

Agricultural Matters.

ACRE YIELDS AND POPULATION'S REQUIREMENTS.

The following correspondence between the Governor of a neighboring State and the farmer statistician, Mr. C. Wood Davis, which we are permitted to lay before KANSAS FARMER readers, is both interesting and valuable:

C. Wood Davis, Esq., Peotone, Kas.:

C. Wood Davis, Esq., Peotone, Kas.: DEAR SIR:—I have, for years, read with much interest your statistical writings. I understand you have a series of publica-tions of this sort. If so, can copies be pur-chased, and at what price, please? Just now, I have read in the KANSAS FARMER your letter to a United States Sen-ator—"Probable Trend of Prices for Corn." I note in this paper your reference to your mode of ascertaining ratios between popu-lation requirements and acre products. May I inquire if this you consider a secret of your own? If not, may I ask, approxi-mately, what term of years is required to determine these ratios. But your publications, if you have such,

But your publications, if you have such, prices, etc. Yours truly, _____ December 18, 1895.

DEAR SIR:-Replying to your favor of the 13th inst., I beg leave to say that articles have only been published in magazines and papers and are not procurable.

Regarding the method of ascertaining ratios between population, requirements and acreage, would say, that there is no mystery about the matter, neither is it a secret, nor do I consider it personal property in any sense, al-though I was doubtless the first, as I seem still to be the only one measuring productive power and requirements in this manner, or attempting thus to determine the very obvious relations existing between acres, average acre vields and consumers.

Long since, impressed with the insufficient returns of the farmer, and becoming convinced that their inadequacy was due but in slight part to any of the causes usually assigned, I was impelled to enter upon an investigation, hoping to determine the primal cause, and the probable duration of its continued operation. With this object in view, data was sought, first in the publications of the federal government, and then in those of foreign nations, but everything bearing upon the sub-ject was found to be of the most fragmentary character, and, so far as world conditions were concerned, without either systematic arrangement or continuity, and so they remain to-day, both at home and abroad, each nation seemingly satisfied to tabulate its own acreage and product, with an occasional effort—especially at Washington—to assemble about three-fourths the wheat product of the world and call it the world's harvest. At the same time little or no heed is given to the rye fields although they furnish about onethird of all the bread eaten.

Groping ineffectively among these fragments, the idea at last presented itself that were it but possible to determine acre yields from the fields of the bread-eating world, or from those of any given country, and, as the case might be, the net imports or exports of the territory dealt with, the average annual unit rate of consumption could then be determined with a fair degree of accuracy, and the relation of the acres employed to existing consumers shown, and could data be had for a period of twenty or thirty years the probabilities as to the sufficiency of future supplies and the trend of prices might be deduced. Such work was undertaken solely for my own information and guidance, and withouta thought of publication until the remarkable character of the facts developed suggested that others might be interested and possibly encouraged by their publication. I regret to say, however, that the great majority require pabulum that accords with theories of their own, and that the most of the writers for the press are never content except when misrepresenting the views and statements of any one who has the temerity to leave the beaten track. The period required to determine supply equaled 7.937 bushels. As the what are average acre yields should, I ble data exists, in order that the vari- was 15.32 bushels an acre; hence 0.5181

shown by the fact that the yields of wheat in the countries inhabited by peoples of European lineage-really the only bread-eaters-during the last twenty-five years have been such as to give an average of 12.8 Winchester bushels an acre, and yet but one crop, in such regions, harvested since 1886 has given a yield below 12.8 bushels an acre, while nearly all the other eight have given yields very much in excess. When the consequences of this remark-able succession of great yields are, in the bearings upon prices and the welaverage yield for any given area or for the world as whole. Unfortunately, there are but one or two countries possessed of satisfactory crop data extending back more than twenty-five years, and even in Britain official determinations of the volume of production were not made till 1884. In the United Kingdom, and in several other countries, we are compelled to rely upon administrative or commercial estimates in order to go back twenty-five years. Having, from available data, ascertained, approximately, the acreage and the average acre yield, we have the most important factors. Then by determining the total product, the requirements for seed, the net imports or net exports, as the case may be, and the average number of consumers sup-

plied for the term of years selected, we can readily determine the annual average rate of consumption, and the quantity of land, under the particular product dealt with, necessary to meet such unit requirements, or to supply a given population so long as average rates of yield and consumption shall

remain constant. The data collected leads me to believe that nowhere is there-at least in recent decades—any material increase of acre yields resulting from improved modes of culture, as the progressive inclusion in the productive area of acres of lower and lower fertility quite offsets the increase of yield from acres longest cultivated. Moreover, in most countries any increase that might have resulted from such improved processes has been neutralized, so far as the ratio of productive acres to population is concerned by an increase of unit consumption resulting from a practically continuous improvement in the condition of the mass of the population due to the greater purchasing power of the wages received and, in many cases, to an actual increase of wages.

For present purposes it may be assumed that, whatever the average rate of acre yield, deducible from data covering a period long enough to equilibrate variations due to changing meteorological conditions, that it is constant, and that a given acreage must be employed to supply a given number of people, residing in the given region, with required quantities of any one of the primary food staples of the temperate zones.

This proposition can best be illustrated by actual conditions. During the decade ending with 1890, France grew, imported and consumed wheat

as follows:

Total supply...... 3,479,524,000 Wheat required for seed.... 456,392,000 Wheat available for food.. 3,023,222,000 population and the acres under each of Total consumption..... 3,479,524,000 " Dividing the wheat harvested from the primary food staples of the temper-1881 to 1890, inclusive, by the 172,185,ate zones at the end of each of the 000 acres employed in its growth, the last three decennial periods and now. yield is found to have averaged 17.97 The results are practically the same as Winchester bushels an acre. (With those by the longer method already rare exceptions writers for the press described, if we assume acre yields and use the Imperial and Winchester bushel indiscriminately, although on a unit requirements to be constant over considerable periods. While average acre yield vary because of varying cliworld crop the difference is a matter of some 80,000,000 bushels). Dividing matic conditions that are equilibrated only by long terms of years, unit rethe supply available for food during quirements vary because of changes in the decade among the 380,901,000 conthe standard of living; hence the de-terminations by this less laborious prosuming units, each supplied one year, it appears that the average annual unit cess are not satisfactory. Yet we know, from the prices then obtaining, seed sown was officially estimated at believe, be the longest for which relia- 2.65 bushels an acre, the net product that from 1865 to 1875 there was neither a great overahundance nor any mateations due to ever changing climatic of an acre of the wheat-bearing lands of rial defect in the supply of the primary conditions may be equilibrated so far France was employed, during the ninth food staples, and therefore the ratio cation more so, as publishers look upon

as possible. The necessity for this is decade, in furnishing a quantity of grain equaling average unit requirements.

French wheat fields gave yields during the seventh decade averaging 16.52 Winchester bushels an acre, 16.35 bushels during the eighth decade, and 19.97 bushels in the ninth, the average fall-ing to 17.86 bushels since 1890. Evidently, it would be erroneous to assume that the average yield was either of the quantities named, but that the average of 17.08 bushels deduced from the harvests of all the years (thirtyfive) for which official data are availfare of the cultivators, considered, this able, is the one which should be is, obviously, a fact of the greatest sig-nificance and shows the necessity of change in French agricultural methods long periods to determine a veritable since 1860; certainly no such changes average yield for any given area or for as imply an appreciable increase of acre yields.

We ought, however, to adopt the latest term of sufficient length-say ten years-to arrive at anything like an approximate measure of present unit requirements, because such requirements are not controlled by varying meteorological conditions, but measurably are by such economic ones as affect the standard of living; hence the enclosed table is significant, inasmuch as it shows a great and continuous increase in annual unit requirements for wheat in France, which has been as follows:

This increase of no less than 19.6 per cent. in twenty years is due to that increasing prosperity of the lower strata of the population which has continued a process of substituting wheat for rye that has been in progress since the revolution of 1789, and a later substitution of wheat for buckwheat and other cheap foods, and in part to the absorption of the greater rye-eaters of Alsace and Loraine by Germany.

Having ascertained that the average acre vield from French wheat fields during the last thirty-five years has been 17.08 Winchester bushels, and that present unit requirements are at least 7.937 bushels—exclusive of seed— it is easy to ascertain that France requires a supply of wheat, from home and foreign sources, equaling the average net product from 0.5181 of an acre of the wheat-bearing lands of France for every unit of the population.

Possessed, as we apparently are, of fairly reliable agricultural data embracing some 90 per cent. of the grainbearing areas of the countries inhabited by the bread-eating peoples of European lineage, and imports of wheat into such countries from other regions (Asia and North Africa) annually averaging no more than the net product from 2,500,000 acres, it is not impracticable, in the manner indicated, to at least approximately measure the bread-eating world's productive power and requirements and determine with some degree of accuracy what they are likely to be in the nearby years. Such a process, however, when applied to worldwide areas involves nearly endless labor and persistent patience in dealing with a vast mass of details which only those private individuals are likely to undertake who can find their compensation in the significant and far-reaching conditions developed as such work progresses.

There is another and analogous method of measuring productive power and requirements, and one involving much less labor. That is, by determin-ing the ratios between the consuming

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cine, for the cure of Croup, Sore Throat, Lung Fever and Whooping Cough,

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Cherry Pectoral cannot be equaled. E. M. BRAWLEY, D. D., Dis. Sec. of the American Bap-

tist Publishing Society, Petersburg, Va., endorses it, as a cure for violent colds, bronchitis, etc. Dr. Brawley also adds: To all ministers suffering from throat troubles, I recommend

AYER'S Cherry Pectoral Awarded Medal at World's Fair.

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between productive acres and consumptive requirements were very evenly balanced. Yet were such acres now in the same ratio to the populations of European lineage, in the countries they inhabit, as in 1870, the acreage omployed in growing wheat, rye, spelt, maslin, barley, oats, buckwheat and potatoes would be quite 90,000,000 acres more than it is. This discrepancy would not be explained by the shorter process, because the variations in yield due to changing meteorological conditions would not be developed, nor yet the changes in unit consumption due to more favorable economic conditions. During the last Line years so exceptionally favorable have been climatic conditions over worldwide areas as to give harvests of grain and potatoes averaging, in acre yields, more than 7 per cent. in excess of the average for the twenty-five years ending with 1895. This remarkable succession of favorable seasons and great yields has masked the defective acreage and wholly neutralized its effect both upon supply and prices. Still, this defect of 90,000,000 acres, or 15 per cent., in the productive power, relatively to the consuming element and as measured by the ratio of 1270, must make itself apparent in a most startling manner whenever there shall be two or more world harvests in succession giving no more than average yields. In other words, only a succession of world crops (nine) giving yields above the average have sufficed to meet requirements that have increased nearly eight times as fast, since 1884. as the power to produce the primary food staples named. This great disparity would have long since been manifest but for such a succession of favorable seasons as had not been known for at least one hundred years. But for this succession of great world crops I believe prices would now be satisfactory to the cultivator. The work I have done has resulted in the accumulation of a great mass of data, and the inclusion of much of it in many tables (similar to that enclosed), showing the acreage under staples, the product, and the net imports or exports of a majority of the countries inhabited by the bread-eaters, each product in each country being dealt with separately and then all combined, and the whole world dealt with in the same way, so far as data exists. This work, however, is far from completion. Were it complete, the tables, and accompanying text, might furnish what you desire, and what probably exists elsewhere only in scattered fragments. Owing to waning power to work and the amount of labor involved, its completion is very doubtful, and its publi-

such matter as holding out little promise of such a demand as shall render its launching a commercial success. Yours very truly,

C. WOOD DAVIS. Peotone, Kas., December, 1895.

Kaffir Corn Experience.

EDITOR KANSAS FARMER:-In re ply to several inquiries, the Red Kaffir corn was drilled in rows with corn planter; six inches apart in rows with corn about right to drill. Cut with a Mc-Cormick corn binder, which binds in bundles with twine. Shocked in shocks of twelve or more bundles, bound around top of shock with twine. When cured, stacked with butts of bundles outward, to protect from ravages of birds. Threshed through a separator with concaves out, but an old Pennsylvania "chaff piler" or a separator with the separator attachment taken off would be more suitable. After running through the machine the resulting fodder is the best roughness in the world. A "sled" cutter costing a few dollars, or that farmers make themselves, will answer the purpose for cutting, but I would still tie in bundles by hand and shock in order to cure thoroughly and save time in handling. Rye straw threshed with a flail is better than twine for binding by hand if you JNO. H. WURTZ. can get it.

Dawson, Pa.

The Stock Interest.

The Corn Ration.

R. S. T., Hutchinson, Kas.—Please tell me your opinion as to relative value of corn meal straight and corn and cob ground to-gether, for fattening purposes in feed lot, and oblige.

The experiments on record in regard to the relative value of corn meal and cob and corn meal are to the effect that these two feeds are very nearly equal. Professor Shelton, of this experiment station, found years ago that he could get the same result from corn and cob meal and straight corn meal when fed to hogs. But the question is, whether the extra power required in grinding the cob will pay for the nutrition contained in the cob. On the average, 100 pounds of dry ear corn contain about fourteen pounds of cobs. A hundred pounds of corn cob contain 1.6 pounds of digestible protein, 43.9 pounds di-gestible carbohydrates and .3 pound of fat. Hence fourteen pounds contain .21 pounds of protein, 6.28 pounds of carbohydrates, while the amount of fat is too small to take it into consideration. If we estimate the protein to be worth 3 cents a pound and the carbohydrates .9 of a cent a pound, which is rather high valuation, we should have as the total feeding value of the cobs in 100 pounds of ear corn, 6.25 cents at the outside. Now can the cob be ground for that price? If so, there may be a profit in using corn and cob meal.

There is another consideration, and that is the physical effect which the cob meal has on the stomach in the digestion of the corn meal. This is a factor concerning which we know little or nothing, and it would doubtless vary in value with the individuality of the animal. The fact that there has been no appreciable difference found in the gain of animals fed on corn and cob meal and clear corn meal, respectively, is doubtless partly due to the small something religious going on, pass amount of cob which the former con- around the hat. This association must tains. pounds of cob could not make any shovel and the hoe. We have several marked difference in the gain. The difference in nutritive value of 100 During the year it occurred to me that pounds of corn meal and 100 pounds of corn and cob meal is .6 pounds protein, 6.4 pounds carbohydrates and 1.3 pounds fat, i. e., the former contains this much more nutrition than the latter, but this difference is so small as to hardly be perceptible in the gains under the most careful feeding. Slight differences in the individuality of the animals fed would readily account for differences in gain.

Sutton's Sermon to Breeders.

In view of the annual meeting of the Kansas Improved Stock Breeders' Association, in Topeka, this week, we make a few extracts from the annual address of ex-President Wm. B. Sutton, of Russell, Kas., made one year ago, that are still pertinent:

"I believe this association has, or should have, large enough scope to extend its influence and assistance to all classes. The Dairy Association of the State, at a recent meeting, appealed to our law-making power for relief from this unnatural and unfair competition, and I heartily recommend that you add your petition in their behalf. I am not prepared to call butterine a fraud per se, or to say that its production is not legitimate. On the contrary, I believe it to be wholesome, and to an uncultivated taste fairly palatable, and to the poor who cannot afford the price of good butter it may be a blessing, but it is a notorious fact that all over the State of Kansas it is sold as butter. In that much it is a fraud, and should be regulated by law, and at this session of your Legislature.

"The sheep industry, on the contrary, has materially advanced; the demand has enlarged. Wool has commanded a satisfactory price, and mutton at times has been almost out of reach of the poor. In this instance the limit of production has not been reached. We cannot nearly supply the demands of our own country for either wool or good mutton. Touching at once the point I desire to make, I call again for help from all classes of breeders and all who have the material interest of the State of Kansas at heart. (I beg of you not to ring the 'chestnut bell' on me now, but hear me through.) Many times have you resolved and reresolved that this great industry must be protected, but the wind is not tempered to the shorn lamb-the dog barks uncared -the wolf howls his defiance and the coyote moans not at its own funeral. Somebody must bear the ridicule of his colleagues; somebody must dare to be called a dog-catcher. We want the dogs taxed to create a fund to pay for the sheep the dogs destroy, and possibly to pay for the wolf scalps.

"If farmers' organizations have accomplished any lasting good, or shall have achieved that which will live after them, it is in the education of the people, in their formation of habits of thought, and with it self-reliance, or putting it into homely phrase, 'thinking for themselves.'

"My great desire is that this association shall prosper. That it shall enroll on its membership roster every wide-awake farmer and every breeder of improved stock in the State; that the association shall become potent not only for the education of themselves, but for the enforcement of reforms upon the State looking to the betterment of agricultural conditions. To accomplish this there must be a radical change from the apathy heretofore existing. Your President and Secretary cannot command their presence. For the past year there has been but a very small percentage of the breeders of the State enrolled as members. I would rather not say how few for fear it might be published. I am willing to try to do my share, but I never was known to stick to a sinking ship. Nothing can run without money. Even the churches, in order to have The amount of nutrition shown have a larger membership and more above to be contained in fourteen money, or we may as well hang up the the nose white, as also some white on half-starved organizations in the State. it would be wise to consolidate these organizations into one, and have one grand, successful whole, with a large annual meeting, with time allotted to each interest. Consolidation is the order of the day. We are being taught this lesson on everything we buy every day of the 365. In pursuance of this plan I wrote the Presidents of some of the associations, and I believe it found general favor. I would urge the plan. I think while our State 18 young, and until the various branches of our stock interests become large enough to stand successfully alone, that it will be found the only practical plan. If you can

believe in it, I trust you will take ac-tive steps to bring it about.

would be well to hold our meeting at different points in the State, and to have two or more meetings during the year; but my conviction is that it would be unwise to undertake more than one meeting annually, at least for a year or two, until our membership shall have largely increased. The loss of time and expense of attending more than one meeting is more than some of our members feel inclined to incur, and it is a matter we cannot lose sight of. But there is not a breeder of stock in the State but should tack this motto on his front gate: 'You can well afford to attend each year, though it cost you a pig, a sheep or a steer.'

No Corn Stalk Disease.

EDITOR KANSAS FARMER:-I have seen so much said in your valuable paper concerning the alleged corn stalk disease. There is no such thing. I desire to say to your correspondent, Mr. J. M. Smith, of Globe, Kas., what killed his cattle. In the first place, he turned them in the stalk field all day, although he says he gave them plenty of water and salt. What he had to say was of no special value to the farmers. I desire to reiterate the fact that there is no such thing as corn stalk disease.

We have had some experience with cattle and never lost any by turning them in the stalk field. We left all of the rotten corn in the field and did not pretend to collect it when we gathered the corn. In the beginning we turned the cattle out only about ten minutes at a time, then took them to water and left them several hours, and then turned them out again, and so on until they got used to feeding on stalks, and in this way you can be sure that you will not lose any cattle. We have always followed this plan and never lost any. We have recommended it to others, and while they had lost cattle before, they never lost any under this method. Try it and be convinced.

We all know that cattle never go to water, when once turned in, because they are so ravenous for the corn and stalks at first; later they seek the wa-ter, but too late. The results are very similar to cattle when first turned on wet clover. They must first get accustomed to the change of feed, and then you need never lose any stock.

Herington, Kas. J. T. SHUMP.

Berkshire Qualities.

Extracts from the Berkshire Year Book:

"For the purpose of improving the common swine of the country, no other hog can be used to better advantage or with greater certainty of good results than the Berkshire. Having descended from so long a line of pure-bred ancestors, he possesses in an unrivaled degree the power to stamp upon his progeny his own excellence of form and feeding capacity, as well as vigor of constitution, which includes the ability to resist encroachments of disease. Hence he is in almost constant use for the improvement of common hogs. The improved Berkshires of the present day are a well-defined breed, possessing in an eminent degree definite and valuable qualities and may be described as follows: Body color black, with smooth, pliable, plum-colored skin; hair rather fine, soft and thick; feet and tip of tail white, with dash of white on face, and not unfrequently jowl; forehead and face broad, the latter dished, with eyes rather large and very clear, and snout short; ears of medium size, thin and very soft and carried rather upright; neck short, broad on top, with jowl large and full; shoulders broad on top and deep through the chest; back broad, sides deep and nearly straight on bottom line; hams large, reaching well forward on back and down on hock, well rounded and deep through, causing the legs to stand well apart; these, as well as the fore legs, short and strong, and standing well on toes; tail tapering

ve steps to bring it about. "It has been thought by some that it ould be well to hold our meeting at

Arms and limbs are stiff and lame and it

Arms and limbs are stiff and lame and it is misery for me to move. This is rheu-matism, caused by lactic acid in the blood. Neutralize this acid, purify the blood, and cure rheumatism by taking the one true blood purifier, Hood's Sarsaparilla. "I have been taking Hood's Barsapa-rilla for the last six months, and find it a great help to me. I have been suffering with rheumatism in my left arm and shoulder, which was rendered entirely helpless. I am able to use them again since taking Hood's Sarsaparilla." MRS. C. E. SAY, Hox 414, Junction City, Kansas.

Hood Sarsaparilla Is the One True Blood Purifier. \$1; 6 for \$5. Hood's Pills cure all Liver Ills. 25 cents.

pearance and recognized at once as an animal of more than ordinary worth.

"W. E. Spicer, of Harvard, Neb., is not only a good breeder of Berkshires of extra quality, but a very successful breeder of fat barrows for the market. Mr. Spicer gives the following data in reference to a feeding experiment with the Berkshire sow named Number Seven 11055, of the well-known Romford family. He writes: 'She had been fed and shown at the fall fairs of that year (1888). On October 7 she was weighed about 4 p. m., after having all the soaked shelled corn she would eat at noon, weighing 632 pounds. She was then put in a small, open shed and fed corn meal soaked in water from one feed to the next, generally using the dishwater from the house. She was fed three times per day all she would eat. She had a feed of pumpkins two or three times that week. She was fed at noon on October 14, and about 4 p. m. that day she was taken out of the shed and weighed 678 pounds -gained forty-six pounds in seven days. The feed she ate was not weighed, but she had been fed from one barrel. I weighed the barrel and what was in it and then filled it as near as could like it was before. I then weighed it and found I had put in ninety pounds of meal. In the fall of 1890 I fed Romford II. 15791 (American Berkshire Record). In this test I wished to see how many pounds of corn meal were required to produce a pound of gain, so the sow was carefully prepared and placed on full feed, the weighing being done in the evening each time just be-fore she was fed. She was fed all she would eat at noon each time before being weighed. She was kept in a yard thirty-two feet square, with a good house in it. On September 30 she weighed 491 pounds, and on October 7 she weighed 525 pounds, having gained thirty-four pounds in seven days. She ate ninety-seven pounds of corn meal and matter. The meal was soaked six hours.'"

Take advice! Stop coughing at once by the immediate use of Dr. Bull's Cough Syrup. One bottle will cure you.

A Corn Contest.

This paper circulates in the best corn- . producing section of the country, and there are few of our subscribers who are not corn-growers. Every practical corn-grower should take pride in having the best corn and the largest crop, and we notice that this year there is to be a contest as to who will produce the largest crop of corn on one acre of land. The contest is open to all competitors in any part of North America, and it is being so extensively advertised that it is attracting great attention and assuming national importance. We would feel gratified if one of our subscribers should win the prize as the best corn-grower in America (that would mean in the world) and therefore we take pleasure in calling our readers' special attention to the matter. The prizes amount to a total of \$500, in addition to which the value of the corn grown. as seed corn, would be no small sum, and the reputation of having won this prize would be worth more to any man than the best forty-acre farm in the State. Full particulars in regard to this contest can be obtained from the Iowa Seed Co., Des Moines, Iowa, together with a large beau tifully illustrated catalogue of all the best varieties of seed corn and other kinds of

In short, I would not grind the cob unless the cost of the additional power required to do so is very trifling.

C. C. GEORGESON. Agricultural college, Manhattan.

Irrigation.

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Subsoiling Saves the Water.

EDITOR KANSAS FARMER :- Last spring my wife, who superintends our Oklahoma farm during my absence, had Red Rock valley land broken by the subsoiler, sixteen inches deep, and then had the land cross-broken by the same implement. Apparently the ground contained no moisture during the first nine days of April, and in the dust she had alfalfa seed sown by hand. Rain came on the 10th, and at irregular intervals thereafter throughout the season. The precipitation sometimes measured several inches, but no matter how great the downpour became the water did not run off or stand on the surface to be licked up by Texas winds. It quickly disappeared in the deeply pulverized alluvial soil as it gravitated toward a lower level. Every alfalfa seed seemed proud of its location in the wake of the subsoiler and vied with, its neighbor in spreading aloft the prettiest and largest banner of green. The ground was soon covered with alfalfa plants remarkably free from the presence of dodder or other extraneous soil productions, and my wife had two crops cut from this year's seeding. I spent the month of August on the farm and saw the second crop grow. The sight of that alfalfa on land where blue-stem grass six feet high had possession prior to the 16th of September, 1893, was a powerful cerebro-spinal stimulant, and it was also good for my soul.

On land adjoining the alfalfa, the soil of which was of the same quality and structure, but had only been stirred to the orthodox depth of a few inches, water stood in places two or three days.

I have great admiration for and confidence in that rich, mellow, virgin soil, and I believe that I give it full credit, but with present impressions I would not for any reasonable monetary consideration do without the "Re-deemer" with a big R, the subsoil plow, on Prospect farm.

W. MCKAY DOUGAN, M. D. Western Shoshone Agency, White Rock, Nev.

Sub-Irrigation.

EDITOR KANSAS FARMER:-Dr. Hud son's dissertations on this subject are deeply instructive to all your readers in western Kansas. Lest some might suppose that the tile he mentions is an absolute requirement for this process. let me tell them something of my personal observation.

Mr. F., a railroad employe, has a farm-if Eastern people won't take offense at the term-near the Colorado State line. His well is twenty-six feet deep. A small wind engine raises the water. His garden is on sloping ground -say eighteen inches to one hundred feet. At the crest of the slope his boys inches. Now the engine and pump dug a flume, eighteen inches wide and two feet deep and as long as the width of his garden, this flume being, of course, at right angles to the slope of the ground and the length of his garden. Down the slope, at intervals of four feet, leading out of this flume, furrows were plowed as deep as practicable and then deepened by digging to twenty inches or two feet, the bottom of each ditch being finished in V-shape. In these V's were laid old drippings sold to harvesters, at \$1, sorghum stalks from the feeding yard. \$68; net cost of fuel for raising The ditches were then filled and the seventy-six feet to irrigate 135 acres ground leveled, and the garden planted. five times, \$68. This was four years ago, one of our One acre mon "dry years"-I might say the dryest. This was an experiment, but upon perfectly logical deductions, and the re-sults were astounding. (This is the only word that expresses the sensation of all witnesses.)

loosely nailed to allow free escape of the water. That year was also a dry one, but the results were, if possible, better than those of the previous year, especially from the fruit trees. These board gutters are good yet and may be for several years longer. When they become useless they will be renewed or permanent arrangements will be made and areas extended.

Moral: Don't sit down and sigh for the unattainable, but reach out for whatever is in sight, and use it to the best of your enlightened judgment.

J. C. B. Spearville, Kas., January 1, 1896.

Much Water From "Points."

EDITOR KANSAS FARMER:-You are interested in my work of putting in points and taking water from them in large quantities with centrifugal pumps.

I have been successful in this work in different localities. At the Soldier's Home, at Fort Dodge, Kas., last June, 1 put in two points of thirty feet each, of six-inch pipe, and secured 650 gallons per minute, from each point. For different men I have put in points, here in Sterling-T. H. Brown, R. J. Shay, W. B. Graham, Rev. Allin and Wm. Groendyke.

On the 30th of November I tested Mr. Groendyke's point, with a pump having a capacity of 1,850 gallons per minute. We estimated the discharge of water to be 1,000 gallons per minute, and would hold out at that rate. This point is twenty-four feet from surface and six-inch pipe, eight feet of perforation. This point is the most remarkable for quantity of all I have put down. I shall be glad to give you any further information you may desire on this G. A. GONDER. subject. Sterling, Kas.

A New Era in Irrigation by Pumping Plants.

On a recent trip to Lindsay, Tulare county, California, the writer saw three citrus groves that had been irrigated during the season of 1895 by engines using crude oil. All are looking well and in each the water must be raised not less than fifty feet. Mr. Seybolt uses a lift pump with three chambers, which he thinks needs less power but more repairs than the centrifugal that is in common use for such work. The only attention it requires is for the lubricating cup to be filled every hour or two, and occasionally the spring must be adjusted that regulates the electric spark, for the explosive principle of the gasoline engine is used. The water is pumped up seventy-six feet (at night) into a reservoir eighty feet in diameter and four and one-half feet deep, from which it is drawn off for irrigating during the day. When the pump first starts it throws about eighteen miner's inches of water, but soon falls back to the amount which the vein or well can supply, twelve seem to work as well when throwing eighteen as if they only threw twelve, which shows that the well is the weakest link in the chain of conditions affecting this irrigating plant. A tank of 105 gallons crude oil lasts 140 to 144 hours, and the expense account stands thus: Sixteen tanks account stands thus: Sixteen tanks crude kerosene oil (each containing 105 gallons) at \$8.50, \$136; deduct sixty-eight cans (five gallons each) of filtered drippings sold to harvesters, at \$1, \$68; net cost of fuel for raising water seventy-six feet to irrigate 135 acres

cent per acre per year which Mr. Seybolt's outfit required for fuel, would be considered a very reasonable charge for maintenance and repairs on a gravity system. Not every one has done as well, but it does seem as though pumping plants opened up a new era in irrigation .- F. S. Chapin, in American Agriculturist.

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 an-other 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:

remittances payable to

PERINE'S PLOW WORKS, Topeka, Kas.

The Wooden Hen.



It is not a toy but an up-to-date modern necessity, properly vouched for by all engaged in the great poultry industry of Kansas. It has made a profitable business out of poultry-raising. It has made a business opening and a source of steady income for women, as well as the girls and boys. The wooden hen" will hatch ducks, geese and turkeys as well as chickens. It is so simple that any boy or girl can run it success fully the year round. It weighs fifteen pounds, size 10x15x8, capacity twenty-eight eggs, price only \$5. Address Geo. H. Stahl, manufacturer, Quincy, Ill.

A Look Through South Missouri for Four Cents.

The Kansas City, Fort Scott & Memphis Railroad Company has just issued a magnificent book of sixty or more photo-en-graved views of varied scenery in south Missouri. From these views an accurate



JANUARY 9,

any other fence made. A trial will convince you. Write for catalogue. **KEYSTONE WOVEN WIRE FENCE CO.,** PEORIA, ILL.



Carnahan's Tree Wash and Insect Destroyer Destroys the bore worm and apple root louse, pro-tects the plum from the sting of the curcuilo 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.



IT COSTS YOU NOTHING! To geta copy of "Science of Optics—in a Nutshell." Tells you all about the defects of your vision, and how our specialist can fit you a pair of spectacles or eye-glasses by mail. Satisfaction guaranteed or money refunded. Hundreds of testimonials from all over the U.S. Eyesight is priceless. Do not delay. Write for particulars at once, to DR. MAX M. MAAS, Ref. Dr. Opt. G. (Doctor of Refraction graduate in optics), 1027 Wyan-dotte St., Kansas City, Mo.



Monarch • Feed • Grinders. Steel interchangeable rings. BETTENDORF FARM TRUCKS-All steel

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price. RED JACKET EAR CORN CUTTERS-For

FREEMAN'S FEED-CUTTERS-Hand and

Power.

Nothing Better Made for the Purposes. For circulars and prices address

Rock Island Implement Co., Kansas City, Mo.

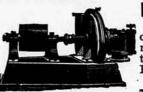
At the lower end of these V-shaped sub-ditches he had fruit trees planted, and while neighboring trees of greater age died, his grew as luxuriantly as could possibly be desired.

The next year he had other subditches made from the same headflume, between the first ditches, and at the bottom of each was placed a wooden ditches by gravity, has been reported gutter made of three common pine all the way from \$2.50 to more than \$80 fencing boards, six inches wide, the per acre, and some systems in Italy run one forming the top of the V being as high as \$200 per acre. And the 50-

One acre more would make the cost of pumping exactly 50 cents per acre, or 10 cents for each irrigation, or 10-76 of 1 cent for each foot the water was raised to irrigate one acre. Last year Mr. Seybolt used wood to supply a boiler and pumped with a pulsometer at a cost for fuel and fireman of over \$800, or about \$6 per acre, showing oil to be incomparably cheaper.

The cost of installing these pumping plants varies from \$5 to \$10 per acre for each twenty feet the water must be raised. The cost of irrigation district systems, by which water is supplied in





IRRIGATION MACHINERY. If you want the most practical, efficient and cheapest irrigation pumping machinery, write for catalogue of Cen-trifugal and Triplex Pumps, Engines, Boilers, Gasoline Engines, etc., to IRVIN VAN WIE, 717-726 W. Fayette St., SYRACUSE, N. Y.

The Apiary.

Conducted by A. H. Duff, Larned, Kss., to whorf inquiries relating to this department should be ad-dressed.

"Well-Trained Bees."

EDITOR KANSAS FARMER:--Under the above caption, an article from the St. Louis *Republic* is published in your issue of December 18. Please permit me to state that to accept some parts of said article as true, would be to accept what is not a fact, for there is, perhaps, not one living thing in the entire animal kingdom whose habits are more unalterably fixed than those of the honey bee.

To begin with, the writer shows that he is not well informed in regard to bees. He uses the following language in speaking of the habits of the bee: "He will mount in the air and fly in a straight line for his hive." The honey bee proper is not a male at all, but is an imperfectly-developed female. The queen is the only perfectly developed female in the hive, and is the mother of the whole colony. But further, the general course of the bee, when going to or from the hive, is straight, but its method of navigating the air is from right to left, or what may properly be called a zigzag course. In regard to their economizing space in the construction of their comb, his statement is correct, but he should have gone a little further, and stated that their measurements are as precise as that of the finest and most skilled mechanic, as the worker cells measure just onefifth of an inch, or that there are always five to the inch, while in drone comb we find just four cells to the inch.

In speaking of their training, he states that in 1831, a man named Wildman trained a troupe, and exhibited them for the recreation of the public, and that he got swarms of bees so well trained that he could make them enact maneuvers with as much precision and unity as troops of soldiers go through field tactics. Wildman would appear, he says, before the audience with bees swarming all over him. All at once he would whistle and, presto, the bees started off and flew straight to their hives, and when they got well settled there, he would whistle again, and back they flew and settled on his face and hands and clothes once more. This, he says was done with the greatest promptness and regularity. That Wildman could and probably did ap-That pear with bees clustered about his person, is, no doubt, true, as he or any other person could cage a queen bee and put the cage on any part of the body, and the workers would cluster on and about the cage, and the person bearing the cage can then go any where and the bees will stay with him; and if they have been well fed just before capturing and caging their queen, they will not sting unless they are hurt. For when full of liquid sweets, the honey bee acts solely on the defensive, and not on the offensive. But Mr. Wildman or any one else might whistle until the crack of doom, and the bees would not leave him and go to their hive as long as he held their queen captive. This is all there is to this training of honey bees. The balance is simply "Sinbad the Sailor" romance. But the writer further states that, whether they had been despoiled of their stings or not, is not stated. Had he been well informed he would have known that when a honey bee loses its short time.

out its use, it will take them fourteen or fifteen days. In the difference of seven or eight days, a colony under the same conditions will store nearly one hundred pounds of surplus honey, worth from \$10 to \$15; and not only this, but by its use we have perfect combs of worker comb, and without its use we have, as a general thing, imperfect combs and a large amount of drone comb, which every apiarist knows is not desirable. In many seasons the heaviest flow of honey lasts but a short time, perhaps ten days or two weeks. Hence, you see, that in a season of this kind it would take a colony hived on empty frames during the entire honey flow to build up and make a full colony, without getting anything done in the surplus line. Foundation comb is one of the best investments the bee-keeper can make.

Gossip About Stock.

D. P. Norton, Short-horn breeder, Coun-cil Grove, Kas., says our "Two-cent column" is a hummer, and he has inquiries for car lots of bulls, as well as single orders. and if one in ten buy who talk about it, there will be a bull famine of the right sort. If cattlemen would advertise more they would have less cause for the chronic complaints of recent years.

O. P. Updegraff, of Riverside stock farm, Topeka, Kas., has made the following recent sales of breeding swine: To K т. Crimm. Kansas City, Mo., five choice Berkshire gilts and the yearling boar Riverside Hope, by the imported boar Warrick Hope; to J. F. Roe, of Vinland, Kas., a fine young boar by Riverside Model, a son of Longfellow Model. Mower Bros., of Lost Springs. Kas., were looking over the youngsters and home with them a choice young took gilt by Bismarck II., bred to a son of the im-ported boar Western Prince. and a spring boar pig by Riverside Model. Mr. Updegraff also sold to W. S. Crouch. Maple Hill, Kas., a Poland-China boar by Upward, son of Onward. To R. H. Town, Valencia, Kas., a Berkshire boar by Riverside Model. To Henry Jahnke, of Leonardville, Kas., a boar by the same sire. To J. D. Haldeman, two young gilts bred to sons of imported boars. Though sales have been quite heavy this fall, there are yet in this herd a grand lot of boars and gilts ready for market at asonable prices

H. L. Leibfried, manager Sunny Slope farm, Emporia, Kas., reports: "We sold twenty-one head of bulls to the Widow Adair ranch, in Texas, purchased by their manager, Mr. Walsh. We sold five more head to go to a ranch in Texas. We sold two calves to Jacobs Bros., of Neosho Rapids, Kas., one sired by Wild Tom and one sired by Arch V.; price \$325. Sold to T. W. Marshall, of Ulysses. Kas., a bull calf sired by Arch V., for \$150. He is intending to start a little herd at Ulysses and is buy ing nothing but the best. Also to Mr. Geo. Channon, of Hope, Kas., three fine Hadley Jr. gilts, five J. H. Sanders Jr. gilts, one Longfellow sow bred to J. H. Sanders Jr. W. H. Wren, Marion, Kas., a Hadley Jr. boar pig. Three very fine J. H. Sanders Jr. gilts, dam Golden Bar 2d, a full sister to the sow that farrowed King Hadley and Samboline, the two sensational pigs this year; also one of our show sows. Miss Burke Corwin. We sold to C. W. Owens, of Lake City, Iowa, a Hadley Jr. boar pig. We exported four pigs to Juan Castillon, in Mexico. We are having an extra good trade and will, no doubt, sell out our large crop of pigs. Our pigs have given good satisfaction. We have an extra fine lot of gilts and several fine boars by Hadley Jr. and J. H. Sanders Jr. We also sold to Mr. Channon a fine Hadley Jr. boar pig." "The mud was a foot deep and the water

reached the skies," writes T. A. Hubbard, of Rome, Kas. Consequently his sale was necessarily declared off, yet he rises to re-mark further: "I am now prepared to fill most any order from a pig to a car-load of breeders of as fine breeding as can be found in the United States, with growth, style and finish, and they are in the pink of condition, healthy and hearty. Having kept my hogs on alfalfa, ship and bran largely for two years, they are in excellent condi-tion to breed. My Poland-China herd is composed of several families, but strongly Tecumseh-bred, and I am using two grand young Tecumseh boars, assisted by three others, while Jumbo 11803, a royal-bred fellow, heads the aged herd. He was sired by the following great boars: Avalanche F. 11544, he by Avalanche 7765 by Black U. S. 4209 by Success 277 by Tom Corwin 2d 85, and running back to Moorish Maid on the dam's side, etc. My Large English Berkshires are called real good, having used three of Gentry's males, and my hero is composed of as good blood as I can find. and individual merit Am using five males on them. The sale being called off on ac count of rain I am prepared to furnish the public some plums of either breed, male or

better lot of gilts and young sows, also some show boars, for sale, and they are bred and will make any man money. Now is the time to stock up right. One or two good thoroughbred sows will stock your farm."

Publishers' Paragraphs.

If you want to get prices on furs write to John Petrzilek, 826 Kansas avenue, Topeka, Kas. He is a practical furrier and manufacturer and his quotations are at full values.

Mrs. L. Hudnut, of South Bend, Ind., is making a liberal offer to ladies afflicted with any form of female disease. Any one inerested in a remedy of the kind described in her advertisement in this number will profit by sending to her for a free package of her home treatment.

phia, are sending out a 25-cent collection, containing seven superb new varieties This is a great offer that our readers who desire to adorn and beautify their homes

during summer and autumn, in going over their fields, note down everything observed of value regarding any plant of interest to farmers and gardeners. All these facts are embodied in their annual catalogue, which they will send free on application.

mouthpiece, which will color beautifully and which has never before been sold for much less than \$1 50. It is a full-size pipe and is sent postpaid for 50 cents by B. F. Kirtland, 47 Randolph street, Chicago. This party is well known by the FARMER as the head of a reliable concern.

by the Des Moines Incubator Co., of Des Moines, Iowa, in competition with some of the leading incubators of the country at the Kansas City show, recently, won first hon-ors. This is, indeed, a very great victory for the Successful Incubator. and it looks very much as if some close competition for honors will be the result of the exhibits at the shows that are to be held at other places. The Des Moines Incubator Company have recently issued their annual book—a complete treatise on poultry which will be sent to any one for 10 cents in

Rheumatism positively cured by Kidney kura. We guarantee it. See advertisement.



Send five ic. stamps for book and sample packages. J. B. A «MSTRONG, Shenandowh, Iowa





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21

to use Vacuum Leather Oil on harness and shoes. Get a can at a harness- or shoe-store, 25c a half-pint to \$1.25 a gallon; book "How to Take Care of Leather," and swob, both free; use enough to find out; if you don't like it, take the can back and get the whole of your money.

Sold only in cans, to make sure of fair dealing everywhere—handy cans. Best oil for farm ma-chinery also. If you can't find it, write to

VACUUM OIL COMPANY, Rochester, N.Y.



As to training fleas to perform certain operations, I am convinced that if a large audience could see them perform the antics many have felt them perform, it would be highly amusing to them, and I apprehand that to bring their natural tricks out where they can be seen is about the size of their training. G. BOHRER. Chase, Kas.

The Use of Foundation.

The amount of foundation comb necessary to accommodate a swarm of bees will cost something less than one dollar. During the honey flow, when it is used, a colony of bees will, with its use, fill an ordinary-sized hive full of brood and honey in five or six days. With- female, at reduced prices. I never had a

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

The Bome 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 them-selves accordingly.

LOVE AND POVERTY.

It happened very lately, In a mansion tall and stately, That a darling little Cupid came and took up his abode; All day long his footsteps' patter, Ringing laugh and merry chatter Floated to my tiny cottage, for I lived across the road.

But, alas, one sunny morning, Without note or word of warning, I saw creeping to that mansion a most unwel-come guest; Her face a horrid vision, Her laugh one of derision, And from head to foot in garments soiled and tattered she was dressed. I saw

As I watched her creeping nearer, I could not help but fear her. With her horny, bony fingers and her gaunt and hollow che ks, But a. I watch d her sbiver And saw her pale lips quiver, I said, "Her name is Poverty, a shelter there she seeks."

Then the pretty little Cupid, Handsome, petted, but so stapid, Saw the ghatly form approaching, thought he dida't care to stay; So he took his golden ringlets, Spread wide his snowy winglets. And from my lady's window flew far, far away.

For I saw it with mtne own eyes And I tell it to my cronies, an in the door comes Poverty, Love flies out of the window " Wh

THE MODEL HUSBAND.

Surely This Man Knoweth How to Blow His Own Horn.

1 am a model husband. My wife couldn't lay her hands on another one like me in a fortnight. When the baby cries at night I get up and fix him and put him back to sleep. We have been married three years and we have the sweetest little baby boy in the world. I never cause my wife any trouble. When she is all tired and worn out I just say: "Come, now, old sweetheart, go lie down, and let me finish this job." We have a great number of little dresses for Wendel, and I know where they are kept and how to get at them.

My wife's father is a well-to-do farmer, and I like my wife's mother. I never see any other woman who can walk a little better than my wife, or who looks just a little sweeter. I wouldn't marry the best woman on earth unless I thought she filled the bill for perfection, from my standpoint of judgment. I thought my wife did, and she does. When she gets a bis-cuit turned over a few times between her hands and puts it in the pan, I know the biscuits are going to be exactly right. No doubt about it. We have no drip coffee pot, but she makes the blessedest drip coffee you ever saw, and has the commonest kind of an old tin coffee pot. She has a majestic bearing, too. Her feet set just exactly as a perfect woman's feet set. Her head could be carried no better if she tried for a hundred years.

When I want to find out if anything is right or not, I just get it before her mind and figure on her judgment. She hits it every time. Don't ask me how she does it. There is no spittoon around the house. I know where the peg for my hat is, and every time I take it off in the house I hang it on this peg. My coat has a peg, too, and there is where my coat is found when not on my back. There is no club on earth like my wife and Wendel. She is the outside guard and the inside guard. She is the light in the east, and the intellect in the west. She is my bright and morning star. She can smell a loose button a hundred yards, and she has a way of noticing the little specks on my coat lapel, as she used to before we were married. She loves me and Wendel. I don't find anybody that suits me half as well as she does, sweet and gentle from morning to night. When I want to be cross, she won't let me. When I get cold-hearted and the last speck of brotherly love is oozing out of me, just one touch of her presence stops that disposition. All in all, my wife is O. K. and I am a model husband .- Erastus Plokey, in Housekeeper.

BEAUTY IN THE BUSH.

Australian Types Becoming Famous the World Over.

Girls in the Antipodes Imitate Their English Sisters-Art, Literature and Drama Are Regions Unexplored by Them.

A good deal has been written about the American girl, the English girl and the girls of other countries; but the Australian girl, up to the present, has not come in for much attention. Perhaps it is, says London Sketch, that, coming from English stock, she has always been regarded as too essentially British to be dissociated from the daughters of John Bull. Yet she is a distinct species, as different from the average English girl as the American girl. In personal charms she possesses all the attractiveness, but, owing largely to the prevalence of sweltering suns and parching hot winds for eight months out of the twelve, her face has not that freshness, that pink, rosebud coloring which are at once the joy and sovereign possession of the English girl.

But it is in the exquisite contour of her figure, in the smallness of her hands and feet and in the perfect molding of her features that the daughter of the sunny south is able to hold her own. If her face lacks the freshness of the green fields and pastures of England there is in it the warm sun of Australia, which gives to the countenance a look of perpetual pleasure. The small but clearly chiseled features of the Australian girl are always pleasant in expression, indicating a light-hearted, care-less, irresponsible character underneath

The innate shyness of the English girl has no place in her temperament, nor does she pay much regard to the culture, the self-contained dignity, the gracefulness which sit so easily on the girls of the west. The unrestrained spirit of an independent democracy seems to be ingrained in her. She is essentially sociable; indeed, the life of the average Australian girl seems to be made up of a round of social functions-balls, "at homes," parties. She clevates gossip to a fine art, and in the little world in which she resides she will be possessed of an encyclopedic knowl-



TYPE OF AUSTRALIAN BEAUTY.

edge of everybody figuring in social circles. She achieves distinction in volubility. "She can talk, but she has no conversation," as Mrs. Allonby remarked. To her, art, literature, drama and politics are unexplored regions. Dress is the dominant note of her character. And in this, as in almost everything else, she is an imitator.

There is little original about the Australian girl. England is her fetich, and particularly the English fashion journals. She will wear cumbersome and trailing skirts under a pitiless sun, and with the thermometer over 100 degrees, if they have been worn in England. And in her affections she dearly loves an Englishman. She doesn't stop to inquire about his character; if he comes from the old land he has the key of her heart. But, above all these superficialities, which are unavoidable in a new country, rough and uncultured, there is much that is good and useful and practical about the Australian girl. In her domestic qualifications she is unapproachable. Hard-working, industrious, economical, capable with her needle, good-tempered, and, above all, generous, the Australian girl makes an ideal wife.



ingrained in the people of the vast southern continent, the Australian girl, by her grace and winsomeness, will become a keen competitor with her American cousin for recognition in the social spheres of London and Paris.

SOME FUNNY REPLIES.

They Were Made to Questions Asked in New York Schools.

Fun in a schoolroom is something that most people don't approve of, but that there is a deal of humor afloat during study hours in our public schools no one can deny after reading the following notes.

Here are some questions that an East side school-teacher asked her scholars, with the answers that she received:

"What is love?" "It's going on errands."

"What is guilt?" "Telling on another boy."

A poor boy was asked: "What is a gentleman?" "A fellow that has a watch and chain," he replied, adding, when he saw that his answer was not perfectly satisfactory: "and loves Jesus." He evidently thought the latter portion of his answer should atone for any weakness in the former part. A Sunday school child told her day-school teacher that "Missionaries are men who get money." "Alias was a good man mentioned in the Bible." "Medieval is a wicked man who has been tempted." "Epicure is a man who likes a good dinner." The oral answers given in classes are often mirth-provoking. The word "lad" occurred in the primary reading. "What is a lad?" inquired the teacher. A very small girl answered: "A thing for courting with." "Give the future of drink." "Present, he drinks; future, he will be drunk." "Compare ill." "Ill, worse, dead." "The plural of pillow?" "Bolster." "What are the chief imports of Canada?" "Emigrants." Did you ever see an elephant's skin?" "Yes, sir." "Where?" "On the elephant." "What is the difference between foot and feet?" "One feet is a foot, and a whole lot of foots is a feet."

A young temperance advocate wrote: "Alcoholic beverages greatly obstruct the breaking down of the body," and he succeeded in saying exactly what he did not mean. The little girl who wrote the following must have associated with very foolish, grasping people: "The body is composed chiefly of water, and nearly one-half of it is avaricious tissue." "How many children know who his Satanic majesty is?" said the teacher. Several hands were raised, and the first pupil named promptly replied: "The inspector." "A circle is a round straight line with a hole in the center of it." "The chief products of the United States are earthquakes and volcanoes." "In Austria the principal occupation is gathering Austrich feathers." "Climate lasts all the time and weather only a few days." The two most famous volcanoes of Europe are Sodom and Gomorrah." "John Bunyan lived a life of scantity." What makes the ocean salt? Salt fish," answered the reflective boy. What does sea water contain beside sodium chloride?" "Fish, sir," said a boy who trusted more to shrewdness than to preparation of his lesson. The same boy, when asked to draw a picture of Jonah and the whale drew the whale only. "Where is Jonah?" asked the teacher. "Inside the whale," answered the boy. The teacher pointed to the sun and asked the new boy what it was. "I don't know, sir," he answered, "we just moved around here."-N. Y. Recorder.

How to Clean Costly Furs.

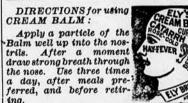
Ermine and sealskin are best cleaned with soft flannel. Rub the fur delicately against the grain, and when it has been thoroughly lifted and reversed dip the flannel into common flour and rub lightly any spots that look dark or dirty. Shake the flour well and rub with a clean, dry flannel until the flour is all removed. Sable, chinchilla, squirrel and monkey skin may be very nicely cleaned with hot bran. Get a small quantity of bran and heat it in the oven until it is quite warm. Rub stiffly into the fur and leave for a few minutes before shaking to free it from the bran.

In Praise of the Onion.

A medical authority truthfully sounds the praises of onions. They are excellent blood purifiers. Boiled onions used frequently in a family of children will ward of many diseases to which the little ones are subject. As an external application they are successfully used in cases of croup and earache. They are good for the complexion, and a lady who has a wonderfully clear, fine complexion attributes it to the liberal use of onions as food. People troubled with wakefulness may be assured a good night's rest often if just before retiring they will eat a raw onion. When troubled with a hard cough, if a raw onion is caten, the phlegm will loosen almost immediately, and can then be easily expectorated .-Farm and Fireside.

FREE TO INVALID LADIES.

FREE TO INVALID LADIES. A lady who suffered for years with uterine trou-bles, displacements, leucorrhœs and other irregu-larities, finally found a safe and simple home treatment that completely oured her without the aid of medical attendance. She will send it free with full instructions how to use it, to any suffering woman sending name and address to MRS. L. HUDNUT, South Bend, Ind

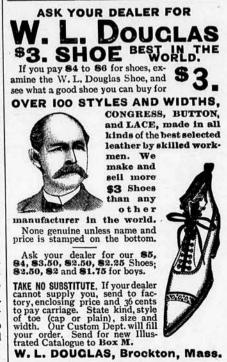




CATARRH

ELV'S OREAM BALM opens and cleanses the Nasal Passages, Allays Pain and Inflamma-tion Heals the Sores, Protects the Membrane from colds, Restores the Senses of Taste and Smell. The Balm is quickly absorbed and gives relief at once.

A particle is applied into each nostril and is agree ble. Price 50 cents at Druggists or by mail. ELY BROTHERS, 56 Warren Street, New York.



Get up a club for the FARMER.

As the artistic and refining influences of the old world become more and more | at the front.

"Old, yet ever new, and simple and beau tiful ever," sings the poet, in words which might well apply to Ayer's Sarsaparillathe most efficient and scientific blood purifler ever offered to suffering humanity. Nothing but superior merit keeps it so long

NEW STYLE MANTEL est and best bed e S6.25, DELIVERED. A gold mine for K. C. BED CO., 1508 Main St., K.

The young Folks.

1896.

GRANDMOTHER'S PATCHWORK QUILT.

- A motley and but mean'ngless, To you a thing of shreds And patches—but a queer and quaint Old corio—its threads All make a clew to lead me down The labyrinth of time, And set my grandma's wedding bells Once more, for me, a-chime.

- The air grows aweet, as with the breath Of orange blooms, and lo! I seem to see the happy bride And happy bridegroom go; I all but hear the hearts that beat Within each happy breast; Beneath those bits of grandma's gown And grandpa's wedding vest.
- Nor is it only wedding bells I hear, nor orange bloom That fills the air. The cypress hangs All heavy o'er a tomb, And sad and far away I hear— Or seem to hear—the bell That tolls above a lovely head Laid low the funeral knell.

My hand fails tenderly, as on A grave, whene'er I tonch Thit tear-stained bit of baby-blue; Th 'well we know "of such" As she, who wore it long axo, "The k ngdom" is, dry-eyed We cannot ace what once was bers. We cannot see what once was hers, The sittle girl that died.

And grandma tells with trembling lips How old she'd boto-day. Her first-born-fifty-fire - and thinks Of childish heart grown gr vy Wit grief. Yet, tho'she gives to God Thanks that her bet ne'er knew A care, hor tears still fall upon That bit of "baby-blue."

And so she follows, one by one, The friends of other days; The l wed and lost come back to her Along the patchwork mase; And ancestors I never knew Seem ghosts to me no more, As grandma points the pieces out Of garments that they wore.

Like storied stones that go to make The names of great men shine Thro' mists of years, these little bits Of faded silk combine That humbler lives be not forgot. To many a heart you've built A monument, O iny blocks, Of grandma's patchwork quilt. —Anony

-Anonymous.

A HOG-POWER MINE.

How a Californian Made His Porkers Earn Their Living.

"I was riding through the mountains in Trinity county a few days ago," said a California miner, "when I happened to take a trail that led by old 'Burlap' Johnson's cabin. I took a dinnercold corn-bread and bacon-with him, and then sat down for a smoke.

"'Wouldn't you jest as soon do your smokin' outside, podner?' he asked.

"'Certainly,' said I, 'but you don't object to the smoke of a cigar, do you?' I was naturally surprised, for he was already puffing away at an old corncob pipe.

"'No, course not, seein' as I've smoked nigh on to 50 years; but I want to keep my hogs to work.'

"My curiosity was aroused, but I said nothing. He took down a double-barreled muzzle-loading shotgun and his powder horn. Then he went out to a shed and got a pan of shelled corn.

"He sat down on a bench at the cabin door, rammed down a couple of charges of powder, and poured a handful of corn in each barrel. He put on a percussion cap, pressed it down with the hammer, cocked both barrels, and blazed away at the side hill across the little gulch.

"The roar had not died away till a drove of hogs came running, grunting and squealing, and commenced to root the side hill for the corn. Whenever they slacked up in their work the old man fired another charge of corn. "'That's a mean trick,' said I. 'Why

don't you feed it to them in a trough?' "'Feed it to 'em!' he repeated, in amazement. 'Then they wouldn't work.

UNDER A LION'S PAW. How It Feels to Be Shaken Like a Rat

by a Wild Beast. One of the most famous encounter with a lion, from which the chief actor escaped and was able to relate full particulars, is that recorded in the life of Dr. Livingstone. "I meant," he says, "to have kept it to tell my children in my dotage," but friends considered it so marvelous that he was persuaded to relate it in his first book. The testimony of such a man is far more valuable than accounts of the average sportsman. It is as follows:

"The Bakatla of the village of Ma botsa were troubled by lions, which leaped into the cattle pens by night and destroyed their cows. They even attacked the herds in open day. This was so unusual an occurrence that the people believed themselves to be bewitched-'given,' as they said, 'into the power of the lions by the neighborhood tribe.' They went once to attack the animals, but being rather cowardly in comparison with the Bechuanana in general, they returned without slaying any. "It is well known that if one in a

troop of lions is killed, the remainder leave that part of the country. The next time, however, the herds were attacked, I went with the people to encourage them to rid themselves of the annoyance by destroying one of the marauders. We found the animals on a small hill covered with trees. The men formed round it in a circle and gradually closed up as they advanced. Being below on the plain with a native schoolmaster named Mabalwe, I saw one of the lions sitting on a piece of rock within the ring. Mabalwe fired at him and the ball hit the rock on which the animal was sitting. He bit at the spot struck, as a dog does at a stick or stone thrown at him; and then leaping away broke through the circle and escaped unhurt. If the Bakatla had acted according to the custom of the country, they would have speared him in his attempt to get out, but they were afraid to attack him. When the circle was reformed we saw two other lions in it, but dared not fire lest we should shoot some of the people. The beasts burst through the line, and, as it was evident the men could not be prevailed on to face their foes, we bent our footsteps toward the village.

ty is probably produced in all animals killed by the carnivora; and if so, is a merciful provision of the Creator for lessening the pain of death. As he had one paw on the back of my head, I turned round to relieve myself of the weight, and saw his eyes directed at Mabalwe, who was aiming at him from a distance of ten or fifteen yards. His gun, which was a flint one, missed fire in both barrels. The animal immediately left me to attack him, and bit his thigh. Another man, whose life I had saved after he had been tossed by a buffalo, attempted to spear the lion, upon which he turned from Mabalwe and seized this fresh foe by the shoulder. At that moment the bullets the beast had received took effect and he fell down dead. The whole was the work of a few moments, and must have been his paroxysm of dying rage. In order to take out the charm from him, the Bakatla on the following day made a huge bonfire over the carcass, which was declared to be the largest ever seen. Besides crunching the bone into splinters, eleven of his teeth had penetrated the upper part of my arm. The bite of a lion resembles a gunshot wound. It is generally followed by a great deal of sloughing and discharge, and ever afterward pains are felt periodically in the part. I had on a tartan jacket, which I believed wiped off the virus from the teeth that pierced the flesh, for my two companions in the affray have both suffered from the usual pains, while I have escaped with only the inconvenience of a false joint in my limb. The wound of the man who was bit in the shoulder actually burst forth afresh on the same month of the following year. Thi curious point deserves the attention o Inquirers."

Hercules and the Hawk.

Some passengers over one of the Berlin canal bridges the other day noticed the sudden appearance of two black points in the sky at a considerable distance away, which developed into two ducks. Behind them, at a lower level, flew another bird, which suddenly rose into the air above the ducks and then shot down upon them like an arrow. One of the ducks flew sideways toward the Thiergarten; the other, closely pursued by its enemy, flew slanting into the canal, and, reaching the water exactly behind the bridge, dived, while the hawk, in his blind haste, struck against the head of a statue of Hercules and fell, once more flapping its great wings, dead on the pavement of the bridge. The bird was a splendid specimen, the wings having an expansion of more than three feet.

Origin of the Coffee Plant. The coffee plant was taken from Africa to Persia in 875.

The Grumpity Man. Hoighty, toighty, grumpity man! Finding fault since your life began! Pity we haven't a comet or two To carry off passengers such as you! -Frank H. Sweet, in St. Nicholas.

For rheumatism and neuralgia use Salvation Oil, the greatest cure on earth for pain. It is an infallible cure. 25 cents.



Fainting, Weak or Hungry Spells, Irregular or Intermittent Pulse, Fluttering or Palpitation, Choking Sensation, Shortness of Breath, Swelling of Feet and Ankles, are symptoms of a diseased or Weak Heart.



MRS. N. C. MILLER.

Of Fort Wayne, Ind., writes on Nov. 29, 1894: "I was afflicted for forty years with heart trouble and suffered untold agony. I had weak, hungry spells, and my heart would palpitate so hard, the pain would be so acute and torturing, that I became so weak and nervous I could not sleep. I was treated by several physicians without relief and gave up ever being well again. About two years ago I commenced using Dr. Miles' Remedies. One bottle of the Heart Cure stopped all beart troubles and the Restorative Nervine did the rest, and now I sleep soundly and attend to my household and social duties without any trouble.

Sold by druggists. Book sent free. Address Dr. Miles Medical Co., Elkhart, Ind.

Dr. Miles' Remedies Restore Health.

How to Make Money. Agents make money fast selling PERFECTION DISH - WASHERS. Washes and dries in two minues. Sells at sight! For particulars write Perfection Manufacturing Co., Drawer a-3, Englewood P. O., Chicago, Ill.



The only Commercial College in Wichita! Actual Business Practice, through U.S. mail, with students of best Eastern Colleges. is the finest thing extant. The Commercial still leads, our only competitor having closed its doors. Write for Journal to-day

Washburn College.

TOPEKA, KANSAS.

Collegiate, Academic, Musical departments. Classical, Scientific and Literary courses. Seven beautiful buildings. 160-acre campus. Large endowment. Faculty unexcelled. Highest standard of admission in the State. Expenses very low. Splendid facilities for science and classics. Fall term opened September 11, 1895. Catalogue on application.



THE LION READY FOR THE ATTACK. In going round the end of the hill I saw a lion sitting on a piece of rock about thirty yards off, with a little bush in front of him. I took a good aim at him through the bush and fired both barrels into it. The men called out: 'He is shot, he is shot!' Others cried: 'He has been shot by another man, too; let us go to him!' I saw the lion's tail erected in anger, and, turning to the people, said: 'Stop a little till I load again.' When in the act of ramming down the bullets I heard a shout, and, looking half round, I saw the lion in the act of springing upon me. He caughtme by the shoulder and we both came to the ground together. Growling horribly, he shook me as a terrier dog does a rat. The shock produced a stupor similar to that which seems to be felt by a mouse after the first grip of the cat. It caused a sort of dreaminess, in which there was no sense of pain nor feeling of terror, though 1 was quite conscious of all that was happening. It was like what patients partially under the influence of chloroform describe-they see the operation, but do not feel the knife. This placidi-



Besides, they don't need it.'

"'What do you want to make them work for, and why do you waste corn on them if they don't need it?'

"'Why, man alive, they do as much work as four men would! They root up the dirt, and when the rain comes, all I have to do is to sluice it.'

"Then I understood that he was using the hogs to help him mine."

Why He Declined the Job.

A man named Simmons is said to have declined to become, the private secretory of a man named Green for a peculiar reason. The salary was tempting, and the work would have been light and agreeable; but then, as he said, he couldn't bear the thought of signing letters: "Green, per Simmons."



The Dr. J. H. McLean Medicine Co St. Louis, Mo.

Gentlemen: I feel it my duty to inform you of the great good I have received from Dr. J. H. McLean's Liver and Kidney Balm. I am Kidney Balm. I used at first two bottles, which helped me so much I could leave the bed and go about my household duties; so I continued with it. I also began to pass the gravel. In all I passed five stones. I am now feeling entirely cured, but still taking the Balm occasionally to make sure. Doctor, I am unable to express my

taking the Balm occasionally to make sure. Doctor, I am unable to express my gratitude to God for my restoration to health, and I owe it, even my present existence, to your Liver and Kidney Balm. It is a grand medicine.

Yours respectfully, At the request of the writer of the above the name is omitted, furnished in strict confidence to any who wish to investigate this but it will be

MRS. H. J. D., OANNELLTON, IND.

February 8th, 1895.

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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. KANSAS FARMER CO., Address Topeka, Kansas.

ADVERTISING RATES.

ADVERTISING RATES. Display advertising, 15 cents per line, agate, (four-ment iness to the inch). Becial reading notices, 25 cents per line. Business cards or miscellaneous advertisments will be received from reliable advertisers at the rate of 5.00 per line for one year. Annual cards in the Breeders' Directory, con-sisting of four lines or less, for \$15.00 per year, in-cluding a copy of KANSAS FARMEN F. Electrom must have metal base. Dijectionable advertisements or orders from un-timel cards when auch is known to be the case, will mit be accented at any price. To tinsure prompt publication of an advertise-ment end cash with the order; however, monthly on the treferences are uiven. Electromatic intender for the current weak thould reach this enfor not later than Mo-day. Berry advertiser will reseive a copy of the paper free Auster in orders. Manna FARENER CO., Topeka, Kas.

KANNAN FARMER CO., Topeks. Kas.

The quarter-centennial meeting of the State Board of Agriculture is now in session in Representative hall.

The Nebraska State Board of Agriculture will hold its annual winter meeting, farmers' institute and corn exhibit. at Lincoln, commencing January 21, 1896.

A subscriber desires to know. from those who have had experience with crimson clover, how to get a stand at the earliest date. He inquires whether he may sow in the spring or must wait until September.

Any subscriber who wishes to club with other papers can save money by sending his list to the KANSAS FARMER We have dealers' rates with almost every publication and are willing to give our subscribers the benefit whether the journals they want are in our published clubbing lists or not.

The demand for KANSAS FARMER binders has been so great that the entire stock that we had made was exhausted about January 1. As soon as practicable we began making another lot, and while there was last week a delay of a day or so in filling orders, we expect to keep ahead of the demand from this time forward. The man agement feels greatly complimented on account of the anxiety of old subscribers to preserve their papers in good form.

The importance of the annual meeting of the State Board of Agriculture, this week, is emphasized by the fact that this is the year for the election of the Secretary. Two years ago Mr. Coburn, who was not a candidate, was elected as a result of a deadlock among several strong aspirants. So satisfactory has been the administration of the office that at this writing there is no suggestion of any competition for the place. This results, not from lack of desire for the position with its honors and salary, but from the efficiency and excellence of the work done by Secretary Coburn.

When expenditures exceed income-

ECONOMIC OUESTIONS.

ECONOMIC QUESTIONS. EDITOR KANSAS FARMER: --Enclosed hand you money order for \$1, subscription for FARMER for 1896. Would at the same time say that I still like your paper, as one can gain information from it of value to farm-ers, in order to raise big crops, etc. But since you have dropped off treating eco-nomic questions, that is, telling us why prices of our products are below cost of production, and pointing the way of better-ing the conditions of producers. I do not like your paper nearly as well, for I do hold that it behooves all of the agricultural and also the religious papers to tell the people the truth about the existing abnormal con-ditions prevailing in this country, and I consider that any of those papers failing to do so is not doing its full duty by its read-ers nor the country generally. It is sup-posable that the editors know or think they know on which side of their bread the but-ter comes in. JNO. SCHWAB. Cherokee, Kas., December 30, 1895. We like this letter for its frankness

We like this letter for its frankness and because it makes a concise statement of the views of a great many earnest people, both farmers and those engaged in other vocations. The effects of public treatment of economic questions, of legislation upon them and of xecutive action in relation to them are so far-reaching; they extend their influences so much into the matters of private prosperity. of personal gain or loss, that the man who dwells upon and analyzes the subject is liable to conclude that no other temporal matter is of so much importance. With this conclusion the KANSAS FARMER is not disposed to take issue. All political parties agree to this, and at present conduct their campaigns in advocacy of their several positions as affecting the prosperity of the people.

Our correspondent is right in preuming that the editor has decided views on the economic situation. He has also decided views on many other matters of importance to the public of which he never writes and on which the FARMER never contains a sentence. It is impossible to attend to every matter of importance in one paper and to attend to them all with the thoroughness essential to valuable work. The FARMER does not exclude the scientific discussion of economic questions, but its special purpose to impart information "of value to farmers in order to raise big crops, etc.," requires its best efforts and most of its space. Economic questions from the political side are fully and ably, if not always scientifically, discussed in the political papers, of which Kansas has a great abundance without the intrusion of the KANSAS FARMER. Their consideration from the scientific side engrosses the attention of some able publications. Those who desire to keep abreast of this discussion should subscribe for some of these.

In Kansas almost everything runs into politics. Our readers are of every shade of politics and each wants a Kansas farm paper to help him keep in the front rank as a successful producer. and none cares to have adverse political or economic views thrust before him in the place where he looks for information as to his especial calling. No doubt the publication in these columns of the editor's views.on economic questions would bring them to the attention of many who scrupulously avoid reading the journals which make a specialty of the presentation of these same views, but they would probably not continue long as readers of what they do not want to read, and we should straightway lose the opportunity to help them raise big crops as well as to instruct them in economics

against their wishes. The fact that all political parties propose to remedy whatever is wrong in the economic situation, makes it difficult to present any side of economics without seeming to get into partisan politics. The KANSAS FARMER is out of politics, and whatever else it does it proposes to stay out. In all ages, the present not excepted, on one basis of classification, humanity has been divisible into two classes-the riders and the ridden. Subject to ex- an invaluable book of reference. Synceptions, the ridden have been, in opses of the principal features of this times past, and are now, almost as re- report were furnished by the Secretary luctant to promote changes to put the and have appeared in the columns of riders afoot and relieve the ridden as ury has advertised for proposals to buy the riders have been averse to disthese bonds, the price to be paid in mounting. Indeed, the experiences of society with disruptions of the es- KANSAS FARMER (\$1 a year). Both journals tablished order have generally been are furnished by us for the price of one attended with catastrophes such that paper, viz., \$2.

it is not so very surprising that "we rather bear the ills we have than fly to others that we know not of."

The writer does not remember so long ago that good men and true were not planning for reforms which would give the farmer better compensation for his services to the race. The reward of such philanthropists has not infrequently been ridicule, in which those they sought to help took a liberal part; poverty, because they worked for others rather than themselves; obscure old age, broken hearts and practically unknown graves. Whether they did more good than those who devoted themselves to raising bigger crops is a question which will not be considered here. But certainly some of us must attend to the big crops, some Kansans must devote their efforts to the study of the best methods known to modern progress, otherwise producers elsewhere will so outrun us in the race of efficiency in the cultivation of the soil that we sha'l be reduced to lower levels in the scale of prosperity while those who study to improve their methods may fied, under present social conditions, ample remuneration for the products which their improved methods realize.

This last observation was well illustrated by the experience of a young farmer who called at this office last week. He is a graduate of the State Agricultural college. He is a diligent This may be all wrong but it is the student of all that modern science is doing for the betterment of farm meth-The farm, which is a good one ods near Topeka, has been rented to nurserymen, who have raised apple trees, and have paid an annual cash rental of \$10 per acre. The young man has been farming since his return from school and has found that he cannot afford longer to let the nurserymen have the land at \$10 per acre. The consideration of economic questions may or may not interest such a farmer, but certain it is that if the KANSAS FARMER can assist the great body of farmers in the State to such prosperity by assisting them to raise bigger crops, it will accomplish a better work than is probably possible through such influence as it might have by devoting itself more fully to economic questions.

WHEAT PRICES AT OHICAGO.

1859

Cash prices of No. 2 spring wheat at Chicago, and months of lowest and highest prices, according to the Cincinnati Price Current:

Years.	Months of lowest price.	Yearly range of prices.	Months of highest price.
1859 1860 1861	July and Aug Dec mber June and J'ly	66 @1.13 55 @1.25	May. April. May.
1862	Janua y	64 @ 92½ 80 @1.12½	August. December.
1841	March .	1 07 @2.28	June.
1865	December	85 61.55	January.
1866	February	77 @2.03 1 55 @2.85	November. May.
1867	August Nov mber	1 04% @2.20	July.
1869	December		August.
1870	April	73% 01.81%	July.
1871	August	99 .01.32	Feb Apl.Sep.
1872			'ugust.
1873	September		July.
1874			April. August.
1875	February	83 @1.26%	
1876 1877	July	1.01%@1 76%	
1878	October		\pril.
.879		81%@1.33%	December.
1-80		86 - @1.32	J nuarv.
1881	January	95% @1.43%	
181:	December	91%@1.40	April. May.
1888		9, @1 13 4	
1884			Fe ruary. April
1885	March October		
1887	August	H6%@ 91%	
1888			-ept.mber.
1889	June	. 75%@1 084	Fe roary.
1890	Pebruary	74% 001 08%	August.
1891	July		April.
189	. 1) tober	. 69% 4 9 4	
	. July		pril.
1894		. 50 00 65%	April.
1895	January	. 48% (0 853	May.

THE INVENTORY.

This is the time of year when the merchant and the manufacturer take account of their properties of every sort and also of their debts. By comparing this year's inventory with that of last year the gain or loss is at once apparent. The fact that very many businesses have shown successive losses renders the making of the inventory an unpleasant task, but the busi-ness man finds it a necessity. Farmers are apt to omit this important work. It is sometimes unpleasant to see in cold figures that one's possessions are really less than he has allowed himself to fancy. Some imagine that it may have some effect on assessment, or that it is likely to cause uneasiness of conscience because its figures do not agree with those given to the assessor. It is better to know the exact condition of one's business than to feed the imagination on unreal wealth. The inventory is for the private information of the owner of the property, and is a matter with which the assessor is not concerned. It is the common acceptation of the law as to listing property for taxation, that while the law says all property shall be rated at its true value in money, it is held to mean that in talking to the assessor this "true value in money" is one-third, one-fourth or one-fifth of the value of the property as listed in the private inventory. true state of the case. It is perhaps as good conscience to admit to one's self this reduction as to attempt self-deception in the matter by neglecting to

make an inventory. In making an inventory, it is well to note the property by classes. The land will probably be the first item, and may be followed by improvements, such as buildings, fencing, orchards, etc. Stock, farming implements and produce on hands may follow, each being noted in detail. Household effects, also moneys and credits, etc., should be included.

Another list should be made of debts of every kind. The real state of affairs is readily ascertainable after the lists are made, and no one should fail to make the necessary additions and subtractions.

The advantage of knowing one's own exact financial condition will be appreciated after trying it. A train of thought is sure to be suggested as to means of bettering the situation. Some changes in methods, some shortening of expenditure, greater liberality in some directions-every inventory will prove worth more than it costs and will certainly suggest, almost demand the keeping of accounts to make possible a more effectual scrutiny as to leaks and possible betterments.

The new KANSAS FARMER binder is made expressly for the convenience of those subscribers who desire to keep their KANSAS FARMERS for reference. It takes but a few seconds to put the paper in it when received. The binder holds fifty-two numbers. and keeps the papers in as nice shape as if they were a book. The price is 25 cents, post-paid, or \$1.10 for the binder and the FARMER one year. Send your own renewal for one year and a new yearly subscriber, with \$2 for both, and we will send two binders, one for yourself and one for the new sub-criber.

There is a grotesquely humorous side to the Venezuelan complication. Venezuela asked that the disputed question of boundary between that country and a British colony be arbitrated. Great Britain said, "there is nothing to arbitrate. We are right, we are strong and you must submit." The United States thereupon demanded that the boundary question be submitted to arbitration and virtually said, "we'll whip you if you don't arbitrate." There has not yet appeared amon nations one which cares to say to Uncle Sam, "you must arbitrate that question with John Bull." On the contrary, the nations, in effect, say, "Eagland has long needed whipping, anyhow, and, in our opinion, Uncle Sam' is just the size to do it."

borrow money if yo u cau, state of affairs continues and borrowing has to be repeated, wisdom suggests that expenditures be reduced, or bankruptcy will result. But this country now, in a time of profound peace, is to have another issue of bonds-\$100 000,000 this time. It is understood that arrangements were practically completed to sell these to the syndicate which took the last issue and made so round a profit on it that the matter became a great scandal. But under heavy pressure, which appears to have come from American investors, the Secretary of the Treasgold. They are to be thirty-year 4 per cent. bonds. payable in "coin," which means gold or silver.

The report of the State Board o Agriculture for the month ending December 31, 1895. is out. It contains the State decennial census for 1895, and farm, crop and live stock statistics for 1895. The report consists almost entirely of tables, and while not excitingly interesting to read as a novel, is the KANSAS FARMER.

Every breeder in Kansas should have the Breeder's Gazette (price \$2 a year) and the KANSAS FARMER (\$1 a year). Both journals

Buckingham's Dye for the Whiskers can be applied when at home, and is uniformly successful in coloring a brown or black. Hence its popularity.

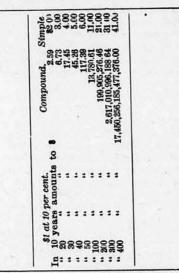
EDITOR KANSAS FARMER :-- My attention has been called to a recent editorial in the FARMER, entitled, "How to Get Rich," making special reference to the compounding of interest as an almost indispensible factor. Very few people appreciate the power of interest compounded through long periods of time, even at a moderate rate per cent. As curiosities, if nothing more, the following examples may be of interest to the readers of the KAN-SAS FARMER.

1. One penny put at interest at the birth of Christ, at 5 per cent., and the interest compounded annually, would, at the close of the year 1810, have amounted to more money than could be expressed by 357,000,000 globes of solid gold each as big as this earth. At simple interest at the same rate and for the same time, the amount would have been only seven shillings, seven pence, halfpenny. Extending the calculation to the close of the year 1846, the result would equal 2,107,530, 864 worlds of solid gold!

2. If Christopher Columbus, when he discovered America, had placed at interest \$1, and the interest had been compounded annually at 10 per cent., it would, in the year 1892. have amounted to \$17,450,256,185,477,376. At simple interest at the same rate and time, the amount would have been \$41. Assuming the population of the United States in 1892 to have been 65.000,000. this sum would have been equivalent to \$268,465,477 for each man, woman and child in the country.

3. An issue of the Salt Lake Tribune, in 1892, says: "Mr. J. F. Corker has a copy of a very curious mortgage. It calls for \$45,972,003,820.50. The mortgage was given by Lewis Forest and wife to B. F. Wayne, dated December 1, 1861, on the west one-half of lot 8. block 21, Boise City, Idaho. The mortgage was to secure \$340, if paid in legal tender, at the rate of 20 per cent. per month, but if paid in gold or silver coin or in gold dust, the mortgage would be for \$170, with interest at the rate of 10 per cent. per month. If the interest was not paid at the maturity of the note, April 1, 1865, the amount was to be added to the principal and compounded semi-annually with interest per month as above stated. The mortgage was never satisfied, and the interest on \$170 at 10 per cent. per cent. per month, compounded every six months, would amount to \$45,972,-003,182,020.50."

A contrast or comparison between simple and compound interest at 10 per cent. for 400 years would show as follows:



time short enough to be of practical value, they will find that the longsought seldom-found royal road to fortune is along the line of savings through industry and frugality and of a safe investment at a fair rate of interest, with frequent compoundings and time enough to do its work. Topeka, Kas. J. E. COWGILL.

Topeka, Kas.

Publications of United States Department of Agriculture for December, 1895.

of Agriculture for December, 1895. [Note.-The Department has no list to whom all its publications are sent. The Monthly List of Publications will be mailed to all applicants. For the maps and bulle-tins of the Weather Bureau requests and remittances should be directed to the Chief of that Bureau. The publications men-tioned below to which a price is attached may be obtained of the Superintendent of Documents, Union bullding, Washington, D. C., upon the payment of the price thereof as fixed by him in accordance with the provisions of sections 61 and 67 of the act providing for the public printing and binding, and the distribution of public docu-ments, approved January 19, 1895. Appli-cations for other publications should be addressed to the Secretary of Agriculture, Washington, D. C.] The World's Markets for American Prod-uots. Belgium. Price 5 cents.

ucts Belgium. Price 5 cents. Report of the Pomologist for 1894. By S.

B. Heiges. Price 15 cents. Timber: An elementary discussion of

Characteristics and Properties of Wood. By Filibert Roth, Special Agent in Charge of Timber Physics, under the direction of B. E. Fernow, Chief of the Division of Forestry. Price 10 cents.

The Russian Thistle .- Gives description troublesome character, useful qualities, rapid spread and present distribution, remedies, and avenues of introduction to be guarded.

Contributions from the United States National Herbarium, Vol. III, No. 5. Report on Mexican Umbelliferæ, Mostly from the State of Oaxaca, Recently Collected by C. G. Pringle and E. W. Nelson. By John M. Coulter and J. N. Rose. Descriptions on Plants, Mostly New, from Mexico and the United States. By J. N. Rose. Purely technical. Price 10 cents.

North American Fauna No. 10. Revision of the Shrews of the American Genera Blarina and Notiosorex. By C. Hart Merriam. The Long-tailed Shrews of the East-ern United States. By Gerritt S. Miller. Synopsis of the American Shrews of Jr. the Genus Sorex. By C. Hart Merriam. Price, 15 cents.

Report of the Statistician for 1895. By

Henry A. Robinson. Silos and Silage. By Charles S. Plumb, B. S., Professor of Animal Industry and Dairying in Purdue University, and Director of the Indiana Agricultural Experiment Station.

Charts of the Weather Bureau. (Size 19x24 inches.)-Weather-crop bulletin (series of 1895), reporting temperature and rainfalls with special reference to their effect on crops (Nos. 31 for the month of November, 1895) Daily weather map, showing conditions throughout the United States and giving forecasts of probable changes. Snow charts for December 9. 28 and 30, 1895. Storm Bulletin No. 3 of 1895. Atlantic coast storms of December 9 to 12 and 12 to 15, 1895.

Monthly Weather Review-June, 1895. Price, 10 cents.

Monthly Weather Review-July, 1895. Price, 10 cents.

Climate and Health. No. 3.-A summary of statistics for the four weeks ended Sep-tember 28, 1895. Price, 10 cents.

Climate and Health. No. 4.- A summary of statistics for the four weeks ended October 26, 1895. Price, 10 cents. Report of the Chief of the Weather Bu-

reau, 1894. Price, 30 cents.

REPRINTS. Barnyard Manure. By W. H. Beal, of the Office of Experiment Stations.

Farmers' Institutes.

Farmers' institutes have been ap pointed for the following places and dates, and will be attended by the representatives of the Agricultural col-lege named:

Meteorological Summary for the Year 1895.

Prepared by Chancellor F. H. Snow, of the University of Kansas from observa-tions taken at Lawrence.

The average temperature of the year 1895 was nearly of the normal value for this locality, but the monthly temperature in some instances departed widely from the mean. Thus April and September were abnormally warm, while February was re-markably cold.

The rainfall of the first five months of the year was very deficient, little exceed-ing one-half of the average amount, but the extraordinary precipitation of the four fol-lowing months was the cause of an abun-dant corn crop and brought the total rainfall for the year 1895 to the highest point yet reached since our record began.

The total distance traveled by the wind during the year was slightly above the av-erage; the sky was more than 2 per cent. clearer than usual; and the barometer was nearly of average height. The number of fogs during the year was remarkably small. TEMPERATURE.

Mean temperature of the year 53 34°, which is .82° above the mean of our twentyeight years' record. The highest temperature was 96°, on July 6; the lowest was 18 5° below zero, on February 7. giving a range of 109 5°. Mean at 7 a. m., 47.58°; at 2 p. m., 61.45°; at 9 p. m., 52.20°.

Mean temperature of the winter months. 27.79°, which is 1.57° below the average winter temperature; of the spring, 56.64°, which is 8.09° above the average; of the summer, 74.17°, which is 1.24° below the average; of the autumn, 54.77°, which is 1.17° above the average.

The warmest month of the year was August, with mean temperature 74.37°; the warmest week was September 12 to 18, mean 80.68°; the warmest day was July 16, mean 85.12°. The mercury reached or exceeded 90° on twenty-nine days (eight below the average number). Of these twenty-nine hot days four were in May. four in June. seven in July, five in August and nine in September.

The coldest month was January, with mean temperature 25.07°; the coldest week was February 1 to 7. with mean 6.64°; the coldest day was February 7, with mean 5° below zero. The mercury fell below zero on ten days, of which two were in January and eight in February.

The last hoar frost of spring was on May 18; the first hoar frost of autumn was on September 28, giving an interval of 133 days entirely without frost. This is twenty-one days shorter than the average interval.

The last black frost of spring was on March 21; the first black frost of autumn was on October 23, giving an interval of 218 days, or fully seven months without severe frost. The average interval is 200 days.

BAIN.

The entire rainfall, including melted snow, was 47.16 inches, which is 11.31 inches above the annual average. Either rain or snow or both, in measurable quantities, fell on ninety days-eightless than the average. On twenty-four other days rain or snow fell in quantities too small for measurement. The beaviest rain of the year was 5 38 iuches on August 14, which has been exceeded only once since our record bagan. The number of thunder showers was thirty-six.

SNOW

The entire depth of snow was sixteen inches, of which seven inches fell in January, one inch in February, one inch in March, and seven inches in December This is five inches below the annual average. Snow fell on twenty-six days, on sixteen of which the quantity was too small for measurement. The last snow flurry of winter was on March 19; the first snow of autumn was on October 30.

FACE OF THE SKY. The mean cloudiness of the year was 41 08 per cent., which is 2 35 per cent. below the average. The number of clear days (less than one-third cloudy) was 165; half clear (from one to two-thirds cloudy), 115; cloudy (more than two-thirds), 85. There were forty-five entirely clear days and thirty-five entirely cloudy days. The clearest month was September with a mean of 20 88 per cent ; the cloudiest month was December, mean 53 76 per cent. The percentage of cloudiness at 7 a. m. was 43 21; at 2 p. m. 46 37; at 9 p. m., 38.52. There were only four fogs during the year, which is nine below the average.

The highest velocity was 75 miles an hour on February 6 and April 5, for a few min-utes only on each of these dates. The highest daily velocity was 1,102 miles on the 7th of February; the highest monthly velocity was 13,899 miles in March. The three windiest months were March, May and December; the three calmest months were June, July and August. The average ve-locity at 7 a. m. was 14.38 miles; at 2 p. m., 16.79 miles; at 9 p. m., 14.55 miles.

BAROMETER.

Mean height of barometer column, 29.118 inches, which is 0.009 inch above the annual average. Mean at 7 a. m., 29.135 inches; at 2 p. m., 29.105 inches; at 9 p. m., 29.114 inches; maximum, 29.840 inches on January 8; minimum, 28.878 inches on April 6; yearly range, 1,475 inches. The highest monthly mean was 29.288 inches in December; the lowest was 29.016 inches in April. The barometer observations are corrected. for temperature and instrumental error only, the altitude being 874 feet above the level of the sea.

Monthly Weather Report for December, 1895.

Prepared by Chancellor F. H. Snow, of the University of Kansas, from observations taken at Lawrence:

The past month is in most respects an average December. The month was slightly warmer than the average, although the number of winter days—days on which the mean temperature was at 32° or below—was above the average. Only two Decembers in the past twenty-eight years have had more rain, and only six have had more snow. The number of days on which snow or rain fell was large, only two Decembers on our record exceeding. The cloudiness and humidity were considerably above the average, the barometer below. The maxi-mum barometer for the month was the lowest on our record, and the minimum the lowest but one.

Mean temperature was 82.26°, which is 1.29° above the December average. The highest temperature was 61°, on the 16th; the lowest was 4.5° on the 3d, giving a range of 56 5°. Mean temperature at 7 8. m.. 27.53°; at 2 p. m., 87.75°; at 9 p. m., 31.88°

Rainfall. including melted snow. was 8.86 inches, which is 1.87 inches above the December average. Rain or snow in measur-able quantities fell on nine days. Total snowfall for month was 7.02 inches. There was one thunder shower during the month. The entire rainfall for the twelve months of 1895 now completed was 47.14 inches. which is 11.8 inches above the annual average for the twenty-seven years immediately preceding.

Mean cloudiness was 53.76 per cent. of the sky, the month being 4 45 per cent. cloudier than usual. Number of clear days (less than one-third cloudy), ten; half clear (from one to two-thirds cloudy), twelve; cloudy (more than two-thirds), nine. There were two entirely clear days, and seven entirely cloudy. Mean cloudiness at 7 a. m., 54.03 per cent.; at 2 p. m., 56.29 per cent.; at 9 p. m.. 50.96 per cent.

Wind was southwest twenty-two times; northwest, sixteen ti nes; north, thirty times; south, eight times; northeast. six times; east, two times; southeast, three times; west, six times. The total run of the wind was 13 355 miles, which is 1 381 miles above the December average. This gives a mean daily velocity of 430.8 miles, and a mean hourly velocity of 18 miles. The highest velocity was 60 miles an hour,

between 1 and 2 p. m. on the 11th. Barometer.-Mean for the month, 29.099 inches; at 7 a. m., 29.110 inches; at 2 p. m., 29.076 inches; at 9 p. m., 29.113 inches; max-imum, 29.511 inches, on the 2d; minimum, 28.527 inches, on the 24th; monthly range, 0.984 inches.

0.984 inches. Relative humidity.—Mean for the month, 76 36 per cent; at 7 a. m., 87.03; at 2 p. m., 63.96; at 9 p. m., 78.1; greatest, 100, several times during the month; least, 37. at 9 p. m., on the l4th. There was no fog during the month.

The World's Eighth Wonder.

Its not a pyramid nor a hanging garden; its Salzer's Silver Mine Oats, which yielded 209 bushels per acre. Silver King Barley beat that in 1896 and win \$200. Largest grass, clover and grain seed-growers in America! 148 page mammath

To pay out the amount given at the end of 300 years, would require the services of 111 paying tellers just 300 years, or precisely as long as it took \$1 at 10 per cent. to produce that amount, and to do it in that time each one would have to count \$10 every second without intermission during banking hours (9 to 4) Sundays excepted.

Of course the periods of time given in these examples are too long to be of practical value or else the rate is too high to be available in ordinary business. They are only cited as curiosities and to illustrate a point. Should the readers of the FARMER care to make other comparisons between interest investments and non-interest investments, or between simple and ber of The Irrigation Age. Price, 10 cents. compound interest during periods of No. 34 Clark street, Chicago.

Peabody-January 30-81, Profs. Mayo and

Lantz. Edgerton-January 28-24, Profs. Graham

and Georgeson. Washington—January 16-17, Profs. Mayo and White.

Randolph—January 30-81, Profs. George-son, Winchip and Will. Hutchinson—February 6-7, Profs. Pope-

Hiawatha — December 26-27, President Fairchild and Prof. Mason.

BRONCHITIS. Sudden changes of the weather cause Bronchial Troubles. Brown's Bronchial Troches will give effective relief.

How to Irrigate.

Practical information for practical farmers and fruit-growers in the January num-

DIRECTION OF THE WIND.

During the year, three observations daily. the wind was from the southwest 303 times south, 165 times; north, 146 times; north west, 182 times; southeast, 110 times; northeast, 106 times; east 89 times; west 44 times. The south winds (including southwest, south and southeast) outnumbered the north (including northwest, north and northeast) in a ratio of 578 to 384.

VELOCITY OF THE WIND. The number of miles traveled by the wind during the year was 184,528, which is 478 miles above the annual average. This

gives a mean daily velocity of 368.57 miles, and a mean hourly velocity of 15.86 miles.

America! 148 page mammoth catalogue 5 cents postage, or if you will

Cut this ont and send it with 10 cents Cut this ont and send to what I to contain postage to the John A. Salzer Seed Co., La Crosse, Wis., you will receive their mam-moth catalogue and ten packages of grains and grasses, including package of Silver Mine Oats and Silver King Barley.

The Rural New-Yorker helps reduce the mortgage and increase the profits of the farm. Let us send it this week. Send your address ; no money.

> The Rural New-Yorker, 409 Pearl Street, New York.

In the Dairy.

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

DAIRYING AND AGRICULTURE.

Paper read by Hon. F. D. Coburn, at the Kansas State Dairymen's meeting, Newton, Kas, Novem-ber 21, 1895.

Although it affords me pleasure to be with you here to-day, I do not come as a dairyman, nor as, in any sense, an instructor, yet in a very modest way a long-time Kansas farmer. I am here firstly, to suggest by being here that I appreciate the increasing importance and magnitude of the interest that this association is organized to promote and that my hearty sympathies are with it and every similar association in its good undertakings for the betterment of our conditions as citizens of Kansas, and secondly, to learn more of your vocation, your methods and your needs, that if in anywise within my power I may render you some service. An interest that represents such an amount in dollars and cents as this has already attained to and that has such possibilities for the future-possibilities scarcely touched upon, can but command the best attention of the best minds. There may be, and doubtless are, regions just as well adapted to the successful prosecution of dairying, but taking everything into consideration I doubt if there is any other presenting more advantages than will be found here when the business is further advanced and put upon the systematic basis to which it will yet be brought by our fellow citizens here on the former range of the buffalo.

All my observations of the business as a business man have tended to convince me that in it the most conspicuous success is invariably attained where the most carefully devised systems are adhered to, while slip-shod methods, carelessness and lack of system are equally as certain to result in dissatisfaction and disaster. Probably no other country has made such general progress or prosperity in dairying in recent years as Denmark.

As indicating the care and method pursued there I have been much interested in some of the regulations of "The Milk Supply Company, of Copenhagen," a company upon which the city relies for its milk. This organization purchases its milk from the dairymen of the surrounding districts and holds them strictly responsible for its quality and the condition of the cows from which it is obtained; each dairyman who sells milk to the company is required to sign a carefullydrawn contract, comprising among others the following requirements:

The feed must be such that it does not affect the taste or character of the milk injuriously. The use of distillery slop and like substances for food is absolutely prohibited, and the use of all as small pin heads. Each layer rests feed that has been injured or is not on a thin plate, perforated with many well preserved. The use of turnips, fine holes, and which fit closely to the kohl rabi, rutabagas and the leaves of all kinds of root crops is prohibited. Cows supplying milk for children must not be fed oil cake of any kind, and for others the grain mixture used must receive the company's approval.

In summer the cows must not be fed in the barn under any conditions.

The cows must be clipped on the udder, tail and hind quarters in the fall before they are put in the barn.

Fresh milk up to twelve days after

rival at the farm. They must be kept years of age began gardening on a poor in an airy place, protected from all and unproductive soil, taking as motdownward, but so that the air has free used.

The cans must under no circumstance be used for any other purpose than the transportation of milk.

The dairyman must agree to answer all questions concerning the milk which that there was practically no limit to the company may put to him. He must permit one of the company's veterinarians to examine his cattle when-ever desired; must carry out the acres, \$16,000. We do not expect every ever desired; must carry out the directions the latter may give, and one to be able to sell an average of \$400 furnish transportation to the veterinarian to and from the railroad station.

If any contagious disease occurs among the persons who live on the farm or at the homes of the laborers who work on the farm it shall be the duty of the dairyman to inform the company of the fact at once.

Should the milk be found of so inferior a quality as to be unfit for sale the company reserves the right to stop its delivery without remuneration.

The company employs a corps of veterinary surgeons who regularly examine all dairies which furnish milk, and any diseased animals found must be at once removed from the herd under heavy penalties; if the owner thinks he has discovered any actual disease he at once keeps the milk separate, or throws it away, and notifies the company.

As soon as the milk is received in the city each lot is carefully sampled and at once tested for butter fat by an immense Babcock machine constructed especially for the purpose; and in addition to these and other precautions all of the whole skimmed milk is filtered before it leaves the company's warehouse.

They supply three grades of milkwhole milk, half skim-milk and milk for children; they also supply two grades of cream, known as first and second. For the skim-milk morning's milk is allowed to stand twelve hours before skimming. The children's milk is obtained only from cows which have been selected for the purpose by the veterinarians, and is filtered, bottled and sealed immediately upon its arrival.

The filtering machines are thus de-scribed: Imagine a forty-gallon bowl of enameled iron on supports, five feet from the floor. There is a hole in the bottom through which the milk enters and near the rim are two discharge pipes, one on each side of the bowl. The filtering material consists of three layers of gravel and six thick nesses of fine muslin stretched over a ring that fits closely inside the bowl and is placed above the upper layer of gravel. The gravel is of three grades of fineness. The lower is about the size of duck shot, the middle layer is finer still and the upper layer as fine sides of the bowl. Each layer is about two inches thick, and there is a space of an inch from the top of one layer to the tin plate which supports the next layer above. The milk is poured into a large reservoir standing higher than the filter. A brass pipe leads from the bottom of this reservoir to the bottom of the filter bowl. The pressure thus

dirt, with lids removed and opening toes for his guidance, thorough drainage, abundant water, equally abundant access to the interior until they are plant food, and good tillage. He lived, we are told, to see his forty-acre farm produce stravberries at the rate of 400 bushels to the acre, potatoes 750 bushels per acre, and onions 1,000 bushels. As a reward for his faith in the idea the production of an acre, if properly treated, he received in one year, as the worth of products per scre from forty acres of land; but there is only one thing that stands in the way of approaching this standard to a much greater degree than is done, and that is unwillingness to bring to the task the necessary amount of intelligent labor. I do not instance the case of Mr. Smith with a view to inoculating every one with the idea that he can make a fortune out of forty acres of land in a single season, and Mr. Smith did not do it in that way himself. His success, we do not need to be told, was the result of patient effort, pursued with unvarying constancy, keeping the guiding principles he had chosen continually in view. It seems to me that this persevering, painstaking, intelli-gent effort is what leads to success in any line, and I think of none to which it might perhaps be more applicable than to dairying.

I am sure we are advancing in dairy methods, for within my own recollection my grandmother, of sainted memory, slapped the buttermilk out of her butter with her hands. That her method, crude as it may seem, was thorough and effective I can feelingly testify, for I was no doubt frequently benefited by the same vigorous manipulation. And this reminds me of an anecdote from England, where, as it is related, quite an effort is being made in many counties to educate farmers in dairy lines. One method is that of traveling dairy schools with a dairy van, or, as we would say, a dairy wagon, accompanied by a bright young woman who visits the farmers' homes and instructs them in the first principles.

In narrating some of her experience one of these women tells this:

"In one village I was especially amused with an old lady who always liked her butter clean, and she invited me to see her dairy. I went expecting to behold a model place; instead I was escorted to a very small, stuffy room, which contained numerous little thingin the way of eatables in the corners, a bag of moldy rags in another corner, and hanging from the ceiling was a not too clean pair of gloves. 'Ah,' said she, 'I see you are looking at my gloves. Mine gloves are most valya-ble; I've had 'em this five year. I allus make my butter in 'em. Fayther -my old man-he wears 'em on a Sunday, and on days what I churns I rinses 'em and puts 'em on and makes the butter. I never touches it with my hands.'"

An important point upon which we are weak, and I suppose it applies to dairymen quite as well as the rest of us, is our failure to produce more of the articles we consume, and we go on in this way until it amounts to business obtained forces the milk through the suicide. We export money and import successive layers of gravel and six clothing when home-grown wool should thicknesses of cloth, and when it rises be made to pay the bills; export money calving must not be delivered, nor will to the top it is drawn off through the and import fruits, vegetables and canned goods, when intelligent attention to orcharding, vegetable farming and gardening would enable us to produce nearly all these articles at home in ample quantities, and we taboo the idea of home manufactures, when the people who produce in other States so large a part of the products which we consume grow wealthy as a result of their thrift and our thriftlessness. And then, to cap the climax, the absorbers and the absorbed get at loggerheads because, in the natural run of events. the former class had money to loan and the latter class over-borrowed. As a sovereign remedy for the evil effects

WINTRY WEATHER WEAKENS

the system, lowers the vitality and decreases the power of resistance against colds and chills. Many people are feel-ing weak and shivery just now. They complain of cold hands and feet. Their blood doesn't circulate properly; the raw, bleak air seems to go right through them. Others feel worn out and lack vigor. They are bilious, nervous, have backaches, headaches, and a pale sallow complexion. All these symptoms indicate that the liver and kidneys are out of order. Feeble circulation of the blood shows that the system is in a very low condition. People who feel like this are facing some dangers they little suspect.

JOOKO

for pneumonia, influenza or some other dangerous complaint when you are in this state!

If you have any of these symptoms and are not feeling so well as you ought to feel, do not wait until you are laid up with a serious illness. Act at once. Take something that will build up the system, put the blood in healthful motion and act on the liver and kidneys. Prevention is better than cure.

There is only one way to get well. There is only one remedy that can make you well. The remedy you need is Warner's Safe Cure, which is recommended and prescribed by physicians throughout the world. This great remedy contains the vital principle essential the maintenance of health and strength. It increases the muscular energy, fortifies the system and builds up every part of the body. It has never been equaled as a cure for liver and kidney complaint, bladder trouble or Bright's disease. It is the great stand-ard remedy, the best remedy, the most reliable remedy known to medical science. Every one who has ever tried it, believes in it.

If your health needs attention, do not experiment with inferior remedies. It is cheaper and wiser to take a remedy that has earned a world-wide reputation, which has stood the test of years and has proved, in millions of cases, that it can always be depended upon to relieve and cure.

legislated into prosperity. We raise dogs and buy hogs. We let our ma-nure go to waste and lament that the crops are light. We grow weeds and buy vegetables and brooms. We catch 5-cent fish with a \$5 rod. We build school houses and colleges and then send our children away to be educated, And lastly, we send a boy out with a \$40 gun and a so-called \$20 dog to hunt 10cent birds.

A well-known Southern writer, in describing the condition of affairs in his State, where they were always buying but never producing, and hence were always poor, draws this picture of the burial of one of his fellow citizens, which would be only too true in many another community outside of Georgia. He says: "They buried him in a marble quarry; they had to cut through solid marble to dig his grave, but the tombstone they put over him was brought from Vermont. They buried him in a pine forest, but the pine coffin they put him in came from Connecticut; they buried him within touch of an iron mine, but the nails in his coffin and the shovels with which they dug his grave were imported from Pittsburg: they buried him in the midst of the finest sheep grazing country in the world, but the woolen bands on the coffin were made in the North; the South did not furnish one thing on earth for that funeral but the corpse and the hole in the ground.

the company accept milk from cows delivery pipes. that give less than six pounds per day. I call attention to this as a good

The utmost cleanliness must be obexample of the careful painstaking served in milking, and the milk must deemed requisite by a concern with be strained through a metal strainer large interests at stake, and essential covered with a clean woolen cloth. to success in supplying acceptably a

Every dairy must be supplied with a city of 200,000 inhabitants with wholecertain make of milk cooler, and this some milk, and to suggest that, so far may be rented of the company if deas my view has extended, genuine and sired. As soon as drawn the milk must lasting success in this business is nowhere attained without similar painsbe cooled by the use of ice water on the cooler to 41° F. before being shipped, taking. and this at all seasons of the year. If there is any one thing that my ob-

It must not be sent from the farm servations in agriculture convince me sooner than necessary to make the of more than any other, it is that the train, and in summer the wagons must limit of our possibilities in production be covered so as to shade the cans. are too often scarcely half reached, and

The company will supply the cans, I have little doubt that this applies as clean, but they must be rinsed with

"They threw the clods down on his coffin, and they buried him in a New York coat, a Boston pair of shoes, a Chicago vest and a Cincinnati shirt, giving him nothing to remind him of the State in which he was born and for which he fought for four years, but the chilled blood in his veins and the marrow in his bones."

of ignoring the plainest rules of Every successful agriculturist learns business management, a portion of to appreciate the importance of fertilwell to some features of dairying. J. our people have swallowed the mis- izers, and it is coming to be more and cold water immidiately upon their ar- W. Smith, of Green Bay, Wis., at fifty chievous doctrine that they can be more conceded that there is no com-

modity for this purpose equal to brains. As an illustration of fertilizing with brains I would suggest the county of Jefferson, in Wisconsin, where, as it so happened, I was born. It was originally a fairly good county in a reasonably good part of a very good State, but agriculture had been carried on in such an indifferent, brainless way that in 1870 the land would produce about eight bushels of wheat per acre and the mortgage indebtedness of the county was equal to nearly 45 per cent. of the farm valuation. About this time two or three men with brains, one of whom was my friend W. D. Hoard, who later became the honored Governor of his State, and who is yet editor of that useful dairy paper so well known to all of us, began to agitate the subject of dairying and its possibilities for that region, if judiciously and systematically carried on. They made careful study of the subject and with a few of their more intelligent neighbors embarked in the business of butter and cheese production. They offered no product that was not of the highest classs, and soon the goods from Jefferson county began to have a reputation and active demand. Gradually others took up the work, and now from the use of brains along with muscle that county, within twenty-five years, has become one of the greatest dairy centers in the Union; its lands are worth from \$65 to \$100 per acre, their average yield of wheat is nineteen bushels, and, although strictly a rural community, its people have a million and a half of money in the bank, highly improved farms with big red barns and houses to correspond on every quarter section, only 7 per cent. of them mortgaged, and where plenty, comfort and intelligence have their seats. If you ask what has made this, the answer, Gov. Hoard has said, is the steady, constant accumulation from their small but well-handled herds of cows. "These farmers have come to know the value of the cow, and along with this have used the plow with more intelligence and a wider diversity. They have improved the breed of their cows, to be sure, but the improvement in the breed of dairymen has been just as great, and out of all this comes progress and prosperity."

The difference in men in accomplishing results along lines like these is illustrated by a cow at the Minnesota State farm. During the year 1893 she is reported to have earned \$127.50, the cost of her feed and keeping for the same period was \$42.56, leaving a surplus of \$64.94 for her owner. Truly, such a cow must be a good investment, but her former owner did not think so, so he sold her for \$25 and believed he was getting the best end of the bargain. Of course he was, in a way, because his method of doing things would never have developed the earning capacity of the animal in the manner that men familiar with the possibilities of dairying have done. It was a good bargain for the cow, because it transferred her to people who knew how to feed her so as to permit a generous response at the pail, and treat her yield in an intelligent manner so as to make its product command the highest possible price. The sale of this cow and her subsequent earnings tells the story in concrete form; there are dairymen and alleged dairymen, farmers and alleged farmers, and that the latter have not sufficient gumption to make a success of business when opportunities thrust all the essentials of

A Happy New Year.

The dairy editor of the FARMER wishes all its readers a prosperous and happy New Year. The plans for 1896 require a large amount of work on the line of needed legislation, and we take this occasion to invite every dairyman in Kansas to render all the assistance possible in this most important matter. The time is ripe for action, and any delay or indifference may cause another defeat and put us still farther away from the desired end. These interests are paramount to all others and there is no excuse for any one holding back.

Borticulture.

Home-Made Wine.

Numerous inquiries have been received by the KANSAS FARMER for a practical method of making grape wine. The correspondents have recognized the fact that Kansas is a prohibition State, and that people ought not to use fermented drink for beverage, even in the pagan States surrounding us. But they think that often, in case of sickness, a little pure home-made wine, free from the poisonous drugs so often put into wines on the market, is useful. We have, therefore, asked Mr. A. L. Entsminger, the grapegrower and nurseryman of Silver Lake, to give to KANSAS FARMER readers

his method for making wine. It will be noticed that Mr. Entsminger speaks of using a barrel and other large vessels. Possibly he expects that those who want this recipe are sick all the year round and require a great deal of medicine, or that they will make at once a supply for a lifetime.

Here are Mr. Entsminger's methods in his own words:

"In order to make a reasonably good wine great care should be taken all the way through, and, if you can't make up your mind to do so, better not commence.

"First, make everything ready. If you intend to use a new barrel, first soak it sufficiently to take out all of the wood taste, then put in some quicklime. Now put in water sufficient to slake the lime and roll the barrel about, so that all of the inside may be as if done with a whitewash brush. While the lime is slaking the barrel should be closed up tight. Now wash out clean, cork tight and put in the cellar for use. When you get ready to fill the barrel, take some new wine, make boiling hot, put in the barrel, cork tight, and roll about with vigor. This is what is called making the bar rel wine-green. This process can all be going on while you are making other preparations. Take a tank or barrel, open at one end, of sufficient size for your purpose, which you must determine yourself, cleanse nice and clean. Now insert a faucet about two inches from the bottom, so that the must (juice of the grape) can be drawn off readily. This tank is to receive the mashed grapes for the purpose of allowing them to ferment in the pulp. Now prepare another tank precisely the same as the above. This is to receive the must for the purpose of allowing it to ferment after it comes from the ess.

"Now you are ready for the grapes, which should be well ripened. It will do no harm to allow them to stand in baskets until the stems are well dried

give a gentle pressing. After the pressing is complete, place the pulp back in the tub, then add about one-third as much well water as you have drawn off must, stir well, and allow to ferment, and press as before. The must should now be placed in the second prepared barrel which I have previously spoken of. Now, dissolve two and one-half pounds of sugar for each gallon of must, taking care that the sugar is all dissolved. Granulated is the best. This is for Concord grapes. Catawba and other grapes with less acid will not require so much. This may not be quite sweet enough, but more sugar can be added. The exact amount of sugar required can only be determined by the use of an acidometer, which is a very expensive concern. Keep well skimmed off until it has apparently spent its force by fermentation. Now great care should be taken in drawing off by means of your faucet, for if you stir it up at this stage you will have cloudy wine, which you will have much trouble to get clear again, which can only be done by adding yeast and compelling it to go through another fermenting process. Now place your new wine in the tight barrel which I first described.

"Great care should be taken so as not to allow bacteria to form in your barrel. In case it should, you will have something besides wine-possibly vine-gar, possibly dead wine. Both pressings should be put together in this barrel. When the barrel is full cork tight. Now take a piece of common gas pipe, about three-eighths inch in diameter, and bend in the shape of a siphon. Now bore a hole in the barrel -which should be placed on the sideinsert the longest end in the hole in the barrel, place a tumbler or earthen vessel under the other end of the siphon. Now fill the tumbler with new wine, which you have kept for the purpose. This will allow the gas to escape and prevent all danger of bursting the barrel. Now be careful; do not allow this barrel to be disturbed so as to mix the sediment with the wine. When the gas ceases to escape from the barrel through the siphon, the barrel may be corked tight. About the next June, or upon the approach of warm weather, you may expect a slight fermentation to take place again, after which your wine should be drawn off with care, your barrel cleansed nicely, and the wine returned. If you have made any miscue, so that your wine is cloudy, add some yeast, which will cause it to go through another fermenting process. This should be done before you rack off in June. If your wine has not high enough color you can add some raspberry juice, which will have the desired effect.

"Care should be taken to keep your barrel in a good cool cellar. If you prefer to bottle you can do so now, at any time. I have kept wine made this way, both in bottles and barrels, for ten years with improvement each year. In fact, I never lost any. Now I hope and expect this will be sufficient guide for even the new beginner to make a

start at least. I might write a great deal more, as I have said nothing about filtering or how to make white, port or sour wine. But I have been too lengthy. Please do not flood me with letters of inquiry for points which you do not understand. Write to the FARMER."

A Mistake in Orchard Planting.

EDITOR KANSAS FARMER:-It is a wise man who observes and profits by the mistakes of others. Mistakes and successes are alike instructive, and he only succeeds in life who profits by both.

I am led to these thoughts from the fact that I am now cutting down threefourths of an orchard of 400 trees I planted twenty-two years ago last spring. I planted too many kinds. For the benefit of beginners in orchard planting, I will enumerate a few of the sorts I should have planted more sparingly. I planted too many early sorts. There is very little market for these. They are very perishable, won't stand shipment, and come in competition with small fruits. Nine-tenths of what I have grown have rotted on the ground. I planted twenty Early Harvest (two would have been plenty) and the same of Red Astrachan (one of them would have been plenty), set out twenty-five Summer Pearmain (should not have set any), planted quite largely of Rhode Island Greening, Honey Greening, Cooper's White, White Winter Pearmain, Yellow Bellflower, Harvest Redstreak (worthless), and many other sorts which it would have done to have planted one or two each in a family orchard, but which never should have been planted for market.

A family orchard of 100 trees should contain not more than twenty-five summer and iall sorts, the balance should be all winter apples of best approved sorts. I will not attempt to name varieties. These depend upon the taste of the planter and his family. The State Horticultural Society, in its reports, furnishes an excellent list, which is a safe guide to planters, either of a family or commercial orchard, and should be consulted by all who contemplate orchard planting on either a large or small scale.

I started orchard planting with the old toper's idea of whisky. He said "all whisky was good and some was better " I thought all apples were good and worth growing, while some were better and more worthy of cultivation. Years of experience have sobered the exuberance of my youthful enthusiasm. Nine-tenths of the varieties in any nurseryman's list are wholly worthless as commercial apples.

I am intending to plant 4,000 apple rees in the spring. There will be but trees in the spring. There will be but three varieties in the orchard-Ben Davis, Jonathan and Missouri Pippin. EDWIN SNYDER.

Oskaloosa, Kas.

The best anodyne and expectorant for the cure of colds, coughs, and all throat, lung and bronchial troubles is undoubtedly Ayer's Cherry Pectoral, the only specific for colds and coughs admitted on exhibition at the Chicago World's Fair.



prosperity

the future to win, to have recognition among men who influence and mold the affairs and the society of his time must be intelligent in his work, he must use either more brains or brains of a better quality; competition will force him to this or the wall. He must recognize the fact that to be a successful farmer he must be a successful business man. No other occupations call for closer discernment or more intelligent action.

AVOID PNEUMONIA, diphtheria and typhoid fever by keeping the blood pure, the appetite good and the bodily health vigorous by the use of Hood's Sarsaparilla.

Hoop's PILLS have won high praise for their prompt and efficient yet easy action.

As has been truly said, the farmer of out. Now place your grapes in a tub or any other convenient vessel that will receive them, for mashing. This should be done with the hands, taking care not to mash the seeds. After this place them in the tank, which I have described for the purpose; allow them to remain there about twenty-four or forty-eight hours, according to the temperature, which should not be less than 60° . When the pulp is sufficiently well broken down it will rise to the top, leaving the must at the bottom. Now draw off the must with your faucet, which I have before mentioned. Now with a good cider press, conveniently placed in readiness, place a gunny sack in the press-hoop. Now, with a scoop or dipper of some kind, dip the pulp into the same and



Poultry Notes.

Whole wheat is one of the best grains for poultry.

6

Hens that are kept busy scratching rarely contract vices.

Wheat is rich in material for growth and stimulates egg production.

Fowls should be kept from food ten or twelve hours before killing.

To have the hens lay with any regularity in winter, their quarters must be warm.

For fattening fowls cooked food is better than raw, for the reason that it is more easily digested.

Buckwheat is a good winter feed. It is valuable as an egg producer and will keep fowls in good condition.

On many farms geese could be raised to good advantage. Besides yielding a regular income in the way of feathers, they are a profitable market fowl.

Keep the old hens that you know are good mothers, especially if the young chickens are to be raised by them. A hen that is a good mother and a good forager is too valuable to be sold.

One of the most important items necessary to insure success in the hatching of chickens during the winter, especially for early broilers, is to procure the eggs from a flock of healthy, vigorous fowls.

Good care, warm, clean quarters, pure water and the right kind of food will make the hens lay right along. Warm cooked food is always a help in egg laying, and in this the table scraps can be used to a good advantage .- St. Louis Republic.

Important to Breeders.

Every one interested in improved stock should have the Breeder's Gazette, of Chicago, as well as the KANSAS FARMER, which we furnish for the price of one-both papers one year for only (\$2) two dollars; or we will supply the National Stockman and Farmer, of Pittsburgh, Pa. (the best general farm and stock journal in this country, price \$1.50), and the FARMER, for \$1.50. Send for sample copies to the papers direct, and save money and get a big benefit by sending your subscription to KANSAS FARMER, Topeka, Kas. No progressive farmer or breeder can afford at this low price to be without this great trio of farm magazines.

No one ever thought of introducing so expensive a feature as lithographic color work in the days when the leading magazines sold for \$4 a year and 35 cents a copy. But times change, and the magazines change with them. It has remained for The Cosmopolitan. sold at \$1 a year, to put in an extensive lithographic plant capable of printing 320 000 pages per day (one color). The January issue presents as a frontispiece a water-color drawing by Eric Pape, illustrating the last story by Robert Louis Stevenson, which has probably never been excelled even in the pages of the finest dollar French periodicals. The cover of The Cosmopolitan is also changed, a drawing of page length by the famous Paris



KENDALL'S

SPAVIN CURE

STEER-Taken up by C. E. Austin, in Shell Rock tp., November 4, 1895, one dun steer, Western brand covers nearly whole of left side, crop off left ear; valued at \$15. Cherokee county-P. M. Humphrey, clerk.

HORSE-Taken up by G. B. Carlisle, one bay horse, black mane and tail, shod in front; valued at \$10. Lyon county-C. W. Wilhite, clerk.

HEIFER—Taken up by J. K. Peterman, in Agnes City tp. November 2, 1895, one two-year-old helfer, red with some white spots, tubbed horns. branded L on right hip and C on right side; valued at \$15.

CAVEATS, TRADE MARKS, DESIGN PATENTS, COPYRICHTS, etc. For information and free Handbook write to MUNN & CO., 561 BROADWAY, NEW YORK. Oldest "ureau for securing patents in America Every patent taken out by us is brought before the public by a nutice given free of otherso in the Pottawatomie county-Frank Davis, clerk. HEIFER-Taken up bv A. F. Kolterman, in Mill Creek to. (P. O. Onaga), December 26, 1895, one red and white two or three-year-old heifer, no marks or brands; valued at \$14. Scientific American World. Splendidly illustrated. No intelligent man should be without it. Weekly, \$3.00 a year; \$1.39 six months. Address, MUN & CO., PUBLISHERS, 361 Broadway, New York City.

FOR WEEK ENDING JANUARY 9, 1896 Shawnee county-C. T. McCabe, clerk.

Shawnee county—C. T. McCabe, clerk. FILLY—Taken up by Israel Ward, P. O. Watson, one dark brown filly, 3 to 4 years old, right hip down; valued at §18. GRLDING—Taken up by Benjamin Vance, P. O. North Topeka, one bay gelding, 1 year old, small lump on navel; valued at §8. MARE—By same. one black vearling mare, white strip in face, writs on nose, left hind foot white to pastern joint; valued at §8. HKIFKH—Taken up by Benjamin F. Croasdale, P. O. Topeka, one Holstein heifer. 2 years old past both ears cropped; valued at §12. HEIFER—By same, one red heifer. 1 year old past, no marks or brands; valued at §10. B YEER—By same, one red theifer. 1 year old past, right ear cropped; valued at §12. MARE – Taken up by Willi m G. Kinnard, in Sol-dier to, P. O. Hoyt, one bay mare, 5 or 6 years old; valued at §3.

Wichita county-W. S. Place, clerk.

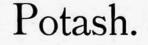
Chase county-M. K. Harman, clerk.



sponds well to liberal fertiliza-AGENTS WANTED Everywhere to canvass for rare beautics. Sell at sight. Liberal terms. Address Historical Publishing Company, Philadelphia, Pa. tion. On corn lands the yield increases and the soil improves if properly treated with fertilizers containing not under 7% actual

1

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A trial of this plan costs but little and is sure to lead to profitable culture.

O pam ' ar no. advertisin, circular bo ing special fertilizers, but are practical works, contain-ing latest researches on the subject of fertilization, and are really helpful to farmers. They are sent free for the asking. GED2TAN KALL WORKS

GEREIAN KALI WORKS, 93 Nassau St., New York.

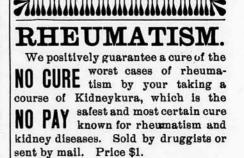


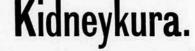
Perhaps you will prosper better and be happier and more thoroughly informed when you take both the KANSAS FARMER and the

Semi-Weekly Capital

When you can get both for little more than the price of one. The Semi-Weekly Capital is issued twice each week, Tuesday and Friday—eight paves, dity-six columns of choice reading matter every issue. It contains the full report of the Associated Press and the full run of Kansas news, all while it is fresh and interesting, besides a large amount of brisht, sploy and interesting miscellaneous reading matter of every description. The KANSAS FARMER CO. has made arrange-ments with the public her whereby it own offer The Semi-Weekly Capital and KANSAS FARMER for the yery low price of \$1.50, or with Almanac and Kansas Year Fook, \$1.65. Address KANSAS CADMED CO.

KANSAS FARMER CO., Topeka, Kas.





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A NEW BOOK is printed on fine

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hundreds of illus-

Rifles, Cal. 22, \$1.75 Rifles, Remington System \$3.60. Rifles Cal. \$2, \$3.50. Cart-

Scientific American

Agency for

The Veterinarian.

We cordially invite our readers to consult us whenever they defire any information in regard to sick or iame animals, and thus assist us in making this department one of the interesting features of the KANSAS FARMER. Give age, color and sex of animal, stating symptoms accurately, of how long standing, and what treatment, if any, has been re-borted to. All replies through this column are free. Sometimes parties write us requesting a reply by mail, and then it ceases to be a public benefit. Such requests must be accompanied by a fee of one dol-iar. In order to receive a prompt reply, all letters for this department should be addressed direct to our Vetrinary Editor, DE. S. O. OBR, Manhattan, Kas.

QUESTION .- My cow, which had partial paralysis last spring, has been do-ing well and seems to be in good health, but she has a bloody discharge when she comes in heat. Will it be safe to breed her? Junction City, Kas. S.

Answer.-It is impossible to say what is best to do. If the cow is thriving the chances are in her favor, and she may never have the trouble again.

STATE OF OHIO, CITY OF TOLEDO. 88. LUCAS COUNTY.

FRANK J. CHENEY makes oath that he is the senior partner of the firm of F. J. CHENEY & Co., doing business in the City of Toledo, County and State aforesaid, and that said firm will pay the sum of ONE HUNDRED DOLLARS for each and every case of Catarrh that cannot be cured by the use of HALL'S CATABBE CURE.

FRANK J. CHENEY. Sworn to before me and subscribed in my presence, this 6th day of December, A. D. 1886.

A. W. GLEASON, Notary Public. SEAL. {

Hall's Catarrh Cure is taken internally and acts directly on the blood and mucous surfaces of the system. Send for testimonials, free.

F. J. CHENEY & CO., Toledo, O. Sold by Druggists, 75c.

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Union Pacific Route.

What you want is the through car service offered between Denver and Chicago via the Union Pacific and Chicago & Alton railroads, which is unexcelled by any other line. Magnificent Pullman sleepers, dining cars and chair cars, run through daily without change, Denver to Chicago via Kansas City.

Seekers for Homes,

Who wish to start over again in some locality where good land is plentiful and climate is favorable, should post themselves rela-tive to the irrigated districts of Kansas, New Mexico and Arizona, the dirt-cheap farms of Oklahoma, and the fruit tracts in southern Texas.

To find out the facts address G. T. Nicholson, G. P. A., Monadnock building, Chicago, or J. E. Frost, Land Commissioner, Topeka, Kas.

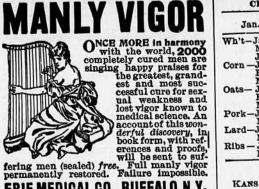
And the Santa Fe is the best line to al most every part of the Great Southwest.

US. We sell your Poultry, Veals, Fruits and all produce at high-est prices. DAILY RETURNS. For stanoils, prices and references, write F. I. SAGE & SONS, 183 Reade St., N. Y. Wm. A. Rogers. Robt. E. Cox. Fred W. Bishop ion

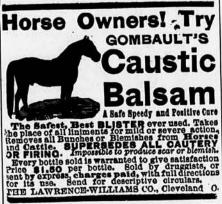


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SUCCESS in any and all of life's undertakings as-S sured. Interesting circulars free. Address PROF. ANDERSON, K. F., Masonic Temple, Chicago.

MARKET REPORTS.

Kansas City Live Stock.

KANSAS CITY, Jan. 6. -Cattle-Receipts since Saturday, 6,999: calves, 60: shipped Sat-urday, 1,068 cattle, no calves. The market was steady to strong. The following are .rep-resentative splace. resentative sales:

SHI	PPING AN	D DRE	SSED B	EEF STEEF	19.
No	Ave.	Price.	INo.	Ave.	Price
18	1.417	84.25	47	1,542	\$4.175
19	1.547	4.15	20	1,608	4.10
5	1,358	3 85	18		3.85
	1,407		16	1,232	3.85
	1,269		12	1,260	3.70
90	1,192			1,302	
	11,111		36	980	3.25
	1,630			1,115	
			NDIAN	STEERS.	
					00 00

50......1,084 \$3.40 | 15......1,081 \$3.30 ABIZONA STEERS. 46......1,189 \$2.75 |

SOUTHWESTERN STEERS

8.....1,062 \$3.35

WESTEHN STEERS. 10......1,143 83.55 | 10......1,108 83.20 44......1,075 3.20 | TEXAS AND INDIAN COWS.

I	2 985 \$2.50	6 863	\$2.50
I	12 Ind 702 2.25	1 Ind 440	2.25
I	COWS AND	HEIFERS.	
I	1 820 \$3.50	28 828	\$3.45
I	20 Gal1,052 3.40	2 970	3.25
1	4 992 2.75	21,170	2.75
1	11,020 2.75	61,011	2.75
1	11.000 2.50	6 833	2,50
	1 1,040 2.50	41,130	2.50
	11,050 2.25	41,022	2.25
	11,030 2.25	11,070	2.25
	11,000 2.00	11,200	2.00
	6 630 2.00	2 880	1.75
U	STOCKERS AN	ND FEEDERS.	
•			A0 18

21	0.00	1	00.30
11 997		1 980	3.35
	3.00	5 588	2.70
	2.50	11,130	2.25
		Saturday, 6,147 s	
Hogs-Receipts	since	Saturday, 0,14/ S	mppe

Saturday, none. The market opened steady and closed strong to 5c higher. The following are representative sales:

	are repr	Cachuar	1140 99109	 CONSTRUCT 		
,	49356	\$3.70	30233	\$3.60	71236	
	46278	3.60	68299	3.60	23228	3.57
1	71262	3.57%	8237	3.57%	62228	3. 7
E	87236	3.57%	56330	3.57%	75223	3.57
	68216	3.55	60236	8.55	\$6277	8.55
-	68255	3.54	61246	8.55	56274	3.55
).	82248	3.55	9214	3.55	66245	3.55
	73238	8.55	64240	3.55	65264	3.55
	14298	3.55	64264	8.55	77201	3.55
	73265	3.55	71271	8.55	50291	3.55
	70195	3.521/2	38219	3.52%	43244	3.52
	43175	3.50	40196	3.50	131216	3.50
	74244	8.50	11303	3.45	77184	
	15 92		58141	3.35	5382	3.33
	11120		8106	3.30	20159	3.30
	20119		18 97		1170	8.25
	23 97		10100		1220	
g,	4282		1250		2220	2.7
		-Recei	Contraction of the second second		aturday,	1,4

60: shipped Saturday, none. The market was active and steady. The following are repre-

h'st La 57 60% 60% 26%	56% 59 59% 25%	Closing 563 593 593
60% 60%	59 59%	593 593
26% 28% 17% 17% 19% 35 65 47% 77%	23% 28% 17% 17% 19% 9 45 5 70	253 263 283 173 175 193 9 85 9 65 5 475 5 75 4 50
	19% 85 65 47%	19½ 19½ 35 9 10 65 9 45 47½ 5 42½ 77½ 5 70 50 4 40

Kansas City Grain.

KANSAS CITY, Jan. 6 .- Offerings of wheat were light to-day and there was a good de, mand, with prices ruling a little higher early though after the speculative market broke buyers refused to pay the early prices. Receipts of wheat to-day, 39 cars. a year ago,

10 cars.

No. 3, 1 car 52%c. Corn was in good demand with fair offerings and spot prices were ½c higher. No trading in January was reported. It was offered at 22½c with 21%c bid.

Receipts of corn to-day, 89 cars; a year ago, 15 cars.

Sales by sample on track, Kansas City: Sales by sample on track, Raisas Croy, No. 2 mixed, 14 cars 22%c, 13 cars 22%c, 2 cars 22%c; No. 3 mixed, 1 car 21%c, 1 car 22úc, 2 cars 22%c; nominally 20@21c; white, 1 car 22%c, 1 car 22%c. Oats continue very scarce. The few cars on sale each day generally go to local buyers on

private terms.

Receipts of oats to-day, 7 cars; a year ago, 8 Cars.

Sales by sample on track, Kansas City: No. 2 mixed, 1 car 17c: No. 3, nominally 16@16%c; No. 4, nominally 15@15%c; no grade, nominally 13@14c: No. 2 white, 1 car 18%c; No. 3 white,

1 car 17%C. Hay-Receipts, 81 cars: market firm. Tim-othy-Choice, \$11.50@12.50; No. 1, \$10.00 J 11.00; No. 2, \$7.50@9.00; No. 3, \$5.00@6.50; fancy prairie, \$7.00; choice, \$6.00@6.50. No. 1, \$5.00@6.00. No. 2, \$4.50@5.00; packing hay, \$3.00 1 car 17%c. @4.00.

St. Louis Grain.

st. Louis Grain. Sr. LOUIS, Jan. 6 — Receipts, wheat, 40,000 bu: last year, 6,000 bu: corn, 30,067 bu: last year, 54,000 bu: oats, 22,000 bu: last year, 42,-900 bu: shipments, wheat, 10,000 bu: corn, 11,000 bu: cats, 10,000 bu. Closing prices: Wheat—Cash, 65c bid: January, 54%c; May, 58%c: July, 58c sellers. Corn—Cash, 24%c; January, 24%c; May, 25%c: July, 26%c. Oats— Cash, 17c bid; January, 17c; May, 19%c.

Kansas City Produce.

KANSAS CITY, Jan. 6.— Butter — Creamery, extra separator, 210: firsts, 18% @19%0: dairy, fancy, store packed, 13@140: fresh, 10@120: off s, 8c; country roll, fancy, 12@14c; choice 10 @120.

Eggs-Strictly fresh candled stock, 180 per

doz; cold storage, 13c. Poultry-Hens, 6½c: springs, 6½ 7c; roosters, 15c: young, 17½c; turkeys, hens, 7½c; gob-blers, 6½c; ducks, 7½@8c; geese, fat, 6½c; pigeons,60c per doz.

Fruits-Apples, fancy, \$2.25@2.50 per bbL; choice, \$1.75@2.0J; common to good, \$1.00@1.50 per bbl.

Kansas City Sheep Market. (Special report, furnished by KNOLLIN & BOOTH, Kansas City stock yards.) The run of sheep was a little freer to-day but was not large. The proportion of real desirable killing kinds was small. There were several lots of fair to decent killing grades of lambs,

The Union Stock Yards, Chicago.

(Consolidated in 1865.) The largest live stock market in the world. The center of the business system from which the food products and manufactures of every department of the live stock industry is distributed. Accommodating capacity: 50,000 cattle, 200,000 hogs, 30,000 sheep, 5,000 horses. The entire railway system of Middle and Western America center here, rendering the Union Btock Yards the most accessible point in the country. The capacity of the yards, the facilities for unloading, feeding and reshipping are unlimited. Packing houses located here, together with a large bank capital and some one hundred different commission firms, who have had years of experience in the business also an army of Eastern buyers, insures this to be the best market in the whole country. This is strictly a cash market. Each shipper or owner is furnished with a separate yard or pen for the safe keeping, feeding and watering of his stock, with but one charge of yardage during the entire time his stock remains on the market. Buyers from all parts of the country are continually in this market for the purchase of stock cattle, stock hogs and sheep. Shipper should ask commission firms for direct in formation concerning Chicago markets.

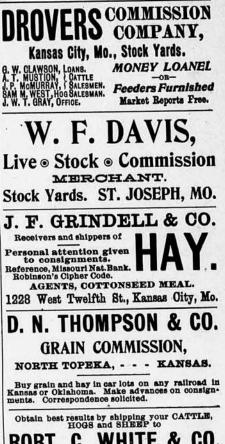
The Greatest Horse Market in America, the Dexter Park Horse Exchange. N. THAYER, JOHN B. SHERMAN, President. Vice President and Gen. Manager. WALTER DOUGHTY, JAS. H. ASHBY, Ass't Secretary and Ass't Treasurer. General Superintendent.

generally light weights. Some 118-pound sheep and yearlings brought \$3.60, but no lambs good enough to fetch over \$4.25 Prices were gener-ally quoted steady to strong at last week's ad-vance, with a fairly free movement. There was some inquiry for feeding wethers at reason-able prices but buyers want them at welker

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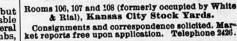
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ROBT. C. WHITE & CO.

Live Stock Commission Merchants,





MORAN, KANSAS, August 17, 1895. The Onstad Chemical Co., Sloux Falls, S. D. Gentlemen: Please send me one box of Onstad's Lumpyjaw Capsules by return mail. P. S.—I have used your remedy with good success.

This is an exact copy of a letter received from Mr. Wright, and without any solicitation of ours.

THE ONSTAD CHEMICAL CO., P. O. Box 1800. Slour Falls, S. Dak. For further particulars see our advertisement in the KANSAS FARMER of December 18, 1895.

a good supply on hand and buyers are coming in rapidly from all directions.

Chicago Live Stock.

CHICAGO, Jan. 6 --Cattle-Receipts, 16,500; market steady to strong: fair to best beeves \$3.50@4.75; stockers and feeders, \$2.50@3.80; mixed cows and bulls, \$1.50@3.65; Texas, \$2.74 @3.85.

Hogs-Receipts, 36,000; market active and generally 5c higher; light, \$3.65@3.82½; rough packing, \$3.55@3.65; mixed and butchers, \$3.64 packing, \$3.552343.05; mixed and butchers. \$1.60 @3.85; heavy packing and shipping, \$3.652 3.77%; pigs, \$2.8023.75. Sheep-Receipts, 15,000; market stronger; na-tive, \$2.0023.65; western, \$3.0023.25; Texas, \$2.2522.75; lambs, \$3.5024.75.

St. Louis Live Stock.

ST. LOUIS, Jan. 6.-Cattle-Receipts, 4,070: market a shade lower: native steers, \$3.50@ Hogs-Receipts, \$3.60 @3.80. Hogs-Receipts, 8.0 0: market 50 higher; heavy, \$3.50@3.75; mixed, \$3.20@3.30; light, \$3.40 @3.65.

Sheep-Receipts, 1,203; market strong.

The Kansas City Stock Yards

are the most complete and commodious in the West,

and second largest in the world! The entire railroad system of the West and South-west centering at Kansas City has direct rail connection with these yards, with ample facilities for receiving and reshipping stock.

	Cattle and calves.	Hogs.	Sheep.	Horses and mules.	Cars.
Official Receipts, 1894 Blaughtered in Kansas City Sold to feeders Bold to shippers Total sold in Kansas City, 1894	959,646 808,181 409 965	2,547,077 2,060,784 11,496 468,616 2,530,896	589,555 387,570 69,816 45,730 503,116	44,237 .28,903	107,494

CHARCES: 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.

C. F. MORSE, E. E. RICHARDSON, H. P. CHILD, EUGENE RUST, V. Pres. and Gen. Manager. Secretary and Treasurer. Assistant Gen. Manager. Gen. Superintende

The Poultry Hard

ATTRACTIVE FOWLS

Brief Description of the Sultan, a Very Pretty Breed.

This breed was introduced into Europe by way of Constantinople some 40 years ago. In many respects the Sultans resemble the White Polish, but they have shorter legs and more abundant plumage. The latter is very white and flowing; on the head they have a compact Polish tuft; the comb is only two little points, and the wattles are very small. They have five toes on each foot. The fowls are non-setters, small eaters and layers of large, white eggs. They are said to be hardy when mature, but are difficult to raise. They



are very small and are kept chiefly as pets, being generally regarded as the most beautiful of all domestic fowls. They are, however, good layers .- N. Y. World.

EGG-EATING HENS.

A Plan by Which They May Be Cured of the Pernicious Habit.

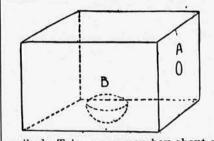
A correspondent writes: "It seems that too much cannot be said or done to prevent this worst of evils a hen can fall heir to. It is very disgusting to any poulterer, or even any person who keeps poultry. When I built my hennery I put in just a few nest boxes for the time being, until I had time to get more, and would not believe it took only two or three days to learn the habit of 'egg-eating.' They would quarrel over the nest and break the eggs, then all would run to have a piece, until at last my two largest pens were full of good-looking egg-thirsty hens, and were, I thought entirely ruined, for when I did give them more boxes they would pick a hole in the shell quite leisurely and eat the contents. What was to be done was more than I could think of for awhile; then I devised a plan which I thought would break some at least of the habit. I made nest boxes as follows: Eight feet long, 14 inches deep, and 11 inches wide, then divided it into eight nests, with one side of the box six inches high, so that when it was covered they had eight inches left to enter the nest; then I set them one foot from the floor. In there it was dark, the space covered by a lid over the box to remove the eggs. In this secluded spot they would deposit their eggs, and only one hen could occupy each nest, and she hadn't room or light enough to do much damage. This was six weeks ago and to day I don't think I have a hen that will cat an egg. If some poulterer who is troubled in like manner will give this a trial I am quite confident he will be amply repaid."-Poultry Chum.

show a preference for corn, but if fed too liberally it will make the hens too fat for profitable egg layers. Of course, excessive feeding of wheat will have a like tendency, but in not so quick or so marked a degree .- Farmers' Review.

SIMPLE RAT TRAP.

If Kept Leaded You Will Have No Trouble with Rodents.

Under this heading a correspondent of a poultry journal sends a description and sketch, here reproduced, of what he calls "the only perfect rat-trap, and very simple and inexpensive." Rats in some localities are a serious nuisance to poultry breeders, and a good trap is worth a good deal of money to them. The contrivance is thus de-



scribed: Take a common box about a foot square and 15 inches long, bore a hole in each end with 11/2-inch auger, about four inches up from the bottom, as shown at A in cut. Fill a small tin pan (or box) with meal mixed with arsenic, set in middle of box, as indicated by dotted line B; nail cover on, and you can set it anywhere without fear of chicks or fowls touching it. Keep it.loaded all the time, and you will have no trouble with rats.-Australasian.







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Saved by the Poultry.

Everything that usually goes to the swill barrel can be turned to more profit on the farm if it is put in proper condition for feeding the poultry. Pos tato and turnip parings boiled are good to put with the mixed food. All table scraps make the very best of food; even the meat bones can be crushed, and will more than pay for the trouble in the increase of eggs. The buttermilk used in a scalding state or sour or sweet milk the same add increased nourishment to the mixtures mentioned. The whey when curd is made can also be utilized the same way. Whole grain should be fed at evening. Wheat, bar-ley, buckwheat, corn and rye are valued as respectively enumerated. The fowls



HAD FREE A GENUINE 14 E-GOLD-FILLED WATCH and chains IES to every reader of this paper. Cut HWS this out and send it to us with your & SET this of A data send it is us with your-address and we will send you FREE. for examination the Best and Unly Genuine American watch ever offer-ed at this price. It is 14k. Solid Gold filled, with Genuine American Movemest, 20 Years' Guarantee, and looks like a Solid Gold Watch sold at \$40. Examine at express office and if you think it a bargain, pay \$7.50 and express charges, other-wise pay nothing. A Handsome Gold Plated Chain, sold in certain stores for \$3 goes free with each watch. for \$3 goes free with each watch. OUR GRAND OF FER. FREF one of these \$1.50 watches and warra To-par, as this price holds good for 60 days only. ROYAL BY'O CO., \$07 Unity Bids, Chicago, Ili.



ST. LOUIS, CHICAGO, OMAHA, PEORIA. ST. PAULAND MINNEAPOLIS WITH Dining Cars Vestibuled Drawing Room Sleeping Car Reclining Chair Cars (Seats Free). ONLY ONE CHANGE OF CARS TO THE ATLANTIC COAST THE BEST LINE FOR NEW YORK, BOSTON, Washington, Baltimore, Cincinnati, Philadelphia, Niagara Falls, Pittsburgh, AND EASTERN POINTS. For full information, address

THE HEATING ATTACHMENT



In connection with the Lake City Automatic Stock Fountain, will enable you to water 50 to 150 pigs daily, as conveniently in the winter as in the summer. You will never have to cut ice from trough. Back up barrel thoroughly, attach foun-tain to same or to tank, slip the small attachment under drinking cup, and it will never freeze. The heat is produced by a chemical combination of ground charcoal and coke, pressed into bricks 2% at for \$3.50, and include free, coal to try the matter thoroughly to be paid for when found satisfactory. As it costs nothing to try, send for one. Mention express station. AGENTS AND DEALERS wanted in every locality.

The pictures include portraits of each President; of the prominent men and women of to-day, as, McKinley, Crisp, Reed, Hill, Edison, Parkhurst, Susan B. Anthony, Frances E. Willard and many others. Tersely stated, the book is

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H. C. ORB Ass't Gen'l Passenger Agent, Kansas City; Mo



POLAND - CHINAS of the leading strains Tecum-sehs, Wilkes Sumets. Good ones.strictly first-class Good bone, br ad back. fi e head. Prices reasonable. Visit me.

CLOVER HILL HERD **Registered Poland-China Swine**

Eighty head, headed by Royal Perfection 13159 S., a son of King Perfection 11315 S., that won sweep Stakes St. Louis fair, 1894. Twey one April pigs, Royal Perfection. Write or come. Royal Perfection. Write or come.

Shropshire Rams and Ewes for Sale. Also Oxford and Delaine Merino, from 1 to 8 years old. Write for plices to DORSEY BROS., Perry, Pike Co., Ill. DOGS.

FOR SALE-Or exchange for small place near good town-tif not sold by February 1, 1896, for rent)-234 screes, well improved, good land; plenty of living water. Four miles from Linwood, twenty-tive miles from Kansas City. A. P. Ashbrook, Lin-wood Kas wood, Kas.

WEET POTATOES-Sent out to be sprouted O on shares. No experience required Directions for prouting free. T. J. Skinner, Columbus, Kas.

YTRAYED—From the farm of Forest Savage, four miles southwest of Lawrence, Kan., a dark bay m re, heavy ser, but hy tail, legs dark from knees down, in good fiesh, good looking mare. A suitable rew rd will be given to any person for her recovery. Audress J. A. Downs, Lawrence, Kas.

YORKSHIRE HUGS, LEGHORN, LANGSHAN, Plymouth Rock, Minorca and Sliver Polish fowis bred in their purity. James Burton, James-town, Sas.

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WANTED-Buyers for Large English Berkshires. On hundred pure-bred pigs, farrowed in March and April, are offered for sale at from \$ 0 to \$15 each. Jarm two miles west of city. Biverside Stock Farm. North Topeka, Kas.

WANTED-Sale bills, horse bills, catalogues and other printing. A specialty at the Mall job printing rooms, 900 North KansasAve., North Topeka.

