

THE VISITOR

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

VOL. XXI. NO. 12.

CHARLOTTE, MICHIGAN, JUNE 18, 1896.

WHOLE NO. 492.

The Liquor Commission.

Some Opinions By Prominent Citizens of Michigan.

PRES. JAS. B. ANGELL.

In reply to your request, I will say that I have read the Redfern bill which you have sent me.

The purpose of the bill is excellent. The facts, showing the use of malt and spirituous liquors, and the effects of that use, it is very desirable to procure.

I should think the life of the commission might be three years rather than six. Some of the specifications of information to be sought might perhaps be criticized, on the ground that they are vague, or that they are too inquisitorial, or that they are impracticable. But such an objection does not lie against the general purport of the bill.

The great difficulty will be to secure unbiased and competent men to serve on the commission without compensation, men in whose investigations the public will have confidence.

Ann Arbor.

JUDGE C. B. GRANT.

I am in favor of any reasonable means to gather facts in regard to intemperance in order to place them before the people for their enlightenment. I am not entirely clear, however, as to the wisdom of the state undertaking the expense of a bureau for that purpose. If the present law were enforced as it ought to be, and as it can be, many of the evils of which we now complain would be avoided. What we need is not so much information of the evils of intemperance, for that we all know, but more enforcement of law. If the good people in every locality would organize for this purpose, such enforcement could speedily be accomplished. The evil will not be remedied by laws unenforced, but by laws enforced. If we cannot enforce the present law I see no reasonable prospect of enforcing one more rigid.

Lansing.

ALBERT A. DODGE.

I have read with considerable interest the article in the VISITOR on the subject of the State Liquor Commission and I wish to endorse all that you have said. I am not now prepared to say whether or not the bill should be adopted in every particular as published; possibly it might have been improved by a few slight amendments, but in the main I wish to endorse the whole idea and trust that you will succeed in working up sufficient feeling throughout the state to secure the enactment of the bill by our next legislature.

Grand Rapids.

MRS. AGNES L. D'ARCAMBAL.

The appointment of a state commission to investigate the liquor traffic, its extent and effects, other things being equal, would no doubt be valuable in helping the public who have not already done so, to realize just where we stand as a state and as a nation in regard to it.

Of the making of commissions and investigating committees on this subject there is no end, but the great vested interest in the liquor traffic has ever been the power that has kept both state and country from acting on recommendations and fully realizing the statements of such, even if it has not succeeded in hindering its investigations and stultifying its work.

Sam Jones says, "The man who sells liquor is an infernal scoundrel, and the man who drinks it is an infernal fool." This language may seem more than emphatic, but thinking and unprejudiced people have long ago recognized its truth. It is well known to economists that, unlike that of a legitimate article of commerce, the supply of alcoholic drink creates the demand, and not the demand the supply.

The key to the solution of the liquor question seems to be the awakening of the religious sense of the public, and especially that of the governing classes. To stigmatize revenue made through its manufacture and sale. To brand and ostracize those who grow wealthy on the degrada-

tion of the race. To place the reproach not so much on the unfortunate victim of environment and appetite as on those who cater to the one and create the other. Above all, to realize the inherent evil of the stuff, and that it is impossible to touch it actually or metaphorically without defilement.

If the work of a commission should so investigate and hold up before the public the liquor traffic in all its direct and indirect bearings and effects without fear or favor its iteration, of the matter as a system of facts near at home might help those who desire the highest benefit of the state to arouse individual action.

Detroit.

HON. WM. L. WEBBER.

I am, as you say, interested in every practical temperance movement, and I regret that so much zeal and strength should be expended in such misdirected efforts to promote the cause of temperance. Experience has demonstrated that every misdirected effort to promote any good cause is really an injury to the cause, and I think Michigan, and humanity generally, have suffered because there has been so little knowledge and judgment exercised in seeking to forward the temperance movement. Every such movement designed for the benefit of humanity must first rest upon the actual condition of humanity, and what would be wise if some other condition existed may be unwise as conditions now exist.

I have never been of opinion that the prohibition movement in Michigan was promotive of advance in temperance. This movement contemplated the absolute extinction of alcohol, and the speakers and writers have declared alcohol, in all its forms, a curse. As a matter of fact, this statement is not true. It is simply the abuse of alcohol which is the curse; the unnecessary use of alcohol which does the mischief. But alcohol has always existed, and I think it is safe to say it always will exist. Again, the friends of prohibition have urged that alcohol was a poison, whereas the best scientific authorities hold otherwise. You remember the investigation made by Governor Andrews of Massachusetts, and the published results. No matter how good a cause may be, when false premises are assumed the cause is injured thereby. Let the friends of temperance tell the truth, and say that the abuse of alcohol is the cause of the trouble—say that the weakness of humanity in not being good to itself is the cause of the trouble.

You remember Dr. Reynolds, in the Red Ribbon movement, took as his text everywhere, "Be Good to Yourself." He was a true temperance apostle, and did much good. Men are placed on earth with certain personal responsibilities; they are possessed of liberty of choice; their Maker has not seen fit to deprive them of choosing evil, if they prefer it; why should man assume to be wiser than his Maker, and take from man this choice? Rather let men be instructed in the good, and yet be permitted to choose the evil, unless they have so far lost their reason that they should be placed in asylums or under physical restraint. On this basis the cause of temperance can be promoted and built up, and on this basis alone can we hope for any permanent good. The saloons, as they are ordinarily conducted, are a great evil in the community. They will exist in some form, or in some manner, and in some place. Better, therefore, that they should be regulated and restrained by placing them under heavy penalties to comply with the rules and regulations of the law, to have them as little mischievous as possible, and lessen the number by the severity of the rules and regulations.

Humanity requires instruction and caution as to intemperance in eating as well as intemperance in drinking. An eminent physician once said to me, "Two men are killed by over-eating for every one killed by over-drinking."

I think experience has demonstrated that those evils in society which have always existed, and which seem to exist in consequence of the infirmity of humanity, are best dealt with by society by such le-

gal regulations as shall restrain and legislate them, rather than to attempt their prohibition, when the experience of the world has proven that prohibition is impossible. Vice can be carried on in such a secret manner that man cannot be prevented from vice except by a physical restraint of his person.

I do not see any good to come from the passage of the Redfern bill, or the investigations which it proposes. We all know now the evils of intemperance; we know that it is an evil of great magnitude, and to know its precise extent, perhaps, is not material. The value of investigations under such a bill as this would depend largely upon the wisdom and the sagacity of the men who should conduct them; and after the detailed information was procured there would still exist difference of opinion in the community as to the best method to remedy these evils.

Every man who is intelligent enough to be a member of the legislature should know, without waiting for the report of a commission, enough on those questions to form his own conclusions without waiting for further advice as to facts. Every man has had the evils of intemperance before his eyes from his youth to the present time; every man has heard the subject discussed and all sorts of opinions expressed concerning the best methods of eliminating these evils from society, yet there are so many opinions as to these methods still existing as to demonstrate a want of uniformity in the premises which lead to these conclusions. In my judgment the passage of the Redfern Bill would call upon the taxpayers for at least \$30,000, and I should not anticipate any useful results whatever from operations under it.

Saginaw, E. S.

The Hessian Fly.

BY G. C. DAVIS, MICHIGAN EXPERIMENT STATION.

The Hessian fly is now in the "flax seed" or pupa stage and is found near the base of the plant, encased between the stem and the leaf-sheath. It is called "flax seed" stage because it resembles in appearance and shape a flax seed. Occasionally a minute mosquito-like fly is already making its appearance from the pupa stage, but the greater share of the flies will not appear for a month or more. Whether there is a third, or summer, brood is unimportant at this time, but suffice it to say, that when early fall wheat appears, the females begin laying their eggs on the leaves, usually along the midrib. The egg is about one-sixteenth of an inch long and of a pale red color. From the egg comes the white maggot which works its way in toward the stem and does the harm to the wheat by bruising the stem and sucking the sap from it. The second brood of flies appears in early spring and the maggots from this brood do the most harm of all as they cause the wheat stem to crinkle and break and the grain to shrink or remain undeveloped.

This, in brief, is the annual cycle through which the Hessian fly passes. However, it is not so often of the life history and habits of the fly regarding which we are questioned, for most of the farmers are already acquainted with it in that respect through reading and experience. The letters which are now coming to us are looking to the future and asking, in substance, "What is the probability of a severe attack on the next year's wheat crop?" and "Is there anything that we can do to prevent or lessen the injury?" As these are vital financial questions to the grain producing farmer, even a few suggestions may aid.

"WHAT IS THE PROBABILITY OF A SEVERE ATTACK ON THE WHEAT CROP NEXT FALL?"

This is about as difficult a question to answer as the fore-casting of the weather, as much depends upon this one influence. Two years ago this summer indications of the Hessian fly were about the same as last summer, but last season's wheat was not injured to any extent in comparison with the present crop. Whether it was the dry, hot summer of last year that held the fly in check, or whether it was some

other influence or combination of influences that made the difference, admits of much conjecture and leaves room for more study, observation, and facts than we now possess. We must say though that, as abundant as the flies will soon be, there is a strong probability that the attack on wheat this fall will be a severe one. Parasites are not apt to be of any great aid before next season, and climate influences so far this season are very favorable for the fly.

"IS THERE ANYTHING THAT WE CAN DO TO PREVENT OR LESSEN THE INJURY?"

Occasionally the man who does all that he can in the autumn to prevent an attack of the fly, succeeds no better than his indifferent neighbor, but generally he succeeds in molifying if not entirely preventing an attack on his crop.

Prof. Webster, the present entomologist of the Ohio Experiment Station, has spent much of his time for the past twelve years in studying the fly and gathering data regarding it, and he gives us very good proof that late fall sowing is an important item in checking the fly. There is a time when most of the brood of flies has deposited its eggs and died. In the southern tier of counties in this state the date of sowing has been determined to be from the 12th to the 15th of September. As we go northward from this, the time of sowing becomes earlier at the rate of a day for every 12 miles, or 5 days for every degree of latitude. For the average autumn this date will still give the wheat an opportunity to make a good growth before winter comes.

When wheat is sown late, particular care should be used in thoroughly preparing the ground and in using fertilizer where necessary to give the wheat a vigorous growth. Much depends upon the seed-bed and strength of soil in aiding wheat to withstand any insect attack.

ALL VARIETIES INJURED.

On the College farm, ten of the more common varieties of wheat grown in the state were examined and all found to be badly injured by the fly; some perhaps a little more than others, but the slight difference no doubt was due to other conditions independent of variety.

A MAGGOT INSIDE THE STEM.

Several persons have reported finding a little white maggot inside the wheat stem. As the Hessian fly maggot does not work inside the stem, a few of these farmers have gone so far as to make the assertion that it is not the Hessian fly, but another that is doing harm this season. This is the result of a closer examination of the wheat than usual, for this maggot inside the stem is found in varying numbers every season and causes the upper portion of the wheat stem to turn white before ripening time. It is known as the wheat stem maggot, and is rarely numerous enough to do much damage.

Agricultural College.

From 1873 Until 1896.

Huron Co., O., March 30, 1896.

Mr. O. W. Ingersoll,
DEAR SIR: Your paint which we used on our house in 1873 has proved very satisfactory and, as we desire to repaint it this spring, we write you for sample color cards.

Yours,

W. W. MARTIN.

See Adv. Ingersoll's Liquid Rubber Paints.

In writing to advertisers please mention the VISITOR.

Catarrh Cannot Be Cured

with LOCAL APPLICATIONS, as they cannot reach the seat of the disease. Catarrh is a blood or constitutional disease, and in order to cure it you must take internal remedies. Hall's Catarrh Cure is taken internally, and acts directly on the blood and mucous surfaces. Hall's Catarrh Cure is not a quack medicine. It was prescribed by one of the best physicians in this country for years, and is a regular prescription. It is composed of the best blood purifiers acting directly on the mucous surfaces. The perfect combination of the two ingredients is what produces such wonderful results in curing catarrh. Send for testimonials, free. F. J. CHENEY & CO., Props., Toledo, Ohio. Sold by druggists, price 75c.

Field and Stock.

Prune Growing in Oregon.

BY PROF. U. P. HEDRICK, PROFESSOR OF HORTICULTURE, OREGON AGRICULTURAL COLLEGE.

But few eastern people comprehend the magnitude of the prune industry on the Pacific coast. Ten years ago nearly all the prunes used in this country were imported from southern Europe; but, beginning about that time in California, the prune industry has grown to be one of the most important interests on the coast. The value of the crop is exceeded in California only by that of the citrus and viniferous fruits. In Washington, Idaho, and Oregon prune interests have assumed greater proportions than all other orchard industries.

I think I am safe in saying that Oregon is the favorite state of the prune and I am sure that the prune is the favorite crop in Oregon. As such it has much in its favor; the trees are sure to bear, there are no climatic conditions to overcome, and there is a comparative immunity from insect and fungus pests. The demand, too, is growing enormously for both the dried and green product, thus promising well for the industry.

THE CLIMATE IMPORTANT.

The chief feature in Oregon prune growing is the climate. The tree is a comprehensive feeder and any good soil will produce prunes. But to grow them at their best the climate must be temperate in regard to heat and moisture. A large and even product of good flavor and color can be produced even in Oregon only where local climate conditions are good, this being largely the secret of profit and loss. It is not necessary to irrigate in Oregon to grow prunes nor is the fruit cracked by the hot sun as it is in California. The moisture conditions are such that the tree makes one good, strong growth in the spring and early summer, and this, followed by an abundance of sunlight and an equable summer heat, ripens fruit and wood, giving the former a beautiful color and a delicious flavor.

There are now about 30,000 acres of prunes grown in this state. The major part of the industry is comprised in the valleys of western Oregon, though there are many fine orchards along the Columbia river in northern and eastern Oregon. Lying between the Cascade and Coast Range mountains in western Oregon there are three great valleys, in order of size and importance, the Willamette, Umpqua, and Rogue; each drained by a river of the same name. The soil for some miles adjacent to these rivers in a black alluvial deposit very deep and so rich that for years and years without any manuring and with but little cultivation it has averaged from 30 to 40 bushels of wheat per acre. It is upon this black soil that most of the prunes are now grown. As you reach the foot-hills of the mountains on either side of the rivers the soil becomes red and is of basaltic origin. It is quite like that of the fruit regions of California and is very rich in the mineral elements of the soil, potash especially. Some of the very best prune orchards are on this soil and that it will some day produce large crops of prunes is certain, but as yet it has not to any appreciable extent been encroached upon.

VARIETIES.

There are two varieties of prunes popularly grown in Oregon, the French or Petite, and the Italian. The first named is the Robe de Sergent plum in the East and is the prune grown almost exclusively in California. At present it is the universal favorite in the commercial world. Unfortunately it does not do so well in the northwest and is not so largely grown as the Italian. The Italian is not quite so popular in the market at the present time as the Petite but when its good qualities become known by a more general introduction it may be expected to rank in the markets with the French prune. The Italian prune can only be grown to perfection in the northwest. In the east it is known as the Fellenburg plum.

Briefly, the difference between the two is: The Italian when dried is larger than the Petite prune, is black or bluish black in color and is more acid, having a most agreeable sub-acid flavor. The Petite is smaller but is heavier in proportion to size, having more solids and sugars. It is of a bright amber color when dried, making it the more attractive looking of the two. Its insipid taste, because of a lack of acid, is its chief defect, though this sweetness recommends it to many.

METHODS AND PROFITS.

The prune trees are grown on peach stocks generally, though myrobalan and marrianna plums are being used some and will, I think, supersede the peach. The cultivation given is that universally given plums. The trees when full grown are not so large as in Michigan but are much

more productive than there, and the fruit is of larger size and better quality. Last season a new era for the prune industry opened up in the shipping of undried prunes, many carloads having been sent east from Oregon. The outlook is promising indeed for this branch of the industry.

The great bugbear of the prune grower is to get his prunes evaporated. The evaporators now in use are of all makes and turn out all grades of prunes. A prune evaporator, in general, is quite like the large drier used in evaporating apples. As the industry grows steam will be introduced in all the large plants and with its advent much will be accomplished toward increasing the efficiency and economy of running an evaporator. Before drying, the prunes are graded into "sizes" and dipped in strong boiling lye to crack the tough skin and thus hasten the drying. In California most prunes are dried by the sun.

A word in regard to profits may be said. Last year the Oregon Experiment Station conducted a thorough survey of the fruit interests of western Oregon. The average net profit per acre per year for prunes as summarized from the reports of the survey were one hundred four and one half dollars for the 1894 crop. The extremes given the survey workers were great yet this can, I think, be recommended as approximately correct. From the same report the average cost of bringing an orchard in bearing was forty-one dollars and eighty cents. A prune orchard bears at four years old. The cost of prune land in Oregon is from twenty to eighty dollars per acre.

Corvallis, Oregon.

Agriculture.

Report of Committee at State Grange.

Worthy Master, Sister and Brother Patrons: We come before you with the full realization that the most difficult thing for the average of human beings to see are their own privileges and blessings, and hope that the report that we are about to submit will not be full of ominous forebodings, but will present all subjects in their true light.

While we cannot with propriety return thanks for bountiful crops and paying prices for the past year, we are truly grateful that matters are no worse than they are.

Your committee, in presenting to you their report, feel the responsibility and the importance of the many questions that present themselves to the agriculturists of this State and Nation. As the basis for successfully pursuing our calling requires broad acres, so we feel that our report should be correspondingly broad and liberal, realizing that in the present day and age of advancement, no business or occupation can stand wholly alone, that the prosperity of any one branch, depends, in a great measure, upon the prosperity of other branches, for when consumers are hampered by enforced idleness, or low wages, their purchases are limited correspondingly; therefore, legislation or business complication that interferes with, or cripples any useful industry legitimately pursued is detrimental to us.

OUR HOME MARKET.

Our home market is our best market; that is articles of which we do not produce an export quantity, do not come in direct competition with the products of cheap land and labor in foreign countries, and we do not have to accept their prices, less the cost of transportation to their markets.

There has been a plan presented by one David Lubin of California, and known as the Lubin idea, which was discussed at great length at the meeting of our last National Grange, which provides for the payment of a bounty by the government upon agricultural exports, claiming that agriculture under the present system of protection does not receive benefits in proportion to manufactures, and hoping by said bounty to relieve the depression in agriculture.

It seems to your committee that to adopt this plan, one fundamental principle is overlooked, and that is, that the people must support the government, and not the government support the people. But as extreme cases require extreme remedies, and as agriculture, which has furnished the bulk of our exports, and sixty per cent of the internal commerce that floats on our great lakes and rivers, besides contributing by far the greater part of the freightage for our 175,000 miles of railroads is languishing, any remedy that will relieve the pressure on this industry should be resorted to. Therefore while we cannot indorse it, we will not condemn it.

EXPORTATION.

From the committee on agriculture at the meeting in Worcester, we learn that the United States produces annually, on an average, 500,000,000 bushels of wheat (this year's crop is 60,000,000 bushels less), and that the average annual export of wheat and flour is 140,000,000 bushels. By these figures you will see

that if we could lessen production, or increase consumption a little more than one-fourth our home market would consume the entire crop. This would cause an advance in price, so that the 340,000,000 bushels annually consumed, would be worth as much money as the 500,000,000 bushels now annually produced.

Manufacturers and miners in certain lines are so thoroughly organized that they can and do regulate their markets by the supply of their goods; but we are not so fortunately situated.

With an average corn crop of 1,800,000,000 bushels we annually export 75,000,000 bushels.

Our average oat crop is 650,000,000 bushels all consumed at home.

Of potatoes we produce about 200,000,000 bushels and have to import from 10 to 20,000,000 bushels annually to supply our own market.

France annually imports about 45,000,000 bushels of wheat. Germany 40,000,000 bushels and the United Kingdom, the largest importing country of food products, 180,000,000 bushels. Russia is the largest exporter of wheat, and annually sends out 160,000,000 bushels. European Russia has a population of 98,000,000 souls, four-fifths of whom are peasants, who live on rye bread and potatoes, and are nearly all engaged in agriculture. The undeveloped territory of Russia, could in a short time be made to supply the world with bread. India annually exports 40,000,000 bushels of wheat. She has a population of 290,000,000, three-fourths of which cannot read or write, and live on rice and other cheap food, and work for almost nothing. Argentine exports about 45,000,000 bushels. She has over 400,000,000 acres of rich lands with but 10 to 12,000,000 acres now under cultivation.

From these figures you can readily see, that so long as the export price of wheat controls the markets, it cannot be otherwise than low. As we produce 90 per cent of the corn of the world, competition in that line is not so great.

We believe it the duty of the government to enact such laws as tend to rebuild our languishing industries and as far as possible maintain them, and at the same time enhance the receipts of our National treasury, so that we may diminish our debt, rather than increase it.

TRANSPORTATION.

In the matter of transportation, we do not feel that the government should own and operate the modes of transportation, as the employment of capital in that direction is just as legitimate as its employment in production. The mission of the government is to govern the people and not to do the business of the country. The duty of the law is to protect the weak against the strong. The physically weak against the physically strong. The financially weak against the financially strong. Therefore, as large amounts of capital are concentrated for accelerating transportation and the capital invested in agricultural pursuits is scattered, we feel justified in demanding laws for our protection from this source. In the pooling of the eight American railroad trunk lines, and the one Canadian trunk line, controlling the traffic between New York and Chicago, the arrangements are nearly completed, and the agreement provides that every road in the combine shall make and maintain the rates prescribed by a board of managers representing all the roads. That this will virtually destroy all competition in both freight and passenger rates between these two great centers of commerce, is a clear case where the weak need protection against the strong and should be stopped at once.

TRUSTS.

Any and every trust or combine, or anything of that nature that tends to interfere with the natural laws of supply and demand, or the legitimate and natural competition in business, is nothing more nor less than oppression to the people and should not be tolerated for a moment. While we believe that supply and demand are the great regulators of prices, when not interfered with, we fail to see the force of the argument of Secretary of Agriculture Morton when he says that the limited supply of unoccupied lands, with our constantly increasing population will, within a few years greatly enhance the value of farms. In our opinion farming lands will not materially advance in value, until the prices of farm products advance, to an extent that money invested in land will pay as good dividends as money invested in other enterprises.

We give people who are engaged in all kinds of necessary and useful business, credit for being just as honest and loyal as we are, and therefore accept their expressed opinion as their honest conviction and denounce all expressions, such as gold bugs, silver kings, etc., that are intended to carry with them disrespect. As sectionalism in this country is a thing of the past, so we want to see the classes done away with, and our laws framed for the good of the masses, and not for special classes.

TAXATION.

In the matter of taxation, we hope that

the work of the tax statistician whose appointment is the fruit of our order, will throw such light upon the subject, as to cause the burdens to be borne more equitably. Believing that the whole property should pay its fair share of the taxes, any law that will help to place all property upon the roll, and assess it at its true cash value, and in the township or city where such property is located will be welcome. There are now two exceptions to this. One is in the case of railroads. Every mile of railroad should be assessed where it is located, and thereby help to pay our town and county taxes. The other exception is in the assessment of mortgages. We hold that when the mortgage tax law was repealed Michigan took a step backward. While the law no doubt had some defects, the principle was right, for no man was assessed for property he did not own, no property was assessed twice, and all property was assessed where it was located.

STATION BULLETINS.

For the bulletins issued by the agricultural college, and the knowledge imparted through and by their experiments, we would return thanks, and believe that the lack of interest in said work, and the failure to profit thereby, causes more loss among farmers than does the support of the school. Would we not think it ridiculous for professional men to advocate the abolishment of their respective branches in the university because every student who studied law or medicine did not practice it, and is it not equally absurd for us to be forever kicking because everyone who attends agricultural college is not a farmer? As regards the construction and maintenance of highways, to their centers of commerce, they can do so by securing special legislation.

There are certain natural laws, controlling the business of the world, which we sometimes overlook, and one of those laws is, that great wealth is not speedily secured through agricultural pursuits. Those who are ambitious to possess extreme wealth must seek it elsewhere. However, our products are the world's necessities, and it is just that we should receive fair remuneration for our labor, and our capital invested, and it is our duty to work for that end.

Our business demands our earnest, personal attention, it cannot be successfully conducted by proxy. The old rule, never abrogated and never in any sense suspended, there is no excellence without great labor, is closely personal in its application. And to the farmer, this means as much as to any other man, that it is his own hand that must guide if he would make the most of his opportunities.

Respectfully submitted,

R. A. WOOLSEY,
A. H. GILLET,
M. L. EVENS,
MRS. C. D. BEECHER,
MRS. SARAH J. SHAW.

General Topic for June.

TRANSPORTATION.

Question 1. Should the Government own and control the railroads in this country?

Question 2. Has the work of the Interstate Commerce Commission been of sufficient value to the people of this country to warrant the enactment of the law creating the commission?

SUGGESTIONS.

But few direct suggestions will be made under this topic. What is given will be largely in the line of statistical information for a large class of the members of the Order who may not have opportunities for procuring the same. The Declaration of Purposes says: "We are not enemies of railroads, navigable or irrigating canals, nor of any corporation that will advance our individual interests, or of any laboring classes." The discussion on the first question should be in the spirit of the above quotation. For argument study the reports on Transportation in the Proceedings of the National Grange for ten or fifteen years. The proceedings of 1891 contain a special argument in favor of Government ownership. By act of Congress the Interstate Commerce Commission were directed to investigate the subject of Government ownership of railroads, and the Commission issued a special report in regard to their investigations in 1894. This report gives a history of Government ownership of railroads in foreign countries and the conclusion reached is that Government ownership is not desirable in this country. Both sides of the question should be carefully studied.

The following condensed statistics from official sources will show the magnitude of

Continued to page 5.

WOMAN'S WORK.

My Strawberry.

O marvel, fruit of fruits, I pause
To reckon thee. I ask what cause
Set free so much of red from heats
At core of earth, and mixed such sweets
With sour and spice: what was that strength
Which out of darkness, length by length,
Spun all thy shining thread of vine,
Netting the fields in bond as thine.
I see thy tendrils drink by sips
From grass and clover's smiling lips;
I hear thy roots dig down for wells,
Tapping the meadow's hidden cells;
Whole generations of green things,
Descended from long lines of springs,
I see make room for thee to bide
A quiet comrade by their side;
I see the creeping peoples go
Mysterious journeys to and fro,
Treading to right and left of thee,
Doing thee homage wonderingly.
I see the wild bees as they fare,
Thy cups of honey drink, but spare.
I mark thee bathe and bathe again
In sweet uncalendared spring rain.
I watch how all May has of sun
Make haste to have thy ripeness done,
While all her nights let dew escape
To set and cool thy perfect shape.
Ah, fruit of fruits, no more I pause
To dream and seek thy hidden laws!
I stretch my hand and dare to taste,
In instant of delicious waste
On single feast, all things that went
To make the empire thou hast spent.
—Helen Hunt Jackson.

Our Schools.

What the Public Has a Right to Expect of the Schools; from the Editor's Standpoint.

(Read by E. R. Reed at Hesperia Grange and Teachers' Association.)

It is very difficult for me to divorce the ideas I may have as an editor or a citizen in regard to the public schools. My occupation in one field and position as a parent and citizen have given me some decided opinions in respect to our school system, but whether I have those views as a citizen or editor I cannot tell; and if I express them as an editor it does not necessarily follow that they are "editorials and must have position at top of column and next to pure reading matter." For I am willing they should have the "run of the paper" and be counted for just what they are worth, and no more.

Is the same care and attention being given in our schools to the primary department that there is to the higher grades?

Out of a class entering the primary school at the ages of five or six years consisting of twenty scholars not more than three or four of them finish the high school, and not one in hundreds beginning at the lowest round finish in the higher colleges provided. In the first and second grades the children are crowded in large numbers in one room, and sometimes as high as sixty or seventy little ones are undertaken to be controlled by some inexperienced teacher who has no adaptability for the place. She is usually hired because she will work cheap, and the peculiar qualifications necessary are not taken into consideration until teachers for the higher grades are wanted.

It has been said, and justly, too, I think, that the trend of one's life is shaped by the handling of the first two or three years of home and school life. That the shape and direction of one's mental thoughts and after usefulness are made in early school years. If such is the case, is the proper attention and care given to those early years?

When the upper grades are reached the same number of scholars will be given two or three teachers. Costly apparatus will be provided for them and the studies be made more attentive by experienced teachers chosen for their ability and adaptability. But long before these scholars reach these grades in many cases they have lost their interest in school; inexperienced teachers lacking the ability to discern the bent of the young mind have failed to discover what will interest the peculiar cases, and very often the cause of children dropping interest during intermediate grades from a lack of interest can be traced to utter indifference on the part of scholars to the school. What was necessary to interest that pupil had not been discovered by the teacher until too late, and the child, in most cases the boy, drops out; the few remaining get the benefit of the higher training.

Cannot the schools be made more attractive so that more of the young men of our country can be induced to finish their studies in the high schools? Is this lack of attendance their own fault, or is it the fault of the system?

A large percentage of those who graduate in our high schools are girls. They are developing intellectually much faster than the young men of the age. If this continues, what of the future? Many of the best thinkers and writers of the age are women. Within the past half a century this position has changed greatly intellectually and mentally. They are advancing, the young men of the age are leaving school with less of an education, adapting habits of cigarette-smoking and other vices and degenerating. How long can this continue and our country be safe? The young man is injuring himself, society is being

deprived of an educated citizen, and the government itself is being weakened, for its strength and prosperity depends on the intelligence of its votes.

I do not want to be a pessimist and magnify the evils of today, but I believe these thoughts are worthy of consideration, and if I have a mistaken idea of them I will willingly stand correction; but they are thoughts that force themselves to my mind. How are the many young men who are so lightly ignoring an education to be reclaimed? Can the school system be altered or amended in any way to correct the evil? Will more attention to them while in their primary grades affect them in after years? Can I as a citizen and other citizens do anything to counteract the growing tendency?

These are questions that rush through my mind as I write, but I will admit frankly that I have no remedy to suggest. I cannot point to the duty done or undone that will correct the evil. Our educators may be able to suggest remedies, and if so, they will find in me for one a helper who will do all they can to help.

We all have a right to know not only the best that is being done, and can be done, but also the worst features of our school system, and he is no true friend of education who wilfully conceals or keeps back facts and knowledge regarding them. A discussion of such questions will purify the atmosphere surrounding it, and if no such evils exist as these, those patrons who have such ideas and thoughts will have them corrected.

That Maple Stub.

BY EMMA A. CAMPBELL.

"I was just going to have it done!" "Have what done?" "Why, have stakes driven about the old maple stub in the door yard." "What for?" "To preserve it. It was old and rotten and getting shabby." "It's not pretty in a door yard." "No, I know it was not pretty, and stakes about it would have made it look worse, but the big blow came, and the stub is blown down, and now what good is it that I was just going to have it staked."

In the spring of 1891, my child came running in great excitement, "O, mamma, the red-headed woodpeckers have a nest in the old maple stub." Sure enough; now thought I we will see if John Burroughs is right, that the woodpeckers abandon their nests after the first season (page 138, Wake Robin). Every summer since then I have found the red heads have had their first brood out of that old stub in time for my cherries. They used the same cavity in 1891 and 1892; in 1893 they made a new chamber, which they used in 1894, adding a new door so they could enter either the back or front way. Again a new chamber was excavated in 1895, and they had just completed the work of house-digging for the present season when the disaster came. The fallen stub confirms my conclusions that woodpeckers do sometimes use the same chamber successive seasons, for there were only four cavities,—one with two doors—which had done service for six successive seasons. But now the loud joyous cries and the resonant hammering—the melody which woodpeckers know how to evoke from the roof of a barn—have gone out of my home concert, and from my summer cares I shall miss protecting the blundering first flight of baby woodpeckers from the watchful cat.

Washnetaw Co.

Why We Cook Our Food.

We cook our food to render it more agreeable to our senses of taste and smell. Cooking develops flavors and odors not present in the raw state. This is particularly true of the animal foods, but it is also true to a greater or less extent with regard to vegetable foods, and indeed some vegetables, as potatoes and beans, would be repugnant were they uncooked. The superior flavor, appearance and taste of a piece of beefsteak nicely cooked is a case in point. The development of pleasant flavors in the coffee berry and peanut illustrate the same principle.

A second reason why we should cook our food is to be found in the fact that thereby we facilitate the process of mastication. Some foods are tough or hard and can neither be finely divided nor well mixed with saliva. Cooking softens these so that the work of the teeth is performed with greater ease, and the results, so far as the digestibility and the amount of nutrient matter obtained are concerned, are vastly more efficient.

Again it is often desirable that the food be chemically changed; thus some foods or portions of them are absolutely indigestible in the uncooked state; the fibrous tissue of meat, for example, cannot be considered a food until by the application of heat it has been changed chemically to gelatine. Similarly starches, though not entirely indigestible when raw, are changed into a more digestible form by cooking, and the cooked starch, as in bread, is by the process of toasting, converted into a new chemical substance called dextrin, which closely resembles sugar both in its

chemical properties and in the ease with which it is digested. Again sugar is changed into caramel and fats are partially decomposed into other more digestible substances.

A fourth reason for cooking food is that the warmth which is thus imparted promotes digestion by causing an increased flow of blood to the digestive apparatus and hence a more copious secretion of the digestive fluids. It is to stimulate the flow of digestive juices that hot soup is given as the first course at dinner. As a result of this increased flow the digestion of the food is well advanced by the time dinner is over. The general stimulating effect of tea and coffee is enhanced considerably by their warmth.

The general result of all these changes mentioned, the development of flavor, the increased ease of mastication, the chemical changes, and the warmth imparted by cooking, is that more nutrient matter is obtained from the food at the same time that its digestion is promoted.

Finally, cooking destroys any parasites that may be present in the food. Of these, *trichinae* in pork and the *scotex*, or encysted head of the tapeworm, in what is known as mealy beef, are the most common. To show that these are not so rare I may mention that between two and three per cent of all the hogs slaughtered at the Chicago stock yards are found to be infested with *trichinae*. Most food materials serve as a favorable media for the propagation and growth of bacteria. Many of these are harmless, but we must remember that we cannot be sure at any time that no dangerous ones are present. As heat destroys bacteria we are taking fewer chances when we cook our food than when we do not.—Prof. Thomas Grant Allen, M. A., in *The Chautauquan*.

Means of Protection Against Clothes Moths.

G. C. Davis in Bulletin of Michigan Experiment Station.

It is much easier, we find, to keep a house free from clothes moths than rid the house of them after they are once thoroughly established. There are few dwellings which have not some dark clothes press in which woollens are left exposed during the summer. Often old clothing or woolen rags are thrown into a little used attic and thoughtlessly left. Upholstered furniture not in use is often carried to the same general reception room for cast away articles. All of these articles and many more of a like nature, such as feathers and furs, are very attractive to these little moths and make a breeding place for them that is sure to bring annoyance and grief to the house matron if such practice is continued. The first item then to remember is to avoid unnecessary exposure of anything that will attract the moths and on which their young can feed.

Clothing, including furs, to be stored in the wardrobe during the summer, can be kept entirely exempt from attack if put into new flour sacks, linen sacks, or something of that nature, and tightly tied so that a moth cannot enter at the mouth. Chests serve the same purpose when tight enough to prevent the moths from entering.

Garments to be kept free from the moth entirely by isolation, as mentioned in the last paragraph, must not be left exposed for a month or two after the wearer has discarded them before they are packed away, as the moths are most active in May and June and are the most likely to deposit their eggs on these garments before they are safely stored. They should be put in safe keeping without delay as soon as doffed and cleaned.

Various repellants, such as camphor, moth balls of naphthaline, snuff, tobacco and similar substances are in quite general use and have usually given fair satisfaction. Cedar chests are well known to give protection against the moths, but they are quite expensive. In all probability cedar oil, as spoken of under the carpet beetles, will prove to be an excellent repellant in a wardrobe, bureau or chest, when sprinkled over the wood-work occasionally. It seems superior to all other repellants tried by myself, and quite likely will be sufficient to keep all moths away.

Where the larvæ of the clothes moth are known to be at work, there is probably no better or simpler method of dealing with them than to apply a liberal quantity of benzine or gasoline to the garments on which they are feeding. Then the garments should be hung out of doors in the sunshine and thoroughly aired. There may still be eggs or larvæ that have escaped the first application, and a second a week or two later is desirable to make the work certain. Other garments of the same wardrobe are likely to be infested and should at least be inspected in bright light and watched for a few weeks. The room should also be sprayed that the work may be complete. What has been said of careful, thorough work regarding the carpet beetle is also of equal importance in dealing with the clothes moths.

Linen and cotton goods are not attacked by the moths. Neither will garments that

are in frequent use be attacked. Upholstery of furniture, linings and trappings in carriages and similar material remain free from attack by use and plenty of sunshine.

The Juveniles.

Little Mamie Gay.

Little Mamie, aged three,
Wise beyond her years,
Sat demurely on the sofa,
Quite unknown to fears.

I had known her scarce a day—
Long enough for us,
We could understand each other
Without "company" fuss.

Soon I asked how old she was,—
"Didn't she look wise?"
What a world of careful study
In the big blue eyes!

Then she tipped her head aside,
Answered "Thirteen," gravely;
"No! let's see," with doubtful nod,
"Thirty!" smiling bravely.

Then I laughed. The little fairy!
"Maybe three," I said,
"Yes! That's it," the mite replied,
And bobbed her curly head.

—Helen K. Chace.

Among The Fishermen.

Early in the morning, long before most people in the busy city think of getting out of their beds, the fishermen are busy down upon the wharves selling their fish to the marketmen. At all hours of the night the boats come in and anchor, in readiness for the first customer who may appear. Some of the boats are small, hardly larger than a dory, while others are larger and carry sails. The boats are loaded with several kinds of fish, which the men have been fortunate enough to catch.

The writer remembers one morning when the tide was out. The boats were fifteen or twenty feet below the wharf. The purchaser would walk along until he saw some fish in the boats below that he wanted. Then he inquired the price, and if satisfactory he would tell how many he wanted and they were counted out or weighed and raised to the wharf by a pulley. The marketman would pay the bill, load his wagon or cart and drive off. Others were going and coming. What they said was all fish talk, and a landsman could not always understand what was meant.

The decks of the boats were slippery and wet, and the men were dressed in suits of oil-cloth. Some of the boats had codfish, some had hake, others had mackerel, and others had several kinds of fish. When any fisherman had sold all his catch he moved out as quickly as possible and sailed or rowed away for another day's work.

A large number of men are engaged in this industry, and oftentimes they are exposed to many dangers. At any rate, it is hard work, but the fishermen look the perfect picture of health.—Ex.

OVERWORK

—INDUCED—

Nervous Prostration

Complete Recovery by the Use of

Ayer's Sarsaparilla

"Some years ago, as a result of too close attention to business, my health failed. I became weak, nervous, was unable to look after my interests, and manifested all the symptoms of a decline. I took three bottles of Ayer's Sarsaparilla, began to improve at once,



and gradually increased my weight from one hundred and twenty-five to two hundred pounds. Since then, I and my family have used this medicine when needed, and we are all in the best of health, a fact which we attribute to Ayer's Sarsaparilla. I believe my children would have been fatherless to-day had it not been for Ayer's Sarsaparilla, of which preparation I cannot say too much."—H. O. HINSON, Postmaster and Planter, Kinard's, S. C.

Ayer's THE ONLY Sarsaparilla

RECEIVING MEDAL AT WORLD'S FAIR.

AYER'S PILLS SAVE DOCTOR'S BILLS.

THE GRANGE VISITOR

CHARLOTTE, MICH.

The Official Organ of the Michigan State Grange.

Published on the First and Third Thursdays of Each Month

EDITOR:

KENYON L. BUTTERFIELD, LANSING, MICH.

To whom all exchanges and all articles for publication should be sent.

MANAGERS AND PRINTERS:

FERRY & McGRATH, CHARLOTTE, MICH.

To whom all subscriptions and advertising should be sent.

TERMS 50 Cents a Year, 25 Cents for Six Months. In Clubs of 20 more 40 Cents per Year each.

Subscriptions payable in advance, and discontinued at expiration, unless renewed.

Remittances should be by Registered Letter, Money Order or Draft. Do not send stamps.

To insure insertion all notices should be mailed no later than the Saturday preceding issue.

Entered at the Postoffice at Charlotte, Mich., as Second Class matter.

NEXT ISSUE, JULY 2.

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:

1. (a.) By wider individual study and general discussion of the business side of farming and home keeping.
- (b.) By co-operation for financial advantage.
2. (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.
3. (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.
4. (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 are in receipt of the proceedings of the Colorado State Grange.

We want more Grange news. Just a word about what you are doing.

Do not overlook the letter from Bro. J. G. Noble of Oxford, on page eight.

While performing institute work at Greenville, we chanced to be in town the same afternoon that Montcalm Grange met, and were pleasantly welcomed by the Patrons of that wide awake Grange.

Worthy Master Horton has called the attention of Patrons to the necessity of beginning the planning for August picnics. Why cannot every county having a Pomona Grange have a picnic this year? It does not need to be large to be good or useful.

The Board of Agriculture, at their last meeting, adopted a course for ladies at the Agricultural College. Both this course and the revised course for boys will be published soon. We hope that these changes will induce much larger attendance this coming year. The new year will begin Sept. 14. Send in your name for one of the new catalogues, which will be out in a few weeks.

Sister Mayo makes an appeal for the Fresh Air work, in this issue. The best argument for this work is the success attending it. It has now been carried on two seasons, and at the end of each season's work the chairman of the woman's work committee has had abundant evidence, in the shape of numerous letters, showing not only the value of this work to the poor city people who need it so much, but also the actual value to those who have performed the service. It is perhaps useless to make a further argument in behalf of the work, either from the philanthropic standpoint or from the standpoint of its value to the Grange. The best word we can say is that it has been performed by many busy women on our farm homes. It can be extended and made much more permanent if other busy women simply try it this season. We hope that these appeals of our sisters will be recognized by the woman's work committees, and that every Grange will, through its members, take at least a small share in this noble work.

Now is the proper time to discuss the qualifications of our state legislators. It is more pertinent now than it will be a year from now. We think our people spend too much time in pointing out the faults of their public servants after the deeds have been done, and too little in doing their share to see that men of proper qualifications are selected for these important places. We all expect in members of the legislature the ordinary qualifications of honesty and a fair degree of intelligence.

These two we regard as common qualifications. There is no debate upon them. If a man is not honest, if he does not deal with his constituents as they expect, if he is a crank, if he is not able to comprehend the scope of state affairs, he ought not to be in the legislature. But there is something that lies at the very basis of the qualifications for acceptable public service which is often overlooked. This essential thing is patriotism. By this term we mean that spirit which asks, when a certain measure is presented, "What will be the effect of this measure upon the public good?" and which does not consider the question, "How will this effect my political standing?" We never shall have ideal legislators, but if it were possible for us to secure a legislature, the majority of whose members, or even a good sized minority of them, were actuated by this spirit, we would have no difficulty in predicting the success of that legislature.

The spirit of selfishness is the most crying evil of our politics. It can be eradicated only by education and by persistent effort. If we could only have men in our public service who are truly patriotic in the sense of being willing to sacrifice their personal interests for the public good, we would get along pretty well under almost any form of government, and under almost any laws. We should like to dwell at greater length upon this phase of our politics, because it is the essential thing. It matters much less what sort of laws we ask for, than it does what sort of men we send to make the laws. The men we want must first be intelligent and well informed, though they need not be scholars. They must be perfectly honest, though they need not be poor. And above all they must be men who will keep ever before them the good of the whole people, and not the wishes of a small clique, nor the apparent benefit to themselves.

The Grange has a clear duty in this matter; it must first educate its members to believe, not only theoretically, but practically, that this spirit of patriotism is the thing most needed in our politics. Then the members of the Grange should make an effort at every opportunity to endeavor to secure for public place men who possess this spirit. All this is a hard task, but not an impossible one. You can find the men if you want to, but it means that you must go to work now and keep at it until the proper men are chosen. We have no sympathy with anybody who neglects this sort of work and then will complain next winter when his member of the legislature fails to do his duty.

In our last issue, we printed a splendid article from Brother J. Y. Clark, of Orion Grange, which we headed "The Leading Question." It was a strong presentation of a most important phase of Grange work. We can agree with him in the main, and wish to call especial attention to the matter which he brings up. It must be remembered that while financial returns are not the most important thing in life, they are the fundamental thing. No man can make progress without the necessities of life, and we think that few men can do their best without both the necessities and some of the comforts of life. Hence, as Brother Clark says, the first things to look after on the farm are those which govern our income and outgo.

The Grange has already done something in this line, and has provided machinery for the more economical purchasing of supplies, both for the farm and for the home. We regret to say that Subordinate Granges are not taking due advantage of this opportunity. Those who have tried it have, so far as we know, been well pleased, and have saved considerable money. Would not it be a good idea for us to take full advantage of this scheme of purchasing and give it a thorough trial? It certainly will be a help. There are many difficulties in the way of a solution of the problems presented. They seem almost insuperable. The farmer makes his own price in very few of his business transactions. It would seem, on the face of it, to be essential that he should be able to make his own price on what he sells, but this has never yet been done to any satisfactory extent. The matter is worth investigating, however. Two or three years ago the State Grange passed a resolution, directing an inquiry as to the feasibility of selling together as well as buying together. So far as we know, this investigation has never been made in Michigan. We should be very glad indeed to hear Brother Clark's views in regard to the specific methods that he thinks feasible for solving this great problem, and we should be glad to hear from anybody else who has any suggestion to make. We have sometimes thought that it might be practicable to institute a farmers' board of trade for the state, which could collect information in regard to prices, crops, and possibly give general directions and advice as to markets.

There certainly is one line of work that has been attempted very little by general farmers that it would seem to us would be of value, in some directions at least. For instance, most of the people in cities who buy beefsteak, get a very inferior article. Now if they could be educated to know what good beefsteak is, and to demand it, they would not only buy it in larger quantities, but they would pay a higher price for it. Then the farmers should be prepared to furnish prime beef to supply this demand. The same would be true in regard to fruits, vegetables, and butter and cheese products. We believe it is a fact that a great proportion of these products consumed by our city people is very far from being of high grade, and that the public taste should, in some way, be educated to demand better articles; then the farmers should raise these articles.

There is one sentence in Brother Clark's communication to which we take exception: "The farmer of the present and future, laboring under financial burdens unknown to his predecessors, cannot afford to belong to a mere society for debate and social culture." Our GRANGE VISITOR'S motto is, "The farmer is of more consequence than the farm, and should be first improved." This motto has been followed for twenty-five years of Grange history. The result has been not so much a financial improvement in the farmer's condition, as in his improvement as a man. By reason of the debates in the Grange, and the social culture of the Grange, the farmers of Michigan today are much more able to cope with men in the professions and other lines of business than they have ever been before. The Grange, largely by reason of these very factors, has produced some of the noblest men in Michigan history. The Grange today, through these very opportunities for debate and social culture, is educating a large number of young men who are destined, by reason of these opportunities, to occupy even a larger place in our state than their fathers have done. We do not minimize the importance of the financial side of the Grange or of the farmer's life. But these higher things must not be lost sight of. Because we have hard times, because our people are depressed for lack of money, we must all the more be on our guard against losing sight of the fact that the best things of life, the most important factors in life, are included in the education of our higher faculties.

We publish in this issue a number of letters, both favorable and unfavorable, on the Redfern Liquor Commission Bill. Mr. L. C. Storrs, Secretary of the State Board of Corrections and Charities, has also favored us with a copy of some letters which have come to him during the spring. They bear so closely upon this topic that we quote large portions of them. They show that the idea underlying the Redfern Liquor Commission Bill is a practical one, and that it is considered a useful one by some of the leading minds of the east. The first letter from which we quote is from the special agent of the committee on the relations of the liquor problem to economic conditions, poverty, and crime. The chairman of this committee is Gen. Francis A. Walker, president of the Boston Institute of Technology. This committee is a sub-committee of what is called "The Committee of Fifty for the Investigation of the Liquor Problem." This is "a committee of fifty gentlemen, representing different communities and occupations, under the presidency of Hon. Seth Low of New York, and is engaged in the study of the liquor problem, in the hope of securing a body of facts relating to the medical, legislative, ethical, and economic aspects of the question which will serve as a basis for intelligent public and private action. It is the design of this committee to discuss with absolute impartiality all the facts which it is able to collect, and thus to secure for the evidence which it shall present a measure of confidence on the part of the community which is not accorded to partisan statements." The officers of the committee are as follows: President, Hon. Seth Low, LL. D., president Columbia College, New York; vice-president, Charles Dudley Warner, Hartford, Conn.; secretary, Prof. Francis G. Peabody, D. D., of Harvard; treasurer, William E. Dodge, Esq., New York. The list of members includes some of the best known men in the east.

We quote as follows from the letter to Mr. Storrs, the italics being our own: "I beg to call your attention to the undertaking of the committee of fifty as set forth in the accompanying circular. The committee have already made some important investigations relative to the physiological and legislative aspects of the liquor problem, the results of which will in due time be given to the public.

"All investigation into the relations of this problem to economic conditions, poverty and crime, is now in progress under the auspices of the gentlemen whose names head this letter.

"For that part of our inquiry which concerns the relations of the drink question to pauperism and crime, I wish to bespeak your special interest. I need not dwell on the supreme importance of this subject to persons engaged in charitable and reformatory work. *The close affiliation of intemperance with pauperism and crime is so universally admitted. Yet, while many are ready to aver that just such percentages of vice and misery are due to drink, a well ascertained body of facts demonstrating this commonly accepted truth, and which may serve to quicken intelligent action, both public and private, is, as you know, not at hand.* It is our endeavor to collect and study such facts. To this end we need the assistance of all who have the solution of distressing social problems at heart. * *

"It also occurs to me that among the superintendents of the poor, almshouses and reformatory institutions, subject to the control of your board, there may be some sufficiently interested to make local inquiry into the relation of drink to pauperism or crime.

"If nothing more can be gained, we can perhaps get the personal impressions of those who come into immediate contact with paupers and criminals. As the cost of our work is borne by private subscriptions, we are not in position to offer adequate compensation for services rendered. It must be a labor of love. May I venture to hope for your valuable assistance in the matter?"

The following is from a second letter explaining somewhat the plan of inquiry:

"Allow me to explain a plan we have for investigating the relation of intemperance to pauperism among the almshouse population. The only way in which we can obtain somewhat reliable statistics that lend themselves to tabulation—and that is what we above all things desire—is by means of a schedule inquiry. I enclose a specimen of the schedule prepared for use in almshouses. I believe it is fairly comprehensive and adapted to bring out the facts in the matter, so far as they can be secured.

"We are in no hurry for results, and shall not be able to compile our reports before the expiration of a year. As we hope such investigations will be carried on in different states, it does not seem necessary to take more than two or three representative institutions in each state.

"We are not ready as yet to begin the investigation of the relation of intemperance to crime. This will prove the most difficult task. By means of schedules, similar in all respects to the inclosed, charity organization societies and others in our principal cities are now carrying on, or about to begin, investigations for our committee to cover all cases looked into by them in the course of twelve months. I have already distributed thousands of blanks. We hope for good results. Social settlements in various places are to make studies for us of the relations of the liquor problem to comforts, luxuries, pleasure, sanitary conditions, the habits of the different nationalities, etc. Furthermore we try to get some facts on the question how far the liquor habit is the cause of physical and moral degeneracy among the Indians and Negroes.

"The Department of Labor at Washington is about to begin an investigation of the relations of the liquor problem to labor and the employment of labor, which is directly in the line of our researches."

Grange Fresh Air Outing.

DEAR PATRONS: There has been a little necessary delay on the part of the Detroit friends owing to the fact that both Mrs. Poe and Mrs. Chittenden, who were managers of the work last year, have left the city, but the work has now been reorganized under the Associated Charities, and is in running order with Miss Charlotte Mason, 65 Erskine St., Detroit, as agent, to whom all communications for children, working girls, or women with babies, should be addressed.

WOMAN'S WORK COMMITTEES OF THE SUBORDINATE GRANGES.

This work had the hearty sanction of the State Grange last year. The State Master has again placed in our hands this branch of Grange work. Your Granges have endorsed you as co-workers with us. Will you not plan the matter before your members, and in a kindly, fraternal spirit argue that each of your Granges take a few of these who so much need a change of air, rest, and the comfort of just two weeks in the country?

I know the plea will come, "so much work, hot weather, all I can do now"—but there are many worse things than "plenty of work"—no work, poverty, illness, impure air, insufficient food, long hours in shop, factory or office, poor mothers and poorer babies,—all these are much worse than the work we have to do, the meals we have to make ready, the fruit we must care for, the comforts of our quiet country homes, where "sweet mother love is resting, and the feet of children come." It is

such a little more to do compared to the blessings that come with the doing.
Mrs. Royce will, we think, be able to furnish Patrons from the southwestern part of the state. We are trying hard to get some sort of a starting point in Grand Rapids.

AN INSTANCE.

Last week at our County Grange we noticed a strange face, the face of a lady who quietly and deftly waited upon the tables. A pretty black-eyed little girl clung to her, calling her mamma. We learned she was one of the "Fresh Air" folks sent out from Grand Rapids last year, and has staid on and on, making herself useful, and is now in a quiet country home earning a living for herself and child. She was ill nearly all last summer and is not well now, but able to work and take care of herself.

Last year we did well, this year we want to do better. Some mistakes were made to be sure. It would be very strange if there were not, and those mistakes, though in some instances they were disheartening, should not, must not condemn the work. The work is a glorious work, and we look to the Patrons to aid in making many hearts glad by offering to share your comfortable homes for just two weeks with those less fortunate than ourselves.

Remember, Miss Charlotte Mason, 65 Erskine St., Detroit, is agent for that city; Mrs. Belle Royce, Baroda, Mich., for southwestern Michigan, and we hope very soon to announce to you an agent in Grand Rapids.

Yours for the work,
MARY A. MAYO.

Battle Creek.

General Topic for June.

Continued from page 2.

the railroad interests in this country, and their present standing, and in case of Government ownership it will show the extra amount of business over which it would have direct control, also an approximate amount of the purchase money that would be needed.

June 30th, 1894, there were 178,708 miles of railroads in this country, under the direction of 745 independent companies whose employees, including officials, amounted to 779,608, which is 93,994 less than 1893. This reduction was mainly owing to business depression, but labor troubles were a minor factor in the matter. Estimating four persons to a wage earner 375,976 persons were deprived of their regular income by reason of the business depression and other causes affecting transportation interests.

The average daily compensation of railroad employees, June 30, 1892 and 1894 was as follows:

	1894	1892
General officers.....	\$9.71	\$7.62
Other officers.....	5.75	
General office clerks.....	2.34	2.20
Station agents.....	1.75	1.81
Other station men.....	1.63	1.68
Engine men.....	3.61	3.68
Firemen.....	2.03	2.07
Conductors.....	3.04	3.07
Other train men.....	1.89	1.91
Machinists.....	2.21	2.29
Tel. operators, dispatchers	1.93	1.93

Other employees in about the same ratio. It will be observed that the pay of the general officers and office clerks was raised from 1892, while that of all other employees was reduced with one exception, and that remains the same.

The total amount of railroad capital in the United States, June 30th, 1894 was the enormous sum of \$10,796,473,833. (It is estimated that more than half of this is watered stock.) The total amount of indebtedness of the railroads was \$5,356,583,019. No dividends were paid on 63 per cent of the stock in 1894, and no interest was paid on 17 per cent of the funded debt.

Whole number of persons carried by railroad in 1894—593,560,612 (this means

number of tickets and passes used.) The gross income of the roads for this year was \$1,073,361,797. This is \$147,390,077 less than the gross income of the previous year. The net income of the roads for the year ending June 30, 1894, was \$55,755,990, showing a decrease of \$53,302,064 from the previous year. The amount paid in dividends in 1894 was \$101,607,264, showing that the roads increased their indebtedness nearly fifty million for the purpose of maintaining the money value of the stock, through the payment of dividends.

The revenue per passenger per mile in 1892 was 2.126 cents, 1894 it was 1.986 cents. The revenue per ton of freight per mile in 1892 was .898 cents, in 1894 it was .860 cents.

The average cost of running a train one mile (including all trains) was 96.580 cents in 1892; in 1894 it was 93.478 cents, or a little less than one dollar. A careful preparation is necessary for the intelligent discussion of the transportation question, which is one of the most important economic questions before the American people, and Lecturers should not fail to make a report of the discussions to the State Lecturer.

Ripans Tabules: pleasant laxative.
Ripans Tabules cure nausea.
Ripans Tabules.

THE SEA-SIDE & WHITE MOUNTAIN SPECIAL

The Finest Train in the World.

A Solid Pullman Wide Vestibuled Train from Chicago to Niagara Falls, Thousand Islands, St. Lawrence River, Adirondacks, White Mountains and the Sea-Side Resorts of the Atlantic Coast.

Commencing Wednesday, June 24, and each Wednesday thereafter until and including August 28, 1896, the Grand Trunk Railway System will run a solid Pullman Wide Vestibuled Train from Chicago to Portland Me., as follows:
Leave Chicago Wednesday, 5:00 p. m., arrive Niagara Falls Thursdays, 8:55 a. m.; leave Niagara Falls Thursdays, 7:20 p. m., arrive at Kingston Wharf Friday mornings connecting with steamers for daylight ride through the Thousand Islands and the Rapids of the St. Lawrence to Montreal, arriving at Montreal 6:30 p. m. Fridays. The train arrives there Fridays, noon. Passengers preferring afternoon and evening at Montreal to the river trip, will remain on the train. Passengers for the Adirondack region make connections via Prescott and Ogdensburg or Montreal and Plattsburg. Leave Montreal 1:30 a. m. Saturdays, passing North Stratford, 7:37 a. m. (junction point with the Maine Central R. R. for Twin Mountains, Fabyans, Crawford Notch, etc.); passing Groveton Junction (junction of Boston & Maine R. R. for Mt. Jefferson, Bethlehem, Profile House, Fabyans, etc.) 7:22 a. m.; passing together the gateway of the White Mountains, 8:45 a. m., connecting with stages for summit of Mt. Washington, connecting at Berlin Falls, Bethel and Bryant's Pond, with stages for the Range Lakes, and at Danville Junction with stages for Poland Springs, and with Maine Central R. R. for Bar Harbor (Mt. Desert), arriving at Portland shortly before noon Saturdays, within reach of all Sea-Side and Mountain Resorts of the coast in this vicinity the same day.

This train is lighted by electricity, and is composed entirely of Pullman Wide Vestibuled Cars as follows: A Pullman Wide Vestibuled Composite car, containing baggage compartment, electric light plant, barber shop, bath room, etc.; a Pullman Wide Vestibuled Dining car, containing Sleeping and Drawing Room cars, containing every known modern improvement; a Pullman Wide Vestibuled Combination Sleeping, Library and Observation car. The cars are finished in mahogany and vermilion, frize, plushes of fawn, empire green and steel blue, are used in the upholstery; the rich tints of the mahogany, the blue and gold of the decorations and the upholstery, together with the carpets, draperies, varied shades of the furnishings, lounges and easy chairs, present a picture of comfort and luxury absolutely without an equal on any train in the world.

Pullman fares, including meals, also prices of tickets available on this train, will be found in "Sea-Side and White Mountain Special" folder, furnished or mailed free on application. Early application should be made and accommodations secured and paid for as the capacity of the train is limited. Reservations not paid for two days prior to departure of train will be disposed of to other applicants.

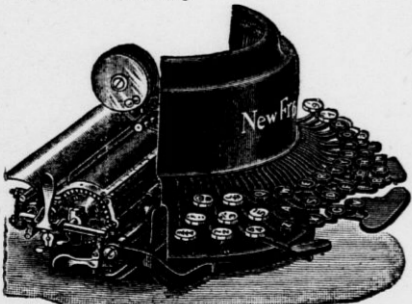
West Bound, train leaves Portland 9:00 p. m. Sunday, June 28, and each Sunday thereafter to and including August 20, arriving Chicago 10:45 a. m. following Tuesdays.

A special agent of passenger department as well as "a lady attendant," accompanies these trains through to destination and return, through the finest scenery in the world to the finest summer resorts in the world, on the finest train in the world. Intending summer tourists should apply or send their addresses to

A. FORD, Agent Grand Trunk Ry.,
Charlotte, Mich.

DO YOU BELIEVE IN "TRUSTS?"

If not, then buy



The New Franklin Typewriter,
THE GREAT
Anti-"Trust" Machine.
25-per cent cheaper!

Easy to learn!
Simple in construction!

Five Years on the Market.
Sold on easy payments. For Samples of work, testimonials, etc., address,
STATE AGENCY,
Grand Rapids, Mich.
40-41 New Houseman.

WOVEN WIRE FENCE

Over 50 Styles Best on earth. Horse-high, Bull-strong, Pig, and Chicken tight. You can make 40 to 60 rods a day for 12 to 20c. a Rod. Illustrated Catalogue Free. KITSELMAN BROS.,
Ridgeville, - Indiana.

TEA FAILURES

Owing to the immense decline in prices of Japan Teas, about one-half of the firms engaged in the importation of this kind of teas have failed in business. With ready cash we have been able to take advantage of the immense stocks of Japan Teas forced on the market in this way, which will be **YOUR GAIN**, for we intend giving you the benefit of the immense reduction in prices. Remember we are quoting you the following lots at one-half the cost to import. Because the price is cheap do not think the teas are not good. We guarantee them all to give perfect satisfaction or money will be refunded.

We Have Divided Our Several Purchases Into the Following list

	Price per lb. in 70 lb. chests.	Price per lb. in 20 lb. caddies	Price per lb. 5 & 10 lb. caddies.	Price per lb. in small lots.
No. 1 consists of 70 half chests Japan Nibs. It is a good drawing Tea.....	12	14	15	17
No. 2 consists of 109 half chests Basket Fired Japan Tea—draws clear and sweet, and you will be astonished to see how good and cheap it is.....	14	16	17	19
No. 3 consists of 615 half chests new crop Uncolored Japan Tea—is a sweet drawing, light liquor, fancy Japan, so good that the retailer could sell it quickly at 40c per lb.....	17	19	20	22
No. 4 consists of 64 half chests new crop Basket Fired Japan Tea, light liquor—a fancy drink at this price; it is like buying wheat at 15 cents per bushel.....	19	21	22	24
No. 5 consists of 113 half chests new crop Fancy Uncolored Japan Tea—we will guarantee this to be the finest Basket Fired Uncolored Japan Tea in the country. If you are paying 50c per pound, you will find this as good; if you are paying 80 cents or \$1 per lb., you will find this just as good; and our price is some cheaper.....	26	28	29	33

REMEMBER we guarantee all of these teas to give satisfaction or money refunded. We guarantee the quality—the prices speak for themselves. This is a good chance for Grocers, Tea Dealers and large consumers to lay in at least a year's stock. Do not miss the opportunity—prices cannot keep going down always. They must reach the bottom some time and this looks as though they were below the bottom.

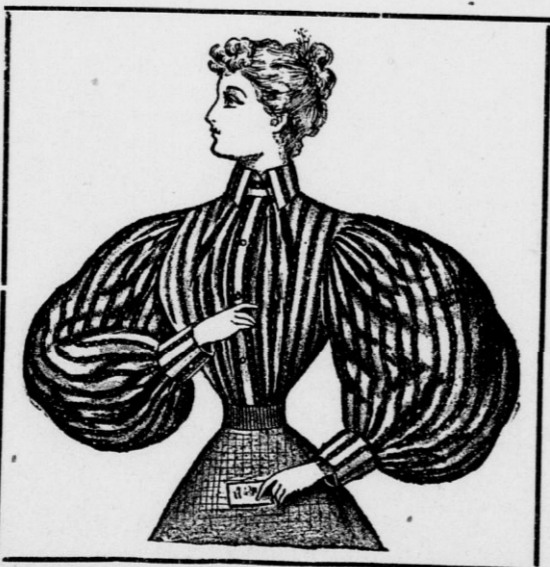
GRANULATED SUGAR

A Price That Cannot Be Duplicated.

We have just imported a large lot of Granulated Sugar from Germany, so as to be independent of our un-American sugar trust. This sugar is packed 100 pounds in a bag, and is a good white granulated color and very much sweeter than that made by our un-American trust. We have to pay the United States Government a duty of 25 cents per hundred pounds, and pay the freight from Germany to Chicago, but we are still able to sell it for much less than our un-American trust asks for theirs. TRY A BAG.

100 pounds in a bag. Price..... \$4.89

A WAIST SENSATION



All our famous 39-cent waists are sold, but as the public seem to like the price and as we never carry over any garments from one season to another, we have decided to sell all the \$1.00 to \$2.00 qualities of Shirt Waists for

39 cents

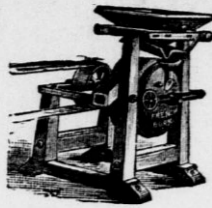
Made of fine Percale, Madras and English Cambric, in latest designs. All have laundered collars and cuffs and full set of studs. Every one fast color and the most perfect-fitting shirt waists made.

Think of it! Your Choice for 39 Cents!
(Postage 10 cents.) Give your bust measure and the color desired.

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

FRENCH BUHR MILLS

The Best. Mills for Farmers and those doing a Custom Meal and Feed Grinding Business.



(28 Sizes and Styles.)

BECAUSE they grind more with same power, don't wear out or break down. Grind fine table meal and all kinds of grain, including ear corn for feed. A boy can keep them in order.

(Five First Premiums at World's Fair.) Flour and Buckwheat Mills

Roller or Buhr Systems

Estimates furnished on application. Special prices for 1896. Write for "Book on Mills." NORDYKE & MARMON CO., No. 400 Day St., Indianapolis, Ind.

Advertisement for Individual Tension Fence, featuring an illustration of a fence and the text '100 RODS \$35.00 FOR INDIVIDUAL TENSION BUCHANAN FENCE CO. SMITHVILLE, O. 500 YARDS FOR CIRCULAR.'

OFFICIAL DIRECTORY

Officers National Grange.

- Master—J. H. Brigham, Delta, Ohio. Overseer—Aaron Jones, South Bend, Indiana. Lecturer—Alpha Messer, Rochester, N. Y. Steward—John T. Cox, New Jersey. Ass't Steward—J. A. Newcomb, Colorado. Chaplain—O. H. Hale, New York. Treasurer—Mrs. Eva McDowd, New York. Secretary—John Trimble, Washington, D. C. Gate Keeper—W. E. Harbaugh, Missouri. Ceres—Mrs. Lucy G. Smith, Ohio. Pomona—Mrs. Sarah E. Baird, Minnesota. Flora—Mrs. E. L. A. Wiggin, Maine. Lady Ass't Steward—Mrs. S. G. Knott, W. Va.

Executive Committee.

- Leonard Rhone, Center Hall, Pennsylvania. N. J. Bachelder, 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. H. Martin, Box 442, Grand Rapids. Chaplain—Mary A. Mayo, Battle Creek. Treasurer—E. A. Strong, Vicksburg. Secretary—Jennie Buell, Ann Arbor. Gate Keeper—William Robertson, Hesperia. Ceres—Mrs. Mary Estella Buell, Union City. Flora—Mrs. Estella Buell, Union City. Pomona—Mrs. Julia McClure, Shelby. L. A. Steward—Mrs. A. Martin, Grand Rapids.

Executive Committee.

- W. E. Wright, Coldwater. H. D. Platt, Ypsilanti. C. G. Luce, Coldwater. Perry Mayo, Battle Creek. F. W. Redfern, Maple Rapids. R. K. Divin, Holly. E. A. Holden, Lansing. G. B. Horton, Fruit Ridge. Jennie Buell, Ann Arbor.

Committee on Woman's Work in the Grange.

- Mrs. Mary A. Mayo, Battle Creek. Mrs. Mary Sherwood Hinds, Stanton. Mrs. Belle Royce, Baroda.

General Deputy Lecturers.

- Mary A. Mayo, Battle Creek. Hon. J. J. Woodman, Paw Paw. Hon. C. G. Luce, Coldwater. Hon. Perry Mayo, Battle Creek. Hon. Thomas Mars, Berrien Center. Jason Woodman, Paw Paw. A. E. Palmer, Grand Rapids. Judge J. G. Ramsdell, Kalkaska. E. O. Ladd, Traverse City. D. D. Buell, Union City.

County Deputies.

- D. H. Stebbins, Atwood, Antrim Co. L. C. Root, Allegan. R. B. Reynolds, Inland, Benzie. George Bowser, Dowling, Barry. A. L. Smith, Girard, P. O. Branch. R. V. Clark, Buchanan, Berrien. J. W. Ernest, St. Johns, Clinton. Mary A. Mayo, Portage, Calhoun. E. B. Ward, Charlevoix. James B. Mann, Corey, P. O. Cass. F. H. Osborn, Eaton Rapids, Eaton. W. H. Bovee, North Star, Gratiot. B. Turner, Finishing, Genesee. E. O. Ladd, Grand Traverse City. S. E. Haughey, South Camden, Hillsdale. Earl Brown, Jonesville. E. A. Brown, Sand Beach, Huron. D. H. English, Chandler, Ionia. F. W. Havens, Fitchburg, Ingham. J. Weston Hutchins, Hanover, Jackson. Geo. F. Hall, Portage, Kalamazoo. Robert Dockery, Rockford, Kent. Geo. L. Carlisle, Kalkaska, Kalkaska. Hiram Bradshaw, North Branch, Lapeer. Fred Dean, Brighton, Livingston. E. W. Allis, Adrian, Lenawee. Jacob Rosenstiel, Riga, Monroe, and Lenawee. George H. Lester, Crystal, Montcalm. D. E. Van Amber, Bear Lake, Manistee. Frank F. Upton, Big Rapids, Mecost. J. S. Lawson, Disco, Macomb. 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. E. Taylor, Cranston, Oceana. D. Murlin, Vermont, Shiawassee. A. W. Cantfield, Avoca, St. Clair. Wm. B. Langley, Centerville, St. Joseph. Robert Treby, Birch Run, Saginaw. S. O. Con, East Fremont, Sanilac. Helen A. Fiske, Lawrence, Van Buren. Henry Hurd, Plymouth, Wayne. John A. McDougal, Ypsilanti, Washtenaw. R. C. Norris, Cadillac, Wexford. Mary Robertson, Hesperia, Newaygo.

Revised List of Grange Supplies

Michigan State Grange

- Porcelain ballot marbles, per hundred, \$0.75. Secretary's ledger, 85. Secretary's record, 50. Treasurer's orders, bound, per hundred, 50. Secretary's receipts for dues, per hundred, 35. Treasurer's receipts for dues, per hundred, 35. Applications for membership, per hundred, 50. Withdrawal cards, per dozen, 25. Demits, in envelopes, per dozen, 25. By-laws of the State Grange, single copies, 10c; per dozen, 1.00. Glad Echoes, with music, single copies, 25c; per dozen, 3.00. Grange Melodies, single copy, 40c; per doz., 4.00. Opening Song, Card, 2c each; 7c per 50; 100 1.35. Rituals, 7th edition (with combined degrees), 25c each; per dozen, 2.75. Rituals, 5th degree, set of nipe, 1.80. Rituals, Juvenile, single copy, 15c. Notice to delinquent members, per 100, 40. American Manual of Parliamentary Law, 40. Digest of Laws and Rulings, 25. Roll books, 15. Sample package co-operative literature, 18. Kelley's History of the Grange, 75. Write for prices on gold pins, badges, working tools, staff mountings, seals, ballot boxes and any other Grange supplies. Address Miss Jennie Buell, Ann Arbor, Mich.

College and Station

Fertilizers Upon Potatoes.

Bulletin Michigan Experiment Station.

Quite a number of plots were devoted to experiments with fertilizers. A large share of them were used to make a comparative test of the muriate of potash, but in addition to these salts, use was made of ground bone, bone black, nitrate of soda, wood ashes and stable manure, both alone upon the plots and in various combinations as explained below.

The soil was a very light sandy loam which had been sown to rye, buckwheat and similar crops for several years previous to 1894, when the land was leased for the use of the station and it was laid off into seventeen one-eighth acre plots. A strip three feet wide was left without fertilizer between the plots, but was planted the same as the plots. The crop of 1894 was greatly reduced by the drouth, and although a considerable increase in yield was found in fertilized plots as compared with those unfertilized, the results were so variable that we were unable to draw any conclusions as to the merits of the different fertilizers.

Last spring the plots were laid out as before and received another application of the same fertilizer as used in 1894. The land was marked off three feet each way and the seed cut into pieces about the size of a hen's egg. The variety used was the Rural New Yorker No. 2. Despite the severe drouth they made a fair growth and the tubers were of a good size and almost entirely free from scab. The land was quite even and as notes were taken from time to time but little difference was observable in their appearance, except in case of the "nothing" plots, which were rather weak, and the manured plots which were somewhat stronger than the others.

The fertilizers used and the results obtained are shown on the accompanying chart, the figures being computed for an acre, although only one-eighth of an acre was actually used.

It will be noticed that the largest yield was secured from Plot 2, which was heavily dressed with stable manure, and that by its use a gain of nearly seventy bushels per acre was obtained over what was given by the adjacent unmanured plot. A half ration of manure with sulphate of potash and ground bone in Plot 1 gave nearly as large a yield, while the same amount of manure with 56 bushels per acre of unleached wood ashes gave but 142 1/2 bushels in Plot 6. Straw manure used as a mulch in Plot 5 gave 165 1/2 bushels or 8 bushels less than was obtained with decomposed manure in Plot 2.

Comparing the yields from Plots 10, 12, and 16 with those of Plots 11, 13 and 17, we find a gain of about eight bushels per acre in favor of the former upon which the fertilizer used contained sulphate of potash, while in the latter the muriate was used.

The average gain from the use of fertilizer in the plots where a full ration was employed was about eighty bushels per acre, which at 20 cents per bushel would about repay the expense for the fertilizer. It should not be forgotten that a dry season does not favor large returns from the use of fertilizers, and that moreover a considerable portion of the plant food that they contained remains in the ground, where it can be utilized by a crop next year. Figured at one dollar per load the manure was no more economical than the fertilizer, but in a season with a large rainfall and higher prices the balance might have been upon the other side of the ledger.

Table with 2 columns: Plot number and Yield. Plots 1-17 showing yields for various fertilizer combinations.

Table with 2 columns: Plot number and Yield. Plots 18-34 showing yields for various fertilizer combinations.

To Destroy Insects of the Granary.

G. C. Davis in Bulletin Michigan Experiment Station.

There is only one practical method known by which we can rid the granary of the most of its insect pests after they are once well established in the grain, and that is by the use of bisulphide of carbon. This is a clear, almost colorless liquid, which is very rapidly converted into a gas on being exposed to the air. Owing to its being heavier than air it settles rapidly through the grain and quickly permeates the whole of it. It is highly inflammable, and explosive when ignited, and care must be observed in keeping all light and fire from the gas, or near where it is confined.

Local druggists rarely keep the bisulphide of carbon in stock as it so readily evaporates and the residue is then worthless, but probably your druggist would order it for you. If not, it can be ordered by yourself from some wholesale drug house in one of our larger cities. We order for our own use of Edward R. Taylor, Manufacturing Chemist, Cleveland, Ohio, as he makes a specialty of bisulphide of carbon for such purposes. He sells it at the rate of 10 cents a lb. in 50 pound (5 gallons) cases; in smaller quantities the price will be a trifle higher.

If insects are present in the grain and it is desired to treat them with the bisulphide of carbon, one of the first things to consider is whether the granary or the bin in which the grain is placed is comparatively tight. If it is very loose and open and cannot be tightly closed, it may be necessary to remove the grain to a tighter receptacle, as the gas will escape too quickly and the insects will merely be stupefied. Wheat bins and bins for ground feed can easily be made tight enough. If a cover is lacking, wet blankets thrown over the grain may serve as covers.

When the bins containing the grain are tight, one pound of the bisulphide is said to be enough for 100 bushels of grain. For a moderately tight bin, a pound or a pound and a half to each ton of grain is surer, and there is no danger of injury to the grain either for food or for seed when used at this rate. The liquid may be poured directly onto the grain by distributing it well over the surface. It may also be placed in open dishes or on an absorbant, such as cotton batting, where it will evaporate more slowly and last longer. Where the grain is more than four or five feet deep in the bins, portions of the bisulphide should be put down near the middle of the grain and about every two or three feet apart. A piece of gas pipe will be suitable for this purpose. Inside the gas pipe should be a cylindrical stick that can be drawn out of the pipe as soon as it is pushed down into the grain as far as desired, and then the bisulphide can be poured down the gas pipe.

After the liquid has been applied, cover the grain as quickly as possible and leave it covered for twenty-four or thirty-six hours when it can be opened up and aired. The gas will very quickly mix with the air when the grain is exposed, so that in a few hours no odor can be detected. A second application may be found necessary in a month or two after the first is made. The bisulphide of carbon will kill mice and rats, that may be held in the bin, by in-

haling the poisonous gas, and it is also injurious to man when inhaled in large quantities. There is no danger in its use if handled with judgment.

A New Churn.

Pennsylvania Experiment Station.

There is being introduced into the state a new churn known as the Texas Air Churn. The advantages claimed for this churn are: first, simplicity in construction; second, economy of time; third, cheapness; fourth, the quantity and quality of butter produced.

In construction the churn consists of an open tub with a flaring top which holds the cream. In this tub, a little below the surface of the cream, a hollow tin disk with two openings into the cream and one large opening at the top revolves rapidly. In revolving, the disk forces more or less air through the cream, and it is claimed by the patentees that the air forced through the cream in this manner, although the friction and agitation caused by the disk must assist more or less, will bring the butter in one or two minutes. The first trials of this churn at the station creamery were made at temperatures ranging from sixty-eight to seventy-six degrees. At these temperatures the butter would come in from one and a half to two and a half minutes. The quality of this butter was very poor, containing as high as 4.88 per cent of curd, besides having a large percentage of fat in the butter milk. As the churning temperature was gradually reduced, it was found that the ripened separator or gravity cream could be churned exhaustively at a temperature of forty-seven to fifty-two degrees in from six to nine minutes.

The following table gives the results of seventeen churnings with the Texas Air churn, also seventeen consecutive churnings made in a combined concussion churn and worker in our dairy school last winter: although not strictly comparable, they will answer the purpose of giving some idea of the merits of the principals of the two churns.

Table comparing churn results: Combined churn and worker Monday churn vs. Texas Air churn. Columns include Time required, Churning temp., and Percent of fat in butter milk.

The mechanical condition of the butter made with the Texas Air churn was uniformly superior to any the writer has yet seen; the granules in each and every case were fine, flaky, and took the salt and color more evenly than the round granules so often obtained in concussion churns, especially from cream poor in butter fat. At an average churning temperature of 52 degrees, the butter was firm and washed easily, often in but one water.

A chemical analysis of the butter made under the above conditions gave the following results.

Table with 2 columns: Component and Percent. Butter fat, Moisture, Curd, Sugar and ash.

The mechanical construction of the Texas Air churn as yet does not do justice to the principle of it, but it is understood, that in this respect it will be very materially improved before it is placed upon the market.

Dietary Studies at the University of Tennessee.

United States Department of Agriculture.

Dietary studies of a students' club and a mechanics' family have recently been made at the University of Tennessee by Prof. Chas. E. Wait, under the auspices of the U. S. Department of Agriculture. The results are published as Bulletin 29 of the office of Experiment Stations, entitled "Dietary Studies at the University of Tennessee in 1895." The amount of food consumed and its composition were determined, as well as the ratio of the tissue-forming nutrients to those which more especially yield energy. Prof. W. O. Atwater and Chas. D. Woods, special agents of the department, have compared these results with those obtained from investigations in New England and elsewhere. They have shown the points of similarity and difference, and how these results compare with dietary standards commonly accepted by physiologists. It appears that the students

in Tennessee, Missouri, and Connecticut eat sufficient food, though there is rather less protein (the tissue-forming nutrient) and rather more carbohydrates and fat (the nutrients which yield energy, but cannot form muscular tissue) than the standard calls for. This discrepancy is more marked in Tennessee and Missouri than in Connecticut. The Tennessee and Missouri students eat more poultry and eggs, more fat pork and less beef, mutton, and veal than the Connecticut students. Protein is provided in its most available form in meat, milk, and other animal foods. The students in the South obtain considerably more of their protein from vegetable sources than the students in Connecticut. In every case over 10 per cent of the protein purchased was wasted, the waste being chiefly in the form of animal food.

The results of this study bear out the opinion quite prevalent among students of the subject, namely, that considerably more fat is consumed in the South than is necessary. A better balanced dietary could be obtained by using more of the leaner meats, as beef and mutton, more nitrogenous vegetable foods, as beans and peas, and less fat and starchy foods. Attention is called to the great value of the cowpea as a food, and its more general use is recommended.

This work at the University of Tennessee is part of an extended investigation which the Department of Agriculture is carrying on to learn the food habits of people in various sections of this country. It is not the purpose of such study to teach the people to weigh out a definite number of ounces of food, which shall be divided into three portions, and taken at the proper intervals. The object is rather to teach the uses of food, the values of the several nutrients and their proper combination, and how to make the most of available food resources. The man is best clothed who selects cloth for its wearing qualities and appropriateness, as well as for its looks; in the same way a person will be best nourished who understands the needs of the body and selects the foods which will supply them. The cost of food is not always the measure of its actual value, and if it is possible to prepare a palatable, nutritious, and well-balanced dietary for less money than is now expended for this purpose, food investigations will certainly benefit every one who earns his daily bread.

This bulletin is for sale, as provided by section 67 of the act providing for the public printing and binding and the distribution of public documents, approved January 12, 1895, by the Superintendent of Documents, Union Building, Washington, D. C., to whom all applications must be addressed, accompanied by the price, five cents, which should be sent by postal money order and not in stamps or currency.

DOES QUALITY COUNT?

If you are particular about what kind of NURSERY STOCK you set—If you are anxious to get started right—If you want to feel easy knowing that what you buy will prove to be HEALTHY and TRUE TO NAME, write us to-day, or call on the SECRETARY of YOUR GRANGE and learn about us.

We have a large line of choice Apple, Pear, Peach, Plum, Cherry, small fruit plants, and shrubs. Our low prices may surprise you.

WEST MICHIGAN NURSERIES,

Benton Harbor, Mich.

R. MORRILL, Pres. O. E. FIFIELD, Sec'y and Treas. P. S.—See Confidential Trade Circular, p. 40.

FOR PARTICULARS regarding the prices of the famous fruit lands, general farms, and city property, write to E. H. ALLYN, Real Estate Agency, Frederick Block, Traverse City, Mich.

PATRONS' PAINT WORKS.

PATRONS' PAINT WORKS have sold Ingersoll Paint to the Order P. of H. since its organization. House Paints and Cheap Paints for Barns and Outbuildings, 10,000 Farmers testify to their merits. Grange Halls, Churches, School Houses, Dwellings, all over the land some of them painted 15 years ago, still looking well, prove them the most durable.

MICHIGAN PATRONS "Buy direct from Factory" at full wholesale prices and save all Middlemen's Profits.

O. W. INGERSOLL, PROP.
Oldest Paint House in America.
241-243 Plymouth st., Brooklyn.

Ingersoll's Liquid Rubber Paints

Indestructible Cottage and Barn Paints

Sample Color Cards, "Confidential" Grange Discounts, Estimates and full particulars MAILED FREE. Write at once.

AT MARKET VALUE

GRANT ALLEN

Kathleen Hesselgrave, a pretty young English artist, and Arnold Willoughby, a Bohemian amateur, meet casually at the Royal Academy gallery in London. They hold mutual views upon art and upon the stupidity of the judges who have rejected their pictures. Rufus Mortimer, a rich American idler, joins them. He is a friend of the Hesselgraves and is surprised to find Kathleen in the company of Willoughby, whom she knows as a common sailor dabbler in art. CHAPTER II—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 refuses 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 Hesselgraves meet in Venice. Mrs. Hesselgrave 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. Hesselgrave 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. Hesselgrave 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 secures a second literary success and marries Kathleen, but renounces all claims to his earldom.

CHAPTER XXII ISLES OF WINTER.

Arnold Willoughby had a strong constitution, but that second summer in the northern seas told upon his health even more seriously than all his previous seafaring. Perhaps it was the result of his great disappointment; perhaps it was the sense of nothing left in this life to live for, but at any rate he grew thin and weak and lost heart for his work in a way that was unusual with so vigorous a sailor. The skipper, as he looked at him, thought Willoughby wouldn't ever be fit for another sealing voyage—though it in that hard, purely objective way that is habitual to skippers in dealing with seamen. And Arnold Willoughby himself began to recognize the fact that he was growing ill and worn with these continued hardships. Life had been a failure for him. His day was over. He was one of those, he feared, who must go to the wall in the ceaseless struggle for life which nature imposes upon us. But at any rate he would go to the wall like a man; he would live or die on his own earnings; he never went back for a moment upon the principles he had established for himself in early manhood. From the day when he saw his cousin Algy's claim admitted in full by the house of lords he considered himself as nothing more than Arnold Willoughby, an able-bodied seaman, and not even that now, as things were taking him. Yet he was himself for all that. Even though you go sealing on the Greenland coasts you can't quite get rid of the cultivated habits and tastes of a gentleman. Arnold Willoughby, for his part, never desired to get rid of them. He loved the things of the mind in spite of everything.

During his earlier years of apprenticeship to the perils of the sea he yearned for art. Now he had given up art for the moment. He took instead to literature. The sailors in the fo'c's'le of the Sheriff Ivory of Dundee were much amused from time to time at Willoughby's rummy way of writing at odd moments in a pocketbook he kept by him, and indeed at all spare hours he was engaged by himself in a curious piece of work, whose meaning and import the average mariner's mind could hardly fathom. He was deciphering and translating the Elizabethan English sailor's manuscript which he had picked up by accident in the little shop at Venice. He did it merely to please himself, and therefore he was able to spend a great deal more time and trouble over doing it to perfection than he could possibly have spent if he were one of the miserable drudges who live by the professional pursuit of letters under our hard faced regime. He translated it carefully, lovingly, laboriously. Day after day in his spare moments he took out a page at a time and transcribed and Englished it with studious pains in his little pocket notebook. For two seasons he had gone on with this amateur authorship, if such it might be called, and toward the end of the second he had pretty fairly finished his allotted task work.

But the fo'c's'le of a sealer in full pursuit of oil is by no means an ideal place for literary composition. Many a time and oft Arnold was interrupted by rude pleasantries or angry calls; many a time he was

delayed by the impossibility of finding room for a few minutes' work even on so humble a basis. At last, one afternoon, toward the close of the sealing season, he was told off with a dozen other men for a run in a boat down the icebound coast in search of fresh sealing grounds. His party was on the lookout for Greenland seals, which usually bask and flounder in the sun on the blocks in ice floes, and they had rowed to a considerable distance from their ship without perceiving any "fish," as the sealers call them. Their road lay through a floating mass of blue crystalline ice blocks.

At last the pack grew too thick for them to penetrate any farther, and the bo'sun in charge, blowing his whistle from the stern, gave the word to return to the Sheriff Ivory. They rowed back again about half a knot, in full sight of their ship, when it became gradually apparent that they were becoming surrounded by icebergs. A change in the wind brought them along unexpectedly. One after another the great white moun-



The sailors were much amused at Willoughby's rummy way of writing.

tain loomed up and approached them from all sides, apparently sailing in every direction at once, though really, of course, only veering with the breeze from different quarters in the same general direction. The bo'sun looked at them with some dislike. "Ah doan't care for barge," he said in his thick Sunderland dialect. "Tha've got now pilot aboard." And indeed the icebergs seemed to be drifting in every direction, hither and thither at random, without much trace of a rudder. Closer and closer they drew, those huge glacial islands, two large ones in particular almost blocking the way to the ship in front of them. The bo'sun looked at them again. "Toorn her about, boys," he said once more in a very decided way. "Easy all; bow side. Row like blazes, you other uns! Ah'm thinkin we'll naw be able to break through them by that quarter."

The men turned the boat instantly in obedience to his word and began rowing for their lives in the opposite direction. It was away from the ship, but in their present strait the first thing to be thought of was avoiding the present danger from the icebergs at all hazards. By and by the bo'sun spoke again. "Ah'm thinkin," he said slowly, "tha're toornin' themselfs this way, mates."

Arnold Willoughby glanced round. It was only too true. The icebergs, which were two enormous blocks of white shimmering crystal, half a mile or more in length, had shifted their course somewhat and were now coming together apparently, both behind and in front of them. The boat lay helpless in a narrow channel of blue water between high walls of ice that glistened in the sun like chalk cliffs in August.

At the rate the bergs were moving, it would take only some 10 or 12 minutes for them to shock and shiver against one another's sides. The prospect was appalling. Human arms could hardly carry the boat free of their point of contact before they finally collided. In that moment of danger not a word was spoken. Every man saw the peril for himself at once and bent forward to the long sweeps with terrible intensity of energy. Meanwhile those vast moving islands of ice came resistlessly on, now sailing ahead for a moment before a gust of wind, now halting and veering again with some slight change in the breeze. Yet, on the whole, they drew steadily nearer and nearer, till at last Arnold Willoughby, looking up, saw the green crystal mountains rising almost sheer above their heads to the terrific height of several hundred feet, like huge cliffs of alabaster.

"Noo, look out, boys," the bo'sun cried in a solemn voice of warning; "tha'll strike afore long." And every eye in the boat was fixed at once as he spoke on the approaching monsters. Scarcely room was left between them for the boat to pass out, and she was still many yards from the point where the blue channel between the bergs began to widen again. A sort of isthmus of water, a narrow, open strait, intervened between them and the wider part of the interval. Two clashing capes of ice obstructed it. On and on came the great mountains of glistening white crystal, tall, terrible, beautiful, in irresistible energy. The men crouched and covered. Arnold Willoughby knew their last moment had come. There was no way out of it now. In another second the bergs would crash together with a thunder of the sea, their little cock-boat would be shivered to fragments before the mighty masses of the jarring ice mountains, and they themselves, mere atoms, would be crushed to a pulp as instantly and unconsciously as an ant is crushed under the wheel of a carriage. Not a man

tried to pull another stroke at the oars. Every eye was riveted on the horrible moving deaths. Their arms were as if paralyzed. They could but look and look, awaiting their end in speechless terror.

At that awful moment, just before the unconscious masses struck and shivered into pieces, a flood of strange thought broke at once over Arnold Willoughby's mind, and it summed itself up in the thousandfold repetition of the one word—Kathleen, Kathleen, Kathleen!

He thought it over and over again in a sudden agony of penitence. With a rush it burst in upon him that he had done wrong, grievously wrong, to be so hasty and impulsive. What misery he might have caused! What injury he might have inflicted! After all, no man can ever be quite certain even in his interpretation of the most seemingly irresistible facts. What wrong he might have done here—ah, heaven, how irrevocable! Irrevocable! Irrevocable! For the mighty masses of ice stood above them like precipices on the brink of falling, and in one second more they would shock together.

Crash! crash! crash! Even before he had finished thinking it a noise like thunder or the loud rumble of an earthquake, deafened their ears with its roar, redoubled and ingeminated. The bergs had met and clashed together in very truth, and all nature seemed to clash with them. A horrible boiling and seething of the water around them—a fearful shower of ice shot upon them by tons! And then, just before Arnold Willoughby closed his eyes and ceased to think or feel, he was dimly aware of some huge body from above crushing and mangle him helplessly. Pains darted through him with fierce spasms, and then all was silence.

Half an hour passed away before Arnold, lying stiff, was again conscious of anything. By that time he opened his eyes and heard a voice say gruffly: "Why, Willoughby ain't killed neither. He's a-lookin' about him."

At sound of the voice, which came from one of his fellow sailors, Arnold strove to raise himself on his arm. As he did so another terrible shock of pain made him drop down again, half unconscious. It occurred to him dimly that his arm must be broken. Beyond that he knew nothing. And he lay there long, nobody taking for the time any further notice of him.

When he opened his eyes a second time, he could see very well why. They were still surrounded by whole regiments of icebergs, and the remaining valid men of the crew were still rowing for dear life to get clear of the danger. But one other man lay worse crushed than himself—a mangled mass of clotting blood and torn rags of clothes at the bottom of the boat, while a second one by his side, still alive, but barely that, groaned horribly at intervals in the throes of deadly agony.

Arnold lay back once more, quite passive all the while as to whether they escaped or were engulfed. He was weak and faint with pain, and so far as he thought of anything at all thought merely in a dim way that he would like to live if only for one thing—to see Kathleen Hesselgrave.

Hours passed before he knew what had really happened. It was a curious accident. An iceberg is a huge floating mass of ice, only an insignificant part of which shows visibly above water. The vastly greater portion is submerged and unsuspected. It is impossible, of course, to guess at the shape of this submerged part any more than one could guess at the shape of the submerged part of a piece of ice as it bobs up and down in a glass by observation of the bit that protrudes above the water.

These particular icebergs, however, had such exceptionally sheer and perpendicular sides that they looked like huge fragments of an extended icefield broken off laterally. They seemed to show that the submerged portion was flush with the cliffs they exhibited above water. Had that been quite so, Arnold Willoughby's boat could never have escaped complete destruction. It would have been staved in and crushed between the great colliding walls like a nut under a steam hammer. But, as it happened, the submerged block was slightly larger in that direction than the visible portion, and the bergs thus crashed together for the most part under water, causing a commotion and eddy which very nearly succeeded in swamping the boat, and which rendered rowing for a minute or two wholly impossible.

At the same time a projecting pinnacle that jutted out above from the face of the cliff came in contact with another part of the opposing iceberg, and shivering into fragments a hundred yards away from them broke up with such force that many of its shattered pieces were hurled into the boat, which they, too, threatened to swamp, but which fortunately resisted by the mere elasticity of the water about them. For a minute or two all on board had been tumult and confusion. It was impossible for those who were less seriously hurt to decide offhand upon the magnitude of the disaster or to tell whether the bergs, recoiling with the shock, might not wheel and collide again or lose balance and career, sucking them under as they went with the resulting eddy. As a matter of fact, however, the collision, which had been little more than a mere sideward gliding, like the kiss of a billiard ball, was by no means a serious one. The two moving mountains just touched and glanced off, ricocheting, as it were, and leaving the boat free in a moment to proceed upon her course. But as soon as the bo'sun could collect his wits and his men for a final effort, he found that one was dead, while two more, including Arnold Willoughby, lay wounded and senseless at the bottom of the gig, whether actually dead or only dying they knew not.

Summoning up all their remaining nerve,

the uninjured men seized their oars once more and rowed for dear life in the direction of the open. It was half an hour or so before they could consider themselves at all clear of the ice, and even then they had no idea of the distance from the ship, for the Sheriff Ivory herself could nowhere be sighted. For hours they rowed on helplessly over the trackless waves. It was dark before they sighted the missing ship in front of them. By the time they had reached it Arnold Willoughby, now faint and half unconscious with cold and exposure, hardly realized as yet the full extent of his injuries.

But when next morning he woke again in his bunk after a night of semiunconsciousness he discovered that his arm was really broken, and, worse still, that his right hand was so crushed and maimed as to be almost useless.

The voyage back to Dundee was for Arnold a terrible one. He lay most of the time in his hammock, for he was now useless as a "hand," and his arm, clumsily set by the mate and the bo'sun, gave him a great deal of trouble in the small hours of the morning. Moreover, his outlook for the future was exceedingly doubtful. It was clear he would never again be fit to go to sea, while the damage to his hand, which he feared was irrevocable, would make it impossible for him to return to the trade of painter.

Whither to turn for a living when he reached home again he knew not. Nay, even the desire to see Kathleen again, which had come over him so fiercely when he sat under the shadow of the impending iceberg, grew much feebler and fainter now that he felt how impossible it would be for him in future ever to provide for her livelihood. More than at any previous time the self-deposed earl began to realize to himself what a failure he had proved on equal terms with his fellow man in the struggle for existence.

Yet even if you are a failure it is something to accept your position bravely, and Arnold Willoughby always accepted his own like a man with that cheery pessimism which is almost characteristic of his caste in England.

[TO BE CONTINUED.]

HARNESSES!

Our stock of Leather that we bought before the advance will soon be exhausted and then we will have to advance our prices about 25 per cent. Any person in need of HAND MADE HARNESSES can save money by purchasing at once.

A Word to the Wise Should be Sufficient

HAND MADE HARNESSES CO.,

Stanton, Mich.

SEND FOR CATALOGUE.

WONDERFUL PROGRESS

In one hour by the use of our LETTER-FINGERBOARD and SIMPLE-FIELD INSTRUCTOR. Latest Musical invention, which can only be had with the

"PREMIUM"

GUITARS, MANDOLINS, BANJOS, VIOLINS.

Our Fine Catalogue will tell you a host of them. Write for to-day.

FINEST ON EARTH.

Sold Direct to you at the Dealer's Profit. PRICES RANGE FROM \$5.00 UP.

The United States Music Co. CINCINNATI, O.

The Eureka Washer

WITH LID COMPLETE.

Simple in construction and easy to operate. Will wash everything clean from a lace curtain to the heaviest bed clothes. Ask the secretary of your grange for full particulars.

Eureka Washing Machine Co., MUNCIE, IND.

AN IRISHMAN'S REASON.

A group of Kentucky farmers were discussing fences. One only, defended a ratchet device, all the others preferred "the Page." Each in turn gave his reasons, a son of the "old sod" last. "Begorra!" said he, "I'd rather hev a cow that'll coom up herself than a dog after her twice a day."

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Binder Twine

Largest sellers in the world. Samples & prices free; write to HOSKINS & WARD & CO., 111 to 115 Michigan St., Chicago.

The ZEPHANIAH BREED WEEDER and CULTIVATOR.



will work corn, sugar-cane, potatoes, peas, beans, squashes, melons, cucumbers, tomatoes, cabbages, beets, carrots, parsnips, cauliflower, celery, onions, (think of it, onions!) strawberry plantations, both new and old, asparagus, during cutting season, and many other crops, all without other cultivation hand-hoeing or hand-weeding, while for grain fields they have no equal.

Our No. 1 and 2, two horse, will work clean 25 to 28 acres per day. No. 3, 4, and 5, one horse, will work 15 to 18 acres per day. With our No. 8 one man's time will care for 5 to 7 acres of onions until they are 3-4 inch in diameter without hand-weeding. \$100 in prizes for largest crops and largest increase in crops grown by the use of our weeders in 1896.

Send today for circular describing nine sizes and styles of Sulky, Walking and Hand Machines. It also contains an article on "Weeds and Tillage" by Prof. Taft, of the Mich. Agr. Coll., "Shallow vs. Deep Cultivation" by Prof. Hunt, of Ohio Agr. Coll., and "How 1 gr. or 300 to 400 bushels of Potatoes in Mass.," by C. W. Russell, Esq., of Upton, Mass., an authority on potato culture. Address

Desk No. 1, The Z. Breed Weeder Co., 26 Merchants Row, Boston, Mass.

Free! - - Free!

64 page Medical Reference Book

giving valuable information to any man or woman afflicted with any form of private or special disease. Address the leading Physicians and Specialists of this country.

CURES GUARANTEED.

Dr. Hathaway & Co.,

70 Dearborn St., Chicago, Ill.

At 1/4 Price

Gold and Silver Watches, Bicycles, Tricycles, Guns and Pistols, Carriages, Buggies, Wagons, Larders, Saws, Sleighs, Harness, Cart Taps, Shingles.

Sewing Machines, Accordions, Organs, Pianos, Cider Mills, Cash Registers, Feed Mills, Stoves, Kettles, Bone Mills, Letter Presses, Jack Screws, Trucks, Anvils, Hay Cutters, Press Stands, Vices, Drills, Road Plows, Lawn Mowers, Coffee Mills, Lathes, Benders, Dump Carts, Corn Shellers, Hand Carts, Fences, Saws, Wire Fences, Winnowers, Engines, Saws, Steel Saws, Grain Drums, Crow Bars, Blowers, Tools, Bit Braces, Hay, Stock, Elevator, Railroad, Platform and Counter SCALES. Send for free Catalogue and see how to save money.

151 So. Jefferson St., CHICAGO SCALE CO., Chicago, Ill.

Ask secretary of your grange for our illustrated Catalogue. Aug. 15 1896

The COAST LINE to MACKINAC

TO MACKINAC DETROIT PETOSKEY CHICAGO

2 New Steel Passenger Steamers

The Greatest Perfection yet attained in Boat Construction—Luxurious Equipment, Artistic Furnishing, Decoration and Efficient Service, insuring the highest degree of COMFORT, SPEED AND SAFETY.

FOUR TRIPS PER WEEK BETWEEN

Toledo, Detroit & Mackinac

PETOSKEY, "THE 800," MARQUETTE, AND DULUTH.

LOW RATES to Picturesque Mackinac and Return, including Meals and Berths. From Cleveland, \$18; from Toledo, \$15; from Detroit, \$13.50.

Between Detroit and Cleveland

Connecting at Cleveland with Earliest Trains for all points East, South and Southwest and at Detroit for all points North and Northwest.

Sunday Trips June, July, August and September Only.

EVERY DAY BETWEEN

Cleveland, Put-in-Bay & Toledo

Send for Illustrated Pamphlet. Address

A. A. SCHANTZ, G. P. A., DETROIT, MICH.
The Detroit and Cleveland Steam Nav. Co.

Notices of Meetings.

JUNE MEETING OF IONIA POMONA.

Subjects: "What has a farmer's gain been in buying cheaper articles when compared in selling cheaper products?" "Has the Farmer's Taxes Been Reduced as Has His Income, and What is the Difference Due to?" "Will it Do for Farmers in the Aggregate Seriously to Contemplate Eliminating the Sheep from the List of Domestic Animals?" "Which is the most Essential to Generations for Strength, the Eating of Meat or Rice?"

Grange News

VICKSBURG.

Dear Brother:—By the kindness of Brother E. A. Strong I am just handed the GRANGE VISITOR of April 16, on the 8th page of which I find a report from the legislative committee of Parkville Grange on the Lubin Bill and I find my name signed as in opposition to said bill and as favoring said report. This is the first I have known of it, and I wish you would in your next issue correct the mistake, as I did not sign said report, neither was I in favor of it but voted against its adoption. Mr. E. A. Strong was not there at the meeting when the report was presented and did not see or hear it. D. T. DELL.

HILLSDALE POMONA.

Hillsdale Pomona held its June meeting with Lickley Grange on the fourth. On account of recent affliction and new home responsibilities our worthy secretary, Sister Bowditch, asked to be released from further official duties. In sympathy, but with regrets, Pomona complied with the request and elected Brother M. Walworth to fill vacancy. In the afternoon was an open session and the time was given to Worthy Lecturer, Sister Hunker. The program included the subjects for home discussion in National Quarterly Bulletin. But on account of the lateness of the hour before they were reached, they were but little discussed. Our young Grange orator, Brother Clio Phillips, favored us with a selection, and we were entertained by instrumental and vocal music by little girl singers. The hope of the Grange is with the young, and we should commence training early. WM. KIEBY.

WESTERN POMONA GRANGE

met with Silica Grange, at their hall at Dalton, May 28 and 29, 1896, and were given a cordial reception and a great many good things to eat. After dinner Grange was called to order and the program immediately taken up. An excellent paper was presented by Sister H. J. Austin of Lisbon Grange, on the subject, "What are the real enjoyments of life and with what class are they chiefly found?" In which was claimed that the real enjoyments of life were found chiefly in the American farmers' homes, and were promoted by good health, loving hearts and a sweet contentment.

A recitation entitled "The old and new," by Linda Gordon, was then rendered.

The subject, "The secrets of successful farming," was discussed at some length. It was generally conceded that the most important secrets are the proper care of all animals and tools, the proper preparation and cultivation of the soil for growing crops, and last but not least, a good sensible and practical housewife. After a song by the choir of Silica Grange, Sister Knowles, of Ravena Grange, read a paper on "Home adornment." The discussion was confined chiefly to the adornment of our yards. They should be kept neat and attractive and adorned with a few shrubs or well kept flower beds.

The next subject, "The social and intellectual features of the Grange," was opened by Brother Chas. Giles of Silica Grange. It was not disputed that the social and intellectual features of the Grange are of great advantage to all who improve the opportunity of enjoying them, and that the Grange is the means of placing the farmer in the position he now occupies. A song, recitation entitled "Fritz's courtship," by Milfred Dyre, and music, were then enjoyed.

A paper on the subject of "Spraying," prepared by Brother Melvin Smith, of Tallmadge Grange, was then read. Important discussions followed. Music being called for, the orchestra of six pieces responded. Then a vocal solo entitled, "I don't want to play in your yard," and recitation were given. Brother Thomas Wilde, of Ottawa Grange, then opened the subject, "The cultivation and fertilization of sandy soil," recommending the use of the Z. Breed Weeder and of crimson clover.

Sister Knowles gave a recitation entitled "Brains and breeches," after which followed a vocal duet entitled, "I'm going back to Dixie," music by the orchestra, and song; all well received.

It was decided to hold a picnic at Hiverside Park, August 27, instead of the next regular meeting. We expect to have a lecturer, good music for the occasion, and a grand, good time.

Some of the Granges within the jurisdiction of Western Pomona were reported as not being in as thriving a condition as could be wished for, but we are not in the least discouraged. Mrs. BERTHA SMITH, Sec'y.

IONIA POMONA.

Held its May meeting at South Boston Grange hall with good attendance. Reports of South Boston, Keene, Berlin, Banner, and Ronold Granges were given about

the same on crops. Wheat badly injured, some thought by wind and rust, others by Hessian fly. Cut worms and potato bugs are making it lively for the farmers. Apples promise a fair crop, 75 percent; peaches 75; plums 100; strawberries, large yield. The subject for discussion, "Fruit Pests," was well handled, as many of the farmers of South Boston Grange are fruit growers. "What the Farmer's Garden Should Contain," was of interest and well discussed. Other questions were debated on subjects of value to the Granges. Thus ending a very successful meeting, showing Ionia Pomona in a flourishing condition. Thanking the brothers and sisters for their hospitality and good cheer, and an invitation to our June meeting, the Master declared the Grange closed to meet with Berlin Center Grange, No. 273, if convenient.

The following letter is self explanatory: DEAR FRIEND BUTTERFIELD:—In my article in last issue, "Summer Reading for Farmers," I wrote that one might use a "half hour at night while the tired body is (B-O-D-Y) is resting." The printer makes me say "while the tired "baby" is resting." Inasmuch as our baby is ten years old, his resting has very little connection with my reading. What is the matter with that printer? On second thought, perhaps the question should be, "What is the matter with my penmanship?" J. W. H.

GONE BEYOND.

Brother and Sister John Bowditch of Hillsdale county mourn the loss of an only daughter, who passed away in the fullness of a young womanhood. Hillsdale Pomona passed appropriate resolutions. We tender to Brother and Sister Bowditch our sincerest sympathy in their bereavement.

In the town of Danby.

On section nine. We have a Grange That is very fine.

It consists of members, Both large and small, And nearly enough To fill the hall.

We hold our meetings Every two weeks, When each has a chance To read, write, or speak.

Of contests we plan To have four a year, Which furnishes us With plenty of cheer.

At the close of each contest We always plan So that every one present May eat all he can.

Now this is my first Attempt at rhyme, But hope to do better Some future time.

MRS. AMELIA PEAKE

Can We Help?

The following has been received in reply to a letter to Brother Noble, asking him if the Grange could help the people:

EDITOR GRANGE VISITOR:—In response to your letter of inquiry of the 11th, in regard to what the Grange throughout the state can do for the tornado sufferers, will say that the committee of three who were appointed to investigate and estimate the loss done by the storm have got about one-half of the work done and report \$75,000 damage to buildings, stock, furniture and clothing, while the loss to timber orchards, growing crops and fencing is not reported but will reach a very large sum.

From what I can learn, there has been an abundance of clothing donated, but dishes, furniture of all kinds, is lacking in every family, as everything of that nature was totally destroyed.

The village of Oxford has raised nearly \$1000 besides clothing and provisions furnished. Pontiac has raised \$2,000 in cash besides clothing, etc.

The people in these places have been able to visit the scenes of the storm, and feel impelled to give generously. Other towns near by are doing equally as well. People who only know of the calamity by having read accounts in the papers are not moved to action like those who have witnessed the real condition. The losses will be likely to reach \$150,000 exclusive of timber, trees of all kinds and fences. There has been but about \$40,000 in money raised up to date.

Mr. Gillette Hinman, of Pontiac, a reliable man, has been appointed by the governor to receive contributions, which will be justly distributed to the individuals who deserve it, in accordance with all conditions entering into the matter.

Money is at present the only thing that is needed.

Hard times prevent farmers from being able to do very much at present, but if members of the Grange in their several localities would make collections, or organize in whatever way they can to do something for the sufferers, their efforts will be fully appreciated and their offerings faithfully turned over to the needy.

Yours fraternally, J. G. NOBLE.

Ice Cream Now Made in a Minute.

I have an ice cream freezer that will freeze cream perfectly in one minute; as it is such a wonder a crowd will always be around so anyone can make \$5 to \$6 a day selling cream and from \$10 to \$20 a day selling freezers, as people will always buy an article when it is demonstrated that they can make money by so doing. The cream is frozen instantly and is smooth and free from lumps. I have done so well myself and have friends succeeding so well that I felt it my duty to let others know of this opportunity, as I feel confident that any person in any locality can make money as any person can sell cream and the freezer sells itself. W. H. Baird & Co., 140 S. Highland Ave., Station A, Pittsburg, Pa. will mail you complete instructions and will employ you on salary if you can give them your whole time.

FARMERS use, and make money by selling. Holdin... Corn Binders. Used on... Pull and it's fast. Ties itself. Costs less than string. Never wears out. They are easily sold in a town. Good profit. Get your town agency now. Outfit 5c. THE CO., Box 55 Unadilla, N. Y.

STEALING.

I stole down by the brooklet side. The moon was bright. I stole a dozen kisses there That blissful night.

I stole a march on other men; I knew my part. I was so good at stealing that I stole her heart.

Now we are happy man and wife. Why seem it strange. If, when I'm fast asleep in bed, She steals my change? —Yonkers Statesman.

CABLE CAR STUDIES

Portrait of a Passenger by the Conductor. Ditto by the Passenger.

He was a cheerful looking citizen when he got on the Broadway cable car. He nodded pleasantly to the conductor, and then felt in his pockets for change. He went through one after another, found none, and looked less cheerful. Finally he took a pocketbook from his breast pocket, and picking a \$5 bill from the roll handed it to the conductor, apologizing at the same time. The conductor snatched the bill and looked ugly. He counted out the change in chicken feed, as small coins are called on the railroads, and shoved it into the man's hand with a "Take it!" Then he turned to another passenger on the platform and began to talk loud enough for the other to hear about "hogs" who rode on cars.

"Did ye see that fellow that just give me the bill?" he said. "Well, he's a skin, ye know. That's an old game. They git on a car with a \$5 bill and hand it to the conductor. Nine times out of ten the conductor don't have the change and the man rides free. I know this fellow. I've had him a dozen times."

"See here, my friend," said the man who had had the bill changed, his face as red as a beet, "you're a d—d liar." The conductor looked startled. The man repeated the declaration and proceeded:

"I want to tell you, sir, that you have spoiled as good a friend as the street railroad men ever had. I've been their friend for 20 years. When passengers kicked at them, I always figured that if there was any trouble it was the passengers' own fault. When friends told me of rows they had, I always said: 'Well, it's a hard job on the back platform of a car. The man was only doing his duty.' Now, I've been the friend of the railroad men through thick and thin. When they have struck, I've been with 'em. But you're an infernal liar, sir, an infernal liar. The next railroad man that sasses me will get punched in the jaw. Do you hear, sir? Punched in the jaw! Punched!"

The cheerful citizen was fairly dancing with rage.

"Well, ye needn't get hot about it," said the conductor, and he went in and collected a fare. The cheerful citizen got off the car muttering to himself.—New York Sun.

London or Kashmir.

A man who had traveled much, seeing many lands and varied peoples, confessed that he had never felt the delight of satisfied curiosity in such fullness as on the day when he first walked into London, a mere youth, and stood amid the crowd and shops of Regent street. A born wanderer by nature and possessed of the means to gratify his desires, his fancy had fixed on Kashmir, out of many places full of wonder and romance, as a land where he should find truest enjoyment. To foster this idea he avoided all books that affected to treat of Kashmir and refused to believe that anybody had ever been there. In his imagination he saw it as a region of flowery valleys, soft watered meads, peaceful vistas and perpetual sunshine.

He duly reached Kashmir, and he has long since returned, a thing he once thought might never happen. Of Kashmir he speaks reasonably and with calm appreciation, but ask him to tell again of how he first came to London, and in answering his voice takes a tone of enthusiasm and mystery. He refuses to sully the recollection by analysis or dim it by any later disenchantment. He was young then, and it was London.—Chambers' Journal.

Boy "Heroines."

All those divine creatures, those heroines of Shakespeare, were acted in his day, and for some time afterward, by youths and young men. May we not fancy that this hard condition was a sorrow to Shakespeare, who, of all men, must most keenly have felt how much better his godlike women could have been realized by actresses? It must have been hard for boys to turn their masculine natures to favor and to prettiness when they had to enact women—and such women! Shakespeare must have longed to see the boards trodden by the light foot of woman, with her incomparable grace and witchery and feeling. What manner of youth could be found, even in Elizabeth's time, worthily to personate the divinity of womanhood? We know next to nothing of these boy women actors, but a demand creates a supply, and they may have been more satisfactory than we can well imagine. They must have been handsome—delicately handsome.—Gentleman's Magazine.

Ripans Tabules cure bad breath. Ripans Tabules cure biliousness. Ripans Tabules: one gives relief. Ripans Tabules cure indigestion.

BINDER TWINE

The Season's at hand.

We're the largest sellers in the world.

1000 TONS, bought and paid for, for this season's sales. Two kinds, Sisal and Manila. Quality the best. Prices the lowest. There's just one wise way to buy Binder Twine. That's by sample. Take the sample in your hand. TEST IT. Look the price in the eye. There you are, fully posted.

We send Samples, and quote prices, free for the asking. Buy Binder Twine at Headquarters.

FOR THE RIGHT PRICE

of almost everything that's used in life, have our GENERAL CATALOGUE and BUYERS' GUIDE always with you. Buy Right. Money saved is same as earned.

We hand it to you if you call at our great 10-acre Store, or send it for 15 cents, in coin or stamps, to pay part of postage or expressage.

Montgomery Ward & Co.

Monarchs of the Mail Order Business, the Store of all the People. 111, 112, 113, 114, 115, and 116 Michigan Avenue. Directly Opposite the new Post Office, CHICAGO.

THE HAMILTON GROCERY COMPANY,

No. 238, 240 and 242 East Pearl St.

CINCINNATI, OHIO.

James Hamilton, President. William Hamilton, Treasurer. Chas. G. Shane, Secretary. We are prepared to fill all Grange orders at lowest wholesale rates.

BIG PROFITS

—IN—

FRUITS and VEGETABLES providing you use the right kinds of trees and seeds.

We furnish the very best Michigan Grown TREES and SEEDS at the RIVER RAISIN VALEY NURSERIES of Monroe, Mich. We have a reputation for hardy, prolific, early bearing stock. Besides our famous specialties, the WINTER BANANA APPLE, the NEW PROLIFIC PEACH and the NEW CONRATH BLACK RASPBERRY, we have a large assortment of Fruit and Ornamental Trees, Small Fruit and Flowering Shrubs.

The very best tested Vegetable, Flower and Grass Seeds—and such full packets you never did see.

But you must know HOW to plant and cultivate the orchard garden. We tell you how to your heart's content in THE NORTH AMERICAN HORTICULTURIST, published monthly at 50 cents a year with choice premiums if paid in advance. Agents wanted. Catalogues and sample copy free.

Ask Secretary of your Grange for contract rates on all nursery stock.

GREENING BROS., Monroe, Mich.

WE HAVE NO AGENTS

but have sold direct to the consumer for 25 years, at wholesale prices, saving them the dealers' profits. Ship anywhere for examination before sale. Everything warranted. 10 styles of Carriages, 50 styles of Harness, 41 styles Riding Saddles, Top Buggies as low as \$25. Phantoms as low as \$35. Spring Wagons \$31 to \$50. Send for large Catalogue. No. 721—Price, with lamps, sunshade, apron and fenders, \$60.00. As good as sells for \$80. ELKHART CARRIAGE & HARNESS MFG. CO., W. B. Pratt, Sec'y, ELKHART, IND.

BUTTER in 2 min. \$150 PER MONTH

THE QUEEN BUTTER MAKER. Sells at sight. Every woman wants one when she sees the butter come and gathered in two minutes. Every machine guaranteed or money refunded. Butter churned and gathered by the same machine. The Queen Butter Maker is the greatest invention of the age. We will send a trial machine to one family in any neighborhood; a good chance for agents to make big money; costs but little more than an ordinary churn. The Queen Butter Maker Co., 20 E. 3rd St., Cincinnati, O.

AFTER THIRTY YEARS Continuous experience in the Wool Business we should be in a position to serve your interests in the most acceptable manner. We sell direct to the manufacturer, and charge as small a commission as is consistent with good business principles. We make liberal advances on consignments when desired. We furnish free use of sacks to all our shippers. We keep you informed at all times as to the latest and best points on the wool situation, prices, etc. As to our responsibility, we refer you to any reputable business house or the Chicago banks. Can't we correspond with you? SILBERMAN BROTHERS, 122-128 Michigan St., CHICAGO, ILL.

FOR SALE

At reasonable prices, a choice selection of April and May Poland China pigs. Can furnish pairs. Pedigree with sale. O. P. C. R. Correspondence solicited and communications promptly answered. JOHN BOWDITCH, Hillsdale, Mich.

Special Offer

Send us fifty cents and we will forward to you once, a beautiful, genuine Japanese fan. This fan retails in the large stores at 50 cents each. It is of fine parchment and highly decorated. We have often obtained a special price upon this fan, and fully warrant it as being the best we have ever offered. To every purchaser of this fan we offer FREE

the American Home Journal for one year. This is a monthly paper and contains bright, fresh, and entertaining news. The regular subscription price for this paper is 50 cents for one year. We do not care so much about your money or about selling the fan, as we do to introduce to you the beautiful, illustrated American Home Journal. R. D. LEE Pub. Co., Lynn, Mass.

HOW UNPLEASANT TO BE BILIOUS, Or suffering from Chills and Fever, Dyspepsia, Neuralgia, Sick Headache, Constipation or Indigestion. In all these cases the liver is to blame. Now, if you will send five 2-cent stamps to cover postage, we will send FREE by mail, a package of St. Joseph's Liver Regulator, which is in powder form. This remedy is a safe and sure cure, and one trial will convince you of its merits. Address Dept. (K) L. Gerstle & Co., Chattanooga, Tenn.

Plain Cultivators.

(\$3.75 to \$20.00)

Also Horse Rakes, Hay Tedders, Mowers, Cultivators, Hay Presses and other implements at cash prices satisfactory to the farmers. If our goods are not found to be as represented, we will return the money of the goods. Address The Ann Arbor Agricultural Co., Ann Arbor, Mich.