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(Continued on page 20.)

TOPEKA : BUSINESS : INDEX

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Table listing various agricultural books such as 'Farm and Garden', 'Fruits and Flowers', 'Horses', 'Cattle, Sheep and Swine', and 'Miscellaneous' with their respective prices.

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A NON-PARTISAN statement of facts and figures showing what the Tariff is, what its use, object and effect, its origin and history, with definitions of terms explaining the operation of specific and ad valorem duties, and giving the difference between a Revenue Tariff and a Protective Tariff; together with facts about wool, sugar, lumber, salt and coal, and statistical matter convenient for reference as to all matters usually considered in Tariff discussions; also the Tariff planks of all the platforms of the Democratic, Whig and Republican parties from 1840 to 1888. It is the whole subject in one little volume of 144 pages, about the size of an ordinary pocket-book. It is a compendium of pertinent facts for all classes of people to study for themselves as helps, then they may form their own conclusions in their own way. A great deal of hard labor was expended in its preparation; it is sent out as reliable and without party bias, by Judge W. A. Pepper, editor of the KANSAS FARMER. Price, 25 cents for a single copy; five copies to one address for \$1; sixteen copies to one address for \$2; 100 copies to one address for \$10. Postage paid in all cases. Address H. A. Heath, KANSAS FARMER office, Topeka.



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Agricultural Matters.

OREGON'S STATE FARMERS' CONGRESS.

We do not know of anything more interesting to give our readers on this page than a report of the organization of the Oregon State Farmers' Congress, as the same appears in the *Pacific Farmer* of September 27. We hope every reader of the *KANSAS FARMER* will read it and study it as a suggestion of worth to farmers in every other State.

Pursuant to the adjournment from the meeting held in Salem on June 12 last, a large assemblage of farmers and their wives met at Machinery Hall on the State Fair grounds, September 19, President Wilkins in the chair.

Reports of committees were called for. The committee on address failed to make any report, and the committee on constitution and by-laws reported that they had doubts about the expediency of an organization of farmers further than the Grange and the Alliance, and that if thought best to perfect the organization, they would recommend the Alliance.

This report was not received or adopted, but was somewhat criticised by several persons speaking thereto; and after a general interchange of views, it was on motion decided to appoint a new committee to consider the necessity and advisability of some other organization of farmers at this time, and to report a form of constitution for such organization. The chair appointed on that committee J. Clem, of Linn county; John W. Shute, of Washington county; John P. Robertson, of Marion county; J. Gaston, of Multnomah county, and Charles Miller, of Marion county; and the committee was instructed to report to an adjourned meeting at the same place on September 20, at 7:30 p. m.

Hon. M. V. Rork, of Michigan, was then invited to address the meeting, which he did in a very able manner, showing how the farmers are systematically robbed by the organization of trusts and other schemes and the great necessity of such an immediate organization of farmers as would be able to destroy these conspiracies. His address was heartily applauded, and a vote of thanks tendered therefor.

On motion adjourned to meet again September 20.

September 20, 1888.

In pursuance of the adjournment of last evening, Machinery Hall was again crowded with an enthusiastic meeting of farmers and their wives, President Wilkins in the chair.

The committee appointed at the previous meeting then submitted the following report:

Your committee to whom was referred the resolution authorizing us to consider whether any other or additional organization of the farmers was necessary, and if so to prepare and report a constitution for the organization of a State branch of the Farmers' Congress of the United States, beg leave to report that we have given your resolution careful consideration, and have decided that there is a sentiment among the farmers desiring an open organization to consider and discuss questions affecting their interests and prosperity. That a very large number of the agricultural and producing classes feel and believe that there are serious evils oppressing their interests, and that in order to act understandingly and take such action as will abolish our grievances, an open organization for discussion and investigation is not only desirable, but necessary. Your committee are unanimous that no organization should be attempted which might be thought to be a rival or opposing organization of the Grange, but rather one which should be supplementary to and friendly with that

organization, so that the two might co-operate and work in harmony to achieve one end, the greatest good for that great class of toilers on which all other classes and interests depend.

We therefore recommend the adoption of the following constitution:

CONSTITUTION.

1. That this association shall be called the Oregon Branch of the Farmer's Congress, and its object, the organization of the farmers of Oregon for the purpose of investigating and discussing openly and irrespective of party, those questions which affect the interests of agriculture and labor, such as taxation, transportation, trusts, and the currency; and combining and concentrating the power and influence of the agricultural classes by petition, ballot or otherwise, so as to carry into the laws of the land, the wishes or decisions of this association on any public question.

2. That this association shall co-operate with the Farmer's Congress of the United States; and we hereby respectfully invite the co-operation of the Patrons of Husbandry and other organizations.

3. That subordinate associations shall be organized throughout the State, under the authority and supervision of the State organization, which shall be entitled to send delegates to the annual State Congress.

4. That there shall be held an annual State Congress, and such special meetings thereof as the executive committee shall deem expedient to convene.

5. The officers of this organization shall consist of a President, Vice President and Secretary who shall be ex-officio Treasurer, who shall be elected at the annual meeting and hold office for one year, and until their successors are elected.

6. There shall be elected annually an executive committee of five members, who shall hold office for one year and until their successors are elected, the duty of which committee shall be, to issue an annual and other addresses to the farmers of Oregon on the condition of any public question or interest affecting the welfare of the agricultural classes; and to generally control the business and affairs of this Congress and execute its will; but that until the next regular meeting of the Congress the President shall appoint the executive committee.

7. That all persons of good character, both men and women, over the age of eighteen years, belonging to the agricultural or producing classes, and who shall contribute 25 cents annually for the support of the State Congress, and who shall sign the constitution, shall be entitled to become members of this Congress, and participate in its deliberations and decisions in subordinate organizations.

8. All officers, of both State and subordinate organizations, shall serve without salary or recompense, except the repayment of actual expenses.

9. The State Congress in session shall consist of the executive committee and existing officers, and three delegates from the subordinate organizations of each county, selected by a county committee or convention.

10. All dues to the State Congress from the subordinate organizations, shall be expended under the direction of the executive committee in printing and circulating information, or paying the expenses of State lectures or organizers.

11. The subordinate organizations shall make such regulations to provide for their own expenses as they may deem best, and meet as often as they see proper.

12. This constitution may be altered, amended, or added to by a two-third

vote of the annual meeting of the Congress.

Respectfully submitted.

On motion to adopt the report and the constitution, Osborn moved to substitute the word "resolution" for the word "ballot" in the first section.

This motion at once excited a sharp and animated discussion. Osborn and Minto supported the motion on the ground that it would run the organization into politics, or convert it into a political party or third party. The motion was opposed by Messrs. Clem, of Linn county, Shute, of Washington county, Miller, Dimick and Hibbard, of Marion county, Bruce, of Benton county, Hewitt, of Yamhill county, and Senator Tongue, of Washington county, all claiming that the "ballot" was the essential point in the whole organization, and that if the farmers did not make up their minds to use their "ballots" to protect themselves they might just as well surrender at once to the robbers preying on them. Senator Tongue spoke at some length explaining that political action was not necessarily party action, that there were many things like the inter-State commerce act, the passage of which was a political act, but not the act of any party; and so farmers could, and should combine to use their political power either in or outside of the party they belonged to, and at the polls, to secure relief from evils and injustice which could only be righted by legislative action. The remarks of all the speakers were listened to with great interest and heartily applauded. The motion to strike out the word ballot was voted down, receiving only two votes; and the constitution, with some alterations and amendments, was then adopted in the form printed before.

Mr. Shute offered the following resolutions, which, after discussion and amendment were adopted:

Resolved, That the Executive committee be instructed to issue an address to the farmers of Oregon, at their earliest convenience, setting forth the necessity for and objects of this association, and accompanying the same with a brief form for the organization of subordinate associations.

Resolved, That the next regular meeting of this Congress be held at Salem on the second Monday in January next.

Resolved, That the Executive committee select three persons to represent this Congress and this State, in the Farmers' National Congress, to be held at Topeka, Kansas, in November next, and that the Governor be requested to appoint and commission such persons as such delegates and representatives.

Mr. Osborne offered the following resolution, which was adopted:

Resolved, That the Oregon Branch of the Farmers' National Congress of the United States endorse all measures adopted by the National Congress in the interest of agriculture, and that we will co-operate with said body in all lawful measures to abolish existing evils.

On a call for membership, a large number of persons mostly from Washington, Multnomah, Marion, Polk, Yamhill, Benton, Linn, Lane, Douglas and other counties whose address was not obtained, then signed the constitution and paid the annual fee.

On motion the Executive committee was instructed to have printed two hundred copies of the constitution for distribution to subordinate associations.

On motion the President was instructed to appoint organizers of subordinate associations in each county. President Wilkins then announced the Executive committee as follows:

John P. Robertson, of Marion county, A. W. Lucas, of Polk county; W. R. Kirk, of Linn county; James Bruce, of Benton county; John W. Shute, of Washington county.

On motion the Congress then adjourned to meet at Salem in January next.

M. WILKINS, Pres.
J. GASTON, Sec.

Where Flies Go in Winter.

Some one has asked the *Washington (N. C.) Messenger* where flies go in the winter. This is a question of some interest, for a house fly is born fully grown and of mature size, and there are no little flies of the same species, the small one occasionally observed being different in kind from the large ones. The house-fly does not bite or pierce the skin, but gathers its food by a comb or rake or brush-like tongue, with which it is able to scrape the varnish from covers of books, and it thus tickles the skin of persons upon which it alights to feed upon the perspiration. A fly is a scavenger, and is a vehicle by which contagious diseases are spread. It poisons wounds, and may carry deadly virus from decaying organic matter into food. It retires from sight at the beginning of winter, but where it goes few persons know. If a search of the house is made they will be found in the roof or between the partitions or floors. Last winter we had occasion to examine a roof, and found around the chimney myriads of flies hibernating comfortably, and sufficiently lively to fly when disturbed in "overpowering clouds." No doubt this is a favorite winter resort for these creatures.

The wine crop of California this year will not be less than 25,000,000 gallons, or 8,000,000 more than last year.

After an expenditure of \$750,000 for machinery and prospecting, Egypt has abandoned the search for petroleum.

Hall's Vegetable Sicilian Hair Renewer is the most reliable article in use for restoring gray hair to its original color and promoting the growth of the hair.

The ancients generally maintained that there was a close connection between bees and the soul. Porphyry speaks of "those souls which the ancients called bees."

It is said that upon the backs of the seven-year locusts, there sometimes appear marks like a letter of the alphabet. When this looks like a W it is thought that a war is imminent.

RALEIGH, N. C., Feb. 20, 1888.

Dr. A. T. SHALLENBERGER, Rochester, Pa.—*Dear Sir*:—I wish to say a word in behalf of your wonderful Chill and Fever Pills. Some months ago a friend, who knew that my wife had been afflicted for months, sent me a package of your pills. I gave them to her and they cured her at once. A neighbor, Mr. Perry, had suffered with chills for more than a year, and had taken Quinine until his hearing was greatly injured. Seeing the cure wrought in my wife's case, he procured a bottle of pills and was speedily restored to perfect health. I feel that this is due to you.

Very truly,
REV. J. D. DAVIS.

As winter comes on, the danger to sheep from hungry dogs increases. Already reports come of destruction in valuable flocks. It is useless to look to the incoming Legislature for relief any more than from the blizzards which are to be expected at their irregular intervals, as usual. The business of sheep-raising will pay next year, if ordinary care is taken of the flock, dogs or no dogs. Ordinary care will include shelter at night in a dog-proof inclosure. If the farmer will give to his five-dollar-a-head sheep the care his wife gives to her ten-cent chickens to protect them from the rats, he will come out with full numbers in the spring, and they will be in better condition.

How's This!

We offer One Hundred Dollars Reward for any case of Catarrh that can not be cured by taking Hall's Catarrh Cure.

F. J. CHENEY & CO., Props., Toledo, O.

We, the undersigned, have known F. J. Cheney for the last fifteen years, and believe him perfectly honorable in all business transactions, and financially able to carry out any obligations made by their firm.

West & Truax, Wholesale Druggists, Toledo, Ohio.

Walding, Kinnan & Marvin, Wholesale Druggists, Toledo, Ohio.

E. H. VanHoesen, Cashier Toledo National Bank, Toledo, Ohio.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucus surfaces of the system. Price, 75 cents per bottle. Sold by all Druggists.

The Stock Interest.

THOROUGHBRED STOCK SALES.

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

NOVEMBER 13. — C. M. Gifford & Son, Short-horns, Junction City, Kas.

Future of the Southdowns.

EDITOR KANSAS FARMER:—The breeders of Southdown sheep seem happy and confident as to the future of sheep husbandry. They pride themselves on having the best mutton sheep in the world. The studies of Prof. McMurtre regarding the structure and strength of wool show that Southdown wool is stronger than any other, and that it is excelled in fineness of fiber only by the Merino wool. In view of these facts and the necessity felt by sheep-breeders generally for giving more attention to the production of mutton than has been their habit, the breeders of Southdowns observe an increased demand for breeding rams for crossing on Merinos as well as other sheep.

This condition of the sheep interest is quite encouraging to the members of the American Southdown Association. The rule requiring double entry fees in the record from non-members seems to have been a good move at the right time. One of the first to join the Association after the last annual meeting was N. R. Boutelle, M. D., of Waterville, Maine. Among the applications for membership recently made are the following leading breeders in their respective States: Albert Sites, of Ohio; Sidney P. Clay, of Kentucky; E. J. Fennessey, of Illinois; H. C. G. Bals, of Indiana; and R. P. Pomeroy, of Pennsylvania.

The rule of the association placing the entry fees for Southdowns imported from Great Britain, at \$5, is well received by American breeders. It is not claimed that this rule has any political significance. It was indeed a movement for protection, not however, for protection against competition, but against errors in pedigrees; or, as some will say, against frauds in the pedigrees of English-bred sheep.

As is well known, American breeders are quite particular in the selection of breeding stock among farm animals. With a good animal they want a good and true pedigree. Without the latter they care but little for the former more than what it will bring for the butcher's block. If the breeders of Southdown sheep in England will establish there a public record of breeding stock, and thereby make it possible for American breeders to buy in England sheep that are certified by competent authority to be pure-bred, the American \$5 rule will no doubt be rescinded.

PHIL. THRIFFTON.

Springfield, Ill.

Shall We Cross Our Merino Ewes?

Of course, if it will make money. It is not a sin to do so. True breeders of Merino stud flocks condemn it as a perilous and terrible sin, fit to be punished here and hereafter. There are hundreds of Merino flocks in the United States on farms that are not paying their way. Many thousands of these farms are overstocked; the sheep are out of condition; feebleness is written all over the flocks, all over the farms and in their owners' faces and pocket-books. "Overstocked" is unmistakable. Thousands of inquiries, such as "What ails my sheep" can be answered, "overstocked." What is the remedy? Sell off some. The answer is the fact I can't; they are too thin for the butcher, and nobody else wants sheep these times.

This is a fact. No reasonable-sized

flock that has been turned into mutton-raising by crossing with a black-faced ram is in trouble to-day. Notice the prices of mutton sheep and mutton lambs. Their ewes cost \$2 to \$2.50 apiece. Their wool is an item. It is strong, valuable wool, eagerly sought for in the market. Ohio and such regions are suffering on account of low prices of wool, while mutton is in high demand.

Is there any lesson in this? Can no remedy be found for this? Cross Merino ewes? Why, of course, cross them. If mutton lambs are not so high next spring, still there is money in them. If mutton is not so high there is money in it. Who are squealing the loudest today about a tariff? Wool men, of course. Why? Because wool is so low. Then let us raise less of it. If mutton pays, maybe the two together will pay better. They tell us that two extreme excellencies cannot be gotten from the same sheep. Then we can afford to take less—a little less—of either if we have to. Two strings to a bow are better than one, all the time.

But is it true that we cannot get big fleeces from a sheep that gives a standard carcass for the butcher? Not at all. Is it true that this sheep shall be a coarse-wool or a long-wool or a medium-wooled sheep? Not at all. Is it true that such a sheep must be one that will not herd in large flocks? Not wholly. Any breed of sheep will do better in small than large flocks. Each breed has its fitness and best capacity for flocking. None equal or approach the Merino in this particular. A black-face cross on the common Merino ewe is a desirable mutton and wool cross. Such cross-bred ewes are in excellent demand for mothers on the farms of eastern Pennsylvania, New Jersey and New York, and that region adjacent to the great mutton lambs market. Such cross-bred wethers make most excellent feeding wethers for the grain-growing sections.

Farmers will feed sheep rather than sell their grain off the farms. Raise the feeders; raise the mutton lambs—mothers for the mutton lamb raisers. Keep down the size of the flocks. Don't be overstocked, handicapped. Keep up the vigor and thereby the health of the flocks, and if worse comes to worse, we shall be able to use the two-purpose sheep in keeping up our soil, and feed and clothe our families. The dark days have come before and gone, without ruining us as badly as we had feared. The American people have not lost all their sense. We have managed our affairs pretty well so far. Nobody takes us for a nation of fools. "Forewarned is forearmed." The discussions are healthy, and we have always met emergencies like men, and acquitted ourselves creditably. Somebody may be mistaken in judgment. Who can say who is right? Each one thinks he is right, and sometimes each one is led to acknowledge he was not. It is safe to use all diligence and intelligence to make the most of circumstances and resources. This is American, and we are illustrious for this in the past, and shall not fail now nor in the future. We make our own destiny, and do best when we try with soul, mind and strength in harmony and unity. We are not going to smash now, if we use all the means within our reach.—*Farm and Fireside.*

As to quantity, the best rule is to feed always enough to keep the calves growing well and in good condition, but never enough to make them excessively or unduly fat. It will be found that this amount will vary greatly with animals of the same age; one keeping in high flesh on what will not keep another in ordinary condition, and again one animal will eat all that is given it and another will often leave part of its ration in the feed box. The individual character of the animals, the climate, the season, etc., are all factors which go to regulate the question of quantity.

Cleveland Bay Horses.

A correspondent of the *Mark Lane Express*, a London paper, prepared an article on the Cleveland Bay horse, and it was copied by the *National Live Stock Journal*, Chicago, from which paper we clipped it some months ago. It is now given to our readers as an interesting bit of "horse talk."

"It is a strange fact that so little is really known respecting Cleveland Bays out of the north of Yorkshire, which of late years has become peculiarly their home, and another remarkable fact is that they are written about and described as something very different to what they really are.

"The Cleveland Bay is a powerful, active, and good-looking horse, well adapted for every purpose of light draft as well as for drawing vans and trams. Standing from 16 to 16½ hands high, he has good shoulders, a powerful back, a head rather plain but well set on and carried, and fine level quarters. Indeed the quarters are an especial point of excellence in the Cleveland Bay, and perhaps no breed possesses in so marked a manner the elegant quarters and well-carried tail which is so much an object of admiration to our American friends. The Cleveland Bay has also plenty of clean, flat bone, and his legs are nearly devoid of hair. His action is remarkably good, and though he does not boast the high-stepping qualities of a roadster, he steps out freely and well, moving his shoulders and hocks in a way that denotes activity and power. It is this peculiar style of action that so admirably fits the Cleveland Bay mare to be used as the basis for the breeding of hunters and high-class carriage horses, a purpose for which she is far better adapted than either the Hackney or Shire mare, of which we have heard so much theorizing lately. I have ridden hunters from Hackney mares and hunters from Shire mares, but for level, easy action, only the Thoroughbred can come up to the hunter descended from the Cleveland Bay.

"Then, again, the Cleveland Bay as a breed has been kept purer than perhaps any other British breed of stock, the Thoroughbred excepted, and this greatly increases his value as an animal to be used for crossing purposes.

"So long ago as 1823 a gentleman named Lloyd took a Cleveland Bay stallion into Gloucestershire for the purpose of improving the native breed there, and his experiment exceeded his most sanguine expectations.

"Indeed there is no breed of horses in ordinary use (race horses are, of course, not included), which is not improved by the action and elegant carriage imparted by the Cleveland Bay cross. This is undoubtedly one of the causes which has led to the diminution in numbers of the Cleveland Bay, and those gentlemen who are using their Cleveland mares for breeding half-bred horses alone are like the man who killed the goose which laid the golden eggs. Depend upon this, once lose the Cleveland Bay breed and nothing can replace it. It is also a matter worthy of notice that the outcry about the deficiency in quality and power of our ordinary riding and driving horses was nearly simultaneous with the falling off in numbers of Cleveland Bay mares.

"Another cause, and perhaps one which operated quite as much to the injury of the breed as that just named, was the carelessness with which many men mated their mares. The horse nearest at hand was too frequently used, principally only because he was the nearest at hand, and if he was bay with black legs he suited the owner well enough. His pedigree was not often examined carefully—and indeed if it was, was frequently incorrect. Horses

were described as Cleveland Bays which were in reality cross-bred animals, and the results of the union of such sires with Cleveland mares, as might be expected but too often prove disappointing. The natural consequence was that many ceased breeding Cleveland and took to breeding half-bred horses or cart horses, and many disposed of their mares, thinking themselves well out of them, at a price which would not be thought half their value now.

"The Cleveland Bay Horse Society, which was formed in 1884, at the instance of a few gentlemen who were anxious to preserve, and so far as was possible to resuscitate the breed, and which has already issued the third volume of its stud book, has done good work in removing the latter difficulty, and since its establishment it is gratifying to learn that increased attention is being paid to the proper mating of mares, and that the numbers of good young Cleveland Bays are gradually increasing.

"The foreign demand, also, thanks to the security which a stud book gives, is greatly increased, and a fair trade is now being done with the foreigners. I have heard this foreign trade much deplored by some well-wishers to the breed, and I certainly would like to see Cleveland mares of the best stamp more than quadrupled in numbers, but before condemning that most used and best abused man, the farmer, for parting with his good brood mares, let us reflect that times are bad, prices of agricultural produce abnormally low, many things can not be disposed of at all save at a ruinous sacrifice, and that a man must sometimes sell what he can, not what he would. It is a matter for regret that the Royal Agricultural or Yorkshire societies do not offer prizes for a class or two of Cleveland Bays at their shows. This more than anything would tend to educate public opinion as to the value of the breed. True, this year the Royal offers a prize for Cleveland Bay or coach horses, but this will do little to educate public opinion. Cleveland Bays and coach horses are very different animals, and it is fair to neither to put them in the same class. Great care, too, should be taken in the selection of judges of these classes, and it requires a specialist to give satisfaction to the critical on-lookers who surround the Cleveland Bay and coach horse rings.

"I trust, as more attention is bestowed on the subject, that the many excellent qualities of the Cleveland Bay will receive that recognition at the hands of the horse-loving public of England that they have already obtained from those whose experience tells them that as an 'all-round' or general-purpose horse, the Cleveland Bay is perhaps unequalled by any other breed and is certainly not excelled. The Cleveland Bay is an admirable worker; on light land he can work the ordinary cart horse to a stand-still, and even on strong land can hold his own. So that keeping a Cleveland mare or two for breeding does not necessarily entail keeping more horses on the farm than are required for working it, a serious consideration in times like these."



YOUNG TIP

LOG CABINS, lacking elegance, were yet comfortable homes. Health and happiness were found in them. The best of the simple remedies used are given to the world in Warner's Log Cabin Remedies made by Warner of Safe Cure fame. Regulate the Regulator with Warner's Log Cabin Sarsaparilla.

Great numbers of women take up government lands, more often unmarried women than unmarried men. Betrothed couples have been known to go from the East, and, after living on adjoining claims, join the two by a marriage, and possess together a farm of 320 acres or more.

In the Dairy.

THINGS TO DO AND NOT TO DO.

There is too much finely-drawn and over-wise discussion about the cream-gauge systems. It is all right for smart men, and those especially wise, to experiment and theorize and talk learnedly about the spaces, the oil test and all the other befogging and suspicion-making notions as wise or otherwise or nowise; but, after all, would it not be better to keep stiller about it, and not stir up all the dairymen in this broad land without in reality giving them any certain remedy for the ill? I, for one, have great faith in the cream-gathering system of dairying, and, as a rule, recommend it. I am sure that the average dairyman, who has been making butter, can do much better to patronize a butter factory than to undertake to make butter on his own farm.

This does not mean that as good butter cannot be made in the private dairy, because it can be, and under favorable conditions, a better product can be made in the private dairy. Take the average and it is not so. It is also true that a butter factory anywhere can take the cream from any neighborhood or town and work it up, and get more money for it, than an average price, if made at the homes of the same patrons. This is because it is better made, and is more nearly uniform; and it makes for itself a reputation, which gives it an enhanced value, while the home-made butter often goes begging. This is not always so, and need not be at all, if the same skill, care and really artistic ways were used by the dairyman at home as are practiced by the educated and trained butter-makers, which the factories try to employ. The dairyman does not come up to the standard—first, because he does not know how to do it, and second, because he does not have the appliances to do it with. The reduction of the labor on the farm, and the consequent benefit to the wives, is reason enough why the average farmer should patronize the butter factory. This everlasting talk about the percentages of cream, and one man doing more than his share, and another doing less, is mighty unprofitable. No good comes out of it. It can only lead to distrust, dissatisfaction and discouragement, and some men, who are doing better and getting more money than they ever got before from their dairy, will imagine they are being robbed.

It is an easy thing for a factory to run smooth and prosperous, and it is as easy for it to run to the down end. The way to prosperity is for every one to do their best, and to keep their tongues still and not run around and growl and find fault. Butter factories are built to live when they stand on good will, confidence and honest purpose. Farmers are so far down under now that it ought to be a short way to reach the base upon which to build. Stretch out your right hand and your left to your neighbors, and hold right on for a common weal. That will secure it. Let it be known that the occasional tests made by this man and that one, to show whether he is getting his full share of butter credit as to milk or cream, do not prove anything. The circumstances are so varied from day to day, with the same cows, that one test tests nothing, with a definiteness to make it a guide. What farmers should do is, get as near as possible cows of the same breed, and then follow a general rule in their care and feeding. This is a plain business principle. Persons who put in a plant to do a certain kind of business, do not get machinery calculated to do things differently—to make coarse and fine goods, things large and

small, light and heavy, and then to call them all one thing, or kind, and then put in the steam and expect to turn out goods of uniform texture, style and finish. There is too much looseness of purpose, or hit-and-miss notion about dairying. With uniform cows, uniform food and care, and this of the best, there will be a reasonable, in fact a satisfactory, uniformity in the product of milk. The next thing is to secure uniformity of conditions for the handling of this milk, apartments of a similar character, and apparatus similar for the raising of the cream. I do not think anything depends on the particular patent, although some are nearer perfection than others, and no doubt will be instrumental in securing more cream than others. When milk is set in the same kind of creamery, and the cream is raised at the same temperature, there will not be the variations and apparent discrepancies there appear to be, oftentimes, when the conditions are otherwise. Save grumbling by uniform conditions. With these particular and well understood regulations, a factory, to make butter, should start right, go on right, and lead right to a long life of success. It has been done.

My plan would be to draw up a clearly defined business compact, in which every patron or partner would bind himself to conform to the rules and agreements strictly, or pay a forfeit; then elect one man manager, and require him to report once a month the full condition of things. With many associations there is not head enough. It must be made a business. The greatest lack is of educated and skilled makers, who can also be book-keepers, and can detect, with an acknowledged ability, wrongs in milk, food, temperature, and other conditions. We can never get dairying in its best shape, or in a really satisfactory form, until the State of New York shall make provision for the education and training of men and women to work in this profession. If we can manage to get along for two years more, we shall have, I doubt not, our first class graduated to enter upon this higher order of attainment. Speed the day!

Dairying has got to be the future basis of farming in this great State, and the sooner we, one and all, work up to this necessity, and put our hands and brains into its perfecting, the better. There is now a general awakening, and I do not know of one well-managed butter factory or creamery, or one private dairy, which is not prosperous, and more prosperous than any line of general farming, even in the best parts of the State. There is no branch of agricultural husbandry which equals it, unless it be some special thing favored by fortunate and uncommon surroundings. The butter factory at Chatham, located in one of the best sections of the State for grain-raising, is a grand success.

The farmers in the old town of Ballston, under the lead of Hon. S. W. Buell, are constructing a model creamery, a joint stock company furnishing the means. This factory is located in the midst of a rich farming community, but, with a wise forethought, they realize that the old system of grain-raising cannot be made profitable any longer; and the wearing out of the soil for more than one hundred years must now be heeded, or posterity, now born, will reap an evil harvest. There will be no trouble with these enterprises, with more neighborly, liberal and business-like feelings and determination.—F. D. Curtis, in *Country Gentleman*.

Regulate the Regulator, by the use of Warner's Log Cabin Sarsaparilla. Sold by all druggists. 120 doses \$1.

Breed vs. Feed.

It is a curious fact that in quoting a man in print, and especially upon some disputed agricultural subject, he is often made to say a thing was black, when he had tried his best to express his opinion that it was white. This thing would be very exasperating if it were not so common.

In several places lately I have seen Dr. Sturtevant and others, as well as myself, quoted as stating broadly that it did not make any difference what was fed to a cow, as the milk could not be changed by the food. I hope few people have been led to believe that the persons named ever made such absurd statements.

What I have said and written upon this point has been merely a repetition of the general truth, which is abundantly sustained by experimental evidence, that the breeding has more effect than the feeding upon the quality of milk, if not quantity, which is produced by any given cow. If a cow, as the result of a long line of breeding in a particular direction, has fixed upon her and her dairy products the characteristics of her breed and family, these will never be materially changed by the way she is fed, or even neglected, so long as she remains healthy. If bred a butter cow and inheriting this trait, she will always be a butter cow. If by nature her milk is poor in butter fats, it will always be so, relatively, no matter how she is fed. If by inheritance a large milker, a generous yield will be her habit, even upon scanty rations; and if naturally a small milker, no quantity of feed will profitably increase her product. But these statements, which are certainly well substantiated, are perfectly in accord with the well known increase or decrease in milk or butter, or both, from a given cow, as the direct result of a change in her feeding or other treatment.

Dr. H. P. Armsby, whom I regard as an excellent authority on this subject, has recently expressed his views admirably, in these words: "The quality of milk which a cow can produce depends upon her breed and individuality, and, in this sense, the quality of the milk is more dependent upon breed than upon feed. On the other hand, the quality of milk which any given cow will produce is very largely dependent upon her feed." Other good authorities may also be quoted, I believe correctly, as follows: "The quality of milk is most dependent upon breed." "The disposition by breed will preponderate." "The quality of the milk is mainly dependent upon the breed of the cow, but not exclusively." "If by quality is meant richness of milk, it certainly depends primarily upon the breed." "The good cow will give good milk on quite poor feed; the poor cow will give better milk on good feed than on poor, but always a small mess of comparatively inferior quality."

It may be regarded as a settled fact that every cow has her limit to capacity, both as to quantity and quality, or richness of milk. Beyond this limit she cannot go, and no feeding or treatment can force her beyond it. It does not require much observation to determine what this limit is, and ascertain beyond what point food is wasted if consumed. In the well-bred animal, the limit of possible production is much farther removed from average product than in the common cow; hence, as a rule, highly-bred cows can be fed highly with profit. While we speak of a cow being unable to do better than her best, it is true that our cows are seldom at their best—rarely maintained at their utmost limit of production, and so it is generally easy, by some change or improvement in feeding and care, to

Every Household

Should have Ayer's Cherry Pectoral. It saves thousands of lives annually, and is peculiarly efficacious in Croup, Whooping Cough, and Sore Throat.

"After an extensive practice of nearly one-third of a century, Ayer's Cherry Pectoral is my cure for recent colds and coughs. I prescribe it, and believe it to be the very best expectorant now offered to the people."—Dr. John C. Levis, Druggist, West Bridgewater, Pa.

"Some years ago Ayer's Cherry Pectoral cured me of asthma after the best medical skill had failed to give me relief. A few weeks since, being again a little troubled with the disease, I was promptly

Relieved By

the same remedy. I gladly offer this testimony for the benefit of all similarly afflicted."—F. H. Hassler, Editor *Argus*, Table Rock, Nebr.

"For children afflicted with colds, coughs, sore throat, or croup, I do not know of any remedy which will give more speedy relief than Ayer's Cherry Pectoral. I have found it, also, invaluable in cases of whooping cough."—Ann Lovejoy, 1251 Washington street, Boston, Mass.

"Ayer's Cherry Pectoral has proved remarkably effective in croup and is invaluable as a family medicine."—D. M. Bryant, Chicopee Falls, Mass.

Ayer's Cherry Pectoral,

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get direct results and prove that food does affect product. The general statement remains true, however, that in the dairy cow breed is more potent than feed, in determining the product and the profit of the animal.—*American Cultivator*.

Log Cabin Logio.

Brawn and Brain!

The powerful engine, with its wonderful propelling power, coupled to the long train full freighted with the richest fabrics of the intellectual looms of the centuries—what obstacles can stay the progress of this mighty force, when once under full steam along life's highway?

The American with brawn and brain does not see the necessity for titles of nobility, does not care for elevation by descent, he can reach out and pluck the stars.

But with brawn or brain impaired, a man is badly handicapped in the mad race for success, which is the marked characteristic of the present age.

The physical system is a most intricate piece of machinery. It ought to be kept well regulated, so that it will work harmoniously in all its parts, then it is capable of an immense amount of work.

It is said that a watch, if expected to keep perfect time, must be wound daily. It will not keep good time unless it "runs regular." More men break down because they don't "run regular" than for any other reason.

It is claimed by physicians that few men are killed by hard work. It is to the irregularities of modern social life that the high death rate is due. Men burn their candle at both ends, then wonder why it burns out so quickly.

The main thing in keeping the human machine in good working order is to keep the regulator all right. "The blood is the life," and sound health is assured so long as the blood flows through the veins a limpid stream of purity.

Regulate the regulator with Warner's Log Cabin sarsaparilla, the old-fashioned blood purifier, prepared after the best formula in use by our ancestors in good old Log Cabin days, and with the vigor of brawn and brain which must ensue, in your life's lexicon you will find no such word as fail.

Farm Loans.

Loans on farms in eastern Kansas, at moderate rate of interest, and no commission. Where title is perfect and security satisfactory no person has ever had to wait a day for money. Special low rates on large loans. Purchase money mortgages bought.
T. E. BOWMAN & Co.,
Jones Building, 116 West Sixth street,
Topeka, Kas.

Correspondence.

A Few Suggestions to Mr. Smith.

EDITOR KANSAS FARMER: In the first place Mr. S. starts out with false premises and consequently could not fall of being forced into false conclusions. He intimates that the farmers productions are unprotected, while those of the manufacturer are protected. Is that true? It may be true that there is not sufficient protection upon some articles produced by the farmer as is shown by the millions of dollars worth thrown upon our market during the past year, and yet, if the duty were lowered so as to meet Mr. S's views—simply for revenue only, the importations would be greatly increased; so the remedy would be worse than the disease. Protection is of a three-fold character; protection of the article, the labor or the market. The farmer is benefited in having his market protected. Take for instance the New England states, together with New York, Pennsylvania and New Jersey, they have a population of about 15,000,000 inhabitants, and consume 84,000,000 bushels of wheat annually, but raise only 38,000,000. They therefore go abroad for the other 46,000,000 bushels. The west supplies it. Now, if Canada or the Indies are allowed to supply that defect, we can't do it. If we throw ours upon the market it will be glutted and the price must depreciate. The last year of our reciprocity treaty with Canada she threw 17,000,000 bushels upon our market; she now throws scarcely any, and why? The 20 cents duty bars her and gives the West an opportunity. India a few years ago exported no wheat, last year over 41,000,000 bushels. She can lay her wheat down in New York city with duty off cheaper than we can, the duty causes her to go elsewhere. We have millions of bushels to export, but that makes no difference with India; if she can make by throwing hers here she will do it. It is but a few weeks since Manitoba had 10,000,000 bushels to export. Our duty kept her from throwing it on the Chicago market and displacing that of Dakota. The same is true of all the farmers products, and a tariff for revenue either places them on the free list or places the duty so low that importations are increased, and we are either crowded out of our own market or the market is so glutted that prices must rule low.

Mr. Smith says "The common man does not stop to realize that he is actually paying a tax of 2½ cents on every pound of sugar." Hold, my friend, a tariff for revenue only, taxes all such luxuries. One party in Congress wanted to reduce the tax on sugar far below what it is, and the other refused upon the ground that the tax on that article was for "revenue only." Mr. S. further says we are taxed 1¼ cents on every pound of nails. Not true, my friend. We are not taxed a cent on all the nails we use. The duty is paid only on nails we import, and as we import none, how can we be taxed? We make our own nails and they are furnished us by the manufacturer nearly 50 per cent cheaper than when we imported them. Moreover, our woolen clothes is furnished us 33 per cent cheaper than when we got the most of it from foreign countries; and as the duty is only on the imported article, and as my friend is not obliged to purchase that at all, how is he taxed upon that? This tax talk is all a myth, outside of the article of sugar, from the fact we are manufacturing so largely that we control the price, and by home competition have reduced it to the consumer. Mr. S. says "If he is a merchant his goods are bought at a price that includes the duties," just as though we were importing the most of our goods. Why, we are making the most of our goods, and we fix the price, and if nations throw their's on our market they pay the duty and then sell at our price already fixed. These importers are all in the employ of foreign manufacturers. We import a good many potatoes. Now if a cargo from Nova Scotia is thrown upon the Boston market, do they enhance the price of ours already there? Not at all. Our's fix the market price and the foreign article sells for the same to the customer, or else they will not sell at all. Who paid the duty? Why the foreign producer or else the importer. That is why New South Wales has a lobby in Washington to get the duty lowered on wool, or have it placed upon the

free list. That is why the Canadian Lumber Co. had a large lobby in Washington to get lumber on the free list. That is why, when a few years ago it was proposed to lower the duty on steel rails, that Henry V. Poor, an agent for two importing firms of England, appeared before the Ways and Means committee in the interest of the project.

My friend seems to doubt that the laborer is benefited by protection, yet, let there be lowering of duties, and then would be a corresponding stimulating of importations, and who don't know that if there were an increase of importation to amount to even \$200,000,000 worth, that it would mean idle workmen to just that extent. Would strikes be any less frequent under such a state of affairs? Yes, protection does cause thousands to come to our shores, and that increases the farmers home market, but that does not reduce the price of labor as my friend intimates. The statistics of the past do not show any such thing, from the fact we also increased our manufacturing establishments and made a demand for that labor, and by the competition by such increase of establishments reduced the price of the product to the consumer; so protection has not "inviolably forced up the price of what labor has to buy" as the gentleman states. Mr. S. is simply theorizing in his statements; they are not facts; besides, that "independent farmer" does get more for what he has to sell, than he would get if duties were lowered. Increase our importations and throw out of employment 2,000,000 of our workmen, and let them become producers as well as consumers and where would the farmers market be?

The gentleman further says, "Suppose that the tariff was reduced so that the price of goods generally was reduced by one-fifth, then the man that does business with \$100,000 capital need employ only \$80,000, then \$1 out of every \$5 now locked in trade would be turned loose." Would the reduction of the price necessarily reduce the capital employed? Not at all. Would the reduction of the tariff reduce the price of the goods? Not at all. We once had the duties as low as 20½ per cent, and goods were higher then than they are now. At that time if you wanted to buy your wife a calico dress you paid 12½ cents per yard, and now you can buy just as good an article for 8 cents. He says millions of money would be seeking new enterprises. What and where? What man of means would invest at the risk of losing all by foreign competition produced by cheap labor? Our millions would be circulating in foreign lands instead of blessing American homes. Mr. S., in the fore part of his article, makes comparisons of the farmer's home and that of the manufacturer, which is quite conspicuous for its unfairness. He looks upon but one side of the picture. He don't stop to consider the manufacturer must be a man of means first. The manufacturer of pig iron for instance must have a capital of \$250,000. Now the income on that at 10 per cent on the investment is \$25,000, while the farmer here in the west can buy his farm for \$2,000; the income on that, at same rate would be \$200. Any one can make a better appearance on \$25,000 than on \$200. Besides a good deal of the farmer's hard times is his own fault in the reckless way in which he does business. Let a manufacturer pursue the same methods and he would go to the wall, and yet, there are thousands of farmers that are worth 50, 75 and \$100,000, and they got there too, by attending to business and keeping out of debt.

JNO. F. COULTER.

Russell Springs, Kas.

Running Notes About Weather and Crops.

EDITOR KANSAS FARMER:—This week's KANSAS FARMER is to hand, and has what I have been looking for—Prof. Snow's report for the month of September, proving, as I believed, that "the rainfall was below that of any previous September on our record," and that remark will apply to the whole State, and this right in the face of most wonderful predictions of abundant rains. Prof. Snow's August report showed a wonderful fall of rain at Lawrence and vicinity, yet at the same time a most terrible drought was over the larger portion of the State, involving a greater loss in quantity and value than ever known before. Of so little value are local figures. I am told that large quantities of wheat, oats and flax were

destroyed by excessive rains and storms in the eastern portion of the State. The summer is past and its record is about as follows: High winds, chinch bugs and drouth in May nearly ruined gardens, potatoes and and oats, and wheat was shortened. The same causes in July and August sent the corn crop "where the woodbine twineth." Sorghum held its own better than any other crop, while broomcorn, a staple crop over a large area hereabouts, is not more than one-tenth of a crop. Wheat sowing went ahead briskly the first half of September in consequence of fine rains the last week in August, but the weather turning dry the bugs got in their work and men are wishing their seed was in the granary. A local shower October 4 did some good, but dryness is the rule so far. The forty and fifty bushel corn is "panning out" twenty to twenty-five bushels, and the prospect seems certain that there will be less to eat for man and beast on May 1, '89, than same date '88. The 6,500,000 acres planted to corn won't yield an average of ten bushels to the acre, the *Farmers' Review* and *Cincinnati Price Current* to the contrary notwithstanding. The lessons of the year are many, but politics has the floor just now, and these lessons can better be studied after the election.

L. B. MALTBY.

Sterling, Rice Co., October 15.

[Our correspondent ought not to judge the whole State by what occurred in his immediate locality. The corn crop in general is good, the best we have had since 1884. Our November report will show.—EDITOR.]

Who Are Our Law-Makers?

EDITOR KANSAS FARMER:—I noticed a statement in one of the papers a short time since to the effect that out of sixty-seven State Senators and Representatives nominated by the Republican party sixty-five of them were either lawyers or interested in banks, and the Democratic party does not seem to be much behind in this respect.

Brother farmers, did it ever occur to you that their interests are diametrically opposite to yours? If there were no debts nine-tenths of the lawyers and bankers would not be needed in this country. It does not seem necessary to produce any argument to substantiate that fact, for to every observer it is self-evident. If our business was done upon a cash basis, who would be fighting over disputed accounts and lawing doubtful debts? and how many banks could exist if it was not for the usury they are sucking from the toilers? If they existed upon their exchanges alone we would not have need for near as many.

It is a painful fact to nearly every farmer in Kansas that there are debts and their numbers are legion. Why is it that this fair land is plastered over with mortgages? and why this diseased and disordered condition of society? I believe the debts are due almost entirely to the lack of money enough to do the business of the country on a cash basis. Why has there not been enough money in the country to do the business of the country on a cash basis?

In the Forty-fifth Congress there were 198 bankers and bank stockholders, ninety-nine lawyers, and the other thirty-five were divided with the industrial classes, but the farmers were without a representative. To whose interest is it that this unnatural condition of society should exist? The lawyers and bankers, who make our laws. The lawyers and bankers. Is it any wonder that the country is in debt?

In regard to the scarcity of money causing debts, it seems too plain to need argument; but you know we had a large, or we might say a full volume at the close of the war. Fortunes were being made on every hand and there was every inducement offered to go into debt, but in 1866 the entire indebtedness is placed at \$6,000,000,000, and nearly half of that was war debt owed by the government. Now the indebtedness is placed at \$34,000,000,000, with an annual interest of \$2,200,000,000, and labor pays all. Can any one give any other possible reason why the country has been overwhelmed into debt? Then, too, during the period of expansion, or from '63 to '65 inclusive, the liabilities of the business failures averaged \$14,000,000 per year, and during the period of the great contraction, or from 1866 to 1878 inclusive, the average for each year was \$130,000,000.

We have had no wars since 1865 to devour our substance, neither has our country been

blighted by famine; no maladies have been rife in our land. But on the other hand we have been blessed with peace, health and bountiful harvests until the cry has gone forth that an over-production is the trouble. But Bonamy Price says: "General over-production is impossible till the millennium arrives, when every man shall have wealth and enjoyment, shall be rich to the utmost extent of his desires, and no one will be willing to work in order to obtain more."

But perhaps in the history of no nation has there been so much wealth added in so short a time as ours since the close of the war, and yet we find those who produced this wealth almost hopelessly in debt. Some may think that is a little strong, but I would ask how long will require \$34,000,000,000 at 7 per cent. to absorb \$45,000,000,000 (the value of the property in the United States) at 3 per cent., the average increase by labor. Why is it that those who have produced this wealth are so much in debt? I say it is owing to unjust and vicious legislation.

It should be the aim and object of every toiler to do what he can to remove the burden of debt and to restore society to a normal and healthy condition. Senator Plumb, in a speech bearing upon this subject, said: "We are dealing with a question which has more to do with the welfare of the people of the people of the United States, which is of more concern to them than any other thing that is pending in either house of Congress, or which can be pending—the volume of the circulating medium of the country, the value of its property, the difference between debt and bankruptcy on the one hand and freedom from debt and prosperity on the other." There rests the difference. The contraction of the currency is bankruptcy, and the expansion is prosperity. It is the history of the world and the conclusion of the best minds, and who dare say Plumb is not right?

Now can we expect lawyers and bankers to make laws that they know will be the ruin of their occupations and destruction to their business? If we have no reason to believe that they will do so, and believe it to be to the interest of society that the debts be paid and the unjust and ruinous burden they are imposing upon labor should be removed, why will we send them to make our laws? I ask you to carefully consider this matter, and if I am right, I ask you to vote for men to make our laws whose interests are identical with ours.

GEO. T. BAILEY.

Harper, Kas.

Our Illustration.

This week we present a sketch of a Kansas-bred Poland-China, Champion 10929, owned by a representative and successful Kansas breeder, V. B. Howey, of Topeka. His Walnut Grove herd is now headed by Little Giant 12009, winner of first in class and sweepstakes at the Kansas State Fair this year; also at the Ottawa fair he took first premium over all breeds and headed the sweepstakes herd at the same place. At these two fairs the herd won six first and two second premiums with the strongest kind of competition. Male pigs, from 12 to 15 months, \$25 to \$30; some younger, \$15; sow pigs, \$15 to \$20; sows bred, from \$25 to \$40.

Ten days is about as long as the very choicest of butter will *fully* retain its most delicious flavor. Butter "worked" to about the consistency of tallow, ought to "keep" a lifetime.

Farmers and others who have a little leisure time for the next few months will find it to their interest to write to B. F. Johnson & Co., of Richmond, Va. They offer great inducements to persons to work for them all or part of their time.

Attention, Farmers!

The Woman's Exchange, 114 West Seventh street, has become the most popular place in the city as a resort for the hungry. Transient rates 50 cents per meal; lunches from 25 cents upward.

State Forest Tree Notice.

The application books of Forestry Stations Nos. 1 and 2 will be closed about November 5 next. All wishing to participate in this year's distribution of seedlings will please have their applications in prior to that time. Address all communications to

S. C. ROBB,
State Commissioner of Forestry,
Ogallah, Kas.

[Western Kansas papers please copy.]

WHAT CAUSES HOT WINDS?

The article of Mr. Adams in the *Kansas City Times* which was reprinted in the *KANSAS FARMER* two weeks ago, brought out an interesting discussion. We copy below two communications on the subject, one from Prof. Shelton, of the Kansas State Agricultural college, which was first printed in the *Kansas City Times*, the other from Prof. Hawn, of Leavenworth, written for the *Times* of that city.

PROF. SHELTON'S COMMUNICATION.

In common with the great mass of your readers, I have been greatly interested in the discussion of the question of the origin of our Kansas hot winds, started in your columns by Mr. Adams. Unfortunately for me, I have been unable to read all the communications on this theme which have appeared in the columns of the *Times*. For this reason I venture this unprofessional opinion—for I, too, am no meteorologist—with great diffidence, knowing the imminent risk I run of presenting to your readers very much threshed straw instead of unbroken sheaves of grain.

I confess in the outset that I am not nearly satisfied with the argument brought forward by Mr. Adams and others in support of the common and generally accepted view that the Indian Territory and the great unoccupied southwestern region generally are the sources of the hot winds which, more than the grasshopper, burden our agriculture. It is true that these winds with great uniformity blow from the direction of this wilderness region, but that the heat that is experienced by us in the slightest degree proceeds from this region I must deny. The reason for the steady movement of the southwest wind during our summer seasons has been, as I remember, made clear by Prof. Greenwood.

Let us glance briefly at some of the elementary facts bearing on this problem of the origin of the hot winds. The earth receives all (nearly) of its heat from the sun. If the earth is dry it promptly radiates the heat thus received back into space; if wet, it retains more or less of the heat in the latent state. The heat that has escaped from the earth rises vertically unless impeded; if, for instance, the wind blows, the heat is carried away from the vertical toward the horizontal, the amount of the deflection varying with the force of the wind, as may easily be demonstrated. The familiar fact that, however heated, the hottest place in the room is that portion nearest the ceiling, sufficiently illustrates this upward movement of heat. A consideration of these and related facts leads irresistibly, it seems to me, to the conclusion that the heat of our "hot winds" originates right where they are felt, most likely within a few feet of the person experiencing their power; that Kansas hot winds and Dakota hot winds originate respectively in Kansas and Dakota, and are not to be bundled upon some "unoccupied region" which cannot defend itself. I append a few of the facts which seem to me to establish this view, as it were, "upon a rock."

First—Our hot winds almost never blow during the night. When the winds blow all day, however great the heat may be, the nights are generally cool and comfortable, making Kansas during the summer season the best country to sleep in in the world. About 9 or 10 o'clock, synchronously with the gain of the sun's power, the hot winds begin to blow. Now, Mr. Editor, can any rational man believe that during the two or three hours separating the cold night and the hot day the hot wind could have traveled all the way from Texas or the Indian Territory, distant a couple of hundred miles more or less?

Second—The hot winds blow, often most destructively, in Nebraska, in Dakota, in Missouri, in Michigan. In the summer of 1886 I had personal experience in central Michigan of one of these scorers which came, apparently, from a heavily-timbered region a hundred miles wide. If Kansas gets the hot blast from the Territory then Nebraska gets her sirocos from Kansas, and Dakota's scorers must have their origin in Nebraska.

The truth is, as it seems to me, our hot winds originate right where they are experienced, and no amount of "breaking up the soil" or "tree planting" east, west, north or south of us will ever materially alter existing climatic conditions, for vegetation is the

result of climate, and not climate of vegetation.

PROF. HAWN'S COMMUNICATION.

The discussion of the origin of hot winds of Western plains has taken an extensive range, and the dominant conclusions seem to have settled on the sandy plains (formerly called "Staked Plains") of the Southwest as their source.

This reference, so far as I have traced the discussion, has been more hypothetical than deductive, as sufficient facts have not been presented to establish even a theory. It is true that most of the heat of the air is radiated from the earth's surface, having first been absorbed from the rays of the sun, and that this absorption is excessive on a bare sandy surface. Ordinarily when the maximum temperature of the air reaches 70 or 80 deg. in a clear day the surface may reach 110 to 130 deg. But this extreme temperature is readily thrown off after the sun's rays ceased to heat the ground. Even before sunset the surface rapidly cools down, and it will be found, after a clear night, it has not only lost its preponderant heat of the previous day, but it is from 4 to 8 deg. colder at sunrise than the air four feet above the ground. It then follows that however excessive the heat may have been over sandy plains during the day, it recedes many degrees during the night, and that like comparative recessions occur over several hundred miles intervening between us here and those plains, so that the excess of temperature that may have accrued there would be

ology under my supervision, in a corps under the direction of Lieutenant Ruffner, of the Engineer Department, on topographical service in the mountains of Colorado. I often observed a range of 60 deg. and above at an altitude of 10,000 feet. If conditions then prevailed to break down this elevated superheated stratum of air to the level of 1,000 feet on the plains, the increased temperature on descending would have amounted to 110 deg. Such results were manifested in the intense heat and dearth of rain that prevailed here during that summer. The consequence was that the crops were scarcely worth harvesting. Like relative conditions prevailed to a greater degree in 1874, when many of the farmers had to supply themselves with provender from abroad. Many similar co-relations came within my observations since 1868 (when my attention was first directed to this subject), some of which were published in the news of the day.

While my observations and their results in 1873 were local, yet the lack of the normal amount of snow in those elevated regions, raised the temperature much above the normal, and this excess produced like conditions as we have seen, on the plains below. Early in June of 1873 the snows in the mountains had all disappeared. The temperature throughout the summer was mild, even on the highest accessible localities. The sun was scarcely ever obscured by clouds. Calmness prevailed almost to monotony, and I never before realized the perfection of an idealistic climate. But these were abnor-

narrower and more compact, the genial influence of warmer winds from the Pacific coast reach the plains also in the winter.

I long since contended for those principles. There is not only no remedy against the hot winds, but by the improvidence of man this pest will become intensified. The forests of the mountains are disappearing with reckless prodigality, and in that proportion it facilitates the liquification of the snows and destroying these conservative atmospheric influences by reducing the timely amount of our rains, intensifying our summer heat, and producing a radical change of our climate. On several occasions during the last fifteen years I warned the public against this impending danger.

Keystone Corn-Shell.

The corn-shellers made by the Keystone Manufacturing Company embrace a very large line, from the small hand-sheller up through all sizes of hand and power corn-shellers to the large six-hole sheller with a capacity limited only by the ability to get the corn to it. These power shellers contain the latest and best improvements in shellers. The shelling is done by picker-wheels and picker-shafts, which latter present about eight inches of shelling surface to the corn against only about two inches in the stripper-wheel shellers, thus enabling the Keystone shellers to do very fast work. These picker-shafts assist to take the corn through as well as to shell it and are self-adjusting, so they instantly adapt themselves to all sizes of ears and to all parts of the ear from point to butt. The separating of the shelled corn from cobs is done by open link chains, the most simple device yet made. It separates perfectly and rapidly and is the only device that will not clog in damp corn. If you want a hand-sheller of any size or a power-sheller of any size, send to the Keystone Manufacturing Company, Sterling, Ill., for their catalogue and full information. Branch and supply houses at convenient points. The Keystone Implement Company sell them at Kansas City, Mo.

Gossip About Stock.

The sale of Zinn & Lackey at North Topeka, last Friday, was well attended, but prices were only moderate—\$55 a head was the average for Holstein cows. The dispersion of this herd among the farmer purchasers will have a beneficial effect.

The sale of pure-bred Poland-China hogs from the herd of John Lewis, Miami, Mo., which took place at the fair grounds at Marshall, Mo., October 11, was well attended and the lucky purchasers got decided bargains. One hundred and six head sold at the remarkably low price of \$1.103.

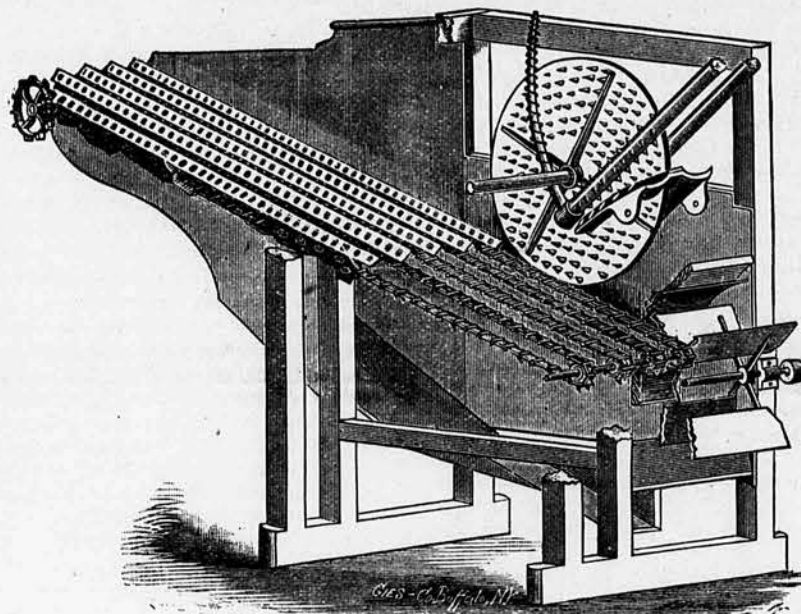
On Wednesday, October 24, at Mexico, Mo., the breeders of Short-horn cattle in northeastern Missouri will sell sixty-five head of cattle at public sale. The offering is said to be a creditable one in every way and deserves the presence of every Western purchaser. Address, for catalogue, S. P. Emmons, Mexico, Mo.

Willis E. Gresham, Burrton, Kas., breeder of Poland-China swine and Partridge Cochon poultry, at the Hutchinson fair won with his swine five first and two second premiums, besides the sweepstakes on boar any age or breed, six pigs with dam and for best collection of swine. His Cochons won first and sweepstakes premiums.

The Jersey herd exhibited by J. A. Doors at the Harvey County Fair attracted a good deal of attention, especially the bull at head of herd. The entire lot show very judicious breeding and are among the best Jersey stock in the State. This was confirmed if the visitor other than the experienced Jersey man could judge by the number of first prizes taken in a competitive field.

F. M. Lall, Marshall, Mo., recently purchased at Columbus, Ohio, a fine Poland-China sow and boar. The boar has made a fine record as a prize-winner this year, having won first premium and sweepstakes at Toledo, Ohio; first premium at Buffalo, N. Y.; first premium and sweepstakes at State Fair at Columbus, Ohio, and first premium at St. Louis. The sow has made almost as good a record.

W. S. Hanna, of Ottawa, Kas., reports that recent sales are so numerous that he can't make crates fast enough to ship the pigs ordered from four States. H. S. Reed, of Lincoln, Neb., an expert judge of that State, ordered a sow pig to scale over .70, and was so well pleased he immediately ordered a boar, and prints in *Western Resources* that "it is the finest sow pig seen in a long time." M. Hart, Clebourne, Texas, who feeds 500 head of fat cattle, did the same thing, and says, "You may expect my custom in the future." Three old customers have ordered the third boar for the third year last week. Most pigs are sold to breeders of thoroughbred hogs. Still there are over seventy left for sale.



KEYSTONE CORN-SHELLERS.

dissipated long before it could reach us here.

These conclusions become still more obvious from the conditions that preceded the advent of a hot wind on October 4, 1871. Soon after midday the temperature began to increase rapidly and culminated in 93 deg. at 2 p. m., but soon commenced falling, and at sunset the thermometer marked 83 deg. On the three preceding mornings at sunrise the temperature stood at 50, 55 and 46 deg. respectively, and on the morning of October 4 at 53 deg.

These hot winds have, and those of the Chinook winds of the Northwest are governed by the same laws and are the undoubted analogue of the foehn that occasionally fold down over northern slopes of the Alps, and fill the valleys with abnormally high temperatures and excessively dry atmosphere.

In investigating the characteristics of these winds Dr. Hann, an eminent meteorologist of Germany, ascertained that these descending currents increase in temperature in proportion to their increase in density by atmospheric pressure, and by stations for observation along the mountain slope found the increase to be in ratio of 1 deg. in about 182 feet.

In adopting these principles in an investigation of the hot winds occurring on the Western plains, we are enabled to establish a close parallel between them and the foehn of the Alps.

We know that a high range of temperature sometimes prevails high up in the Rocky mountains. There have been instances when the range reached higher on Pike's Peak than at Denver. In the summer of 1873 I was on duty as geologist, with meteor-

mal conditions, and as we have seen extended down to the plains below, intensified by the operation of the law previously cited.

A normal current arising from the Pacific coast ascends the mountains to their summit, and then passes on east, the lower portion of the stratum or current constantly encounters irregularities of surface, enters deep valleys and parks, combining with such local influences it may encounter, modifying that portion of the stratum floating clear of the obstructions; and it is obvious that this portion of the stratum being free from friction, retains its normal velocity, and will always be in advance of the lower. If the lower encounters the normal amount of snow, the current on arriving at the eastern margin of the mountains will be of low temperature and containing relatively a high per cent. of moisture. This, when combining with other elements, descend and produce our rains.

When a storm develops in a high thermal range on the Pacific coast, its force wafts its elements rapidly up the western slope to the summit of the mountains, and is then urged forward with great velocity, comparatively uninfluenced by local conditions, particularly in the absence of the normal snows, and consequently when among the eastern margin of the mountains it will contain an abnormal high temperature, and very dry, and in its descent increasing in rates of 1 degree in every 181 feet down to the plains, when with a velocity of twenty or twenty-five miles per hour (which is about the normal of the hot winds) it passes on towards the southeast.

The Chinook winds are of like character and origin, but as the mountain belt there between the Pacific coast and the plains is

The Home Circle.

To Correspondents.

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

Lines Written Under the Flag of the Capitol.

They say I do not love thee,
Flag of my native land,
Whose meteor folds above me
To the free breeze expand;
Thy broad stripes proudly streaming,
And thy stars so brightly gleaming.

They say I would forsake thee
Should some dark crisis lower;
That, recreant, I should make thee
Crouch to a foreign power;
Seduced by license ample,
On thee, blest flag, to trample.

They say that lots of thunder,
Cast in the forge of Rome,
May rise and bring thee under,
Flag of my native home,
And with one blow dis sever
My heart from thee forever.

False are the words they utter,
Ungenerous their brand,
And rash the oaths they mutter,
Flag of my native land;
While still, in hope above me,
Thou wearest—and I love thee!

God's is my love's first duty,
To whose eternal name
Be praise for all thy beauty,
Thy grandeur and thy fame;
But ever have I reckoned,
Thine, native flag, my second.

Woe to the foe or stranger,
Whose sacrilegious hand
Would touch thee, or endanger,
Flag of my native land;
Though some would fain discard me,
Mine would be raised to guard thee.

Then wave, thou first of banners,
And in thy gentle shade
Let creeds, opinions, manners,
Promiscuously be laid;
And there, all discord ended,
Our hearts and souls be blended.

Stream on, stream on before us,
Thou labarum of light,
While in our general chorus
Our vows to thee we plight;
Unfaithful to thee! Never!
My native land forever!

—A Catholic Priest.

So these lives that had run thus far in separate channels,
Coming in sight of each other, then swerving
and flowing asunder,
Parted by barriers strong, but drawing nearer
and nearer,
Rushed together at last, and one was lost in
the other. —Longfellow.

I hear the lofty peans
Of the masters of the shell,
Who heard the starry music
And recount the numbers well;
Olympian bards who sung
Divine ideas below,
Which always find us young,
And always keep us so. —Emerson.

PHYSIOLOGICAL LAWS.

Without physical laws all would be chaos, and we might find an excuse for indulging in the sneers of atheism; but when we look around us we find a harmonious relation that runs through all the intricacies of organic life and inorganic molecules as well. Physical laws govern matter in all its diversified forms, from the microscopic germ of life to its full expansion, even to death and its resolution into its original chemical factors. These laws and their secondary causes and effects, under like influences, are uniform and inevitable; thus showing their origin to be from an intelligent and infinite source. And what triumphantly proves this is man's inability to change them—he can only change conditions which bring into action other laws equally as uniform. He cannot create or change a single one, for all are fixed and unalterable as when the supreme fiat of Omnipotence first decreed their existence. These laws were created to perpetuate the "fitness of things," and give man, the especial child of God, an abiding and unalterable confidence in Him "who will do all his pleasure" through his unalterable and just laws. And they were made, in part, as a guide to us mortals when aided by the powers of the spirit within us capable of grasping cause and effect through the cultivation of the faculties given us. Ignorance of a physical law will not prevent the infliction of the penalty when violated.

It has its distinctive penalty; or in other words, is man's great teacher in the avoidance of pain and suffering. It is through the violation of law that its existence becomes known, and it is thus we learn that obedience exempts from evil consequences. A

child burns its fingers on the hot stove, the smart following is a lesson of so forcible a kind that it is ineffaceably impressed on memory and the stove is given a wide berth. This same child having alimentiveness strong overloads its weak stomach and he suffers from the violation of a physiological law; the stomach rebels and throws off its load or protracted pain and diarrhea ensue. But this one lesson does not suffice, because of an over-cultivated faculty, and painful repetitions are necessary before a reasonable obedience is effected, and these must be aided by reason and judgment. Looking at these things in the light of reason we see that the effects of violated laws are but teachers and, what is called punishment is intended for our good. If this is not so, then their existence is an unsolved conundrum.

Animals are endowed with instincts which guide them more unerringly than reason guides the great mass of mankind, and hence right here we perceive the great importance of parental oversight because of the child's profound ignorance of the simplest laws of life and health. Here we may see if we will, that it is the great duty of parents to become familiar with anatomy and physiology and constitution of mind that we may protect and foster the health and happiness of our children who are helplessly dependent upon us for guidance and protection. The records of necrology show a lamentable and fearful passing away of infants and children up to the age of ten years, and there can be no question that these results are mainly to be attributed to a really criminal ignorance in this land of advanced civilization, on the part of parents, for parents are the only alternative, the only protectors, the only lamp of hope for the feeble life committed to our charge. The fact that numerous persons live to the age of fourscore is evidence that nearly all infants, outside of inherited disease, that are born into the world under circumstances to which they are entitled, may live to the same ripe age. The excessive infant mortality shows a marked deficiency in the ability of parents to properly care for infants. The education of young men and women for the last quarter of a century has been feebly directed to the importance of a better understanding of physiological laws, and the records begin to tell of the magnitude of its importance, in that the influence already exerted shows that the average of life is in the ascending scale. Infancy is helpless dependence, and childhood is little better, and hence a constant and careful watchfulness, backed by essential knowledge, is supremely necessary to the physical health and correct mental development of the children. Primary education passed, study the details of practical business, the anatomy and physiology of the human body, and after, if you have means and inclination, study the natural sciences, music, etc., or the languages and astronomy and gaze at the stars in amazed speculation. We hold that children are born to live, grow, mature and decay physically, the same as all other living things—born to enjoy and suffer, and the education that best subserves a happy life here will most surely assimilate our spirits to "the Giver of every good and perfect gift," and consequently is what we most need to know. Physical health above all other things contributes to mental enjoyment, and the two happily combined are the grand climacteric of life on earth and will lead us in the paths of obedience to moral laws. Indeed, the more perfect the health of body and mind, the more perfect our obedience to the teachings of truth.—R. K. Slosson, in *Western Rural*.

Books That Are Read.

A public library is the intellectual pulse of a community, and its records are as accurate an indication of the exact tendencies into which the great reading public has drifted, as the beats of the artery beneath the skillful physician's touch are the revelation of the condition of a patient.

In both instances, too, to complete the comparison, the diagnosis of to-day may be utterly changed by to-morrow. Unforeseen conditions may arise that will render the prescription of one hour valueless at the next, and so, in a library, the current of public favoritism, running now so strongly in a certain direction, may soon be diverted almost without the slightest premonition, in directly the opposite trend. Still the lesson of the hour may be fraught with many valuable suggestions, and to those who find a

happy companionship in books—no matter of what class—when time runs laggingly, or the brain, distracted by the vexatious annoyances incumbent upon life, seeks relief in forgetfulness of the present, all things connected with the volumes and authors who have been the open sesame to a temporary oblivion of surroundings must assuredly prove of interest.

Novels and tales, some one has said, are expected fresh, daily, like muffins. It was a bold assertion and not far remote from the truth. The ordinary sensation, like a flower of the garden, soon fades and passes away beyond remembrance. Its existence may be perpetuated in some dusty, unknown alcove, its well-thumbed pages telling of its brief run of popularity, but, for all the reading world knows or cares, it has practically disappeared forever. Its place in the popular estimation is vacated for another that too soon will share its mournful destiny. The history of these works is but a few days of fame, and then contemptuous disregard and forgetfulness until some wise librarian consigns them to destruction.

Possibly even this is better than the fate of others whose pages are never turned. To "cut a shine" for a time is more gratifying to pride than to live longer with no especial distinction. Anyhow, be all this as it may, the ephemeral novel, the novel that critics poo-hoo and aesthetes condemn, the novel denominated as "flashy," and "trashy," and "realistically absurd," the one that all self-appointed censors of morals and progress pour forth their accumulated venom upon, this, this much-abused work, is just the identical one that the people buy and read, and loan to their friends to read, until the back has been worn into fragments.—*Savannah Times*.

Resuscitation of Those Apparently Drowned.

Every season greater or lesser number of persons are drowned at the summer watering places. Imprudence in bathing or careless boating are the almost invariable causes of such deplorable accidents. Not infrequently the victims of such accidents are rescued before life is extinct, and could be resuscitated if the proper measures were resorted to in a prompt and effectual manner. In order, however, to accomplish results at once so urgent and desirable, every person should understand the few plain and practical rules that are usually relied upon to bring about restoration. These rules, as will be seen, are simple and can be employed by almost any one who can remember them and retains the self-possession to apply them in an intelligent manner.

When a person drowns he suffers death from suffocation. Air has ceased to enter the lungs, and in place thereof the air passage and cells are filled with water. This is especially the case if a person breathes or gasps after sinking, in which event the water is sucked in and the air is forced out. If a person sinks and the body is recovered in five, ten or fifteen minutes—perhaps even more—there are three natural conditions to be re-established as rapidly as possible: breathing, warmth, and circulation. The instant the body is in hand, begin the work for life, but let everything be done in a cool and methodical manner.

1. Loosen constricting clothing. Turn the person face downwards; then, bending over, clasp your arms under the lower portion of the person's breast and lift up and continue so doing for two or three seconds. This procedure will make the head lower than the rest of the body, at the same time it compresses the lower portion of the chest, thus tending to force the water out of the air cells. This process should be repeated two or three times after brief intervals. Don't hang the person up by the heels, roll him or her on a barrel, or do any useless and brutal acts.

2. Then turn the person upon the back, and if there is any dry clothing at hand, quickly tear off the wet garments and wrap with those that are dry and warm—for warmth is one of the essential conditions on which life depends.

3. Now commence the "Sylvester method" for the restoration of respiration. This method is probably as good as any and has the advantage of being very simple.

"Place the patient on the back on nearly a level surface. Raise and support the head and shoulders on a small, firm cushion or folded articles of dress placed under the

shoulder blades. Draw out the tongue and hold with a cloth of some kind in order to avoid its slipping back and preventing the entrance of air into the lungs. Now begin the imitation of breathing by kneeling at the patient's head and grasping his arms just above the elbows. Carry the arms steadily upwards from the body to above the head, and keep them stretched upwards for about two seconds. By this means air is drawn into the lungs. Then turn down the victim's arms, and press them gently and firmly for about two seconds against the side of the chest. By this means air is pressed out of the lungs. Repeat the measures alternately, deliberately and perseveringly, about fifteen times in a minute, unless a spontaneous effort to respire is perceived. Immediately upon which, cease to imitate the movements of breathing and proceed to favor the circulation and warmth."

4. Warmth is best promoted by removing the wet garments from the victim and replacing them with woolen blankets if these can be had. If they can not be had, use any covering at hand, providing it is warm and dry. Also employ, if it can be had, artificial warmth in the form of hot flannels and bottles filled with hot water. Friction, such as rubbing the patient with the bare hand or with flannels, also aids towards restoring warmth and exciting the circulation. Let it be borne in mind that warmth is one of the indispensable conditions of life, and it is ever one of the chief agents in restoring those who are apparently drowned.

5. The restoration of the circulation is the third object to be kept in view. Here warmth performs another part, for it tends to relax the capillaries which are in a state of contraction from the effect of cold. It renders it possible for the blood to circulate and it relieves the congested state of the internal organs. Rubbing not only aids in increasing heat but also favors greatly the motion of the blood. The efficiency of rubbing is increased by using such stimulants as turpentine, whisky or salt water. Rubbing should be made towards the heart.

6. Finally, less important efforts, but still more worthy to be employed, are the cautiously passing of ammonia or hartshorn under the victim's nose; allowing plenty of fresh air; sprinkling cold water in the face; "flipping" or slapping the face with the end of a towel wet with cold water; keeping the victim flat on his back so as to favor the heart's action. As soon as there is ability to swallow, stimulants may be guardedly used, but they are of doubtful utility.

In conclusion, there are four cardinal maxims to be borne in mind when attempting to restore those who are apparently drowned: act promptly; don't get excited; use common sense; persevere.—*Hall's Journal of Health*.

"God bless all the good old mothers. I never see an old lady sitting in the arm-chair at her ease but I think what storms have pelted into that cheery face without souring it. It may be that a man can go through more exertion than a woman, but at least it remains true that he cannot without losing his laughter, his good cheer, his gentleness and his love and trust in mankind or God. Yet how rarely do you find a frail old mother whose spirit has been worn threadbare and unlovely by what she has endured. A sweet old mother is common. As thy day so thy strength of love, thy riches of an inexhaustible benevolence and hope and faith. This is more apt to be a woman's story than a man's."

How to Select a Wife.

Good health, good morals, good sense and good temper, are the four essentials for a good wife. These are the indispensables. After them come the minor advantages of good looks, accomplishments, family position, etc. With the first four, married life will be comfortable and happy. Lacking either, it will be in more or less degree a failure. Upon good health depends largely good temper and good looks, and to some extent good sense also, as the best mind must be affected more or less by the weaknesses and whims attendant on frail health. Young man, if your wife is falling into a state of invalidism, first of all things try to restore her health. If she is troubled with debilitating female weaknesses, buy Dr. Pierce's Favorite Prescription. It will cure her.

In the Fifth Annual Report of the Wisconsin Agricultural Experimental Station, is a description of a good hog house, with cuts to illustrate the plan. Prof. Henry is doing a great deal of good work. He is growing into a national educator in agricultural methods.

There will be a joint meeting of the Missouri Valley Horticultural Association and the Douglas county (Kas.) Horticultural Society, at Edwardsville, in Wyandotte county, next Saturday, the 20th inst. It will be an interesting occasion, for the membership is large.

A Lane county correspondent writes concerning weather reports. He is mistaken as to who wants the report. He should address Sergt. T. B. Jennings, Kansas Weather Service, Washburn College, Topeka, Kas. His letter and report have been referred to the weather service in accordance with the above directions.

The Cottonwood Falls, (Kas.) Creamery company started their plant July 16, with a capacity of 10,000 pounds of milk daily. They make both butter and cheese. The company has a capital of \$7,500, and is officered as follows: J. M. Tuttle, President; J. F. Kirker, Vice President; W. H. Holsinger, Treasurer; and Leo. Ferlet, Secretary.

Men talk about skilled labor. A good farmer is a specimen of skill in labor. Every good farmer has served a large apprenticeship at his trade, and no man who did not so serve ever was a good farmer. It requires about three years to learn the "art and mystery" of a mechanical trade, but no man ever equipped himself in three years for successful farming.

THE LISTER.—A correspondent in Howard county, Mr. A. J. R. Hughes, asks for discussion of the subject of listing corn. He has used the lister three years and is pleased with it. He believes good results would follow the statement of experience with that implement in different parts of the State. We indorse the suggestion of Mr. Hughes. The subject is a good one. The lister is a good implement in some places and under certain conditions—a great improvement, indeed, and a discussion would bring out what those certain conditions and where those places are.

A 57,000-acre land fraud was recently discovered in California. A syndicate, composed principally of foreign capitalists, was organized, it is alleged, for the purpose of securing the title to these valuable tracts from the government, and the attempt was made to do so by means of fraudulent entries. Some 360 such entries were made, embracing about 160 acres each, in which it is claimed perjury and subornation of perjury was recklessly committed. Of these entries many have been held for cancellation and steps are being taken to secure forfeiture to the government in other cases.

A strong feeling is manifest on both sides of the line in favor of a political union between the United States and Canada. An Ottawa dispatch, referring to a reported interview with Senator Sherman, says it is expected that annexation clubs will be started shortly throughout Ontario, Quebec and the maritime provinces, and the leading imperial managers have resolved to push an immediate extension of a league to fight the annexationists. The question of annexation is coming rapidly to the front and shoving out of sight the question of commercial union and unrestricted reciprocity. An annexation campaign this fall is in preparation, for the meeting of parliament in January, is now considered inevitable.

How to Prevent Frauds at Elections.

To insist upon the purity of elections is a duty of every citizen. So many schemes to defeat the popular will have been successful that it is imperative to provide better safeguards than those we now have. One of the most prolific sources of fraud is found in the manipulation of tickets in the hands of ignorant voters. Among the suggestions to save the timid and ignorant voter from the rapacity of villains who would buy and sell them like cattle, is that proposed at the last session of the Massachusetts Legislature. The bill provides first that all ballots shall be printed at the public expense, and that idea is becoming very generally adopted as sound—that the State should provide the ballots.

Each ballot "shall contain the name, residence (with street and number in city elections), and party or political appellation of every candidate whose nomination for any office to be specified in the ballot has been duly made," the names to be arranged in alphabetical order, except that Presidential electors are to be arranged in a separate group. The provision for distributing the ballots to the election officers at the polls is so specific and so interesting as an effective means for preventing forgery of the official ballots that we give it in full:

"Section 14. The secretary of the commonwealth shall send the proper ballots, specimen ballots, and cards of instruction printed by him, to the several city and town clerks, so as to be received, one set at least forty-eight hours before the day of election, the other set sent separately so as to be received at least twenty-four hours before the day of election. These ballots, specimen ballots, and cards shall be sent in separate sealed packages clearly marked on the outside for the polling place for which they are intended, and the number of ballots inclosed. The ballots, specimen ballots, and cards of instruction printed by the city clerks shall each set be packed in separate sealed packages clearly marked on the outside for the polling precincts for which they are intended. The city and town clerks shall send to the several officers of each precinct or to the selectmen of the town before the opening of the polls on election day, in the manner in which the ballot boxes are required to be sent, one full set of the packages of ballots, specimen ballots, and cards intended for that polling place, keeping a record of the number of ballots sent to each polling place. The second set shall be retained until they are needed for the purpose of voting. At the opening of the polls in each polling place the seals of the packages shall be publicly broken and the packages opened and the books of ballots handed to the ballot officers hereinafter provided for by the precinct officer or the selectmen of the town presiding at such polling places. The cards of instruction shall be posted in each place provided for the marking of the ballots, hereinafter provided for, and not less than three such cards, and also not less than five specimen ballots, posted in and about the polling place outside the guard rails, before any ballot is delivered to the voter."

When the voter receives his ballot, after he has shown that he is entitled to vote, he must go alone into a compartment and check with a cross in the margin of the ballot the names of the candidates for whom he wishes to vote. Then he must fold his ballot so that the official indorsement on the back will be visible, and, coming from the compartment, deposit it in the ballot box. No ballot without the official indorsement can be received by the officers in charge of the ballot boxes, and if any such

should get in, it must be thrown out in the counting. Any voter who allows his ballot to be seen by any person with the apparent intention of letting it be known how he has voted or intends to vote, or any person who interferes or attempts to interfere with any voter while marking his ballot, or who attempts to ascertain in any way how he has voted, shall be punished by a fine of not less than \$5 or more than \$100.

This is submitted now for the inspection of candidates, and for the careful study of gentlemen who will be elected members of the Legislature next month. Kansas has made a good beginning in this direction by providing that in cities the space near the voting places shall be kept clear of persons except those who are voting, but the privacy of the voter and his security against observation and interruption can be and ought to be still much better protected.

How to Use Kaffir Corn.

In response to inquiries about the best uses of Kaffir corn, we have two communications from practical men.

[From Mefford & Platt, Garden City Kas.]
We notice your inquiry as to the manner of feeding Kaffir corn. Feed it in all respects same as sorghum, as a fodder. As all Kansas farmers use cane we presume this is sufficient information. For the grain. It may be fed same as oats, after threshing; it makes a valuable feed and will easily produce fifty bushels seed per acre in our dry soil and has done it this season. Any one wishing to try it for a crop next season can procure fine seed in this locality.

[From R. B. Briggs, Great Bend, Kas.]
I notice in last week's issue of KANSAS FARMER, a correspondent wants to know how to use Kaffir corn. It sometimes happens that such questions do not get answered, everybody thinking some one else will answer it. If you have received answers this can go into the waste basket. If it is the grain he wants to know how to use, I would say it is not necessary to thrash it. Horses, cattle hogs or chickens will eat it without. It is about the size of, and similar to look at, to rice corn. Or if the person has not seen rice corn, I would saw the grains are as large, or a little larger than sorghum seed. But the seed is more compact and the heads are larger than those of cane. The stocks stand erect like cane. Its effects on cattle would be the same as corn. I think bushel for bushel it is equal to corn—perhaps not so heating. I would prefer it for young pigs. It is a splendid poultry food. And the fodder is a valuable feed; but it will not yield the fodder that the milo maizes will.

The estimated yield of wheat for this year is 407,000,000 bushels. Estimates of shortage in weight range from three to eight pounds per bushel, but flour has advanced from \$1.15 for shipping grades to \$2.40 per barrel for patents or 30 to 43 per cent. If the rise in the price of bread, as yet only one-sixth, leads to a fall of one-sixth in the quantity purchased, the difference will be greater than the shrinkage in weight at the largest estimate.

Speaking of the organization of farmers in general, and of the Granges in particular, R. M. Edwards, of Colorado, says: "While the Grange is nonpartisan, that is, not tied to the apron strings of any political party, yet it is a mistake to assume that it has no connection with politics. To succeed it must follow the methods of business men. They work with all political parties and so must we. They want certain measures enacted so they have lobbyists working for them in Congress, they write personal letters to their leg-

islators and induce as many prominent men as possible to do the same; they draw up petitions, write communications to newspapers, pay editors to work for them and keep up an unceasing warfare until their ends are accomplished. Their forces are not as numerous as ours but they are better armed, disciplined and equipped. Until we fight in the same way, know what we want and ask for it unitedly we cannot expect success."

After Tenderfoot.

Mr. J. Browse Oldreive, writing from Florence, Kas., takes exceptions to some statements which were copied two weeks ago in this paper from an Alaska journal. Here is his letter:

EDITOR KANSAS FARMER:—Some more driveling England appeared in your columns last week by a "Tenderfoot." To show the Catholicity of his attainments in describing Alaska he drags in England and says that "lords, dukes and earls" (sic) "having acquired through their ancestors by might hundreds of miles square, would cause a person caught stealing their pheasants or trout to be imprisoned five years." The usual term of imprisonment for this form of theft is three months. Can this genius, or anyone for him, name ten "lords" who have acquired their land by might? "Tenderfoot" does not know apparently that not one of the barons who compelled King John to sign Magna Carta has a male representative. Still less that the term "lords" includes all the titles above baronet. I have, I suppose, less love for "lords" than "tenderfoot," as it is notorious what toadying titled and sham-titled people receive in the States; at the same time I protest against the ignorant cant that is constantly being spoken of and against my former country. It is in execrable taste, is contemptibly ignorant, and it spreads ignorance—states of mind and results by no means desirable for the natives of Central Africa—leaving alone the inhabitants of a country professedly intelligent and desirous to increase its educational status. I have heard that New York State has a very strict game law; perhaps, sir, you will kindly inform a person, who although a resident for five years does not profess to know but a little of this country. On "Tenderfoot's" method, a residence in South America—say Patagonia, would at once enable me to give lectures on the United States and its laws, customs, etc., to the people of Patagonia. The vast extent of Patagonia and the great intelligence of the people would fully qualify me to show up "awful examples" culled from the United States, of the coal barons, sugar trusts, etc., of which things my whole information (for it could not be called knowledge) would consist of short and garbled extracts from newspapers. To clinch the whole, I should interpolate said awful examples from the States in the middle of an account holding up the wonders of Terra del Fuego. As no one in Patagonia could doubt about Terra del Fuego, of course that would be proof positive of any and every rubbish I should state about the United States. J. BROWSE OLDRIVE.

Florence, Marion Co., Kas.

There are 1,425 railway corporations in this country owning roads, but by leases, the operating corporations have been reduced to 700. About 500 corporations control 1,200 roads engaged in inter-State commerce—transportation of freight and passengers across State lines. The numerous railways and equipments have cost more than seven and a quarter billions of dollars, with funded debts due aggregating three billions eight hundred and eighty-two million nine hundred and sixty-six thousand five hundred and forty dollars. The interest due and paid on the debt, last year was one hundred and eighty-seven million three hundred and fifty-six thousand five hundred and forty dollars. The aggregate dividends paid to the stockholders was largely less than half the interest paid to bondholders. No less than one hundred and eight railroads with a mileage of 11,066 are in the hands of receivers, who are managing them under the directions of courts.

Horticulture.

SEEDS AND HOW THEY TRAVEL.

The seed is the structure in which all the plant's energies terminate. It is the culmination of all the processes of reproduction and in it that series of plant individuals bearing the relation of parent to offspring, which is called a *species*, is continued from year to year, and age to age. It is therefore very appropriate that we should take a full view of this important factor in plant growth; look at the essential elements of structure and note the great variety in size and color seeds present, and if possible get some clue to the origin of these wonderfully diversified forms.

Three seeds might be held upon the index finger. One, for example, is a tobacco seed, exceedingly small and easily lost from sight; another is that of a squash, which is cream white and occupies the space of thousands of the dark tobacco seeds. The third may be an apple seed—one of those dark chestnut bodies, which in our childhood was clothed with superhuman ability to choose our future life companion, when the seed was placed upon a hot stove and permitted to "hop" as the spirit (or gases) moved.

We have mentioned three kinds of seeds which are readily distinguished from each other. Their wide differences, however, are as nothing when compared with the extreme contrasts between the plants which may develop from them. According to the subtle and blessed law of uniformity of nature the apple seed develops into an apple tree and nothing else. The tobacco seed does not unfold into a vine destined to grow along upon the ground and bear great squash blossoms to delight the bees and be followed by fruits suited for the garden of giants. It must become a leafy herb charged with narcotic poison like all of its kind and be sadly misused as a filthy, health exhausting curse upon our enlightened age.

A seed is usually small compared with the plant which may grow from it. Structurally minute, in possibilities it is a giant. We err when the judgment projects any parallel between length, breadth, and thickness and the ability to become. The wisest of all teachers drew a lesson from the minuteness of a mustard seed and the great results of its unfolding under the invigorating influences of rich soil and a fostering sun. The solitary storm-defying oak of centuries was once in essence within the smooth coat of a single acorn. The germ has developed and become a giant.

The most essential part of a seed is the minute plant that there resides. This is the offspring of the parent plant and all other parts are only aids and auxiliaries. To this plantlet in the seed the name embryo has been given. It varies greatly in form and size in different kinds of seeds, but there are some parts common to them all. The embryo for convenience of study may be divided into three portions, but it must not be understood that all these parts are invariably present. There are usually some prominent leaves which are called cotyledons. These seed leaves are attached to a minute stem, the caulicle. At one end of the stem is the beginning of a root, while at the opposite extremity is a bud known as the plumule.

It is an easy matter for the reader to

place some common beans in warm water for a few hours. The skin, or seed coats will then separate readily, and when removed, the whole interior will be found to consist of two halves. After a more careful inspection it is observed that the two halves of the "split bean" are not alike. To one-half is still joined the short stem and its plumule. The plumule has one or two leaves of considerable size so folded and placed as to resemble the tail of a fish. The plumule originally lay between the large cotyledons, and before they were separated, was out of sight.

It is evident that the bean seed consists of a small plant closely packed within the thin, tough seed coats for preservation and ready transportation. The cotyledons may seem to be unne-

cessary large and out of proportion to the small size of the caulicle and plumule. The seed plant needs to have a store of nourishment upon which to feed while undergoing the process of germination. The parent plant thus fits it out in much the same way that a thoughtful father aids his son in setting him up in business. The forethought here manifest is worthy of our consideration, and perhaps of our imitation.



JEWEL GRAPE.

AN EARLY MARKET VARIETY, SOLD BY STAYMAN & BLACK, LEAVENWORTH, KAS.

essarily large and out of proportion to the small size of the caulicle and plumule. The seed plant needs to have a store of nourishment upon which to feed while undergoing the process of germination. The parent plant thus fits it out in much the same way that a thoughtful father aids his son in setting him up in business. The forethought here manifest is worthy of our consideration, and perhaps of our imitation.

The cotyledons are thick because filled with starch, oil, and protein compounds. Persons whose attention has not been called to this subject may have a vague notion that plants store up these substances because they are of use in feeding man and the lower animals. Without doubt they are a necessity to man's well being, and in many instances plants long under cultivation

have developed greatly in those parts most useful to man. But it is equally true that the prime reason for such a structure as a nutritious seed is the use which it serves in the continuation of the plant species.

It is not for us here to discuss the modifications wrought in plants under the guiding mind and hand of the diligent and skillful cultivator. We must, however, accept a leading, underlying principle of plant growth, namely, that vegetation as we find it in the wild state is engaged in a constant struggle for supremacy and even for life. A belief in the law of the survival of those forms best adapted to the existing conditions must guide us in the consideration of seed structures.

Very many kinds of plants have seeds

minds. Seeds take almost every conceivable method for migration, and in many instances are provided with special structures to this important end. Light seeds are often supplied with either broad, thin expansions, as in the pine, or long silky balloons for distant airy flights. The willow and milkweed are excellent illustrations of the latter method of wind-navigation. Thistle and dandelion seeds sometimes almost fill the air, being borne along by every passing breeze. Seeds which float in water are easily carried along with the current of streams, while large and thickly covered seeds, like those of the coconut, are drifted for a thousand miles upon the surface of the ocean.

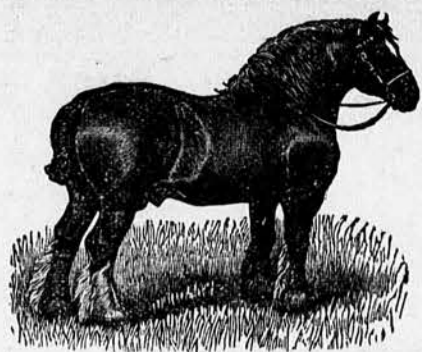
Many species of plants depend largely upon animals for the dispersion of their seeds. The exterior of such may be adhesive or armed with hooks or spines by means of which they cling to the hair or wool of animals. The cow or colt may be the accidental or even the unwilling carrier of the seeds of budock, "tick seeds," "beggars' lice" and scores of other sorts. Any person who takes autumn tramps through a tangled growth in some neglected field, is certain to find his garments covered with innumerable forms of "stick-tights," and as he rids his clothing of them the seeds are scattered perhaps miles from the plants which produced them. — *Byron D. Halstead, in Chautauquan.*

Winter Over Your Plants.

EDITOR KANSAS FARMER:—As the cold weather approaches, the question of saving the fine plants from the border presents itself again. Those who really love plants will find the following plan a practical way of solving this question. I speak from experience. This article is only to those who are not prepared to keep their plants in the house or who may have a surplus after the house is supplied.

Plants that have bloomed outdoors all summer are not worth putting in the house, but make the very best stock for setting out the next spring. If you have a greenhouse it is less trouble to put in hard-wood cuttings in the fall and have them well-rooted for the border. But for those without even a good cellar for plants I offer this plan, which I have tried and regard next to a good greenhouse:

Dig a pit two and a half feet deep, five and a half feet wide, and as long as needed; put a frame of 1x12 inch boards around it, letting it rest on the surface outside with a few cross pieces. In the fall set the plants very close together in the bottom of this pit, in good sandy soil; plants in pots can be plunged to the brim; give water enough to keep from wilting and leave the plants exposed as long as the weather will permit. Cover this frame with glass sash (muslin will do). The earth should be banked up level with the top of the frame, and another frame of 1x4 inch stuff, six or eight inches wider than the first, should be placed around the first on the top of the ground, and the earth banked up to the top of it on the outside; the top frame can be covered with boards. As winter approaches and as the cold increases, coarse stable manure can be thrown over the boards to the depth of from one to two feet, as required. The open space of four inches between the glass and the boards acts as a double wall against the cold. Whenever the weather permits throw



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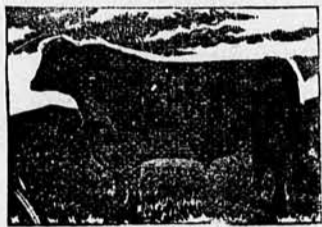
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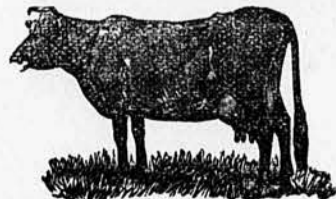
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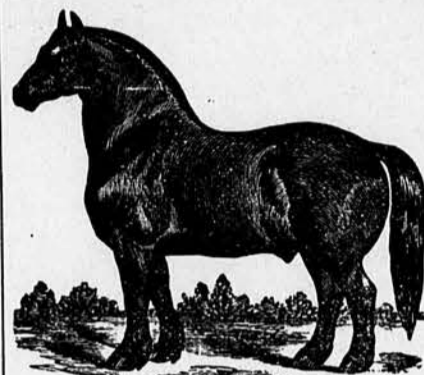
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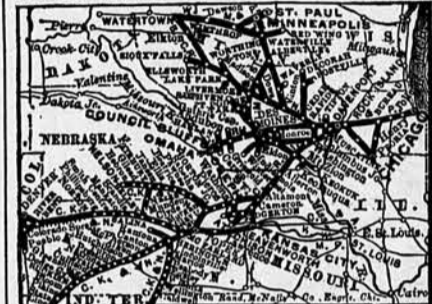
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Stafford county—H. M. Woolley, clerk. HORSE—Taken up by L. E. Woolley, in Cooper tp., September 13, 1888, one brown horse, white in forehead...

FOR WEEK ENDING OCTOBER 18, 1888.

Johnson county—W. M. Adams, clerk. HORSE—Taken up by J. J. Glover, in Gardner tp., October 1, 1888, one gray horse, 4 years old...

Elk county—W. H. Grey, clerk. COLT—Taken up by J. N. Gann, in Painterhood tp., September 9, 1888, one dark iron-gray horse colt, 1 year old...

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