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The Chinch Bug in 1882.

Prof. S. A. Forbes, State Entomologist of Illinois, makes the following report to the Bureau of Agriculture, in regard to the ravages of this insect and the best means of checking its increase:

The history of the chinch bug this season has been unusual and peculiarly interesting. Ordinarily, as reported in previous years, the old bugs which live through the winter have laid their eggs in April and May, in fields of wheat and other small grains, and upon these crops the first brood has expended its principal energies. At harvest time, when some members of this brood are usually fully developed and others but partly grown, a migration to corn fields takes place, and in these the second brood is chiefly produced and gets its growth. It is the survivors of this brood which hibernate and lay their eggs in the spring. From this it follows that the eggs are commonly widely scattered in the fields of small grain which they infest, but, invading the cornfields from the outside, confine their principal depredations to the outer part of each field.

During the present season the old bugs appeared at the usual time in extraordinary numbers, threatening serious injury to all the field crops; but the long-continued cool and rainy weather had the effect partly to delay the deposition of the eggs, and partly, perhaps, to destroy such as were laid, so that in central Illinois the young bugs did not appear until about the first of July, by which time the small grains were nearly or quite out of their way. The eggs were therefore laid chiefly in corn, broom corn and sorghum, and the bugs were of course widely scattered through the fields. For this reason, although the number occurring in several fields was sufficient to do great and conspicuous mischief if they had entered the corn in masses from without, as is their ordinary practice, the same number uniformly scattered have attracted little attention and done relatively little harm. In short, the bugs did not appreciably damage the small grain, because their development was retarded until these crops were beyond their reach, and they have injured corn and similar crops because they were widely scattered through the field instead of being concentrated in hordes.

This condition of affairs has one important consequence. We must not judge of the number of bugs now alive, and the amount of the injury which they threaten another year, by the injury now apparent. They are in fact many times more abundant in central Illinois than the damage attributed to them would lead us to suppose; and every precaution should be taken to prevent a serious outbreak of them next season.

Search should be made for them in fall and early winter among cornstalks and in grass, weeds and trash about fields and under leaves in woodlands; and whenever they are found hibernating in such situations they should be burned, if possible, in the rubbish which shelters them. The exposure of piles of rubbish in fields where they abound, and subsequent burning with the bugs which take shelter under it, is an expedient very worth trying.

It is to be feared that very much more reliance is generally placed upon the influence of wet weather in limiting the ravages of the bugs than the truth will warrant. Careful experiments made at the State Laboratory of Natural History in July showed that a thorough drenching of the corn and ground daily, for ten successive days, did not affect the bugs in number or vigor, or in any appreciable way.

In affected corn fields large numbers of a very small, light brown ant (*Lacius hirtus*) are found running over the stalks and secured under the clods at the base of the hills. As one of these may rarely be seen with a young chinch bug in its mouth, this ant has been reckoned by many a servicable enemy of the pest. I have lately made careful dissections of a number of these taken from among the chinch bugs, but have found only liquid vegetable food in their stomachs. They probably feed almost wholly on exudations from the corn and the fluid excrement of the bugs.

A small predaceous beetle (*Agonoderus comans*) has also been very abundant in the same situations. Dissections of this have proven that young chinch bugs form about 20 per cent. of its food, plant lice making another 10 per cent. On the other hand the remainder of the food is vegetation, apparently derived from the roots of the corn.

I have lately found that the chinch bug is extremely subject to a minute internal parasite, a species of bacterium about two ten-thousandths of an inch in length, the spread and multiplication of which may account for those sudden disappearances of vast numbers of the bugs which have hitherto been attributed wholly to the weather.

Experiments now in progress at the laboratory and in the field have already shown that the chinch bug is very easily killed by the application of a weak emulsion of kerosene and soap, and the material for which cost about three fourths of a cent a gallon. Advantage can probably be taken of this fact to save many fields of corn which would otherwise be destroyed by them. Experiments are now under way for the discovery of cheap and effective methods of applying this and other insecticides on a large scale.

Artichokes for Stock.

The following article, written by Charles Aldrich, and published by the Iowa Homestead, we clipped some weeks ago. Some of our Kansas farmers have raised artichokes successfully and are pleased with them. The editor of the Independence Kansan says he tried them and does not like them. We have somewhere seen another article from Mr. Aldrich strongly recommending them.

"The authorities all agree as to the fact that the Jerusalem artichoke (*Helianthus tuberosus*) is a most valuable plant, and here and there a farmer is enthusiastic in its praise; but yet, for some reason or other, an indefinite, wide-spread, deep-seated prejudice seems to exist against it. In the cases of those farmers who have cultivated it for years reports of its wonderful productiveness almost bordering upon the marvelous have occasionally been circulated in the papers in past years. The plant, with all its acknowledged merits, as we find them set forth in the cyclopedias and in works upon general agriculture,

seems to make but slow progress in coming into cultivation. Neither the authority of the books nor the great agricultural journals of this country and England, or of the continent, seem to have any effect in inducing the farmers to try the artichoke. Not in the township where the writer resides, nor probably in the entire county, is there a single farmer engaged in its culture. The same thing could doubtless be said of one and of all the adjoining counties. And yet, in the face of all this prejudice and incredulity, we have no doubt that the artichoke is one of the most profitable crops for the western farmer.

Some years ago we planted about a couple of acres with artichokes, and notwithstanding we made no proper test of their qualities, we learned enough to become fully convinced that it is a plant of very high value. In those early days we had only 'shanghai' rail fences, within which hogs could not be restrained, and so we realized but little value from feeding them to these animals. But one autumn, just before the first frosts, we cut and shocked the stalks. These cured very briefly, and some of the stalks remained standing until spring. As an article of fodder for cattle we found them of very high value. The animals would leave good hay at any time to eat these artichoke leaves and stalks, and they would eat them up very clean. One day a neighbor asked, 'What are you doing with those ugly things?' The reply was, 'Feeding them to our cows and calves.' 'But,' said he, 'they will not eat them!' 'Well,' we answered, 'we have been feeding them at intervals for more than a month. Let us go and see whether any of the stalks are left on the ground. That will show whether the cattle like them or not.' On going to the feeding place it was difficult to find the bit of a single stalk. Everything had been devoured—both leaves and stalks. Had we been feeding covered with rejected stalks. But the artichoke fodder had been eaten up clean. We kept some of the stalks until quite late in the spring, and never fed them without finding the cows and calves with eager appetites. We have seen estimates of the quantities of artichoke fodder that may be raised on an acre or ground, but we are unable to recall the figures at this time. They were up, however, to several tons. In our own casual experiment the great black hocks seemed to stand very thickly on the ground. But we finally came to want the ground for an orchard, and we plowed it late and sowed a crop of buck wheat, which had the effect to almost entirely kill out the artichokes. The tops of the few which grew getting rid of them with a scythe, and we had no trouble in cutting off of them. It was not a very profitable thing to do, however, for the artichokes would have paid handsomely every year, while the orcharding has been up to this writing an experiment devoid of other profit than experience well paid for.

But the great value which writers usually attribute to the artichoke is in feeding swine. Several tons of the tubers may be raised upon an acre of land, and one great economy in feeding them is that hogs will dig them themselves in the fall until the ground freezes and in the spring as long as may be desired. If hogs are turned out of the field about the usual time of planting corn, enough of the tubers will be left in the ground for the rest of the crop. Once established and properly cared for, an artichoke plantation will last for years—any length of time. They require a deep, rich soil, and the ground ought to be well enriched with stable manure. Our course in planting was to cut the tubers in small pieces, with only an eye to each piece, and as the ground was plowed they dropped one foot apart into each third furrow. The ground was harrowed and plowed as with corn, and the artichokes made a wonderful growth the first season. We first learned their value for fodder from seeing the eagerness with which both cattle and horses devoured the frost-killed stalks as they remained standing in the field. All this occurred some years ago, and we have not lately taken any special interest in the subject; but some day we hope to try the experiment again under better auspices, having a most decided opinion that scarcely any other crop can be grown with such certainty of profit.

White or Brown Bread.

The earliest agitator in the matter observed, two years ago, when traveling in Sicily, that the laboring classes there live healthily and work well upon a vegetable diet, the staple article of which is bread made of well-ground wheat-meal. Nor are the Sicilians by any means the only people so supported. 'The Hindus of the northwestern Province can walk fifty or sixty miles a day with no other food than 'chapatties,' made of the whole meal, with a little 'ghee,' or Galian butter.' Turkish Arab porters, capable of carrying burdens of from four hundred to six hundred pounds, live on bread only, with the occasional addition of fruit and vegetables. The Spartans and Romans of old time lived their vigorous lives on bread made of wheaten meal. In northern, as well as southern, climates, we find the same thing. In Russia, Sweden, Scotland and elsewhere, the poor live chiefly on bread, always made from some whole meal—wheat, oats or rye—and the peasantry, or whatever climate, so fed, always compare favorably with our South English poor, who, in conditions of indigence precluding them from obtaining sufficient meat; food, starve, if not to death, at least into sickness, on the white bread it is our modern English habit to prefer. White bread alone will not support animal life. Bread made of the whole grain will. The experiment has been tried in France, by Magendie. Dogs were the subjects of the trial, and every care was taken to equalize all the other conditions—to proportion the quantity of food given in each case to the weight of the animal experimented upon, and so forth. The result was sufficiently marked. At the end of forty days the dogs fed solely on white bread died. The dogs fed on bread made of the whole grain remained vigorous, healthy, and well nourished. Whether an originally healthy human being, fed solely on white bread for forty days, would likewise die at the end of that time, remains, of course, a question. The tenacity of life exhibited by Magendie's dogs will not evidently bear comparison with that of the scarcely yet forgotten forty days' wonder, Dr. Tanner. Nor is it by any means asserted that any given man or any given child would

certainly remain in vigorous health for an indefinite length of time if fed solely on wheat-meal bread. Not a single piece of strong evidence has been produced, however, to show that he would not, and in the only case in which whole-meal bread has been tried with any persistency, or on any considerable scale among us—to wit, in falls—facts go to show such bread to be an excellent and wholesome substitute for more costly forms of nutritious food.—*The Nineteenth Century.*

Ensilage in Hungary.

The system of sour fodder making has long been practiced in Hungary, by which the farmers there are enabled to store a large quantity of juicy food for the winter, which the beasts become very partial to. It is sometimes fed uncut, but generally chopped, and mixed with maize meal or other grain, according to the state of the corn markets. A dry piece of ground having been selected, ditches ten to twenty rods long, twelve feet wide at the top, narrowing to six feet at the bottom, and twelve feet deep are dug. Where stones or bricks are available, the sides generally, and sometimes the bottoms, are lined. Building material being scarce, dry corn stalks are substituted, as in the case of the underground field granaries of India and Algiers. The lining, however, though an advantage, is not absolutely necessary. When the maize is in bloom it is cut, loaded into wagons, and thrown lengthwise into the ditch in layers, with a plentiful sprinkling of salt between each layer, and then well trampled down. When the ditch is filled, the green corn is built like a stack upwards, about ten feet higher than the level of the ground. Earth is then heaped on the top of the stack, which by its weight presses down the mass and causes it to settle. By so doing so much earth is not needed for covering the sides. Air must be excluded, and the cracks in the earth, which appear as the process of settling goes on, must be filled up. If carefully covered this food lasts good for years.

About Gate Posts and Boys.

The following excellent suggestions we find in the Lane (Kas.) Advance, subscribed by Harriet M. Clark:

"Now a word in regard to that very essential thing, a gate post. Without the posts we could have no gates, and gates are indispensable on a well laid out farm; bars are sometimes substituted, but are not nearly so convenient as a good gate. In order to obtain gate posts the farmer usually takes his team and goes to the woods for the timber out of which to make them, traveling perhaps several miles. Even if made of the most durable wood, they will decay in a few years, on at the longest, and then the same work must be gone over again. Now what is wanted is something that will be permanent. This can be found in the living tree, thus combining beauty with utility. What is more beautiful than the walnut or elm among forest trees? If the farmer would plant one beside each gate post, he would have something that would last for centuries. We have several gates with such posts on our farm, and last year walnuts were planted where other gates will be needed. We found this to work well. It saves expense, and no other hanging is so beautiful for a gate as a walnut or an elm.

The same writer further observes that farming should be made attractive as well as remunerative. It can be done. It may require a few years of well directed labor, but in the end it will pay. It will pay in many ways. Not only are boys exempt from the manifold temptations to be found in great cities, but an independence is insured them in the country on well-conducted farms, which they could not find elsewhere. They grow up healthy and free from vice; although they may have to work hard, yet, under the guidance of wise heads, they will after a time find ample time for mental culture and social refinement. The farm should be regularly laid out with convenient enclosures and outbuildings; the fences should be high, and made of durable material, more especially where stock raising is the chief pursuit. Where order and system prevail there will be less work and worry. In an artistic point of view, many things could be suggested that would very materially add to the value of a farm. There are but few who do not appreciate beauty of scenery. The love of the beautiful is innate in the human mind. Where a home is made lovely with trees and shrubbery, walks and drives, and with the neat arrangement of the household, there would be but little inclination to leave it, and a very great incentive to remain. Of course it is natural for young men to long for the city with its grand buildings, spacious residences, its theaters, lofty cathedrals, vast streets, and busy thronging life. Only a few prosper who resort to the cities, while the majority fall. To fall financially is of but slight moment compared with the blunting and ruining of the finer or moral sentiments of a person's life and conscience. The fact is, the prosperity of our cities is founded upon the labor of the farming population. Agriculture is the basis of wealth.

Life on the Farm.

As to its drudgery—whatever has been the case in the past, where there were stumps to be pulled and mortgages to be lifted from almost every field; when it was a long way to market, and the buyer paid for produce in "trade," when almost all implements were laboriously hewn out at home or clumsily hammered out by the village blacksmith—there is, happily, less drudgery on the farm now, and less need of it every year. Taking the year through, the working hours of a man on a farm are no longer than those of the section hand on the railway or an artisan in the shop, who has his own garden to hoe before breakfast or after supper. The busy lawyer and the doctor in average practice work longer and harder than the farmer. The grocer and the editor and the book-keeper each sees less of his children in their waking hours than the farmer who sometimes enjoys them in his "easy life."

It must be conceded, of course, that the profits of farming are not so large on the average as those which are realized by men who are successful in mercantile or professional life. But, such as they are, they are sure—twenty-fold surer at least. Large profits are always contingent on large risks. One must not expect the same rate of interest from government bonds as mining stocks. The wear and tear, the losses and defeats of business men in the last ten years, have been an experience that no farmer need covet. He may well be satisfied with the small income that, taking one year with another, is such a sure one; to resign the five chances of shuffling success in commercial life to those who are willing to take the ninety-five chances of sure failure. The cities and towns are full of men who once had visions of a business success that would in monthly profits put to shame the small profits of a farmer's life time. On the home-stretch of three score and ten they find themselves dependent for a livelihood on salaried positions, which they hold by dimly uncertain tenure, or on the precarious commissions of a canvasser or a commercial traveler. In comfort and in income, the lives they have led make a shabby showing compared with what they might have done as farmers, and point an important moral for the young men who are now debating whether they will turn their backs on the farm and try their luck in the lottery of city life.—*Good Company.*

The Clover Plant.

Dr. Byron D. Halstead presents in the American Agriculturist for September, the following important facts with regard to the agricultural value of the clover plant: "The clover plant is a close and deep feeder, sending its fine roots far down into the soil, filling the subsoil with a network of rootlets. It exposes a large leaf surface, and is thus able to concentrate weak solutions of plant food, and prepare them for the formation of vegetable substance. The clover plant grows throughout the whole season, and is thus able to take up the nitrates as they form. These compounds of nitrogen are produced in large quantities in hot summer months, and, being very soluble, would be washed out by the rains, were it not that the clover plant absorbs them. This is one great advantage which clover has over all the common grains, that finish their growth, and are harvested before the time for the most rapid nitrification arrives. It is a well known fact that clover prepares land for the production of large crops, and this is explained in large part by the long season of its growth and its deep and close feeding, and the storing up of compounds of nitrogen. The clover plant is largely below ground, so that removing the tops takes away only a part of the vegetable matter that has been accumulated. The roots of clover are large and numerous; when they are turned over in plowing and decay, they yield a good supply of plant food to such crops as feed near the surface, and must grow rapidly for only a few weeks. In this way the clover crop will help the succeeding wheat crop, and has given rise to the saying that 'clover seed is the best manure that a farmer can use.' If the whole crop of clover is turned under, as a green manure, a much larger amount of plant food is put into the soil. This is one of the quickest, cheapest and best methods of increasing the fertility of a piece of land.

Correspondence.

Down With Freights.

To the Editor of the Kansas Farmer: We have had some fine rains lately and farmers are busy seeding, thinking it better late than never. Farmers are selling wheat enough to pay their bills, although the railroads absorb the lion's share. Government (the railroads) should run the railroads at uniform rates—no discrimination, just enough to pay expenses—which, if it had commenced before any of the present crop had started to market, would have saved for the farmers of Kansas alone fifteen million dollars on her products for 1882. Just think of it, how flush we would all be, how much better for the merchants, manufacturers, etc., as we could and would have bought more goods that we really stand in need of but are not able to have; more and better machinery to run our farms with. We should not have to wire up the old harness to make it do, but would be able to buy a new set. Thus all classes would be benefited, where now we put this enormous sum into a few men's hands that do not need it and do no particular good with it, and we grub along in poverty and still vote for men that help to keep up this state of affairs. Farmers, do throw aside your old prejudices and vote the anti-monopoly ticket, and thus help yourselves and brother farmers. D. S. A. Kirwin, Phillips Co., Kas.

A Model Western Farmer.

To the Editor of the Kansas Farmer: As an evidence of the success that can be achieved by a Western farmer, we will give you a short description of the farm and surroundings of Mr. A. Reser, one of the most successful and systematic farmers of this state, residing in Marshall county. Mr. Reser came to Kansas nearly thirteen years ago, from the "Sucker" state, and settled on the high prairie; and the first acre of ground he broke was planted to fruit trees and shrubbery. From that time on he in every respect followed the old, time-tried plans of farming adopted in the East, and now has a comfortable home, with an abundance of fruit. His apple orchard is now laden with beautiful fruit, and large quantities of peaches lie rotting on the ground. His orchards are surrounded with rows of trees, forming a "wind-break," and the fruit is seldom whipped off by the winds. Mr. Reser also has a fine field of clover and timothy, which affords good feed for calves and colts in the fall and spring, and has water handy for everything. To this, together with the fact that he never keeps more stock than he can comfortably house from storms, does he attribute his success in this direction—a policy which, if adopted by all our farmers, would be productive of good results. Mr. Reser farms but 80 acres, but his success has, despite droughts, verified the repeated statement that more grain can be raised from a well-tilled field of 10 acres than from 40 acres poorly tended. And from these and like logical standpoints has Mr. Reser achieved what he has farming in Kansas. Such men are valuable to the state. G. W. SHEDDEN. Onaga, Kas., Nov. 3, 1882.

From Stafford County.

To the Editor of the Kansas Farmer: As there has been another correspondent from this county this summer, an apology for not writing oftener is unnecessary.

The farmers in this vicinity having raised good crops of wheat and broomcorn are in splendid financial condition, and are working with renewed vigor. About the same acreage of wheat and rye is sown as was last year. The faith of the farmers is so strong in wheat this year that a great many not having as much ground broken as they desired (owing to the dry weather in August) drilled it in oats and millet ground, the result of which remains to be seen. It is up and looks very well now. A correspondent from Larned spoke about rolling his wheat ground. It may, perhaps, bring the wheat up sooner, but I think it is best to leave the ground rough in this windy country. It will then catch the snow; while if it is left smooth the snow will drift off in the adjoining fields, and leave the wheat unprotected from the freezing.

A surer and more profitable crop for this county is broomcorn; it will grow with less rain than any other crop except sorghum. Both are raised here to a considerable extent.

Corn that was planted early and well cultivated yields about 40 bushels to the acre; while late planted and poorly cultivated will yield only a few bushels, but good fodder.

The dairy is a very profitable business, always good marketing as so much is shipped to Colorado and New Mexico.

This, as a stock raising county, cannot be excelled. Stafford, Stafford Co. Mrs. C. M. JOHNSON.

A Sure Preventive of Chicken Cholera.

Several experiments have been made during the last five years for the purpose of preventing the spread of chicken cholera by inoculation or vaccination. We have, during the last two years, vaccinated the fowls in 19 different yards where the cholera was prevailing badly, and in each yard we left some common fowls not vaccinated and they all died. But of the two thousand vaccinated only eleven died, although they were in the same yard with those that were dying daily by the scores. We have every reason to believe that this vaccination is as effective in preventing cholera among fowls as vaccination is in preventing smallpox among the human family. Vaccinate a hen and in eight days her system will be thoroughly inoculated; then cut off her head and catch all the blood in some vessel, then pour the blood out on paper to dry; a half drop of this blood is sufficient to vaccinate a fowl and the blood of one fowl will vaccinate your whole flock. Catch the fowl you want to vaccinate and with a pin or knife make a little scratch on the thigh, just enough to draw blood; then moisten a little piece of the paper with the dried blood on and you need have no fear of chicken cholera, if you stick it on the chicken's leg where you scratched it, then let the fowl run. As the result of my many experiments I have now dried blood enough to vaccinate ten thousand fowls, for which I have no use as I do not sell patent medicines. If any of your readers are enough interested in poultry to try this preventive, by writing to me I will send you free of any charge enough dried blood to start with. All I ask is that you send immediately before the blood loses its strength, and report the result of the experiment to your many readers. Zanesville, Ohio. W. H. GRIFFITH.

Short Letters.

HARTFORD, Lyon Co., Kas., Oct. 28, 1882.—How a poor man may become rich: In the spring of 1882, he has 1 two-year-old heifer and calf; in three years he has 1 five, 1 three, 1 two, 2 yearlings, and 3 calves; in five years he has 1 seven, 1 five, 1 four, 2 threes, 3 twos, 5 yearlings, and 8 calves. In ten years, or 1893, he may have from the increase of his herd, 1 twelve, 1 ten, 1 nine, 2 eights, 3 sevens, 5 sixes, 13 fives, 21 threes, 34 twos, 51 yearlings, and 89 calves, or 233 head—no blackleg preventing. COUNTRY CRITIC.

BELOIT, Kas., Oct. 30, 1882.—While at Beloit ark fair I saw a machine for cutting corn. I wish to know whether it is a success or not, as there are a good many that would like to hear through your columns. We like the FARMER better than we used to. L. FAUETT.

[We do not know anything about the merits of this machine. Write to the maker and ask him to come and show his work.—EDITOR.]

E. Stutzer, in Berlin, has devised a method for making artificial wool by mixing wool with vegetable fibers like flax, hemp, jute, etc., so that it will have a beautiful silky luster, and both the wool and other fiber will take the same colors.

N. Jepson, an English vegetarian, not wishing to use poor and adulterated animal fats, has sought a substitute, and found it in a composition for which the following is the formula: Take four ounces of the finest Brazilian nuts, pounded very fine in a mortar; four ounces pure olive oil; rub them into a smooth jelly; add eight ounces of white flour and a quarter of an ounce of salt. Run the whole into a smooth paste, and use as butter. This would certainly be preferable to such that goes by the name of butter.

The Stock Interest.

The Brood Mare.

The object we have in view in horse breeding should be annual improvement. The investment is remunerative when applied to good shape, soundness, and vigorous action, combined with the stoutest and most fashionable blood in several classes.

It is important to regard constitution in the parentage, apart from the essential consideration of side freedom from hereditary blemish or defect, good sound legs and feet, a symmetrical body, wind, eye-sight. Action is contributed by the mare in regard to force, by the sire with regard to the direction.

Leading breeders have always a high standard as a fixed aim; in some cases their efforts excel; in others fall short of their beau ideal. When such is the case the mare is invariably at fault.

Mares with their first foals require the greatest attention. The mare should be served nine days after the foaling, and again tried at the end of a fortnight.

The most eligible time for foaling are the months of March, April and May. In the first of these months they must be housed, unless the weather is most favorable.

Variety of feeding is held by many to be a very safe plan. Just prior to foaling down, and after foaling, reliance for a copious supply of milk is usually looked for in those seasonal products—green meat or tares, lucerne trefoil, and clovers.

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General Rules for Breeding.

In breeding hogs there are certain rules to be observed, the familiarity with which gives the breeder greater control over his stock. The Hon. Cassius M. Clay, who made the breeding of stock a science, claims that sex follows the most vigorous parent.

1. Like begets like. 2. The pure breed predominates over the mixed breed, and most affects the issue. 3. When the male and female have a similar defect, that defect is increased in the progeny, and the reverse is the case when good points are needed.

4. The mixed breeds can be continually improved by the use of pure bred males. 5. A mixed blooded male cannot be used, for there is no telling what may crop out in his offspring.

6. If a scrub male be continually bred on pure blooded females the scrub blood finally predominates. 7. In and in breeding fixes the type, whatever it may be, but the same result may be attained by the use of males from herds of similar stock.

8. When mind and energy are required, as in man, or even the race horse, in and in breeding is injurious, but in animals where fat is desirable, as with hogs, the practice is sometimes admissible.

9. Breeding animals without sufficient maturity deteriorates them, as fruit trees are exhausted by fruitage. 10. Generous feeding and security from unpleasant surroundings favor excellence in all types.

11. Over-feeding is not favorable to improvement in breeding. 12. The laws of health must be observed to produce the highest development.

13. Animals should not be changed from generous to poorer fare, and the laws of acclimation must also be regarded. 14. Continuous selections of the best is the paramount rule, as "like not only begets like," but has a tendency either to revert or advance.

15. Early maturity is a prime quality and is always desirable. 16. The fewer the number of females the more vigorous the offspring.

17. In domestic animals no standpoint can be reached, as domestication either retards or advances them, but wild animals, free from man's care, are fixed in type. 18. The regard for certain colors and families may often be an obstacle to improvement from close breeding.

19. The largest animals are not always the most profitable, but the animal that "gives the greatest weight on the smallest amount of feed in the shortest possible time" is the coming one. 20. Animals suited to one section may be unfit for another, as climate, surface, soil, crops, etc., control the selection.—Cincinnati Times.

Angus and Galloways.

In answer to a correspondent who wants to know wherein Polled Angus cattle differ from the Galloways, a well posted exchange says: "In the first place, both breeds are alike in being hornless, and in being usually black in color, and from their general make-up we should suppose them to have been, at no very remote time, one and the same breed. But as bred for several years past the Angus are finer boned, finer haired animals, and apparently earlier in maturing than their long-haired, coarser, and we really think harder cousins, the Galloways. The Galloways are almost as shaggy-coated as the West Highlanders; the bone of the tail is thick and strong, as are all of their bones—in short hardness and good wrestling qualities are written all over their general make-up, and we doubt, after all, whether there is any breed of cattle, save the native Texan, that can compare with them in adaptation to the conditions of life that prevail on our Western plains.

The hog is a grass-eating animal by nature, and its health is therefore promoted by the use of grass as a part of its food. The grass gives bulk and porosity to the contents of the stomach, and thus aids digestion. If the hogs are to be pushed in fattening, finishing them off in the fall, then they may be kept in a dry pen or yard, and the green succulent grass brought to them each day and given in three small feeds, in small racks over the troughs. In this way they will not get much under foot, and what falls out of the rack will drop into the trough. Some years since we found the best plan in feeding clover to hogs in a pen was to run it through a straw-cutter, and then feed two quarts of the cut clover, mixed with its ration of meal, to each pig three times per day. We adopted the plan of cutting the clover in the morning, and mixing the proportion of meal with it that we desired the hogs to eat per day, and let it lie in bulk through the day. It would then become so mingled that the grass and meal would be eaten together. It would warm up some, but not to injure its quality. The hogs were extremely fond of it, and gained in weight from 12 to 15 pounds each per week. We were feeding for rapid growth during the summer, and fed six pounds of corn meal to each pig, with the clover, per day, and the result was quite satisfactory.

Blind Bridles.

So many people still use blind bridles, and they are so useless and dangerous that one is surprised. Blinds are an injury to the animal; they endanger his sight, and are a constant irritant, especially with young and spirited horses. They are also a source of danger to persons driving the animal. We know of cases where serious results came from their use. It is common for blinded horses to take fright at objects behind or beside them which the blinds had kept from their sight. We have seen teams frightened at buggy and wagon tops which they saw over the blinds when their heads were thrown up. Every one has seen repeated instances of frights because of blinds.

But there is little danger if horses are kept at ease in the matter of sight. Let them see all that is going on, and accustom them to all the objects which are to be near them often. We fully agree with a correspondent of the Live Stock Journal, who says: "After purchasing horses for various kinds of work, for many years past, I have found, when using blinders, that they were apt to shy and be skittish. Remove these, and they overcome both immediately. There is a reason for this. When blinders are worn, horses cannot see anything behind them or at their sides; or near so well in front as without them. In consequence of this, things are brought so suddenly to their notice that it frightens them, whereas if they came in sight gradually and fully, they would not be frightened at all. To prevent a horse being scared, if disposed to it, when first put into harness without blinders, take him behind the carriage, and at the sides, and let him touch these with his nose and smell them well. If certain enclose the carriage, as is usual in a rockaway, loosen and shake them in the face of the horse; then stand him fronting the carriage, between the shafts, and, if a buggy, raise and lower the top, to accustom him to this. If the horse frighten him a little, repeat till he gets completely over it, and then attach him to the vehicle."



Give for Health Lydia E. Pinkham's

LYDIA E. PINKHAM'S VEGETABLE COMPOUND.

A Sure Cure for all FEMALE WEAKNESSES, including Leucorrhoea, Irregular and Painful Menstruation, Inflammation and Ulceration of the Womb, Flooding, PRO-LAPSUS UTERI, &c.

Physicians use it and prescribe it freely. For all weaknesses of the generative organs of either sex, it is second to no remedy that has ever been before the public; and for all diseases of the kidneys it is the greatest remedy in the world.

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Kansas City Stock Yards.

Covers 120 acres of land. Capacity 10,000 Cattle; 25,000 Hogs; 2,000 Sheep, and 300 Horses and Mules. E. F. MORSE, General Manager. R. P. CHILD, Supt. E. E. RICHARDSON, Asst. Treas. and Asst. Sec'y. C. P. PATTERSON, Traveling Agent.

The Hinsdale Patent Five-Shot Breech-Loading SHOT GUN AND RIFLE COMBINED.

Advertisement for the Hinsdale Patent Five-Shot Breech-Loading Shot Gun and Rifle. Includes an illustration of the gun and text describing its features and availability.

SOUTHWESTERN FENCE COMPANY.

Advertisement for Southwestern Fence Company, featuring wrought iron fence posts and farm fences. Includes an illustration of a fence post and text about material prices and availability.

ARE YOU ALWAYS DRY?

Advertisement for Tower's Fish Brand Slickers, water proof coats. Includes an illustration of a fish and text about the quality and availability of the coats.

GALVANIZED IRON GATES.

Advertisement for Galvanized Iron Gates, complete with wire netting. Includes an illustration of a gate and text about pricing and availability.

MAGIC LANTERNS AND VIEWS.

Advertisement for Magic Lanterns and Views, featuring a variety of slides and lanterns. Includes text about pricing and availability.

WHAT WILL THE WEATHER BE TO-MORROW?

Advertisement for Pool's Signal Service Barometer, a weather forecasting instrument. Includes an illustration of the barometer and text about its accuracy and availability.

Advertisement for a machine, possibly a sewing machine or similar, with text about its features and availability.

Grange and Alliance.

NATIONAL GRANGE.—Master: J. J. Woodman, of Michigan; Secretary: Wm. M. Ireland, Washington, D. C.; Treasurer: F. M. McDowell, Wayne, N. Y.

KANSAS STATE GRANGE.—Master: Wm. Sims, Topeka, Shawnee county; Vice: John F. Willis, Grove City, Jefferson county; Secretary: J. A. Melear, Junction City, Jackson county; Treasurer: J. A. Melear, Junction City, Jackson county; Executive Committee: Henry James, of Indiana; D. Wyatt Allen, of South Carolina; W. G. Wayne, of New York.

OFFICERS OF KANSAS STATE FARMERS' ALLIANCE. President—J. L. Hart, Dickinson county. Vice-President at large—F. W. Smith, Ellis county. Vice-President at district—J. A. Melear, Junction City.

FINANCE COMMITTEE. J. D. James, Concordia; J. R. Clark, Clay Center; J. A. Lacy, Wakefield, Clay Co.

We solicit from Patrons, communications regarding the Order. Notices of New Elections, Feasts, Installations and a description of all subjects of general or special interest to Patrons.

Horticultural Department.

The Damson Plum.

In the long list of horticultural productions there is, perhaps, none more neglected than the Damson plum. To anybody aware of its merits it must be apparent that this plum is unjustly overlooked and does not receive the attention it merits.

We have known cases in which the trees were planted out and the grower waited for years and yet no fruit was visible, and finally giving up hopes of ever seeing any fruit on the trees, cut them down.

AMONG THE FLOWERS.

How to Grow The Calla Ethopica, Calla Lily, Egyptian Lily, Or Lily Of The Nile.

If you wish large flowers, plant the tuber with a single crown in a good sized pot (eight to twelve inches) filled with well rotted manure, using lo earth or other soil.

Should the soil become infected with angle or other worms, let the plant get nearly dry, close the hole for drainage in the bottom of the pot with clay or other substance to prevent the water escaping.

Sick Headache.

For the relief and cure of the distressing affliction take Simmons Liver Regulator.

Malaria.

Persons may avoid all attacks by occasionally taking a dose of Simmons Liver Regulator to keep their liver in healthy action.

Constipation.

The Regulator will positively cure this terrible disease. We assert emphatically what we know to be true.

Biliousness.

One or two tablespoonful will relieve all the troubles incident to a bilious state, such as Nausea, Dizziness, Drowsiness, Distress after eating, a bitter bad taste in the mouth.

Dyspepsia.

The Regulator will positively cure this terrible disease. We assert emphatically what we know to be true.

Colic.

Children suffering with colic soon experience relief when Simmons Liver Regulator is administered.

Buy only the Genuine, in White Wrapper, with red "Z" Prepared by J. H. ZELLIN & CO.

SOLD BY ALL DRUGGISTS.

Read. Read. Read. Special Offer. KANSAS FARMER.

Until January 1st, 1883, we offer the KANSAS FARMER at the following greatly reduced rates: 1 copy one year \$1.00 5 copies one year \$5.00 11 copies one year \$10.00 25 copies one year \$22.00 60 copies one year \$51.00

Persons desiring to act as club agents may send in the names with the money whenever secured.

When it may be inconvenient to remit in small sums, by corresponding with this office some special arrangement may be proposed.

Any person having credited a smaller club, may by notifying us, have it credited on a larger list at the rates of the larger club.

The above special offer is made in order that all the friends of the KANSAS FARMER may have their names upon our list before the enlarged and improved edition appears.

We want to secure at least 5,000 new names before the close of this year.

With the beginning of 1883 the KANSAS FARMER will enter upon its twenty-first year. At that time it will be enlarged and otherwise greatly improved.

Remember the time for which this tempting offer is made only lasts till January. Thereafter the regular prices will be resumed.

GO TO HEADQUARTERS FOR Norman Horses. The Draft Horse center of America.

Norman Horses.

Have two large stables in Bloomington and Normal, and five farms devoted exclusively to breeding and handling NORMAN HORSES.

New Importation of 100 NORMANS Arrived July 29, 1882.

Have now on hand over 300 head; as fine a show as can be found in the world.

PUBLIC SALE OF HEREFORD AND Polled Aberdeen Cattle

AT DEXTER PARK, CHICAGO, ON WEDNESDAY, NOVEMBER 22, 1882, commencing at 10 o'clock.

The undersigned will sell at public sale, at the time and place above mentioned, about 35 Hereford cows and heifers, imported and home bred, 7 imported Hereford bulls and bull calves; about 25 Polled Aberdeen or Angus imported cows and heifers, and 12 young bulls; also, his entire flock of imported and home bred.

Shropshire and Oxford Down Sheep, consisting of about 300 head.

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Riverside Stock Farm.

Miller Bros., Proprietors.

BARAINS IN Improved Farms

In Kansas, Missouri and Iowa.

Low Prices, five years time on Deferred Payments, 7 Per Cent Interest.

J. B. WATKINS & CO., LAWRENCE, KANSAS.

Kansas is blessed with another beautiful harvest, demonstrating beyond a doubt the desirability of her lands for agricultural purposes.

Wild Government and Railroad Lands are generally believed to be the only lands within the reach of men of small means, but we offer

IMPROVED PRODUCTIVE FARMS,

In good locations, at almost the same price as is asked for Wild Lands.

These Farms were obtained by us at such figures that we are enabled to sell them at less than their actual value and less than others equally well improved can be bought for.

We have choice farms in nearly all parts of Kansas and a few in Missouri and Iowa, ranging in size from 50 acres to 640 acres, with improvements varying from a few acres in cultivation and a cheap house up to more pretensions and valuable accessories, so that

We can suit the wishes and pockets of almost anyone seeking A HOME.

Please call at our office in Lawrence, or address the undersigned for full information and circulars.

J. B. WATKINS & CO., LAWRENCE, KANSAS.

Holstein Cattle.

THOS. B. WALES, Jr., IOWA CITY, IA.

Herd established in Massachusetts in 1870 and now numbers over 80 head, all represented in the Holstein Herd Book. Many animals we personally selected in Holland.

NO ONE SHOULD PURCHASE Holsteins without visiting this herd. Send for new Illustrated Catalogue.

ATTENTION, FARMERS!

SAVE AGENT'S COMMISSION. Buy direct from the Dealer.

THE ONLY PERFECT SEWING MACHINE.

SIMPLEST, LATEST IMPROVED. MOST DURABLE & BEST.

BUY IT AND MAKE HOME IF THERE IS NO AGENT NEAR YOU WRITE DIRECT TO US. NEW HOME SEWING MACHINE CO. 30 UNION SQUARE, N. Y. CHICAGO, ILL. ORANGE HALL, ST. LOUIS, MO.

"Sewing is Believing."

A FREE GIFT

Of a Beautiful Needle Case to all buying needles for any make of Machine. Also Parts and Attachments For any Machine Made.

STOCK OR PRODUCE TAKEN IN TRADE. NEW HOME STORE. 209 Kias. Ave., bet 5th & 6th Sts. TOPEKA, KAS.

LANDS AND HOMES

Acres of timber and prairie. Land along the line of the St. Louis and San Francisco Railway for sale on seven years' time, at from \$2.00 to \$8.00 an acre. Free transportation from St. Louis to purchasers per Circular sent on application to W. H. YEATON, Temple Buildings, W. H. COFFIN, 212 1/2 So. 2d St., St. Louis, Mo.

DR. JOHN BULL'S Smith's Tonic Syrup

FOR THE CURE OF FEVER AND ACUE Or CHILLS and FEVER. AND ALL MALARIAL DISEASES.

The proprietor of this celebrated medicine justly claims for it a superiority over all remedies ever offered to the public for the SAFE, CERTAIN, SPEEDY and PAINLESS cure of Ague and Fever, or Chills and Fever, whether of short or long standing. He refers to the entire Western and Southern country to bear him testimony to the truth of the assertion that in no case whatever will it fail to cure if the directions are strictly followed and carried out. In a great many cases a single dose has been sufficient for a cure, and whole families have been cured by a single bottle. It is, however, prudent, and in every case more certain to cure, if its use is continued in smaller doses for a week or two after the disease has been checked, more especially in difficult and long-standing cases. Usually this medicine will not require any aid to keep the bowels in good order. Should the patient, however, require a cathartic medicine, after having taken three or four doses of the Tonic, a single dose of BULL'S VEGETABLE FAMILY PILLS will be sufficient.

The genuine SMITH'S TONIC SYRUP must have DR. JOHN BULL'S private stamp on each bottle. DR. JOHN BULL only has the right to manufacture and sell the original JOHN BULL'S TONIC SYRUP, of Louisville, Ky. Examine well the label on each bottle. If my private stamp is not on each bottle do not purchase, or you will be deceived.

DR. JOHN BULL, Manufacturer and Vendor of SMITH'S TONIC SYRUP, BULL'S SARSAPARILLA, BULL'S WORM DESTROYER, The Popular Remedies of the Day. Principal Office, 831 Main St., LOUISVILLE, KY.

THE NEW WHITE GRAPE-Prentiss.

Rockington, Moore's Early, Warden, Early Victor, Vegeance Duchess, Jefferson Lady, all other sorts, new and old. Also, fruit trees, small fruits, etc. Send for Price List to Wilson & McFadden, Atlantic, Iowa.

Poland China & Berkshire Hogs.

We have a larger number of pure bred hogs than any breeder in the state, and have the very best of each breed that money could procure from the leading breeders throughout the United States.

Poland China hogs run dark like Chang, 268 American Poland China Record (a true likeness of him appears above). He is the sire and grand sire of many of our hogs.

We have a number of nice pigs on hand ready for shipment and some excellent young sows in pig. No man can afford to have an inferior stock of hogs. We have a large amount of money invested in fine hogs and the arrangements for caring for them, have proceeded with great care and we have for sale a very choice lot of young sows and spring pigs.

Send for new catalogue. Satisfaction guaranteed. ROLLINS & WALKER, Manhattan, Kas.

Attention Swine Breeders

Rollins & Walker, proprietors of the Manhattan Stock Farm make a speciality of best Berkshire Swine of the best quality. Our herd having won 85 high class premiums at leading fairs during the last three years.

Short-Horn Cattle AND Berkshire Swine. COTTONWOOD FARM, Four miles east of Manhattan, Kas. J. J. MALLS, Proprietor.

Breeder of Short-Horn cattle and Berkshire swine. Young stock always for sale. My Short-Horn number 23 head of well bred animals, including 10 head of young bulls.

My Berkshires are all recorded or can be in the American Berkshire Record, and are bred from noted prize winners, as British Sovereign II 633; Hopewell 3337, and Imported Mahomet 1979; and from such sows as Queen of Manhattan 836; Sally Humphrey 428; Kello's Sweetmeat 7422, and Queen Victoria 7255. Correspondence solicited.

Merino Park Stock Farm.

Winchester, Jefferson County, Kansas. Wm. Booth, Proprietor. FRANK L. GIBBS, Manager Leavenworth, Winchester.

Breeders of Registered Merino Sheep.

None but the very best stock that money and experience can produce are presented for breeders. A few choice Rams for sale, ready for service this fall.

Wm. Booth Leavenworth, Kas. Breeder of Thor oughbred Berkshire swine. I am using three Boars the season at the head of which stands Genl's Lord Liverpool No. 3945 sire Lord Liverpool No. 221. I am breeding twelve as fine Sows as the country can produce. Most of them Registered, and eligible to register. Stock for sale and sale-tion guaranteed. My stock are not fitted or the show ring, but for breeding only. send for prices.

STEEL WIRE FENCE

Is the only general purpose wire fence in use. Being a strong, heavy, without rust, it will stand up to dogs, pigs, sheep and poultry, as well as the most vicious stock, without injury to either fence or stock.

It is just the fence for farms, gardens, stock ranges and railroads; and very neat for lawns, parks, schools, lots and cemeteries. As it is covered with rust-proof paint (or galvanized) it will last a life time. It is superior to boards or barbed wire in every respect. We ask for a fair trial, knowing it will wear itself into favor. The SEDGWICK GATES, made of wrought iron pipe and steel wire, defy all competition in neatness, lightness, strength and durability. We also make the BEST and CHEAPEST ALL-IRON automatic or self-opening gate. For prices and particulars, ask hard ware dealers, or SEDGWICK BROS., Richmond, Indiana.

AGENTS WANTED for COBURN'S Subscription Books

THE FINEST IN THE WORLD, and the fastest-selling best work without parallel in the paper, elegantly illustrated and beautifully bound. No other looks their equal. All new and to competition. Territory clear. They satisfy the Agent because they sell fast, the people on account of their value.

"Newman's America," a complete Encyclopedia of all American history from the earliest times to July 29, 1882. The only book covering the subject.

"The Lives of the James Brothers," The only complete account of the Missouri Outlaws.

"The Jeannette," The only Narrative of the Explorations, including FRANKLIN, KANE, WILKES, HALL, and the LONG.

"Pictorial Family Bible," The only complete work containing both versions of the New Testament. More Features and Illustrations than any other edition.

The most LIBERAL TERMS presented by any PUBLISHING HOUSE. PROMPT DELIVERINGS. NO DELAYS. Write quickly for circulars and terms. Territory is rapidly being taken.

COBURN & COOK PUBLISHING CO., 66, 68, 69 & 100 Metropolitan Block, CHICAGO, ILL.

HOLLAND BULBS ROSES AND PLANTS

MILLIONS OF THEM Our Fall Catalogue is the finest and most complete ever issued. Full instructions for culture by an experienced horticulturist. Sent FREE.

HIRAM SIBLEY & CO. REDSMEN, Rochester, N.Y. & Chicago, Ill.

SHEEP FARMERS TAKE NOTICE.

LITTLE'S CHEMICAL FLUID, THE NEW SHEEP DIP

No fire needed; handy and safe at all seasons of the year.

PRICE PUT DOWN TO HARD PAN, which makes it the cheapest and best Sheep Dip in the world. send for circulars, price list and testimonials.

JAMES HOLLINGSWORTH, 210 LaSalle St., Chicago, Ill.

BEATTY'S ORGANS 37 steps, 1st Piano \$27.50. BEATTY'S Factory running day and night. Catalogue free. Address DANIEL F. BEATTY, Washington, N. J.

500,000 acres of LANDS

WISCONSIN CENTRAL R. R. Address: Full particulars FREE. CHARLES L. COLBY, Land Commissioner MILWAUKEE, WIS. IN WISCONSIN.

CONSUMPTION.

I have a positive remedy for the above disease; by its use thousands of cases of the worst kind and of long standing have been cured. Indeed, so strong is my faith in its efficacy, that I will send TWO BOTTLES FREE, together with VAL

THE KANSAS FARMER.

Published Every Wednesday by the
KANSAS FARMER COMPANY:
 H. C. DEMOTTE, President.
 R. E. BROWN, Treasurer and Business Manager.
 H. HEATH, General Business Agent.
 W. A. PEPPER, Editor.

TERMS: CASH IN ADVANCE.
 One Copy, Weekly, for one year, 1.50
 One Copy, Weekly, for six months, 1.00
 One Copy, Weekly, for three months, .50

CLUB RATES—In clubs of ten or more, one dollar a year, and one copy free to the person who gets up the club. Sent to any post office.

The greatest care is used to prevent swindling humbugs securing space in these advertising columns. Advertisements of lotteries, whisky bitters, and quack doctors are not received. We accept advertisements only for cash, cannot give space and take pay in trade of any kind. This is business, and it is a just and equitable rule adhered to in the publication of THE FARMER.

Post Office Addresses.
 When parties write to the FARMER on any subject whatever, they should give the county and post office both. Some of the new post offices are not put down in the post office directory, and when the county is not mentioned, the post office clerks do not know where to send papers or letters.

For special terms to subscribers until January 1, 1893, see advertisement in another place—\$1.00 to everybody.

Yesterday's Election.
 St. John's election is generally conceded, but by a small majority. The Legislature will be largely Republican. The country generally went Democratic, and that party will have control of the next House at Washington. Butler is elected Governor of Massachusetts. New York and Pennsylvania largely Democratic, but Indiana is believed to be Republican. Returns indefinite this morning.

New Advertisements.
 The following advertisements appear in the FARMER the first time this week:
 Reporter wanted; Mason & Hamlin, Organs; Shot Gun and Rifle; Pensions; Daniel F. Beatty, Organs, etc.; Kansas City Stock Yards; Labels for Stock; Feed Grinder; Ran off from home; Patents; Merinos for Sale.

Gardens that have hard, heavy soils may be improved by deep tillage and profuse manuring.

Students at the Kansas Agricultural College now number about 300, and 75 per cent. of them are sons of our Kansas farmers.

Russia is the only country in the world having more horses than the United States, that nation having 20 million, while we have 10,500,000.

Every farmer that plows his ground this F will be y that much ahead in the Spring, but his ground will be cleaner and in better condition every way.

If a hard, dry clod be placed in loose, damp soil, it will absorb but little of the surrounding moisture; but if the clod had been pulverized and the loose earth it made put into the same place the clod was, it would soon have become as damp as the earth around it.

The Northwestern Kansas Wool Growers' Association met at Oberlin to perfect its organization. We hope our friends out there will keep the FARMER readers posted on what they are doing. Messrs. Cavanaugh, Martin and Colby are included in this suggestion.

An experiment: Oak boxes of one cubic foot capacity were made of half-inch stuff, and thoroughly soaked with oil. The bottoms being removed, the frame was forced down into the earth in the corn field, and the bottoms afterwards put in position. We thus had a foot cube of soil in its natural position. The surface of the earth in one box was left undisturbed, while the surface of two boxes were kept cultivated. Result: The cultivated soil retained moisture better than the uncultivated in the proportion of 4,243 to 1,060.

The Western Rural gives the following directions for keeping sweet potatoes: The potatoes should be dug as soon as frost comes, care being taken not to cut the tubers, as the least wound will result in speedy decay. After digging, let them dry in the sun for a short time, and then spread them in a dry room. After a week or two, pack them in barrels, in dry sand, and set them in a warm dry place. It is not an easy thing to keep sweet potatoes in their perfection in our Northern climate, but the above is a simple way and as effective as any.

Prof Snow, in his weather report for October says: This fine month was free from great meteorological extremes, although both temperature and rain fell over the average. There were several white frosts in the second half of the month, but the temperature of the air above the ground did not once reach a freezing point. The weather was highly favorable for the growth of late potatoes and for the winter wheat. The mean temperature for the month was 58.54, a little higher than the average for October. Rain fall was 3.08 inches, a trifle above the average.

Of establishments for the manufacture of agricultural implements in the United States in 1880, there were 1,942, employing a capital of \$62,315,066 paying annually in wages \$15,499,114, and using \$92,094,107 worth of material, of which iron and steel constitute more than one-half. During that year the number of persons employed was 49,180, and the aggregate value of the implements manufactured was \$68,373,086. In 1880 the total product amounted to only \$6,842,611, and in 1890 to \$17,487,000. In thirty years therefore, the extent of this industry has been increased almost exactly ten-fold.

Thoughts on Railroad Legislation.

Now, that the election is past, and every man elected to the state and national legislature is solemnly pledged to railroad legislation, it is time to begin thinking what ought to be done and how to do it, and we might as well commence by taking an observation of the subject we propose to operate on.

The aggregate length of all the railroads—main lines, in the United States is upwards of one hundred thousand miles. If put into one continuous line it would extend more than four times around the earth at the equator. We have railway lines running from Bangor in Maine to Portland in Oregon; from St. Paul in Minnesota to Mobile in Alabama. The states of our Union are literally bound together by iron and steel cords. Our great rivers are bridged, our mountains are tunneled, our plains are grid-ironed; the iron rail lies in nearly every county in the United States. Kansas beef is slaughtered in Chicago and eaten in Boston—run over the rail in two days. Some single miles of this vast system of roads have cost half a million dollars each. The average cost per mile is estimated to be about \$60,000, making for the whole an investment of upwards of six thousand million dollars, twice as much as the great war cost us. The value of freight carried over these roads in 1881 is estimated to be about twelve thousand millions of dollars, a sum equal to the worth of all the farms in the country at \$30 an acre. The number of persons engaged in carrying on this immense trade is about a million and a quarter, and they received as wages for the year about \$450,000,000. The gross earnings of the roads for the year is put at upwards of \$725,000,000. These figures do not include the nearly half a million men now at work building new roads, nor the wages they are receiving. This great system of railways, though originally divided among several hundred different companies, is now practically under control of a dozen men or less. We now have the Gould system, the Vanderbilt system, &c., having reference to thousands of miles of operated railroads controlled by bodies of men that are ruled by these two railway kings. These railway lines have become so general and are so universally used that every city, town and village in the country and every person living in them, as well as every farmer, mechanic, laborer and merchant, are more or less interested in them; and they have grown so powerful that their influence is felt in our popular elections, in our legislatures and courts.

At the threshold, then, are we confronted with the most powerful organization on earth, stronger than General Grant's army that subdued eight millions of resolute people. This organization has brains and money, and its avenues of influence are ramified, reaching out into all parts of the country. With such a subject, with such men and such influences to deal with, it detracts nothing from the honor or capacity of any man to admit that to make successful headway in railway legislation, a great deal of hard, earnest work must be done.

The first thing we have to do is to coolly lay aside every prejudice we may entertain against the railroads and regard them in the same light precisely that we do any other great agency in civilization—creatures of the law, and therefore subject to the law. The people must rule, and they ought to so rule that even-handed justice shall be meted out to every individual interest and person.

The farm lies at the base of all prosperity. Farmers are the foundation workers. Railroads are only helpers. Farmers sell their wheat, corn, beef, pork, hay, cotton, tobacco, rice, sugar, hemp, flax—everything they raise, by weight or measure. Their rules are uniform. They must always give full measure and weight, and those standards do not vary. Millers, ferrymen, inn-keepers, and every other person who is continually working for the public for pay, are subjected to certain rates of toll, and those rates are made to be uniform. Carriers, from time immemorial, have been held to the same law in every court that ever tried a case involving that question.

The next thing we have to do is, to ascertain the value of services performed by railroad men. The principle of compensation is quantum meruit—how much is the service reasonably worth. To ascertain that we follow two lines of thought which are not similar and must therefore in some practical way be harmonized. One of those lines touches the cost of building and equipping any particular railroad; the other touches the aggregate cost of a system of railways. Equally important with these is the amount of business done by them. On this branch of the subject there will be less difficulty than in the matter of discriminations, for the American people are liberal as well as just.

Touching discriminations, our work must be thorough. Let it be the written law that railroads are lines of travel and traffic authorized by the people for their own benefit, and that all that railroad men are to get out of the business is a fair compensation for the labor they perform; and that that compensation must come from equal and uniform charges made upon all the people who use the road. Make it an offense to charge one person less or more than another person for equivalent service, and this to include all kinds of service, whether passenger, express or common freight. Prohibit all pooling and other combinations which injuriously affect any particular locality, community or individual.

This is an important subject and needs the best judgment of our best men. We need only courage, honesty and perseverance; and we must not be discouraged if we do not find our first efforts to be quite satisfactory to ourselves. Let us make the law plain and then make its enforcement a part of the government's duty, so that individual sufferers will have the combined power of the people to aid them. This is itself will aid wonderfully in causing Justice to pick up her lazy feet.

Sugar from Sorghum Cane.

Twenty-one years ago last month, in southwest Missouri, the writer of this and his wife made up from Chinese sugar cane some of the best syrup we ever saw before or since. The next spring we had a nice lot of sugar in the bottom of one of the barrels. That experience taught us that sugar could be made from the cane, but our lack of experience was in the way of immediate success. We used lime water moderately then, and have often since observed that without the use of lime good syrup has rarely been produced. Experts have been experimenting some years on this subject, and the general judgment appears to be that in order to produce good syrup or sugar the use of lime is necessary. The only serious question now is what shall be the proper quantity, and in what way applied.

In this connection it will be interesting to note the success recently attained at Champaign, Illinois, in the production of sugar, and we can do that no better than to let Col. Colman, of the Rural World, tell it. He says, in his paper of October 26:

The problem whether sugar can be made from sorghum remuneratively has been solved. It is no longer a debatable question. The Champaign, Ill., Sugar works answers the question every day, every hour. They turn out batch after batch of sugar from sorghum with precisely the same certainty that the Southern planter does from the ribbon cane. If any one is at all skeptical in regard to this statement, he has only to visit Champaign, Ill., to have that skepticism removed. He will see some thirty barrels of nice sugar turned out daily, fully equal to the New Orleans, selling by the barrel at the sugar works at 83 cents per pound. There is no sorghum flavor nor gummy character about the sugar. It will sell in any market with the New Orleans sugar, bringing the same price and giving the same satisfaction.

And all this success has been obtained in the most unfavorable season that we have had for cane for many years. Indeed, so unpropitious was the season, that Professors Weber and Scovell did not expect to make sugar at all, and told the stock-holders of the company so. They knew they could make syrup, but the juice fell so much below that of last year in sucrose that they had no expectation of obtaining sugar in paying quantities.

The first batch that was made, the stock-holders were present and wore long faces. It was at night, and there was but little expectation of any sugar being made. The result was awaited with great anxiety. At length the test came, and to the astonishment of all, out came the crystallized fluid even before cooling. There was then a regular jubilee. Columbus, when he discovered America, could not have been happier. Here was a new work, costing twenty-five thousand dollars, that had not been erected without considerable difficulty. It was an experiment to settle the question whether sugar could be made in the North as well as in the South, in such quantity as to make it pay. The season had been exceedingly unpropitious for the growth of cane. The latitude was northern Illinois, and the planting was on the level prairie. The spring had been very cold and wet, and seed lay in the ground a month or more without germinating. Seed planted on the 23d of June matured its cane as early as that planted a month or six weeks before. The rainfall throughout the three summer months in the vicinity of Champaign was 18 inches, while in usual seasons it has not been half that, and the S rgo crop needs but little rain, and revels in drouth. The mean temperature during these same months was six to eight degrees lower than usual, while hot weather is needed to develop the greatest amount of saccharine. And yet, notwithstanding all these unfavorable circumstances, on the very first trial, before the seed was fairly ripe, the company were in possession of several thousand pounds of most excellent sugar, and from that time to this there has not been a single failure in obtaining sugar, at least forty per cent. of the entire amount of syrup crystallizing, and the balance of course making a number one article of molasses, commanding fully the prices of the New Orleans commodity.

Hearing from so many reliable sources of the success obtained at Champaign, we visited the works last week, and found all the statements that had been made fully confirmed. Indeed, we did not expect to find the absolute and positive certainty in obtaining sugar from the juice, that we did. The miller is no surer to obtain flour when he grinds his wheat, than this establishment is to obtain sugar whenever the juice is reduced. They know to a certainty just how many barrels of sugar they will obtain daily, by running their mill ten hours per day—now some thirty barrels—and the same mill could turn out about treble the quantity, if run night and day, by using more steam power. In a more favorable season for cane, the percentage of sugar will doubtless be increased twenty-five, or more, per cent. But as it is, the profits are entirely satisfactory, and greater than can be obtained in almost any other business.

But many will want to know how sugar is obtained with so much certainty. The whole process is simple as can be. In the first place the acid in the juice is neutralized by lime, as practiced by most syrup makers—the litmus paper being used as a test. This is done in the cold juice in the defecator, which consists of tanks, just before bringing the juice to a boil and thoroughly skimming. No defecation at any other stage. The juice is now drawn off through pipes to the evaporator, where it is re-

duced to a semi-syrup, then filtered through bone-black, then pumped into the vacuum-pan, where it is reduced to sugar, and when cooled swung out through the centrifugal. That is all there is of it. The most particular point is in using the lime properly, so as to neutralize the acid. This part needs close attention. No solutions, powders or chemicals of any kind are used.

Of course the vacuum pan plays a very important part, as the syrup is boiled at a lower temperature. There is no caramelizing, no inverting from to grape sugar, and all the crystallizable sugar is preserved. The most incredulous, by visiting this establishment, will become convinced that sugar is not only made, but made with such certainty and in such quantity as to pay. And there has not been a single failure—not a single trial, when the same results have not been obtained.

This experiment at Champaign, under the guidance of Professors Weber and Scovell, is worth millions to the country. It has demonstrated what can be done everywhere. It has proved that there is abundant crystallizable sugar in Northern cane, after becoming ripe, the whole fall, unless injured by freezing, and in the most unfavorable season for the development of sugar in cane that one could expect. There need be no longer any fears of embarking in the business. It is as safe, reliable and certain as any other business, and we believe more remunerative, for the seed raised on an acre of cane is nearly equal in value for feeding purposes for all kinds of stock as corn raised on the same amount of land. The value of the seed will pay for raising the cane and delivering it at the mill, if near at hand, so there is no cost in production, as with the sugar beet or the ribbon cane, neither having any value whatever except for making sugar. We have repeatedly stated in our public addresses that this country would yet be an exporting sugar country, and what we have seen at Champaign more fully confirms us in these views.

This industry will be of great national advantage. It will make our own sugar and keep our money at home, instead of sending it abroad to the amount of about one hundred millions annually. Our farmers are running too much to wheat. There is a need of some other crop to occupy their attention, the product of which can be shipped abroad, and sugar will be that product. It is not an exhaustive crop on land like wheat, but draws its sustenance largely from the atmosphere—the ash portion of its constituents being exceedingly light. It puts the soil in excellent condition for other crops, and, if fertilizers are to be used at all on the farm, they can on no other crop be used to so great advantage, especially the phosphates, as they not only largely increase the yield of cane, but hasten its early maturity wonderfully, and yet consume but little, leaving it in the soil for other crops.

Perhaps we have written at greater length than was advisable, but our readers will pardon us for a little exuberance of feeling over this most gratifying result at Champaign. It has only confirmed what the Rural World has all along claimed, and as this journal has been the only one in the world to dignify this industry with a special department, we must be allowed to tell our readers all about the success achieved, and how happy it makes us to chronicle the fact that the problem is solved—sugar henceforth and forever from the Northern cane is as much a certainty as from the ribbon cane of the South.

An Iowa farmer has invented a novel kind of fence. He says—I take a barbed wire, fasten it to the lower rail of my fence, I then follow a row of corn, put the wire the proper distance from the ground in the middle of the hill of corn, I then cross the cornstalks and put in another barbed wire and so on, to any height you wish your fence. I tried three wires for hogs and found that it answered the purpose. My hogs weighed from one hundred and thirty to three hundred pounds. I use the row of corn next to my fence for braces. The braces must be on the opposite side of the fence from the part you wish to pasture. One row of corn next to the fence on the side pastured should be cut or broken down to prevent being thrown on the fence. The two rows of corn used for the posts must have the ears of corn taken off, and the corn stalks cut off the height you wish your fence, about two feet high for hogs, and about four feet high for cattle and horses. I do not fasten any of the barbed wires except the upper wire of fence and braces. I fasten with a light annealed wire cut flaring, so as to be pointed. I take it around the upper wire of fence and braces, and twist it on the side on which I pasture the hogs. It acts as a protection to the fence. I have tested my fence thoroughly with cattle, horses and hogs.

Ohio Poland China Record.

We are in receipt of Vol. 4 of the Ohio Poland China Record containing 1791 pedigrees, and we observe that the first herd mentioned in the book is that of our neighbor, Chas. A. Allen, of Maubattan. This volume contains 386 pedigrees more than volume 3, yet they occupy but little more space because of the better arrangement of matter in the last volume. The frontispiece shows illustrations of different breeds of hogs represented either direct or indirect in the Poland Chinas. They are taken from cuts of the early days. But the Secretary says he is sorry he could not find an illustration of the Irish Grazer. The 5th volume will be begun soon, and it is announced that after that volume is published, the Association will not record any animal whose ancestors are not recorded in some one of the first five volumes. The Secretary, W. H. Todhunter, Middletown, Ohio, has our thanks for the book.

Inquiries Answered.

What do you know of the Bermuda grass? Is there any in Kansas and if so, does it do well and is it profitable? Also, where can it be had and what is the probable cost?

—Bermuda grass is grown in the far south. We know nothing about it except what we see in southern papers, and from that information we would not advise Kansas farmers to spend any money on it.

To W. E. Campbell: Twenty-five pounds of Alfalfa seed are given by experienced farmers as about the proper quantity per acre. Of Mammoth red clover we know nothing, but would suppose its seed should equal in quantity that of the common red clover, and that, in Kansas ought to be about 5 quarts per acre. We used to sow a bushel to eight acres, but think the quantity ought to be increased on our Kansas prairie soils. The best time to sow clover seed, if on wheat or winter rye, is on the last snow of the season. In any case sow early as you sow oats. We would never sow clover on oats. It does better on winter rye than with any other crop. But it does well, usually, on winter wheat. We would never sow clover seed on ground that has nothing else growing on it; and if we could do it, we would always sow on rye. It needs a little shade and protection for a time, but not much. Rye is the best, wheat next. We have raised fair clover for pasture by sowing seed on corn ground just after the last working, but the ground must be very clean for that. Alfalfa seed ought to be sown in spring as soon as the ground is in good condition to work.

To County Clerks.

We cordially invite the hearty co-operation of every County Clerk, from now until January, at least, in swelling the list of subscribers to the KANSAS FARMER. No one is more able to help us than you, on account of an extensive acquaintance among the farmers and because of the stray list. The money for subscriptions can be remitted with money for strays, or once a month at the farthest. An effort on the part of every Clerk will add several thousand to our present list, besides giving a paper to the farmers well worth many times its small subscription price. The FARMER is to be enlarged to a 16-page paper on the first of January next, and at that time will be still further improved. Until January it costs but \$1.00 per year; after that time it will continue at the old price—\$1.50.

Let every Clerk who is interested in building up the agricultural interests of Kansas, see to it that every farmer of his acquaintance has an opportunity to try the FARMER at least one year.

Stock Gossip.

J. M. Mercer, Wakarusa, Kas., Short-horn breeder, whose herd of thoroughbred numbers 75, lately purchased a 7 months bull calf weighing 750 pounds which won the sweepstakes at Council Bluffs and also at Lincoln, Neb. Kansas is the proper place for prize Short-horns.

L. Leonard, Reno Co., Mo., has joined the Polled Angus men and is now enroute with a large herd and sends a special to the Price Current, Kansas City, that he is coming via Quebec with 150 Polled Scotch cattle.

We are in receipt of the private herd catalogue of Sam Bennett, Safford, Chase Co. His herd is admirably suited to the wants of every farmer.

Thomas Lahey, Sterling, Kansas, offers 700 good grade feeding wethers for sale cheap. See his advertisement in this week's paper.

The sale of Short-horns by Harper & Ficklin takes place on the State Fair grounds, Topeka, to-morrow, November 9.

A lady, Mary A. Huggins, of Dickinson county, as we saw some weeks ago in the Abilene Chronicle, received a few silk worm eggs last May and by June 23, the worms hatched from them "had accomplished their work, done feeding and spinning and the moths had laid eggs." She sent samples of her cocoons and floss silk to Philadelphia where they were pronounced good. She says: I did not find the labor arduous or unpleasant as many had thought it would be, but a great, real pleasure, yet they require care in order to keep them healthy. If we have good, healthy eggs, the worms fed regularly and plentifully, fresh air, plenty of room, uniform temperature and cleanliness, I am thoroughly convinced that the rearing of silk worms is a successful and a profitable industry.

The annual meeting of the Kansas Academy of Science for 1892 will be held at Topeka, November 16th, 17th and 18th. The business meeting will be held at 3 p. m., on Thursday, November 16th, at the office of Dr. A. H. Thompson. On Thursday and Friday evenings, popular lectures may be expected at places to be announced. The regular meetings for reading and discussion of papers will be held, as usual in the Senate chamber. Papers to be read should be handed in, at least by title, before the first day of meeting, in order that they may be duly placed on the programme. J. T. LOVELL, President. E. A. POPEHOE, Secretary.

Sheep for Sale.

High Grade Breeding Ewes, perfectly sound and healthy. **Thoroughbred Merino Rams** of the best blood and breeding in this country. A large pair of our own breeding from 1 to 4 years old. Warranted sound and healthy. BASTIEN & CO., Topeka, Kas. "Capital View Sheep Farm."

About The Busy Bee.

Some Bee Experience.

We extract the following from an article in the Bee Keepers Magazine:

It is honey we are after and not stingless bees. But I will say here that I have had no trouble in handling my Cyprians, and I do not think any one need have if they will follow the directions of Mr. Benton; but all who persist in handling them as they do their Italians, will find themselves in trouble. Taking it for granted that the new races are superior in many respects, it will still be long before they will come into general favor with the beekeepers of America who are prejudiced, and justly so, in favor of the Italians. We all remember the opposition which the Italians encountered upon their first arrival in this country and for many years after, when they were only brought into competition with an inferior race of blacks. How much more opposition, then, must the new races encounter, in being brought into rivalry with the popular and time tried Italians.

With the Holy-Land bees I have had more experience, and so far I have found them to be all that they are recommended to be. They are certainly the most prolific bees I ever had, even going ahead of my Italians, which are a remarkable strain in this respect. They are also very late breeders, several of my colonies had four and five frames of brood on the first of last November, when my Italians had all stopped breeding and their brood had hatched out. Indeed, in the absence of any evidence to the contrary, I do not know but two of my Holy-Land colonies bred all winter, they took so much water in the cellar and came out in spring with the hives so crowded full of bees, many of which appeared to be young ones. The hives were well filled with brood when placed upon their summer stands, and they were as strong and far advanced as Italian colonies usually are by the middle of May.

Another remarkable point about these bees is, that they are more judicious about going out in unseasonable weather in spring, so that there is not that liability to dwindle that is noticeable with the Italians and blacks. Beekeepers who are troubled with getting their bees safely through our cold springs, must consider this quality decided in their favor. I have found them to fly further in search of stores than the Italians, and they either fly more swift or load up quicker, you will see that they have the advantage in either case.

I am now experimenting with some crosses between the Cyprians and Italians, Holy-Land bees and Italians, and the Cyprians and Holy-Land bees, and in due time I will report what success I have. I am allowing no drones to hatch, so they cannot mix with the pure varieties. I have taken great pains in selecting the stock to cross, each variety having the following good qualities predominating: In the Italians, gentleness, hardiness and industry. In the Cyprians, prolificness and judiciousness in going out in bad weather. In the Holy-Land bees, prolificness, industry, hardiness and beauty.

Eastern Carpets.

It is not easy for a European who has never been in the East to realize what an important position the carpet fills there. To an Arab his rug is his most treasured possession. Without one he is a pauper. It is necessary to his devotions, it is often his bed, sometimes his saddle, and generally the only decoration of his tent. This has been the case for centuries and over a vast extent of territory. . . . The prices given in ancient times would now be thought extravagant even by the collector, who will offer thousands of pounds for a Meissonier who will offer a million of money is said to have been paid by the Prophet's tomb, and though the greater portion of this sum represented the jewels interwoven, still about £30,000 remained as the value of the ground work. Major Euan Smith mentions that he saw at Kerman a carpet being made for the shrine of Mashad which was to cost at the rate of £7 the square yard. It was eleven yards long by 2 1/2 broad, and would take two years to make. This means a still larger price when labor becomes more valuable, which it must do even in eastern countries. Then, too, modern chemistry has done its best to ruin the colors, and dyes are not proof against the temptation of the cheapness of aniline as a substitute for the more expensive but lasting pigments. Mr. Vincent Robinson tells us that kermes, the best red ever discovered, was in the Middle Ages in general use all over Europe. It was known to the Greeks and Romans, the Turks, Cossoaks and Armenians. Venetian red was made from it and the Spaniards paid tribute to Rome with its grains. The serfs in Germany were bound annually to deliver a certain quantity to the convents. Heliot speaks of it in old Flemish tapes tries as having lasted 200 years without fading. We hear that Mr. William Morris has determined to revive this valuable dye, for there is no red known in modern times that can supplant it for lasting qualities. Whether it can be procured at a price which is likely to bring it into general use, remains a question yet to be solved.

Sir George Birdwood thinks that in India the decay both in the quality and the design of carpets has been greatly owing to the competition between the Government mills and the native weavers. It is only from provinces far away from European influence that anything worth buying can now be had. He hopes much from the revival of taste in England, and thinks that with more universal culture we shall come to reject the pretentious and worthless manufactures now flooding the market.—The Saturday Review.

Hinsdale Patent 5-Shot Breech-Loading Shotgun and Rifle combined is the greatest invention of this century to the sporting community. The gun is first-class in every respect, accurate and effective at long and short distance, the perfection of workmanship, and the greatest bargain offered. Messrs. E. J. Hinsdale & Co. guarantee the gun, and will do all they say in their advertisement, which will be found in another column.

Only one dollar a year for the KANSAS FARMER, until December 31.

Guenon on Milk Cows.

Mr. Thomas J. Hand, Secretary American Jersey Cattle Club, has translated into English the latest work of Guenon, the famous Frenchman who discovered and published the Guenon System. The book contains 131 pages and is published by Orange Judd Company, 751 Broadway, N. Y. It can be had of T. J. Kellam & Co., Topeka, Kas. Price \$1.00. To those of our readers who do not know what the Guenon System is, we will state that it is based on the *Esculechon*; that is, the form, size, and peculiar characteristics of that part of the cow extending from the udder to within a few inches of the root of the tail, and on which the hair lies in a direction unlike that of other parts of the body. This is what the publishers say of the book:

More than thirty years have passed since "Guenon's system" was published. The original work was translated, and one or more other works were written to illustrate "Guenon's system." This translation is from the last work issued by the author before his death, and, of course, embodies Guenon's very latest views, and such changes in and additions to the early treatise as his experience taught him were needed. Having had frequent occasion to compare this translation with the original, we can testify to its fidelity, and, so far as the language allows, literal exactness. The many illustrations being reproduced by photography, the volume is the most complete presentation of Guenon's treatise to be found in the language.

The President of the United States registered as a voter in New York city the other night. He drove to the registration office in a coupe. While a man in his shirt-sleeves was having his name enrolled, the President took his place behind him. He leaned against the counter while waiting his turn and spoke to one or two friends who were present. He was in full evening dress. Who will presume to say that this isn't a republic of the people, where the chief executive takes his turn the same as any other man?

A most interesting experiment in heliography, or signalling by sunshine, was successfully made in Egypt during the recent campaign. Col. Keyser ascended one of the pyramids near Cairo and by means of a heliographic mirror reflected a ray of sunlight to Alexandria, one hundred and twenty miles away. At that great distance the signals, appearing like pin-points of brightness, were easily ascertained to be a message from Sir Garnet Wolseley to the Khedive.

L. M. Devore advertises a Feed Grinder in this week's FARMER. Look it up; may be you need just that thing.

Remember This.

If you are sick Hop Bitters will surely aid Nature in making you well when all else fails.

If you are constive or dyspeptic, or are suffering from any other of the numerous diseases of the stomach or bowels, it is your own fault if you remain ill, for Hop Bitters are a sovereign remedy in all such complaints.

If you are wasting away with any form of Kidney disease, stop tampering Death this moment, and turn for a cure to Hop Bitters.

If you are sick with that terrible sickness Nervousness, you will find a "Balm in Gilead" in the use of Hop Bitters. If you are a frequenter, or a resident of a miasmatic district, barricade your system against the scourge of all countries—malaria, epidemic, bilious and intermittent fevers—by the use of Hop Bitters.

If you have rough, pimply, or scabby skin, bad breath, pains and aches, and feel miserable generally, Hop Bitters will give you fair skin, rich blood, and sweetest breath, health and comfort.

In short they cure all Diseases of the Stomach, Bowels, Blood, Liver, Nerves, Kidneys, Brights Disease. \$500 will be paid for a case they will not cure or help.

That poor, bedridden, invalid wife, sister, mother or daughter, can be made the picture of health by a few bottles of Hop Bitters, costing but a trifle. Will you let them suffer?

RAN OFF FROM HIS HOME.

Ran off from his home, near Carlyle, Allen Co., Kas., Oct. 27th, 1882. J. H. Funston, 15 years old, heavy built, fair complexion, blue eyes, hair cut short, wearing velvet cap, dark pants, grayish sack coat, watch with brass chain. Rode from his father's stable a chestnut sorrel or brown horse about 15 1/2 hands high, 6 years old, slim built, light breasted. Information regarding either boy or horse, will be paid for. Boy will not be punished. Individuals please post this. Papers copy. E. H. FUNSTON.

Sheep for Sale.

700 good grade Feeding WETHERS for sale. If sold at once will sell cheap. Address THOS. LALLEY, Sterling, Kas.

WANTED—300 young ewes, graded coarse wool preferred. Address O H CALL, Topeka, Kas., stating price and grade.

NEW BOOT and SHOE STORE.

We are prepared to meet the wants of the community with The Largest Assortment of BOOTS, SHOES and RUBBER GOODS

Ever Opened West of the Missouri River.

We Make Our Prices Low and Sell Goods for CASH ONLY.

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Farmers Read This.

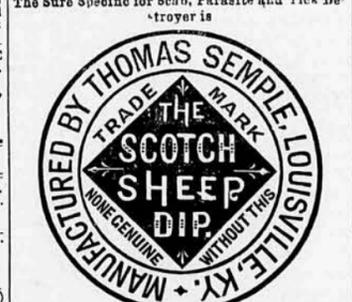
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Value of the Rye Plant.

Successful farming depends much on the selection of the plants to cultivate, as well as on enriching the soil, and good cultivation. Plants, the chief merits of which may consist in filling vacancies between successive crops, may prove valuable aids. As an illustration we may cite the sowing of winter rye after the removal of crops in autumn, for early feed in spring, which will not interfere with subsequent and other growth on the same ground. So far as experiments in this way have been tried, we have found them quite successful. Last autumn rye was sown after the removal of a crop of potatoes. The land was in fair condition, having been moderately manured in previous years, and it was not cumbered with weeds. It was not plowed, but made mellow by passing the Acme harrow twice over its surface. The rye was sown by hand, at the rate of between three and four bushels per acre, and covered with the same harrow. The whole cost per acre, including the seed, sowing, and three harrowings, was slightly less than five dollars. The crop was a dense mass of green before winter, and it grew rapidly in spring, was in full head before the end of May, and was cut for green feed and for hay before the grain had fairly formed. Three separate portions were measured and weighed, in different parts of the field, which appeared to be a fair average. They all gave, with slight variations, twelve tons of green fodder per acre. A portion, after thorough drying for some weeks, was found to have lost about sixty per cent. of water, but it was quite dry enough for hay when it had lost half its weight. Six tons per acre was not a bad return, being less than one dollar a ton, not counting harvesting. Corn fodder was sown after it, in good time for autumn cutting. The interest on the land for the rye could not be reckoned as very large. Another portion of the rye stubble was left to sprout up again, which it did freely from the old roots, giving a smaller crop in time for a later sowing of corn fodder.

Another use to which rye may be applied, is in sowing among corn for fall feed. After the corn has attained full growth, or some time in August, sow two or three bushels broadcast among the corn. Then having muzzled the horse, to prevent eating the tops of the corn, give it a thorough cultivation. The seed will soon germinate, and by the time the corn is cut and drawn off according to the usual method figured and described on page 199 of vol. ix of Rural Affairs, a rich and heavy growth of green pasture will occupy the ground, and will last through that period of commonly dry pasture. It may be eaten down by horses and cattle, but will sprout up again and afford a good spring feed, or a copious green crop for plowing under.

If corn had been raised in an orchard (one of the best crops for cultivating among young or older trees,) a soft bed of herbage can be provided in the way just described for all dropping fruit or wind falls, which will prevent to a great extent the bringing of this fruit, and render it valuable for keeping for home use.

It is not a good crop for summer feed from spring sowing, as it will not make much growth some seasons, and is rather easily affected with dry weather but sown late in summer it will continue fresh and green through the autumn. It appears that a certain degree of actual freezing is required to cause it to form heads. Last winter we had a portion of a field sowed and harrowed during a thaw about the middle of February. It did not come up till early in spring, and was about two weeks later than the other rye; but the freezing of the sprouted grains in March was sufficient; and it formed heads four feet high, and gave a heavy crop of fodder.

Rye possesses much value as a crop with which clover and grass may be successfully seeded, on account of the small amount of shade which its leaves afford as it is approaching maturity, and for this reason grass rarely falls when sown with a crop of rye intended for ripening its grain.

Its advantages, when sown with corn, are, 1, its value to plow under, 2, its raised at little cost, 3, the fine sprouts which may be obtained from a fall sowing; 4, an excellent autumn feeding sown with maturing corn; 5, the certainty and cheapness of any of these crops; 6, its occupying the vacant time between the autumn harvesting of other crops and the sowing or planting of its successors late in spring or in early summer; and the success which usually attends the growth of grass sown with it when raised for the straw, grain or seed. These many uses recommend it as a valuable crop for the attention and use of farmers, without resorting to the manufacture of the grain for deleterious purposes.—Country Gentleman.

Clarifying Cane Juice.

We copy from Colman's Rural World, the following instructions for the use of clay in clarifying cane juice. It is a process simple in itself, but one that but few of our farmers understand. We hope it will help many of our readers to improve the quality of their syrup.

I see of late there are several inquiries in the Rural World of how to use clay as a clarifier, and as I have had fifteen years experience in using it, I will try to answer.

Clay is used either in the cold or hot juice either with or without lime. Add from half to one and a half bushels of dry, light clay, such as is used in making brick, to 100 gallons of cane juice, or enough so that when it settles it will be as clear as water. You must have a settling tank, some have two, so that you can wash one while using the other. The clay and juice must be mixed by agitation until every particle of dirt and the green matter attaches itself to the clay, and will sink to the bottom; draw off the clear juice, and evaporate as quickly as possible. If you have clarified the juice properly, you will have no skimming.

Concerning The Dairy.

About Creameries.

This is from the Journal of Agriculture, St. Louis:

The following which appeared, we believe in the Plainview paper last fall, will be read with interest by those who are and who intend to engage in the creamery business in this state. The article was written by Mr. J. R. Stillman, Monticello, Iowa, to his brother, Mr. R. C. Stillman, who, if we are not mistaken, is a resident of Plainview:

First—After a fair, patient trial of both methods, our creamery men are generally well satisfied that the best results are obtained when the milk is delivered at the creamery. But there are commands a higher price in the market.

Second—Our creamery men pay their patrons on the 15th of every month for the milk furnished the previous month.

Third—The price paid for milk is and must be variable. Our creameries are now paying 60 cents per hundred weight. In the winter season they have paid as high as \$1.25.

Fourth—The foreman of a creamery here gets \$40 per month, and ordinary laborers 1\$ per day.

Fifth—Ice is not needed for the milk if you have cold well water, but in order to keep your

butter in a No. 1 condition while getting ready for shipping, you need ice for a refrigerator to keep the butter in.

Sixth—For an ordinary sized creamery a good horse-power is sufficient and better (all things being considered), than an engine, although many of the creameries have the engine.

Seventh—Of the Fairlamb can I know but little. It was quite popular in some parts of Iowa two years ago, but it has never been used here, and many who have used it have given it up, I am informed.

Eighth—Our creamery here gets spruce tubs by the car load from Vermont, costing 10 cents per nest of three tubs that will hold 100 pounds of butter. The spruce tub is thought superior for Boston and Philadelphia markets, but the New York market wants the ash or oak tub.

Ninth—While you cannot be sure that your patrons will supply you with milk or cream regularly through all kinds of weather you can be sure that they will work for their own interests, and our farmers find that it pays better to take their milk to the creamery and bring home sour milk and butter-milk for their hogs than to attempt to make it up at home. I have never heard any word of complaint on that score. Our creamery men here in Monticello make about 2,000 pounds of butter every day, part of it being from creameries outside of Monticello that they contract.

They ship an immense amount of butter to Europe, being put up in two-pound cans, soldered airtight. I have sometimes thought that the creamery business might be overdone, but there is always a demand for a good first-class article, and creamery butter cannot be bought here to-day for less than twenty-five cents per pound. The farmers of our vicinity are making money rapidly from the sale of milk, and the creamery men seem to be getting rich also. For setting the milk deep tin pails are now used, 8 1/2 inches in diameter by 24 inches deep.

Deep Cans Make the Best Butter.

G. W. Farlee, in a late issue of the Country Gentleman says: I will have to take issue with my friend, R. Goodman, Jr., as to the best method of making choice butter. Mr. Goodman strongly depreciates the deep setting of milk, and is surprised that any one should recommend or adopt it. I have used the deep cans for five years, and have found their use most efficient in making a very superior quality of butter. My butter has come in competition with the celebrated Darlington (Philadelphia) butter, and never to my disadvantage. In fact I consider my butter much the superior, for the reason that while I have as careful and competent a dairy woman as can be found, my butter is made from milk of rich strains of Jersey cattle, while the Darlington herd consists of ordinary cows. I have now used the Cooley creamer for one year and we are satisfied that its principles cannot well be improved upon. The cream taken from the cans submerged in cold water is always of the same quality and condition. I know nothing about the practical operation of the Bureau creamer. It did not impress me favorably on casual inspection, and my criticism on it was that it would require too much ice and attention to preserve the proper temperature for raising all the cream in the milk; the glass doors in the side are liable to shrink or expand, and the casings of the bureau are not thick enough to form sufficient protection against the outside atmosphere. Then again, if the temperature by accident rises so high as to sour the cream, the air of the bureau is liable to be tainted and thus entail no end of trouble in securing purity of air; besides, I judge that it may be necessary to use heat in winter. I know one of the Braunon creamers requires it. The Cooley creamer is a refrigerator, and it is surprising to see how long the water remains cold after the milk is cooled and the ice disappears. I found a farmer in Connecticut this summer using a Cooley creamer without ice, and he said it worked admirably, but he had to change the water daily. We change the water once a week, and use in summer 50 to 100 pounds of ice daily in a creamer adapted to 20 to 30 cans. I do not know enough about the bureaus to advise one way or the other, but I do know the Cooley system will make the very best quality of butter. The butter made by it is possibly not quite so yellow as that made with shallow cans, but in quality would please the taste of the most fastidious.

Another use to which rye may be applied, is in sowing among corn for fall feed. After the corn has attained full growth, or some time in August, sow two or three bushels broadcast among the corn. Then having muzzled the horse, to prevent eating the tops of the corn, give it a thorough cultivation. The seed will soon germinate, and by the time the corn is cut and drawn off according to the usual method figured and described on page 199 of vol. ix of Rural Affairs, a rich and heavy growth of green pasture will occupy the ground, and will last through that period of commonly dry pasture. It may be eaten down by horses and cattle, but will sprout up again and afford a good spring feed, or a copious green crop for plowing under.

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Sixth—For an ordinary sized creamery a good horse-power is sufficient and better (all things being considered), than an engine, although many of the creameries have the engine.

Seventh—Of the Fairlamb can I know but little. It was quite popular in some parts of Iowa two years ago, but it has never been used here, and many who have used it have given it up, I am informed.

Eighth—Our creamery here gets spruce tubs by the car load from Vermont, costing 10 cents per nest of three tubs that will hold 100 pounds of butter. The spruce tub is thought superior for Boston and Philadelphia markets, but the New York market wants the ash or oak tub.

Ninth—While you cannot be sure that your patrons will supply you with milk or cream regularly through all kinds of weather you can be sure that they will work for their own interests, and our farmers find that it pays better to take their milk to the creamery and bring home sour milk and butter-milk for their hogs than to attempt to make it up at home. I have never heard any word of complaint on that score. Our creamery men here in Monticello make about 2,000 pounds of butter every day, part of it being from creameries outside of Monticello that they contract.

They ship an immense amount of butter to Europe, being put up in two-pound cans, soldered airtight. I have sometimes thought that the creamery business might be overdone, but there is always a demand for a good first-class article, and creamery butter cannot be bought here to-day for less than twenty-five cents per pound. The farmers of our vicinity are making money rapidly from the sale of milk, and the creamery men seem to be getting rich also. For setting the milk deep tin pails are now used, 8 1/2 inches in diameter by 24 inches deep.

Deep Cans Make the Best Butter.

G. W. Farlee, in a late issue of the Country Gentleman says: I will have to take issue with my friend, R. Goodman, Jr., as to the best method of making choice butter. Mr. Goodman strongly depreciates the deep setting of milk, and is surprised that any one should recommend or adopt it. I have used the deep cans for five years, and have found their use most efficient in making a very superior quality of butter. My butter has come in competition with the celebrated Darlington (Philadelphia) butter, and never to my disadvantage. In fact I consider my butter much the superior, for the reason that while I have as careful and competent a dairy woman as can be found, my butter is made from milk of rich strains of Jersey cattle, while the Darlington herd consists of ordinary cows. I have now used the Cooley creamer for one year and we are satisfied that its principles cannot well be improved upon. The cream taken from the cans submerged in cold water is always of the same quality and condition. I know nothing about the practical operation of the Bureau creamer. It did not impress me favorably on casual inspection, and my criticism on it was that it would require too much ice and attention to preserve the proper temperature for raising all the cream in the milk; the glass doors in the side are liable to shrink or expand, and the casings of the bureau are not thick enough to form sufficient protection against the outside atmosphere. Then again, if the temperature by accident rises so high as to sour the cream, the air of the bureau is liable to be tainted and thus entail no end of trouble in securing purity of air; besides, I judge that it may be necessary to use heat in winter. I know one of the Braunon creamers requires it. The Cooley creamer is a refrigerator, and it is surprising to see how long the water remains cold after the milk is cooled and the ice disappears. I found a farmer in Connecticut this summer using a Cooley creamer without ice, and he said it worked admirably, but he had to change the water daily. We change the water once a week, and use in summer 50 to 100 pounds of ice daily in a creamer adapted to 20 to 30 cans. I do not know enough about the bureaus to advise one way or the other, but I do know the Cooley system will make the very best quality of butter. The butter made by it is possibly not quite so yellow as that made with shallow cans, but in quality would please the taste of the most fastidious.

Another use to which rye may be applied, is in sowing among corn for fall feed. After the corn has attained full growth, or some time in August, sow two or three bushels broadcast among the corn. Then having muzzled the horse, to prevent eating the tops of the corn, give it a thorough cultivation. The seed will soon germinate, and by the time the corn is cut and drawn off according to the usual method figured and described on page 199 of vol. ix of Rural Affairs, a rich and heavy growth of green pasture will occupy the ground, and will last through that period of commonly dry pasture. It may be eaten down by horses and cattle, but will sprout up again and afford a good spring feed, or a copious green crop for plowing under.

If corn had been raised in an orchard (one of the best crops for cultivating among young or older trees,) a soft bed of herbage can be provided in the way just described for all dropping fruit or wind falls, which will prevent to a great extent the bringing of this fruit, and render it valuable for keeping for home use.

It is not a good crop for summer feed from spring sowing, as it will not make much growth some seasons, and is rather easily affected with dry weather but sown late in summer it will continue fresh and green through the autumn. It appears that a certain degree of actual freezing is required to cause it to form heads. Last winter we had a portion of a field sowed and harrowed during a thaw about the middle of February. It did not come up till early in spring, and was about two weeks later than the other rye; but the freezing of the sprouted grains in March was sufficient; and it formed heads four feet high, and gave a heavy crop of fodder.

Rye possesses much value as a crop with which clover and grass may be successfully seeded, on account of the small amount of shade which its leaves afford as it is approaching maturity, and for this reason grass rarely falls when sown with a crop of rye intended for ripening its grain.

Its advantages, when sown with corn, are, 1, its value to plow under, 2, its raised at little cost, 3, the fine sprouts which may be obtained from a fall sowing; 4, an excellent autumn feeding sown with maturing corn; 5, the certainty and cheapness of any of these crops; 6, its occupying the vacant time between the autumn harvesting of other crops and the sowing or planting of its successors late in spring or in early summer; and the success which usually attends the growth of grass sown with it when raised for the straw, grain or seed. These many uses recommend it as a valuable crop for the attention and use of farmers, without resorting to the manufacture of the grain for deleterious purposes.—Country Gentleman.

We copy from Colman's Rural World, the following instructions for the use of clay in clarifying cane juice. It is a process simple in itself, but one that but few of our farmers understand. We hope it will help many of our readers to improve the quality of their syrup.

I see of late there are several inquiries in the Rural World of how to use clay as a clarifier, and as I have had fifteen years experience in using it, I will try to answer.

Clay is used either in the cold or hot juice either with or without lime. Add from half to one and a half bushels of dry, light clay, such as is used in making brick, to 100 gallons of cane juice, or enough so that when it settles it will be as clear as water. You must have a settling tank, some have two, so that you can wash one while using the other. The clay and juice must be mixed by agitation until every particle of dirt and the green matter attaches itself to the clay, and will sink to the bottom; draw off the clear juice, and evaporate as quickly as possible. If you have clarified the juice properly, you will have no skimming.

Concerning The Dairy.

About Creameries.

This is from the Journal of Agriculture, St. Louis:

The following which appeared, we believe in the Plainview paper last fall, will be read with interest by those who are and who intend to engage in the creamery business in this state. The article was written by Mr. J. R. Stillman, Monticello, Iowa, to his brother, Mr. R. C. Stillman, who, if we are not mistaken, is a resident of Plainview:

First—After a fair, patient trial of both methods, our creamery men are generally well satisfied that the best results are obtained when the milk is delivered at the creamery. But there are commands a higher price in the market.

Second—Our creamery men pay their patrons on the 15th of every month for the milk furnished the previous month.

Third—The price paid for milk is and must be variable. Our creameries are now paying 60 cents per hundred weight. In the winter season they have paid as high as \$1.25.

Fourth—The foreman of a creamery here gets \$40 per month, and ordinary laborers 1\$ per day.

Fifth—Ice is not needed for the milk if you have cold well water, but in order to keep your

The Secret

of the universal success of Brown's Iron Bitters is simply this: It is the best Iron preparation ever made; is compounded on thoroughly scientific, chemical and medicinal principles, and does just what is claimed for it—no more and no less.

By thorough and rapid assimilation with the blood, it reaches every part of the system, healing, purifying and strengthening. Commencing at the foundation it builds up and restores lost health—in no other way can lasting benefit be obtained.

77 Dearborn Ave., Chicago, Nov. 7. I have been a great sufferer from a very weak stomach, heartburn, and dyspepsia in its worst form. Nearly everything I ate gave me distress, and I could eat but little. I have tried every thing recommended, have taken the prescriptions of a dozen physicians, but got no relief until I took Brown's Iron Bitters. I feel now as a new man. I am getting much stronger, and feel first-rate. I am a railroad engineer, and now make my trips regularly. I can not say too much in praise of your wonderful medicine. D. C. MACK.

BROWN'S IRON BITTERS does not contain whiskey or alcohol, and will not blacken the teeth, or cause headache and constipation. It will cure dyspepsia, indigestion, heartburn, sleeplessness, dizziness, nervous debility, weakness, &c.

Use only Brown's Iron Bitters made by Brown Chemical Co., Baltimore. Crossed red lines and trade-mark on wrapper.

KIDNEY WORT IS A SURE CURE for all diseases of the Kidneys and LIVER. It has specific action on this most important organ, enabling it to throw off torpidity and inaction, stimulating the healthy secretion of the bile, and by keeping the bowels in free condition, effecting its regular discharge. Malaria. If you are suffering from malaria, have the chills, are bilious, dyspeptic, or constipated, Kidney-Wort will surely relieve and quickly cure. In the Spring to cleanse the System, every one should take a thorough course of it. SOLD BY DRUGGISTS. Price 51.

GONQUEROR OF ALL KIDNEY DISEASES. HUNT'S REMEDY. THE BEST KIDNEY AND LIVER MEDICINE NEVER KNOWN TO FAIL. I had suffered twenty years with severe disease of the kidneys, before using Hunt's Remedy for two days I was relieved, and am now well. JOSHUA TUTHILL. My physician thought that I was paralyzed on one side. I was terribly afflicted with rheumatism from 1869 to 1889. I was cured by Hunt's Remedy. STEPHEN G. MASON. My doctor pronounced my case Bright's Disease and told me that I could live only forty-eight hours. I then took Hunt's Remedy, and was speedily cured. M. GOODSPED. Having suffered twenty years with kidney disease, and employed various physicians without being relieved, I was then cured by Hunt's Remedy. SULLIVAN FENNER. I have been greatly benefited by the use of Hunt's Remedy. For diseases of the kidneys and urinary organs there is nothing superior. A. D. MICKELSON. I can testify to the virtue of Hunt's Remedy in kidney disease from actual trial, having been much benefited thereby. E. G. TAYLOR. I was unable to arise from bed from an attack of kidney disease. The doctor could not relieve me. I was finally completely cured by using Hunt's Remedy. I was usually completely cured by using Hunt's Remedy. FRANK R. DICKSON. I have suffered extremely with kidney disease; after using Hunt's Remedy two days, I was enabled to resume my business. GEO. CLARK. I sold in two years (3125) thirty three thousand one hundred and twenty bottles of Hunt's Remedy. It is a valuable medicine for kidney diseases. W. B. BLANDING. One trial will convince you. For sale by all Druggists. Send for Pamphlet.

HUNT'S REMEDY CO., PROVIDENCE, R. I. Prices 75 cents and \$1.25. FIVE-TON WAGON SCALES \$60 All Iron and Steel, Brass Ton Beam. Jones As pays the freight. All sizes equally low, for free book, address JONES OF BINGHAMTON, Binghamton, N. Y. GREAT WESTERN GUN WORKS, Pittsburg, Mo. Write for Large Illustrated Catalogue. Rifles, Shot Guns, Revolvers, sent e. o. d. for examination.

Pure Short-Horn Cattle.

Burgundy for Breeders or Buyers. Write me for any information, or stock. I am breeding the very best families with the noted "Duke of Sycamore" at the head of my herd. J. L. ASHBY, Plattsburg, Mo. NO MORE RHEUMATISM, or Gout, Acute or Chronic. SALICYLICA, SURE CURE. Manufactured by the European Medicine Co. of Paris and Leipzig.

Immediate Relief Warranted. Permanent Cure Guaranteed. Now exclusively used by all celebrated Physicians of Europe and America, becoming a Simple, Harmless and Reliable Remedy on both continents. The highest Medical Academy of Paris report 85 cures out of 100 cases within 3 days. Secret—The only dissolver of the poisonous Uric Acid which exists in the Blood of Rheumatic and Gouty Patients. \$1 a box; 5 boxes for \$5. Sent in any address, free by mail, on receipt of price. Indorsed by Physicians, Sold by all Druggists. Address DANIEL ROMMEL, Sole Importer, 58 Maiden Lane, New York.



AGENTS WANTED In every section of Kansas to sell the American Farmers' Pictorial Cyclopaedia of Live Stock and complete Stock Doctor, by Hon. Jonathan Perlem, Editor Prairie Farmer, etc., and A. H. Baker, V. S. Veterinary Editor American Field, etc., nearly 1500 pages and over 700 charts, lithographs and superb illustrations. Price only \$1. Positively the fastest selling book in this market. Exclusive territory and liberal terms. For full particulars address quick KANSAS CITY PUBLISHING CO., 100 W 9th, Kansas City, Mo.

USE LEIS' MANDILLON TONIC THE GREAT BLOOD & LIVER PURIFIER. A SURE CURE FOR Sick Headache, Dyspepsia, Langour, Nervous Exhaustion arising from overwork or excess of any kind, AND FOR Female Weaknesses. IT PREVENTS Malarial Poisoning and Fever and Ague, And is a Specific for Obstinate CONSTIPATION. PRICE \$1.00 PER BOTTLE; SIX FOR \$5.00. SOLD BY DRUGGISTS EVERYWHERE.

FITZ'S LEADING LONDON PHARMACEUTICAL ESTABLISHMENT. Office in New York for the Cure of EPILEPTIC FITS. Dr. Ab. Meserole (late of London), who makes a specialty of Epilepsy, has without doubt treated and cured more cases than any other living physician. His success has simply been that he has treated cases of over 20 years' standing successfully cured by him. He has published a work on this disease, which he sends with a large bottle of his wonderful cure free to any sufferer who may send his express Dr. O. Address: 251 Broadway, New York.

MUNN & CO. PATENTS. ESTABLISHED 1846. We continue to act as solicitors for patents, caveats, trade-marks, copyrights, etc., for the United States, and to obtain patents in Canada, England, France, Germany, and all other countries. Thirty-six years' practice. No charge for examination of models or drawings. Advice by mail free. Patents obtained through us are noticed in the SCIENTIFIC AMERICAN, which has the largest circulation, and is the most influential newspaper of its kind published in the world. The advantages of such a notice every patentee understands. This large and splendidly illustrated newspaper is published WEEKLY at \$3.50 a year, and is admitted to be the best paper devoted to science, mechanics, inventions, engineering works, and other departments of industrial progress, published in any country. Single copies by mail, 10 cents. Sold by all newsdealers. Address, Munn & Co., publishers of Scientific American, 261 Broadway, New York. Handbook about patents mailed free.

The National Dress Society of Great Britain offers a prize for the design of a female garment combining ease, elegance, comfort and health. "The divided skirt" has been condemned.

Dyspepsia, the bug-bear of epicureans, will be relieved by Brown's Iron Bitters.

Miss Calhoun, a young woman from South Carolina, and a grandniece of the statesman, has been studying in London for the past two years, and is shortly to appear on the stage.

To Consumptives. "Golden Medical Discovery" is a concentrated, potent alterative, or blood-cleansing remedy, that wins golden opinions from all who use it for any humor, from the common pimples, blotch or eruption, to the formidable scrofulous swelling, or ulcer. Internal fever, soreness and ulceration, yield to its benign influences. Consumption, which is but a scrofulous affection of the lungs, may, in its early stages, be cured by a free use of this God-given remedy. See article on consumption and its treatment in Part III of the World's Dispensary. Dime Series of pamphlets, costing two stamps, postpaid. Address World's Dispensary Medical Association, Buffalo, N. Y.

The competition of young girls for appointment in the English postal service is increasing. At an examination to test the qualifications of applicants a fortnight ago there were eight hundred candidates for thirty places. The salary is very small, beginning at only \$2.50 a week.

What's Saved is Gained.

Workmen will economize by employing Dr. Pierce's Medicines. His "Pleasant Purgative Pellets" and "Golden Medical Discovery" cleanse the blood and system thus preventing fevers and other serious diseases, and curing all scrofulous and other humors. Sold by druggists.

Fannie Cornan, fourteen years old, has rivaled the famous daughter of the light-house keeper, by the bold rescue of her drowning companion, Jessie Renton. The latter, eight years old, fell into Harlem river the other afternoon. There was a light tide and strong current, but Fannie sprang in without removing an article of her clothing and succeeded in bringing the child ashore.

Consumption.

Leif's Dandelion Tonic will not cure consumption when the disease is fully developed, but by improving the digestion, stimulating the functions to healthy action, restoring lost brain and nerve power, thus improving the general health, it will arrest that dread disease in its incipient. It is as nearly a cure for consumption as anything ever compounded.

Yassar College is said to be in a flourishing state this year. Over one hundred new students have already been received. These, together with the old students returning, swell the number in attendance to a figure not reached in any previous year since 1877. Additions are yet being made daily, and the indications are that the accommodations of the college may be severely taxed before the close of the academic year.

The Story of a Great Discovery.

There appeared not long since, in the Chicago Inter-Ocean, a remarkable article with the above title, occupying nearly five columns of that able journal. It describes very clearly and with great particularity the inception, development, and successful result of an effort by a thoroughly educated and intelligent American physician to discover an element or combination of elements in nature which would, without a resort to drug-medication, cure disease through a restoration of weakened or exhausted nerve and life forces to their normal condition. The scientific aspect of the discovery is so clearly explained in the article that both the learned and unlearned can see the basis of facts and legitimate deductions upon which to rest. Many of the practical results already obtained through the use of this new vitalizing substance, and in cases of the most desperate character where all remedies had failed and the most skillful physicians found themselves at fault, are given in the article, and its high value as a health restorer testified to by individuals well and honorably known throughout the country, who have in their own persons proved its wonderful healing power.

The paper referred to is written calmly, and presents the whole subject in a way to arrest attention and bring conviction to almost any one who can reason from known facts and natural laws, and weigh evidence with impartiality. In order to give the article a still wider circulation than it obtained through the source in which it first reached the public, it has been printed in a neat pamphlet and will be mailed by

DRS. STANLEY & PALEN, 1109 and 1111 Girard St., Philadelphia, Pa., to any one who will drop them a letter or postal card.

The Rural New Yorker, which has an experimental farm, says of wheat planting: "We have used all the way from four pounds to three bushels to the acre, and our best yields have come from one bushel and a half."

An Enthusiastic Endorsement.

GENTS—Whoever you are, I don't know; but I thank the Lord and feel grateful to you to know that in this world of adulterated medicines there is one compound that proves and does all it advertises to do, and more. Four years ago I had a slight shock of palsy, which unnerved me to such an extent that the least excitement would make me shake like the ague. Last May I was induced to try Hop Bitters. I used one bottle, but did not see any change; another did so change my nerves that they are now as steady as any ever were. It used to take both hands to write, but now my good right hand writes this. Now, if you continue to manufacture as honest and good an article as you do, you will accumulate an honest fortune, and confer the greatest blessing on your fellow-men that was ever

Ladies' Department.

"Day Unto Day Uttereth Speech."

The speech that day doth utter, and the night, Full of to mortal ears it hath no sound.

A Life-Lesson.

Grand lessons from little things we draw, Upon a fence-rail old saw, A number of frescos, graceful and fair,

GOOD RECIPES.

I wish I could see all of you ladies that write for the FARMER, and I would visit just as fast as I could;

Tea made from the blossom of any rose will break a fever if taken in time. Wet soda or sweet oil is good for burns.

COFFEE CAKE.

I send a recipe for coffee cake that I know to be good; I have used it for several years.

Human Hair.

Not less than ninety per cent. of the women and five per cent. of the men of this country wear more or less false hair.

Lay a Fainting Person Down.

It is surprising how every body rushes at a fainting person and strive to raise him up, and especially to keep his head erect.

The True Romance of Pocahontas.

In Dr. Edward Eggleston's paper, entitled "The Beginning of a Nation" in the November Century (the first of his series of illustrated articles on the history of life in the thirteen colonies), a description of the first English settlement is given, including the following account of the romantic life of Pocahontas:

From her first meeting with Smith she became devotedly attached to the English, and rendered the settlers many services. She often secured supplies for them, and indeed seems to have haunted the fort, utterly naked as she was, after the manner of little girls among her people, who wore no clothes and showed no modesty until they were twelve or thirteen years of age, at which time they put on a deer-kin apron, and were very careful not to be seen without it.

Her real name was Matoax; but, by order of Powhatan, this was carefully concealed from the whites, lest by their supernatural enchantments they should work her some harm.

In 1613 Pocahontas was among the Potomac Indians, Captain Argall, a man of much shrewdness and executive force, but infamous for his dishonest practices, happened to be trading in the river at that time.

This transaction, not very creditable to the gratitude of the English, accomplished its purpose in causing Powhatan to return the white men held in slavery by him with the least useful of the stolen arms.

This marriage brought about peace during the life of Powhatan, who, on one occasion at least, sent a present of buckskins to his daughter and her husband.

In 1666, more than two years after their marriage, Rolfe and Pocahontas went to England with Sir Thomas Dale.

Lady Rebecca, as Pocahontas was called after her baptism, produced a great sensation. She was received by the king and many distinguished people, went to see a play, and, by help of her naturally quick wit, bore herself very well.

The climate of London, and perhaps also the congenial habits of civilization, affected Pocahontas very unfavorably, and she was taken to Brentford where Smith, then busy with his preparations to sail for New England, visited her.

Fancy Work.

I know how pleasant and fascinating to our girls is the fancy work in which they are now indulging so largely. I know it is just as pleasant as washing dishes, or "helping mother" generally.

A great deal will be done in this line between now and Christmas, and to make a real success of the business it requires some study before hand.

For children something strong is the best policy. How much that is bought and made for them only survives the day.

The Trustees of the University of Pennsylvania, who have been debating the question three or four years, are about to decide, it is thought, in favor of admitting women to that institution.

Dyspepsia, heart-burn, nausea, indigestion, etc., are always relieved by Brown's Iron Bitters.

The Chicago school board, by a vote of eight to four, has voted down the proposed rule to allow its lady teachers to marry while in its service.

Digestion the Great Secret of Life.

A good digestion secured by taking Simmons Liver Regulator. "It is the only medicine that relieved me after suffering five years with dyspepsia, heartburn, sick headache and constipation."

Paris is setting women a sensible fashion in disposing with high-heeled shoes. Flat soles are to be the order hereafter, and women will be able to walk without a rotary motion.

A Lady Wants to Know

the latest Parisian style of dress and bonnet; a new way to arrange the hair. Millions are expended for artificial appliances which only make conspicuous the fact that emaciation, nervous debility, and female weakness exist.

Miss Mary S. Peggam, for many years preceptress and teacher of mathematics in Hillsdale Female College, Jacksonville, has accepted a similar position under Dr. DeMotte, Xenia College, Xenia, Ohio.

Mr. George Fricker, Superintendent of the Southwestern Stage Co., states that he has used Les' Dandelion Tonic whenever he has had occasion to take medicine of any kind during the past year and he thinks that it is an article that every one should keep in his house, and that if it be taken promptly it will save doctor's fees.

Mrs. Mary Jacklin, Detroit's female broker and speculator, has raised a family of four children with success, giving them a liberal education, and has accumulated a fortune of \$60,000 in the produce business.

Tell it Out.

Why not? Good news ought to be told, and it is good news that Hunt's Remedy has cured the worst of kidney diseases, and can do it again and again.

The very hot and dry weather, the past summer was confined to New England alone. In eastern Pennsylvania, Maryland, etc., the weather was pleasant, reasonable, and admirably adapted to the growth of crops.

The woman who seeks relief from pain by the free use of alcoholic stimulants and narcotic drugs, finds what she seeks only so far as sensibility is destroyed or temporarily suspended.

The Toronto Globe says it is cheaper and better for the Canadian farmers to sell their expensive coarse grains—oats and peas—and buy corn with the money for cattle feed, the last being the most nourishing and economical feed of the three.

That poor head-ache, invalid wife, sister, mother or daughter, can be made the picture of health by a few bottles of Hop Bitters. Will you let them suffer? when so easily cured.

When a farmer finds some new kind of insect, beetle or worm with whose habits he is not familiar, he should resist the propensity to destroy it. More than likely it is a friend preying on some of his insect enemies.

Millions of packages of the Diamond Dyes have been sold without a single complaint. Everywhere they are the favorite dyes.

It is time to let up on the other rogues. In Boston a barber has been detected putting vinegar into a squeezed lemon and using it a second time.

Catarrh of the Bladder.

Stinging, smarting, irritation of the urinary passage, diseased discharge, cured by Buchu-palpa. \$1, at druggists, Kansas Depot, McKEE & FOX, Atchison, Kansas.

A good steel trap caught a four hundred-pound bear on Oostee Mountain, New Hampshire, recently.

An Only Daughter Cured of Consumption.

When death was hourly expected all remedies having failed, and Dr. H. James was experimenting with the many herbs of Calcutta, he accidentally made a preparation which cured his only child of Consumption.

Advertisements.

Our readers, in replying to advertisements in the Farmer, will do us a favor if they will state in their letters to advertisers that they saw the advertisement in the Kansas Farmer.

DR. A. C. GIBSON'S COUGH SYRUP. This COMPOUND gives QUICK RELIEF in Coughs, Colds, Sore Throat, Hoarseness, Croup, Soreness of the Lungs from Coughing, Pneumonia, Pleurisy, Bronchitis, Catarrh, Asthma, Whooping Cough, Measles, and Consumption.

\$5 to \$20 per day at home samples worth \$5 free. Address STINSON & Co., Portland, Me. A sure cure for epilepsy or fits in 24 hours. Free to poor. Dr. KRUSE, 2844 Arsenal St., St. Louis, Mo.

7,000 SHEEP FOR SALE. SELLING LOTS TO SUIT PURCHASERS. 4,000 Ewes from 1 to 4 years old, at \$1.75 per head. 2,000 Lambs at \$1.00 per head.

PATENTS. CAN I OBTAIN A PATENT? Send a rough sketch or (if you can) a model of your invention to GEO. E. LEMON, Washington, D. C., and a Preliminary Examination will be made of all United States patents of the same class of invention.

27 Stops Beatty's Organs and Pianofortes for 1883. BEATTY'S PATENT IMPROVED ADJUSTABLE STOP-ACTION ORGAN. A NEW CASE FOR THE HOLIDAYS NOW READY. BEATTY'S PATENT IMPROVED ADJUSTABLE STOP-ACTION ORGAN. \$125. BEAUTIFUL HOLIDAY PRESENTS. BEATTY'S ORGANS AND PIANOFORTES. The Most Successful House in America.

Condensed News of the Week.

The first through train from Guaymas on the Gulf of California, came east this week. A woman in New York, in an insane spasm, killed her three children by bludgeoning them and shooting with a revolver and then killed herself with the same weapon.

St. Louis Horse and Mule Market.

There is but little change to note in the horse or mule market. Offerings large and of all grades. Demand liberal and all found sale except very common and neglected stock. On good grades prices were well maintained.

Table listing various horse and mule breeds and their prices, including Texas ponies, Southern horses, and different types of draft horses.

Philadelphia Wool Market.

W. C. Hutson Jr. & Co., Circular. KANSAS, IOWA AND NEBRASKA. Light, free from sand and bright in color. Fine, 2 1/2%;

TOPEKA MARKETS.

Table of market prices for various commodities in Topeka, including Grocers prices, Butter, Eggs, and Flour.

THE MARKETS.

By Telegraph, November 6. Kansas City.

Price Current reports: NATIVE COWS Market steady, 2 7/8 to 3; Native shipping and butcher steers, 2 7/8 to 3 7/8; stockers and feeders, 2 3/4 to 4; Western grass cattle, 2 80 to 3 70.

Hides and Tallow.

Table listing prices for Hides and Tallow, including Green Hides, Calf skins, and various types of tallow.

Wholesale cash prices by dealers, corrected weekly by Edson & Beck.

Large table of wholesale prices for various commodities like Wheat, Corn, Oats, Flour, and other grains.

THE STRAY LIST.

HOW TO POST A STRAY. BY AN ACT of the Legislature, approved Feb 27, 1886, section 1, it is made the duty of every owner of a horse or mule...

Broken animals can be taken up at any time in the year. Unbroken animals can only be taken up between the 1st day of November and the 1st day of April, except when taken in the lawful enclosure of the taker-up.

How to post a Stray, the fees and penalties for not posting. If an animal liable to be taken, shall come upon the premises of any person, and he fails to advertise for its recovery...

HOPKINS' IMPROVED FARM and STOCK SCALE.

Manufactured at Thorntown, Ind., by THE HOPKINS' SCALE COMPANY. An 8 Ton Scale, with a 20 foot Platform for \$100. Other Scales in Proportion.

A WORD TO THE PUBLIC. It is now more than two years since we began manufacturing Farm and Stock Scales at Thorntown, Ind., under the patent of W. W. Hopkins the inventor.

Testimonials. Dear Sir:—The Stock Scales which we bought of you give me entire satisfaction in all respects.

REPUBLICAN VALLEY STOCK FARM.

HENRY AVERY, Proprietor, AND BREEDER OF PERCHERON-NORMAN HORSES. The oldest and most extensive breeder of Percheron-Norman Horses in Kansas.

Mason & Hamlin. ORGANS are certainly best, having been so decreed at every Great World's Industrial Competition for sixteen years.

BLUE VALLEY HERD.

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