibiting the coloring of oleomargarine to resemble butter, and then when the committees are made up there will be no doubt as to their position.

Competition and the prevailing markets in other States will always keep the price of butter within the reach of all, so that the poor man need not be afraid of paying an exorbitant rate for what he eats on his bread.

Kansas must be regarded as a dairy State until the prices of feeding stuffs advance to a point where it would not pay to feed it to dairy cows, and this is not likely to happen very soon, as at any time within the past five years the raw material would net the producer less when hauled away from the farm than when converted into milk, cheese or butter. We need better and more butter and cheese factories, more and better dairy farmers, and more and better cows, that the trade and even the hotels may be supplied with the genuine article.

The success of so valuable a business means much to the State at large, and every dairyman, farmer and land-owner should join hands in securing such laws as will extend this great industry

FAKE ADVERTISING

The reader may recall the advertisement of the manufacturers of the so-called U. S. separators, which appeared in a previous issue of this paper.

A couple of years ago this U. S. concern scattered broadcast a circular asking "Who was the son of Ananias and Sapphira?" This question, it has been said, was answered when a conspicuous official of that company testified, a few months ago, in the trial at Newfane, Vt., of an action to compel Francis Batchelder & Co., of Montpelier, Vt., to pay for certain U. S. separators which could not be made to do what had been claimed for them, and in which suit Batchelder & Co. were, of course, successful, largely by reason of the curious testimony of this conspicuous witness who is said to claim such ancient if not enviable ancestry.

One might be uncharitable enough to assert that the author of the advertisement to which reference is made as having appeared in this paper two weeks ago was this same scion of Ananias and Sapphira.

The Vermont Farm Machine Co. tries to belittle the effect of the Decree of Infringement of the De Laval patents given by the United States Courts against Samuel Hotchkiss, and publishes what purport to be letters from said Hotchkiss, his financial backer in illegal infringement (whom it terms "the largest merchant in Downsville," and both of whom are at this time agents for the sale of the U. S. machines), and from a user of one of such infringing machines whom the De Laval Co., in the enforcement of its lawful rights, enjoined from the further use of such machine.

The statement purporting to have been made by Hotchkiss that his lawyers assured him that the De Laval infringement claims could not be sustained, if contested, is untrue, and we challenge Hotchkiss (or any one else—except the person who testified at Newfane) to make this statement under oath. Hotchkiss' attorneys were the well-known firm of Risley, Robinson & Love, of Utica, N. Y. Hotchkiss abandoned the further and final contest of the case against him because he was assured by his attorneys, after a thorough investigation by them of the state of the art, that it was a waste of money to proceed further and that he was sure to be beaten. These attorneys also assured other infringers of the same patent, who were equally interested in the result with Hotchkiss, that they could do nothing, and finally actually refused the proffered financial support of an outside infringer, so hopeless did they consider any attempt to answer the De Laval testimony which had been put upon record.

After Hotchkiss and Hulbert, his financial backer, had begged and pleaded with the De Laval Co. for better prices and greater consideration than the De Laval Co. gives to honest and direct buyers of its machines, they went to the Vermont Farm Machine Co., and it is said obtained from it a lot of machines at less than half the price it charges to other buyers of its machines, and in this way some few of the previous users of the infringing Hotchkiss machines have been induced to try the U. S. at about half price, with the further consideration, presumably, of such untrue and misleading statements as those now published, while Hotchkiss and Hulbert are active agents for the sale of U. S. machines.

We leave the public, including the few who have been deluded into buying U. S. machines at full price, to judge of these matters for themselves, and we challenge the denial under oath (by any one—except the person who testified at Newfane) of any of these assertions.

And since the Vermont Farm Machine Co. introduces the subject, we avail of the opportunity to announce for the information and caution of whoever it may concern that we are assured by counsel, including the most eminent patent attorneys in this country, *Harding & Harding*, of Philadelphia, and *Banning & Banning & Sheridan*, of Chicago, that the so-called U. S. machines do infringe the De Laval patents; and that we have only delayed prosecuting the makers and users of such machines from the fact that other suits are now pending which equally affect the so-called U. S. machines, and also from the fact that the present U. S. machines have been apparently but temporary and unsatisfactory makeshifts in style of construction, since the makers have devised and applied for patents upon various new and presumably improved forms of construction, which still more broadly and openly infringe certain of the De Laval patents. Their machines most recently shown at the Experiment Stations are newer in style, but while further infringing do not embody the extreme encroachments upon the De Laval patents which it is their apparent purpose to attempt.

Makers and users of all infringing machines may depend upon our sustaining and enforcing our just and equitable rights in due season, and are again cautioned in this respect.

New York,
February 14, 1896.

THE DE LAVAL SEPARATOR CO.

into every county where feed can be grown. About the time the next Legislature assembles, write a postal card to your Senator and Representative, as follows:

"Hon. —: I am a voter of the — district of the State of Kansas; I ask you to use your influence to pass such a bill as will regulate the manufacture and sale of oleomargarine and protect the dairymen in their rights."

Committee on Oleo Legislation: A. E. Jones, chairman, Topeka; J. E. Nissley, Abilene; H. M. Brandt, Canton; F. S. Hurd, Meriden; L. D. Lewelling, Wichita; G. L. Fuller, Atchison; W. P. Brush, Topeka; Peter Heil, Topeka; J. L. Hoffman, Newton.

A package of oleomargarine from a Rhode Island concern was smuggled into the butter exhibit at the late meeting of the Vermont State Dairy convention. But the judges, E. A. Harris and O. M. Douglass, of Boston, the former, one of the judges at the World's Columbian Fair, in Chicago, detected it as soon as they tasted it; but they scored it, as they had to everything entered, and they say it was one of the best samples of butterine they ever saw. Its rating was many points the lowest of any in the exhibit. The dairymen are jubilant over the outcome of the matter, as the judgment comes from the highest authority in New England and clearly shows that oleomargarine is no companion for Vermont butter.

Swiss cheese is brought into this country at the rate of 400,000 pounds monthly, a total for nine months ending September 30 being 3,608,000 pounds, at an average import value of 13.6 cents, compared with 3,551,000 pounds same period a year ago at a higher average value of 14.5 cents. Other fancy cheese and a small quantity of English cream cheese swelled total imports for the two periods to 7,033,000 and 6,193,000 pounds, respectively.

FOR BRONCHIAL AND ASTHMATIC COMPLAINTS, "Brown's Bronchial Troches" have remarkable curative properties.

Grass is King! Hurrah!!

Shout for joy. The green grass rules. Its more valuable than oats, wheat and corn together. Luxuriant meadows are the farmer's delight. A positive way to get them and a very sure one we know is to sow Salzer's Extra Grass Mixtures. No need of waiting a lifetime either. Salzer has a mixture, sown in April, producing hay in June. Many farmers report yields of six tons of magnificent hay per acre. Over 100 different kinds of grasses, clovers, Teosinte, Sand Vetch, Giant Spurry and fodder plants! Thirty-five packages earliest vegetables \$1; 60,000 bushels seed potatoes cheap as dirt!

If you will cut this out and send it with 10 cents, postage, to the John A. Salzer Seed Co., La Crosse, Wis., you will receive free ten grass and grain, samples and their mammoth seed catalogue. Catalogue alone 5 cents.

A Splendid Business Offer.

The FARMER takes pleasure in calling the attention of its readers to Perine's subsoil plows. That subsoiling is no longer an experiment has been satisfactorily proven and demonstrated. Mr. A. B. Perine, of this city, is the inventor, manufacturer and patentee of the original Perine's subsoil plow. No higher compliment could be attributed to the popularity of the plow, than the fact that other plow companies are trying to profit from its success, by attempting to imitate Mr. Perine's invention. During the months of February, March and April, 1895, Mr. Perine was not nearly able to supply the demand for his plows, and present indications are that he will experience another rush this season. He has enlarged his plant and secured additional machinery. But as a special inducement for early orders he will include a year's subscription to either the KANSAS FARMER or Topeka Advocate to those who will purchase a plow before February 15, 1896.

The prices of the genuine Perine subsoil plows are as follows:

No. 1 plow, for four horses.....	\$12.00
Extra points.....	2.25
No. 2 plow, for three horses.....	11.00
Extra points.....	2.00

Address all communications and make remittances payable to
PERINE'S PLOW WORKS,
Topeka, Kas.

SPRAY PUMPS
EXPRESS PAID
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are strictly hand-made, hand-stuffed, shaped on scientific principles and are provided with sole leather pressed pads.
Light, cool, elastic, and never galls. Perfect home hold.
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The Veterinarian.

We cordially invite our readers to consult us whenever they desire any information in regard to sick or lame animals, and thus assist us in making this department one of the interesting features of the KANSAS FARMER.

INDIGESTION IN CALF.—A calf, six weeks old, is growing some and is in fair fix, and drinks one and one-half gallons of its own mother's milk twice a day, but, when chewing its cud, a greenish, thick substance runs from its mouth.

Answer.—There is nothing serious wrong with the calf. It may be slightly troubled with indigestion. Put a heaping teaspoonful of bicarbonate of soda in its milk each time.

SICK COW.—I have a cow that has been sick for a week. She eats very little and does not chew her cud. Her bowels and urine seem all right.

Answer.—If you had given me a few symptoms I might tell something about your case, but as it is I cannot even guess. Your cow probably suffers from indigestion, and if so a pound of Epsom salt dissolved in half a gallon of water and given at one dose may relieve her.

DEFECTIVE HOOF.—I have a colt that in September cut his left front foot on barbed wire just below the fetlock and through to the hoof. It has healed up and he is not lame but it is swollen and the hoof has grown an inch thick all around. Is there any way to reduce it?

Answer.—There is no way to prevent the hoof from growing thick except by reducing the inflammation, which may be done to some extent by showering twice a day for a month with cold water and then applying a cantharidine blister around just above the hoof. But the hoof will always be defective in growth.

IRRITATION OF BLADDER.—I have a mare, 8 years old, that urinates from four to six times in half a day in small quantities and with some pain, and sometimes she seems unable to void it. She goes with a stiff and straddling gait. She has been in this condition for a year or more.

Answer.—Your mare suffers from irritation of the bladder and the cause can only be determined by examination. There may be a calculus—stone in the bladder—and if so it will require an examination. You might give her a quart of raw linseed oil, then follow with a heaping teaspoonful of bicarbonate of soda three times a day for about two weeks.

DR. RHODES SAYS

That Chronic Catarrh of Long Standing Can be Cured.

J. D. Rhodes, M. D., of Hodges, Miss., in writing Dr. Hartman recently, says: "I can recommend your remedies to be as you claim and more, too. I feel no hesitancy in saying that I am compelled to use them in my practice, and that they do good for those who are troubled and suffering with rheumatic pains, chronic or nasal catarrh, kidney, liver, or lung diseases of long standing. Would say further that they are the best proprietary medicines I have ever seen and I have practiced in different States."

A dose of Pe-ru-na before each meal during the cold season is a safeguard of priceless value, especially to those who are in the least subject to frequent coughs and colds or other effects of wintry climate. Catarrh cannot be cured by local treatment. A thorough course of internal treatment with Pe-ru-na affords the only reasonable prospect of cure. Sprays, douches, inhalants, and gargles sometimes relieve, but never cure. Pe-ru-na cures by removing the cause. It gradually eradicates the catarrh from the system, wherever its location.

An illustrated treatise of sixty-four pages by Dr. Hartman on catarrh will be sent free to any address by The Pe-ru-na Drug Manufacturing Company, of Columbus, O.

"Farmer's Ready Reference, or Handbook of Diseases of Horses and Cattle." A few copies yet on hand that will be sold for \$1 each, by mail. The chapter on "Corn Stalk Disease" alone worth the price. Address S. C. Orr, V. S., Manhattan, Kas.

WEAK MEN

CURED AS IF BY MAGIC.

Victims of Lost Manhood should send at once for a book that explains how full manly vigor is easily, quickly and permanently restored. No man suffering from weakness can afford to ignore this timely advice. Book tells how full strength, development and tone are imparted to every portion of the body. Sent with positive proofs (sealed) free to any man on application.

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

MARKET REPORTS.

Kansas City Live Stock. KANSAS CITY, Feb. 24.—Cattle—Receipts since Saturday, 5,462; calves, 34; shipped Saturday, 1,844 cattle; no calves. The market was steady to strong. The following are representative sales:

Table with columns: No., Ave. Price, No., Ave. Price. Rows include various cattle and beef steers.

Table with columns: No., Ave. Price, No., Ave. Price. Rows include Texas and Indian steers.

Table with columns: No., Ave. Price, No., Ave. Price. Rows include Southwestern steers.

Table with columns: No., Ave. Price, No., Ave. Price. Rows include Utah cows.

Table with columns: No., Ave. Price, No., Ave. Price. Rows include Texas and Indian cows.

Table with columns: No., Ave. Price, No., Ave. Price. Rows include cows and heifers.

Table with columns: No., Ave. Price, No., Ave. Price. Rows include stockers and feeders.

Table with columns: No., Ave. Price, No., Ave. Price. Rows include horses.

Chicago Live Stock. CHICAGO, Feb. 24.—Cattle—Receipts, 10,500; market strong to 10c higher; fair to best beefs, \$3.50@4.65; stockers and feeders, \$2.75@3.80; mixed cows and bulls, \$1.40@3.60, Texas, \$3.00@3.40.

Hogs—Receipts, 38,000; market 5 to 10c lower; light, \$3.95@4.25; rough packing, \$3.85@3.90; mixed and butchers, \$3.95@4.20; heavy packing and shipping, \$3.35@4.20; pigs, \$3.20@4.15.

Sheep—Receipts, 16,000; market steady; native, \$2.50@3.75; western, \$3.25@3.60; Texas, \$2.50@3.00; lambs, \$3.50@4.75.

Chicago Grain and Provision. Feb. 24. Opened High'st Lowest Closing

Table with columns: Wh't-Feb, May, July, Corn-Feb, May, July, Oats-Feb, May, July, Pork-Feb, May, July, Lard-Feb, May, July, Ribs-Feb, May, July.

Kansas City Grain.

KANSAS CITY, Feb. 24.—The demand for wheat continues very slow here. Prices were nominally about 1c higher, but there was not demand for all offerings at that advance, though some of the elevator men were buying.

Receipts of wheat here for two days, 97 cars; a year ago, 26 cars.

Sales were as follows on track: Hard, No. 2, 5 cars, 65c, 3 cars 61 1/2c, 2 cars 64c; No. 3, 1 car 60c, 3 cars 55c, 1 car 50 1/2c, 4 car 47 1/2c; No. 4, 1 car 46c, 1 car 43 1/2c, 1 car 45c, 1 car 44c, 1 car 43 1/2c, 1 car 42 1/2c; rejected, nominally 35@40c; no grade, nominally 35@40c. Soft, No. 2 red, 1 car 74c; No. 3 red, 1 car 70c; No. 4 red, 1 car 65c, 1 car 61c, 1 car 60c; rejected, nominally 54@58c. Spring, No. 2, 3 cars 64c; No. 3, 1 car 60c, 2 cars 61c; 1 car 61 1/2c; rejected, nominally 10@55c; white spring, 1 car No. 3 60c.

Corn was in active demand and was 1/2c higher at the close. Some early sales were at Saturday's prices. The receipts were large, but a large proportion went to fill contracts. There was little trade in futures. Sales were: February, 5,000 bushels 23 1/2c; May, 20,000 bushels 24 1/2c; May white corn, nominally 24 1/2c.

Receipts of corn here for two days, 221 cars; a year ago, 85 cars.

Sales by sample on track: No. 2 mixed, 19 cars 23 1/2c, 10 cars 23 1/2c, 16 cars 23c, 5 cars 22 1/2c, 15 cars 22 1/2c; No. 3 mixed, 1 car 23 1/2c; No. 4 mixed, nominally 21 1/2c; white, No. 2, 18 cars 23 1/2c, 2 cars 23 1/2c, 3 cars 23c.

Oats were about 1/2c lower. White sold readily, but there was little demand for mixed. Most of the latter were of poor quality.

Receipts of oats for two days, 44 cars; a year ago, 17 cars.

Sales by sample on track: No. 2 mixed, nominally 17@18c; No. 3, 2 cars 16c; No. 4, nominally 15c; no grade, nominally 14 1/2c; No. 2 white, 6 cars 20 1/2c, 3 cars 20c; No. 3 white, 1 car 19 1/2c.

Hay—Receipts two days, 204 cars; market very dull and weak. Timothy, choice, \$11.00@11.50 No. 1, \$10.00@10.50; No. 2, \$7.50@9.00; No. 3, \$5.00@6.50; choice prairie, \$6.25@7.00; No. 1, \$5.50@6.00; No. 2, \$4.50@5.00; packing hay, \$3.00@4.00.

St. Louis Grain.

ST. LOUIS, Feb. 24.—Receipts, three days, wheat, 27,000 bu.; last year, 7,150 bu.; corn, 215,000 bu.; last year, 140,900 bu.; oats, 74,000 bu.; shipments, wheat, 19,000 bu.; corn, 176,411 bu.; closing prices: Wheat—Cash, 71c; February, 61 1/2c; May, 64 1/2c@64 3/4c; July, 62 1/2c@63c. Corn—Cash, 26 1/2c@27 1/2c; February, 26 1/2c; May, 27c; July, 28 1/2c. Oats—Cash, 19c bid; February, 19c; June, 20 1/2c; July, 19 1/2c.

Kansas City Produce.

KANSAS CITY, Feb. 24.—Butter—Creamery, extra separator, 17 1/2@18c; firsts, 16c; dairy, fancy, 15c; fair, 13c; store packed, fresh, 10@12c; off packing stock, 7c; country roll, fancy, 12 1/2c; choice, 11c.

Eggs—Strictly fresh, 9 1/2c per doz. Poultry—Hens, 5 1/2c; springs, 7 1/2@8c; roosters, 15c; young, 17 1/2c; turkeys, hens, 10c; gobblers, 9c; ducks, 8 1/2c; geese, fat, 5 1/2@6 1/2c; pigeons, 90c@1.00 per doz.

Fruits—Apples, fancy, \$2.00@2.50 per bbl.; choice, \$1.75@2.25; common to good, \$1.00@1.50 per bbl.

JOHN PETRZILEK, practical furrier and manufacturer of fine furs, sealskin garments, capes and trimmings, 826 Kansas avenue, Topeka, Kas. Mats, rugs and buggy robes always on hand. Ask for special price list. Our current prices are as follows: Mink, \$35@100; Skunk, 25@85; Raccoon, 30@60; Muskrat, 3@8; Civet cat, 5@10; Opossum, 5@12; Prairie wolf, 50@75; Otter, 400@800; Beaver, 300@550.

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Direct all mail to Station A. Market reports furnished free to all sheep feeders or breeders on application. Correspondence solicited and prompt reply guaranteed.

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Correspondence and consignments solicited. Market reports free to prospective shippers. Rooms 252-3-4 Exchange Bld. Kansas City Stock Yards.

Advertisement for THE BRADLEY Plunger. Features: AUTOMATIC REEL FURNISHED, forces the Corn out. Cannot clog in sticky Soil. ALL STEEL AND IRON. Drill or Check-Row. Widths: 3 feet 4 in., 3 " 6 in., 3 " 8 in. ASK YOUR DEALER FOR CIRCULAR. If he has none, send to us for one. DAVID BRADLEY MFG. CO., BRADLEY, ILL., U.S.A.

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Special Want Column.

"Wanted," "For Sale," "For Exchange," and small or special advertisements for short time, will be inserted in this column, without display, for 10 cents per line, of seven words or less, per week. Initials or a number counted as one word. Cash with the order. It will pay. Try it!

SPECIAL.—Until further notice, orders from our subscribers will be received at 1 cent a word or 7 cents a line, cash with the order. Stamps taken.

SHOW BULL FOR SALE—Imp. Buccoiser 106658, fit to head any Short-horn herd. D. P. Norton, Council Grove, Kas.

SEED SWEET POTATOES FOR SALE—All leading varieties. Plants in their season. Correspondence solicited. Address B. F. Jacobs, Box 122, Wamego, Kas.

EGGS FOR HATCHING.—See advertisement elsewhere. Belmont Stock Farm.

LIGHT BRAHMAS—Old and young birds for sale, scoring 90 1/4 to 94 points. Score-cards furnished. Eggs \$1.50 per fifteen, from two high-scoring pens. Mrs. Emma Brosius, Topeka, Kas.

MARRIED MAN—Wanted on stock breeding farm. Must be active, reliable and understand care of fine stock. Position permanent for right man. Address Kirkpatrick & Son, Connors, Kas.

FOR SALE—Duroc-Jersey Red pigs, two to four months old. Holstein-Friesian males and females, five to eleven months old. Special rates to first buyer in each county. Stock recorded or eligible to record. M. H. Alberty, Cherokee, Kas.

WANTED—From fifty to one hundred breeding ewes. Good grade Shropshire or Southdown. Address L. A. Boys, Ottawa, Kas.

FOR TRADE—Large young jacks and stallions. Need grade Holstein heifers, Lloyd B. Ferrell, 310 E. Elm St., Wichita, Kas.

FOR SALE—Partidge Cochon cockerels, large, finely feathered. Eggs \$1.50. W. G. Foley, Hutchinson, Kas.

STANDARD BROOMCOHN—Seed for sale, \$1 per bushel. Dick H. Rich, Coldwater, Kas.

KAFFIR CORN AND CANNED—My own raising, 60 cents per bushel. New sacks 15 cents. S. F. Glass, Marion, Kas.

MARION COMBINATION 42028 A. J. C. C.—Jersey bull, five months old, solid color, black tongue and switch, sound and all right. Bire took first premium at St. Joe, Mo., and Nebraska and Kansas State fairs. First check for \$25 takes him. S. F. Glass, Marion, Kas.

DO YOU PAY CASH RENT? Don't you want to get where land is cheap and where you can handle more stock? We have cheap corn, cheap grazing and cheap land. No hog cholera. The best place to feed cattle in the world. Good health, good roads, good water and good markets. Write for list of farms for sale or rent. C. M. Niquette, Osborne, Kas.

SWEET POTATOES—Sent out to be sprouted on shares. No experience required. Directions for sprouting free. T. J. Skinner, Columbus, Kas.

FOR SALE—Light Brahma roosters, for \$1 each. Eggs \$1 for 15, \$2.50 per 100. Mrs. N. VanBuskirk, Blue Mound, Kas.

1857 For price list of reliable Nursery 1896 W. E. BARNES, Vinland, Douglas Co., Kansas.

WHITE HOLLAND—M. B. TURKEYS—Cheap if ordered soon. R. G. Mason & Co., Kirksville, Mo.

FOR A PRACTICAL BUSINESS EDUCATION address Coon's National Business College, Kansas City. Self-help furnished students of limited means.

THE BLOOD IS THE LIFE.—For \$1 will send roots and herbs to make one quart Blood Purifier and one pint of Cough Syrup. Directions sent. C. E. Coburn, Box 178, Lynn, Mass.

SHORT-HORN BULLS—Cruickshank-topped, for \$1 sale. Choice animals of splendid breeding. Address Peter Sim, Wakarusa, Shawnee Co., Kas.

IRRIGATION—STRAWBERRIES.—Strawberry plants, any variety grown. Lowest prices. Plants guaranteed as to variety and condition. Write for prices, etc. J. W. McCracken, Sterling, Kas.

FOR SALE—Mammoth Bronze turkeys from prize-winning stock. Young toms weighing twenty-five pounds. Harry Killough, Richmond, Kas.

40 IMPROVED FARMS FOR SALE—In Morris county, Kansas, on the installment plan. One-eighth cash and one-eighth each year till paid. No interest added in or asked. Morris county has fine soil, large fruit orchards, and you will find our farms will make desirable homes. Write for particulars. Hal W. Neiswanger & Co., Topeka, Kas.

FOR SALE—St. Lambert Jersey bull calf, 11 months old. He is very strong and robust, very dark fawn, nearly black, with a streak of squirrel gray from his head to just back of shoulder, full dark points. His breeding is as good as the best. E. B. Davis, Columbus, Kas.

SEED POTATOES AND CORN.—Early Ohio seed from Northern stock, large and fine, at 50 cents a bushel. Ninety-day yellow dent corn, first prize at World's fair, 75 cents per bushel. Sacks free. E. L. Jones, Box 224, Topeka, Kas.

ALFALFA CLOVER.—Just received, a car-load choice seed. For prices address Topeka Seed House, 306 Kansas Ave., Topeka, Kas. S. H. Downs, Proprietor.

SORGHUM SEED FOR SALE.—For prices, write S. J. H. Foote, Fort Scott, Kas.

WANTED—Sorghum and alfalfa seed, one M. B. robbler and one peahen, in exchange for pure-bred Poland-Chinas or Light Brahmas. J. H. Taylor, Pearl, Kas.

WRITE—To Alex. Richter, Hollywood, Kas., for information concerning sub-irrigation. Enclose 2-cent stamp for reply. Manufacturer of galvanized sub-irrigation pipe.

PRIZE-WINNERS—Leghorn, Langlehan, Plymouth Rock and Minorca fowls and Yorkshire swine, bred in the purple. Pure, new-crop alfalfa seed for sale. James Burton, Jamestown, Kas.

WANTED—Sale bills, horse bills, catalogues and other printing. A specialty at the Mail job printing rooms, 900 North Kansas Ave., North Topeka, Kas.

FOR SHORT-HORN BULLS—Calves and yearlings, extra fine, write D. P. Norton, Council Grove, Kas.

SEVEN FIRST-CLASS BLACK JACKS—For sale or trade. Prices reasonable. Sam Weichselbaum, Ogden, Kas.

SEND TO ARLINGTON NURSERY—Arlington, Reno Co., Kas., for surplus price list. On account of old age and falling health, I will sell the whole nursery, either with or without the land, at a great bargain. Write or call on B. P. Hanan, Proprietor.

SPECIAL WANT COLUMN--CONTINUED.

WANTED—Buyers for Large English Berkshires and improved types of Poland-Chinas, from prize-winners, at farmers' prices. Riverside Stock Farm, North Topeka, Kas.

ORDER NOW—Barred Plymouth Rocks exclusively. Eggs in season, \$1 for fifteen. Mrs. F. A. Hargrave, Richmond, Kas.

FOR TRADE—A few first-class Cleveland Bay and Yorkshire Coach stallions and mares. Make offers to Stericker Bros., Springfield, Ill.

FOR SALE—B. F. Rocks at \$1 each where more than one is wanted. Mrs. E. E. Bernard, Dunlap, Morris Co., Kas.

FOR SALE—Seven jacks, eight jennets, S. C. B. Leghorn eggs. H. C. Staley, Rose Hill, Kas.

2,000 BUSHELS SEED SWEET POTATOES! for sale. Ten best kinds. Also plants in their season at bed-rock prices. Inquire of N. H. Pixley, Wamego, Kas.

DOUGLAS COUNTY NURSERY FOR SPRING.—General line of No. 1 nursery stock, both standard and small fruits. Twenty varieties of the best strawberries, including Parker Earle. Eight of raspberry, including Kansas. Six of best blackberry. 20,000 grapes. Concord, \$10 for 1,000. 700,000 one and two-year hedge; single 1,000 \$1; 2,000 or more, 90 cents per 1,000, boxed. Send for catalogue. Wm. Plasket & Son, Lawrence, Kas.

TO TRADE FOR STOCK—Southeast quarter section 36, 27, 17, Kiowa county, Kansas. Also lot 1, block 58, Chandler, Oklahoma. Milo M. Mitchell, Callista, Kas.

STRAWBERRY, RASPBERRY AND BLACKBERRY plants at lowest prices. J. C. Banta, Lawrence, Kas.

BROWN'DHOULA—Seed for sale at 75 cents per bushel. E. Christensen, Ellis, Kas.

WE MAKE A GOOD FARMER'S SPRING WAGON, two lay backs and let-down end-gate, for \$55. Warranted. Kinley & Lannan, 424-426 Jackson street, Topeka.

SWEET POTATOES—Sent out to be sprouted on shares. No experience required. Directions for sprouting free. T. J. Skinner, Columbus, Kas.

WANTED—To sell or exchange the Percheron stallion by Brilliant, bred by Dunham, of Illinois. O. P. Upegraff, Topeka, Kas.

FOR SALE—One hundred and sixty acre farm, one and a half miles from Bushong station, Lyon county, Kansas. Good spring. Price \$8 per acre. J. B. McAfee, Topeka, Kas.

KAFFIR, MILLO MAIZE, MILLET, SORGHUM seed, each 35 cents per bushel, sacked. Black rice corn \$1. Willis K. Folks, Wellington, Kas.

THE SENECA NURSERY—To reduce an immense stock of apple, pear, plum, cherry and peach trees, and all other stock, will accept orders until March 1, 1896, at just one-half of regular list prices. See list of first-class apple trees at only \$1 per 100, first-class cherry trees at \$15 per 100, peach \$17.50 per 100, peach \$7.50 per 100. Send orders at once as stock will not last long, and you will never have chances to buy such fine trees, etc., at such prices. Send for price list and order blanks. S. J. Baldwin, Seneca, Kas.

Salesmen Wanted!

\$100 to \$125 per month and expenses. Staple line; position permanent, pleasant and desirable. Address, with stamp, King Mfg. Co., P. 29, Chicago, Ill.

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LiveStockAuctioneer. JAS. W. SPARKS, Marshall, Mo. Sales made everywhere. Refer to the best breeders in the West, for whom I sell. Satisfaction guaranteed. Terms reasonable. Write before claiming dates. Mention KANSAS FARMER.

ELI ZIMMERMAN, Hiawatha, Kansas, Live Stock and General Auctioneer. Pedigreed and registered live stock a specialty. Write for dates. Sales conducted anywhere in the country. Best of references and satisfaction guaranteed.

S. A. SAWYER, FINE STOCK AUCTIONEER—S. Manhattan, Riley Co., Kas. Have thirteen different sets of stud books and herd books of cattle and hogs. Complete catalogues. Retained by the City Stock Yards, Denver, Colo., to make all their large combination sales of horses and cattle. Have sold for nearly every importer and noted breeder of cattle in America. Auction sales of fine horses a specialty. Large acquaintance in California, New Mexico, Texas and Wyoming Territory, where I have made numerous public sales.

Wanted, an Idea.

Who can think of some simple thing to patent? Protect your ideas; they may bring you wealth. Write John Wedderburn & Co. Patent Attorneys, Washington, D. C., for their \$1,800 prize offer and list of 200 inventions wanted.

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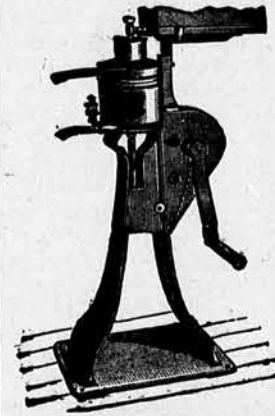
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IMPROVED U. S. SEPARATOR As just published in Bulletin No. 105 of that Station; the United States Separator excelling all competing dairy machines, and repeating again the history of the tests recorded in Bulletin No. 66 of the same Station. Truly, The U. S. Stands on Its Own Bottom.

PRICES, \$75.00 AND UP. Send for pamphlets giving full details. We want agents in every town and county where we have none. VERMONT FARM MACHINE CO., - Bellows Falls, Vt.

THE STRAY LIST.

FOR WEEK ENDING FEB. 13, 1896. Cherokee county—T. W. Thomason, clerk.

TWO MULE COLTS—Taken up by J. E. Lowe, in Spring Valley tp., two dark brown male mule colts, 1 year old; valued at \$20. TWO MARE COLTS—By same, two dark bay mare colts, 1 year old; valued at \$20.

FOR WEEK ENDING FEB. 20, 1896. Lyon county—M. Q. Starr, clerk.

STEER—Taken up by M. M. Mason, in Jackson tp., November 1, 1895, one red steer, 3 years old, dehorned, no marks or brands; valued at \$25. FOR WEEK ENDING FEB. 27, 1896. Jewell county—Finley Yinger, clerk.

MARE—Taken up by James A. Thorp, in Washington tp. (P. O. Montrose), February 4, 1896, one brown mare, weight about 1,000 pounds, no marks or brands; valued at \$20.

Franklin county—J. K. Bailey, clerk.

STEER—Taken up by Jasper Davis, in Williamsburg tp., February 8, 1896, one blue-roan steer, 2 years old, branded 14 on right hip and dehorned. Harper county—Frank Hamilton, clerk.

HORSE—Taken up by W. G. Bailey, three and a half miles southwest of Harper, February 1, 1896, one light bay gelding, 7 years old, about fifteen hands high, small lump on back and harness marks on side. Cherokee county—T. W. Thomason, clerk.

COLT—Taken up by J. C. Elenstine, in Spring Valley tp. (P. O. Baxter Springs), January 25, 1896, one black female colt, 8 months old, white spot in forehead; valued at \$2.50.

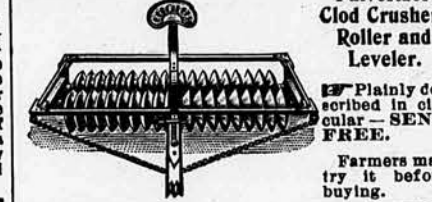
VETERINARY SURGEON.

D. R. B. McCURDY, Veterinary Surgeon. Graduate Ontario Veterinary college, Toronto, Canada. Can be consulted on all diseases of domestic animals at office or by mail. Office: 114 West Fifth Street, Topeka, Kas.

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HIGHLAND KENNELS, TOPEKA, KAS.—Great Danes and Fox Terriers. The first prize and sweepstakes winner, Great Dane King William, in stud. Dogs boarded and treated for all diseases; also, remedies by mail. Correspondence solicited.

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Plainly described in circular—SENT FREE. Farmers may try it before buying.

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MEN BE HEALTHY We will send you the marvelous French Preparation CALTHOS free, and a legal guarantee that CALTHOS will Restore your Health, Strength and Vigor. Use it and pay if satisfied. Address VON MOHL CO., Sole American Agents, Cincinnati, Ohio.

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Original and Only Genuine. SAFE, always reliable. LADIES ask Druggist for Chichester's English Diamond Brand in Red and Gold metallic boxes, sealed with blue ribbon. Take no other. Beware dangerous substitutions and imitations. At Druggists, or send 4c. in stamps for particulars, testimonials and "Halter for Ladies" in letter, by return mail. 16,000 Testimonials. Name Paper. Chichester Chemical Co., Madison Square, Philada., Pa. Sold by all Local Druggists.

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Our celebrated SOLDERING PLATE will mend all kinds of tinware. Each plate consists of 192 quarter-inch squares and at 5 cents a mend will do \$9.60 worth of work. It is as easily applied as putting on a postage stamp. Our price postage paid 25 cts. Refer to this paper, which please mention when you order. Address PEOPLE'S SUPPLY CO., Suite 11, Adams Express Building, CHICAGO, ILLINOIS.

"JONES HE PAYS THE FREIGHT." Farm and Wagon SCALES.

United States Standard. All Sizes and All Kinds. Not made by a trust or controlled by a combination. For Free Book and Price List, address JONES OF BINGHAMTON, Binghamton, N. Y., U. S. A.

J. I. C. DRIVING BIT Still King THE BIT OF BITS.

Will control the most vicious horse. Sales Greater Than Ever. Sample mailed XC for \$1.00 Nickel, \$1.50. Stallion Bits 50 cts. extra. RACINE MALLEABLE IRON CO., WIS.

I X L THEM ALL. QUALITY TELLS THE BEST STEEL MILL.

STRONGEST STEEL TOWER. No long story here. Send for catalogue and prices. PHELPS & BIGELOW WIND MILL CO., Kalamazoo, Michigan.

WINGER'S PUMPING WINDMILL FEED GRINDER "A MONEY MAKER AND SAVER."

A double Grinder with three burrs. Center draft. Can be attached to any size or make of pumping wind mill. E. B. WINGER, 533 Kenwood Terrace, Chicago, Ill.

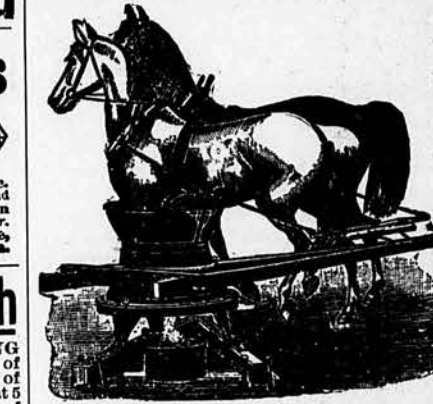
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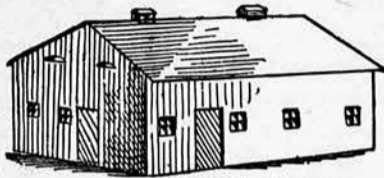
If you want a mill that will grind corn and cob and all small grains. The largest mill made, hence the greatest capacity. FULLY WARRANTED! Made in sweep and power styles and five different sizes. Write for illustrated circulars. THE BLUE VALLEY MANUFACTURING CO., (Successors to Blue Valley Foundry Co.) MANHATTAN, KANSAS.

The Poultry Yard

CHEAP POULTRY HOUSE.

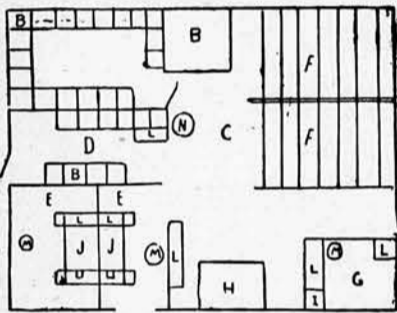
Can Be Constructed of Sod or Lumber by Any Bright Man.

The exceedingly practical and convenient poultry house, an illustration of which embellishes our columns below, is 30 feet long by 24 feet wide and can be constructed of sod or lumber. As shown in the ground plan, the space is divided into four main parts. The principal room occupies the entire right side of the building, as shown in the ground plan, in which F F are roosts 14 feet long; B, a box 5 by 5 feet for



A CHEAP POULTRY HOUSE.

straw in which to throw grain in winter to induce exercise, and H, a coop 4 by 6 feet for shutting up sitting hens. In the left-hand upper corner of the ground plan is the laying room 10 by 12 feet, with nests all about the sides. Just below it is the room 6 by 12 feet for sitting hens, while in the lower left-hand corner is a room 10 by 12 feet for chickens. I is a box in which to put lime and oyster shells. L L L are



feed boxes and troughs; V V receptacles for green feed; M M M are drinking vessels; A A are nests 18 inches square. Windows and doors can be arranged as shown in the illustration or to suit the taste of the builder. There is a partition in the room for chickens, dividing it into two parts, one for those quite small and the other for larger ones. A lath door between this room and the main room allows the chickens to pass.—Farm and Home.

FATTENING FOWLS.

No Way in Which Corn Can Be Fed to Better Advantage.

"How can I best fatten fowls for market?"

This is a very simple matter, and one not requiring any special tact or skill. It is a very profitable proceeding, too, for fowls that are thin and light can be made to put on the heaviest possible weight in a very short time if they are properly handled.

Fowls fatten best in confinement, and those which are to be sold should be shut up in rather close quarters, and fed all they will eat of corn meal coarsely ground. We have tried various mixtures for fattening fowls, but never found anything superior to coarse corn meal and plenty of pure water. Just these two things will make a tough, thin old hen plump and tender in two weeks, and when she comes to the table her flesh will be as sweet, juicy and tender as a spring chicken.

Fowls that are sent to market fat and plump always bring the best prices, and this because they present an inviting appearance. There is no better way in which corn can be fed to advantage than to use it in finishing a lot of thin fowls in preparation for market. The fowls should be sold as soon as they are well fattened, for after this is accomplished it is a waste of food to keep them any longer.—Farm and Fireside.

THE HATCHING PROCESS.

How to Tell Perfectly Fresh Eggs from Unfertile Ones.

It is a common practice for those buying eggs to hold them up to the light, and such as have had any experience can in this way easily tell whether an egg is fresh or stale. A perfectly fresh egg will have a comparatively clear look, with the air space of only moderate size; whereas a stale egg will not

have such a clear look, and the air space will be larger, according to the age of the egg. In addition to this there are other indications, such as the appearance of the shell, which, in the old egg, loses that bloom so striking in new ones. Unfertile eggs are always clear no matter how long they have been set upon. There are those who say that the sex and fertility of the egg can be told before they are set. All sorts of plans have been put forth and declared to be sure and infallible tests as to the sex of chickens, such as the shape of the egg, the time of day it is laid, etc., but these have been found, when tested, to be unreliable, or at any rate not sufficiently reliable to be accepted. That the fertility of the egg may be proved before it is set, we are not prepared to deny, as we have known persons to pick out fertile eggs by breathing on the broad end, and must acknowledge that they have proved to be correct in a large number of cases. We have never been able to disprove this test, and have often found it to be correct, but not sufficiently so as to rely entirely and unreservedly upon it. When working an incubator there is no need for it, for we have always been able to discover 60 hours after they have been put into the machine whether the eggs were fertile or not; and as the quality of barren eggs is then unaffected in any way, it is not worth running any risk with the other tests.—Prairie Farmer.

AMONG THE POULTRY.

Unusually large eggs denote that the hens are too fat.

Nearly all of the nonsitting breeds lay white eggs.

One way of preventing gapes is to feed on a clean surface.

Do not try to keep too many. Hens that are crowded will not lay.

If chicks are raised in a brooder care must be taken to keep the heat uniform.

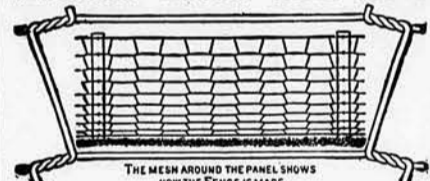
Gather the eggs regularly now, otherwise they are liable to become frozen and broken.

Small flocks, well cared for, will give the best results. Fifty is as many as should be together.

When the hens are closely confined they will thrive better if they can have something to do.

The purposes for which fowls are fed are several, and each purpose requires the food most naturally suited to it in order to secure the best results.—St. Louis Republic.

KEYSTONE WOVEN WIRE FENCE



Combines more points of merit than any other fence made. A trial will convince you. Write for catalogue.

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Incubators & Brooders
Best in the world, hot water, pipe system. Will hatch chicks when others fail. Catalogue Free. Shoemaker Incubator Co., Freeport, Ill., U. S. A.

BEATS THEM ALL!

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SUCCESSFUL INCUBATOR
Our magnificent new catalogue giving full information regarding raising and brooding and treating on poultry raising sent for 4 stamps. Circular free.
Write now. Des Moines Incubator Co., Des Moines, Ia.

SHOEMAKER'S POULTRY BOOK
96 pages, printed in 6 colors. Bird's eye view of largest Poultry Farm. Tells all about Chickens, Prices of same, their Diseases, remedies, poultry buildings, etc.; finely illustrated. Price only 15c. C. C. SHOEMAKER, Freeport, Ill., U.S.A.

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Printed in colors that are correct. Best and finest illustrated Poultry Catalogue ever printed. Get it and be convinced. It tells how to make poultry pay, how to build poultry houses, gives remedies for diseases, also lowest prices of fowls and eggs. If interested in poultry this book is what you want. Sent post paid for 15 cents.
The J. W. Miller Co., Box 162, Freeport, Ill.

PROFITS IN POULTRY! Our Eleventh Annual Poultry Guide and combined catalogue tells how to earn these profits. What others are doing you can do. One hundred and forty-eight pages of valuable, practical matter. **INCUBATORS AND BROODERS!** The Improved Reliable is Warranted to Hatch 80 per cent. of the fertile eggs. Hundreds of recent testimonials. Sixteen popular kinds of THOROUGH BRED FOWLS FOR SALE, also full line of Poultry Supplies. Price of Guide 10c. In stamps—worth one dollar. **Reliable Incubator and Brooder Co., Quincy, Ills.**

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With Best Galvanized Steel Woven Wire Fencing and THEN USE OUR GATES BECAUSE THEY HAVE POINTS OF ADVANTAGE YOU WILL LIKE. Our Catalogue tells the whole story. Write at once to **THE SEDGWICK BROS. CO., Richmond, Ind.**

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This remedy very highly. We have thousands of testimonials. It is the only standard remedy on the market. If your horse is lame you need this remedy, for it will cure more speedily than any other remedy in the world.
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Is a positive, safe and speedy cure for Colic, Curbs, Splints, Contracted and Knotted Cords, Callous of all kinds, etc. Brings speedy relief in case of Spavins, Ring-Bone and Cockle Joints. **Tuttle's Family Elixir** is the best for all pains, bruises, aches, Rheumatism, etc., etc.
Samples of either Elixir are sent for three 2-cent stamps to pay postage. 50 cents buys full-sized bottle of either Elixir at any druggist's or it will be sent direct on receipt of price.
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A Set of Hustlers
are the **PLANET JR.** Farm Tools. They put farm work on a modern business basis,—a week's hoeing done in a day, three times the crops on the same land. The New No. 8 Horse Hoe is a dozen tools in one; width or depth changed instantly without stopping the horse. The **PLANET JR.** Book for 1896 tells all about these famous tools. Sent free if you write to **S. L. ALLEN & CO., 1107 Market St., PHILADELPHIA.**

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Adapted to all soils and all work. Crushes, cuts, lifts, pulverizes, turns and levels the soil in one operation. Made entirely of cast steel and wrought iron—practically indestructible.
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SENT ON TRIAL To be returned at my expense if not satisfactory. **DUANE H. NASH, Sole Mfr.,** Millington, New Jersey, and Chicago, Ill. N.B.—I deliver free on board at distributing points. PLEASE MENTION THIS PAPER.

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Rare Seeds at Less than Quarter their Value. A special and unequalled offer for trial to gain new customers by a well-known Philadelphia firm of Seed-Growers. The most beautiful novelties that have been grown at our famous **FORDHOOK FARM.**

Burpee's GEM Collection contains one packet each of the new **Amaranthus, Coleus-Leaved**, with large leaves of brilliant colors; **Asters, Fordhook Favares, Mignonette, Giant Gabrielle**, large, fragrant flower-heads; **Nasturtiums, Fordhook Finest Tall Mixed**, including beautiful new hybrids of **Madame Guster; Three New Pansies, Kaiser Frederick, Meteor, and Peacock; Three New Largest-Flowering Petunias, Burpee's Delancey, Giant Emperor, and Giants of California** in unequalled mixture; **Phlox Hortensiflora**, like the Hydrangea in its large, beautiful clusters of flowers, and **Ricinus Zanzibarensis**, with magnificent leaves four feet across. **The ten packets named above purchased from us or any other seedsmen, would amount to \$1.20 at regular cash prices; we will, however, send all ten varieties, with full directions for culture printed on each packet—The Complete COLLECTION for only 25 CENTS, or five complete collections for \$1.00.** We hope to make thousands of new customers, and guarantee perfect satisfaction to all. To every one who asks for it we will also send, FREE, **BURPEE'S FARM ANNUAL for 1896** a handsome book of 184 pages, well known as "The leading American Seed Catalogue." **WRITE TO-DAY** as this advertisement may not appear again and send rare flowers never before offered for so little money. **W. ATLEE BURPEE & CO., PHILADELPHIA, PA.**

SALZER'S SEEDS BRL \$1.50
35 Packages EARLIEST VEGETABLE SEEDS. Postpaid, \$1.00.
YOU Have often seen seed come up poor and stony, without sufficient vitality to produce a crop—that was an object lesson that poor seeds produce poor crops—but when you plant Salzer's Northern Grown Seeds, for garden or farm, the scene changes as if by magic. Instead of poor yields you at once get rousing crops, crops that will gladden your heart and fill your purse, for Salzer's Seeds are full of life, full of vigor, full of producing qualities.
\$400.00 IN GOLD PRIZES. We pay this on Oats, Barley and Corn. 209 bushels Silvermine (Nameless Beauty) Oats grown on one acre in 1895. You can beat that! It is the greatest Oats of the century. No more hard times if you sow a plenty of Salzer's Barley, Oats, Potatoes, Grass and Clovers! Have you tried Teosinte, Scallion, Giant Spurry and Giant Quick-Growing German Clover? Catalogue tells all about these marvelously wonderful Fodder Plants!
SPLENDID VEGETABLES. Large selections, many splendid sorts. Everything cheap. Onion Seed at 90c per lb; 10 pkts. Flower Seed, 25c. 1,000,000 Roses, Plants and Small Fruits, hardy as Oaks. Send 2c. for Market Gardener's Wholesale List. Our great Seed and Plant Book, 148 pp., with 16 pages, Grasses and Grains, including above Prize Oats, Barley and Corn. Is sent upon receipt of 10c. postage. Catalogue alone, 5c. Catalog and one pkg. Pumpkin Yellow Melon, 12c.
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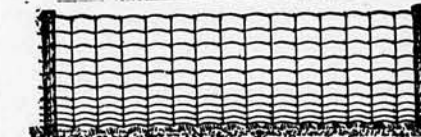
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Accommodating capacity: 50,000 cattle, 200,000 hogs, 30,000 sheep, 5,000 horses.

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	Cattle and calves.	Hogs.	Sheep.	Horses and mules.	Cars.
Official Receipts for 1895.....	1,689,652	2,457,697	864,713	52,607	103,368
Slaughtered in Kansas City.....	922,167	2,170,827	567,015		
Sold to shippers.....	392,262	1,876	111,446		
Sold to feeders.....	218,805	278,999	69,784		
Total Sold in Kansas City, 1895.....	1,533,234	2,346,203	748,244	41,588	

CHARGES: YARDAGE, Cattle, 25 cents per head; Hogs, 8 cents per head; Sheep, 5 cents per head. HAY, \$1 per 100 lbs.; BRAN, \$1 per 100 lbs.; CORN, \$1 per bushel.

NO YARDAGE CHARGED UNLESS THE STOCK IS SOLD OR WEIGHED.

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We make Steel Windmills, Steel Towers and Feed Grinders and are selling them cheaper than the cheapest. Our productions are standards; are first-class in every respect and sold on trial. Send us a postal and we will tell you all about them. **CURRIE WINDMILL CO.,** AGENTS WANTED. Manhattan, Kas.

Portable Well Drilling MACHINERY

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For Nebraska and the Black Hills.

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A LARGE STOCK IN PRIME CONDITION FOR SEED. Full of new blood and vigor from Northern seed. Not "run out," rough or grub-eaten potatoes, but sound tubers of good size—some very large—free from sprouts, and by careful storage in a cellar built especially for potatoes, they have kept the vigor so essential to seed potatoes. The crop was raised by myself, several acres in one field yielding 330 bushels per acre. They will yield as well as Northern seed and are placed at prices in reach of everybody.
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Blue Grass Seeds. Poultry Supplies.

BREEDERS' DIRECTORY.
(Continued from page 1.)

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I have for sale five Short-horn bulls, including my herd bull, MONITOR. He was 3 years old last September. One 1 year old last September, and three coming 1 year this spring. All red in color.

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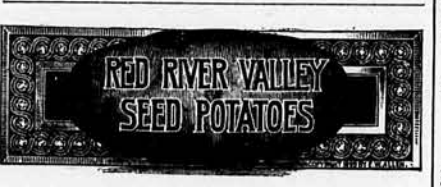
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Ship us two 100-pound kegs by express at once. Heard of your wonderful Remedy through James Hammond, of Schuller, Iowa. I am the largest farmer in the State of Iowa, having 8,000 acres, and carry from 3,000 to 5,000 hogs. C. J. COOK, Odebolt, Iowa.
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Null's King 18517 and the 1,000-pound Commonwealth 15701 head my thirty Poland-China brood sows. The 1,000-pound Miss Lord Corwin 28498 and others equally good. Grand young males and sow pigs. Prize-winning B. P. Rock, Lt. Brahma and Cornish Indian Game birds, Chester White pigs and butter-bred Holstein Bull calves. Everything first-class. Prices to suit the times. **GEO. W. NULL, Odessa, Mo.**

30 Pedigreed Poland-China Yearling Sows and Gilt, all bred and for sale.

The brood sows in my herd belong to the leading families, such as Chief Tecumseh 2d 9115, Orient 8131, Good Quality 4700, Iowa's Champion 2d 6279, Longfellow 29785 O., J. H. Sanders Jr. 13514 S. Herd bred to Hadley Yet, a son of Hadley Jr. 13314 S., the great prize-winner, whose picture appeared in the Breeder's Gazette's last Christmas number. Write and describe what you want, or better, come and select what you wish out of the best bred and finished lot ever raised on the farm. For sale, a No. 1 jack, fifteen and one-half hands high. Warranted a breeder. **W. H. WREN, Marlon, Marlon Co., Kas.**

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553 PEDIGREED AND HIGH-GRADE HEREFORD CATTLE 553

Ever offered at one time in the United States at public sale.
At Fair Grounds, Burlingame, Osage Co., Kas., twenty-six miles southwest of Topeka, on the main line of the A., T. & S. F. railroad.

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The 253 Registered animals consist of six Herd Bulls, sixty-five Young Bulls, 132 Breeding Cows and fifty Heifers. These animals combine the following strains of blood: Anxley, Lord Wilton, The Grove 3d and Cherry Boy. A large number of the females are by the noted Beau Real 11055 and his sons Stone Mason 29071 and Nimrod 29072. For full and complete details of the breeding of the Pedigreed animals send for a free copy of the sale catalogue.

300—THE GRADE HEREFORDS—300.
These offerings will consist of 125 Cows, sixty-five two-year-old Heifers, sixty-five yearling Heifers and forty-five yearling Bulls. All three-quarters blood and up. These will be sold in car lots or bunches to suit purchaser. Send for copy of free catalogue now ready.

TERMS:—Cash. Sale to commence at 9 o'clock a. m. each day and continue until all stock is sold. Usual sale day lunch at noon. Bids by mail or telegraph will be fairly treated by either
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150 PRIZE-WINNING POLAND-CHINAS 150

ON OUR FARM AT
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When we will offer our entire herd, consisting of the breeding boars Hadley Jr. 88007 O., 13314 S.; Sir Charles Corwin 38095 O.; Clay D. 25877 A., the State fair sweepstakes boar; J. H. Sanders Jr. 35089 O.; Longfellow 29785 O., that has the best World's Fair record of any boar west of the Mississippi river; L's Sensation 13316 S.; Harry Faultless, Vol. 10 S., and Victor E. Jr., Vol. 10 S. Among the brood sows belonging to the following families—Corwin, Tecumseh, Black U. S. and Wilkes, are the females belonging to our 1895 show herds, viz.: Yearling herd—Faultless Queen Corwin (26798), Queen Wilkes 2d 82496 O., Ideal Lady U. S. (28910), Miss Short Stop (30644). Six and under twelve herd—Lady Longfellow (34099), Samboline (34101), Sweetheart (34183) and Esmeralda (34181). Our sows were sired by such noted boars as J. H. Sanders 27219 O., Ideal Black U. S. 29505 O., King Tecumseh 2d 14935 A., Michigan 32337 O., Longfellow 29785 O., Royal Short Stop 10887 S., he by Dorsey's Short Stop 6888 S., Corwin King 10323 S., he by Corwin U. S. 7116 S., Black Prince 10118 S., he by Hill's Perfection 3701 S. and Joe Coler 2d 29569 O., he by Joe Coler 21799 O., and others, for which see our free catalogue, as well as for breeding of other brood sows and gilts bred.

TERMS:—All sums under \$20, cash; a credit of eight months will be given on sums of \$20 and over with interest at 8 per cent. from date. Parties from a distance please bring bank reference to obtain this credit. Send for a copy of free catalogue.
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Col. F. M. Woods, Auctioneer. For catalogues write **H. L. LEIBFRIED, Manager.** or **C. S. CROSS, Emporia, Kas.**