

University Agricul College

THE GRANGE VISITOR

"THE FARMER IS OF MORE CONSEQUENCE THAN THE FARM, AND SHOULD BE FIRST IMPROVED."

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WHOLE NO. 495.

County Road Law.

BY J. J. WOODMAN.

The idea has been entertained by some who have not given the law careful examination, that in counties adopting the system all the roads in the county will be built, improved and maintained by a county tax, under the supervision and control of the county commissioners; but it will be seen from the law quoted in my last article that such is not the case. The adoption of the county system does not annul or in any way change or interfere with the present township and district system, except to doubly tax for improving and maintaining roads, every property holder within the county, not living upon or interested in the particular roads selected by the commissioners for county roads. That is, such persons will be taxed as at present, not only to build and maintain the roads in which they are interested, but also the said county roads, and main streets in villages, connecting with such roads. This system of improving roads by county taxation is in direct violation of the just teachings of political economy, that where public improvements are made by taxation the property bearing the burden should be benefitted in some degree commensurate with the amount of tax. This principle is liable to abuse in counties having local interests centered in cities and villages, which have the power to control the elections and expenditure of money.

AN ABUSE OF THE LAW.

To illustrate: In one county in the state which has adopted the system, a beautiful drive-way costing nearly \$20,000 has been constructed with money received from the sale of county bonds from a city in one extreme corner of the county—and through a county not well adapted to agricultural purposes—to a celebrated summer resort. It is a beautiful drive-way for carriages and wheels, and must be of great benefit and a luxury to the people of the city and vicinity; and had the cost of constructing it been borne by them, no one could question the policy or their right to build it. But when we take into consideration the fact that it was built by county bonds, which every tax-payer in the county is arbitrarily compelled to pay, the question of justice and equity may well be raised. It is said that 800 men were employed in building that road, and it is reasonable to infer that but very few of them were tax payers; and had the question been submitted for a further increase of county bonds for local purposes every one of them could have been induced to vote for more bonds, which would give them more work. I do not refer to this isolated case for the purpose of criticising those who legally availed themselves of the franchises which the law gave them, for humanity is supposed to be very much alike the world over, and it is not probable that had the minority who have suffered possessed the power, they would have been more considerate of the interests of others. But I have called attention to it for the purpose of clearly impressing upon the minds of the farmers of Michigan the wrong and injustice which lurks in the provisions of this most extraordinary law, and the danger of placing such a club in the hands of the strong to beat the weak.

HOW THE LAW WORKS.

It is claimed that the law was intended to build main thoroughfares through a county, to give farmers better roads over which to haul their products to a city market. While this may seem plausible as a reason to silence the opposition of farmers, yet as a business proposition it is not tenable. The most difficult and expensive hauling which farmers have to contend with is to draw their crops from the field, compared to which the hauling of their prepared surplus to market is but a trifle. Would it be considered a wise business operation for a man to mortgage his farm to build a gravel or macadamized road even by his own premises, however agreeable it may be to him or pleasant for others to drive on or run their wheels over? And if not, how unwise and unbusiness like it would seem to be for farmers to favor or

consent to issue county bonds, every one of which is a "blanket mortgage upon every parcel of real estate in the county to grade, gravel, or macadamize" a few trunk lines of road, which could not be of any material benefit to only a portion of the people of the county; and would be serious damage to a very large portion of the farmers, not only in arbitrarily imposing upon them an unjust and perpetual tax to build and keep the roads in repair, but in building up a distant city or market place, to the absolute injury of their local village where they do their general business, and receive accommodations from its business men; and where most of their surplus products are marketed or shipped.

It is well understood that those interested in the manufacture, sale, and use of wheels and bicycles were behind this movement for the county system, and that men having idle capital no longer remunerative in the industries of the country are urging it upon farmers, ostensibly to benefit them, but really to provide a safe, if not permanent, investment for their money; for county bonds, secured by all the taxable property of the county, are safer and more desirable than personal obligations, or even farm mortgages.

THE LAW SHOULD BE REPEALED.

While good roads are desirable, and the general movement for improving them should be encouraged, and work prosecuted with vigor under the township and district system, or some other system which is just and equitable to those bearing the burden, yet at the same time we should hold fast to the teachings of the Order, and discard the bond and "mortgage system, the fashion system and every other system tending to prodigality and bankruptcy." I have written these articles for the special purpose of calling the attention of members of our Order and farmers generally, to the dangers which exist in the provisions of this, the most unjust and outrageous law that was ever put into the statutes of Michigan; and to stimulate action for its repeal. I am aware that its repeal would not help those counties which already adopted it, but it would prevent other counties from getting caught in the meshes of the net. It is not generous nor in accord with the teachings of our Order, for those in the older agricultural counties having no large cities or local interests sufficiently strong to out-general or out-vote the farmers, to say, "Well, they can't adopt it in our county, therefore I care nothing about the law." True philanthropy is not confined to self interest. Attempts have already been made in some of the older counties, through the city influence, to get the question of adopting it submitted to the electors of the county, but defeated by the farmers on the boards of supervisors; and their action in defeating it has been severely criticised by the city press. Further efforts will be made when the scheme is better arranged, and control of the board of supervisors obtained. When once submitted to the electors, voters enough can be secured among parties interested and non-taxpayers to carry it. Subordinate Granges should consider this question, and the next State Grange should exert its influence to secure the repeal of this law.

Paw Paw.

A Word of Warning.

It is not the purpose of the Order of Patrons of Husbandry to limit the freedom of the citizen, but rather to teach our members to enjoy this freedom in its fullest and best sense.

The Founders of our Order, no doubt, had this thought in their minds when they placed the restrictions in our constitution. They knew very well that the membership would be composed of those who differed widely in their religious and political views, and in order to protect each member in the full enjoyment of personal views and beliefs, it was provided that no one should interfere with the same, by assailing them in our fraternal meetings.

The original article of the constitution relating to this matter reads as follows: "Religious or political questions will not be tolerated as subjects of discussion in the work of the Order." Afterwards the lan-

guage was changed to "sectarian or partisan" instead of "religious or political questions." This permits the discussion of questions of public policy, when they are not an issue between political parties.

There need be no doubt of the meaning of the constitution in this respect. No matter how vital the questions are to the welfare of the people, if they are the subjects of contention between political parties, they are not proper subjects for discussion in the Grange.

Are the restrictions wise? I think so. There is still some of the spirit of sectarianism and partisan intolerance in most of us, and in the heat of partisan conflicts, the majority could hardly refrain from making the Grange a rather warm place for the few, who would not give in to the superior wisdom of the majority; and in order to avoid discomfort, they would stay away from the meetings when such discussions were permitted. If allowed, very zealous partisans would be likely to occupy nearly all the time with discussions which would become wearisome to many of the members.

It is also a fact that nothing stirs the blood quicker than an attack upon one's religious or political faith. I believe that the restrictions in the constitution have been a tower of strength to our Order; remove them and the end would be near. These restrictions do not prevent our members from fully investigating and discussing the questions involved. They should do so, but there is no necessity of dragging the discussions into the church or the Grange. There is a time and place for everything, but the Grange meeting is neither the time nor the place for this discussion of sectarian or partisan questions. There is nothing to prevent farmers from calling meetings for the purpose of political discussions, as often as may seem best. People can then go to these meetings, knowing their intent, and no objections can be raised, if their opinions are vigorously assailed.

We are on the eve of a national political campaign which is likely to become very exciting, and while we are greatly interested, and should be thoroughly informed on all the issues involved, yet, I believe we should observe the restrictions in the constitution of our Order, and have one place to meet where partisan strife is unknown. Our motto is, "In essentials, unity; in non-essentials, liberty; in all things, charity." If we live up to the spirit of this declaration our Order can go through the most exciting campaign without the estrangement of a single member.—*J. H. Brigham in the National Grange Bulletin.*

General Topic for August.

MONOPOLIES.

QUESTION 1. What monopolies are most detrimental to farmers' interests, and in what way or ways do they injure them?

QUESTION 2. By what methods can the farmers best counteract, or overcome the exacting power of monopolies?

SUGGESTIONS.

This topic like the one for the preceding month has been discussed more or less by Granges in all parts of the country, but many of these discussions have been deficient in method and definiteness which are essential to a clear understanding of the question involved.

It is necessary in the first place to have a definite knowledge of what monopolies are. So much has been said about them during the past few years, that many people have come to think that they are the product of some evil genius, who planted them in the fertile soil of human greed and selfishness, which has given them such a rapid growth during the closing years of the nineteenth century. But such is not the fact, for monopolies in some form have existed from time immemorial, and wise men have seen the necessity of legislative enactments to protect the people from the exactions of combined wealth and power. In 1814 the following was inscribed on a tablet, which was placed in the first State House at Columbus, Ohio.

"General good the object of legislation, perfected by a knowledge of men's wants and nature's abounding means; applied by

establishing principles opposed to monopoly."

Monopolies have multiplied a thousand fold since the above was written, in what was then the frontier portion of our country and their aggressiveness has fully kept pace with the increase in numbers.

Question one calls for a definite answer. It is of the utmost importance for farmers to know who their enemies are, and why they are enemies, in order to enable them to concentrate their forces at a given point, and make the attack with such power as to overcome the adversary. It is useless for farmers to complain about the exactions and oppressions of monopolies if nothing is done to resist them, and successful resistance calls for a definite knowledge of the enemy, and the extent and nature of his entrenchments. Thus it will be readily seen that there is a wide field for the study, investigation and discussion of this part of the question.

The second part of this topic may not call for as much study and investigation as the first part, but it sometimes happens that it is more difficult, and requires more judgment and skill to prescribe the proper remedy, than to give a correct diagnosis of a disease.

A given monopoly may not have the same effect in all parts of the country, and in order to unite the forces of the Grange for their suppression, it is necessary to know which are considered most objectionable, and it is equally necessary for farmers to have a mutual understanding of how the work of opposing them can be done at the best advantage. Both questions under this topic are of vital importance to the members of the Order, and the discussions should be fully reported by the Lecturers.—*Alpha Messer in National Grange Bulletin.*

Reality is the Great Educator.

Rev. Charles H. Parkhurst, D. D., writes on "Substitutes for a College Training" in June Ladies' Home Journal, which makes a most acceptable contribution to his series of papers to young men, an especially practical one in supplementing his article on the value of college training in the May issue of that magazine. Dr. Parkhurst asserts that "there is a certain keenness and vigor of discipline that can come to a man only as he lives out in the midst of things and becomes himself a part of the world and of the events with which the world is so solidly packed. Those to whom my words are particularly addressed are young men who are anxious to make themselves felt in the world, and to such it needs to be said that we best learn how to do by doing. A sense of opportunity, a feeling of being a part, even a minute part, of the machinery by which the threads of current events are being woven in, works upon us with the power of a fine discipline and a strong inspiration. The solidity of the burden that is carried helps to solidify the man who carries it. Problems tumble easily apart in the field that refuse to give up their secret in the study or even in the closet. Reality is what educates us, and reality never comes so close to us with all its powers of discipline as when we encounter it in action. In books we find truth in black and white, but in the onrush of events we see truth at work; and it is only when truth is busy, and when we are ourselves personally mixed up in its activities, that we learn to know of how much we are capable, or win the power by which those capabilities can be made over into effect. Let no young man, then, of spirit and purpose be dismayed by his inability to attend either college or university. Life is itself the oldest and best endowed university in the world, and will guarantee to its pupils all in the way of vigor, keenness and grasp that they have in them the grace and persistency to acquire."

The Best.

Chenango Co., N. Y. April 30, '96.
DEAR SIR:—You can rest assured that we will buy no other paint but yours, as you have proved to our satisfaction that it is the best. Truly Yours,

C. S. GREENE.
See adv. Ingersoll's Liquid Rubber Paints.

Field and Stock.

Relation of Farmer and Experiment Station.

BY A. J. CROSBY, JR.

In every neighborhood farmers may be found who are leaders and guides to some extent. One man in field crops, another in stock of some class, another in dairying, another in fruits, and others in their special lines of work. Naturally enough, most people have somebody to whom they look as a sort of example, watching their practices and measuring their success. Without the intent to follow their example and imitate their doings, they do, through a sort of reverence for their judgment and ability, pattern from their example even in deviation from commonly accepted theory and practice. Nearly the whole of a farmer's work, in one sense, is a series of ventures and experiments, subject to many modifications from year to year, which completely revolutionize many of the systems of their work.

IN THE RUTS.

There is a large class among farmers as among other callings, who seem to have a strong pride in hereditary transmittal of knowledge, and who defend their position with that conclusive argument, "My grandfather did *thus*, my father did the same, and it is good enough for me, too." Another class may be found embracing many young men just starting out, and others who have lately taken up the calling of farmer. They very differently take hold of the work of setting plans and conducting the various operations of the field. This had all seemed an easy matter while they followed a father's or employer's dictation, or simply looked upon the operations of the farmer while themselves pursuing some other calling. Now the matter stands before them in a different light. Details which had appeared trivial heretofore, now seem to bear great importance upon the anticipated results. Gladly would they have some one to lean upon, or the suggestions of experience to point out the way, supported by the most favorable points of advantage in surrounding influences which the natural course of the reason is likely to bring to bear. How many a trial with one crop and another has been dropped off year by year as mistakes of the past, to arrive at conclusions which thousands of farmers the world over, have spent the same time and labor to discover.

CHANGES HAVE TAKEN PLACE.

It would seem that the changes brought about by the continuing age of the country, the removal of forest influence, universal drainage, new or extremes of climate influence, depletion of soils, changes or the diversifying of crops to meet the changing demand in the various lines of market products, brought enough of study, trial, comparison and experiment, that it is a needless sacrifice of a part of the farmer's lifetime and energy, to be multiplying the rediscoveries of others year by year. In view of this, one means and another has been brought out by individual effort and expense, until it came to be recognized by government aid, in nearly every country, resulting in the magnificent systems of government experiment farms and agricultural experiment stations. And it will be found that these are most appreciated where best known.

THE OBJECT OF EXPERIMENT STATIONS.

There are great principles which underlie the growth of plants and animals, as well as the alchemy of the dairy and kitchen. Great scientists have long been hard at work in their research for a better knowledge of them. It is the object of an agricultural experiment station to gather the accumulations of this knowledge, directing the investigations of these skilled scientists, to increase the store of accurate information regarding these principles, in their intimate relation to the practical work of the farmer.

It is really the enlisting of an army of skilled investigators putting them into scientific divisions and departments, and setting them at work under one general supervision to perform work in perfect line with that of the practical farmer, and making accurate, scientific investigations of that which he is doing upon his farm, and in a manner which the farmer has neither time, surroundings, nor the means to accomplish. They make many duplicate investigations in various localities of the country, and gather in the summary a knowledge of corresponding work nearly the world over, and bring these deductions, with the record of similar ones along all lines of work, from ages past, and set them before the farmer in a simple and practical manner where he may compare his surroundings, and with greatly increased knowledge and certainty, plan his future work in such a manner as to be able to forecast quite accurately his success. With this view of the work, it will be plainly seen that the stations are not more seeking new methods, than taking the present methods of the different farmers, whether

old or new, and putting them to such comparative tests that the farmer can take the record and select the best, not teaching farmers new ways, but helping him to more wisely select his own best ways. Showing him which ruts to get out of, and what better track to take. As well might the farmer endeavor to make the water run off his farm up hill, as to refute the conclusions to be drawn from many of the tests in crops, feeding, dairying, fungus, insects, etc.

VARIETY TESTS.

There are persons constantly placing new varieties upon the market of every product grown, enforcing their claims of merit by every scheme and allurement imaginable. Imagine every grower of these products left to his own resources of proving their worthiness or adaptation. Then compare the benefit of having the stations making tests, even ahead of their being put on the market. "Forewarned is forearmed," and the farmer meets the new article upon its merits, prepared to reject and save expense and time, or to seek it and be in the lead in the possession of a thing desirable. It is not to be expected that every farmer will keep in touch with this work. There is no excuse however why more, and especially young men just assuming management upon their own resources, should not become familiar with station work. Following it in connection with their own it would soon grow to a sort of college extension work, lasting a lifetime with pleasure and profit, while they become the means of spreading it to their community.

DO NOT FOLLOW STATIONS ABSOLUTELY.

Do not understand us as advising the farmer young or old to take entire pattern from station experiments, but keep a careful knowledge of them, and cultivate that wise perception which will select the most deductions that will be the best practical benefit to you. Much of the result of experiment station work is read by the farmer from various sources and credited to a somebody, he does not know whom nor where. He will gather from the example of his neighbor, without thought that it is the work of the station which he is taking, while he criticises their expense or management without crediting them with their benefits.

A SUGGESTION FOR EXTENDING THE WORK.

We would be glad to see the line of experimental work so extended as to enlist one or more from every town in every state in the Union, to pursue some line of work each year, under the direction of a station, upon a uniform plan to be as far as possible adapted to compare with the usual manner of work among farmers in that line, and within the opportunity of the average farmer. Similar work has been pursued to some extent in a few places. We think it would soon come to be known and watched by others in the vicinity, who would take interest in looking up the comparative reports of results and the advisory deductions therefrom.

THE EXTENT OF STATION WORK.

We learn that it is about one hundred years since scientific men began to devote their labor to the problems of agriculture, and fifty years since the establishment of the first regular organized experiment station, in the little German village of Mockern. Agricultural experiment stations are now in operation in all the states and territories under the act of congress of March 2, 1887. While all are established upon one general plan and under the general supervision of one head of department they naturally take many different forms or plans of work determined by local needs. One station may devote special attention to dairying, another to feeding, another to crops and soils, another to horticulture, and thus cover the entire field of pursuits of the farmer, gardener, and fruit grower. Thus we find at one time that thirty stations are studying problems of meteorology and climate conditions; forty are at work on soils and fertilizers; fourteen are studying irrigation; thirty-nine are making analyses of commercial and homemade fertilizers or conducting field experiments. All are studying the more important crops, in regard to their productiveness, composition, methods of manuring, cultivation, varieties, and rotation. Thirty-five are investigating the composition of feeding stuffs and digestion; thirty-seven are conducting feed experiments for milk, beef, mutton, pork, and the different methods of feeding; thirty-two are studying subjects relating to dairying, the chemistry and bacteria of milk, creamery butter making and the creameries; forty-five pursue other chemical work; about thirty study botany with special reference to tests of seeds, plant diseases, and weeds; forty-three work in horticulture studying fruits, vegetables and plants; thirty-one study injurious insects; sixteen the diseases of animals and surgical operations; some with beef and poultry. They employ 557 persons in the work of administration and inquiry. In 1894 they issued 54 annual reports and 401 bulletins, aggregating over 4,500,000 copies of these various publica-

tions, which were distributed throughout the states and territories. The service which these stations have rendered in promoting the education of the farmer is incalculable.

SOME RESULTS.

Through institute work and the distribution of bulletins the experiment stations and the farmers have made considerable advancement toward each other. There is much room for more, which will lead to a better mutual understanding and support, while appropriations would be more liberal, allowing the stations to occupy a broader field and more thoroughly complete the works undertaken. And when looked upon in their true light as the farmer's co-worker, the information given out would be received with greater appreciation and benefit. The stations have brought out some things which are new and of great value, while they have taught the farmer to help himself, teaching him that he must of necessity be an experimenter himself, keeping in touch with the progress and advancement made in his calling.

Ypsilanti.

Making Better Butter.

How to Do It Without Extra Expense.

BY H. E. VAN NORMAN.

A great many butter makers are so situated that they must get along with the appliances they have at hand and when they hear or read of improved methods it does not seem to occur to them that they can make any change in their method without getting a new churn, creamer, or dairy house. The question is, are we making the most of what we have. The following are suggestive:

THE MILKING.

Is it done by milkers with clean hands and after the dirt, etc. has been brushed from the udder and adjoining parts? Is the milk set immediately or is it allowed to stand around the barn (while the cows are being fed, or the stable cleaned out, so as to save an extra trip to the barn), and is it left standing in the kitchen until after breakfast? While standing thus it has taken more or less odor from the stable and from the kitchen, possibly so little that no human nose can detect it, but still it has absorbed some. The cream rises and is set in the kitchen to sour (don't need it this weather) and take more odors and bacteria from the air, and finally the butter is made and sold to the grocer. He sets it in the refrigerator along with the good and the bad. When he sells it he discovers that the flavor is "slightly off" but he hopes the buyer will not notice it. After a ride in the grocer's delivery wagon the butter reaches the city housewife's kitchen. She is busy, "hands in the dough" so she says to the grocer boy, "just lay the things on the table, I'll put them away in a minute."

A BIT OF HISTORY.

But the butter stays here in the hot kitchen long enough to warm up the germs and the odors that came from the cow stable, kitchen, corner of the churn, the cracks in the jar, the grocer's ice box (with its collection of stuff that must be kept cool), and from the ride in the wagon next to some ones oil can. Finally it is put in the ice box and by supper time is nice and hard, and some is put on the table to eat with those nice hot biscuits ("most as good as mother used to make.") When John has tried them he says, in effect, "My dear, where *did* you get this butter? It is not very good. I am afraid you are not a good judge of butter, you had better let me order some that we can eat; just remind me of it when I start for the office in the morning." (Possibly he puts it more emphatically.) Next day Mrs. John scolds the grocer and he in turn tells the farmer's wife she doesn't make first class butter, or else he says nothing, preferring to pay her a dollar or two for the poor butter because she will buy \$20 worth of groceries and he can afford to throw away the poor butter. The farm butter maker cannot control the butter after it leaves his or her hands, but he can keep out the filth from the stable, the odor of the kitchen, the churn, etc., and then the butter will be sweet when sold and will keep so till the germs from the grocer's ice box begin to get in their work.

PRECAUTIONS.

To go back again, if the milk stands still in the barn fifteen or twenty minutes the fat (i. e. cream) begins to rise, when the milk is carried to the house the fat is redistributed, if allowed to stand, it again begins to rise, only to be thoroughly mixed in again when the milk is finally poured into the pans or creamer to rise. Without entering into a discussion of why this is so, I will only say that careful experiments show that where the setting of the milk is delayed in this way there is a large loss of butter fat. In no way can we make up for delay in setting. It should be done immediately after milking while it is still warm. Excepting of course the separator, the deep setting with ice water at a temperature below 45 degrees is the most sat-

isfactory means of raising the cream. Many do not have sufficient cream to churn oftener than once or twice a week. In this case put each day's skimming in the cream jar or pail, until, say Wednesday morning, it is found that there is enough for a churning. Don't churn the same day, but stir it up thoroughly and if it is real sour set in a cool place till Thursday morning, if not real sour place in a warmer place. The object is to allow it to stand until all the cream has become sour. Most every one knows that sour cream churns easier, quicker, and with less loss than sweet, hence it is a saving in labor. If the churning is done the same morning the last sweet cream is added it would have taken longer for the butter to come, and much of the butter that was in the sweet cream would have gone out in the buttermilk. To be sure, the buttermilk is just as good for pancakes or to feed the pigs, but it won't pay as much this way as when sold as butter.

THE DAUGHTERS AND SONS CAN HELP.

One more suggestion and I am done. Mothers who have a daughter of sixteen or seventeen—or even one of the boys,—why not teach them the care of the milk and making the butter, and in a little while you will be relieved of this daily task? At first it will take a trifle longer to stand and watch and correct mistakes. Arrange the finances as circumstances make it seem best, but if possible give the maker a part of the proceeds of the sales. Require that if the daughter undertakes the work she must be on hand every day to set the milk when it comes from the barn, morning, evening, Sunday and holiday. Don't think that because you can not send the boy or girl to the dairy school to become an expert and go to work for some one else, that you can't teach them to make butter most as good as you can. Encourage the daughter to study the subject both by reading and talking, even try some new wrinkle and possibly she will learn something new in this way. When she can make a good article, let her look around and find some one who will pay a cent or so a pound more for her butter than they will pay at the store. No need of waiting till some day when you are sick and the daughter has all the other house work and then let her learn buttermaking by her self. The carrying out of these suggestions, one or more, does not require any outlay, not even a twenty-five cent thermometer.

Agricultural College.

Small-Fruit Culture For Market.

BY WILLIAM A. TAYLOR, ASSISTANT POMOLOGIST, U. S. DEPARTMENT OF AGRICULTURE.

[Reprinted from the Yearbook of the U. S. Department of Agriculture for 1895.]

II

PRUNING AND WINTER TREATMENT.

Where winters are severe enough once in four years to seriously injure unprotected bush fruits, mulching or laying down will often pay well. Much depends upon the character and cost of the material used, and its durability. Straw, unless clean thrashed and free from grass seeds, is a most productive source of future trouble to the grower. Forest leaves can be secured in sufficient quantity in some localities to be available for use among the bush fruits. Where obtainable, pine needles also form admirable mulch, and with a little care in removing can be used two or three times. Broken cornstalks that have been well tramped over in the barnyard are useful, and sorghum bagasse is utilized in some sections. In the colder and drier climate of the Upper Mississippi valley the only sure protection for blackberries and raspberries is the laying down and covering of the canes. This is accomplished by digging away from one side of the plant, toppling it over with a fork, and wholly or partially covering the canes with earth from between the rows. This method involves staking or trellising the bushes when they are raised again in spring, but it is found profitable because of the insurance against crop failure which it affords. On most heavy soils water furrows should be run between the rows with a light one-horse or shovel plow late in fall, in order that surface water may be promptly removed during the winter months.

With the strawberry the only pruning needed will be the removal of superfluous runners. The raspberry and the blackberry, bearing their fruit almost exclusively on branches from canes of the previous year, are benefited by systematic pruning, while the currant and the gooseberry need it as urgently as do the tree fruits or the grape, if large fruit is the object sought.

Though sometimes subject to serious damage by insects and fungous diseases, the small fruits, as a class, are less injured by them than the tree fruits. Most of the serious troubles may be avoided by choosing vigorous and resistant varieties or by spraying with well known insecticides and fungicides.

VARIETIES FOR MARKET.

In the selection of varieties for planting, the best guide will always be local experi-

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WOMAN'S WORK.

Caledonia.

Breathes there a man with soul so dead,
Who never to himself hath said,
This is my own, my native land!
Whose heart hath ne'er within him burned,
As home his footsteps he hath turned,
From wandering on a foreign strand!
If such there breathe, go, mark him well;
For him no minstrel raptures swell;
High though his titles, proud his name,
Boundless his wealth as wish can claim;
Despite those titles, power, and pelf,
The wretch, concentrated all in self,
Lying, shall forfeit fair renown,
And, doubly dying, shall go down
To the vile dust from which he sprang,
Unwept, unhonored, and unsung.
O Caledonia! stern and wild,
Meet nurse for a poetic child!
Land of brown heath and shaggy wood,
Land of the mountain and the flood,
Land of my sires! what mortal hand
Can e'er untie the filial band
That knits me to thy rugged strand?
Still, as I view each well-known scene,
Think what is now and what hath been,
Seems as, to me, of all bereft,
Sole friends thy woods and streams were left,
And thus I love them better still,
Even in extremity of ill.
By Yarrow's stream still let me stray,
Though none should guide my feeble way,
Still feel the breeze down Ettrick break,
Although it chill my withered cheek;
Still lay my head by Teviot stone,
Though there, forgotten and alone,
The bard may draw his parting groan.

—Scott.

Trees and Flowers.

Their Cultivation at Home and upon the School-grounds.

Read by Alice M. Rich of Ashland at Union Meeting Grange and Teachers' Association of Muskegon and Newago counties.

We have all of us, when driving about the country, noticed some homes where the good housewife seems to have enjoyed her work among the flowers and shrubs. Such places give us a feeling of contentment, and we think of the people that live there as enjoying life in peace and comfort. We go a little farther, perhaps even to the nearest neighbor's, and as we glance at the severe outline of the house, with no vines, shrubs, or trees to tone down the sharp corners, we can almost read the lives of the people that live there, no sympathy for their fellow-beings, their days being passed only for themselves, and thinking nothing of others.

Nature seeks to adorn all places and in no place should she be helped more than at the home and upon the school-ground. No one should be sorry for the observation of Arbor Day, and every one who has heard the name of J. Sterling Morton in connection with that day, knows that he has done a great deal for this country. Edmund C. Stedman kindly and touchingly wrote of "the tree-planter":

"Tribute of fruits be his, and glossy wreathes
From roadside trees, and his the people's love.
When east and west the wind of summer breathes
Through orchard, shaded path, and sighing grove."

Many of the teachers took advantage of the offer made by the Agricultural College this spring, and commenced making flower gardens upon their school-grounds. In a few years, at most, it will be an unusual thing to see a school-ground without flowers and trees. If the teachers are all interested too, and not willfully destroy what they have cared and tended. For "he who loves flowers loves others besides himself."

Emerson E. White gives an illustration of a model school where the yard was surrounded by shade trees and the winding walks from gates to doorways were ornamented with shrubbery and flowers. The interior of such a school-house would be found to be as inviting as the exterior. The patrons would be sure to be proud of it, and as a consequence there would be few cases of punishment.

Nor do we find the cultivation of flowers and trees entirely at the home and the school, but at many other public places as well, such as the parks and depots of many of our towns and cities.

Teachers and Grangers should unite in their part of the work and instill in the minds of the young a love of the beautiful.

How to Keep the Boys and Girls on the Farm.

This is a problem that older and wiser heads than mine have failed to solve. We have heard that if a Catholic can have the training of a child until it is ten years of age, that child will remain a Catholic through life, no matter what influence may afterwards be employed to change its faith. Place a child in Sabbath school of any denomination and keep him interested, and if the parents take an active part in the school, the impression will be indelibly written on the mind of the child, which time and change of scene will fail to erase. I have known men to vote for their party whether Democrat or Republican, even when they knew the man they were voting for was a rascal, simply because their fathers had believed it was "all right," when in their own minds they knew it was all wrong.

When we consider how early impressions follow a child through life it is no wonder that the boys and girls are eager and anxious to leave the farm? From their earliest recollection they have been taught the dark side of farming, and "hard times"

has been sounded in their ears, until they cannot realize that there is also a bright side to what they consider hard, monotonous labor. The main topic of conversation in a farmer's family is complaint about the government and "hard times," or if brother farmers happen to meet in the road or field, they will sit on the plow or fence, and after telling the state of the weather, whether the prospects are favorable for a drouth, they wander off to the same old story of their hard lot,—wool won't pay for shearing, the hay crop looks thin, the cut worms have taken the corn, the bugs are eating the potatoes, and now the fly and rust have injured the wheat, and peach trees are dying. Yet the taxes must be paid just the same. Taxes is one of the parts of farming thoroughly impressed on the youthful mind. After hearing this constant cry of "hard times" year in and year out, is it any wonder our children long for some occupation that appears to have a brighter side?

Long before we realize that our children are planning for the future we would be surprised if we knew the plans forming in the young minds, and we would not wonder that the boys and girls left the farm that their parents had worked so hard to clear up and beautify for them.

Boys are usually of a restless, uneasy temperament, and naturally think they would like to see some of the world; so they decide on getting employment on a railroad, thinking that will be an easy and profitable job, or if they take to water instead of land, will try cabin boy, with the firm belief that they will soon be captains of their own ship. The youth finds there are temptations and difficulties which he had never heard or dreamed of, and the old home seems like a peaceful haven in comparison. We see the clerk with his delicate hands and nice clothes and we think his is surely a desirable position, but we cannot realize the humiliation of being ordered about by overbearing customers, and after having taken down everything on the top shelves, pulled over the large pile of prints, scattered laces and embroideries all over the counters, the customer wonders why they never have just what she wants, and finally buys a spool of No. 40 white thread and departs, leaving the clerk to restore order out of chaos, both in the establishment and in his temper.

The bright side of mercantile life is always shown to the public, the proprietor always meets you with a smiling face and remarks, that "times are improving, trade is getting brisk," and you are dazzled by the glitter of the electric lights and the artistically arranged goods, and the youthful heart yearns for such an occupation, instead of the farm. But could you look at that bowed head, while you are wrapped in peaceful and healthful slumber, and see the care written on the smiling face you had so recently met, you would find there was another side to this story and that the apparently prosperous merchant is on the verge of bankruptcy, and he would give years of his life to have a farm that he knew belonged to himself and family.

We are living in the electrical age and the old methods of farming have changed with the times, and in this busy, hurrying age, our boys and girls must have some incentive to keep them where they ought to stay, on the farm. In order to do this we must give them a personal responsibility and interest in the work. Make the home just as attractive as you can and give them every advantage you can afford. By all means give your boys and girls a good education, in order to do this it is not necessary to send them very far from home. Right here is where so many parents make mistakes. It sounds well to say our children are educated at some college miles away from home, so there they are sent to come home during the long vacation. They soon form new ties and acquaintances, and the parents find to their sorrow, before those college days are over, that their children have almost drifted out of their lives, these college students are ashamed of their parents and the old home has lost its charm for them forever; when, if the children could come home at least once a week, there would be a mutual interest of the work on the farm and the studies pursued by the young. The children are eager to go home to mother, and the parents, perhaps unconsciously to themselves, are learning from the children and keep up with the times in many ways.

Teach the children political as well as domestic economy; let them understand that farmers themselves are partly to blame for taxes being so high, they cannot expect them to be any less just so long as there are so many salaried officers to pay and almshouses, insane asylums and prisons to be filled with inmates by all those who vote to licence saloons. Take an interest in the work and pleasures of your children, teach them that there are associations connected with the farm that money cannot buy. Children in cities can go to the parks and look at the flowers, if they will "please keep off the grass," but what is that to roaming in the woods and gathering whole handfuls of delicate wild flowers. City children never dream of the delight of climbing trees, sliding down strawstacks,

or jumping from the mow.

The Grange should be an important factor in keeping the boys and girls on the farm. Here all should work together to ennoble the calling which first originated in the Garden of Eden, before there was a president and his cabinet to make laws for us. But since we now have one, the Grange should see that the proper representatives are sent to protect the agricultural interests. Teach the boys and girls to love and honor the old homestead, and with their young hearts and hands to watch and guard the rights of the farmers, and in a few short years there will be no more cry of "hard times."

Clarksville.

MRS. IDA ENGLISH.

The Ideal Home.

It has been remarked that the best house-keeper is the sort that one never notices, and the same may be said of furniture and decorations. In a certain drawing room the preponderance of brass and onyx stands at once attracts the attention of the caller, who feels an irresistible impulse to be continually counting these gorgeous little tables to make sure that there are seven and not eight of them in sight. The effect of such sameness in furnishing, especially when very noticeable articles are used, is to counter-act whatever daintiness the home might otherwise possess and to suggest a lamentable want of taste on the part of the owner or rather the mistress.

The ideal home gives evidence in every part of woman's softening influence and of her desire to provide restful surroundings that will quiet the wearied eye, brain and body. All colors are soft, cheerful and tastefully combined. Easy chairs abound and are evidently intended for practical service. The sunlight is freely admitted by day. Softly shaded lights are used by night. There is no lack of foot-stools, sofa pillows and headrests, and, best of all, the true domestic spirit broods over the whole, lending a charm that money cannot buy or poverty exclude. —*Kon. Industrialist.*

What a Woman Can do.

What a woman can do in the South has been shown by the success of Miss Annie Dennis of Talbotton, Ga., who attracted some attention at the Atlantic Exposition. She is a fine looking young woman of about 25, and possesses a genius for farming.

She owns a handsome estate of 1,000 acres, which she cultivates with great skill and success. Upon it she conducts a dairy, a stock farm, a cannery, a preserving establishment, a vineyard with a fine winery, and a piggery. Each of these are prosperous to a high degree. The owner is public spirited, and exhibits her products at every fair and exposition. She began this work in 1888, and in seven years has carried off nearly 100 prizes.

She ascribes her success to a good education and careful reading. She makes a special study of the application of science, especially chemistry, and utilizes every new idea which appears. At the present rate she will be independently rich in 20 years.—*Columb's Rural World.*

The Juveniles.

Humming Birds.

It is the smallest bird we have in this country. The kind we see most frequently is the ruby-throated. More than three hundred different species have been found by naturalists. They are all found in America; none as yet have appeared in European countries.

Although they are the smallest bird, they can fly very fast—so fast that you can hardly follow them with the eye. When we see them flitting about among the flowers, they are searching for food. They have long beaks, and while they are humming about the flowers the long tongue is sipping the honey. They are called by this name because they move their tiny wings so rapidly that a humming sound is made. They will also eat some insects, but they are very dainty little creatures.

A bird lover once caught a ruby-throated humming bird in his hand and held it until some honey and dissolved sugar were brought. It did not try to move, and only slyly opened its eyes to look around. When a bit of syrup was touched to its tongue it stood up and began to drink the food from the spoon until it seemed to have all it could hold. After this the gentleman kept the bird for some time. Then he set it free, but after a while it returned again to its friends. It would stand on the edge of a cup and drink with eagerness. It was amusing to see the little creature drink the food.

The ruby-throated makes a very delicate nest among the branches of low trees or shrubs. It is a very delicate affair. The outside is covered with light-gray lichen and glued together. When it is done it looks so much like the branch upon which it is made that you would not notice it unless you were looking very carefully. The inside of the nest is lined with soft, delicate fibers gathered from the plants.

This bird, although it is one of the smallest, is also the most fearless. It is a real

tyrant, and will fly with great fury at any bird it has reason to attack. It has been known to attack the largest eagle while flying in the air. Mounted on the eagle's back it will peck away at it and fill the air with the feathers of the monster bird. The eagle will scream and try to get rid of its tiny foe.

Small-Fruit Culture for Market.

Continued from page 2.

ence. If the grower aims to supply a home demand, he may often find it profitable to grow varieties which, because of lack of firmness, would be valueless for shipment. The published bulletins of the experiment stations afford much light on the subject by indicating in a general way what the behavior of varieties is in each state. These should be consulted, and also the reports of the state horticultural societies, many of which contain catalogues of the varieties known to succeed within their several districts. But most valuable of all will be found the experience of growers in the immediate vicinity. Their conclusions, though not always correct, are safest for the beginner, and he should only plant largely those varieties which they have found successful. The main planting should rarely consist of more than two varieties of each fruit, except in the case of the strawberry, where four or five sorts ripening in succession may often be profitably grown. New and untried sorts, though highly commended elsewhere, should be planted in an experimental way only, for but a small percentage of the varieties introduced prove equal in value to the standard market sorts at the time of their introduction. The market to be supplied should be studied also, and if some variety is found to be in special demand, that fact should be considered in making the selection from those known to succeed.

SELECTION OF PLANTS.

The selection of plants is a matter often slighted, even by growers who have long been engaged in the business, yet it is a most important item. The ideal method is to use such plants only as have been propagated from vigorous and productive individual plants of the desired variety. The owner of an established plantation can, by propagating from plants marked at fruiting time because of their superior vigor or productiveness, soon provide himself with plants much superior in these respects to those obtainable through commercial sources. But the beginner, with no fields to select from, must rely upon the fact that well-grown and accurately named stock is the best that he can get. He should insist that the stock furnished him be true to name, that it be free from injurious diseases and insects, that it be thrifty and from newly set fields, and that it be carefully dug and handled. Whenever practicable he should assure himself of the character of the stock by personal inspection of the plants during the growing season. For stock of this kind he should expect to pay a fair price. He can well afford to pay double the price usually charged for old bed stock of the same varieties. If the varieties desired are fairly healthy there, and reasonably true to name, he will usually find it best to buy as near home as the desired sorts can be found, though plants of all kinds are now shipped in good condition for long distances.

Fact and Fiction in Novels.

There never was a story whose interest would not have been greater if, just as it was, it had been actual fact.

But, on the other hand, there never was a bunch of facts which would not have been more interesting if, just as they were, they could have possessed all, and only, the features and arrangement the story-teller would have liked them to have. His main purpose, however grave, however playful he may be, is to convey, not weighty information, but welcome emotions, thereby to establish, for the moment, at least, and as much longer as he may, spiritual facts of life in the sensibilities, sentiments, and affections of his readers. For him fact and fiction alike are but means to this end. He draws no distinctions between them. As long as facts serve him best he will use them, disguised as fiction. When fictions suit better he will use them, in the guise of facts. And when the improbable is his best instrument, as at times it may be, he does well to use it, if he can so wield it that in the end it is cheerfully forgiven by the head, for the good it has brought to the heart.

Why, then, are we so much more easily interested by fiction than by fact?

We are not. Fiction that is only fiction has no pleasing interest whatever. Nor is any such thing to be found in literature. It is the facts in the fiction,—not mixed with it, as some boor may mix sand with sugar, but the facts in the fiction, as our life is in our blood,—it is this that holds our interest. Every fact is interesting to every one interested in the group of facts to which it belongs, and every fact of the heart's experience is interesting to every true heart; so interesting that only by taking on the drapery of art can fiction compete with naked fact at all.—*Geo. W. Cable in the July Atlantic.*

THE GRANGE VISITOR

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OUR WORK.

The following has been approved by the State Grange as a fair statement of the objects the Grange of Michigan has in view, and the special lines along which it proposes to work. We hope every Grange in the state will work earnestly in all these departments, so that by a more united effort we shall rapidly increase our numbers, extend our influence, and attain more and more completely those ends which we seek.

OUR OBJECT

is the Organization of the Farmers for their own Improvement, Financially, Socially, Mentally, Morally. We believe that this improvement can in large measure be brought about:

- (a.) By wider individual study and general discussion of the business side of farming and home keeping.
- (b.) By co-operation for financial advantages.
- (a.) By frequent social gatherings, and the mingling together of farmers with farmers, and of farmers with people of other occupations.
- (b.) By striving for a purer manhood, a nobler womanhood, and a universal brotherhood.
- (a.) By studying and promoting the improvement of our district schools.
- (b.) By patronizing and aiding the Agricultural Colleges and Experiment Stations in their legitimate work of scientific investigation, practical experiment, and education for rural pursuits.
- (c.) By maintaining and attending farmers' institutes; reading in the Reading Circle; establishing and using circulating libraries; buying more and better magazines and papers for the home.
- (a.) By diffusing a knowledge of our civil institutions, and teaching the high duties of citizenship.
- (b.) By demanding the enforcement of existing statutes, and by discussing, advocating, and trying to secure such other state and national laws as shall tend to the general justice, progress and morality.

We wish to call especial attention to several notable articles which appear in this week's issue of the VISITOR. In discussing the value of the experiment stations, Brother Crosby clearly shows that they are making for great progress in farming. His suggestion relative to extending the work by inducing farmers in every township in the state to try some experiment is being tried in a very modest sort of way through the county institute societies. We believe that about 50 farmers in different parts of the state are experimenting in various ways this year. Brother Crosby's suggestion is a valuable one. In fact it leads us to say that there is a whole world of work before some one who can organize and maintain a system of agricultural college extension, this carrying of education right to the doors of the farm home. No agricultural college, however successful, can reach more than the merest fraction of the farmers of the state. Its other work, that of going out to the farmers through the Farm Home Reading Circle, extension lectures, and various publications, though perhaps not so vital and inspiring, is even more far-reaching and important than the work with students.

Mr. Van Norman, who writes the article on butter-making, lectured last winter before 25 county institutes on this subject, and was everywhere received with great favor. He is an expert butter-maker. The point he makes in this article is one well worth thinking of, because he says it involves no extra expense. Our own farm experience and observation lead us to think that while one great factor in success is intelligent carefulness, this truth is frequently neglected in the case of thousands who complain because they do not succeed so well as their neighbors. We must look after legislation, we must look after good government and farm organizations, but let us look out for ourselves, that we are utilizing every opportunity within our grasp to make success certain.

Sister English, in her paper on "How to keep the boys and girls on the farm," covers an important topic in a most delightful way. There is a sentence of hers, however, that leads us to say a word or two, not in criticism, but simply because it is suggested by the sentence. She says that sometimes boys and girls come back from college and look down upon their parents. Now we want to say that if any boy or girl, after having finished a college course, comes back to the old home and cannot endure to remain there because they are ashamed of the old father and mother who have given their best years for these children,—we say that such children have not been educated,—they have simply been swelled by the classical stuff which has been poured into them at the institution, or else they have been most woefully neglected in their earlier years. A person who is educated cannot help seeing the faults of speech and manner in those uneducated, but that should not, and will not if the person has received the right training and has the proper sort of spiritual makeup, make them ashamed of anyone because of their lack of this education and

polish. Such people ought never to have the advantages of an education, or else they ought to be thumped about by the world, homeless and alone, until they learn what constitutes manhood and womanhood.

Brother Woodman makes some strong points against the county road law, and closes his argument by urging its repeal. We have always stood by the county road law, though not because it is perfect, for we recognize that it contains many weak points both in principle and in practice. It has been adopted by some six or seven counties in the state, we believe, and so far as we know it has given fair satisfaction in those counties. There have been abuses of it, just as there are abuses of any other law. But Brother Woodman's points against the law may be accepted, every one of them, and still we think that he has not made an argument sufficient for the repeal of the law. To show that the law ought to be repealed, there must be specifically shown one or both of two things: first, that the law, whenever adopted by a county, has worked poorly and has been a source of great corruption, with gross misuse of public funds, and has, moreover, not accomplished to any great degree what it was designed to accomplish; and second, having this evil, or perhaps even not possessing it, it is being forced, or is likely to be forced, upon counties against the wishes of a large minority who are most vitally interested. So far as we know neither of these conditions is known to be generally true. We desire our readers to remember that we are not defending the county system as a state system, but we do feel that the optional county road law has many features that commend it. A number of counties, as we said, are working under it already, and can not be deprived of working further under it if they want to. A number of other counties in the northern part of the state it seems to us will be greatly benefited by the adoption of the law. We feel that it is only fair to the northern counties of the state that the law be retained on statute books. We are open to conviction, but as facts are at present, we cannot favor the repeal of the law however many defects we may readily see in the system itself. Is it not possible that the law could be retained, but in an improved form, thus doing greater good in the counties where they want it? Perhaps also there is some way of lessening the chances of its undesired adoption.

Only about four months remain before the next State Grange convenes. This will be an especially important meeting, because matters of legislation will have to receive a great deal of attention. Is it not time that we began discussion in the Subordinate Granges of those topics that we wish to discuss at State Grange and to decide upon them for legislative action? We cannot begin any too soon in this matter, because the questions are many and important, and some of them difficult and involved. We must have them so thoroughly discussed in the Subordinate Granges that when the State Grange meets the delegates will be thoroughly posted on the various phases of the questions, and can get together in their views and unite upon two or three measures which they wish to push before the legislature, and also express themselves in such a way that the legislature will not care to pass certain measures that are not in harmony with views of the Granges. The VISITOR desires to aid in this discussion all that is possible, and while we assume no prerogative of any officer in the Grange, we shall take the liberty of suggesting various questions for discussion. We have selected them from among those questions which have been passed upon by previous State Granges, and which are well known to every member of the Order as being of interest to Patrons. Hence we feel that in presenting them we are but voicing common Grange sentiment. We shall endeavor to have articles upon these various subjects from the best posted men in the state who are interested in them from the farmers' standpoint, and we ask, and shall welcome, brief, concise contributions from any members of the Order who desire to express an opinion. We should be especially gratified if secretaries of Subordinate Granges would send us, in a few well chosen words, concise reports of the conclusions reached when these reports are up for discussion in their Grange. The most important and most interesting question being that of taxation, the first topic we suggest for discussion is this:

"Are the present tax laws just and fair?"

Second,

"Are they complied with?"

We suggest that Subordinate Granges begin the discussion of these topics at an early date. Let us have this matter of taxation thoroughly sifted during the fall.

Our readers may remember that a short time ago we called attention to the "Committee of Fifty" in the east which is investigating the liquor traffic from all standpoints. In the July Forum Prof. Francis Peabody of Harvard, who is secretary of the Committee, has an article dealing with

some results already attained in the city of Boston. The specific purpose of his article is to show that there should be some social substitute for the saloon, some place for men to gather together where the dangerous influence of the saloon will be absent. He asserts that the great attractiveness of the saloon is not that it sells intoxicating drinks so much as that it is a social club. But this is not the point we call especial attention to. It is the fact that the public has been enabled to judge in a far better way of the real extent of the liquor traffic in the city of Boston, and also that measures are being urged to get rid of its evils. Any careful reader of Prof. Peabody's article will see that these two facts are brought out very prominently. We are glad to refer to these results, because they are right along the line of the contention which we have been making, viz., that an investigation of the liquor traffic in Michigan would, in the first place, show our people the real extent of the liquor traffic, (which we contend that we know now only in a general way) and that it would both point out the better methods of reducing the evil and arouse enthusiasm to this end. We are glad that this work has been done in the east because it will shed some light on the methods to be followed and the dangers to be avoided in an investigation. We commend this article, which is entitled, "Substitutes for the Saloon," to every reader of the VISITOR.

National Grange Meeting.

As the Western Traffic Association failed to grant any concession to the Patrons of Colorado for transporting the delegates and visiting members to Denver and return, as was reasonably expected, they were unable to meet the requirements of the National Grange for holding the next (30th) session of that body in the city of Denver. Thereupon the Executive Committee of the National Grange has decided that the meeting will be held in the city of Washington, D. C., official notice of which will be given as soon as the necessary arrangements for the meeting can be made.

J. J. WOODMAN, Secretary Ex. Com.
Paw Paw, Mich., July 30th, 1896.

Grange Fresh Air Work.

MY DEAR SISTERS:—I cannot write you all personally neither can I talk to you all except by this slow pen of mine.

A letter comes to me from Miss Mason saying so many little cash girls from the stores are very anxious to get into the country for rest and change for a few days. "The poor little things work so hard when you consider their age, long days and poor pay that to them it would be such a blessing." Who will take some of these? Suppose they were our girls how glad we would be if someone would give them shelter, food and a good time for just two weeks. Miss Mason says: "Boys especially do not seem to be wanted. Poor things they are considered too much trouble." My heart always goes out towards the little fellows. There seem such great possibilities before them if they only have a chance.

Who will open their hearts to one or more and give them the best time they ever had in their lives? It can be done and at such a very little trouble.

Some will question if we practice what we preach? Yes, we now have our first one for the season—a sick girl. She is on her second week, as soon as she goes another comes, on the 31st of August another, and sometime in September another. We do nothing extra for them. They just come and stay as a part of the family. They always bring a blessing. I know the times are hard, crops short, and prices shorter, but the little we give in this sweet charity we shall never miss.

Think this over dear sisters, look at it from all points, and then decide just as your own good hearts shall prompt.

MARY A. MAYO.

Co-operation for Farmers.

The following paper was prepared and read by Albert Deyo before the Lenawee County Pomona Grange at Fruit Ridge, and at request of the Grange was sent to the GRANGE VISITOR for publication.

It hardly seems necessary at this time to attempt to present any new arguments to establish the importance, nay, the necessity of organization and co-operation in all enterprises which have for their object the social, educational or material interests of mankind. While this has been recognized to a limited extent in past ages, but in no period of history have these principles been found of so great value, and so universally adopted as at the present time. In the past when ignorance and superstition prevailed and men were distrustful of each other and for lack of any feeling of sympathy or confidence existing, men dared not organize even for mutual protection. But as ignorance and superstition receded before the advance of intelligence and a better civilization, the principles of co-operation took a deeper root in the minds of the better classes, and they found its practical application to be of great advantage for mutual protection and personal gain. By a concentration of effort and energy results can be reached that never could be by individual effort.

OTHER LINES CO-OPERATE.

It is not strange then that in a country which stands at the head of the civilized nations of the world in intelligence and progress, it is not strange to say that co-operations should be so universally adopted and co-operative enterprises should be multiplied on every hand. So extensively have these principles of co-operation and organization been applied in all lines of business transaction, so thoroughly have these principles been applied in all branches of trade, commerce and politics as well, that it is well nigh impossible for the achievement of individual success in any undertaking of magnitude or importance. It has then become a recognized and well established fact, that this is not only essential, but absolutely necessary in all branches of business, whether it be professional or industrial, in order to reach the best results. Then in order to keep pace with the advancement and developments that are constantly coming to the front, every advantage must be taken, and continuous and untiring effort is necessary. And no surer way presents itself for accomplishing this than by united effort brought about by co-operative organization.

SOME EXAMPLES.

Nearly every branch of industry is thoroughly and systematically organized. The railroads—while they may be competing lines—but still the managers thereof have their stated meetings for the purpose of fixing uniform fare for travel and uniform tariff for freight; and any infringement upon these rules is visited with a fine. Manufacturers form combines for mutual protection and for the protection of their agents and salesmen, organizations in almost every department of labor for the benefit of their members, both offensive and defensive, with rigid by-laws regarding strict obedience thereof and embracing many thousand members.

AGRICULTURE BEHIND.

But the great preponderating interest of all others, agriculture, that which stands out in the front in importance to any other, that which requires the broadest protection by a thorough and complete organization, and a systematic co-operation in order to stand on equal terms with other interests, stands today, subordinately so at least, alone. So far as Granges, farmers' clubs, and kindred organizations are concerned I think that I am justified in saying that not to exceed one farmer in a hundred over this great land is benefitted thereby. How many loyal men, I care not how brave they were, would it have taken to have conquered the south, and to have restored the Union, in the days that are past, without a thorough and complete system of organization, fighting as they would have been against well disciplined forces of the south?

THE POWER OF UNION.

A military organization of a thousand men well officered and drilled would be a match for more than twenty times that number of equally as brave and determined men without that organization. How well do we recollect when marching through Dixie, that when we came to a bridge, the command would be given "break step march," for the power of a thousand men keeping step to the tap of the drum would cause the collapse of almost any structure ever built, but the same number of men stepping at will, the strain would be comparatively light. But through the Grange and kindred farmer organizations, I believe the germ is being produced, and that the farmers of America will see the importance,—nay the necessity,—of thorough and efficient organization.

WORK MUST FOLLOW ORGANIZATION.

But organization without systematic work will avail but little. Our worthy State Master I understand has been instrumental in organizing recently a number of new Granges in this county. When this is done, but the first step is taken toward the accomplishment of lasting results. Then only the foundation is laid upon which to build, and the structure erected, and the amount of good accomplished, depends upon the amount of work done. The farmers of this county have failed to keep step with the progress of other classes of industry, and it is time they awoke to the necessity of more thorough, efficient, combined action, which if not accomplished they will be left behind in the race of life.

THE FARMER'S GREATEST NEED.

What farmers most need at the present time is a better understanding of such economic and political questions as relate to their material interest, and a disposition to unite with others of the same class to put this knowledge into practical use. While many co-operative efforts have been made among farmers, only a few have been successful owing to a want of unity of action and that stick-to-a-tive-ness so essential for the accomplishment of a purpose. I am well aware that this is a broad and almost limitless field for operation and will require much time and patience to accomplish permanent results, but I believe that through the Grange organization the seed is being sown that will ultimately produce a harvest that will be widespread.

and beneficial to the agricultural interests. In communities where the influence of this organization has been felt, the morals have been elevated, social refinement has been advanced, reckless habits and customs have been changed, systems improved, and the general condition of the people made better. In commercial lines the success of co-operative efforts under intelligent direction, is giving courage to the great mass of farmers who are laboring under financial difficulties, and with courage will come the conviction that organization and co-operative effort is the only hope for the American farmer.

CO-OPERATION IN POLITICS.

There is another phase of co-operation to which I wish briefly to allude, and one which I deem of much importance to the future prosperity and independence of the farmers of this country. I mean co-operation in politics, not in a partisan sense, but in a law-making sense, which will enable farmers to have some influence in shaping and controlling legislation so as to modify or repeal such laws as operate against their material interests, and by the enactment of such laws as will afford farmers at least equal protection with other business interests. I am not asking for

class legislation in our favor, but I insist that no class or special legislation shall be enacted that militates against us. I am criticising no one but the farmers themselves in this matter.

FARMERS LISTENED TO.

I am no chronic fault finder. I well know that within the last few years in both our state and national legislative halls the demands of the farmers have been heeded, and beneficial enactments have gone upon the books, but this has been brought about by persistent and determined effort and is further evidence of what co-operation and organization will accomplish. I have heard the Master of the National Grange tell his experience when first appointed by that body as legislative committee to go before the proper committee of the national congress to ask at their hands for the enactment of a certain law looking to the protection or advancement of agricultural interests. When he first appeared before the committee it was only by persistent effort that he was enabled to obtain a hearing, but today when his towering form of 6 feet 4, lineal measure, and 225 pounds avoirdupois, enters that committee room he is received and treated with that respect to which he is entitled as the rep-

resentative of a great national interest. But what we have accomplished in this direction has been done through the influence of our organization; and what I insist upon is a broader, wider field for operation in this direction. I said a moment ago that we want co-operation in politics, and that our interests shall have a fair and equitable representation in the legislative halls. Farmers are so strongly hemmed in by party lines, or have blindly followed the mandates of party leaders, who have fostered their prejudices and secured their votes to place in power or continue in power men who have only selfish regard for the agricultural interests of the country.

NO FARMERS' PARTY NEEDED.

I do not deem it wise or necessary to institute a farmers' party; but I do deem it of the utmost importance for the farmers to unite their forces whenever it becomes necessary for the enactment of wise and judicious laws for the protection of our common interests. We are now approaching a political campaign in this state as well as nation in which we are about to nominate and elect the county and legislative as well as the executive power for a term of years.

THE DUTY OF EACH FARMER.

The farmers of this state have the power vested in them by co-operation to influence and shape to almost any extent they may desire, good and wholesome legislation looking to the general good of all. I think it a reproach upon the intelligence and business management of farmers that they do not insist upon being better represented in the law-making halls of this country. What proportion of the farmers of this community or of this township attend the caucuses where nominations are made, or where delegates are selected to represent you in state, district or county convention? There is the place to put your work to advantage and to make your powers felt by delegating your rights only to those who will represent your wishes in the nominating conventions. These primary meetings are of the utmost importance, and when you are neglecting them, you are selling your birthright for less than a mess of pottage. Referring again to the text, co-operation, I have in conclusion to say, that the subject in its different phases is a fertile and exhaustless one, and at the present time intensely interesting to the American farmer, and in connection with the Grange of the utmost importance.

Agricultural Education in the Public Schools.

Industrial schools are becoming quite a feature of the public school system in all our large cities. Boys are taught the use of tools in a practical manner and girls to cook and bake and sew. There is a disposition on the part of some taxpayers to regard these departments of the public system as a fad. Perhaps in some cases they are. There is, nevertheless, an unmistakable tendency towards giving in the public schools something that will fit and qualify the scholar in a practical way for the duties of life beyond the three R's that in former days was the sum of all common school education, namely: reading, 'riting and 'rithmetic. It is passing strange that there should be but little in public schools concerning the problem of transportation, and the problem of farm life. We do not mean by this that the more difficult problems which the farmer has to solve should be taught to the pupil. His mind is too immature as yet for the task of solving most of these problems, and his education too limited to comprehend them. It does seem to us, however, that there should be a line of teaching in the public schools that will inculcate a love of farm life, as well as a knowledge of the thousands of valuable facts which he should comprehend. How many scholars and how many teachers, for that matter, know the number of varieties of trees that grow within the township or the sub-district? How many know the names of the grasses that grow in the fields, or the weeds that grow in the school house yard? What knowledge does the student obtain of insect life, or bird life, of the habit of plants and animals, and what beginning has he made when he is too big to go to school in the acquisition of that whole wonderland of knowledge that lies within the comprehension of the man who lives on the farm and keeps his eyes open. How many pupils in the public schools, or, for that matter, how many teachers know anything of the mysteries of the bee hive; the queen, the drones, the workers, the way the comb is made, the propolis, etc., etc. On visiting in Scotland some years ago we dropped into the University of Edinburgh, and we there found a class of forty or fifty teachers in public schools going through a course of instruction that would fit them for teaching the elementary principles of agriculture to the pupils. England and Scotland are far behind us in the matter of common school education, England having only within the last four years adopted the public school system, but in the matter of educating the children of farmers in the lines of their work, or rather in those elementary principles that are necessary for the conducting of their work, Scotland, at least, is far ahead of us. We simply suggest this as worth thinking over; something which it would be well for the farmer to turn in his mind as he turns his fall furrows; something that may well be talked about at the fireside and at the meetings of school directors.—Wallace's Farmer and Dairyman.

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No. 101 A.—Reed body, wood bottom, with oil-cloth, wood wheels and gear. Upholstery, silesia. Parasol, silesia. Price.....\$2.99
 No. 101 B.—Same style. Upholstery, cretonne. Parasol, sateen. Tinned wire wheels. Price, \$3.47
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No. 102 A.—Full sized wood dowel body, finished. Upholstery, cretonne. Parasol, sateen, unlined, any color. Novelty springs, second-growth ash gear, steel axles. Tinned wire wheels and brake. Price, \$4.38
 No. 102 B.—Same style. Upholstery, American Damask or Derby cloth, with plush back roll. Parasol, sateen, any color, with lace edge or ruffle. Tinned wire wheels and brake. Price.....\$5.52



No. 103 A.—Reed body, finished, carpet bottom, novelty springs, steel axles. Upholstery, cretonne. Parasol, sateen, unlined. Tinned wire wheels and brake. Price.....\$4.95
 No. 103 B.—Same style. Upholstery, American Damask or Derby cloth, with plush back roll. Parasol, sateen, with lace edge or ruffle. Tinned wire wheels and brake. Price.....\$5.71

And the reason why we can offer these carriages for less money than any Jobbing House on the market is simply this:

We do not make a grand and expensive store display, and therefore save high rent and clerk hire.

Our customers get the benefit of this directly in the prices we quote. Our method is to sell direct to the consumer from the manufacturer with as little handling as possible, so that the prices we offer are the direct wholesale prices.

We desire to call the attention of our customers particularly to the descriptions of these carriages as compared with those of our competitors—

That where they use Silesia upholstery we use CRETONNE;

That where they use Cretonne upholstery we use AMERICAN DAMASK;

That where they use Damask upholstery we use SILK PLUSH;

And instead of the Silesia Parasol used by others we furnish SATEEN, with either lace edge or ruffle, and in addition to the above advantages each of our carriages is furnished with a TINNED IRON BRAKE, which prevents it from blowing or running away when left alone.

Read the above carefully, and note our Descriptions and Prices.



No. 104 A.—Wood and reed body, finished, carpet bottom, oil tempered springs and double braced gear. Upholstery, cretonne. Parasol, sateen. Tinned wire wheels and brake. Price.....\$5.58

No. 104 B.—Same style. Upholstery, American Damask or Derby cloth, with plush roll. Parasol, sateen, with lace edge or ruffle. Tinned wire wheels and brake. Price.....\$6.34

OUR GEARS are made of second growth white ash, finished natural, with light front novelty springs, two coil back springs, double braces in back, fine tempered steel axles.

We can also furnish these gears with all bright parts nickel plated, excepting the wheels, with any carriage at an additional cost of \$1.20.

We carry a fine line of twin baby carriages. A daisy for \$12.16.

Any of our carriages finished in enamel or gold at an additional cost of \$1.75 to the price.

Carriage parasol protectors \$1 each.

Any carriage, except No. 9, can be furnished in cherry, antique or 16th century finish without extra charge if desired.



No. 105 A.—Reed body finished, carpet bottom. Upholstery, American Damask or Derby cloth, loose cushions. Parasol, sateen, with lace edge or ruffle. Double braced gear. Tinned wire wheels and brake. Price.....\$6.94

No. 105 B.—Same style. Upholstered in fine silk plush, loose cushions and tassels. Parasol, sat lined, silk lace edge or ruffle. Tinned wire wheels and brake. Price.....\$8.76



No. 106 A.—Reed body finished, carpet bottom. Upholstery, American Damask or Derby cloth, with plush roll. Parasol, sateen, lace edge or ruffle. Tinned wire wheels and brake. Price.....\$6.38

No. 106 B.—Same style. Upholstery, silk plush. Parasol, satin lined, lace edge or ruffle. Tinned wire wheels and brake. Price.....\$8.55



No. 107 A.—Reed body, fancy finished, woven cane bottom. Upholstery, American Damask or Derby cloth, with silk plush roll. Parasol, sateen, lace edge or ruffle. Tinned wire wheels and brake. Price.....\$9.89

No. 107 B.—Same style, a beauty. Upholstery, silk plush, corduroy or carriage cloth. Parasol, satin, silk lace edge or ruffle. Tinned wire wheels and brake. Price.....\$10.97

Ripans Tabules cure constipation.
 Ripans Tabules cure headache.
 Ripans Tabules cure bad breath.

H. R. EAGLE & CO., 68 and 70 Wabash Ave., CHICAGO, ILLINOIS.

College and Station

The Cow Pea.

Bulletin Louisiana Experiment Station.

1st. The origin of the cow pea was doubtless India, where today many related species are grown.

2d. All the varieties of the cow pea now cultivated in the United States, are believed to have originated from one ancestor "Vigna sinensis," and that the numerous so-called varieties can be greatly reduced in number.

3d. The best varieties of peas for vines and green manuring are the Unknown, Black, Clay, Red, etc., while the strictly bunch varieties, Whippoorwill, Blue, Black-Eye, etc., give larger returns in peas.

4th. The composition of peas and pea vine hay exhibits large feeding values, as well as high fertilizing properties.

5th. Cow pea vines can be converted into hay or preserved as silage, both of which have proven by repeated experiments to be palatable and nutritious food for farm stock.

6th. The cow pea occupies the front rank among the leguminous plants as a soil restorer, enjoying largely the common property of this family of utilizing the free nitrogen of the air; an average pea crop accumulating over 100 pounds of nitrogen per acre.

7th. A rotation of crops is imperatively demanded by scientific agriculture, and any system of rotation in the south which omits the cow pea, is an egregious blunder.

8th. A three years rotation with five crops, two of which are cow peas especially with appropriate fertilizer for each crop, has been found most effective in building up worn soils.

9th. The proper disposition to make of pea vines is to convert into hay or silage and feed to stock, carefully returning the manure therefrom to the soil. The digestive co-efficients of peas and pea vine hay are high. In the absence of stock to consume the hay, the vines should be turned under.

10th. The proper time to turn under vines will depend largely on soil and exigencies of the farmer. True economy would dictate the turning under in the early fall, and the sowing of the ground later in some winter crop, small grain, grass or clovers, and these in turn to be buried if a spring crop be desired. [It must be remembered that this advice is for Louisiana, Ed.]

Digestibility of Ensilage, etc.

Bulletin Illinois Experiment Station.

The composition of cow pea ensilage corresponds very closely to that of clover hay, the most important difference being in the higher percentage of fat found in the clover, but the digestibility of the cow pea ensilage is so much greater that it furnishes an equal amount of fat and much more protein and total energy than the clover hay.

Soja bean ensilage resembles clover hay both in composition and digestibility. It furnishes an equal amount of protein, more fat, but less total energy than clover hay. Both these leguminous forage plants draw upon the free nitrogen of the air in an indirect way for a part of their food supply; their composition shows a high percentage of nitrogen; and they have great value for improving the soil.

Corn-fodder and corn ensilage have about the same digestibility for total dry matter and furnish nearly equal amounts of energy. The fodder furnishes more digestible carbohydrate extract, but the ensilage slightly more of the other nutrients.

As compared with cow peas and soja beans, the corn-fodder and corn ensilage have a much higher value for energy or fat production, but the cow pea ensilage and soja bean ensilage are far more valuable for animal growth or the production of milk.

Suggestions on the Building and Equipment of Butter Factories.

So many localities are contemplating butter factories that we believed it would be of value if we published the following from a bulletin of the Utah Experiment Station.

The first point to be considered

is the number of cows. It is a question whether a factory can be successfully operated with less than the milk from 300 to 400 cows; therefore, in any locality where the erection of a factory is contemplated, a thorough canvass of the district for four or five miles around should be made, and the milk from a sufficient number of cows guaranteed. If the cows necessary are not to be found it would be better to drop the project.

If the required number of cows is secured, the next question is organization. The factory may be organized as a private enterprise, or as a Joint Stock Company, or a Co-operative Association. As to which of these is best in any particular locality will depend upon those handling the business and the people who supply the milk. A Co-operative Association will be found very satisfactory when properly conducted, for each patron who supplies milk, having a financial interest in the factory, has a right to know how the business is conducted and the results of the same. This insures confidence in the factory.

AN IMPORTANT POINT.

It is much the cheaper and wiser plan for the people interested to work up the organization, rather than to depend upon some outside agent. The latter plan, which appears quite easy, as it relieves the people of all trouble, frequently results in their paying from \$500 to \$2000 more for a plant than it is worth. Again, the fact that the parties directly interested take up the work of organization, makes them familiar with many of the details of the business and the manner of conducting it successfully, and difficulties to be met and guarded against, points which could not fail to be of much benefit in the future management of the factory.

A frequent difficulty in organizing on the co-operative plan is, how to raise the money. A plan sometimes followed is for each patron to take one or more shares of stock, paying the cash for them, but many desirable patrons have not the money necessary. An excellent plan is recommended in Bulletin No. 35, Minnesota Experiment Station. Each patron of the proposed creamery signs an agreement guaranteeing to furnish the milk from a certain number of cows. The agreement also provides for the borrowing of the money necessary to build and equip the factory, which is obtained on a joint note of all the patrons. This plan gives the money necessary to do business on a cash basis which is of much advantage in getting the best terms on material, etc., for building and equipment. After the factory is started, five cents from each one hundred pounds of milk delivered to the factory is withheld to form a sinking fund to pay off the borrowed money. The bylaws should provide that the directors shall apply this money as fast as accumulated to the payment of the debt. On this plan, a factory handling 10,000 pounds of milk a day, on the average, would pay by \$5 a day, and thus require only from a year to a year and a half to pay off the loan.

In selecting a site for a factory the following points should be observed. 1. The site should be one easily drained. 2. It should have an abundant supply of pure, cool, water. 3. It should, as far as possible, be easy of access by good roads.

These points are so self evident that comment is scarcely necessary. In a low, damp situation it is scarcely possible to keep the surroundings of the factory clean; and there is always a large amount of waste water from a factory, which should be easily and rapidly drained away. Abundance of pure, cool water is always needed, in fact, a dairy cannot be successfully and profitably run without it.

The plan and arrangement of a factory will depend very largely upon its location and the quantity of milk to be handled. Whether a cheese or butter factory, or a combination of these is desired, will also affect the plan. This point should receive careful study, as very much work may be saved by having a convenient arrangement of the factory and apparatus. Another point to be considered is to have the building planned to accommodate standard size apparatus.

In a large factory, it may be best to have the milk-receiving vat on a platform, the apparatus and cream vat on another level three feet lower, and the churn and butter worker on a yet lower level. By this plan the milk or cream runs to the places where it is required and saves lifting. In a small factory where one or two men are employed, this plan gives too much running up and down stairs, and it is probably better to have all the apparatus on one level; the milk for separating may be raised to the heater by a pump, and the cream could be lifted into the churn.

In a general way, the cream vat should be convenient to the separator so that the cream may run into it. The churn should be but a step or two from the faucet of the cream vat. The butter-worker should be close to the churn, and it should also be convenient to the refrigerator. In a cheese factory, the presses should be convenient, in their relation to the cheese vats and also to the curing room.

Bacteria in the Dairy.

Bulletin Connecticut Experiment Station.

1. The cream in ordinary creameries or in ordinary dairies always contains bacteria, a large majority of which are perfectly wholesome and which give rise either to good flavors and aromas in the butter, or at least produce no injurious effects upon the cream. They are perfectly consistent with the production of the best quality of butter.

2. In the months of May and June the variety and the number of these types of bacteria is decidedly greater than in the winter months and this probably explains, in part, the better quality of the butter at these seasons.

3. Occasionally a dairy or creamery may be impregnated with a species of bacteria that grows rapidly and produces a deleterious effect upon its butter. This will produce in all cases a falling off in the quality. The trouble may be due perhaps to a single cow, inasmuch as the milk of individual cows may sometimes contain species of organisms not found in others, even in the same barn. It is, however, commonly impossible for the farmer or the butter-maker to find the source of such injurious bacteria.

4. Creameries and dairies will in many cases be supplied with bacteria giving rise to desirable flavors, aromas, and a proper amount of acid. This is commonly the case from the fact that the good flavoring species are abundant, but it will not always be the case. It is more common in June than at other seasons of the year, simply because the variety of bacteria is greater at this time and hence the greater likelihood that some species which produce the proper aroma and flavor will be present. Probably also some of the desirable species are especially abundant in the green food of cows in June.

5. If cream be inoculated with a large culture of some particular kind of bacteria, this species will frequently develop so rapidly as to check the growth of the other bacteria present and thus perhaps prevent them from producing their natural effects. Hence it will follow that the use of starters will commonly give rise to favorable results even though the cream is already somewhat largely impregnated with other species of bacteria before the inoculation with the artificial starter. This fact lies at the basis of the use of artificial starters either with or without pasteurization. To produce the desirable result it is necessary to have the starter contain a large abundance of some favorable species which by its growth can both check the development of the ordinary cream bacteria and can develop a proper flavor by itself.

A Money Making Woman.

I have succeeded so well in the past few weeks that I think it my duty to thank you for it. I read in your paper of the Centrifugal Ice Cream Freezer, and what a good thing it was to sell, and I find it better than represented, as I can freeze cream perfectly in less than 5 minutes. I never make less than \$5 a day and often twice that, and I consider that very good wages for a woman. Write to W. H. Baird & Co., Station A, Pittsburg, Pa., and they will start you in the freezer business, and I believe anyone can pay for a sample freezer the first evening selling cream, and any lady or gentleman can make money in this business anywhere.

MRS. W. B.

If Napoleon Had Invaded England?

It is also pertinent to inquire what would have happened had Napoleon been successful in landing an army on English shores. In the first place, his mastery of the seas would have been quickly ended by the combined efforts of the English war vessels then afloat, and he would have been left without base of supplies or communication. In the second place he would have met a resistance from a proud, free, enlightened and desperate people which would have paralyzed all his tactics and would have worn out any army he could have kept together. Did Napoleon fail to understand this? Of course not. He had said before that an army which cannot be regularly recruited is a doomed army. He had seen this theory verified in Egypt, and he knew very well that a permanent mastery of the seas was out of the question with the fleets and flotillas at his disposal. It would appear in the case of any other man than Napoleon that the proof was complete, in view of what actually did occur—namely, the attack by land on Austria. The impression which Metternich received in 1810 that this had been the emperor's intention from the first, and the lavishness with which Napoleon, throughout his public career, made use of any and every form of ruse, even the costliest, in order to mislead his foes, are complementary pieces of evidence which furnish the strongest corroboration.—Professor W. M. Sleane's "Life of Napoleon" in Century.

Where the Diamond Tree Grows.

No work on horticulture makes mention of this interesting shrub, which rarely attains large size, but is mainly restricted to a number of small cuttings.

The pawbroking trade is where the cultivation is carried on. An unscrupulous pawbroker having had certain diamond ornaments entrusted to his safe keeping for awhile is the gardener, and it is in the arid atmosphere of his workshop that the work of propagation will be observed.

A piece of jewelry in which diamonds are set is carefully examined, and stones of similar quality, but just a shade smaller in size, are cleverly substituted.

The removed stones are in turn exchanged for others from another article again, an imperceptible shade bigger, until at last the original cutting has developed quite respectable growth and dimensions. It is not wise to force the growth to too great an extent, and so the original process is being continually repeated.

The beauty of the operation lies in the slight danger of detection. The substitution in each case varies but very little in the matter of size, and the owners of the property rarely or never notice what has taken place, but "many a little makes a muckle," and in the course of a few weeks a skillful gardener may make a very good thing out of a diamond tree.—Pearson's Weekly.

Better Work Every Day.

We ought never to be willing to live any year just as we lived the last one. No one is striving after the best things who is not intent on an upward and a forward movement continually. The circular movement is essential, too—the going around and around in the old grooves, daily tasks—yet even in this treadmill round there should be constant progress. We ought to do the same things better each day. Then in the midst of the outward routine our inner life ought to be growing in earnestness, in force, in depth.—J. R. Miller.

THE BRIDGE BUILDERS.

We build a bridge of trust From night to morn, A mystic arch of dreams Till day is born.

We build a bridge of trust From friend to friend, And often break the span We cannot mend.

We build a bridge of trust From shore to shore, And shadow figures steal across At peace forevermore.

—Florence A. Munroe in Detroit Free Press.

The Thing to Tie To! And How Tight it Will Tie, Too!

It is simply a piece of steel wire, so bent that when a string or rope is drawn through it, it is automatically fastened. It has a score of uses, especially to the farmer. It is made in various sizes and styles, to suit various wants, all under the name of "Hold-fasts." For tying shocks of corn in has no equal and is so cheap one can't afford to be without it. Write the Tie Co., Unadilla, N. Y., for prices and particulars.

Hall's Hair Renewer enjoys the confidence and patronage of people all over the civilized world, who use it to restore and keep the hair a natural color.

A Chance to Make Money.

I read a few weeks ago how one of your subscribers made money selling Pancake Griddles. I ordered one, tried it, and it did the work beautifully. My lady friends came in, saw it, and were charmed, as they all hate the old way of baking pancakes and they mostly do all their own cooking. My brother suggested that we start in the business. We did so and have never made less than \$10 per day above all expenses. Our sales so far have been made close to home, and our business is increasing right along, and we are going to stick to it until we have paid off the mortgage on our farm. We sell from 15 to 25 griddles every day, and some days more. The griddle is lovely and every housekeeper wants one. Get a sample griddle, show it to your friends, and you are sure to make money. No excuse for any one to be poor when money can be made so easy as it is selling pancake griddles. For full particulars and sample griddle address (with stamp) H. M. McDANIEL, Owosso, Mich., and start on the road to success. R. G.

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Lecturer—Alpha Messer, Rochester, Vt
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Ass't Steward—J. A. Newcomb, Colorado
Chaplain—O. H. Hale, New York
Treasurer—Mrs. Eva McDowell, New York
Gate Keeper—John Trimble, Washington, D. C.
Cores—Mrs. Lucy E. Harbaugh, Missouri
Cores—Mrs. Sarah G. Baird, Minnesota
Flora—Mrs. E. L. A. Wiggin, Maine
Lady Ass't Stew'd—Mrs. S. G. Knott, W. Va

Executive Committee.

- Leonard Rhone, Center Hall, Pennsylvania
N. J. Baebelder, New Hampshire
J. J. Woodman, Paw Paw, Michigan

Officers Michigan State Grange.

- Master—G. B. Horton, Fruit Ridge
Overseer—M. T. Cole, Palmyra
Lecturer—Jason Woodman, Paw Paw
Steward—George L. Carlisle, Kalkaska
Assistant Steward—J. B. Martin, Box 442, Grand Rapids
Chaplain—Mary A. Mayo, Battle Creek
Treasurer—E. A. Strong, Vicksburg
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J. Weston Hutchins, Hanover, Ionia
Geo. F. Hall, Portage, Kalamazoo
Robert Decker, Rockford, Kent
Geo. L. Carlisle, Kalkaska, Kalkaska
Hiram Bradshaw, North Branch, Leaning
Fred Dean, Brighton, Livingston
E. W. Allis, Adrian, Lenawee
Jacob Rosenfield,
Riga, Monroe, and Lenawee
George H. Lester, Crystal, Montcalm
D. R. Van Amberg, Bear Lake, Manistee
Frank F. Upton, Big Rapids, Mecosta
J. S. Lawson, Big Rapids, Mecosta
Will G. Parish, Flat Rock, Monroe
E. C. Smith, Mooreland, Muskegon
W. W. Carter, Ashland, Newaygo
A. J. Crosby, Ypsilanti, Oakland
Samuel Stauffer, Gooding, Ottawa
W. F. Taylor, Cranston, Oceana
D. Morlin, Vernon, Shiawassee
A. W. Cannon, Avoca, St. Clair
Wm. B. Landley, Centerville, St. Joseph
Robert Treby, Birch Run, Saginaw
S. O. Coon, East Fremont, Sanilac
Helen A. Fiske, Lawrence, Van Buren
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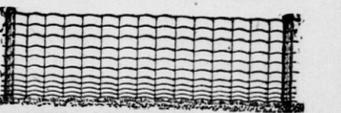
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Kathleen Hesslegrave, a pretty young English artist, and Arnold Willoughby, a Bohemian amateur, meet casually at the Royal Academy gallery in London. The mutual views upon art and upon the pictures of the judges who have rejected the pictures, Rufus Mortimer, a rich American, joins them. He is a friend of the Hesslegraves and is surprised to find Kathleen in the company of Willoughby, whom she knows as a common sailor dabbler in art. CHAPTER I.—Kathleen lives with her mother in fashionable lodgings. The aristocracy visit there, and one day at a reception the company discuss the mystery of young Earl Axminster, who has fled the country disguised as a sailor, Canon Valentine, the lion of the party, thinks the aristocracy of England is well rid of him. His habits are too good. III.—Willoughby is the earl. He is stranded by the failure of the picture. He fuses help from Mortimer and goes to sea to earn money to continue the study of art. IV.—Mortimer pursues Kathleen on love's quest. She likes him and with difficulty holds him off. V.—Mortimer, Willoughby and the Hesslegraves meet in Venice. Mrs. Hesslegrave is alarmed at Kathleen's enthusiasm over the sailor painter and his works. VI and VII.—The young artists roam through romantic old palaces together. Willoughby a guest at Kathleen's home. The maiden half reveals her love for him, and both confess to themselves that they are in love. VIII and IX.—Mortimer proposes and discovers Kathleen's passion for Willoughby. X.—Canon Valentine appears in Venice with the news that the missing earl has been traced and has perished in the shipwreck. He recognizes Willoughby on sight, but promptly denies it. XI.—Kathleen admits to her mother that she is certain of the identity of Willoughby with the missing earl, but will preserve the secret for her lover's sake. XII.—Mrs. Hesslegrave finds the secret too good to keep, tells Willoughby that Kathleen knows it, and he leaves her house in anger. XIII.—Willoughby abandons Venice suddenly without giving Kathleen a chance to explain. XIV.—Parliament declares the missing earl officially dead and settles the inheritance on a distant relative. Willoughby resolves not to contest it, as he prefers to be taken by the world at his "Market Value." XV.—Canon Valentine and Mrs. Hesslegrave die, thus leaving Willoughby's secret unguessed except by Kathleen. The remaining chapters show how Willoughby keeps to his purpose. He is shipwrecked and makes a hit in literature, through which Mortimer traces him. Mortimer has promised to find him for Kathleen and proves to him that Kathleen loved him before she knew his real character and has loved him through all. He scores a secondary success and marries Kathleen, but renounces all claims to his earldom.

CHAPTER XXV. THE MEETING.

Arnold Willoughby arrived at Kathleen Hesslegrave's door in a tremor of delight, excitement and ecstasy. During all those long months that he had been parted from her he had loved her with his whole soul—the memory of the girl he had once believed her—even though that girl, as he fancied, never really existed. And now that her letter to Rufus Mortimer had once more reinstated her image in his mind as he first imagined her his love came back to him with a rush even more vividly than ever. For had he not now in her own handwriting the assurance that she loved him—the assurance that she was his, be he present or absent?

He could approach her at last without any doubts on that subject. He could be sure of her answering love, her real affection for himself, whatever might be the explanation of those strange expressions Mrs. Hesslegrave had attributed to her that afternoon in Venice.

He mounted the stairs in a fever of joy and suppressed expectation. Kathleen sat in her little drawing room waiting anxiously for the promised second telegram from Rufus Mortimer. A knock at the outer portal of the flat aroused her, all tremulous. Could that be the telegraph boy? She held her room door half ajar and listened for the voice. When it came, it sent a thrill of surprise, delight and terror down her spine like a cold wave. "Is Miss Hesslegrave in?" it said, but the tone—the tone was surely Arnold Willoughby's.

"Miss Hesslegrave is engaged this afternoon, sir, and can't see anybody," the maid answered demurely. For Kathleen felt too agitated, with hope and suspense, for receiving visitors.

"I think she'll see me," Arnold replied, with a confident smile, and while the girl still hesitated Kathleen's own voice broke out from within in very clear tones, "Let the gentleman come in, Mary."

see for yourself how you have wronged me." Arnold's face was all penitence. As she spoke, so fearlessly and so proudly, yet with such an undercurrent of tenderness, he wondered to himself how he could ever have doubted her.

"Oh, Kathleen," he cried, standing back a pace and stretching out his hands and calling her for the first time to her face by the name she had always borne in his thoughts and his day dreams, "don't say that to me, please. Don't crush me so utterly. I know how wrong I have been: I know how much I have misjudged you. But don't visit it too heavily upon me. I have suffered for it myself—see, see how I have suffered for it! And you don't know yet how difficult it was for me to resist the conclusion. After what I was told, my darling, my heart's love, I could hardly think otherwise."

"I know that," Kathleen answered, standing opposite him and trembling, with a fierce desire to throw herself at once into her lover's arms, only just restrained by a due sense of her womanly dignity. "If I didn't know it, Mr. Willoughby—or Arnold if you will—I wouldn't allow you to come here. I wouldn't allow you to speak to me. I would guard my pride better. It's because I know it that I'm going to lay my heart bare like an open book in front of you. Before I hear anything else—before I even ask what that means," and she glanced at his useless hand with unspoken distress, "we must clear up this mystery. Till the misunderstanding's cleared we can't talk about anything else as we ought to one another. And in order to clear it up I shall tell you just everything. I shall open my whole soul. I shall tear my heart out for you. There's no room for reserve between us two today. We must understand one another, once for all. Oh, Arnold, my Arnold, now I've found you, I've found you!"

Arnold gazed at her and melted with shame and remorse. Her passion overcame him. How could he ever for one moment have doubted that pure, that queenly soul? But, then, Mrs. Hesslegrave's words—that dark saying about the earldom—those mysterious hints of a deliberate conspiracy!

"You thought I knew from the first who you were?" Kathleen began, drawing breath and facing him boldly.

"I thought you believed from the first I was Lord Axminster," Arnold answered quite frankly, but still refusing to commit himself, "and I thought it was through that belief alone that you first permitted a common sailor to win his way as far as he did, if he did, into your affections. But, Kathleen, I won't think so now. If you tell me you didn't, I'll believe you at once, and if you tell me you did, but that you loved me for myself, though you took me for ten thousand times over an earl, oh, Kathleen, I will believe you! I will believe you and love you with all my heart and soul, if only you'll allow me."

It was a great deal for Arnold Willoughby, with his past behind him, to say, but it wasn't enough for Kathleen. She was still unsatisfied. She stood before him, trembling and quivering all over with love, yet just waving him back with one imperious hand when he strove to draw nearer to her. "No, no," she answered, holding him off with her queenly gesture. "That's not what I want. I want plainly to clear my-

self from page to page till they deepened at last into shamefaced self confessions of maiden love and culminated in the end in that one passionate avowal: "Sailor or no sailor, oh, I love him. I love him. I love him with all my heart, and if he asks me I shall accept him."

When he came to that page, Kathleen saw by the moisture rising thick in his eyes what point he had reached. He looked across at her imploringly. "Oh, Kathleen, I may?" he cried, trying to seize her hand. But still Kathleen waved him back. "No, not yet," she said in a tone half relenting, half stern. "Not yet. You must read it all through. You must let me prove myself innocent."

She said it proudly, yet tenderly, for she knew the proof was there. And after all she had suffered she did not shrink for a moment from letting Arnold so read her heart's inmost secret.

He read on and on. Then came at last that day when the canon recognized him in the side canal by San Giovanni e Paolo. Arnold drew a deep breath. "It was he who found me out, then?" he said, for the first time admitting his long hidden identity.

"Yes, it was he who found you out," Kathleen answered, leaning forward. "And I saw at once he was right, for I had half suspected it myself, of course from those words of yours he quoted. And, Arnold, do you know, the first thought that crossed my mind—for I'm a woman and have my prejudices—the first thought was this: 'Oh, how glad I am to think I should have singled him out for myself out of pure, pure love, without knowing anything of him. Yet that he should turn out in the end to be so great a gentleman of so ancient a lineage!' And the second thing that struck me was this: 'Oh, how sorry I am, after all, I should have surprised his secret, for he wished to keep it from me. He wished perhaps to surprise me, and it may grieve him that I should have learned it like this prematurely.' But I never knew then what misery it was to bring upon me."

"Kathleen," the young man cried imploringly, "I must—I must this time!" And he stretched his arms out to her.

"No," Kathleen cried, waving him back, but flushing rosy red, "I am not yet absolved. You must read to the very end. You must know the whole truth of it."

Again Arnold read on, for Kathleen had written at great length the history of that day—that terrible day—much blotted with tears, on the pages of her diary, when the canon went away and her mother "spoiled all" with Arnold Willoughby. When he came to that heartbroken cry of a wounded spirit, Arnold rose from his place; he could contain himself no longer. With tears in his eyes, he sprang toward her eagerly. This time at last Kathleen did not prevent him. "Am I absolved?" she murmured low as he caught her in his arms and kissed her.

And Arnold, clasping her tight, made answer through his tears: "My darling, my darling, it's I, not you, who stand in need of absolution. I have cruelly wronged you. I can never forgive myself for it."

Willoughby, a common sailor, unfit for work, and an artist too hopelessly maimed for any further painting—in short, a man without fixed occupation or means of livelihood."

Kathleen clung to his hand. "I knew as much already," she answered bravely, smoothing it with her own. "That is to say, at least, I knew from the day you went away from Venice, and still more from the day when your cousin's claim was allowed to hold good by the house of lords, that you had relinquished once for all your right to the peerage. I knew a man so just and good as you are would never allow your cousin to assume the title as his own and then rob him of it again. I knew that if you ever came back to me it would be as plain Arnold Willoughby, fighting your own battle on equal terms against the world, and, Arnold, now you're here, I don't care a pin on what terms or under what name you come; it's enough for me to have you here again with me."

"Thank you, Kathleen," Arnold said, very low, with a thrill of deep joy. "My darling, you're too good for me."

"But that's not all," Kathleen went on, with swimming eyes. "Do you know, Arnold, while you were away what I wanted you to come back for most was that I might set myself right with you; might make you admit I wasn't ever what you thought me; might justify my womanhood to you; might be myself once more to you. But see what a woman I am after all! Now you are here, oh, my darling, it isn't that that I like about, nor even whether or not you'll ever be able to marry me! All I think of is simply this—how sweet and delightful and heavenly it is to have you here again by my side to talk to."

She gazed at him with pure love in those earnest big eyes of hers. Arnold meted with joy. "You speak like a true, good woman, darling," he answered in a penitential voice. "And now I hear you speak so I wonder to myself how on earth I could ever have had the heart to doubt you."

So they sat and talked. One hour like that was well worth those two years of solitude and misery.

[TO BE CONTINUED.]

Rented Violins.

Violins are rented for varying periods, perhaps for a week, to a visitor in the city. They are often rented by the month, like pianos. The bulkier cello and the double bass are sometimes rented for single occasions, for concerts in private houses. The instrument is delivered and taken away, the player preferring to hire an instrument rather than to carry or to attend to the carrying of his own.—New York Sun.

A Thoughtless Compliment.

She—It is a very pretty ring, indeed, dear, but it is a good deal too large for me.

He (thoughtlessly)—Yes, I was afraid it might be. Mildred's hand is bigger by two sizes, sure, than yours.—Somerville Journal.

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being twisted up in knots. I was unable to dress myself, except with assistance, and could only hobble about by using a cane. I had no appetite, and was assured, by the doctors, that I could not live. The pains, at times, were so awful, that I could procure relief only by means of hypodermic injections of morphia. I had my limbs bandaged in clay or sulphur, in poultices; but these gave only temporary relief. After trying everything, and suffering the most awful tortures, I began to take Ayer's Sarsaparilla. Inside of two months, I was able to walk without a cane. In three months, my limbs began to strengthen, and in the course of a year, I was cured. My weight has increased to 165 pounds, and I am now able to do my full day's work as a railroad blacksmith."

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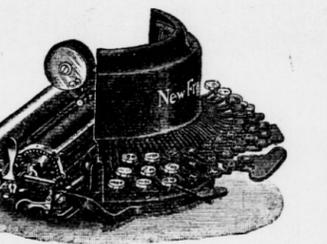
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Notices of Meetings.

A picnic under the management of Gratiot Co. Grange will be held in McDaid's grove, one mile south and one-quarter mile west of the village of North Star, on Thursday, August 27. Hon. J. J. Woodman will deliver an address in the afternoon. Patrons from surrounding counties invited. Yours fraternally, F. G. PALMER.

The annual picnic and Tri-State Grange assembly will be held Aug. 20 at Baw Beese Park, adjoining the Hillsdale city limits. The railroads have promised the usual special trains which will run direct to the grounds at less than half fare for the round trip. A good program is being prepared and the manager at the park is making every possible effort to have everything in readiness. The Patrons having the details of the meeting in charge will leave nothing undone to make it the largest and most enjoyable meeting which they have ever held. The Patrons of Hillsdale county invite all to unite with them in making this surpass all previous gatherings, and assure all of a genuine Granger welcome. SECRETARY.

Grange News

MR. EDITOR: Since my last letter to you on the subject of new Granges, which was dated June 29, the following new Granges have been established: Illinois 1, Indiana 1, Maine 1, New Jersey 1, Oregon 2, Pennsylvania 2. Total 8. Total number of Granges organized from Oct. 1, 1895, to and including July 31, 1896, is 157. Faithfully yours, JOHN TRIMBLE.

TO THE GRANGE BEYOND.

Ronald Grange No. 192, Ionia county, passed resolutions expressive of their sorrow in the loss sustained by the recent death of their sister, Minnie E. Heath. She was one of the active and earnest members.

CASCADE GRANGE.

has been rather dilatory of late on account of Sunday school rallies, and the weather, also the busy time of year. All who bought binding twine are well satisfied that it pays to belong to the Grange, as they saved enough on 50 pounds to pay one year's dues. We do not make use of the state contract as much as we ought.

Our next meeting will be August 8 at 1:30 p. m., and the subject is, "What cause or causes have led to the present depressed condition of business affairs in this country, and the low prices of farm products?" All farmers are invited to attend. H. C. DENISON, Lecturer.

GRATTAN GRANGE

celebrated the Fourth of July very agreeably. We invited some of our ex-Grangers and neighbors to join with us in our picnic to celebrate our time-honored Fourth. We had no regular program but we raised a pole and flung out our beautiful stars and stripes to the breeze. Our flag, blessed emblem of liberty and independence, may we ever be true to thee! You know how hot the day was. Well, the men and children occupied the outside of the hall and the women the inside. The men discussed politics while the children made merry over their firecrackers, and we, the women, made ready the dinner and visited and had a jolly good time, as the children say, and our dinner was grand—can't begin to tell all the good things we had but we did justice to the dinner if we did not by ourselves, and we resolved to try the experiment again another Fourth if Providence permit. Such social gatherings help to make life worth the living, and the Grange surpasses all for the farmer and family, so I think. AUNT KATE.

Magazine Notes.

THE ARENA.

All lovers of Whittier, and for the matter of that, all who love a beautiful life, will be deeply interested in the article in the August ARENA entitled "Whittier—The Man." This article is one of a series on Whittier by the Editor, E. O. Flower, and is certainly the most delightful of the series so far. Mr. Flower is a brilliant and at the same time a sympathetic writer, and while from a literary point of view this paper is admirable, its great charm lies in bringing us so near to the heart and soul, to the real inner life of the gentle Quaker, one of the most loved of America's great poets.

THE ATLANTIC.

It is a glimpse of a typical frontier town that Mrs. Catherwood gives us in her new ATLANTIC story. The struggles and adventures of two young men who started a newspaper in a new town on a new railroad are described with much humor and force. Nothing could be better character drawing than the two men themselves, one a dreamer with high literary ideals and no practical ability, the other a "hustler" trying to keep his whimsical partner from offending one or the other faction in the town and church and laboring through the week to get enough money to meet the demands of paying off Saturday night.

REVIEW OF REVIEWS.

The Review of Reviews for August, while largely given over to the issues of the presidential campaign, finds space for the treatment of other important topics. Besides the character-sketch of Mr. Bryan, the democratic candidate for the presidency, the Review has illustrated articles on Harriet Beecher Stowe and Dr. Barnardo, the father of "Nobody's Children." There is the usual elaborate resume of the current magazines; and the departments of "The Progress of the World," "Record of Current Events," and "Current History in Caricature" answer the typical American demand for what is up to date and "live."

THE AUGUST FORUM.

The August number of the Forum contains no less than thirteen timely and unusually interesting articles. The leading article, entitled, "Mr. Godkin on the West: A Protest," is contributed by Mr. Charles S. Glead of Topeka, Kan., and is a vigorous and spirited reply to an article by Mr. Godkin, the editor of the New York Evening Post, which appears in the May number of the Forum. Mr. T. S. Van Dyke, of Los Angeles, Cal., attempts to refute free coinage in an article entitled "The Financial Bronco." He declares that the ignorance of the West about the business methods of our country and of the world—full knowledge of which will alone settle the question in any sound mind—is equalled only by the ignorance of the East about the average western mind and the way to reach it. He declares that much of the financial literature sent West has failed of its purpose because of its abstruseness, and because most of the eastern sound-money arguments assume a knowledge of trade that the West does possess.

THE OUTLOOK.

The July Outlook offers its readers a character-sketch of William McKinley, by Murat Halstead, the famous journalist and brilliant writer, whose close acquaintance with Mr. McKinley makes him eminently suited to write just such an article as will make the Outlook's readers feel that they have come to know the republican candidate more directly than before. A large drawing by Mr. Gribayedoff of Mr. and Mrs. McKinley at home, and several studies of McKinley as an orator, at his desk, and so on, will illustrate Mr. Halstead's article. As a companion sketch will be a similar personal study of the democratic candidate for the presidency, William J. Bryan of Nebraska. The interest in the youngest man who ever stood before the public as a presidential candidate is naturally great, political considerations entirely apart. The article will be written by Mr. Richard Linthicum, a successful Chicago journalist. (\$3 a year. The Outlook Company, 13 Astor Place, New York.)

THE NORTH AMERICAN REVIEW

For August opens with a masterly paper from the pen of Sir Walter Besant on "The Future of the Anglo-Saxon Race." The Hon. Robert P. Porter most pertinently asks "Is Japanese Competition a Myth?" and "The Canadian Elections and Their Result" are adequately discussed by J. W. Russell. The sixth and concluding installment of the series of sketches on "Wild Traits in Tame Animals," by Dr. Louis Robinson, is presented, his theme being the familiar one of "Dogs and Cats." H. W. Lucey furnishes an accurate insight into "The Power of the British Press," and under the caption of "Issues and Prospects of the Campaign," two extremely important political articles are contributed by Senator W. E. Chandler and the Hon. Josiah Quincy; an interesting study of "Some Ante-Bellum Politics" is indulged in by the Hon. George W. Julian, and Dr. H. S. Williams deals with the query "Can the Criminal be Reclaimed?" A theory of "Natural Bimetallism" is propounded by George H. Lepper; while in "Novels Without a Purpose," Grant Allen advances the opinion that in the twentieth century such works of fiction will not obtain serious recognition from the public. An admirable criticism on American social life, under the title of "A Newport Symposium," is given by Mrs. Burton Harrison. Other topics dealt with are: "How to Prolong Life," by William Kinnear; "Italian Immigration," by Prescott F. Hall, secretary of the Immigration Restriction League, and "The Taxation of Church Property," by Speed Mosby.

The Boys and the Farm.

We want to help the boys—the good, honest, straightforward, and manly country boys. God bless them! They are the source of the strength, the honor and integrity of the Nation, the bulwark of virtue and purity in all that is manly; against which increasing vice and sin, that is too often the outgrowth of city life, is rolled and dashed into harmless spray, like a great wave of the sea against a stone wall.

We would like to have the boys on the farm love the farm, and stay on the farm, because the farm is a better place for boys than the city is. We were a country boy. We have tried both the country and the city, and the older we grow the more we like the country, and the less we like the city.

But we are sorry to say that the boys on the farm often learn to dislike it, because they are not treated right. In fact, they seem

to have no rights that their elders are bound to respect. They are made to share in the work, but seldom in the profits. They see that, while it may be son's calf, it is "dad's" cow, and when it is sold "dad" keeps the money. This is true, too true, of the cattle, horses, sheep, and hogs on the farm. The boy is a helper, but not a partner in the returns. This is wrong.

Fathers, begin now. Begin with the boys while they are little. Let them have the chickens on the place. Encourage them to raise and care for all the chickens they can. Let them sell the young chickens as soon as they are old enough to sell, and let them have the money for them. Don't deprive your own sons of their just rights. Give them a share in everything on the place. Encourage them to work that they may have reward. Let each boy have something that he may call his own; to keep or to sell, and when he sells it, let him have the money to invest as he sees fit, subject, of course, to your advice and suggestions, but don't coerce him. The calves may be fine, the lambs fine, and the colts finer; but listen, you farmer fathers, the finest young animals on your farm are your boys.

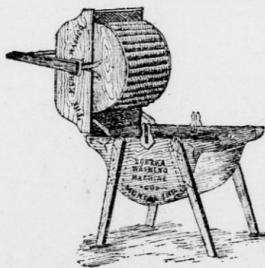
If every father would be more of a boy with his boys, he would be happier, look younger, and live longer. A man is only a boy grown old—a sort of an "old boy," and he should not allow himself to become too sedate or morose, because such outcroppings only serve to make him grow old the faster.

Live with the boys, talk to them, confide in them; take them into full partnership, and share your good luck as well as your bad luck with them. The boy that has such a father will work for him with a willing heart, and fight for him if necessary. And another thing—don't work as if the world was made in a day. Your bones are hardened and your sinews strong, but remember your boys are growing, and they will often tire out before you do. Give them a chance to rest. Yes, give them a holiday every once in a while. Let them lay off occasionally, and have a little pleasure.

Encourage them to visit among the neighbors of an evening and Sundays, and let them have their friends visit them at home. Help to make the home life in the country more social and more cheerful. Such a course causes the boys to love their home, and to stay on the farm after they have reached manhood, and have the means of going elsewhere, if they prefer.

Cultivate the boys on the farm as well as the crops. It will pay. H. B. Geer, in Farm, Field and Fireside.

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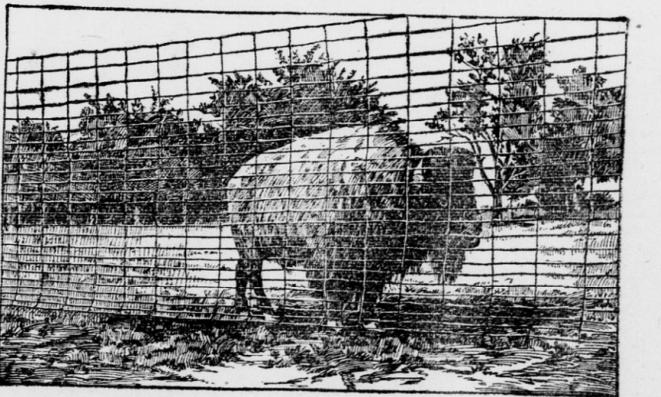
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PRESERVING BIG GAME. Commendable Instance of Private Enterprise.

ADRIAN, Michigan, June 30.—The recent death of Austin Corbin, the New England multi-millionaire, at his villa, near Newport, N. H., elicits special interest here. Mr. Corbin has the most extensive private preserve for large game that probably exists, covering 25,000 acres in the Blue Mountain Forest. On this magnificent range much of the Page-Woven Wire Fence has been used, the works for the manufacture of which exist in this city. The great financier had adopted the Adrian product in preference to all others. He had given much attention to preserving from extinction the American buffalo; and one of the stipulations submitted for enclosing his New Hampshire domain was that the fence should be proof against attempts to leap it, or break through, on the part of these powerful and agile animals. Unlike barb wire and analogous devices the Page product is a protection instead of a menace to animals within its enclosure. A short time ago he donated to the park commissioners of New York, a number of bison from his Blue Mountain herd, with the condition that blue but Page fencing be used to enclose them. Stimulated by Mr. Corbin's example, the Page people have instituted a zoo of their own. A range of 37 acres has been enclosed, and in this the company has placed a number of deer and elk, with nine bison. These were obtained after considerable trouble and expense, so rare are full-blooded specimens of the American bison becoming. None, a superb animal weighing 2100 pounds, died recently from injuries sustained in its transportation to the Adrian park, and has been mounted together with a beautiful elk, and donated to the museum of Adrian college. Having succeeded so well in corraling the brawny bison, the Page people are now preparing a fence to enclose the elephants in Lincoln park, Chicago, and relieve the animals from the chains which keep them in subjection at the expense of their tempers and physical condition. The company has also made a tender to the government to enclose a range at Yellowstone park, and save from depredation and loss the few buffalo that remain.