

DEC 30 1910

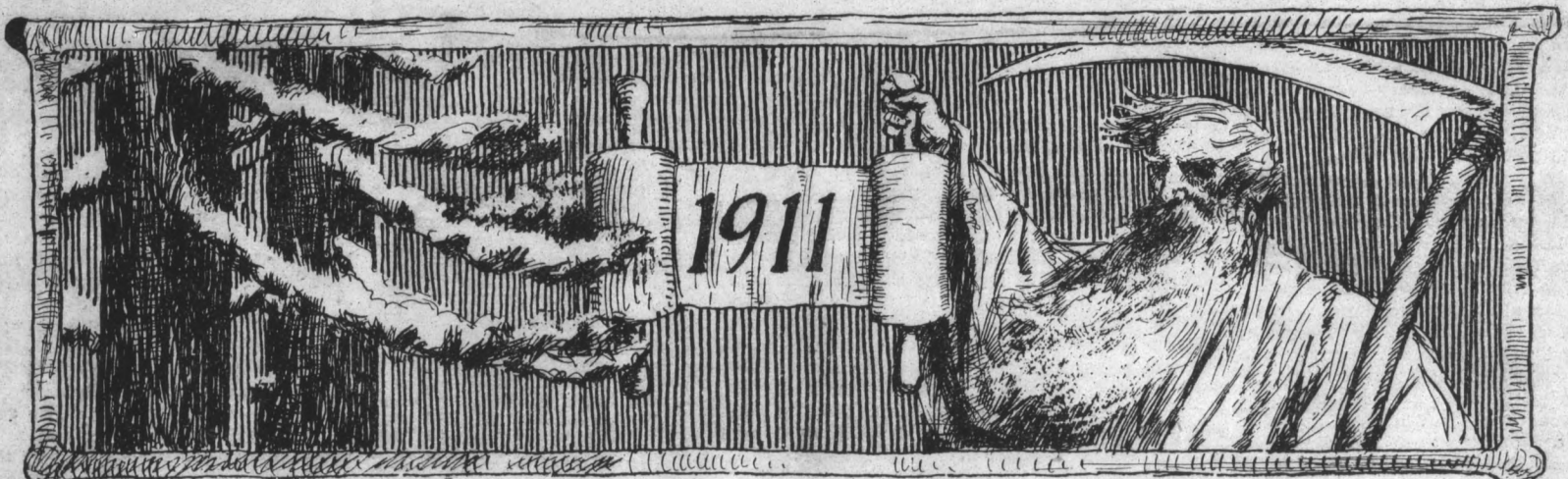
The MICHIGAN FARMER



VOL. CXXXV. No. 27.
Whole Number 3528.

DETROIT, MICH., SATURDAY, DEC. 31, 1910.

75 CENTS A YEAR
\$2.00 FIVE YEARS



RESOLVED FOR THE NEW YEAR.

FOR MY COUNTRY: THAT I WILL STAND ALWAYS FOR THE SQUARE DEAL—FOR THE COMMON GOOD.

FOR MY HOME: THAT I WILL BE TRUE TO IT—TO ITS HAPPINESS AND ITS FINEST IDEALS.

FOR MY NEIGHBORHOOD: THAT I WILL ENDEAVOR TO BE SYMPATHETIC, TOLERANT, PATIENT, HELPFUL SEEKING TO EXEMPLIFY THE GOLDEN RULE.

FOR MYSELF: THAT I WILL SPEAK TRUE, PLAY FAIR, HOLD SACRED MY FRIENDSHIPS AND MY OBLIGATIONS, BELIEVING THAT CHARACTER, RATHER THAN WEALTH OR RANK, IS THE TRUE TOKEN OF SUCCESS.

PEETS-

FARM NOTES.

Seeding Alfalfa in Northern Michigan.

Kindly advise me as to the best method of getting a stand of alfalfa on a sandy loam field that was cleared and broken up last spring and part was sown to peas and the balance to rape, clover and timothy being sown in the rape and a good stand secured. This part of the field was well manured with stable manure and both rape and peas were pastured with hogs and sheep. I will have manure enough to cover the balance of the field. I have been reading your articles on alfalfa for some time, but have not found just what I want. Lime is too high to use here, and I have not seen any sweet clover growing in this part of the country. A few farmers in this section have tried alfalfa, but have failed. It would grow about six inches high and then turn yellow. But a friend of mine in Oscoda county sowed a small patch last spring and in six weeks from time of seeding cut it for hay, it then being about 18 inches high. He inoculated his soil with a liquid. This alfalfa now looks fine for the winter. I have always believed that alfalfa would thrive in this part of the state if we only knew how to get it started.

Montmorency Co. J. E.

It is quite probable that this new land would not need lime as would the older land or soils which have been longer cultivated and where it is difficult to get a stand of alfalfa without liming the soil. At least it is the writer's opinion that it would be a better plan to try the alfalfa on a small scale without liming to determine whether it is necessary or not, using lime on a smaller plot to note the effect. In comparison with the unlimed portions of the field sown. If this were the writer's case he would experiment in a small way only at first instead of putting this whole field into alfalfa. It would seem better to leave the portion which is seeded to clover and cut it for hay this summer, sowing only that portion of the field intended for alfalfa which peas were grown on last summer. By manuring this ground well and plowing early in the spring then working it thoroughly to kill the weeds which may start and inoculating the seed when sown, then applying lime on a small plot of the field you would, from this experiment, be able to determine whether or not the lime is needed. The condition of the alfalfa described would indicate that it is necessary to inoculate in order to get a good stand. The liquid described is a pure culture, which can be secured at a nominal charge, which covers the cost of making, from the bacteriological department of the agricultural college.

This culture is applied to the seed according to directions and the seed is sown preferably on a cloudy day as the bright sunlight is injurious to the bacteria. It is conceded, however, by practical farmers and experimenters alike, that the better method of inoculating soil for alfalfa is to sow the soil from a successful alfalfa field or from a sweet clover patch. But if neither is available in your locality the pure culture may give you a successful inoculation and make a success of the alfalfa crop from the start. By sowing it only on a portion of the field which is not now seeded to clover the experiment will be less expensive and the supply of hay for the next year will be more certain, as alfalfa seldom gives a profitable yield of hay the first year even where a successful stand is secured, the case cited being an exceptional one.

There is no doubt, however, that alfalfa will grow successfully in northern Michigan. The writer has seen successful stands in the upper peninsula and there is no doubt that where this greatest of leguminous crops can be grown it will prove a money maker in the economical maintenance of live stock.

Orchard Grass.

I would like information regarding the growing of orchard grass. At what time should it be sown and what amount of seed should be sown per acre as a hay crop? Land is sand in part, balance is muck mixed with a little clay, and is not very fertile, as it has been poorly cared for, and I wish to raise some crop for hay next year.

Wayne Co.

W. E. S.

Orchard grass is a valuable and profitable grass to sow in mixtures for hay or pasture throughout the northern section of the United States. It is one of our earliest grasses to start in the spring and furnishes an abundant aftermath when cut for hay. Its name was doubtless given it because of the fact that it endures shade well for which reason it is especially suited for groves and orchards. It will thrive on a moderately rich soil, that is not too retentive of moisture but is not a soil builder and cannot be expected to give a heavy yield of hay on land which is in poor condition. If sown at all on such land it should be sown in a mixture with clovers and in any case

it is better suited for use in a mixture with other grasses than when sown alone as it is a bunch grass and does not form a thick turf. It may be sown either in the early spring or late fall but preferably the former and if sown alone two or three bushels of the seed which is very light are required per acre. One-half to three-fourths of a bushel of the seed, if sown in a mixture of clover and other grasses will be sufficient. It is not a grass, however, well suited to produce a crop of hay the year it is sown. If a crop of hay is desired on this ground for next year's use it would be better to give it liberal fertilization and sow to a mixture of oats and peas. However, land that is in the condition described, should be seeded to clover at the earliest possible date in order that its fertility may be improved by the addition of both nitrogen and vegetable matter which the clover will supply.

ADVANTAGES OF UNDEVELOPED SECTIONS OF MICHIGAN.

The So-Called "Ice Box of Michigan."

I recently met a man from Gratiot county and had quite a discussion with him regarding the possibilities of the Upper Peninsula from an agricultural standpoint. He was fully convinced that Michigan, north of the straits, is a veritable "ice box."

Nothing could be more untrue, and yet a large part of the people of the state think that nothing will grow in the northern counties but grass and potatoes. A lot of northern peninsula people are among the number who think that way. They have heard it was so and, knowing nothing about it themselves, have accepted the statement for truth the same way that most people accept a religion or a political creed.

There are parts of the northern peninsula not suited to general agriculture and very little, if any, of it will grow grapes commercially. On the other hand, there are many localities, in fact, a large part of the entire territory except the sand plains east of Marquette that will grow nearly everything that can be grown in the state. Mr. Geismar, in charge of the experiment station at Chatham, Alger Co., has proved that fact beyond a question of doubt. Take Ontonagon county, especially the northern part along the shores of Lake Superior. The temperature averages with Milwaukee during the winter, with a regular snow covering of three to five feet on a level. The weather in summer is cooler than in Milwaukee; there are no hot nights.

The strawberry farms in this district ship as fine berries, if not finer, than those grown in any other place, and they bring the growers from 10 to 12½ cents on cars. We have no trouble growing a large variety of apples. Plums and cherries do very well. Currants and raspberries are finer here than I have ever seen them elsewhere.

Our root crops are marvelous, both in quality and quantity. Sugar beets show as high a percentage of sugar as anywhere.

Our hay crops, especially clover, would open the eyes of southern peninsula farmers. Take into consideration that our ground never freezes. Mr. Geismar, for example, plants half of his potatoes each year in the fall. The fact that the ground don't freeze accounts for our wonderful hay crops. Clover is a weed—actually a weed. The grasses stay green under the snow nearly every season and stock can run on pasture almost as soon as the snow is gone.

I have seen clover pastured heavily with hogs in October that was sown the first week in August of the same year, and have a fine stand left the next year, and as many years as you may want to leave it, for clover doesn't run out up here as it does further south.

My own alfalfa experiments show quite conclusively that it will do as well as clover and I predict that nowhere east of the Mississippi river will finer crops of that wonderful plant be grown.

Corn is being grown—mostly flint but some dent. Time and selection will soon produce corn that will ripen as regularly as it does anywhere in this state. The Houghton County Agricultural Society offered prizes for corn grown by school children in Ontonagon, Baraga, Houghton and Keewawaw counties this past season. The villages of Ontonagon and Green in this county sent over 50 exhibits, none of which were poor and many of which would do credit to Illinois or Iowa. There were over 300 exhibits all told, nearly all of them good. The counties won in the order named above.

There is no question but that we are growing as fine grain crops as are grown anywhere, including winter wheat. All live stock seem to do exceptionally well. The soil is a loam, varying from sandy to black and usually having a clay subsoil. Our own soil in this county is as strong a soil as one would want.

The day is not far distant when the Upper Peninsula will develop into a dairy section second to none. Her mutton sheep will be sought after. Her hogs will be in demand on account of their exceptional vigor. I will even go so far as to say that favored portions like the northern part of this county, lying as it does under the protection of the Porcupine mountains and the Copper Range, in a veritable basin, with Lake Superior everywhere to the north, will some day be famous for its fruits.

People without knowledge of the facts have done much to hurt our development by assuming that general agriculture is unprofitable here. There is no better market in this country than the copper and iron districts, right at our doors. Why continue to refuse to believe in our own state and allow land boomers from the far west to take our sons and even fathers away from us—to what? Certainly to nothing better than we have here. Why pay hundreds of dollars per acre out west when we have better lands at home for ten or twenty? Let us all pull together and turn the tide of emigration to our northern county lands, instead of allowing it to go elsewhere.

Ontonagon Co. T. A. GREEN.

Editors' Note.—This is the first of a series of articles to be published on the "Advantages of Undeveloped Sections of Michigan." Others will be published in future issues.

KEEPING UP THE FERTILITY OF THE SOIL.

How can I keep up the fertility of my soil on a 40-acre farm? I keep but very little stock, and raise wheat, oats, sugar beets, and beans. My soil is good clay loam in good heart, and I wish to keep it so. What rotation can I practice, if any, that will keep up the fertility? Also, what is the best fertilizer for beans and how should it be applied?

Isabella Co. C. H. T.

The first thing to do to maintain the soil, is to grow clover in the rotation of crops. If you don't need the clover for hay, then it should be turned under as a permanent improvement to the soil. I don't believe any man can permanently keep up the fertility of the soil without growing common red clover. This plant not only gathers a little nitrogen from the atmosphere, but it improves the mechanical condition of the soil. Its roots grow deep down into the subsoil, separating and pulverizing it and allowing the water and air and frost to get into it, which causes the subsoil to become gradually weathered and the plant food which it contains is thus made available. If I wanted to raise wheat, oats, sugar beets and beans, I would begin with the clover sod and plow it down for beans, then, without plowing the ground, I would put the bean ground into sugar beets the next year and unless the ground is too heavy, oats could follow sugar beets without plowing. The lifter, which must be used in sugar beet culture, stirs the ground quite thoroughly as deep as one would plow it. Then the oat ground would have to be plowed for wheat and the wheat seeded to clover again. Leave the ground into clover only one year, the first crop must be cut for hay early, so as to get a good second growth, leave the second growth on the ground until the next spring, put on what stable manure you have during the fall and winter and the next spring plow it under for beans, but I do not believe that the clover crop in this rotation would keep up the fertility of the soil and allow you to take off crops of wheat, oats, sugar beets and beans. You will have to have some plant food from some outside source. Since you do not propose to keep much stock and will have very little stable manure, it seems to me that you will have to resort to the use of commercial fertilizer, and by the judicious use of commercial fertilizer and clover in the rotation, I am of the opinion that you can keep your land in splendid condition, increase its fertility and its crop producing power. I would use commercial fertilizers on all of the crops which are removed.

On a clay loam, for beans, I would use what is known among the fertilizer men, as a standard fertilizer, containing 1½ to 2 per cent of ammonia; 8 to 10 per cent of phosphoric acid and 2 to 3 per cent of potash, using from 200 to 300 lbs. per acre, applying it broadcast with a grain drill before the beans are planted and

working it well into the soil. For sugar beets, I would use a much heavier application. I think that you will find that 500 to 1,000 lbs. per acre will be profitable, and for the oats that follow, for that soil I would use only a light application of 200 or 300 lbs. of acid phosphate, and then a good standard mixed fertilizer, 300 to 400 lbs. per acre for wheat, I believe will bring you profitable returns and keep up the fertility of the soil.

COLON C. LILLIE.

NEXT YEAR'S NEEDS.

It is an excellent plan to think about next year's needs at this season of the year when farm work is not crowding and when there is ample time to make investigations along this line, particularly if the farmer finds it necessary to add something to his farm equipment, as he generally does each year. It is far better to have thought the problem out carefully in advance of the season when this equipment will be needed than to make a hasty decision when there is no time to investigate carefully. Perhaps it may be a wagon or something in the line of farm tools and machinery, or maybe some kind of equipment for the barn or stables which is most needed to insure economy in the production and the handling of our products. Many times it requires careful thought to determine which one of a number of such needs should be first supplied. If the matter is thought over at this time of the year when it can be given proper attention, it will often be decided that it would be good economy to supply most, if not all, of these things even if it does seem as though we can hardly afford to do so, since anything that will make for economy in production over and above the legitimate interest charge on its value is something which we cannot well afford to do without. If this proposition is carefully thought out at this season of the year, we will be better prepared to make a wise selection in the supplying of our several needs for the coming year. As a means to this end it would be the part of wisdom to look over the advertising columns of the Michigan Farmer and write the advertisers for literature describing their various products, in order that we may make a careful study of the same and determine which is best adapted for our use. This will also give us time to plan on their purchase during the winter season in order that the needed equipment may be at hand when the active season opens next spring and then no time is lost in the pushing of the active farming campaign. This will cost only a few cents in postage and will prove an invaluable aid to us in determining the nature, as well as the extent of the equipment which is required to satisfy our needs for the next season.

GOLDEN OPPORTUNITIES IN THE NORTHWEST.

The Dakotas, Montana, Idaho and Washington offer golden opportunities for the farmer, the business and the professional man. Towns recently established along the new Chicago, Milwaukee & Puget Sound Railway in these states have had a phenomenal but substantial growth. These new towns offer good openings in many lines of business. Adjacent to this new line are thousands of acres of good agricultural land awaiting development and in Montana a 160-acre or 320-acre government homestead can still be secured. THE CHICAGO, MILWAUKEE & ST. PAUL RAILWAY during 1911 will offer very low round-trip fares to points in the Northwest affording the home-seeker an excellent opportunity to visit and investigate this new and undeveloped country. For descriptive literature, fares and dates on which reduced fare tickets will be on sale, write F. A. MILLER, General Passenger Agent, Chicago. (153)

CATALOGUE NOTICES.

The Kent Manufacturing Co., Fort Atkinson Wis., has just published a beautiful art catalogue illustrating the installation of their sanitary barn equipment in many of the dairy and stock barns of the country, together with testimonials from the users expressing their entire satisfaction with this equipment.

The Detroit Engine Works, Detroit, Mich., send a 30-page catalogue describing and illustrating their stationary gasoline engine in detail. The claim is made by this company that it takes an hour and a half to carefully read the catalogue but that reading it will save the purchaser of an engine from \$40 to \$200.

"Neither my wife or I would think for a minute of getting along without the Michigan Farmer."—Karl Kober, Nunica, Mich.

LILLIE FARMSTEAD NOTES.

A Poor Crop of Beets.

As I have stated from time to time during the summer, my crop of beets this year was nearly a failure and the factory returns, which have just been received, seem to confirm my good judgment. I had 12 acres of beets; that is, what I put in and that is what I harvested. Had I deducted, as some people do, that portion of the field which was killed, where the beets did not grow, I might make a fairly good showing; but one cannot do that and give any accurate information about what one is liable to run up against in growing any kind of a crop. Owing to local conditions, nearly, if not quite half, of the 12-acre field scarcely produced any beets at all. This was on the heavier portion of the field, the clay loam, ordinarily, so my experience goes, the best beet land on the field. It was well prepared, in good condition and well fertilized. The seed was sown the first of May, came up nicely, could see the rows clear across the field and I would have started to cultivate them in a day or two. Then we had a wet spell of several days, some places the water stood almost continually, even right over tile drain. And then the other extreme followed, extremely dry, hot weather with blistering sun, and I am of the opinion that the young plants were scalded. That is the only reason that I can give for their not growing. Certainly they did not grow. If we had had a good, steady rain within a reasonable time after this, I am of the opinion that many of these plants would have developed into good beets. No rain came until the 23rd day of August, that is, no rain that would wet the soil down so that the beets could get started.

Results:

On the 12 acres I had 63.38 tons of washed beets, with an average test of 15.25 per cent, and received an average price of \$6.54 per ton, or \$415.76 for the entire 12 acres of beets, and I pay the freight bill of \$35.49, and for beet seed, \$28.50, leaving net return \$351.77, or \$29.31 per acre. I figure that the cost of labor and the fertilizer I used would just about amount to this sum, leaving me nothing for the use of the land. This is not very encouraging. The factory, I think, has probably made more off this field than I have, and yet I am not discouraged because I have had better results before and I expect better results in the future. I have had poor stands of beets on sandy portions of the field before, but I never had a poor stand on the clay loamy portions of the field until this year.

Beet Tops.

I have the beet tops to pay for the rent of the land and what profit, if any, I get on the crop. Before they settled in the silo, I had a silo 12 feet in diameter and 34 feet deep full of beet tops with some oat straw mixed in among them. When they began to settle, I put a carload of beet pulp on top to preserve them, and now they are through heating and settling, and the whole mass has settled down seven feet from the top of the silo. Here is certainly quite a lot of beet top ensilage. How much it is worth, I do not know, but I believe it to be worth as much as an equal amount of good corn silage.

Harvesting the Beet Tops.

We did not draw any beet tops until after we had hauled all the beets. When we were hauling the beets we took pains to carefully remove the beet tops and put them in piles, two piles to each pile of beets, and when we were all through hauling beets we hauled the tops. We pitched them directly into the silo from the drive-bridge of the barn until the tops were so high that it was not practical to pitch them in by hand. We had one man in the silo constantly placing the beet tops evenly over the surface until they were all packed down. The straw was distributed between the beet tops, but you can put in considerable straw and not have it take up very much room, because it packs in between the tops and does not fill up the silo so very much.

The remainder of the silo we filled with a carrier from the outside. Our creamery had a sprocket-chain carrier that was used to load butter into the car directly from the refrigerator, which was in the basement of the creamery. This was about eight feet long. When we built our addition to the creamery this carrier could not be used, so I took it to the farm to see if it could be arranged to handle beet tops. It was hardly long enough for a 34-foot silo, but we built a

platform about six feet high and put one end of this carrier on it and run the carrier with a gasoline engine. The teams drove up alongside and we pitched them on to the carrier and they were elevated into the silo. It worked very well and would elevate just about as fast as a man could pitch them off. This carrier was also used to elevate the beet pulp which I got from the factory to put on top. As explained before, last year the beet tops spoiled down from the top to a considerable distance, because the beet tops will not pack very closely and this allows the air to get in, and they will continue to rot until there is a sufficient amount of the rotten ensilage on top to form a mass sufficient to exclude the air. I figured that, by putting the beet pulp on top, I would entirely avoid this waste, and I believe I have done so. The beet tops have been packed down and the air excluded and the top of the pulp looks just as fresh as when we put it in. I can not see that any of it is spoiled. Of course, we will know more about this when we begin feeding it. Last year we began to feed the beet top ensilage about the holidays, as soon as they were nicely through heating; but this year I shall defer this until later on. I want to feed out one silo of corn silage before I begin to feed the beet tops. My old silo spread somewhat after it was filled this year, and we fixed it up temporarily so we will not lose practically any silage if we feed it out quickly, and I shall not begin to feed the beet top ensilage until after that silo is gone, which will be some time after the holidays, so that I will not know just how this beet top ensilage comes out until well towards spring. From all appearances now, however, there will be little, if any, loss.

It is useless to say that I feel pretty good over this experiment. It looks now as if my theory was correct, and that my plan will be a decided success.

COLON C. LILLIE.

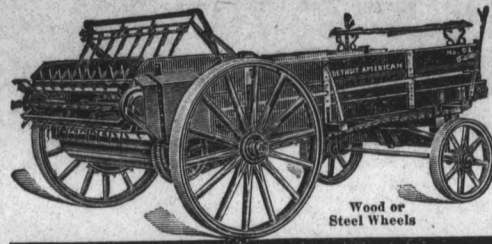
SHOULD THE FARMER LEAVE HIS LAND?

In a recent issue of The Farmer, Mr. J. W. Ingham has a very interesting article on the above subject. He gives several instances where farmers who have sold out and gone into some other business in town, have made a failure financially and perhaps shortened their lives. The writer of this has personally known of similar cases. There is another side of this question of selling out or leaving the farm, which Mr. Ingham did not touch upon. Suppose a man has reached the age of three score years and ten, or is nearing that age, and has no son to take up the cares and responsibilities of the farm, but must depend upon hired help, which in most cases does not relieve him of any care, and he feels that this care is becoming more burdensome every year. The puzzling question is, would it be better for him to sell his farm, move to some town or village and spend the remainder of his days in comparative idleness? Perhaps some will say, under the circumstances mentioned, why not rent the farm and then move to town and be assured of a steady income? Those who have had experience in renting their farms, will no doubt bear me out in the statement that a farm that is rented will, in most cases, deteriorate in value from year to year, about as much as is received from rent. So there would be little, if any, advantage in such a transaction. The question raised is certainly a puzzling one to many, and it seems to be that it would be a profitable one for discussion by the readers of this paper, especially those who have had experience, as such experience would be valuable.

Ottawa Co. JOHN JACKSON.

GYPSUM AS A FERTILIZER.

A reader asks if plaster is a fertilizer. Plaster has the effect of liberating certain potash compounds found in many comparatively new soils, and for a few applications produces very noticeable results. But after this unavailable potash has once been converted, the plaster no longer produces beneficial effects, for which reason its use is generally abandoned and it is said that the plaster is not as good as it used to be. Where it can be made or obtained there is no better fertilizer than good stable manure, which adds vegetable matter as well as plant food to the soil, but this is not always available, and commercial fertilizers may be used with profit to supplement it and sometimes in its stead.



1911 Spreader Bargains—
Unrivalled Values **\$42⁵⁰**
Starting at

—Delivered in Michigan. Slightly more in other states owing to increased freight charges. Just as big values throughout our full line of complete machines. You must get our book to see your spreader bargain because you get the style and size you want at a price that makes it the biggest value of the year. Whether you want an Endless or Return Apron machine, wood or steel wheels, 50 to 100 bushels capacity, or our Wagon Box Spreader, you can't beat the Detroit-American quality, no matter what you pay. 19 improvements last year and more this year. We're so far ahead now, there's no comparison. Prove it yourself. Get our book and low factory price. Then let us send you a

Detroit-American

on 30 Days' Real Free Trial
—No Money Down—Cash or Credit—Freight Paid—

You take no risk before you buy and our unlimited-time guarantee protects you for life after you pay. Think how good we must make the Detroit-American spreader to send it out with the money in your pocket and a guarantee not for five years or ten or twenty years, but for a lifetime. You can't beat our proposition. No other spreader in the world could make good on it. Get our book and you'll know why. Read about the gearless construction; read how much more steel we use. Then you'll know the reasons for Detroit-American remarkable simplicity and strength. Six changes of feed mean efficiency.

It's the mistake-proof spreader—you can't misuse it. Get our

Big Free Book

and freight-paid price before you do a thing about getting any spreader. We're offering every advantage others offer and more. Send your name now. Our big book is the best ever written about spreaders. Honest all through. Also shows biggest values in famous Detroit-American Tongueless Disc Harrows and Cultivators. Write postal now. Address

AMERICAN HARROW CO., 936 Hastings Street, Detroit, Mich.

This Galloway MANURE SPREADER

Only **\$39⁵⁰**
F.O.B. WATERLOO

The real thing. A successful 50 bushel Spreader with more than four years of success behind it, only \$39.50. This is only one of the great Galloway lines. More than 40,000 farmers of America have stamped their O. K. on it. They say, "It's the Best." This is the latest from the Great Galloway factory. It's part of my 1911 capacity of 40,000 manure spreaders. It is you that gets the benefit of this tremendous output, and you save 40 to 60 per cent on your purchase because I divide the melon with you. Every page of my big free book fairly bristles with Proof



GET THIS BIG BOOK FREE

Let me quote you prices on a Galloway Spreader to suit the size of your farm. I've got the one for you. I'll trust you to try it. I'll put it all up to you, and if you say it's not what you want, I'll take it back and you don't lose one dollar by the deal. See it work, then you know what it is. Here's what you will find out: It's the simplest and handiest—two horses can handle it—spreads any kind of stuff—no breakage bills—long life—satisfaction all the way—it's a money-maker every day—it pays you big profit on every crop you use it. Now prove this out. Find out that you can make this saving. I know something about the spreader business you ought to know; let me tell you. Write me and don't put it off till tomorrow. —WM. GALLOWAY



WM. GALLOWAY CO., 649 Galloway Sta., Waterloo, Iowa
Let Me Tell You How I Divide the Melon with You

It is cheaper

to maintain the fertility of your soil while it is producing revenue than it is to reclaim it after it is exhausted.



FERTILIZER

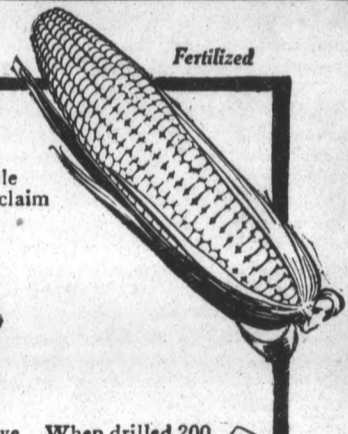
will keep your soil rich and productive. When drilled 200 to 400 lbs. to the acre it will increase the yield of corn from 40 bushels to 80 or 100 bushels per acre. The ears will be fuller, and the grain better developed.

Write for Free Memorandum-Calendar Book. Contains valuable information on the scientific growing of grains, vegetables, etc., etc.

THE CINCINNATI PHOSPHATE CO., CINCINNATI, O.
Agents Wanted. We want a live man in each vicinity. Here's a chance. Write us.



Unfertilized



Fertilized



\$225 an Acre from Potatoes

Early potatoes are one of the best-paying crops raised in Southern Alabama, Western Florida, Tennessee and along the Gulf Coast. Good prices are always obtainable and demand for same beyond the supply. Read what a farmer at Summerdale, Ala., has to say on this crop:

"My yield of salable potatoes this year, per acre, was 150 bushels, which sold readily at \$1.50 per bushel, this being the first crop on the land. I followed this crop with sweet potatoes and sweet corn and then planted cow peas. I raised three crops on the land in one year, all of which brought good prices."

Sweet potatoes produce big returns and are usually planted after Irish potatoes have been dug. Two to three hundred bushels an acre are produced and bring from 50 cents to \$1.75 per bushel. Let me send you our illustrated booklets and learn what can be done in a country where fertile land can be purchased cheaply and where there are 312 working days a year. Low round-trip fares 1st and 3d Tuesdays each month.

G. A. PARK, Gen'l Ind. and Imm. Agt., Louisville & Nashville R. R. Room 213 Louisville, Ky.

When writing to Advertisers mention the Michigan Farmer.

LIVE STOCK

FEEDERS' PROBLEMS.

Barley as a Hog Feed.

I have some barley which I desire to grind and feed with ground corn and cob. Is there any danger in feeding this to hogs or cattle? Last year I fed some ground barley to young hogs and lost one and made another very sick. It seemed to be a case of indigestion.

Lenawee Co. B. W. A.

Barley is an excellent grain to use in the ration for fattening hogs, especially where a fine quality of pork is desired. The Danes, who produce bacon which commands a premium in the English market use barley very freely in the feeding of their hogs, and count it as the best single grain for the purpose of fattening or finishing their swine. In Canada, where barley has been used more extensively as a hog feed than it has in the United States, it is also a popular grain for pig feeding in combination with other feeds. On account of the hardness of the grains it should be finely ground and well soaked before feeding. It is not generally considered as a good feed for very young pigs or for brood sows, and it is possible that the bad results which followed its use in the case above cited was due to the age of the pigs to which it was fed as an exclusive ration. Compared with corn in some carefully conducted experiments it was found to have about eight per cent less feeding value than corn. In another case where the experiment covered a period of four months, it was found that it took an average of four pounds and 11 ounces of barley to produce one pound of pork. Where fed to young pigs a very little barley should be fed at first, mixed with wheat middlings, the quantity being gradually increased as the pigs get older and increase in size. For older hogs it may be fed in connection with corn, peas, wheat or other grains available, and if roots or other succulent feed is fed with it better results will be secured. In feeding it with corn, however, it would be better to use corn meal ground without the cob, as corn-and-cob meal should be very finely ground for good results with hogs, and even then is not favored by a great many feeders who have experimented with it. Barley is also a good grain to use in the ration for cattle and horses. In fact, it is one of the best of our available grain feeds where fed with judgment and in proper combinations.

One peculiar fact in connection with the use of barley for hogs is, however, worthy of special mention, and should not be overlooked by those who use barley for this purpose. Hogs seem to require much more water where barley is fed than where corn meal is fed as the exclusive grain ration or as the principal factor in the grain ration. In one experiment reported by Prof. Henry where the water drunk by the hogs on these two feeds was weighed, it was found that nearly twice as much water was consumed by the hogs eating barley as by those eating corn meal. It is, of course, essential that this requirement of barley fed hogs should not be overlooked if the best results are sought in its use as a large factor in the ration.

HOG UNTHRIFTINESS, CAUSES AND REMEDIES.

Recently our attention was called to a pig in a barnyard and our opinion regarding its ailment solicited. The pig appeared run down in condition. He was thin. His coat was stiff and harsh. His head seemed heavy and he had a deep, raspy cough. He seemed to lack vitality and ambled about in a lifeless, languid manner.

Just what the trouble with that unthrifty youngster was, would be impossible to say definitely, without post mortem examination. However, the case looks very much like worms. Every symptom indicates that. Yet the cough and unthriftness may be due to lung worms. I am inclined to believe that the trouble is caused by intestinal worms and shall recommend treatment for that porcine trouble. If intestinal worms are the cause the treatment will cure it. If the trouble is due to lung worms the sooner the pig dies the better it will be for the owner's feed bin, because the chances for its recovery are very poor and so long as it may live it will be eating some feed for which it is giving no return in gain.

Worms really are a source of untold loss to the hog raiser. Last year a bunch

of spring pigs started into winter in a very unthrifty condition. They remained unthrifty all winter. Although they were fed liberally of good feed which, as we all know, was very high in price, they gave no gain whatsoever in return. Toward spring they were treated for worms. The remedy used was one that caused the worms to loosen their hold and to pass out of the intestines. The day following the administration of the treatment the dry pen in which the pigs were confined was literally covered with wriggling squirmers from the alimentary canals of the suffering shoats.

The change resulting from the treatment was simply marvelous. In a week the tucked up flanks had come down to respectable proportions and the pigs moved about with more vim and life. Then their sides and bellies filled out and the jowls became pendant in true fat hog style and the coats were bright and glossy. They grew very rapidly despite the fact that they had been so badly stunted by the infestation of worms. In three or four months the hogs were fat and lazy and ready for the pork barrel.

Just at this season when the hogs have been changed from the last green feed to dry feed, and have left the open air and free range of the pasture for the more restricted feeding yards and sheds, much attention needs to be given to their condition. About half the ordinary feeding hogs throughout the country are unthrifty from one cause or another. And worms is one of the chief causes. The symptoms have been fairly well described in the first paragraph of this article. And if those symptoms and surrounding conditions seem to indicate worms no time should be lost before administering treatment. To postpone treatment is simply to waste the feed given, for wormy hogs will not gain.

A satisfactory treatment may be had in the good old-fashioned household remedy that most of us were required to take when we were youngsters. That remedy is copperas. It should be used in the powdered form. If the druggist does not have it in that form he should be required to pulverize it. The number of hogs to be treated in each pen should be determined before the medicine is purchased so that the druggist can weigh out the exact amount calculated for each lot. The dose required is one dram for each 100 pound hog, and two drams for a 300 pounder.

The copperas should be dissolved in warm water and fed in slop. A great deal of care will need be exercised that the mixture is thorough and perfect. This remedy should be fed every second morning for a week. If the case is bad or if results are not satisfactory the treatment should be continued for a second week. While administering the treatment keep the pigs out of their accustomed yard and in a dry lot. This will prevent the worms or the eggs being dropped in the hogs' regular quarters and the dry lot will enable one to rake up and burn the droppings, which should be done. One treatment will usually suffice but if it does not it may be repeated in a month or six weeks.

Some kind of a corrective can usually be provided. Charcoal and salt are about as good as anything for this purpose. Hogs like this mixture and it no doubt has a beneficial effect in ridding pigs of worms and keeping up the tone of the health of the hogs. At this season when every farmer is feeding ear corn, charcoal can be very easily provided from the cobs. A pit, say three feet wide and three feet deep, and six, eight or ten feet long, depending upon the size of the herd, will need to be dug. To make the charcoal, throw a few of the cobs into the bottom of the pit and ignite them. Then, as fast as more will take fire, they may be piled into the pit. When the pit is full it is to be covered with strips of iron or something that will not burn, and the cracks stopped with dirt to keep out all air. After a couple of days the charcoal will be ready for use. The charcoal and salt may be mixed and fed in a small open trough where the hogs have access to it at all times, or it may be fed in any other way that may be more convenient.

Lice, while not as harmful as worms, cause a great deal of loss to the farmer every year. Yet they can be gotten rid of very easily. We recently went over a bunch of shoats that were quite badly infested and succeeded admirably in getting rid of the lice with crude oil. The way we went about it was to pen the pigs up in small quarters. Then we set the pall of crude oil down outside the low fence where it could be easily reached with the broom. Then, the old stubby

broom was dipped in the oil and applied quite liberally to the pig's coat. We daubed them between the ears, on top of the neck, along the back and sides and flank and on the lower ham. The hogs naturally did quite a lot of squirming around and crowding each other. In that way they spread the oil quite generally over each other. This treatment proved effective.

Iowa.

H. E. MCCARTNEY.

FEEDING STEERS AND HOGS AT CLOVERDALE FARM.

December is upon us and winter has begun. We have about 50 shocks of corn in the field yet, but this isn't worrying me any because we can haul this and stack it when the right day comes. Of our 75 acres of corn we husked about 400 bushels and then we had the corn the binder knocked off to feed also. The remainder we hauled to the barn and stacked to feed the steers. We prefer hauling and stacking it to leaving in the field as it can be fed under cover to better advantage and it is out of the field and can be fed stormy days without the trouble of hitching up and digging it out of the ice and snow.

A month or so ago I ordered a car of shelled corn to feed the steers and hogs, and we have been hauling it from the station about seven miles away. It is No. 2 yellow old corn and cost me 53½¢ per bushel on track. I did not dare to put in the new corn two weeks ago on account of its not being dry, and we wanted some of this to mix with oats to feed the horses next summer. The dry weather this summer hurt our corn so we have to buy more this winter than usual. I shall buy corn at present prices to feed hogs as it certainly can be fed to a profit when hogs are worth 7½¢ in Buffalo. We are running more hogs behind our steers this winter than usual and feeding some extra corn to them. Behind 40 steers we usually run 40 hogs, but at present we have some 60 of them. I am not trying to crowd them now and look for higher prices in February and March.

CHAS. GOLDSMITH.

THE LIVE STOCK MEETING.

The twentieth annual meeting of the Michigan Improved Live Stock Breeders' and Feeders' Association will be held at the Agricultural College, East Lansing, Mich., on Jan. 11-12, 1911. All meetings will be held in the new Agricultural Building. The first day will be devoted to the sectional meeting as follows:

- Michigan Horse Breeders' Association, Wednesday, Jan. 11, 1:00 p. m., room 316.
- Michigan Shorthorn Breeders' Association, Jan. 11, 1:00 p. m., room 110.
- Holstein Friesian Association of Michigan, Jan. 11, 9:30 a. m., room 403.
- Michigan Jersey Cattle Club, Jan. 11, 2:00 p. m., room 311.
- Michigan Guernsey Cattle Club, Jan. 11, 2:00 p. m., room 111.
- Michigan Red Polled Breeders' Association, Jan. 11, 2:00 p. m., room 208.
- Michigan Hereford Breeders' Association, Jan. 11, 1:00 p. m., room 116.
- Michigan Oxford Down Sheep Breeders' Association, Jan. 11, 2:00 p. m., room 215.
- Michigan Shropshire Sheep Breeders' Association, Jan. 11, 10:00 a. m., room 214.
- Michigan Berkshire Association, Jan. 11, 10:00 a. m., room 207.
- Michigan Duroc-Jersey Breeders' Association, Jan. 11, 2:00 p. m., room 314.
- Michigan Poland-China Breeders' Association, Jan. 11, 1:00 p. m., room 315.

Following these sectional meetings there will be a joint meeting and informal reception in room 402, fourth floor of the new Agricultural Building at 5:00 p. m. A conference on the subject of tuberculosis will occupy a portion of this time. At the close of this informal session a luncheon will be served to the members of the association in the Women's Building, under the auspices of the State Board of Agriculture.

The general sessions will be held on Thursday in room 402 of the new Agricultural Building, beginning at 9:00 a. m. Among those who will be heard on the program are Prof. H. H. Wing, of Cornell, who will speak on the subject of "Dairying;" Prof. Andrew Boss of the University of Minnesota, who will talk on the topic, "Beef Production for Michigan;" Dr. R. P. Lyman, of M. A. C., who will discuss the "Relations of the Stockman and the Veterinarian;" Mr. C. A. Tyler, who will talk on "Mutton Production in Michigan;" and Dr. Ward Giltner, of M. A. C., who will discuss briefly "Our Present Knowledge Concerning Contagious Abortion."



Are you befogged?

You can't get befogged about roofing when you steer straight for Genasco, and get it for every building on the farm.

Genasco Ready Roofing

is made of the only perfect water-proofer—Trinidad Lake Asphalt, Nature's own product. No mystery; no guess-work. Genasco has the life that lasts. Proven by over thirty years' use of natural asphalt.

The Kant-leak Kleet is the greatest help yet in applying roofing. Makes seams positively watertight without cement. Saves time. Enhances beauty of the roof. Supplied with Genasco, when ordered.

Ask your dealer for Genasco, Gold Medal (highest award) Seattle, 1909. Mineral or smooth surface. Look for the hemisphere trademark on the roll. Refuse substitutes of similar looks. Write for samples and the Good Roof Guide Book.

THE BARBER ASPHALT PAVING COMPANY

Largest producers of asphalt, and largest manufacturers of ready roofing in the world.

PHILADELPHIA

New York San Francisco Chicago

Cross-section, Genasco Smooth-surface Roofing.

Trinidad Lake Asphalt
Asphalt-saturated Wool Felt
Trinidad Lake Asphalt

AGOOD Liniment
CAN BE MADE FOR
80 CENTS A GALLON
20 CENTS A QUART.
AS FOLLOWS:
PUT one ounce of Absorbine in a quart bottle, fill one-quarter full with Vinegar, then fill up the bottle with Water, add a teaspoonful of Saltpetre, shake thoroughly together and you will have a good liniment for general use to reduce swelling of the Ankles, Tendons, Legs or Shoulders, Collar Galls, Bruises from interfering or accidents, Strains or Soreness of the Muscles, Ligaments, Tendons, Loins or Shoulders, or to sweat down a Big Leg or out Lameness under bandage, or to do up a Knee Horse after a work out, or to bathe the legs of a Work or Driving Horse after a severe day's work or drive, to rest the horse and prevent soreness. Use it for all kinds of troubles where a general liniment would be useful, and you will always thank me for calling your attention to this combination. A trainer with an international reputation said to me: "I could write you a book full of different cases where I have removed swellings, cured bruises and lameness with the above formula." One bottle of Absorbine will make twelve gallons of liniment. Absorbine can be obtained of your regular druggist, chemist, or dealer, or I will send you a bottle express prepaid to your nearest express office upon receipt of \$2.00, safe delivery guaranteed.
W. F. YOUNG,
P. O. F. 268 Temple St., Springfield, Mass.

DUNHAMS' PERCHERONS

Fourth importation for 1910 arrived August 4th. Our present lot, we believe, equals or surpasses any we have heretofore collected. More horses of better, size and first-class quality than ever. Numerous important prize winners. Write for catalogue.

W. S., J. B. & B. DUNHAM
Wayne, Illinois

JACKS and MULES Raise Mules and get rich. 18 Jack and Mule Farms under one management, where can be seen 300 head fine large Jacks, Jennies and Mules. 14 to 17 hands high Good ones. Stock guaranteed. Write for prices today. Address
KREKLER & MATHEWS
West Elkton, Ohio
—Branch Barns—
Clinton, Indiana.

REGISTERED PERCHERON STALLIONS for sale. 1 and 2 years old. Grays and blacks. West Michigan Fair winners. R. OVERHOLT, Dutton, Mich.

Registered Kentucky Mammoth JACKS, JENNETS and SADDLE HORSES

We are the largest breeders of Mammoth Jacks in America. Registered Tamworth and Hampshire hogs all ages. J. F. COOK & Co., Lexington, Ky.

BELGIAN HORSES. If you are wanting to buy Draft Horses write H. H. JUMP, Munith, Michigan.

ALWAYS mention the MICHIGAN FARMER when you are writing to advertisers.



THIS TELLS THE STORY

Our contract takes absolutely every particle of chance out of the matter so far as the user is concerned. This is no "say so" or "catch the unwary" sort of guarantee; it is a legal, binding, signed agreement to protect purchaser. Send for copy and absolute proof—results—truths from business men, bankers, manufacturers, breeders, and horse owners the world over.

15 YEARS' SUCCESS. On any and every case the kinds where all other methods fail, it proves to have the potential properties and power to consummate the desired result. Whether an old, new or a serious complicated case considered beyond hope, in using "Save-the-Horse" you are not frittering away time and money.

EXPERT VETERINARY ADVICE ALWAYS FREE.

The Citizens' Bank of Atchison Co., Rock Port, Mo. — I have bought several bottles of "Save-the-Horse." I used part of last bottle on bay mare, lame in hind tendon, with great results. Have had over 35 years' experience and consider it the greatest remedy I ever had.

STAYS SOUND: THAT'S THE BEST OF IT.

Brooklyn, N. Y., June 21, 1910. — Just a year ago to-day I bought of my dealer a bottle of "Save-the-Horse," which I used with great success. It cured my horse entirely of a bone spavin. He was so bad he could not be used without danger of my being arrested. Now it would take quite a little money to buy him. I cannot praise your spavin cure too highly.

Denver, Colo., June 23, 1910. — I have cured one of the worse thoroughbreds on a stallion that ever was, with your remedy, and did not use quite one bottle. It certainly does the work. Since using your medicine I am sure of its merits. — Respectfully, Geo. W. Williams, 1643 Marion St.

\$5.00 a Bottle With Signed GUARANTEE

A binding CONTRACT to protect purchaser absolutely in treating and curing any case of Bone and Bog Spavin, Thoroughpin, Ring-bone (except low), Curb, Splint, Capped Hock, Windpuff, Shoebol, Injured Tendons and all Lameness. No scar or loss of hair. Horse works as usual. Send for copy of contract, booklet on all lameness and letters on every kind of case.

At all druggists and dealers, or express paid. Froy Chemical Co. 20 Com'l ave. Binghamton, N.Y.

DR. FAIR'S NEW WORM REMEDY

is given in feed—it kills worms in two ways; by suffocation or absorption, but never hurts the horse or brood mare.

Symptoms of Worms
Nervousness, itching, rubbing tail, rough coat, hide-bound, dandruff, unthrifty condition, bloating, dusty rectum and passing worms.

60 Horse Doses Delivered By Mail **\$1.00**

New customers may have a regular 25c box for trial by sending only 4c in stamps.

DR. FAIR VETERINARY REMEDY CO.,
W. C. FAIR, V. S., Prop.,
5712-14 Carnegie Ave., Cleveland, O.

MINERAL HEAVE REMEDY

CURES HEAVES

NEGLECT Will Ruin Your Horse

Send to day for only **PERMANENT CURE**

SAFE CERTAIN.

\$3 PACKAGE will cure any case or money refunded.

\$1 PACKAGE cures ordinary cases. Postpaid on receipt of price. Agents Wanted.

Write for descriptive booklet.

Mineral Heave Remedy Co., 463 Fourth Ave., Pittsburg, Pa.

Death to the Stomach Worms Guaranteed.

We will send you 100 lbs. of DR. HOLLAND'S MEDICATED STOCK SALT on 60 days' trial, freight prepaid. If you derive no benefit, it costs you nothing; if you do it costs you \$5.00. Give us your order at once.

THE HOLLAND STOCK REMEDY COMPANY, Wellington, Ohio.

DEATH TO HEAVES

NEWTON'S Heave, Cough, Distemper and Indigestion Cure.

The first or second \$1 can cures Heaves. The third is guaranteed to cure or money refunded. \$1 per can at dealers, or express prepaid. Send for booklet.

THE NEWTON REMEDY CO., TOLEDO, OHIO.

BOWSHER

(Sold with or without elevator)

CRUSH ear corn (with or without shucks) and **GRIND** all kinds of small grain. Use Conical Shape Grinders. Different from all others.

LIGHTEST RUNNING.

(Our Circular Tells Why.)

Handy to Operate. 10 Sizes—2 to 25 h. p. One size for wind-wheel use.

Also Make Sweep Grinders; both Geared and Plain.

D. N. P. BOWSHER CO., South Bend, Ind.

FEED MILLS

MENTION THE MICHIGAN FARMER when writing to advertisers.

AMOUNT OF ENSILAGE TO FEED.

I understand that you have had considerable experience with the silo. And as I am a beginner in feeding silage and feel that feeding it without knowing what I am doing, may result disastrously, I should like to know what amount should be fed. I am feeding 250 lambs which I wish to feed silage once a day. What would be proper to start them with and what should be the limit? I have nine head of store cattle, cows and heifers coming in in the spring. I also have several horses and colts. The horses are not doing any work to speak of and I want to feed some silage and not much grain. I have cottonseed meal to feed. Should I feed the meal to the lambs? They are getting plenty of good old shelled corn and clover hay. How much of the meal should the horses and cattle get? I do not intend to fatten any of the cattle. If you can give me the required information it will be greatly appreciated.

Calhoun Co. A. E. A.
Corn silage being a bulky, succulent, carbonaceous feed, there is little or no danger of overfeeding it. It is the cheapest feed of its kind one can get, if you have plenty of it you can simply feed what your animals will eat up clean without any injurious effect.

Cottonseed meal, being rich in protein, is a most excellent feed to feed in combination with corn silage, which is rich in carbonates, thus helping to balance the ration. If your horses are at work, you can feed them with profit, 10 pounds of cottonseed meal to each horse per day. If they are not at work, I don't think it would be necessary to feed them that much. Your fattening steers you can feed as much as two pounds of cottonseed meal per day and more. Mix the meal with the ensilage. I would not feed cottonseed meal very heavily to the heifers coming fresh in the spring. You can give them a small amount, after they freshen, then you can gradually increase the feed of cottonseed meal until you are feeding them two pounds per day. It is all right to feed the cottonseed meal to the lambs in connection with their corn silage, but I would not figure on giving them more than about one-fifth of a pound per day for each lamb, and I would feed this in two feeds, night and morning, when I fed them the corn silage. Fed in this way, I think you will get very satisfactory and economical results. The two feeds will go well together.

COLON C. LILLIE.

UNINTENTIONAL ABUSE OF HORSES.

Together with the arousing of public sentiment the evolution of the horse has caused a great decrease in the old time cruelty. But this does not necessarily mean that cruelty has ceased, but what I do wish to show is that the nature of the cruelty has changed as the disposition of the horse has changed.

It is a very common thing to see a man driving a horse along the road at its highest speed, kept up by a continuous twitching of the rein, or tapping of the whip or both—when he stops, he stops the horse suddenly, and starts with a full burst of speed.

It is not so much fast driving that I wish to condemn as the manner in which it is done. When you see a horse driven as just mentioned you will notice that it lasts about two years and is then considered as "knocked out" for the roads; a new horse is bought and he, too, goes through the same grind.

It has not been the number of miles such a horse has gone, nor the number of beatings, nor starvation, but the continual "nagging" that limited his usefulness to two years.

What I mean by nagging is any process that keeps a horse continually nervous. Some people delight to keep a horse "on his nerve" or "showing his mettle," little thinking they are practicing as dire cruelty as the man who used a club on his low-bred horse.

I am not sure but that we will all agree, when we understand all the conditions, that he who used the club was the most humane. The club was used most on a thick hide, a low, nervous organization and sluggish disposition. The nagging process is used on a horse that has highly developed nerves, thin, sensitive skin and hot blood.

The club bruised a small area of flesh and irritated a few nerves that scarcely aroused the sluggish brain. Nagging throws the whole nervous system out of the normal, arouses a sensitive brain and starts the blood flowing at fever heat. Such a horse truly is on his nerve. He uses his nervous energy at a rapid rate and hence his quick decline. He ages rapidly. Rheumatism, stiffened muscles

and indigestion result from such a strain upon the nervous system.

When a horse is kept up to his highest pitch, with his nerves on a continual strain, it is nothing less than torture, and torture of the worst kind. The more spirited the horse, the greater becomes the torture.

A small spot constantly irritated on a nervous horse is often the source of more annoyance than a large running sore would be to a horse of less sensibility.

Just today my attention was called to a highly bred young coach horse that is developing an ugly temper, which I found to be caused by a sore back. The young owner had adopted the fad of driving without breeching, leaving the buggy to be stopped by the back-band. This inevitably causes irritation, and at a spot that is very sensitive.

Custom sometimes allows this form of torture to pass unnoticed, while using a horse with a wound that would be odious to the sight but far less severe to the horse, would be sufficient cause for a heavy fine.

Many people allow their horse to become obstinate and balk or have some sort of mad tantrum. This is just about as excusable in a horse as it is in a child.

I have seen parents allow their children to kick, bite and scream in a paroxysm of madness, until the child quit from pure exhaustion. No attempt would be made to stop the child and it would be excused on the plea of an "ungovernable temper," or "extremely nervous." The fault would not be the child's but the parents.

If the parents had used good sense in government, one word would have stopped the whole affair and saved the child from the suffering it endured.

The same thing is true of the horse, and there is no more reason for it to suffer with mad tantrums than the child.

When a man has his horse under his control, as he should, he can prevent all that wear and tear on his nerves and save the horse the suffering it endures.

OHIO. PROF. JESSE BEERY.

A RATION FOR THE DRIVING HORSE.

I have a horse that has been having grain and I have run short of same. She is not going to stand it very well, as I have quite a little driving to do. Would you oblige me by advising me what would be the best thing I could feed her? That is, the cheapest feed I could get for the best results?

Clare Co. E. L. M.

There is no economy in undertaking to drive or work a horse on an insufficient ration. The driving horse particularly should have a liberal allowance of the best food if he is to do his work satisfactorily and keep in a thrifty condition and it will not pay to allow him to get in an unthrifty condition since the damage to the horse's value and the extra cost of getting him back will more than over-balance any saving in maintaining it. For a driving horse there is nothing better than good, sound oats and, at the present price, oats is not a very expensive ration; however, where corn is available it is generally a cheaper base for the ration and corn and oats mixed together in equal quantities together with a little oil cake makes a very satisfactory ration. The writer has used a ration composed of 600 lbs. of corn, 200 lbs. of bran and 100 lbs. of oil cake with considerable saving over the cost of oats in recent years and with very satisfactory results. If oats are available they may be added to this in any quantity desired, as a variety of grains increases the palatability of the ration and its efficiency in maintaining the animal. The amount of feed is a matter of individual judgment but it should be sufficient to maintain the animal in flesh and spirit for the work it is called upon to do. If, however, this work is intermittent, care should be taken not to over-feed, as this is even worse for the horse that is not given much exercise than under-feeding during the winter season and is a common cause of azoturia, which is most prevalent in the winter season.

W. L. Gregston, of Chicago, says: "As I figure it, there are some 800 packing houses in the United States. A great many of these have been going slowly in their operations all this fall and early winter. They are now beginning to buy a few hogs and do a little business. They all have some trade. Some of them, besides buying hogs, have to buy special cuts, like hams, to supply their trade later on. This enormous buying power is just getting into the market, and it always makes a wonderful difference in the hog market, which eventually affects the provision market, canners.

FREE TO MILLIONS

A Valuable Little Book Sent Free For The Asking.

Medical books are not always interesting reading, especially to people enjoying good health, but as a matter of fact scarcely one person in ten is perfectly healthy, and even with such, sooner or later sickness must come.

It is also a well-established truth that nine-tenths of all diseases originate with a breaking down of the digestion, a weak stomach weakens and impoverishes the system, making it easy for disease to gain a foothold.

Nobody need fear consumption, kidney disease, liver trouble or a weak heart and nervous system as long as the digestion is good and the stomach able to assimilate plenty of wholesome food.

Stomach weakness shows itself in a score of ways and this little book describes the symptoms and causes and points the way to a cure so simple that anyone can understand and apply.

Thousands have some form of stomach trouble and do not know it. They ascribe the headaches, the languor, nervousness, insomnia, palpitation, constipation and similar symptoms to some other cause than the true one. Get your digestion on the right track and the heart trouble, lung trouble, liver disease and nervous debility will rapidly disappear.

This little book treats entirely on the cause and removal of indigestion and its accompanying annoyances.

It describes the symptoms of Acid Dyspepsia, Nervous Dyspepsia, Slow Dyspepsia, Amylaceous Dyspepsia, Catarrh of stomach and all affections of the digestive organs in plain language easily understood and the cause removed.

It gives valuable suggestions as to diet, and contains a table giving length of time required to digest various articles of food, something every person with weak digestion should know.

No price is asked, but simply send your name and address plainly written on a postal card to the F. A. Stuart Co., Marshall, Mich., requesting a little book on Stomach Diseases and it will be sent promptly by return mail.

Warranted to give satisfaction.

GOMBAULT'S CAUSTIC BALSAM

A safe, speedy and positive cure for

Curb, Splint, Sweeny, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a **HUMAN REMEDY** for Rheumatism, Sprains, Sore Throat, etc., it is invaluable.

Every bottle of Caustic Balsam sold is Warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address

THE LAWRENCE-WILLIAMS COMPANY, Cleveland, Ohio.

HARRIS STEEL CHAIN HANGING WOODLINED STANCHIONS AND SANITARY STEEL STALLS.

Send for our new catalog which shows photographs of some of the most up-to-date barns in the country. You will be convinced that we make the very best there is at the lowest price.

THE HARRIS MFG. COMPANY, 816 Cleveland Ave., Salem Ohio.

SCIENTIFIC SWEEP MILL

Double Action. Triple Geared

This No. 5 is one of our leading Feed Mills. Particularly adapted for grinding ear corn and small grain for stock feed. A medium priced mill that

Gives Satisfaction

Strong, durable and easy running. Mounted on a heavy hard-wood box. Fully guaranteed. Write for free catalog. Over 20 styles and sizes.

THE FOOS MFG. CO., Box 217 Springfield, Ohio

THE DAIRY

CONDUCTED BY COLON C. LILLIE.

THE SILO—ITS CONSTRUCTION AND LOCATION.

The past year has been a phenomenal one in the erection of silos and indications point to still greater activity along this line the coming year. This manifestation of interest in silos naturally follows a better understanding of the economy of silage in stock feeding.

But while the value of the silo is now generally understood, there are some matters in regard to its construction and location that need further emphasis. During the past year I had occasion to inspect something like forty silos and one thing I noticed particularly was the fact that small dairymen are inclined to build silos of too great a diameter. A number of farmers complained that they could not feed the silage fast enough during warm weather to keep a portion of it from spoiling. In this connection it should be remembered that owing to the contact of the air with the top of the silage, it is necessary to remove a horizontal layer of silage to a depth of not less than one and one-half inches daily to prevent any of it from spoiling in warm weather.

On an average, good pasture is available only about three months in the year so that silage can be advantageously fed nine months of the year. To remove a layer of silage one and one-half inches deep daily for nine months would require a silo 35 feet deep and this depth is recommended to those who can use only one silo. The width of the silo is determined by the amount of silage to be fed. If silage is fed at the rate of 30 lbs. per day for 270 days of the year, a herd of 15 cows will require 60.75 tons a year. Since silage settles some after it is put into the silo, it will require a silo of about 65 tons capacity to hold the above amount. This capacity is obtained in a silo 35 feet deep and 10½ feet wide. The lower five feet of the silo is preferably built into the ground.

If it were not for the necessity of removing one and one-half inches of silage daily during warm weather, I should favor a silo 30 feet deep for the following reasons: If deeper than 30 feet, too much climbing is required to get into the silo, more power is required in filling and the cost of labor in building above 30 feet is relatively great. If less than this depth, the silage will not pack so thoroughly and there is also a proportionately greater loss from spoiled silage at the top when the silo is first opened. Where the size of the herd permits the construction of two silos, there is really no occasion to have the silos more than 30 feet deep because one silo can be used for winter feeding and the other for summer.

The use of two silos has other important advantages. If the silos are built up against the barn with the edges touching, there is formed a triangular space which answers the purpose of a chute and this will also make a suitable air exist for the ventilation of the stable. The passage of the stable air through this exit will help to keep the silage from freezing.

In the matter of doors the continuous opening is preferred because of the convenience it affords. Where cement is employed in the construction the thickness of the silo wall from a point opposite the continuous door, should gradually increase toward the door so as to measure about two inches more at the edges of the opening. On the inside of the silo right at the edges of the door opening, a two by four inch stud should be placed so as to make a two-inch depression in the thickness of the silo wall after its removal from the mold. This depression or groove is necessary for the reception of the pieces of planks which constitute the door. To bind the two edges of the silo at the continuous door, iron rods, about three-quarters of an inch in thickness, must be placed at intervals of two feet and the ends firmly embedded in the silo wall. The pieces of planks are placed in the door opening as the filling of the silo progresses and should be covered on the inside with good acid and water-proof paper to make the door air-tight.

A matter of no small importance is the proper location of the silo. For convenience of feeding, the silo should be as near the manger as possible. And to protect the silage from frost, the silo should be so located as to shield it from the cold winds of the north and west. If located on the east side of the barn it should have a position near the north end

so as to exclude the least amount of sunlight from the barn.

Wisconsin. JOHN MICHELS.

CAUSES OF ABORTION.

Abortion may be brought about in many ways. The principal causes probably are injuries to the mother from fighting, falling, kicks from other animals, drinking excessively of very cold water, exposure to severe or sudden changes in the weather, and the eating of spoiled, frozen or moldy foods, especially wheat or rye, which contain ergot or smut. Improper hygienic surroundings also contribute, especially in stabling, breeding too young, inbreeding, and severe constitutional diseases. The death of the foetus itself is at times responsible.

When any of the accidental or explainable causes cannot be assigned to the case, contagious abortion is always to be suspected, for it is common and easily spread from one animal to another. The failure of many mares and cows to breed may often be attributed to this trouble. The diseased animals are often able to infect those with which they associate, so it is readily seen that the immediate loss of the young animal is not the only loss sustained by a herd in which this disease may get a foothold. It frequently results in many months of sterility or possible loss of increase completely, as well as infection of new herds or animals replacing the old herd.

There can be no doubt of the fact that the disease is of germ origin, or infectious, as we more properly say. The fact that it spreads rapidly from one animal to another, and that, experimentally, it can be produced by the introduction of the discharge of an affected animal into the vagina of a pregnant animal, both conclusively prove this point.

The germs of the disease are found in the vagina and uterus of affected animals and are passed out with the discharge from these organs, therefore the membranes and discharges from a case of abortion should always be buried, burned or thoroughly covered with strong and efficient disinfectant.

This is one disease where it is obvious that prevention is worth vastly more than an attempt to cure, mainly because the trouble is as a rule not suspected to be present till it has occurred, therefore treatment is directed to those animals supposed or known to be affected, and the known exposed ones, applying those sanitary measures necessary to check its spread.

THE ORIGINAL PACKAGE SCHEME.

The proposition advanced by the oleomargarine people to regulate the sale of their product by requiring that it be sold only in small original packages under a revenue stamp is fooling a good many people who really want to see the consumer protected. They think this will afford protection and that it is not necessary to draw the color line.

Space forbids a detailed explanation as to the inadequacy of such regulation, but the following points should be kept in mind:

First, it would not affect the sale of oleomargarine in hotels, restaurants and boarding houses where millions of our people eat butter. It is argued that the state laws should regulate this trade. If the state food laws are adequate why was it necessary to enact a federal pure food law?

Second, and one of still greater importance, the internal revenue department is a tax collecting department and can not be made a police department in enforcing laws against fraud except when the fraud is committed against the government by avoiding the payment of the specified tax. This department cannot become interested in the question of fraud when oleomargarine is sold to the consumer as butter. The internal revenue department is but a branch of the treasury department of the government and is in no sense a police department except in collecting revenues for the United States treasury.

In case a uniform tax of two cents per pound were imposed upon all kinds of oleomargarine the commissioner of internal revenue would only be interested in seeing that every pound of oleomargarine made was taxed at that rate and the tax paid to the government. It is argued that a heavy penalty for selling the stuff from any other package would prevent the irresponsible dealer or peddler removing the stamp and selling it as butter. But of what benefit is a heavy penalty if there is no machinery by which violators are to be convicted?

Third, if the law cannot prevent the

hotel man from removing the stamp and selling the product to his patrons as butter, how can it prevent the peddler who goes from house to house, from doing the same thing?

Fourth, a majority of our state law-making bodies and those of foreign countries undertake to prevent fraud in the sale of oleomargarine by drawing the color line. When the states fail it is because the administrative departments are not powerful enough to enforce the law vigorously and because the federal law is not similar.

The original package scheme is impractical so long as oleomargarine is made to look like butter. E. K. SLATER.

A PROFITABLE ANIMAL.

Information has been forwarded to this office of the record of Polly, a St. Lambert Jersey cow owned by Ed. Thompson, for the year ending in November. During the twelve months, according to the creamery record, this cow gave 8,663 lbs. of milk which gave an average test of 5.9 per cent of butter-fat or 511.2 lbs. The average price for the butter-fat was 30.11 cents per pound, which gave a gross income of \$153.96. Tributary to the same creamery are 1,100 cows producing 165,000 pounds of butter-fat a year. It would take but 323 cows of the quality of Polly to bring in this same result.

GOAT MILK DESIRABLE.

The nation's capital is in the midst of a crusade for clean milk and the authorities having made a clean-up of tuberculosis cows are endeavoring to impress upon the people the truth of the arguments produced by the Department of Agriculture that the goat is the poor man's cow and that it should be more widely cultivated, for it is not a victim of tuberculosis and for that reason it furnishes good liquid diet for the baby.

Several years ago the Agricultural Department in furtherance of its scheme to introduce goat raising in this country, imported Maltese goats from Malta where, it is said, goats produce more milk per animal than in any other country. But they all subsequently died of Malta fever. Next the Department tried to import a herd from Switzerland, but about that time there was an especially virulent outbreak of foot-and-mouth disease in the goat latitude, and as this country had recently after a brief experience with the same ailment spent \$300,000 in stamping it out, the goat experiment was then abandoned.

Now the government experiment station at Bethesda, Maryland, is trying a new scheme. It has secured a lot of goats from Alabama, guaranteed to be acclimated and free from foot-and-mouth disease and Malta fever. The management claims it will be able to raise milking goats that will be pure and undefiled. They may not give as much milk in the first few generations as do the foreign goats, but they will have other advantages. G. E. M.

THE HOPE OF MANY FARMING SECTIONS.

While there are a few farmers who have made a success of farming without feeding stock, there are multitudes who have failed and then brought their land back to fertility through the method of feeding crops to animals and then selling the animal products.

Dairying has been the most important branch of the live stock industry in this regard. Two main reasons have made it so: The districts where farming first failed could not compete with the ranges in preparing good meat animals for market and therefore would fat a steer or sheep at a close margin or loss, while the ranges were too far away from the good markets and were too sparsely settled to conduct the dairy business on a large plan. Consequently in those sections where the land was first brought under the plow we find the dairy business developed to its highest level and with the increase of herds there is a corresponding increase in the fertility of the farms.

Fancy Cheese in America.—This volume by Chas. A. Publow, A. M. B. D. C. M., Assistant Professor of dairy industry in the New York state college of agriculture of Cornell University, gives specific directions for the manufacture of over forty different fancy cheeses, of which a million or more dollars worth are imported from Europe every year. The book contains 100 pages, is bound in cloth, illustrated and can be had through the Michigan Farmer office for 75 cents per copy. Published by the American Sheep Breeder Company.

Think—Mr. Farmer THINK! Sharples Tubular Cream Separators

A Free Trial In Your Home Costs You Absolutely Nothing

Think of what it means to you when you can have a Sharples Tubular Cream Separator, the "World's Best," delivered by our representative at your home town; demonstrated in your own home; left with you for free trial without its costing you one cent for freight, in fact, without any investment whatever.

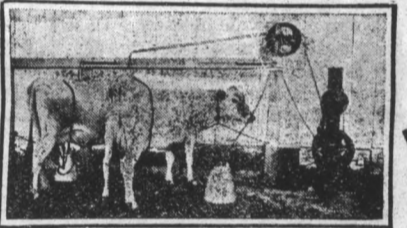
Think hard and tell yourself if there is any reason why you should send your money to a "mail order" house, or pay freight on an inferior cream separator. Write for 1911 catalogue No. 152



THE SHARPLES SEPARATOR CO.
WEST CHESTER, PA.
Chicago, Ill., San Francisco, Cal., Portland, Ore.
Toronto, Can., Winnipeg, Can.

No Motors to Adjust on the Hinman Milker

No complicated small parts to give constant trouble and annoyance—the Hinman has but 2 mov-



ing parts. Each cow's milk is separate. Vacuum pumps are reversible. Not one feature makes the Hinman superior, it is all right from principle to execution. Progressive farmers and dairymen prove to us and to you by their orders and opinions that the Hinman is the machine for you to buy.

HINMAN MILKING MACHINE CO.
39 SENECA STREET, ONEIDA, N. Y.

Whether or not you start with one Sooner or Later you will buy a DE LAVAL

The more you come to know about cream separators the better you will understand the overwhelming superiority of the DE LAVAL.

THE DE LAVAL SEPARATOR CO.
165-167 BROADWAY, NEW YORK. 42 E. MADISON ST. CHICAGO.

Owl Brand Cotton Seed Meal

41 Percent Protein Guaranteed Standard for 35 Years. Corn can't replace cottonseed meal. Animals need Protein. Feed a balanced ration. Write for our booklet "Science of Feeding."

F. W. BRODE & CO., Memphis, Tennessee—Established 1875

FARMERS who will need a TANK HEATER should see the NELSON. No heat wasted, all under water. Two weeks free trial. Send for catalogue No. 20, and price.

NELSON MFG CO., Deerfield, Wis.

FREE CHURN To introduce the Challenge Churn 1 to 10 gal. capacity. Makes good butter from milk or cream, easy in from 1 to 5 minutes. Write today sure, get one FREE.

MASON MFG. CO., Dept. J, CANTON, OHIO.

CALVES RAISE THEM WITHOUT MILK, BOOKLET FREE

J. E. BARTLETT, Co., Jackson, Mich.

POULTRY AND BEES

GEESE FOR PROFIT.

There are no fowls that respond to treatment or furnish better returns than geese. They will mature just as rapidly away from streams as near them. A generous supply of drinking water is all that is required. There are many places on the average farm that are worth little for cultivation but could be used with excellent results for raising geese. The cost of food is small in comparison with the cost of that used for other fowls bred for market. A goose on range gathers the larger portion of its food, consisting of grasses and insects and other animal and vegetable matter to be found in the fields and brooks.

The goose occupies the same place among poultry that sheep do among farm animals, and, if cared for, will prove just as profitable in proportion. It is just as necessary to pluck the feathers from the goose as it is to shear the wool from the sheep, and the product has a great demand. Feathers may be picked four times a year, during the summer, and each fowl will yield about two pounds of feathers in a season, which are worth, in the market, about \$1.50.

The Toulouse breed is one of the largest and, in my opinion, the most profitable and probably the best known of geese. They are more easily kept without a pond of water than the Embden or other breeds, and with proper care can be made to weigh more. The young are easily raised and when let run with the old fowls they need very little care. Toulouse geese mature very rapidly, attain an enormous size and, when fattened bring a high price in the market. The male and female look so nearly alike that it is quite difficult to tell them apart. They are very stately in appearance and among the most beautiful of water fowls. They live to be very old; some breeders report them living and doing well at 30 years of age. They, also, are not subject to the diseases common among other poultry and are very robust and hardy. They rarely need shelter and will stand out in snow and ice during zero weather with apparent pleasure. They do well in cold climates, as well as in the south, and will pay a profit on a farm too poor to otherwise pay the taxes.

Ohio. P. R. P.

LIFE IN THE HIVE.

Honey bees form a brilliant illustration of the blessings bestowed by labor. It is their ability and willingness to work which make them an example to everyone. The young bee, as she issues from her cell, is a baby-like creature; but in a few days she is at the height of her strength and usefulness. She stays at home, as a rule, for about two weeks, and helps to do the housework of the hive, removing dead bees and foreign matter, attending the queen and feeding her, secreting wax building comb, caring for the larvae and ventilating the hive. When first hatched the bee appears to have no desire to collect honey; she must serve her apprenticeship in the hive before the desire awakens to go forth to the honey fields. When older she either joins the field force and collects honey, or is detailed to do sentinel duty at the entrance of the hive, for bees have a habit of placing a guard at the entrance of the hive to prevent intrusion from other colonies. Worker bees never sting a queen. When they desire to dispense with a royal personage they politely, but fatally, cluster about her so closely that she is smothered to death.

When a swarm is put into a new hive their first care is to build comb. When leaving their old home each bee fills her honey sack so as to be provided for the journey. Nature demands several days' rest for a queen after the issue of a swarm, and she gets what nature calls for while the bees are building new comb. The habits of the workers account for the cleanliness in the hive and for the exquisite purity of the honey comb. The wonderful regularity of the comb is a beautiful tribute to the skill of the tiny worker, while its slight irregularities show it to be the work of intelligence rather than of an unreasoning machine.

The nectar, when first brought in, is mostly retained in the honey sacks for ripening, being unloaded very unripe only when the supply is so great they can not hold it all. From the time in the morning that enough nectar is brought in to load

the sacks of the inside workers, throughout the rest of the day, the bees are carrying around their loads of nectar. If it comes in too fast for them they stick it in wherever there is an empty cell, often putting small drops here and there about the combs where there is a little cup or cavity that will hold a drop, later gathering it up and storing it regularly where wanted. At the close of the day they are at the entrance fanning air into the hive to evaporate the moisture that the nectar contains when gathered. When the cells are finished and nearly filled with honey they are allowed to remain open a few days, that the extra water may evaporate and the honey be properly cured. They are then sealed or capped over with wax, and the work is done.

The drone spends his time in gluttony and idleness. He works not at all, neither at home nor abroad. From no fault of his own, he has a very short tongue, too short to gather honey from the flowers. The drone flies out only when the sun is high and the weather warm; he does not go out in search of honey, never goes into a blossom, but roams about for pleasure and always comes home to eat. He appears just before the swarming season, as a rule, and there may be hundreds or even thousands reared in one hive. Each queen mates but once, and, consequently, only one drone would be really essential to every swarm. As the season advances, and the drones are no longer needed, they are driven from the hive and slaughtered. If they were equipped with a sting they might retort, but such is not the case, and they are obliged to submit to the feminine rule. Bee life is, in the strictest sense, communal, and the death of the drones is necessary to the welfare of the hive.

F. G. H.

CEMENT FLOOR IN ROOST ROOM.

Is a cement floor a good thing in the roosting part of a chicken house? If not, how can the mistake be cheaply remedied?

Calhoun Co. H. S.
In our opinion a cement floor in any part of a henhouse is a needless expense. However, it is preferred by some and where it is kept heavily covered with litter so that it will not be too cold there are no objections to it aside from its first cost. Of course, such a floor is a little easier cleaned than any other and it will last for all time. It is sometimes put in because of the fear that any other kind of floor would prove damp owing to the peculiar location of the house, but experience has demonstrated that the same precautions as regards drainage must be taken in building a cement floored house as in any other. If the house stands on level or low ground the surface outside should be graded until it will readily carry surface water away from the building. Then the floor should be filled in with dry earth or gravel until it is even, or a little above, the graded surface outside. Then if it is preferred to lay a cement floor on top of this it will be free from dampness and prove quite satisfactory, but a good heavy coat of gravel will make it just as satisfactory, even more so to the fowls.

There is no very strong objection to the cement floor in your roost room unless it is so low that it collects moisture and is constantly damp. In that case it would be well to keep it well covered with a good absorbent like dry straw or land plaster. If there is no droppings platform beneath the roosts it will be best to use some such absorbent anyway to catch and hold the droppings. It will greatly facilitate the cleaning of the floor and the handling of the manure and, if the cleaning is done frequently and liberal quantities of good dry absorbent applied each time, it is likely that no ill effects will come from having the fowls occupy this roost room at night.

Now is the time April and May pullets should be making some returns for the labor and feed bestowed upon them during the growing months. Pullets hatched in April and May, and even later pullets of the more precocious breeds, should now be laying if they have been properly handled up to date. Early pullets will sometimes moult after laying a few eggs in early fall, but this should not stop egg production for any length of time; in fact, some of them will oftentimes lay through moult, if heavily fed and make the very best winter layers.

LAST CALL! December 31 is the last day at which the Michigan Farmer can be had at present prices—mail your orders to-day. Orders mailed January 1 and after will be charged \$1 per year. Now it is 75 cents; 3 years \$1.50; 5 years \$2.

Get the Full Value of Your Fence Investment



ELLWOOD FENCE

HOW? Use good corner and end posts, well braced. Then stretch the fence—stretch it till it sings. Ellwood fence will stand any stretching. You cannot break it.

Erect your fence in this way and it will last twice as long. Any fence dealer can supply the tools. *It costs no more to erect a fence properly.* It requires no greater effort if you expend a little thought to get the knack of doing it. Our dealer nearest you will give you a booklet explaining how to erect a fence—how to make the work easy and right.

The steel in Ellwood fence is specially made for the purpose from carefully selected stock. It is hard, elastic, tough and springy. The line wires, composed of two

or more wires twisted into cables, give each individual wire the shape of an elongated coiled spring. The fence is therefore sufficiently elastic to take care of expansion and contraction, and yet so rigid when properly stretched as to prevent sagging. The small and permanent mesh is made by weaving one continuous wire throughout the fabric. The mesh or stay wires are so interwoven that slipping is impossible. The triangular truss is the strongest form of construction known. For this reason, Ellwood fence will stand the hardest usage and still retain its shape.

Ellwood Fence is sold in your town. Look for the Ellwood dealer and let him show you his different styles of fence and quote you his low prices. Get his expert advice on your special needs. He is on the spot, buys in large quantities, gets the lowest carload freight rates, demonstrates quality before your eyes and is the man from whom you will get the most for your money.

FRANK BAACKES, Vice President and General Sales Agent
American Steel & Wire Company
Chicago New York Denver San Francisco

Send for copy of "Ellwood Fence News," profusely illustrated, devoted to the interests of farmers and showing how fence may be employed to enhance the earning power of a farm. Furnished free upon application.

48 Million Shortage

Government statistics show there were 48,000,000 bushels less of potatoes grown in the United States last year than in 1909. This with increasing population must necessarily make a larger demand for potatoes in 1911. No crop as a

Money Maker
squalis it, and the information showing how to grow for profit will be mailed absolutely free to any one asking for it. Our president has devoted over fifty years to the study of potato culture and the manufacture of machinery for handling the crop in all stages.
ASPINWALL MANUFACTURING CO.
439 Sabin Street, Jackson, Michigan, U. S. A.
World's Oldest and Largest Makers of Potato Machinery.

EASIEST RUNNING MILL MADE

A Duplex Mill requires 25% less power and will do twice as much work as any other mill of equal size. Grinds ear corn, shelled corn, oats, wheat, kafir corn, cotton seed, corn in shucks, sheaf oats or any kind of grain. There is no mill made that for speed and complete grinding equals the

Kelly Duplex Grinding Mill
Easily operated. Never chokes. 7 sizes. Fully guaranteed. Any power. Especially adapted for gasoline engines.
Duplex Mill & Mfg. Co., Box 217 Springfield, Ohio

\$7.55 Buys Best 140-Egg Incubator
Double cases all over; best copper tank; nursery, self-regulating. Best 140-chick hot-water Brooder, \$4.85.
Both ordered together, \$11.50. Freight prepaid (E. of Rockies). No machines at any price are better. Satisfaction guaranteed. Write for book today or send price now and save waiting.
Belle City Incubator Co., Box 14 Racine, Wis.

More Money made with a STAR Grinder than any other Implement on your Farm.
No toll to pay—no trips to mill. Fresh feed for your stock—more beef, pork, milk, healthier stock. This means more money. Our 35 years' experience at your service free with helpful booklet. Write to-day for prices and terms.
THE STAR MANUFACTURING CO.
11 Depot St., New Lexington, O.

White Wyandotte COCKERELS from heavy layers, \$3, \$4 and \$5 each.
A. FRANKLIN SMITH, Ann Arbor, Mich.

Please mention the Michigan Farmer when you are writing to advertisers.

Quality Higher—Price Lower

We beat them all again. Got our DIRECT-TO-YOU proposition, low prices, and BIG FREE BOOK on **SUCCESSFUL** Incubators and Brooders before you buy anywhere this year—the greatest value ever offered. Catalog FREE—send name. If you want a book on "Proper Care of Chicks, Ducks, Turkeys"—send 10 cents.
Des Moines Incubator Co., 364 Second St., Des Moines, Ia.

Hatch After Hatch

Write today for our Big FREE Book about the World's Greatest Guaranteed Continuous Hatchers **CYPHERS** Incubators and Brooders. Get your share of billion dollars poultry money in 1911. Guide Book free—write for it today.
Cyphers Incubator Co., Dept. 35 Buffalo, N. Y., New York City, Chicago, Ill., Boston, Mass., Kansas City, Mo., Oakland, Cal.

FOR SALE—Mammoth Bronze Turkeys and Barred Rock Cockerels. Mrs. THOS. WYCKOFF, Orchard Lake, Michigan.

GEESE Mammoth Toulouse and White, all choice prize bred stock. A square deal, prices right. Write your wants. P. B. FOUNTS, B. Z. Bueyrus, Ohio.

COCKERELS FOR SALE—Light Brahma White Wyandotte & B. P. Rocks, good ones, also pullets. E. D. BISHOP, Route 38, Lake Odessa, Michigan.

BUFF PLY. ROCK and S. C. Buff Leghorn Cockerels. Exceptionally good stock at farmers' prices. Eggs in season. F. J. H. BURCH, Blaine, Michigan.

Big Business Barred Rocks
J. E. TAYLOR, Belding, Michigan.

SILVER, GOLDEN and WHITE WYANDOTTES 100 White cockerels at \$2 and \$3 each. New circuit after January 15th. C. W. BROWNING, Portland, Mich.

THOROUGHBRED S. C. BROWN LEGHORNS. A few nice cockerels left at \$1 each. LEWIS T. OPPENLANDER, R. No. 4, Lansing, Mich., successor to Fred Mott.

BARRED PLYMOUTH ROCK—Hurry! Hurry! Write quick if you want your pick out of a bunch of Cockerels the large type, narrow barring, bred right sired by first Cockerel at Grand Rapids Poultry Show. A. J. GORDEN, Dorr, R. No. 2, Michigan.

Barred Rock Ckls.—Vigorous, farm raised, and bred from prize winners, \$3 each two for \$5. J. A. BARNUM, Union City, Mich.

WE will have a few ckls. to sell from Barred and White Rocks, Buff and White Orpingtons, Black Minorcas and White Leghorns. Write for prices. H. H. KING, WILLIS, MICHIGAN.

White Wyandotte COCKERELS from heavy layers, \$3, \$4 and \$5 each.
A. FRANKLIN SMITH, Ann Arbor, Mich.

DOGS.

YOU WRITE W. J. ROSS, Rochester, Michigan, for those beautiful sable and white Collie Puppies, of the finest breeding, and from stock workers.

TRAINED foxhounds and hound pups for hunting fox and coon. Also collies. Inclusive 2-cent stamp. W. E. LECKY, Holmesville, Ohio.

HORTICULTURE

MICHIGAN STATE HORTICULTURAL SOCIETY REPORT.

(Continued from last week.)

On Wednesday morning nine senior horticultural students from the Agricultural College gave competitive five-minute talks on various horticultural topics for prizes of \$15, \$10 and \$5, given by the Horticultural Society. These talks were excellent but we can not take the space to report them here. Five judges were selected from the audience, and the winners were placed as follows: L. B. Scott, first; B. W. Keith, second; J. G. France, and Mr. Teno a tie for third.

The business meeting of the society followed, Treasurer Satterlee reporting that there were enough funds on hand to liquidate the balance of the notes given. On November 10, 1910, there was a balance of \$1,297.10 cash on hand, and the total assets of the Lyon fund were \$8,418.14. The report was referred to the finance committee.

The report of Treasurer Satterlee of the State Horticultural Society followed, showing a balance of \$784.20 on Dec. 6, 1909, and \$348.31 on hand Dec. 6, 1910. 554 annual members and 32 life members had been added during the year.

The report of Secretary Bassett showed that there were 1,050 members of auxiliary societies, and 311 life members and nearly 600 annual members of the State Society, making nearly 2,000 in all.

This is the third year of co-operative buying of the society, and the secretary reported that although some obstacles had been encountered they were being met, and as a whole the plan was very satisfactory. It was estimated that \$13,000 was saved on last year's business. The contract price now sets the price for the state and has caused a constant lowering which has saved thousands of dollars to non-members.

Secretary Bassett plans to issue a bulletin monthly giving prices, crop reports, and contributions and cuts sent by members, and members are urged to assist in this work to the benefit of all.

In pursuance of notice given last year it was voted to increase the annual membership fee from 50 cents to \$1.00, and notice was given that a vote would be called on increasing the life membership from \$5.00 to \$10.00 next year.

The following officers were elected: President, T. A. Farrand, Eaton Co.; secretary, C. E. Bassett, Allegan Co.; treasurer, Jas. Satterlee, Ingham Co.; members of executive board, O. S. Bristol, Lapeer Co., J. P. Munson, Kent Co., Chas. Pratt, Berrien Co., (to fill vacancy).

A Sulphur Series of Spray Mixtures.

After the business meeting Prof. Waite, of Washington, D. C., gave a talk on lime-sulphur sprays. Bordeaux mixture, which was introduced about 20 years ago had become the standard and nearly the only fungicide used until the recent advent, or rather recall, of lime-sulphur and now we are beginning all over again. There are three grades of sulphur on the market. 1. The flours of sulphur, which is much used for grape mildew, rust, etc. 2. Flour of sulphur, which is of different degrees of fineness, varying from 175 to 250 lbs. to the ordinary barrel. The heavy grades were formerly used in making lime-sulphur until it was found that No. 3 commercial ground sulphur was nearly as good, and cheaper. The sulphur needs something to combine with it and lock the sulphur into a nearly insoluble compound that will give up its sulphur slowly after it is on the tree. Lime has been found to be the best carrier for the sulphur as well as for the copper. Soda compounds are too soluble.

Prof. Waite made samples of each of the three classes of lime-sulphur in use. 1. Mild self-boiled. This was made by putting lime in a pail and pouring cold water over it, adding the sulphur in the form of a paste after the slaking was over. This wash is thick and not clear and is used on the peach as it is very mild and will not injure the foliage. 2. Strong self-boiled. This was made similar to the other except that the lime was slaked with hot water and the sulphur added sooner, so there was more boiling and the wash was more clear, more of the sulphur being in solution. 3. Boiled with artificial heat. This can be made as used or can be made so as to keep in stock. This spray is used as a winter wash, or more dilute as a summer spray

for apples and pears. Arsenate of lead can be used in combination with lime-sulphur but Paris green or arsenate of lime can be used only with difficulty. There is little decomposition when arsenate of lead is added to the lime-sulphur, but it is not serious; however, it is best to add the lead just before applying.

Two years ago the department began a series of experiments to determine if possible a good fungicide that would not cause the russetting attributed to Bordeaux mixture. These experiments have now progressed far enough so that results can be stated definitely. The varieties in the experiment of which samples were shown were Ben Davis, York Imperial, and Newtown Pippin. Arsenate of lead was used as an insecticide.

1. Sprayed with strong self-boiled lime-sulphur. Fruit was clean and had good finish.

2. Sprayed with boiled lime-sulphur solution. Fruit was free from russetting and of good finish.

3. Sprayed with iron sulphide. No russetting noticeable, but finish not as good, and Pippins were greener and later in season.

4. Bordeaux and sulphur mixture. This fruit showed a slight russetting and the finish was not as clean and bright.

5. Bordeaux mixture. Samples all showed some injury of a russet or corky nature, the Ben Davis most and York Imperial least.

These tests have been duplicated at several stations and by several growers and all report very similar results. The conclusion is that lime-sulphur is the best fungicide for apples and pears.

Prof. Waite continued his talk in the afternoon, taking up the spraying of the peach. Prof. Scott had explained this experiment at last year's meeting so he did not go into details, but stated that the conclusions reached last year and verified this year were that arsenate of lead and self-boiled lime-sulphur is the best combination treatment for curculio, brown rot, scab, and spot. The treatment is as follows:

1. Just as shuck falls from young fruit, or about 10 days after petals fall. This is the most important single treatment.

2. Three to four weeks later when the peaches are about three-fourths of an inch long. This is the first spraying for black spot also, and arsenate of lead is used as before for the curculio as the rot often gains entrance at these punctures.

3. One to two months before ripening, giving one or two sprays according to virulence of the disease and weather conditions. The cooked lime-sulphur can not be recommended for this.

For apple spraying the self-boiled lime-sulphur and the Bordeaux need not be considered. The lime-sulphur solution, either home-made or commercial, is preferable. For home-made use 4 lbs. sulphur to 50 gals. water, and 1 to 1½ gals. commercial to 50 gals. for summer spray. Standard commercial solution should contain about 2.6 lbs. sulphur to the gallon, and costs about twice what the ingredients for the home-made would cost, labor not counted. Pears will take the same spray.

There was some russetting in some cases with the lime-sulphur spray, some of which was thought to be due to spraying when the trees were too wet. There have also been cases of reddish spots, thought to be due to the action of the sun on the sulphur. There was also some injury on rainy seasons to the tips of the leaves but the injury was done at once and had the balance of the season to heal, while Bordeaux injury is cumulative. Lime-sulphur has not yet proved a satisfactory spray for grapes.

Prof. Waite thinks that kettle-cooking is as satisfactory as steam cooking, or more so. One or more jacketed kettles may be used. If the solution is to be kept as a stock solution use twice as much sulphur as lime, and when through cooking dilute so a gallon will contain a given amount of sulphur, say 1 lb. or 2 lbs. Bulletins Nos. 54 and 58 on the apple, and 27 and 120 on the peach, will give the experiments in full. These will be published soon.

The discussion brought out the opinion of Prof. Waite that summer spraying with lime-sulphur would not do away with the necessity of winter spraying for scale, but would assist in its control, likewise the aphids.

Prof. Waite also stated that he believed the russetting may be done even before the blossom falls and that weather conditions have their effect on it. He prefers spring spraying for scale where possible.

The apple spray can be used on European plums, but is rather strong for Japanese varieties, where the peach spray is better. The value of winter spraying with lime-sulphur in retarding growth in the spring was regarded as very small. Powdered arsenate of lead was considered of about the same value as the paste, possibly a little easier to mix. Mr. Rose believed there would be less russetting if apples were sprayed only on dry, warm days.

Cherries and Peaches for Profit.

Mr. Paul Rose, of Benzie Co., who is called the "Cherry King," and is one of the largest growers of peaches in the state, handled this subject from the standpoint of personal experience. His location was chosen because the soil was quite new land, fairly cheap, location high, air drainage good, and lake protection excellent. Mr. Rose now sets his cherry trees 25 to 40 feet apart, according to variety, and gives them all the land from the start. He doesn't believe in crowding the trees or in growing 25 cent potatoes on good cherry land. Among the varieties he has found satisfactory are Early Purple, Rockfort Bigarreau, Black Tartarean, Napoleon, and Smith Bigarreau, the latter being the largest cherry grown. He has grown them 13-16 inches in diameter, only 1-16 inch less than the record cherry of the west. It is a late, black cherry. Gov. Wood and Yellow Spanish are not favored. Lambert and Bing are considered good.

His sweet cherries are packed by girls in ten pound California boxes, they having been picked with stems on, not clipped. These boxes are about 7¼ x 20 inches and hold three and four layers according to size of fruit. They are packed from 8 to 12 rows in a box, those too small for 12 rows going into the 16-quart crate. Stems are placed upward in packing so as not to show on face side, and cherries checked from weather conditions are thrown out. Cherries are marketed in Chicago, Cincinnati, Detroit, and other cities, and have brought 25 cents per box more than western cherries in Chicago.

Of the sour cherries, Montmorency is best. Early Richmond is good but is a little soft and light in color. English Morello is a good dark late cherry, but the tree is a little weak. Louis Philippe is another good variety.

Mr. Rose has no scale in his locality, and sprays but once when the cherry is about half grown. No plowing is done in the orchards but much harrowing, and disking, if necessary. In July a cover crop of oats, barley, or peas is sown, but nothing that will grow in the spring. Considerable quantities of stable manure and commercial fertilizer are used.

Sour cherries are sorted, packed in 16-quart crates and generally faced, and sell from \$1.50 to 1.75 per case, f. o. b. Frankfort. Ten-pound boxes of sweets bring from \$1.50 to \$2.00. One tree of sour cherries picked 550 pounds, worth four cents, and a Smith Bigarreau (sweet) 500 pounds, or 50 boxes. Mr. Rose figures that it costs \$500 to grow \$1,000 worth of cherries.

The only peach Mr. Rose is now planting are the Elbertas. They are set 25 to 30 feet apart, trained low, and cultivated and fertilized the same as cherries, except that more fertilizer is used and it is applied later. The manure is hauled upon the hills in fall, both for root protection and fertilizer. Thinning is done by pruning as much as possible. 1,000 pounds of 4:3:5 fertilizer was used to the acre, and stable manure in addition on the hills. A five-year orchard picked 4.5 bushels to the tree this year. The fruit is packed in the 6-basket Georgia carrier, and the selling price averaged about \$2.00 per carrier, or \$3.00 per bushel in Chicago and Cincinnati this year. Gold Mine gave good results, Crawford was small and inferior, New Prolific has a tender skin, is uneven in size, and has too long a season of ripening.

In the discussion which followed, Mr. Rose stated that he had lost a few peach trees, and had some 31 years old. Has no scale or yellows. Mounds peach trees 18 inches to keep out borers and is little troubled with them. Advises purchasing sweet cherry trees in fall and heeling in over winter.

Peach Diseases and Replanting.

Prof. Waite, of Washington, D. C., took up his topic from the standpoint of one who has visited the peach regions of Michigan every year except the last one, for 20 years, and has carried on a number of experiments looking to the control of peach yellows and other diseases. His study of the subjects leads him to believe

Please mention the Michigan Farmer when writing to advertisers.

COMMON SENSE AND PLAIN DEALING.

Ralph Waldo Emerson once said: "Nothing astonishes men so much as common sense and plain dealing." The more we think about this statement, the more we are convinced that Emerson was right. Common sense enables us to choose wisely, to make correct deductions, to avoid snares and pitfalls, and plain dealing gives us the power to do the right thing by our fellow men and to avoid misleading statements. The American Seeding-Machine Co., Incorporated, Springfield, Ohio, makers of the Buckeye Grain Drill, have evidently kept this saying of Emerson constantly in mind, for their warranty on the Buckeye is so plain that it would not mislead a child, and the common sense displayed in the design and manufacture of this world-famous grain drill has made it astonishingly simple, accurate, reliable and wear resisting. Write to the manufacturers for a Buckeye catalogue, read it carefully, and then drop in at your nearest implement dealer and see what an exceptional drill the Buckeye is. The feed is of the double type—that is, two feeds in one—a force feed having great range as to quantities, and which will accurately measure and sow all grains and grass seeds, peas, beans, rice, beets, etc. The combined Buckeye Grain and Fertilizer Drill will sow all commercial fertilizers and is the only drill in the world that has an absolutely non-corroding glass fertilizer feed. The many good features will surely interest the careful farmer and we know our readers will be pleased to learn more about it by sending for a Buckeye catalogue.

SPLENDID CROPS

in Saskatchewan (Western Canada)



800 Bushels From 20 Acres of wheat was the thrasher's return from a Lloydminster farm in the season of 1910. Many fields in that as well as other districts yielded from 25 to 35 bushels of wheat to the acre. Other grains in proportion.

Large Profits

are thus derived from the FREE HOMESTEAD

LANDS of Western Canada.

This excellent showing causes prices to advance. Land values should double in two years' time.

Grain growing, mixed farming, cattle raising and dairying are all profitable. Free Homesteads of 160 acres are to be had in the very best districts; 160-acre pre-emptions at \$3.00 per acre within certain areas.

Schools and churches in every settlement, climate unexcelled, soil the richest; wood, water and building material plentiful.

For low settlers' railway rates and illustrated pamphlet, "Last Best West," and other information, write to Sup't of Immig., Ottawa, Can., or Can. Gov't Agt. (52)

M. V. McInnes

176 Jefferson Ave., Detroit, Mich.

C. A. Laurier, Marquette, Mich.

SAWS

ANY WOOD IN ANY POSITION ON ANY GROUND 4 in to 5 ft. Through 2 MEN with 2

1 Man Sawing Machine Beats 2 Cross-cut Saws 5 to 6 cords daily is the usual average for one man.



OUR 1911 Model Machine saws faster, runs easier and will last longer than ever. Adjusted in a minute to suit a 12-year-old boy or strongest man. Ask for catalog No. M24 and low price. First order gets agency.

Folding Sawing Mach. Co., 158 E. Harrison St., Chicago, Ill.

Peach Trees

fine, stocky, hardy grown on the bank of Lake Erie. Free from borers and other diseases. All kinds of Fruit Trees in large supply. Headquarters for Ornamentals, 50 acres in Hardy Roses, none better grown. The Best Flower and Vegetable Seeds, 44 greenhouses of Everblooming Roses, Palms, Ferns, Ficus, Geraniums, and other things too numerous to mention.

Mail size postpaid, safe arrival and satisfaction guaranteed. Immense stock of SUPERB CANNAS, the queen of bedding plants. Acres of Peonias and other Perennials. No. 1 Catalog, 112 pages, for Fruits and Ornamentals; No. 2, 168 pages, for Seeds and Plants. Both FREE. Direct deal will insure you the best at first cost. Try it. 57 years. 1,200 acres. (18)

The Storrs & Harrison Co., Box 134, Painesville, O.

The Winters Farm Pedigree Oats

The best seed oats on the market. Yield 77 bushels one year, 76 bu. each year for 5 years.

We have tested most of the leading varieties of oats in America, Canada and England.

\$1.25 per bu. Bags free.

BYRAM L. WINTERS, Proprietor,

Smithboro, Tioga Co., N. Y.

PLANT HARDY TREES

Healthy, acclimated, high grade, true to label fruit trees and plants for Northern States at wholesale prices, direct from nursery to planter. Send for catalogue.

CELERY CITY NURSERIES, DESK E, KALAMAZOO, MICH.

that the following causes in the order mentioned are responsible for the decline of Michigan's peach industry:

1. Frost or winter injury. There have been several bad freezes, notably in 1904 and October, 1906. This is partly unavoidable, but there are some things that can be done to aid. Freezing is more destructive on dry sandy knolls, especially if the autumn has been dry. This may be partially prevented by mulching with straw, manure or other material, or by cover crops. The weakening by freezing affords a foothold for root and other fungous diseases.

2. Soil poverty, especially in humus. This reason is connected with the previous one, for if the soil is lacking in humus it freezes easily, while new ground and rich ground will stand more cold and abuse. The soils should be brought up by means of manure, commercial fertilizer, or cover crops. These may be manured individually before setting by digging holes in the fall and filling with manure, removing the coarsest of this in the spring and placing on top. This allows the juices and fine parts to become incorporated with the soil and give the trees a good start. Has grown fine orchards on poor land by means of commercial fertilizer applied to truck crops and followed by cover crops. The nitrogen makes a green, vigorous leaf growth and the potash and phosphoric acid gives sound, firm, well colored fruit. Set trees far enough apart so they are well fed. Mr. Waite is now planting 16x24, and seven-year Elbertas are closing the 24-foot space and will be thinned to 24x32. If possible give the land three years rest before resetting. Corn and clover are good renovating crops. Manure is excellent to hustle the young trees, and is a preventive of black aphids.

3. Root fungi. These are usually associated with soil poverty, and a rich soil is the best preventive. Where the fusarium fungus, which rots the tips of the roots, or the eel worm are present, it is best not to replant at once.

4. The black peach aphids. Use plenty of stable manure and they will not be troublesome.

5. The yellows group of diseases. This includes yellows, little peach, and rosette, the first common in Michigan, and the second becoming so, while the last is confined to the south. Although scientists have been working continuously on these diseases little is known about them. Prof. Waite would not commit himself as to when or how the disease spread, but he believed that it could be controlled by eradication so as not to prove especially dangerous if growers would unite in the work, and remove affected trees at once. The little peach is more difficult to detect though it has a characteristic curling of leaves and sickly appearance that the expert can catch.

6. Poor drainage. This may be true of whole orchards or only spots in orchards, and must be remedied or the trees will not respond as they should.

7. Miscellaneous. Under this head were included curl leaf, root rot, and the minor fungous diseases which could be controlled by spraying or other means.

8. Neglect of care. Nothing need be said on this topic except that it is well known that many orchards are dying for lack of care.

In the discussion M. Welch, deputy state inspector, told of an experiment planned by Prof. Waite and carried out by them in which they completely eradicated all yellows in an area six miles square by going over the entire area three times during the summer and taking out all trees affected. It was hoped to eradicate all of the disease present during the season so as to prevent inoculation through the blossoms, should this be the manner of spreading, during the next season. Little of the disease was found for several years afterward, and there is little there now, though this was five years ago.

Several growers suspected that the disease spread only in the spring and that a common method of infection was through the blossom by means of bees. Prof. Waite did not believe that anything in the soil would cause or promote yellows. He suspected that much soil was in need of lime, and advised about a ton to the acre. The lump lime could be hauled to the field in a wagon and dumped in heaps of a half bushel to a bushel each, and spread later. Follow lime with a grass or cover crop. Ground lime is better than caustic lime. By means of fertilizing well Prof. Waite has grown peaches which took nine to fill a Georgia basket, or 54 to a carrier.

On Wednesday evening Hon. Chas. W. Garfield, of Grand Rapids, spoke on "The People's Play Grounds." Mr. Garfield made an eloquent plea for the saving and care of the wood lots adjoining the cities and the converting of them into parks for the use of the people. He also dwelt upon the necessity of playgrounds for the children. Mr. Garfield's talk was pleasing, practical, and well received, and I am sorry that space forbids giving a more complete synopsis of it.

The audience then enjoyed a most pleasant hour of entertainment by a soloist, a reader, and a violinist, after which John I. Gibson, secretary of the Western Michigan Development Association, showed and explained a very interesting series of views of Michigan orchards which proved to the satisfaction of those present that Wolverines need not go outside their own state to study examples of successful orcharding.

(Continued next week.)

Calhoun Co. S. B. HARTMAN.

THE CULTURE OF BLUEBERRIES.

The Department of Agriculture has found by experiment how blueberries differ from ordinary plants in their methods of nutrition and in their soil requirements, and by means of this knowledge it has worked out a system of pit culture under which these plants attain a development beyond all previous expectations. The failure heretofore of attempts to cultivate blueberries commercially as a market fruit, appears to be due to a misunderstanding of the soil requirements of the plants, which, as these experiments show, are radically different from those of our common cultivated plants.

The market would gladly pay a higher price for cultivated blueberries of superior quality. A marked distinction should be made in market quotations between the large plump blueberry (genus *Vaccinium*), whose seeds are so small as to be almost unnoticed when they are being eaten, and the huckleberry (genus *Gaylussacia*) in which the seed is surrounded by a bony covering like a minute peach pit, which crackles between the teeth. The failure to make this distinction in nomenclature, and the unsightly condition in which careless handling often presents the berries to the buyer, are the cause of much of the failure to appreciate the blueberry at its real value. As the blueberry withstands the rough treatment incident to shipment so much better than most other berries, with proper handling it should always reach the market in first-class condition, whether shipped from North Carolina to Boston in early June, or Nova Scotia to Washington in late September, making the blueberry season cover a period of nearly four months.

To those desiring to experiment with field culture of the swamp blueberry, whether with wild plants, seedlings, or plants grown from cuttings, two methods of treatment are suggested, both deduced from the experiments already made. The first method suited to upland soils, is to set the plants in trenches or separate holes in well-rotted peat at least a foot in depth, and mulch the surface well either with leaves or with clean sand, the excavations should provide ample space for new growth of the roots, and the peat used may be either of the bog or upland type, and should have been rotted for several months before using. The soil should afford good drainage, the ideal condition of the peat about the roots of the plant being one of continued moisture during the growing season, but with all the free water draining readily so that thorough aeration of the mass of peat is assured.

The second method of field culture suggested is to set the plants in a peat bog after the bog has been drained, turfed, and deeply mulched with sand, just as for cranberry culture, except that no special provision need be made for rapid flooding of the bog for winter, and the ground water of the bog might be kept a little lower than is usual with cranberries.

Modern Methods of Harvesting and Packing Apples is the title of a 30-page pamphlet published by B. G. Pratt & Co., manufacturing chemists of 50 George St., New York city. It contains valuable information regarding the best methods of growing and packing apples, with many illustrations. This book would prove most interesting to every one interested in the growing of apples.

LAST CALL! December 31 is the last day at which the Michigan Farmer can be had at present prices—mail your orders to-day. Orders mailed January 1 and after will be charged \$1 per year. Now it is 75 cents; 3 years \$1.50; 5 years \$2.

Fruit Growers!

Bowker's Lime-Sulphur is absolutely pure

No salt or caustic being added, every drop is effective against the San Jose and other scales, destroying mosses, fungi, etc., and thoroughly cleaning up the trees without injury.

Write for special prices, stating number of trees to be sprayed.

BOWKER INSECTICIDE COMPANY,
43 Chatham St., Boston, Mass.

Manufacturers of Arsenate of Lead; also Bowker's "PYROX" the one Best All Around Spring and Summer Spray for fruits and vegetables.

You're Robbing the Soil

of part of its most valuable and fertile properties—ammonia, potash and phosphorus—every time you grow a corn crop.

These must be replaced regularly or in a few years all the fertility of the soil will be exhausted.

Jarecki Brand Fertilizers

contains all the foods necessary to the perfect development and maturity of corn.

Drill Jarecki Fertilizer, 200 to 400 lbs. to the acre, and you will get 80 to 100 bushels of better, more fully developed corn per acre.

Write for free memorandum book. Contains the A, B, C, of fertilization. Free to all growers.

THE JARECKI CHEMICAL CO.
Sandusky and Cincinnati, Ohio.
Agents wanted in every vicinity.



UNFERTILIZED



FERTILIZED

GALLOWAY SAVES YOU \$50 to \$300

SAVE from \$50 to \$300 by buying your gasoline engine of 1 1/2 to 2 horse-power from a real engine factory. Save dealer, jobber and catalogue house profit. No such offer as I make on the class of engine I sell has ever been made before in all Gasoline Engine history. Here is the secret and reason: I turn them out all alike by the thousands in my enormous modern factory, equipped with automatic machinery. I sell them direct to you for less money than some factories can make them at actual shop cost.

All you pay me for is actual raw material, labor and one small profit (and I buy my material in enormous quantities).

Anybody can afford and might just as well have a high grade engine when he can get in on a wholesale deal of this kind. I'm doing something that never was done before. Think of it! A price to you that is lower than dealers and jobbers can buy similar engines for, in carload lots, for spot cash.

An engine that is made so good in the factory that I will send it out anywhere in the U. S. without an expert to any inexperienced users, on 30 days' free trial, to test against any engine made of similar horse-power that sells for twice as much, and let him be the judge. Sell your poorest horse and buy a



5-H.-P. Only \$119.50



**Get Galloway's
Biggest and Best
FREE GASOLINE
ENGINE BOOK**

Write today for my beautiful new 50-page Engine Book in four colors, nothing like it ever printed before, full of valuable information, showing how I make them and how you can make more money with a gasoline engine on the farm. Write me—

**Wm. Galloway, Pres., Wm. Galloway Co.,
645 Galloway Station, Waterloo, Iowa**

START A BUSINESS OF YOUR OWN



KOCH'S

If you want to make money, summer or winter, rain or shine, get our proposition. Pleasant work, increasing profits. No experience needed. We want a representative in every locality. Don't work for others, be your own boss. Let us start you in business for yourself. There is money in it for you. Write us today.

**KOCH V. T. CO.,
Box M, Winona, Minnesota.**

GRANGE

Our Motto—"The Farmer is of more consequence than the farm, and should be first improved."

THE JANUARY PROGRAMS.

State Lecturer's Suggestions for First Meeting.

Song, "America." Installation of officers. Installation Welcome Song, page 19. Grange Melodies. Reports of delegates to State Grange. Humorous recitation. Roll call, responded to by each member suggesting one thing which it will be well for this Grange to do or discuss this year. Song, "Michigan, My Michigan." Music and general arrangements for installation in charge of assistant stewards. Suggestions for Second Meeting. Song. Legislative measures in which the Grange is specially interested. General discussion. Song, page 144. Grange Melodies. Recitation, "Ma Can't Vote." Debate. Resolved, that equal suffrage would benefit the state. Music. Paper, "Games and refreshments for winter evenings," (with samples). Closing song.

STATE GRANGE OF 1910.

As stated last week, most of the committees at this year's meeting found time to pretty thoroughly discuss the numerous propositions submitted to them and as a result their reports contained little of a radical or impractical nature. This week we are presenting, more or less in detail, the results from the labors of some of the more important committees. Advanced Ground in Rural Educational Matters.

Probably the most important committee report of the entire meeting was that rendered by the standing committee on education appointed one year ago. The members of this committee met with the State Association of City Superintendents and City School Boards in April of this year and were invited to co-operate with the legislative committee of that association in endeavoring to secure legislation relating to school books and the distribution of the primary interest fund. On the text book question the committee favored a reaffirmation of the position taken by the Grange at its 1907 meeting which endorsed free books but declared against state uniformity. Other recommendations were stated as follows:

1. That a state school book commission be appointed, composed of the state superintendent of public instruction, the head of the department of agricultural education at Michigan Agricultural College and one member to be appointed by the state board of education, to whom publishers of school books can present their books for inspection. This commission shall examine all books, see that they conform to state laws and are up to present standards, receive bonds of said companies to sell their books to the county commissions and school boards at the minimum price at which they are sold in any part of the United States. The members of this commission shall act as arbitrators to settle disputes between publishers and the various commissions and school boards, and provide for forfeitures of the bonds where contracts are violated.

2. That the county board of school examiners shall constitute a county school book commission to select a set of text books for schools in their county under their supervision.

3. That the provisions of this law may become operative in any county only by a vote of those interested.

The committee further recommends the distribution of the primary interest fund on the basis of the number of teachers employed rather than as at present. Also that the subordinate Granges study and discuss the "Township Unit System" law as applied to their respective immediate vicinities and that the Grange use its influence to prevent the repeal of the optional feature of that law and the enactment of a law making it mandatory.

Touching more closely the interests of the rural schools this report said: Since there is a growing interest and wide demand that rural pupils be educated in the spirit of rural life, and that more attention be given to rural education, be it resolved:

1. That the qualifications for county commissioner of schools be amended requiring him to be a graduate of an agricultural college or, before entering upon the duties of his office, to pass an examination in agriculture, the same to be prescribed and conducted by the state superintendent of public instruction and the head of the department of agricultural education at M. A. C. 2. That a closer personal supervision of rural schools is hereby demanded, and that enough money be placed at the disposal of the county commissioner of schools to accomplish this desirable result in all counties having more than 50 schools. 3. That we demand that all county normals, training schools and all summer schools that prepare teachers for rural

schools be compelled to teach the elements of agriculture.

4. That all teachers for rural schools be compelled to pass an examination in elementary agriculture.

5. That all high schools attended by rural teachers shall adopt a thorough course in agriculture and that the state pay the cost of same, not to exceed \$500 for schools.

The committee gave the lecturer of State Grange credit for bringing about the co-operation of the various educational societies of the state in the consideration and formulation of the above recommendations. The report was adopted by a unanimous vote of the delegates.

For Good of the Order in Michigan.

The committee on Good of the Order, Mrs. E. J. Creyts, chairman, reported early, the principal recommendations made favoring the continuance of the effort put forth to improve the lecture work during the past year and the strengthening of the deputy system. The report opened with an unqualified endorsement of Master Hull's administration and recommended that he be given the assistance of a number of district deputies in directing the energies of the present force of county deputies in supervision and extension work. Satisfactory results were reported from the holding of district lecturers' conferences and it was urged that these be continued and that the State Lecturer be allowed to enlarge the scope of this work as is deemed expedient. Other recommendations were: That more stress be placed on the secrecy of the order; that after conferring the early degrees, the familiarity of the candidate with such degree work be made a qualification which must be met before further degrees may be taken; that co-operation in buying and selling, especially the securing of markets for the products of the farmer, be given closer study by subordinate Granges; that an effort be made to include Michigan prison-made binder twine among the articles to be offered to Michigan Patrons under the Grange contract system the coming year.

Resolutions related to the work of this committee but dealing with the good of the order in a national way should properly be mentioned here. They were in reality a very strong and somewhat lengthy reiteration of the Grange's views on the vexed question of proportional representation in the National Grange as expressed by the Michigan State Grange of 1907 and repeated at each annual session since that date. These resolutions, which received unanimous approval, were somewhat broader than those adopted at previous meetings, declaring, in addition to a fair and proportional representation, for a more satisfactory policy as regards extension work, for the fullest publicity

adoption of legislation looking toward the taxation of mining properties upon specific basis, by an adoption of a sliding scale to be determined by cost of production and grade of product. The revenue thus derived from such taxation to be equitably divided between the local and state funds.

6. It is the understanding of the committee that our incoming governor, Hon. Chase S. Osborn, intends to recommend to the legislature a measure providing for the appointment of a commission to investigate the question of taxation within our state. We recommend that this body be allowed one member upon that commission and that the selection be left to our worthy master and executive committee.

This report was promptly adopted with the exception of the section relating to the taxation of mining properties, the consideration of which was postponed to a later session when it was made the subject of a long and well contested debate. The delegates finally voted to substitute the resolution adopted last year, which reads as follows:

We demand the assessment of all copper and iron mines and mine properties in Michigan upon the same ad valorem basis as at the present time and in addition thereto that a tonnage tax (so called) shall be assessed upon all copper and iron produced and mined in Michigan as follows: One cent per pound on copper and 10 cents per ton on iron ore. Such tonnage tax should be payable on June 1 of each year for all copper and iron mined during the preceding year, and that at that time the amount of the state tax paid upon the ad valorem assessment of the preceding year by any individual or corporation shall be deducted from such tonnage tax, if such ad valorem tax shall be less than such tonnage tax, but if such tonnage tax to be paid by any individual or corporation for state tax shall be equal to or less than the ad valorem tax paid by such individual or corporation, then no tonnage tax shall be collected from such individual or corporation for such year. All tonnage tax collected to go into the general fund of the state.

In Behalf of Michigan Agricultural College.

A strong plea for better facilities for giving general or special training in agriculture, and a number of recommendations which met the approval of the delegates, were the features of the report of the committee on Agricultural College. It was presented by Chairman Geismar, director of the Upper Peninsula experiment station, and in part read as follows:

We submit that while education should be broad, liberal and free to all citizens of the commonwealth, the emphasis should be properly placed. Those who wish to follow industrial pursuits should be given

live stock placed for sale upon the markets of this state.

Resolved, That we recognize the pressing needs of the Agricultural College and recommend that we lend our support for the erection of a building designed to furnish adequate room for the safe housing of its valuable library and also to provide an auditorium commensurate to the needs of the college.

COMING EVENTS.

Pomona Meetings.

Western (Ottawa Co.) Pomona, with Georgetown Grange, Friday and Saturday, Jan. 13-14.

LAST CALL! December 31 is the last day at which the Michigan Farmer can be had at present prices—mail your orders to-day. Orders mailed January 1 or after will be charged \$1 per year. Now it is 75 cents; 3 years \$1.50; 5 years \$2.

Michigan Farmer's Club List.

For the benefit and convenience of our subscribers we have arranged the following list of papers on which we can save them money. Besides the money, they save the trouble and expense of sending each order separately.

EXPLANATION—The first column is the regular subscription price of the other papers. The second column gives our price for a year's subscription to both the other paper and Michigan Farmer. The third column gives the price at which the other paper may be added when three or more are ordered. Example: We will send the Michigan Farmer and Detroit Semi-Weekly Journal for \$1.85. If, for instance, McCall's Magazine also is wanted add it at 40c making total \$1.75. Any number of papers may be added at third column price if they are for a subscriber to the Michigan Farmer.

If you want the MICHIGAN FARMER THREE YEARS and the other papers one year add 75c to the second column price. For the Michigan Farmer 5 years add \$1.25. We do not send samples of other papers. Address the publishers direct.

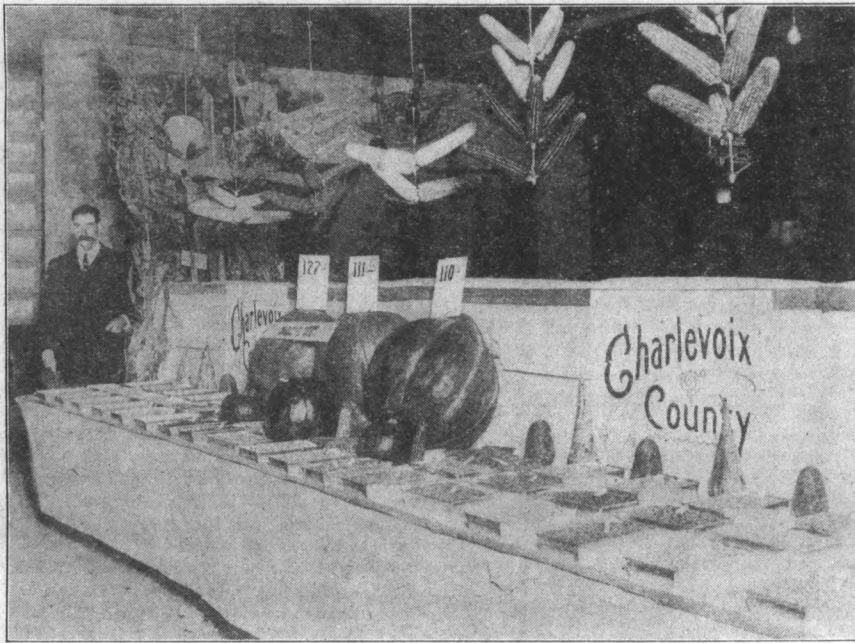
Send all orders to the Michigan Farmer or through our agents.

We will take your order for any publication you want whether listed or not. Write for rates.

NOTE.—So long as a subscriber is on our list for one or more years he may order at any time any publication at third column price. So that a three or five-year subscriber does not lose the advantage of the reduced price if he wants any other paper next year or the year after.

Subscriptions ordered to Canada require postage. Write for rates unless postage is known, in that case include with order. Postage on Michigan Farmer alone to Canada is 1 cent per week.

Table with columns: NAME OF PUBLICATION, and prices. Includes DAILY (6 a Week.), TRI-WEEKLY (3 a Week.), SEMI-WEEKLY (2 a Week.), CATTLE, SHEEP, SWINE, POULTRY, etc., POPULAR MAGAZINES, LADIES' or HOUSEHOLD., and RELIGIOUS and JUVENILE.



General Exhibit of Farm Products, Including the Three Big Squash, made by Charlevoix Co. Patrons at the Recent State Grange Meeting.

of National Grange conditions both as to membership and finances, for a more aggressive policy in securing legislation favorable to the interest of agriculture, instructing the master of Michigan State Grange to support these declarations and to use his best endeavors to secure their adoption by the National Grange; also empowering the State Grange executive committee to use such means as in its judgment will most effectively promulgate these reforms.

State Legislation.

The committee on legislative action, after considering a large number of resolutions, submitted to the convention the following propositions which were deemed of paramount importance:

1. We reaffirm the action of the Michigan State Grange, taken at former sessions, demanding an interchange of messages by all telephone companies operating within our state. 2. It is our belief that the present oleomargarine law is giving general satisfaction and we ask that no legislation repealing the act be enacted. 3. We favor the adoption of the Torrens system of land transfer. 4. We recommend that the Michigan State Grange instruct its legislative committee to renew its effort to secure the incorporation of the initiative, referendum and recall principle in all matters of state government. 5. Your committee would urge the

equal opportunity to prepare for their life-work with those who wish to prepare to follow one of the so-called learned professions. If, as the masses of consumers admit, there is need for at least 10 farmers to one professional man, then it would seem equitable that there be ten times greater need for agricultural education, and it would seem only just that at least a much larger proportion of the money expended on higher education and on professional education should be directed to the training of men for the great profession of agriculture.

To this end we therefore most heartily endorse the work of the Agricultural College, the introduction of agricultural instruction into our high schools, our primary and rural schools and all other legitimate and proper means of disseminating agricultural knowledge among the people of the state.

Resolved, That we endorse the bill now before congress, known as the McLaughlin bill, the purpose of which is the granting of federal aid for agricultural extension work, and that a copy of this resolution be sent to each senator and congressman from this state.

Resolved, That we recommend that the state board of agriculture be requested to administer the law against adulterated seeds in such a way as to make it more effective and that it furnish, at least once each year, to all farmers now or hereafter receiving experiment station bulletins, a complete analysis of the feed stuffs for

(w—weekly; m—monthly; s-m—semi-monthly.)

FREE PREMIUMS.

Those subscribing for the Michigan Farmer in combination with other papers are allowed premiums just the same as if the order was for the Michigan Farmer alone. One premium only for every Michigan Farmer order. Orders for other papers alone will receive no premium under any circumstances.

The above second column combination prices will advance 25 cents after Jan. 1, 1911.

The Michigan Farmer
ESTABLISHED 1843.
THE LAWRENCE PUBLISHING CO.,
EDITORS AND PROPRIETORS.

39 to 45 Congress Street West, Detroit, Michigan.
TELEPHONE MAIN 4525.
NEW YORK OFFICE—41 Park Row.
CHICAGO OFFICE—600 First Nat'l. Bank Building.
CLEVELAND OFFICE—1011-1015 Oregon Ave., N. E.
GRAND RAPIDS OFFICE—5 & 6 New Hawkins Building.

M. J. LAWRENCE.....President.
M. L. LAWRENCE.....Vice-President.
E. H. HOUGHTON.....Sec.-Treas.
I. R. WATERBURY.....Associate Editor.
O. E. YOUNG.....Associate Editor.
BURT WERMUTH.....Associate Editor.
ALTA LAWSON LITTELL.....Associate Editor.
E. H. HOUGHTON.....Business Manager

TERMS OF SUBSCRIPTION:

Five Years 260 Copies Postpaid \$2.00
Three Years, 156 Copies, Postpaid \$1.50
One Year, 52 copies, postpaid 75 cts.
Six Months, 26 copies, postpaid 40 cts
Canadian subscriptions 50 cents a year extra for postage

Always send money by draft, postoffice money order, registered letter, or by express. We will not be responsible for money sent in letters. Address all communications to, and make all drafts, checks and postoffice orders payable to, the Lawrence Publishing Co.

RATES OF ADVERTISING:

40 cents per line agate measurement, or \$5.60 per inch, each insertion, with reasonable discount on orders amounting to \$40 or over. No adv't inserted for less than \$1.20 per insertion.
No lottery, quack doctor or swindling advertisements inserted at any price.
Entered as second class matter at the Detroit, Michigan postoffice.

COPYRIGHT 1910

By the Lawrence Pub. Co. All persons are warned against reprinting any portion of the contents of this issue without our written permission.

WE GUARANTEE to stop THE MICHIGAN FARMER immediately upon expiration of time subscribed for, and we will pay all expenses for defending any suit, brought against any subscriber to The Michigan Farmer by the publisher of any farm paper, which has been sent after the time ordered has expired, providing due notice is sent to us, before suit is started.

Avoid further trouble, by refusing to subscribe for any farm paper which does not print, in each issue, a definite guarantee to stop on expiration of subscription.
The Lawrence Pub. Co.,
Detroit, Mich.

DETROIT, DEC. 31, 1910.

WHY AN ADVANCE IN SUBSCRIPTION RATES WAS NECESSARY.

A few complaints regarding the advance in the price of the Michigan Farmer, which takes effect on January 1, have been received, and we take this opportunity to answer them and others who may have assumed that the advance was an unnecessary demand upon the subscriber. In the first place, let it be remembered that the rates which will go into effect on January 1 are the same as formerly obtained for the paper when it was much smaller than it is at present, except that no reduction was given where the subscriber ordered the paper for a term of year, as will be done under the new schedule of prices. Along in the early nineties, when the general slump in values occurred, it affected paper and other materials used in a publishing office, and labor prices were much lower than at present. Thus it cost less to publish the paper, and the average farmer had less money to devote to reading matter, a condition which was met by cutting the subscription price of the Michigan Farmer to 60 cents. After a time it became necessary, because of changed conditions, to advance the price, which was then raised from 60 to 75 cents per year, although it had formerly been dropped from \$1.00 to 60 cents. As every reader knows, the increasing demands upon our forests have raised the price of all forest products, including pulp wood, and the price of paper was advanced to cover this advance in the raw material from which it was made more than a year ago. This fact, together with the advance in other materials and labor cost, together with the enlargement and improvement of the paper, which has been continuous, has made it necessary to advance the subscription price, a step which we have delayed taking for more than a year since it became apparent that it would be necessary, and would much prefer not to take at all if it could well be avoided. But in making the announcement, every reader has been given an opportunity to extend his subscription at the old rates, even though it has not yet expired, an opportunity which was their due because of the support which they have given the paper in previous years. As we can have but one rule, new subscribers have been given the same opportunity, and to give all the full limit of time in which to make their renewals

we have announced below that all orders sent in envelopes upon which the postmark shows they were mailed as late as December 31, will be accepted at the old rates. No matter if your present subscription has not expired, your time will be advanced from the date of its present expiration for the full time ordered. But this is positively the last opportunity to subscribe at the old prices, so mail all orders not later than December 31, if remittance is made at old rates.

THE LAST CHANCE TO RENEW AT THE OLD PRICE.

Notwithstanding repeated notice of the fact that the subscription price of the Michigan Farmer would be advanced on January 1, 1911, there are still some old subscribers who have not availed themselves of the privilege to renew at the old rate. Probably they have intended to do this but have neglected it because other matters pressed. There is still one last chance to subscribe for as long a term as may be desired at the old rate, after this paper is received. We are not going to deprive any reader of this chance on a technicality. All will get this paper and this last notice of the advance in the subscription price of the paper on Saturday at the latest, and will still have time to send their order and remittance for a renewal for one, two, three, five or more years at the old rate, if same is mailed at once. If the postmark on the letter shows that the order was mailed as late as December 31, 1910, the subscription will be received at the old rate and the sender's time will be advanced from the date of its present expiration, whenever that may be, even though their present subscription does not expire for some time yet. It will be the part of wisdom for every reader of the paper who has not yet renewed to avail themselves of this last opportunity to get their subscriptions advanced at the old rate of 75 cents for one year, \$1.20 for two years, \$1.50 for three years, \$2.00 for five years, or at the rate of 40 cents a year for a longer time. There is absolutely no risk in sending long term subscriptions for such a paper as the Michigan Farmer, which will continue to be the best paper for Michigan farmers in future years as it has been in the years since its establishment in 1843. While the paper will still be worth much more than its cost at the advanced prices which will take effect January 1, 1911, yet the saving that can be effected by mailing the order in time so the postmark will read December 31, 1910, will be very material. Compare the prices above mentioned with those following, which will obtain after December 31, and act at once.

Subscription Prices After January 1.

1 year, \$1.00	3 years, \$2.00
2 years, 1.50	5 years, \$2.75

CURRENT COMMENT.

The New Year. In our cover design our artist depicts the old conventional Father Time unrolling the ancient parchment record, showing the passing of another year and the dawn of nineteen hundred and eleven. The solemn, snow-clad trees of the north on one side, sentinel like, and the gray old figure of Time give tense admonition of the swiftly passing years. The shallow character, at this time, is inclined to "swear off bad habits"—to mend his ways—until again within the pale of, probably not unwelcome, temptation. The earnest soul, with appreciation of life's possibilities and with loyalty to its ideals is intensified in his devotion to high aims and excellence of purpose. Wholesome indeed is the spirit of the resolutions which the design presents, noble, earnest, comprehensive, and sentimentiously expressed. Read them over carefully and more than once: realize fully their deep significance. The preliminary comparative statement of Michigan Farms More Valuable. general farm data for Michigan as issued by the Bureau of the Census contains a digest of the statistical information gathered through the census enumerators which may be profitably reviewed by every Michigan Farmer reader. This report indicates that the largest increase in comparison with the last census is in the purchase of fertilizers by Michigan farmers, in which there has been an increase of 90 per cent. Another surprising item is to be found in the fact that the expenditure of farmers for labor has increased

76 per cent above the sum expended ten years ago. In the matter of buildings and equipment our farmers have made a very considerable advance, the value of farm buildings having increased 79 per cent and the value of all farm machinery 73 per cent since the date of the last census. In the total value of the farms themselves there has also been a considerable gain, amounting to 54 per cent, including the value of the buildings or an increase of 39 per cent in the average per acre value of land and buildings and of 33 per cent in the average per acre value of the land alone. The statement shows in detail that the number of farms reported in 1910 was 206,376, as compared with 203,261 in 1900, an increase of 3,115, or 2 per cent. The total value of farm land and buildings was given in 1910 as \$897,057,000, as against \$582,518,000 in 1900, an increase of \$314,539,000, or 54 per cent. The total value of farm land alone was reported in 1910 as \$612,143,000, as compared with \$423,570,000 in 1900, a gain of \$188,573,000, or 45 per cent. The total value of the farm buildings alone was given in 1910 as \$284,914,000, as against \$158,948,000 in 1900, an increase of \$125,966,000, or 79 per cent. In 1910 the value of the farm land alone constituted 68 per cent of the total value of land and buildings, as compared with 73 per cent in 1900. The reported value of farm implements and machinery was \$49,771,000 in 1910, as against \$28,795,000 in 1900, a gain of \$20,976,000, or 73 per cent. The total acreage reported in 1910 was 18,913,000 acres, as compared with 17,562,000 in 1900, an increase of 1,351,000 acres, or 8 per cent. The improved acreage was returned in 1910 as amounting to 12,819,000 acres, as against 11,799,000 in 1900, an increase of 1,020,000 acres, or 9 per cent. The improved acreage formed 68 per cent of the total acreage in 1910, as compared with 67 per cent in 1900. The average acres per farm reported in 1910 was 92, as against 86 in 1900, a gain of 6 acres, or 7 per cent. The average value per acre of farm land and buildings in 1910 is stated as \$46, as against \$33 in 1900, a rise of \$13, or 39 per cent. The average value per acre of farm land alone in 1910 was reported as \$32, while in 1900 it was \$24, the amount of gain being \$8, or 33 per cent. Of the whole number, 206,376, of farms reported in 1910 there were 205,432 operated by white farmers and 944 by colored farmers, as compared with a total of 203,261 in 1900, of which 202,288 were conducted by white farmers and 973 by colored. The increase in the number of farms of white farmers during the decade amounted to 3,144, or 2 per cent, while there was a decrease in the number of farms of colored farmers amounting to 29, or 3 per cent. The total number of farms operated in 1910 by owners, part owners, and owners and tenants, comprising the "all owners" class, was 171,787, as compared with 168,814 in 1900, an increase of 2,973, or 2 per cent. The total number conducted in 1910 by cash tenants, share tenants, and cash and share tenants, comprising the "all tenants" class, was 32,635, as against 32,213 in 1900, a gain of 422, or 1 per cent. The total number of farms operated by managers in 1910 was 1,954, as compared with 2,234 in 1900, a decrease of 280, or 13 per cent. The total number of farms operated by the "all owners" and "all tenants" classes and those operated by managers constituted the same percentage of the whole number of farms in 1910 as in 1900, namely, 83 per cent, 16 per cent, and 1 per cent, respectively. Of the total number, 171,787, of farms operated in 1910 by the "all owners" class, there were 89,314, or 51 per cent, owned free of incumbrance, and 82,473, or 48 per cent mortgaged. The statement relative to farms distributed according to certain acreage groups shows that those of 19 acres and under numbered 14,561 in 1910 and 13,470 in 1900, a gain of 1,091, or 8 per cent; of 20 to 49 acres, 49,711 in 1910 and 59,197 in 1900, a decrease of 9,486, or 16 per cent; of 50 to 99 acres, 73,632 in 1910 and 71,021 in 1900, an increase of 2,611, or 4 per cent; of 100 to 174 acres, 50,576 in 1910 and 43,741 in 1900, an increase of 6,835, or 16 per cent; of 175 to 499 acres, 17,126 in 1910 and 15,179 in 1900, an increase of 1,947, or 13 per cent; of 500 to 999 acres, 605 in 1910 and 517 in 1900, an increase of 88, or 17 per cent; and of 1,000 acres and

over, 165 in 1910 and 136 in 1900, an increase of 29, or 21 per cent. The largest per cent of increase in 1910 was, in the 1,000-acre group, 21 per cent; next, in the 500-999 acres group, 17 per cent; 100-174 acres group, 16 per cent; 175-499 acres group, 13 per cent; 19 acres and under group, 8 per cent; and in the 50-99 acres group, 4 per cent.

HAPPENINGS OF THE WEEK.

National.
A fire in and about the Shubert Theatre, New Orleans, destroyed property to the value of \$150,000. Ramon Barros Luco was inaugurated president of Chile, Friday, with the usual ceremony and before a great concourse of people. In spite of official denials, reports are being circulated that the Italian government is fitting an expedition to be sent to Tripoli to prevent the sulphur mines of that state falling into the hands of Americans. A fire at the Chicago stock yards resulted in the loss of 25 lives, 21 of whom were firemen, one being Chief Horan of the city department. The expansion of air in one of the warehouses forced the walls outward and buried the firemen and others who were fighting the flames. Commander Robt. E. Peary, who claims to have been the first man to reach the north pole and whose friends are seeking to have his achievements recognized and himself honored by a special bill advancing him to the position of rear-admiral, will present to a committee and to congress proofs of his exploration trip which resulted in finding the pole. Arch Hoxsey, who gave exhibition aeroplane flights at the last Michigan State Fair, captured the world's record for altitude on Monday of this week by a most daring flight at Los Angeles, Cal. In the face of a wind which proved entirely too strong for one of the competing aeroplanes he steadily ascended until, at the end of nearly 1 1/2 hours of gradual climbing, the barograph on his machine registered an altitude of 11,474 feet. This surpasses the former record, held by a French aviator, by nearly 1,000 feet. Admiral George Dewey celebrated his 73rd birthday last Monday. President Taft has approved the report of the special board of army engineers recommending the apportionment of the new \$20,000,000 fund provided by congress, among the following reclamation projects in the west: Salt River, Arizona, \$495,000; Yuma, Arizona, and California, \$1,200,000; Grand Valley, Col., \$1,000,000; Uncompahgre, Col., \$1,500,000; Payette-Boise, Idaho, \$2,000,000; Milk River, Mont., \$1,000,000; North Platte, Wyoming and Nebraska, \$2,000,000; Truckee-Carson, Nevada, \$1,192,000; Rio Grande, New Mexico, Texas and Mexico, \$4,500,000; Umatilla, Oregon, \$325,000; Klamath, Oregon, and California, \$600,000; Strawberry Valley, Utah, \$2,272,000; Sunnyside and Tieton, at Yakima, Wash., \$1,250,000 and \$665,000 respectively. Total, \$20,000,000. The \$20,000,000 is to be spent within the next five years and the interest on the loan is to be charged against the projects. Ann Arbor's leading hotel, the Cook house was practically destroyed by fire early Christmas morning. Postal savings banks in the various states and territories will be ready to receive deposits Jan. 3, the first working day of the new year, is the announcement made by Postmaster General Hitchcock. One experimental office will be opened in each state and territory. The offices designated are all of the second class and in localities where the conditions are exceptionally favorable for the development of a postal savings business. The state highway department has issued its annual report for the year ending June 30, 1910. The report shows that for the year the state paid awards on approximately 187 miles of roads, about equally divided between stone, macadam and gravel. During the same length of time the department received applications for reward for 292 miles of road. From the organization of the department to the beginning of the last fiscal year 341.09 miles of state reward road were built, \$254,126 paid and a total of \$261,136.75 reward money is still pending. Last year 204.37 miles were constructed and \$137,327 paid in rewards. Frank N. Clark, superintendent of the Michigan stations of the United States fish commission at Northville, died last week. Mr. Clark was accredited with a wonderful knowledge of fish life. He was a son of the late Nelson W. Clark, who was the pioneer of fish culture in Michigan. **Foreign.** The political situation in Peru continues to be grave. A new cabinet is yet to be appointed and disturbances are following the unsettled conditions. A band of insurgents attacked a train near San Mateo and robbed it of considerable money. The Japanese diet opened last Friday, the message from the throne being read by Premier Katsura, the emperor being indisposed. Both Austria and Hungary have sent a formal protest to Portugal upon the announcement by the latter country of the expulsion of all Austrian and German missionaries on January 1. The action of the Spanish government in passing legislation prohibiting the establishment of new religious societies for two years has strained relations with the vatican at Rome. The concordat of 1851 must now be revised and inasmuch as negotiations to that effect had been started before the measure was introduced to limit the establishment of new orders, on this account the vatican took occasion to express disapproval of the action; but the legislation now makes it imperative

on the part of the church officials at Rome to come to some agreement in the revision. The habit of obstructing progress in these negotiations appears to have been one of the reasons for the action. The votes in both the senate and the chamber of deputies were decisive.

Capt. Bernard Frederick Trench, of the British royal marine infantry and Lieut. Vivian Brandon, of the royal navy, were found guilty of espionage upon German fortifications by a German court and sentenced to four years' imprisonment. In comments the English press appears to be generally of the opinion that the sentences are heavy.

The French government has drafted a plan for preventing further interference with the public service, by authorizing a commission which will meet at regular intervals to consider matters arising between employers and employees, the commission to consist of men selected by the companies and the working men. When conciliation fails where differences arise, compulsory arbitration will be provided for. Interference with public service is made a crime by the proposed legislation.

FARM CROPS FOR 1910.

The final estimates of the Crop Reporting Board of the Bureau of Statistics of the United States Department of Agriculture, based on the reports of the correspondents and agents of the Bureau, indicate the harvested acreage and production of important farm crops of the United States, in 1910 and 1909, to have been as follows:

Crops.	Acreage. Acres.	Production. Bushels.
Corn, 1910	114,002,000	3,125,713,000
Corn, 1909	108,771,000	2,772,376,000
Wnt'r wh't, 1910	29,427,000	464,044,000
Wnt'r wh't, 1909	28,350,000	446,366,000
Sp'ing wh't, 1910	19,778,000	231,399,000
Sp'ing wh't, 1909	18,393,000	290,823,000
All wheat, 1910	49,205,000	695,443,000
All wheat, 1909	46,723,000	737,189,000
Oats, 1910	35,288,000	1,126,765,000
Oats, 1909	33,204,000	1,007,353,000
Barley, 1910	7,257,000	162,227,000
Barley, 1909	7,011,000	170,284,000
Rye, 1910	2,028,000	33,039,000
Rye, 1909	2,006,000	32,239,000
Buckwh't, 1910	826,000	17,229,000
Buckwh't, 1909	834,000	17,438,000
Flaxseed, 1910	2,916,000	14,116,000
Flaxseed, 1909	2,742,000	25,856,000
Rice, 1910	722,800	x24,510,000
Rice, 1909	720,225	24,368,000
Potatoes, 1910	3,591,000	338,811,000
Potatoes, 1909	3,525,000	376,537,000
Hay, 1910	45,691,000	*60,978,000
Hay, 1909	45,744,000	*64,938,000
Tobacco, 1910	1,233,800	†984,349,000
Tobacco, 1909	1,180,000	†949,357,000

*Tons. †Pounds. x Equivalent to 5,930,000 bags of 186 pounds, average weight.

The total value of crops above specified on Dec. 1, 1910, was \$3,735,464,000, against \$3,971,426,000 on Dec. 1, 1909. The average of prices was about 8.5 per cent lower on Dec. 1, 1910, than on Dec. 1, 1909.

CROP AND MARKET NOTES.

Washtenaw Co., Dec. 15.—Winter seems to have settled down upon the land with unusual vigor for so early in the season and it has found many farmers unprepared, as there is yet considerable corn standing in the fields. Those farmers who have been waiting for a power husker to do the work are in many cases still waiting. The severe weather has brought considerable snow and the ground is not much frozen. Wheat and clover seedlings going into the winter under very favorable circumstances. Values of staples very well maintained. Hogs largely marketed and the slump in price does not seem to scare out any great numbers. Not many fat cattle or sheep in this section, farmers for the most part preferring to produce milk for either Detroit or the creameries. Apples are fast becoming a luxury, retailing in the fruit store at three for 10c and the best varieties selling for \$1.50 per bu.

Livingston Co., Dec. 19.—The first snow of the season came before the ground was frozen and for a time the roads were in bad shape, but we are now enjoying fairly good sleighing. The ground is in the best possible shape for wheat and clover, being covered with snow and not frozen. There seems to be a larger number of lambs on feed this winter than usual, but feeders are not taking a very optimistic view of the business on account of the present market conditions. Hogs are being marketed freely with \$7.30 per cwt. offered. Grain is not being marketed very freely, with the exception of rye. Market quotations are as follows: Wheat, 88c; rye, 79c; corn, 54c; oats, 32c; butter, 25c; eggs, 32c.

Eastern Oceana Co., Dec. 19.—This month so far has been quite wintry, with good sleighing for the last two weeks. wheat, rye and grass have been well covered with snow and went into winter quarters in first-class condition. Owing to our warm and wet fall cattle and sheep run to pasture nearly all the month of November, thereby helping out our light crop of hay. Fat cattle getting scarce and buyers plentiful. About the usual number of hogs on feed. A good stock of fall pigs to winter. A large quantity of corn left in the fields, owing to a shortage of farm help last fall. More than the usual number of sows being bred for spring litters. Wheat, 80c; rye, 70c; oats, 40c; corn, 35c per bu. of ears; potatoes, 17c; apples, \$1@1.50 per bu.; creamery butter, 23½c; dairy, 25c; eggs, 25c; hay from \$9@14 per ton, baled; hogs, dressed, \$8 per cwt; fowls, alive, 9@10c.

Illinois.

Western Warren Co., Dec. 22.—It is raining and sleeting this morning which looks as though winter has set in. We have not had any snow so far this winter and no good rain since August. Wells and cisterns all gone dry. Farmers are hauling water for stock and wells as the

railroad is running two special water trains a day. Some corn out yet. We have had an ideal fall; roads like a floor. Corn is a bumper crop, with prices low. It is feared that wheat has suffered from the drouth and bare ground. Poultry is plentiful; one dealer has picked up over \$200 worth up to date. Local market for produce: Corn, 31@35c; oats, 26@27c; wheat, 82c hay, timothy, baled, \$15.50; mixed, \$14; hogs 50c less than the Chicago market. Turkeys, 14c; old gobblers, 13c; hens, 9c; roosters, 6c; springs, 9c; fat ducks, 9c; geese, 7c; eggs, 30c; butter, 30c.

MICHIGAN FARMERS' INSTITUTES.

Barry Co.—Nashville, Jan. 9; Lacey, Jan. 10; Banfield, Jan. 11; Hickory Corners, Jan. 12; Prairieville, Jan. 13; Middleville, Jan. 14.

Berrien Co.—Buchanan, Jan. 2; Niles, Jan. 3; Berrien Centre, Jan. 4; Sodus, Jan. 5; Fairplain, Jan. 6; Stevensville, Jan. 7; Bainbridge, Jan. 9.

Gratiot Co.—Middleton, Jan. 5; North Star, Jan. 6; Rathbone, Jan. 7; St. Louis, Jan. 9; Elwell, Jan. 10.

Huron Co.—Pinnebog, Jan. 10; Uby, Jan. 11; Port Hope, Jan. 12; Harbor Beach, Jan. 13; Verona Mills, Jan. 14; Grant Twp., Jan. 16.

Lapeer Co.—North Branch, Jan. 10; Brown City, Jan. 11-12; Clifford, Jan. 13; Dryden, Jan. 14; Imlay City, Jan. 16; Almont, Jan. 17-18; Hadley, Jan. 19-20.

Lenawee Co.—Tecumseh, Jan. 9; Tip-ton, Jan. 10; Adrian Twp., Jan. 11; Madison, Jan. 12; Fruit Ridge, Jan. 13; Medina, Jan. 14; Hudson Centre, Jan. 16; Cadmus, Jan. 17; Onsted, Jan. 18; Addison Cong. Church, Jan. 19; Lime Creek, Jan. 20; Blissfield, Jan. 21; Ogden Centre, Jan. 23; Morenci, Jan. 24; Holloway, Jan. 25; Macon, Jan. 26.

Livingston Co.—Gregory, Jan. 3; Parker's Corners, Jan. 4; Pinckney, Jan. 5; Tyrone, Jan. 6; Oak Grove, Jan. 7.

Midland Co.—Coleman, Jan. 10; Geneva, Jan. 11; Averill, Jan. 12; Hope, Jan. 13; Crane, Jan. 14; Poseyville, Jan. 16; Lapor-te, Jan. 17; Pleasant Valley, Jan. 18-19.

Montcalm Co.—Crystal, Jan. 3; Butter-nut, Jan. 4; Lakeview, Jan. 11; Coral, Jan. 12.

Muskegon Co.—Dalton, Jan. 9; Holton, Jan. 10-11; Muskegon, Jan. 12; Trent, Jan. 13-14.

Newaygo Co.—White Cloud, Jan. 4; Big Prairie, Jan. 5; Newaygo, Jan. 6; Ash-land, Jan. 7; Sitka, Jan. 9; Hesperia, Jan. 10; Hawkins, Jan. 11.

Sanilac Co.—Melvin, Jan. 4; Peck, Jan. 5; Crosswell, Jan. 6; Lexington, Jan. 7; Carsonville, Jan. 9; Minden, Jan. 10; Deckerville, Jan. 11; Argyle, Jan. 12; Shabbona, Jan. 13; Snover, Jan. 14; Mar-lette, Jan. 16.

BOOK NOTICES.

Popular Fruit Growing, the last and most popular work of the late Samuel B. Green, Professor of Horticulture and Forestry, University of Minnesota, comes to our attention. This is the third edition of this popular book and was revised shortly before the author's death last summer. The directions are plainly and tersely given, and illustrations are numerous. An amateur can successfully grow fruit, with a copy of this book at hand for a guide. Those in absolute ignorance of the art of fruit growing and its requirements will find light, information, and a basis for success in this valuable edition. Published by the Webb Publishing Company. Size 5½x7½ inches. Price \$1.00 postpaid.

Flower Guide.—A pocket size hand-book on wild flowers east of the Rocky Mountains, by Chester A. Reed. Each of the 320 flowers described is illustrated in colors. Designed to be used in the field. Contains key to flowers, using colors as guide, also general index. In cloth. Price 75c. Doubleday, Page & Co.

CATALOGUE NOTICES.

The International Harvester Company, of Chicago, send a 100-page almanac which shows the evolution that has taken place in publications of this kind since the days of "Poor Richard." In addition to the practical and scientific information regarding the changes of the seasons, etc., this almanac contains signed articles by leading authorities on many agricultural subjects. This book is available to those who write for it, naming this paper.

Another recent publication of the International Harvester Company of America, is "The Golden Stream." This book discusses up-to-date topics of interest to dairymen, including the Dual Purpose Cow, Bovine Tuberculosis, Rations for Dairy Cows, The Value of Silage, Advantages of Dairy Farming, etc. This book will be sent to any reader of this paper who may write to the main office at Chicago or any one of the branch houses of this company.

A series of handsome calendars for 1911 have been given out by The International Harvester Company of America, directing attention to their well known lines of harvesting machines. These calendars are works of art, beautifully lithographed in colors depicting numerous scenes, which would be an ornament to any home. Every farmer should call upon his local dealer who handles this company's goods and secure one of these calendars.

Fairbanks, Morse & Co., of Chicago, Ill., have just issued a new catalogue describing their traction gasoline engine which is suitable for plowing, traction or belted service. The illustrations show it at work in the field plowing with a gang of plows which enable it to turn over from eight to 15 acres per day, according to the conditions. Write Fairbanks, Morse & Co., at Chicago, Ill., for a copy of their catalogue No. T. B. 601, describing their 25-horsepower traction engine and telling what it will do for the farmer in the way of furnishing cheap power.

Established 1847.

Allcock's

PLASTERS

The World's Greatest External Remedy.



Coughs, Colds, Weak Lungs
Allcock's Plasters act as a preventive as well as a curative.
Prevent colds becoming deep-seated.

Rheumatism in Shoulder
Relieved by using Allcock's Plasters
Athletes use them for
Stiffness or Soreness of muscles.

Allcock's is the original and genuine porous plaster. It is a standard remedy, sold by druggists in every part of the civilized world. Apply wherever there is Pain.

When you need a Pill
TAKE A **Brandreth's Pill** (Est. 1752.)
FOR CONSTIPATION, BILIOUSNESS, HEADACHE, DIZZINESS, INDIGESTION, Etc. Purely Vegetable.

100 pounds of an ordinary Fertilizer (testing 2-8-2)

Well-balanced Fertilizer (testing 2-8-10)

FILLER 28 LBS

NITRATE OF SODA 12 LBS

ACID PHOSPHATE 56 LBS

MURIATE OF POTASH 4 LBS

Both of these are called "complete" fertilizers, but they are very different.

If you prefer ready-mixed fertilizers, insist on having enough Potash in them to raise the crop as well as to raise the price. Crops contain more than three times as much Potash as phosphoric acid.

It was found years ago that the composition of the crop is not a sure guide to the most profitable fertilizer, but it does not take a very smart man to figure out that a well-balanced fertilizer should contain at least as much Potash as Phosphoric acid. Insist on having it so.

If you do not find the brand you want, make one by adding enough Potash to make it right. To increase the Potash 5 per cent., add 10 pounds of Muriate or Sulfate of Potash to each 100 pounds of mixed fertilizer; to increase it 10 per cent., add 20 pounds.

Talk to your dealer and ask him to carry Potash in stock or order it for you. It will pay you both, for

Potash Pays

For particulars and prices write to

GERMAN KALI WORKS Continental Building, Baltimore
Monadnock Block, Chicago, Ill.

FILLER 12 LBS

NITRATE OF SODA 12 LBS

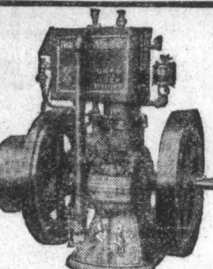
ACID PHOSPHATE 56 LBS

MURIATE OF POTASH 20 LBS

The Farmer's Wife

Appreciates the value of a gasoline engine as a labor-saver in the home.

With **The "New-Way" Air Cooled**

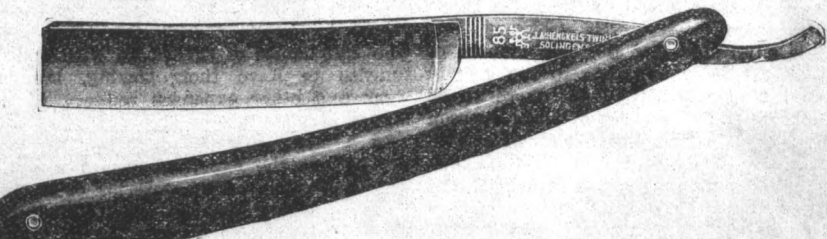


she churns, does the washing, runs cream separator, makes ice cream, has a water supply for sink and bath room. On the farm life is worth living with.

The "New Way" Air Cooled Farm Engine.
Just ask your wife about it, then ask for Catalog C from

The "New-Way" Motor Company
LANSING, MICHIGAN, U.S.A. 7 Ash Street.

A HENCKEL'S RAZOR.



People who know what a good razor is know that the J. A. Henckel's razor is the best made. There was never a Henckel's razor sold for less than \$2.00 and often they sell for \$3.00. By buying 1,000 of them we got them so that we can sell them to our subscribers for \$1.50 each. Postage paid.

J. A. Henckel's works was established in 1731. They have gained a great reputation all over the world. You can rest assured that there is nothing finer made than the Henckel's razor. At the St. Louis Exposition in 1904 the Henckel razors were awarded the highest diplomas for excellence of goods in quality and workmanship. We absolutely guarantee these razors in every way, and those of our subscribers who wish a nice, smooth shave can have it and at a price that is less than they can buy the same thing for elsewhere.

Address all orders to THE MICHIGAN FARMER, Detroit.



Woman and Her Needs

At Home and Elsewhere



"THE GOBLINS WILL GET YOU" But They Ought to Get the Parents.

I wonder how many mothers who read these columns still resort to the barbarous practice of securing obedience through fear of the "bogy man?" So much has been written on the subject that the average mother is educated to better ways, but I fear some still resort to such methods of discipline.

From my kitchen the other day I heard a mother call,

"Louise, come into this yard."

Evidently Louise did not stir, for again came the call,

"Louise, come here instantly."

Apparently Louise still stayed outside for presently there was the shrill call,

"Louise, if you don't come here at once I shall call the policeman to get you."

I must plead guilty to spying then, for I could not resist the temptation of going to the window to see how badly Louise was frightened by that threat. But she had heard it before for she stayed right on at play until the child she was playing with was called home, when Miss Louise arose and sauntered into her yard as unconcerned as though she had never been called. I could hear something about "I'll tell your father, young lady, when he gets home," but evidently that had no terror either for Louise smiled impudently at her mother and set about making a snow man.

I understood then why my neighbor's older children were so rude and ungovernable and had so little respect for law and order, to say nothing of respect for their mother. She had taught them from infancy that her word was of no moment, and from that they had come to hold all law in contempt. Some day, perhaps they may encounter the might of the magistrate and learn a little of respect for state laws, but to the day of their death they will never respect their mother.

Years ago I knew a small boy, a lively, mischievous little fellow, but one who might have been easily controlled by sane methods. One day he was frightened by a neighbor who was doing some work in the cellar, and from that day his mother used that fear to force him into obedience. Whenever a tussle of wills came up his older sister was sent into the cellar to groan and roar and make horrible noises until the lad, in fear of his life, obeyed the maternal dictum. This method worked beautifully for a time, but later Johnnie noticed Sister Mary's absences during the time the "bear man" was supposed to be in the cellar. Then he saw her one day when she came up from her impersonation, and after that the game was up. From that day on his mother never had a spark of control over him, and today when he is a man grown he takes every statement of his mother's in a spirit of suspicion.

Then there is that habit of "telling father." Now I am a firm believer in the theory that father and mother are equally responsible for the correct upbringing of the child, and I believe that the father should be consulted in questions of government and education in all matters of importance. But this habit of settling all arguments between mother and child by saying, "All right, I'll tell your father when he comes home," is but one step removed from threatening with the "bogyman." To my mind there is something wrong with the mental makeup of the woman who can not deal with her children in such matters of discipline as come up through the day. The average normal child is not such a monster that he can not be governed without resorting to brute force, if the mother has only the tact and patience to look for the way.

DEBORAH.

while the poor ones speedily drop out. Of course, the capable, good workers rise to the top, just as cream rises to the top of the pan, and aside from the loneliness of being away from home and friends they really do enjoy the life. Some girls are born business women and enjoy mastering all the details of business life with as much avidity as their brothers. It is a hard climb always, but for the worker who enjoys climbing there is always a place at the top.

The successful stenographer speedily learns to dress quietly and sensibly, to master the details of her employer's business, to keep her lips religiously closed about affairs that do not concern her, to give her best endeavor to her work, to keep her belongings in perfect order, to know the value of being punctual and to keep her temper in the face of many petty distractions. If she fail in any of these details she may be certain never to rise very high, though she may be kept at work because helpers are scarce or for

thing worth having in a business way will tell you this.

"The girl who wants to get the most out of her profession as stenographer, both financially and educationally, will specialize," says Miss Florence Brighton. Miss Brighton is an expert stenographer in a law office in Detroit, and has grown so enamored of law through her stenographic work that she is planning to take up the study.

"The law and insurance are the two best businesses for stenographers to try for," says she. "But of course every girl can not get work in these branches. Whatever you get into, though, specialize in that, be it coal, lumber, gas, railroads or drygoods. Each business has a terminology all its own and once you learn one it is easier to stick to that than to go into something different and learn all over again.

"Would I advise girls to come to the city? I should advise girls to think for themselves and decide just what sort of life they want to live. The city broadens you and gives you chances for an education that the country never can. On the other hand, city people know absolutely nothing about simple good times, unselfish family lives and the thousand and one good times the country folks enjoy. I am struck every day with the selfishness of city girls. I see it not only in the business world but in the home. There is none of that giving up for others that the country girl takes for granted.

"A little illustration will show what I mean about selfishness at home. You go to the country and no matter what time you arrive the first question is, 'Have you had your dinner?' Go to a home in the city at an unexpected hour and everyone is annoyed. Instead of being glad to get a meal for you the thought, unspoken perhaps, perhaps not, is 'Why didn't you get your lunch in a restaurant?' No one wants to be bothered by anyone else.

"That is the situation in a nutshell. If it is money and education you want, come to the city. If it is love and fellowship and good, wholesome fun, stay in the country."

WINTER BABIES.

BY CHARLOTTE A. AIKENS.

The arrival of a winter baby brings a few special problems to every home. One problem is that of warmth: How to keep the little stranger comfortably warm, and yet not overdo the business is a matter that is not always easily adjusted. The devoted father is very apt to shovel in coal or put on wood till the room is superheated sometimes, and in a few hours the temperature may have dropped to the chilling point. A superheated atmosphere is bad for any one, and just as bad for a baby as for an adult. The baby does need to be kept comfortably warm, of course, but it is always possible to accomplish this by means of proper clothing, hot bricks, or bottles if need be. But keep the air he must breathe from becoming too hot. One common cause of "snuffles" is bad management of the warmth and air questions. The room in which the baby lives and moves and has his being is kept too warm, and not well ventilated and when this is the case "snuffles" may be expected any time.

The very first thing every baby needs when he arrives in this "vale of tears" is pure air to breathe—oxygen. If for any reason the supply of oxygen is cut off he promptly dies, and throughout life, fresh air is the most immediate of all necessities. Therefore when baby is asleep, as he ought to be most of his time for the first few weeks, protect him from all draughts, and let a supply of clean air come in for him to breathe. Be just as careful about giving him clean air to breathe, as you are about giving him clean clothing to wear. In no way can the blood be purified except as it comes in contact with the oxygen in the lungs.

There is no need to say that the food provided by nature is the best. There



—Photo by Hayes.

Miss Florence Brighton.

other reasons. Attention to detail is the only sure way to succeed.

And what chances are there for country girls as stenographers in town? Very many. It all depends upon the girls themselves whether they succeed or fail. If the girl has grit and common sense and ability, and is willing to begin at the foot of the ladder, there is no reason why she should not succeed. I do not say the climbing will be easy work, but it will be enjoyable to the girl with the right material in her. Many a woman goes through life with the sense of being cheated because she was not allowed to try her fortunes in the great business world, when just a short term would have sent her home satisfied with herself and her surroundings for the rest of her days. Personally I should advise girls to choose some other vocation than that of stenography, but since nothing else will satisfy the majority of them, it is well to advise them to get the best training possible and then go ahead. There are many opportunities waiting for the workers, but none for the girl who wants to be a stenographer solely that she may have a "good time." To the latter every avenue of success is closed, for the successful country girl in the city must learn to do with fewer good times than ever she has had before. Every girl who has won any-

The Country Girl's Chances in Town—No. 2.

By Hilda Richmond.

Specialize in Stenography.

ALL over the country in large and small country homes, there are eager, alert, ambitious young women dreaming and planning to get away from home to work. Somehow, "Father's Money" does not give satisfaction as it is unwillingly spent for the daughters, or else father must pinch and save and the girls chafe under the necessary economy and long to try their hand at money-making, or the farm looks lonely and narrow. The reasons for leaving the farm are quite too numerous to mention. To the eager country girl the town looks like paradise, and nothing short of a "place" in that charmed region will satisfy her. The tears and arguments and pleadings of the parents are set lightly aside, for youth is ever impatient, and the happy young girl goes confidently out of the protecting farm house to fight the battle of life alone.

It is a strange fact that nine-tenths of the girls who want to go to the city to work intend when they get there to be stenographers. Let some wiser person than I explain this, but explained or still a mystery, it is a fact. Perhaps the idea set forth by many business colleges, that a three months' course is all that is necessary to fit bright pupils for good positions, is responsible in many cases for the decision, but however that may be the average country girl thinks all her dreams of bliss would be realized if she could only sit in a comfortable office with her hair done in the latest style and her white hands flashing over the keys of a typewriter.

Now some pupils do finish the course in three months and start out in good positions at once, but they are the exceptions

to the general rule. It usually takes six months or longer to turn out a pupil who can spell, punctuate, copy from dictation, write clearly and compose a decent letter, and then she must begin at the foot of the ladder. The salary depends upon many things. In a town of 10,000 to 15,000 inhabitants, a representative small city of which there are so many in our country, there was just one young woman earning more than \$10 per week as a stenographer, and very few reached the \$10 mark. The one exception was a woman with many years of experience and much business ability, and her salary was helped out materially by the fact that she held the position of official court stenographer. The great majority of stenographers in the place received from \$6 to \$8 per week for their services, and the market was overstocked at that. The country girl was forced to compete with the town girls who had homes of their own with opportunities to have their sewing, laundry work and other expenses reduced to the lowest possible figures.

In a large city the opportunities look better, but the expenses are also greater. A glimpse of the interior of a New York boarding house which sheltered many girl workers at from \$7 to \$9 per week was a revelation to me. These young women earned from \$15 to \$20 per week, and to the country girl this sounds like a fortune, but the rooms they occupied were so small that I wondered how they could possibly endure them after the free, fresh air of the country. On the top floor the small cubby holes with one small skylight for two rooms, seemed suffocating even in winter. To "keep even" is the aim of the average worker,

is no "perfect substitute" for it, however extravagant the claims may be that are made by manufacturers of baby foods. If the natural supply fails, something must be substituted, of course. What that substitute shall be is a matter that is too important to be left to the chance advice of well-meaning neighbors. Consult the physician and avoid experimenting, as far as possible, with a piece of mechanism as delicate in its construction as a baby's stomach. Be especially careful that nursing bottles and attachments are always kept as clean as possible. Feed the baby regularly and do not accustom him to having food offered to him every time he cries. Very often a baby cries because of discomfort from an overloaded stomach.

It is a good plan from the beginning to give the infant water to drink, for babies as well as adults get thirsty, and milk does not always sufficiently quench the thirst. See that the water is not too cold. In winter it is best to have it almost tepid.

Avoid the abomination known as a "comforter." A baby who is properly cared for, need never form the filthy, useless habit of everlastingly sucking something. These "comforters" are rolled around in all kinds of dirt, picked up, and without cleansing, thrust back into the helpless infant's mouth. Perhaps it is true that "everybody has to eat his peck of dirt," but don't let the baby have any more dirt in his mouth than is an absolute necessity.

Silk, wool, linen, and cotton, all have their advocates for the baby's shirts. It matters very little which is chosen so long as it is clean, does not chafe and is sufficient to protect from the cold. As a matter of fact, most babies are dressed too warmly. Unless the baby is very feeble or inclined to diarrhoea, abdominal bands or "binders" are unnecessary after the first two months. Have the shirts long enough to come down well over the abdomen. The legs need to be well protected when the dresses are shortened. All clothing should be so adjusted so as to allow perfect freedom of the muscles.

It is always better to keep the night clothing distinct from the day. A baby is much more likely to sleep well at night if his clothing is changed and freshly adjusted at bed time. Flannelette is cheap and a supply of night gowns easily procured. Shoes are not necessary till the baby is nearly ready to begin walking. Till that time the feet can be kept warm and comfortable with the soft moccasins made from chamois, leather, and without stiffening. As soon as short dresses are worn, the stockings should come up well over the knees. Diapers should be pinned so as to allow the knees freedom to bend. The amount of clothing, and the quality, should be adapted to the season. Too much clothing is a burden.

All babies are better for a daily bath. After the first month they can be accustomed to the bathtub and allowed in it. A good dusting powder is made of equal parts of talcum powder and boracic acid. If there is any sign of chafing, a little oxide of zinc ointment will usually relieve it.

A great many little babies have sore eyes, and any such symptom is a matter of great importance. About one-third of all cases of blindness are caused by a disease called ophthalmia neonatorum. The redness and discharge from the eye may be a simple inflammation that will subside with ordinary care. It may be the early symptom of serious trouble. In any case, do not neglect it. Usually any such trouble may be overcome by frequent washing in a solution made by dissolving two teaspoonfuls of boracic acid powder in a pint of boiled water. This can be kept in a pint sealer, and a little used each time the washing needs to be done. Use some little bits of soft white cotton. Burn the bits after use, and never use the same piece to wash the two eyes. Protect the baby's eyes from the glare of the sun.

The business of very little babies is to eat, and sleep, and eat again. Let them exercise their lungs and cry a little now and again. As soon as it is safe, free their feet from long petticoats, and give them room to stretch and kick. Encourage kicking, but avoid letting them stand too soon.

Avoid fussiness. A vigorous letting alone sometimes is a pretty good thing for babies as well as grown-ups. A little cuddling and fussing is good. Too much of it makes baby a tyrant. The forming of the baby's character and habits can begin from the day of its birth. It is

then plastic material to be moulded one way or the other. There is much in getting a baby started right.

HOW ONE WOMAN MADE MONEY.

Dear Editor:—There are many farmers' wives who wish to earn some money to get some extra furniture or something which she feels that they can not yet afford to get out of the general fund. To such I would suggest that you take summer boarders. The railroads get out lists every year and you should send your "ad" in soon. They print it free of charge. I took boarders one summer and will say that I did not work a bit harder than I do other summers, for we always have lots of company, city relatives on a vacation. When I had the boarders I did not have many guests but I had a nice sum of money in a few weeks. I took out what I really considered was the cost of the food, and what remained, for the work and the rent of the room I spent for things which I am using yet, and look at them with a lot of pride when I think that I earned them myself.

I am a farmer's wife and I join with others in wishing that more of our city friends would take their vacations and come to see us in the winter time when we have not so much hard work and hot weather to contend with. 'Tis true we do not all have the nice warm bed rooms and bath and nice lights but really after the friends would spend a time with us in the winter they would more fully appreciate the conveniences which most of them have in the city homes.

If any one cares for it, I would give a few pointers of interest to any who might wish to take summer boarders for the first time.—Mrs. New.

DISH-WASHING TIME-SAVERS.

BY M. M. N.

Take the egg beater and lemon grater to the sink or a pan of water, and wash immediately after using, with a small vegetable brush, then lay them in the warming oven to dry. It takes but a minute and saves many minutes of laborious digging into cracks and crevices if left to dry on.

If you have a basin or pan in which beans, potatoes or puddings have been baked, turn it upside down in a large pan. Pour in half an inch of water and set it on the back of the stove before you sit down to dinner, or even just before you begin the dish-washing. Give the same treatment to the dish in which you make thickening for gravy. On baking day try it on the cake bowl.

If there is a dish in which some small "left-over" has become dried on, wet the inside in your dishwasher, and then invert it, allowing it to soak in one side of the dishpan while washing other dishes. You will be surprised at what the steam will do in these cases if you have never tried it. It loosens the particles in a fraction of the time required if the dishes are allowed to soak right side up. I treat the kettles in which mush and pumpkin are cooked, in the same way.

Grease the bread pan when putting the large loaf in to rise and the dough will come out much easier. Wash the pan as soon as possible, using a small brush to help loosen particles and if no hot water is handy wipe it and set aside to scald later.

SHORT CUTS TO HOUSEKEEPING.

If you should accidentally get a colored garment into the boiler with the white clothes so they are all stained, after rinsing out the soap, try putting them into clear cold water with a little turpentine added, let boil a few minutes and rinse again.—Marian.

To keep old potatoes from turning black, when putting them to boil, add one-half teacup of sweet milk to the water in which they boil.—Mrs. J. C.

A fine way to keep floor oilcloth, linoleum, etc., spick and span, with very little work, is to keep an extra mop of soft old underwear moistened with coal oil. Never wet with water; after sweeping, just wipe off with the oily mop, and it always look like new.—F. R.

If the clothespins are placed in a pan in the oven long enough to warm them through, it will save many cold fingers when the clothes are hung on the line.—Mrs. H. R. W.

When you buy fresh meat and it is not used at once, the meat will keep almost any length of time by boiling at least a half hour each day until needed.—Reader. Kindly send name and address.

Coal Dealers are Sore Don't Like This Invention

New Invention That will Give You Just as Much Heat as You are Now Getting, With Half as Much Coal.

Inventor Says Any Reader of the--g-- Anywhere Can Try it for 30 Days without Paying One Cent.

If you heat your home with either coal or wood stoves you ought to give thanks to a man over in Akron, N. Y., who has discovered a way to give you twice as much heat as you are now getting for the same money, or just as much heat as you are now getting for 40 to 60% less money.

The inventor has sent us the illustrations showing the Parlor Furnace, as he calls his invention, attached to a stove pipe in an upstairs room above the parlor.

It has been proven time and time again that with the Parlor Furnace this cold upstairs room can be heated a whole winter through without burning one extra hod of coal.

If you have a room over the kitchen stove, or over any other stove, it can be comfortably heated all winter at no extra cost.

Or if you have an adjoining room on the lower floor you can easily heat it for the same price you are now heating the one room.

If you have only one room to heat, mind you, you can heat it with about half the coal you are now using.

And best of all, the Parlor Furnace is so constructed that it keeps the floors warm. There are no cold feet in the homes where the Parlor Furnace is used.

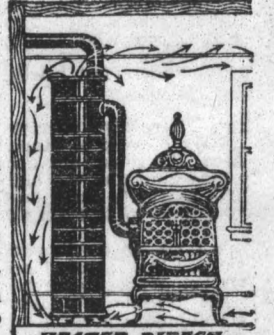
The Parlor Furnace is, without doubt, a money saver to all people who heat their homes with stoves. It puts warm, pure air in circulation throughout the

rooms, and utilizes the heat that would otherwise go up the chimney.

There is no other invention like the Parlor Furnace; it is built on an entirely new and novel plan.

It is extensively used in stores, offices, schools, churches, and workshops where one stove is not sufficient and where cold floors endanger health.

The Parlor Furnace is made of polished blue steel, trimmed with nickel, and is an ornament in any home. It is easily attached to any stove; any man who can put up the pipe of an ordinary stove can connect a Parlor Furnace.



HEATER DIRECT-CONNECTED WITH PARLOR FURNACE.

THE INVENTOR'S LIBERAL OFFER.

I will send the Parlor Furnace to any address in the United States. Try it for 30 days and if it doesn't give satisfaction, or do all I claim it will do, return it at my expense. If it does give satisfaction send me \$12.00.

If you want further information and testimonials drop me a postal or letter today.

If you want to take advantage of my 30 days' Free trial offer right now, mail me the coupon below, and tell me what room you intend to heat with the Parlor Furnace. George E. Cady, Pres.

Use This Coupon.

GEORGE E. CADY, Dept. G.
Pres. Akron Heater Co., Akron, N. Y.

Dear Sir:

Please send me a Parlor Heater on 30 days' free trial. If I am satisfied with it, I will send you \$12.00. If I am not satisfied I will return it at your expense.

Name.....

City or Town.....

State.....

NEW HOME

LIGHT-RUNNING
NEW HOME
TRADE MARK
REGISTERED

No other like it. No other as good.

Warranted for All Time

Not sold under any other name.

The NEW HOME is the cheapest to buy, because of its Superior wearing qualities. All parts are interchangeable, can be renewed at any time. Ball bearings of superior quality. Before you purchase write us for information and Catalog No. 4

THE NEW HOME SEWING MACHINE CO., Orange, Mass.

\$19.00 More Profit On Your Hides
We Pay The Freight

YOUR cow and horse hides are worth big money. Send them to us, we pay the freight and we will make them into warm, comfortable fur coats for yourself or any member of your family, for 50 per cent less than you would pay for an ordinary cloth coat that lasts but a season or two. You can have your wife and children clothed warm this winter for very little money. If you don't want to use the coats yourself, you can quickly sell them to your friends and clean up 50 per cent easy, net profit. A fur coat like this will cost you only \$11. It is a poor economy for you to buy a cloth overcoat when you can for 50 per cent less money, get a fur coat, warmer and guaranteed waterproof that will last many years. Keep yourself and family warm this winter. We tan any kind of wild and domestic skins and make them into furs or robes.

FREE 2 1/2 inch each cow or horse hide coat or robe made from hide furnished by you, we will make free for you a pair of fur knit-lined mittens with horse hide palms. Send for new, handsome catalog which explains everything and learn about our money saving methods. Write today.

National Fur & Tanning Co., 25 Arnold St., Three Rivers, Mich. Omaha Branch, 1929 S. 13th St.

"The Machine you will Eventually buy"

UNDERWOOD TYPEWRITER COMPANY
(INCORPORATED)
241 BROADWAY, NEW YORK CITY.

When Writing to advertisers mention the Michigan Farmer

HOME AND YOUTH

RESOLUTIONS.

BY LALIA MITCHELL.

I've always noticed, year by year, That January's pleasures lie In hunting up some reason why My resolutions, written clear On New Year's Day, should be discarded, Forgotten, lost or disregarded. Now, thoughtfully, I've made a plan Which should be counted worth the pains; I'll manage so, when interest wanes, I still may be a model man. And those who laugh, as wanes the season, May know, for mirth, they have no reason. First, I'll resolve to rise no more At six o'clock to start the fire; Also, I'll rouse my good wife's ire By late hours at the club; I've wore The martyr's cloak so long, I'm certain 'Tis time to just ring down the curtain. Then I no more will shovel walks, Or put the cat outdoors at night, Or bring home groceries, large or light, Or listen while the parrot talks, Or simulate great exultation O'er visits of my wife's relation. My resolutions, they are made, And written out in good black ink, And now I'm wondering if I'll think Myself in luck, when they're mislaid Or if I'll laugh, as erst, out-spoken In joy, o'er resolutions broken.

THE LESSON OF THE YEARS.

BY HELEN MATHIE.

Why, as the tally of years that have passed grows larger and that of those yet to come grows smaller, do we look and feel and speak as if there was no longer any use in trying to enjoy life, accomplish things or plan for the future? Have not the years increased, one by one, ever since we first saw the light of day,

and has not each succeeding year subtracted one from the number yet to be? All along the path of the first of these years arose experiences of pleasure or of pain, with their attendant lessons. Very often we did not get the most that we should from either, for our immature hearts and minds did not recognize their importance. Nevertheless, they all helped to make us what we now are.

Youth has a beauty and joy of its own. Nothing can add to the beauty of a fresh-faced young girl, and nothing take away. If she draw back her hair in uncompromising straight lines her youthful face would be all the more in evidence. If her dress is unadorned, the beautiful curves of youth show the more plainly, but the middle-aged woman has engraved the lines of life's experience on her face and the doing of life's labor has robbed her of her dainty curves. The life that was in her in youth has, much of it, been spent in doing well life's tasks. Now is the time to arrange the hair prettily, wear bright, becoming colors and dresses, and bonnets adorned to make them beautiful. If life's years are numbering to a close, all the greater reason for filling each one with beauty and joy.

In the beginning we were young from the inside, green, immature, growing. Now is the time to be young from the outside, to surround ourselves with young growing things, both brute and human, with flowers and pictures and books, with pretty clothes and, with heart wisdom and experience, fill every passing hour with what is good. We need not be frivolous but we can laugh with the joy of living as freely as the young things around us, for we are getting more out of life than they, because we have developed a capacity for real soul-satisfying enjoyment that they do not possess. How we do enjoy young things, and the best way to enjoy them is to be young with them. Then they will enjoy us. "Grow old along with me, the best is yet to be. The last of life for which the first was made."

way. "What do you want?" she called loudly.

Merle went out on the piazza to hear his story. The car had broken down and the people wished to know if they could come to the house and wait awhile until they could have a carriage come for them from the hotel, and they would also like some refreshments if it was convenient.

"They won't git nothin' from me," stormed Mary, stalking back into the kitchen. "I ain't goin' to go to work in the middle uv the afternoon fer nobody; besides, I ain't got bakin' enough to last till tomorrer if I feed a pack uv city people who don't know no better than ter ride in a machine when the Lord has made hosses fer 'em ter use even if he hain't giv 'em sense enough ter use 'em."

"Got her started," chuckled Joe; "tell 'em to come up, shan't I, Miss Merle? There ain't nobody but an oldish man and his darter; nice, high-toned sort uv folks they be—your kind, I can see that."

"But what shall I give them to eat?" she asked in bewilderment. "Nell has gone to meet the train and bring Searls home, and Mary, I know, will not let me touch a bit of cake or cook anything."

"City folks don't like nothin' better'n baked apples and cream," he suggested. "Give 'em that, and bread and butter, and iced milk, and they'll like it I know, all right. They don't want no fancy stuff in the country."

Merle clapped her hands. "Good for you, Joe. I have an idea. You ask them up here and I will get their lunch ready on the piazza where we have our tea these hot nights."

She hurried around to the wire-enclosed corner of the porch which they used as a dining-room in the sultry weather. The round table was littered with books and magazines which she removed and placed a vase of wild flowers instead on the handsome centerpiece. Then she brought out Nell's dainty bread and butter set, a heaping plate of the delicious, baked, sweet apples which she had designed for their own supper, a pitcher of thick cream, another of iced milk and that, with several slices of Mary's fresh bread, which she took without asking, and a print of the Jackson prize butter, completed the lunch. Then she hastened to the front porch where Joe had brought the guests, and as they turned to meet her she ran to them with a cry of joy, while Joe looked on in open-mouthed amazement. "Blamed if they ain't some uv her city friends," he said to Mary a moment later as he looked into the kitchen window. "She called him 'Mr. Amidon' and the girl 'Grace' and the two kissed each other as if they were sisters."

He scratched his large head perplexedly. "Them Jackson's must have had mighty high-toned friends for I heard the man say that he was glad to see her as if she was his own child, and when I left he was asking after Ned."

"Humph!" said Mary. "But that's the kind that takes chances in them pesky bubbles. I wonder," she added, "if it wouldn't be better ef I giv 'em some uv my angel cake. As long as they are friends I guess I can spare a few slices," she added, starting for the pantry.

Ned had been at work all the afternoon in the garden so he had not known of the Amidons' arrival; but on going to the barn at five o'clock to do his part of the chores he was dumfounded on seeing Searls walking with the old gentleman, while the girls, with Nell, were also inspecting the barn. He knew then that he would be obliged to meet them but hoped it would not be until he had had time to dress himself properly before tea, when he could be at his ease. So he hurried through his chores at a much greater speed than he had ever worked before, but his heart sank and his face burned with shame when he saw them coming directly towards him a little later when he was engaged in his detested job of scrubbing out the pig troughs with an old broom before turning in the swill which was in readiness in the piggery.

He gave one despairing look around, wishing that the earth would open and swallow him from their sight; there was no way to run for cover, so he stood his ground but did not look up until both Mr. Amidon and his daughter held out their hands.

He drew back, almost choking with mortification. "I am too dirty to shake hands," he said apologetically, "you must excuse me till I get through with this work." "We are glad to see you just the same," said the old gentleman heartily, "and I am especially glad to see you at work. That is what I have always advocated on my farm—the necessity of giving pigs

THE WAY OUT

From Weakness to Power by Food Route.

Getting the right start for the day's work often means the difference between doing things in wholesome comfort, or dragging along half dead all day.

There's more in the use of proper food than many people ever dream of—more's the pity.

"Three years ago I began working in a general store," writes a man, "and between frequent deliveries and more frequent customers, I was kept on my feet from morning till night.

"Indigestion had troubled me for some time, and in fact my slight breakfast was taken more from habit than appetite. At first this insufficient diet was not noticed much, but at work it made me weak and hungry long before noon.

"Yet a breakfast of rolls, fried foods and coffee meant headaches, nausea and kindred discomforts. Either way I was losing weight and strength, when one day a friend suggested that I try a 'Grape-Nuts' breakfast."

"So I began with some stewed fruit, Grape-Nuts and cream, a soft-boiled egg, toast and a cup of Postum. By noon I was hungry but with a healthy, normal appetite. The weak languid feeling was not there.

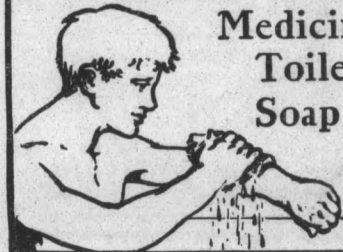
"My head was clearer, nerves steadier than for months. Today my stomach is strong, my appetite normal, my bodily power splendid and head always clear."

Read "The Road to Wellville," in pkgs. "There's a Reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

HEISKELL'S

Medicinal Toilet Soap



In your daily bath use HEISKELL'S MEDICINAL TOILET SOAP. Keeps the pores open and performing their natural excretory office. Thus no poisons accumulate to form blackheads, pimples and roughness.

For skin diseases like erysipelas, eczema, salt rheum, scald head and inflammation of all kinds, use

Heiskell's Ointment

Cures the most severe and obstinate cases. HEISKELL'S BLOOD AND LIVER PILLS make pure blood and an active liver.

All druggists sell these preparations—use them. Write for our new booklet, "Health and Beauty."

JOHNSTON, HOLLOWAY & CO. 531 Commerce St., Philadelphia

THE GATES OF BAKAPPLEIN

By ELIZABETH JEWETT BROWN and SUSAN JEWETT HOWE.

Chapter III.—(Continued).

"I do not think we care to see that, but we will leave the car here and explore the ledges on foot," he said to his daughter. Then as Ned started his horse again he called to him: "Thank you very much for your information, young man, but there is one more question I'd like to ask. You don't happen to know anything about a family of Jacksons around here?" and this time there was such a suspicion of laughter in his voice that Ned felt his face crimson with shame.

He was so far behind them, with his horse turned on the road which led to his home, that he knew they could not see his face distinctly, but he felt as if they half divined who he was. He started the horse into a trot before answering. "They live up this way," he snouted and was gone before they could ask further questions.

He drove furiously into the yard and as Merle ran out to meet him she laughed at the black look on his face. "What's up?" she teased. "I am sure that your pants and your hair are both creased down the middle. That you look as dapper as usual. Your shoes are still shiny and the rest of them are roosting on their trees as they always do. Your cigarette is as pronounced as ever; your eyes just as dark, your collar is as clean and your tie and—"

"Let up," he snapped. "Can't a fellow have a grouch without being made a guy of by you. I've had knocks enough for one day. I wish Searls was here and I'd tell him he'd have to get another driver. I'm not going up to that hotel any more to be snubbed as a hired man, let me tell you."

"What are you going to do?" she asked calmly. "Thought you liked your work; anyway you like the money all right."

"Money, why I used to have as much for pocket money as what I get here by working for it. I've got tired of the whole thing. That automobile chased me up to the street and back again. They think they are darned smart making fun the way they do."

"Shrop got on your nerves I fancy," she said blithely. "You need another dose of my medicine to knock some sense into you."

"Cut it out, Merle," he interrupted. "Can't you let a fellow have a grouch once in a while. All that I mean is that

I won't stand to have the city fellows look down on me when I am every bit as good as they are. I was telling Madaline so."

"You will be falling in love with Madaline yet," she answered composedly as she bit into an apple. "But if you do it will be hopeless. She is too highly educated to think of boys like you."

"Boys!" Ned's voice rang with scorn. "Laugh all you want to laugh, Merle Jackson. I will show you when I am twenty-one what I can do. Then I will leave this old farm to run itself and—"

"And you will run yourself—into the ground maybe," she answered reflectively as she went away with her apples.

In the middle of the afternoon Merle heard Mary's sharp voice scolding in the kitchen. She was looking out of the window at a stalled automobile near the driveway, and expressing her disgust. "Another one of them fool wagons got broke down," she said tartly. "I've ben watchin' it fer some time. I see it a crawlin' along the road as if it had put its stifle jint out, and I said to myself that suthin' had gone wrong; then bimeby it stopped plum by the driveway. It's a pity that every one of them old machines can't bust up. They're nothin' but a nuisance and the law orter put a stop to 'em a runnin' over the country," she stormed, enjoying the sight of the disabled car. "That shuvver has shoved himself clean under it already a 'tryin' to find out what ails it. Good Lord, what a sensible man kin want uv a machine that is liable to bust up any minnit when he's got horses, and mules, and donkeys, and legs to use, to say nothin' of steam cars, is more than I know."

"You dislike them from principle," said the girl, good naturedly, "but you will have to become reconciled, for you know that Searls intends to get one another year. He thinks they are such time-savers and if time is money anywhere it is on a farm."

"He'll run it then, and ride in it," she retorted, "for I will never tempt the Almighty by riskin' my neck, to say nothin' uv scarin' a hoss to death. They are jest nothin' but an invention uv the devil who couldn't git around the country fast enough to do mischief, so he toggled up a car. Here comes Joe Green," as that individual came puffing along the drive-

Have Electric Lights On the Farm at Low Cost

Electric Lights make the brightest, safest, cleanest and most reliable lighting system known for farms and country homes. The Dayton Electric Lighting Outfits are low in cost, easy to install, cost almost nothing to operate. Give you better lights than most city people enjoy. Write today for complete illustrated catalog showing outfits, fixtures, etc. DAYTON ELECTRICAL MFG. CO. 237 St. Clair Street Dayton, Ohio

AGENTS—\$33.30 A WEEK

Jack Wood did it! He writes—"Hurry up 100 more—gold first lot in 2 days—best seller I ever saw." Hundreds of agents gaining money—\$5.00 worth of tools for the price of one. Drop forged from finest steel. Nickel Plated all over. Astonishing low price to agents—1,200 ordered by one man. Write at once. Don't delay. Experience unnecessary. Sample free. THOMAS MFG. CO., 2245 Wayne St., DAYTON, OHIO

WONDER LAMP

The Factories Sales Co. of 833 Wyandotte St., Kansas City, Mo., is making an offer to send a lamp, free to one person in each locality to introduce this FREE marvelous, new, incandescent 100 candle power oil lamp. Simply send name and nearest express office.

a fair show. I won't eat any pork unless I know how it was fattened, and my pigs are fed in scrubbed troughs, fattened on corn and turped into the clover fields just as these pigs are here; and what I especially like is this clean piggery," he continued, turning away from the still embarrassed boy and going with Searls into the building. "I see it isn't swarming with flies, and no wonder, for the pigs have no filth to wallow in. I tell you Jackson, it is worth while to come to your farm just to see how absolutely clean you keep everything. No wonder your pork commands the highest prices in the market and I believe I could find a bigger market for you if you could supply it."

"Why didn't you speak to us this morning, Ned?" the girl asked as soon as her father was out of hearing. "I was almost sure that it was you at the time. Didn't you know us?"

He hesitated, then as Merle remarked that she had not heard him speak of them, the girl continued: "Probably he did not know us, but we knew him. So you are not much acquainted around here," she laughed. "Why, Ned, what is the reason you are ashamed of being on this lovely farm? I think it is the most beautiful place I have seen yet. Merle has been telling me how good your cousin has been to you, and it is such a fine way to learn farm work. I always liked pigs," she continued as she saw them scrambling and pushing to get into the trough; "they act so much like human beings. On our farm I always have a few pets among them, and my only regret is that I cannot stay there all the time. And," she added teasingly, "I also like sheep."

Ned was recovering his equanimity. Grace was the same adorable girl he had formerly known and so far from feeling above him because of his lowly occupation she was actually complimenting him on his work. By the time the chores were done he was his old, jolly, happy-go-lucky self, ready to joke about his misadventure of the morning, perfectly satisfied with himself and as full of faith in his lucky star as ever.

Tea was served on the piazza; and Ned, transformed from a farm hand into a young gentleman, endeavored to counteract the impression which he had unwittingly made upon his father's oldest and best friend that morning. But his success was indifferent, for during the meal Mr. Amidon spoke at length about Edward Jackson.

"He was the best man I ever knew," he said warmly. "And in losing him our firm lost a man whom we never expect to equal. There was no branch of the business he did not understand. There was nothing he could not and would not do if necessary, from wiping an engine to repairing it, or to closing a hundred thousand dollar deal. He never stopped at dirty work and there was never a day but that he would don his greasy overalls and go to work with the men to show them what to do if anything went wrong. I believe that I knew him better than his children did, for I saw a great deal of him. He used to speak with intense regret of ever having sold his birthright in this magnificent old farm, and his dearest hope was that he would be able to buy a country place and spend his last days there. He broke his health in his devotion to business and we wanted him to rest before he did; then, in his anxiety to provide for his children, he foolishly staked all he had—and lost. Ever since his death we have kept his children in mind and I took this trip for the express purpose of finding them, and—" he looked hard at Ned whose eyes fell, "my idea was to give his son the same chance his father had, that of beginning at the bottom and working up. But I hardly think it advisable now, as the work would be much more disagreeable than on this farm. I have an idea." He turned to Merle to relieve the tension; "do you know how much automobile parties would relish a place where they could get a lunch such as you served us today? Those baked apples and the iced milk and cream formed a repast fit for the gods. If you will agree to serve transient guests that way I can promise you patronage every day. What do you say?"

"The very thing," cried Merle, impulsively; then she glanced at Searls, who nodded his approval.

"I have thought that such a thing would be practicable," he answered deliberately. "For more than a hundred years this place was a public inn, standing as it does on the old turnpike between two large cities. And there are many old stories of the hosts of people

entertained here who came by stage coach, on horseback and on foot; also revolutionary soldiers were quartered here, and in later days this lawn was the scene of many a general training. We can imagine the stores of good things which were baked in the brick ovens, cooked over the wide fireplace and eaten outside on the grounds or else in the big livingrooms. The house has not been remodeled very much, aside from the necessary plumbing and bath rooms, as I have liked to keep it in its original shape. Back where our barns now are—in ancient times they were across the road, shutting off the westward view and the glimpse of Old Beverly among the trees—were the slave quarters. Yes, my ancestor, two centuries ago, kept a few slaves, and somewhere among our records is a deed of sale when he sold the last of them, as they were not profitable in New England. Do you see that sign!" He pointed out to the forks of the road "That was erected by my ancestor, Jonathan Searls Jackson, July 4, 1800, and it reads, so many miles to Providence, Boston, Hartford and Worcester, on each of its four arms. So you think, Mr. Amidon, we could make this a sort of a Baked Apple Inn?" he asked jokingly.

"Bakapplein," laughed Merle, "The very thing, Mr. Amidon. You may send your friends here for baked sweet apples all summer if they will only telephone ahead so I can have them ready."

"Only first-class guests, remember," cautioned Searls as he agreed. "Then if we, or rather you, succeed in restoring the ancient glories of the Jackson Stand in supplying the hunger of the automobile passers-by, this old place will have to have another name. I never really liked the name 'Jackson Stand' so I have never used it on my farm papers. What shall we call it?"

"Just what Merle said first," suggested Nell. "Bakapplein."

"Bakapplein it is, then," he answered laughingly. "So now it is up to you, Merle, to prove the name good as long as the apples hold out. I have a sweet apple tree that has never yet profited me anything and I unconditionally give it to you in order to perpetuate the name of Bakapplein."

When they were leaving the next morning, Mr. Amidon said aside to Ned that when he was ready to work cheerfully, and not feel disgraced by honest labor, he could come to him. "I do not like to see such a feeling in you, my boy. It is not worthy of your father, but as long as you have this false pride you would not suit me. Now, my son is spending his vacation as a common farm hand on a large estate in order to thoroughly learn the business and take the full management of my estate sometime." He took a letter from his pocket and opened it. "He writes that he has won the high honor of being called the best hired man on the place, and that letter did me more good than his class honors in college, for it proves to me that he will yet be a capable manager of the biggest industry in the world—that of farming."

(To be continued.)

THE ROMANTIC LIFE OF HERBERT FURLONG.

BY W. J. GRAND.

While sojourning at the little hotel in Miles City I made the acquaintance of a U. S. Senator who was there on private business. We became quite chummy. Through his influence I became an employe of Uncle Sam as a federal detective with headquarters at St. Paul. Arriving there I made my home with a sister of the detective of the railroad company and was soon engaged in my new duties. About that time spurious bills were being circulated in large quantities, and I with others, was put on the case.

Among the numerous people settling in St. Paul in those days was a very nice old Irish Canadian lady, (a widow), named Hughes. She had rented a two-story brick house with the intention of renting rooms, furnished or unfurnished. The house was on Larabee street and she had occupied it three or four months without being able to rent any of it, and was getting discouraged, when one day, looking out into the street, she saw that she was about to receive a call. Two well dressed men crossed the street and the next minute there was a knock at her door and an inquiry as to what apartment she had to let. On her informing them that she had the whole of the house empty, they exchanged significant glances and said they would like to be shown over it. This having been done, they said they would take the house, and requested

to have the bills taken from the window. Mrs. Hughes was amazed and delighted. Such a stroke of luck, and such nice gentlemen! She was more amazed when they paid her the first quarter's rent in advance, and to her inquiries as to how many there were in the family, etc., she was astonished to hear there was no family, and, with the exception of one or two visitors, no one would call upon them. Their meals they would prepare themselves and they would not give her the slightest trouble. They were, they said, patentees, and as they were hard at work on something that would astonish all America, they must not, under any circumstances, be disturbed. They would bring their trunks and baggage that very night.

With the night, came the two men with their luggage, which consisted of heavily laden trunks. They were so weighty that it was necessary for the express man who brought them to lend a hand to get them into the passage-way and up stairs. The lodgers had been with Mrs. Hughes for quite a month, and, with the exception of two callers, no one else visited them. The visitors came about twice a week, and always at night time, occasionally staying with their friends on the top floor, which consisted of one large and three small rooms. The large room was arranged into a kitchen and sitting room combined, having a range, sink and other conveniences. The small rooms were fitted as bedrooms, all opening into each other.


Mrs. Hughes was not a suspicious woman by any means, but she couldn't for the life of her, understand how men, no matter what the importance of their work, could go on day after day, and week after week without troubling her. Up to the present she had only caught a glimpse of them when they were letting their friends out. On each of these occasions she noticed they wore leather aprons and had their shirt sleeves turned up over the elbows, giving her the idea that whatever their occupation they were hard working, honest men. She also observed that, although the visitors came empty handed, they invariably took heavy, bulky parcels away with them. On several occasions she tried very hard to induce them to allow her to give their bedrooms a good clean out, but she was always met with a flat refusal. Although they seemed to her the strangest lodgers in creation, yet they paid her well and she was satisfied. They had been with her now exactly three months. With the greatest punctuality they entered her little parlor and asked for a receipt for the second quarter's rent which they placed upon the table. Mrs. Hughes' gratitude knew no bounds. She was profuse in her thanks and compliments, and probably it was due to her overflow of joy that, on retiring to her kitchen, she indulged in just a wee drop to the health of her lodgers. Be this as it may, when Mrs. Armstrong, an old friend of hers, and my landlady, called upon her later in the day, it was to find her more voluble than she had ever previously found her.

Mrs. Armstrong was a shrewd woman and saw at a glance that something unusual had happened to raise her friend's spirits to the pitch she witnessed. As a rule, Mrs. Hughes was very reticent, but on this occasion she was unable to keep within bounds. Her friend, noticing this, and also noticing the bottle and glass upon the table, suggested that a little more might be beneficial. The bait took, and the two ladies were soon in animated conversation, the landlady informing her visitor of her long spell of ill luck and later good fortune. She then, under secrecy, informed her of the peculiar habits of her lodgers, and the mystery surrounding their movements. Having imparted all that was in her power to impart, she suddenly called to mind the fact that her friend was the sister of the detective at the station, and that her imprudence might cost her the loss of her roomers. She, therefore, once more referred to the matter of secrecy.

America had been startled by the boldness with which certain unknown men had been flooding it with counterfeit coin. The counterfeiters were so perfect in appearance and ring that it was next to impossible to detect the spurious from the genuine article. The coins varied from the quarter to the dollar. They were so highly finished that the only means of detection was by weight. The authorities were cornered, as well they might be. The haunts of the coiners were pretty well known to the police, and these were ransacked over and over again, but without eliciting anything in the shape of a

(Continued on page 598).

SEE THAT



this trade-mark is on every bottle of Cod Liver Oil you buy; it stands for the original standard and only genuine preparation of Cod Liver Oil in the world—

Scott's Emulsion

Cod Liver Oil preparations without this trade-mark are only cheap imitations, many of them containing harmful drugs or alcohol. Be SURE to get SCOTT'S. ALL DRUGGISTS

Send Your Name

—Now—on a postal—to get interesting and valuable information about power engines that are big money-makers. Don't buy any till you first learn all about Old Reliable



LEFFEL'S STEAM
Engines and Boilers

Made in a style and size to suit you and sold at a price that's right. The most simple, durable, economical, efficient engines made. Address James Leffel & Company Box 249, Springfield, Ohio

BROWN

WE PAY THE FREIGHT

Heaviest Fence Made
Heaviest Galvanizing
We make 250 styles. Horse cattle, sheep, hog, and poultry proof fences made of No. 9 double galvanized wire and absolutely rust proof

Bargain Prices:
14 cts per Rod Up
Poultry and Rabbit Proof Fences, Lawn Fences and Gates. Send for Catalog and Free sample for test. The Brown Fence & Wire Co. Dept. 49 Cleveland, Ohio

FENCE

13 1/2 Cents a Rod

For 18-in. 14 3/4-c for 22-in. Hog Fence; 16c for 20-in.; 18 3/4-c for 22-in.; 25c for a 47-inch Farm Fence; 48-inch Poultry fence 28 1/2-c. Sold on 30 days trial. 80 rod spool Ideal Barb Wire \$1.45 Catalogue free.

KITSELMAN BROS.,
Box 278 MUNCIE, IND.

Ornamental Fence

Cheaper than wood. For Lawns, Churches, Cemeteries, Public Grounds. Also Farm and Poultry Fence. Catalogue free. Write for special offer. THE WARD FENCE CO. Box 441, DECATUR, IND.

FENCE Strongest Made

Made of High Carbon Double Strength Coiled Wire. Heavily Galvanized to prevent rust. Have no agents. Sell at factory prices on 30 days' free trial. We pay all freight. 87 heights of farm and poultry fence. Catalog Free. COILED SPRING FENCE CO. Box 21 Winchester, Indiana.

LAWN FENCE

Many designs. Cheap as wood. 32 page Catalogue free. Special Prices to Churches and Cemeteries. Coiled Spring Fence Co. Box 1 Winchester, Ind.

NOTICE.

At the annual meeting to be held in the City of Hastings on January 3rd, 1911 at one o'clock, P. M., the members of the Michigan Mutual Fire, Marine, Cyclone and Wind-Storm Insurance Company will vote on amendments to and revising the charter of the said Insurance Company. Dated Hastings, Mich., Nov. 26, 1910. D. W. ROGERS, Sec.

THE LARGEST AND BEST LINE OF WELL DRILLING MACHINERY in America. We have been making it for over 20 years. Do not buy until you see our new Illustrated Catalogue No. 14. Send for it now. It's FREE.

Austin Manufacturing Co., Chicago

ALWAYS mention the MICHIGAN FARMER when you are writing to advertisers.

MARKETS

DETROIT WHOLESALE MARKETS.

December 28, 1910.

Grains and Seeds.

Wheat.—The surprise of the wheat situation is that with all the unfavorable news that the bears are bringing to light, substantial declines are not evident.

Table with 5 columns: Day, No. 2 Red, No. 1 White, May, July. Rows for Thursday through Wednesday.

Corn.—The local board did not alter quotations this past week. The trade is easy and steady, the tone changing slightly with variations in wheat prices.

Table with 5 columns: Day, No. 2 Corn, No. 2 Yellow. Rows for Thursday through Wednesday.

Oats.—Market is steady with a weak ago. The trade shows sluggishness. Increase in the visible supply was less than a half million bushels.

Table with 5 columns: Day, Standard, No. 3 White. Rows for Thursday through Wednesday.

Beans.—While no transactions are reported the board has seen fit to advance quotations for cash goods. A year ago the price for spot seed was nominally given at \$2.05 per bu.

Table with 3 columns: Day, Cash, Jan. Rows for Thursday through Wednesday.

Clover Seed.—There is continued activity in the seed trade and prices are looking upward. Alsike advanced with other kinds.

Table with 4 columns: Day, Prime Spot, Mar, Alsike. Rows for Thursday through Wednesday.

Rye.—Offerings are small. Market is steady and firm. Quotations for No. 1 is 85 1/2c per bu.

Visible Supply of Grains.

Table with 3 columns: Grain, This week, Last week. Rows for Wheat, Corn, Oats, Rye, Barley.

Flour, Feed, Provisions, Etc.

Flour.—The flour trade is easy with prices unchanged. Quotations are: Clear \$4.65, Straight \$4.65, Patent Michigan \$5.20, Ordinary Patent \$4.75.

Hay and Straw.—Hay values are steady. Quotations on baled hay in car lots f. o. b. Detroit are: No. 1 timothy, \$16.50@17; No. 2 timothy, \$15.50@16; clover, mixed, \$15.50@16; rye straw, \$7@7.50; wheat and oat straw, \$6@6.50 per ton.

Feed.—All prices are steady with those of last week. Carlot prices on track are: Bran, \$27 per ton; coarse middlings, \$23; fine middlings, \$26; cracked corn, \$25; coarse corn meal, \$25; corn and oat chop, \$24 per ton.

Potatoes.—There was nothing to stimulate interest in the potato market this past week, the holiday attractions rather diminishing the attention given it. Trade about steady with prices unchanged. In car lots Michigan potatoes are selling at 37@40c per bu.

Provisions.—Family pork, \$24@25; mess pork, \$23; medium clear, \$20@22; smoked hams, 14c; briskets, 13c; shoulders, 12c;

picnic hams, 12c; bacon, 15c; pure lard in tierces, 12c; kettle rendered lard, 13c.

Dairy and Poultry Products.

Butter.—The trade took no account of any disturbance in market conditions and prices rule steady with a week ago. The demand is moderate. Quotations are: Extra creamery, 30 1/2c; first creamery, 28 1/2c; dairy, 23c; packing stock, 20 per lb.

Eggs.—Last week's prices are still ruling and trade news show no change in the general situation except that in some sections hens are beginning to lay. Fresh receipts, case count, cases included, are now quoted at 31 1/2c per dozen.

Poultry.—Price alterations for poultry are upward. Demand good. There appears to be a satisfactory supply of turkeys for the holiday demand and prices for them are steady. Dressed chickens are higher and quoted at 13@14c; fowls, advanced to 12@13c; ducks steady at 16@18c; geese are up to 14@15c; turkeys steady at 20@22c per lb.

Cheese.—Michigan, 17c; Michigan sharp, 17@18 1/2c; York state, 17 1/2@18c; York state sharp, 19c; limburger, old, 16@17c; Swiss domestic block, 20@22c; cream brick, 17@18c.

Dressed Pork.—Price is steady at 9@10c per lb. Veal.—Best higher. Choice, 12@12 1/2c; ordinary, 8@10c per lb.

Fruits and Vegetables.

Rabbits.—Steady. Per dozen, \$1.50. Apples.—Market is active and steady. Fancy greenings are quoted at \$5.25@5.50; Kings, \$5.25@5.50; Baldwins, \$4.50; Steel reds, \$6; ordinary grades, \$2.75@3 per bbl.

Cranberries.—Steady. Quoted at \$3.25 per bu. Cabbage.—Higher. Selling at \$1.75 per bbl. for new.

Onions.—Unchanged. 75@90c per bu. Honey.—Choice to fancy comb, 15@17c per lb.

OTHER MARKETS.

Grand Rapids.

The bean situation is somewhat improved, with better demands from outside markets, though prices to farmers are unchanged. White beans are still quoted on \$1.75 basis; red kidneys, \$2.25. No improvement is seen in the potato market, prices ranging from 20@30c, the higher figure being paid at Greenville and possibly a few other nearby stations.

Boston.

Wool.—Territory wools lead, the market this past week but Ohio and Pennsylvania fleeces found a fair demand at unchanged figures. Other offerings were slow. Following are the leading domestic quotations: Ohio and Pennsylvania fleeces—Delaine washed, 34c; XX, 32c; fine unmerchanted, 24@25c; 1/2-blood combing, 29@30c; 3/4-blood combing, 29@30c; 1/4-blood combing, 27@28c; delaine unwashed 26 1/2@27c; fine unwashed, 22@23c. Michigan, Wisconsin and New York fleeces—Fine unwashed, 20@21c; delaine unwashed, 26@27c; 1/2-blood unwashed, 28@29c; Kentucky, Indiana and Missouri—3/4-blood, 29@30c; 1/4-blood, 21@23c.

Chicago.

Wheat.—No. 2 red, 93 1/2@95c; May, 95 1/2c; July, 93c per bu. Corn.—No. 2, 46 1/2@46 3/4c; May, 47 1/2c; July, 48 1/2c. Oats.—No. 2 white, 31 1/4c; May, 34 1/2c; July, 34c.

Barley.—Malting grades, 76@84c per bu; feeding, 60@70c. Butter.—Market steady with last week's figures ruling. Creameries, 23@29c; dairies, 21@25c per lb.

Eggs.—All kinds steady; no change in values. Quotations: Prime firsts, 31c; firsts 29c; at mark cases included, 19 1/2@22 1/2c per dozen.

Potatoes.—Market very slow; prices unchanged but largely nominal. Choice to fancy are quoted at 43@45c per bu; fair to good, 35@40c.

Beans.—Market weak under liberal offerings, but last week's reduced figures continue to rule. Pea beans, choice hand-picked, are quoted at \$2.08@2.10 per bu; prime, \$1.98@2; red kidneys, \$2.75@2.90.

Hay and Straw.—All grades of hay have suffered another material decline. Quotations now are: Choice timothy, \$18@18.50; No. 1 timothy, \$16.50@17.50; No. 2 do. and No. 1 mixed, \$15.50@16; No. 3 do. and No. 2 mixed, \$12@15; rye straw, \$8@8.50; oat straw, \$7@7.50; wheat straw, \$6.50@7 per ton.

New York.

Butter.—Trade is steady at last week's prices. Creamery specials are quoted at 31c; extras, 29 1/2@30c; thirds to firsts, 23@28 1/2c.

Eggs.—The easier feeling noted last week is still in evidence with prices showing further decline. Nearby eggs quoted at 48@50c; fresh gathered extras, 35@36c; firsts, 33@34c; fancy refrigerator stock, 25@25 1/2c per dozen.

Poultry.—Last week's heavy receipts not entirely cleaned up and the market is rather irregular. Dressed western chickens, 12@13 1/2c; fowls, 12@13 1/2c; turkeys, 16@22c. Live, chickens, 11 1/2@12c; fowls, 13 1/2@14c; turkeys, 20c.

Elgin.

Butter.—Trade firm at 30c per lb., which is the quotation of last week. Output for the week, 603,700 lbs. as compared with 627,300 lbs. for the previous week.

THE LIVE STOCK MARKETS.

Buffalo.

December 26, 1910.

(Special report by Dunning & Stevens, New York Central Stock Yards, East Buffalo, N. Y.)

Receipts of stock here today as follows: Cattle, 105 cars; hogs, 12,800; sheep and lambs, 7,000; calves, 750.

With 105 loads of cattle on our market here today, and being right in the middle of the holidays, there were no out of town buyers here hardly at all; our main dependence was on our home butchers. They being all filled up with Christmas beef, and this being the poultry season, it was impossible to sell these cattle any higher. There were few instances where a few fancy bulls, and a few fancy females sold 10c higher than last Monday, but all other grades were just about steady with last week, with the exception of stockers and feeders. There is no demand here at present for stockers and feeders; market fully 25@50c lower.

We quote: Best 1,300 to 1,400-lb. steers \$6.25@6.65; good prime 1,200 to 1,300-lb. steers, \$5.65@6.15; best 1,100 to 1,200-lb. shipping steers, \$5.50@5.85; medium butcher steers, 1,000 to 1,100 lbs., \$5.25@5.60; light butcher steers, \$4.75@5; best fat cows, \$4.50@5; fair to good do., \$3.50@4; common to medium do., \$3@3.50; trimmers, \$2.50@3; best fat heifers, \$5.50@5.75; good fat heifers, \$4.50@5; fair to good do., \$4.25@4.50; stock heifers, \$3.50@3.75; best feeding steers, dehorned, \$4.50@4.75; medium to good feeding steers, \$3.75@4; stockers, all grades, \$3.50@3.75; best bulls, \$4.75@5.25; bologna bulls, \$4@4.50; stock bulls, \$3.75@4.25; best milkers and springers, \$5@6; good to best milkers and springers, \$4@5; common to good do., \$2.50@3.5.

Impossible to sell late springers at any kind of satisfactory prices; have to be sold mostly by the pound.

Our hog market opened strong 10c higher than Saturday's best time, and closed strong at the opening. Some hogs arriving late sold fully 5c higher than the opening prices.

We quote: Mixed, medium and heavy, \$8.15@8.20 early; some late arrivals, \$8.25; yorkers, \$8.15@8.20; some late arrivals, \$8.25; pigs mostly \$8.40; roughs, \$7.15@7.25; stags, \$6@6.50. Prospects only fair for the near future.

The lamb market opened active today; most of the choice handy lambs selling \$6.85@6.90; few \$7. Heavy lambs simply demoralized; very hard to sell \$5.50@5.75; few odd bunches at 6c. Sheep market was active today; most of the choice ewes selling at \$3.75@3.85; few fancy at 4c; wethers, \$4@4.15; few light, \$4.25.

We quote: Best handy lambs, \$6.85@6.90; heavy lambs, \$5.50@5.75; bucks, \$2.50@3.25; heavy ewes, \$3.65@3.75; yearlings, \$4.75@5; wethers, \$4@4.25; cull sheep, \$2.50@3; handy ewes, \$3.85@4; northern Michigan lambs, \$6@6.50; veals choice to extra, \$10.75@11; fair to good do., \$7.50@10.50; heavy calves, \$5@6.50.

Chicago.

December 26, 1910.

Cattle. Hogs. Sheep. Received today 13,000 23,000 4,000 Same day last year 18,652 12,335 6,085 Received last week 53,706 136,108 84,580 Same week last year 55,273 134,393 68,685

The stock yards are open for business today, although it is observed as a holiday generally, and the packing plants are closed. The live stock offerings are very small, and prices are higher for this reason alone, the general needs of buyers being very limited. Cattle are generally 10c higher, with scattering sales at advances of 15c. There are no fancy cattle on sale. Last week closed with steers no higher than a week earlier, and butcher stock 10@25c lower, steers being only 10@25c above the season's low time. Hogs today advanced 5c, with sales at \$7.55@7.95, compared with \$7.35@7.80 a week ago. Two years ago hogs sold at \$4.95@6, and three years ago sales were at \$4.25@4.65. For two weeks hogs received here have averaged 224 lbs., compared with 214 lbs. a year ago and 205 lbs. two years ago. Sheep and lambs were up today 15@25c owing to the meager supply, following the recent break in values, lambs having declined last week 15@25c, while sheep closed unchanged after their early improvement. Lambs are selling at \$4.50@6.50, while yearlings are on a basis of \$4.50@5.50, wethers at \$3.75@4.25 and ewes at \$2@4. Owing to the disastrous fire in Morris & Co.'s packing plant, that firm is likely to curtail its operations in live stock in the near future, and country shippers should bear this in mind and send in stock conservatively.

Cattle are not usually in very large demand during the last half of December, that being a time when poultry is largely substituted throughout most of the country for beef and mutton, and it was fortunate for sellers that cattle supplies last week were cut down to such unusually small numbers, as it resulted in unexpected advances in prices. The demand was scarcely greater than usual at that time, yet prices by Wednesday morning were generally ruling 40@50c per 100 lbs. higher than a week earlier. Then the market became dull with little demand, and Wednesday's close was lower, followed by declines later in the week. A large share of the beef steers sold during the week at \$5.40@6.50, with the better class of yearlings bringing \$6.50@7.25, while prime heavy beefs failed to go over \$7.10. The commoner light steers sold at \$4.50@6.50. The \$7.10 heavy steers were 25 head that averaged 1,909 lbs., much heavier cattle than are usually seen these times. Cows and heifers were active at \$3.30@6.60, with canners selling at \$2.25@2.75, cutters at \$2.30@3.25 and bulls at \$3.15@5.40. Calves brought \$3@9.50 per 100 lbs., and there was a moderate call from the east for milkers and springers at \$30@65 per head. The stock-

eral scale, and decreased offerings brought about good advances, stock steers selling at \$3.50@5.35 and feeders at \$4.85@5.75. These look like pretty steep prices to pay, and feeder heifers at \$3.40@4.35 look like safe investments to some stockmen who have observed how well fat heifers have sold for a long time past. Baby beef is popular these times and brings liberal returns, whether steers or heifers, while much of the time heavy beefs lose money for their owners after feeding for several months. The feeding districts are still well stocked with cattle, and owners should use caution in selling them.

Hogs had some good up-turns last week that were rather unexpected generally, the marked falling off in supplies being the cause, and when \$8 was reached sellers were very much pleased. There was usually a fairly large demand for the better class of hogs to ship to eastern packing points, but the rise in values was mainly attributable to the smaller supplies. The hogs offered averaged well in quality, and there was the same good demand for consignments to convert into fresh pork that has been in strong evidence ever since winter weather set in. Hogs sold about 45c apart, including the best and the least desirable lots, and the bulk of the offerings sold close together, with medium weight butcher hogs going the highest, while part of the time heavy and light hogs also went at the top, with the best light usually selling at least within 5c of the top figures. Speculators and shippers were the best supporters of the market, taking the choicest lots, while the Chicago packers usually held back and filled their orders late in the day at lower figures. The shortage in the last pig "crop" is undisputed, and there is no reason, so far as can be seen, why stockmen should not finish off their hogs in good shape.

Sheep and lambs underwent extremely wide fluctuations in prices last week, moving up at a rapid pace for the first half of the week owing to the great falling off in receipts compared with recent weeks. Prime fat lambs reached \$6.80 by Wednesday morning, and the best feeders started off at \$6, while Wednesday saw best wethers at \$4.35, best ewes at \$4.15 and prime light yearlings on the lamb order at \$5.85. Late on Wednesday a fierce reaction set in that was continued through the remainder of the week, buyers operating sparingly and getting what they wanted at much reduced figures. Of course, at such a time large supplies would have caused a regular slump in prices all through the week, and all that averted this at first was the moderate offerings. Some good receipts of goats were disposed of at \$2.50@3 per 100 lbs., and choice yearling breeding ewes brought \$4.50. Some short-fed wethers were taken back to the country at \$3.90 to be finished.

Horses were in very poor general demand last week, all that stood in the way of a slump in prices being small offerings. Drafters were salable at \$170@275 per 210 and drivers at \$150@300. An improvement, while feeders were quoted at \$160@ed demand is expected after New Years.

LIVE STOCK NOTES.

A great many hogs are being cut up for the fresh meat trade, which has been vastly quickened since cold winter weather set in, and this outlet is an important factor in stimulating the demand for hogs in the markets of the country and thereby strengthening prices. Pork chops are retailing for 17c per lb. in the Chicago markets, and everywhere fresh pork products are decidedly cheaper than other meats, a highly important item with the average family in these times of high cost of living. Hogs that are now coming to market are averaging extremely well in quality, and they are selling mostly within a very narrow range of prices, heavy, medium and light swine selling close together. The consumption of bacon, hams and other cured hog meats continues to be greatly restricted throughout the country by their unusual dearness, and there does not appear to be much prospect of their going much lower for some time. It has been impossible for the packers to hold prices for hogs down for any great length of time, despite their determined efforts, for farmers understand the situation thoroughly and hold back their hogs whenever there is a bad break in the market.

Some good advances in the prices of cattle in the Chicago market following greatly reduced receipts show that conservative shipments from feeding sections can accomplish much. The great trouble all along for months has been that feeding has been overdone, short feeding particularly, and owners have been in such haste to sell that glutted markets have resulted. Packers have had unusual opportunities for filling their coolers with cheap beef, and their profits, present and prospective, have become extremely large. The best support given the Chicago cattle market has been from eastern shippers, whose purchases have been at times upward of 45 per cent of the week's receipts, which would seem to contradict the oft repeated story that beef consumption is unusually small. Exporters have been fair buyers of 1,250 to 1,300-lb. steers part of the time, but this outlet is not large enough yet to act as much of a price stimulus.

For the last few weeks the Chicago market for milkers and springers has shown pronounced dullness, with a very poor eastern shipping inquiry, and sales were mainly of good to choice cows. Fortunately, the supply was held down to moderate proportions, and the decline in prices was smaller than might have been expected had offerings been maintained at former levels. Forward springers were especially slow of sale.

THIS IS THE FIRST EDITION.

In the first edition the Detroit Live Stock markets are reports of last week; all other markets are right up to date.

DETROIT LIVE STOCK MARKETS.

Thursday's Market.

December 22, 1910. Cattle.

Receipts, 328. Good grades steady; handy butchers, cow stuff and bulls, 15@25c higher than last week.

We quote: Best steers and heifers, \$6; steers and heifers, 1,000 to 1,200, \$5.50@5.75; steers and heifers that are fat, 500 to 700, \$4@4.75; choice fat cows, \$4@4.50; good fat cows, \$3.50@3.75; common cows, \$3@3.25; canners, \$2.75@3; choice heavy bulls, \$4@4.35; fair to good bolognas, bulls \$3.50@4; choice feeding steers, 800 to 1,000 \$4.25@5; fair feeding steers, 800 to 1,000, \$3.75@4; choice stockers, 500 to 700, \$3.75@4.50; fair stockers, 500 to 700, \$3@3.75; stock heifers, \$3@3.50; milkers, large, young, medium age, \$4@5.00; common milkers, \$25@35.

Roe Com. Co. sold Newton B. Co. 3 butchers av 800 at \$4.25, 4 do av 1,082 at \$3.50, 10 steers av 1,072 at \$5.50, 11 butchers av 1,013 at \$4.25, 1 cow weighing 770 at \$2.50, 4 do av \$15 at \$3.

Bishop, B. & H. sold Parker, W. & Co. 16 butchers av 1,022 at \$4.50, 1 steer weighing 1,310 at \$6, 5 cows av 924 at \$3.40, 2 do av 910 at \$3.25; to Sullivan P. Co. 3 do av 803 at \$3, 1 do weighing 1,040 at \$4, 1 do weighing 860 at \$3.25, 15 steers av 947 at \$5.50, 7 do av 820 at \$4.75; to Hammond, S. & Co. 3 cows av 880 at \$3.35, 1 do weighing 1,000 at \$4, 2 do av \$15 at \$3.25, 3 do av \$40 at \$3.25, 1 bull weighing 720 at \$4; to Rattkowsky 7 butchers av 877 at \$3.75; to Mich. B. Co. 5 cows av 990 at \$3.80, 7 butchers av 893 at \$4.25, 3 steers av 1,150 at \$6, 15 do av 620 at \$5; to Sullivan P. Co. 4 cows av 1,085 at \$3.80, 1 do weighing 1,150 at \$3.80, 5 do av 1,126 at \$4, 2 bulls av 1,225 at \$4.35, 1 do weighing 930 at \$4, 2 heifers av 900 at \$4.75, 2 canners av 775 at \$3.

Spicer & R. sold Kamman 2 bulls av \$35 at \$4.50; to Hammond, S. & Co. 3 cows av 810 at \$3.25, 1 do weighing 920 at \$3.20, 1 bull weighing 740 at \$3.25, 1 heifer weighing 830 at \$4.90; to Parker, W. & Co. 4 cows av 1,007 at \$4.30, 1 do weighing 1,030 at \$4, 6 do av 995 at \$4; to Mich. B. Co. 7 butchers av 736 at \$4, 1 heifer weighing 600 at \$4; to Sullivan P. Co. 10 cows and bulls av 775 at \$3.90, 4 do av 1,037 at \$3.90, 6 steers av 1,012 at \$5.75.

Allington sold Harkins 4 feeders av 670 at \$4.75.

Poscham sold Mich. B. Co. 2 cows av 1,210 at \$4.30, 2 do av 1,005 at \$3.75.

Allington sold Sullivan P. Co. 2 cow and heifer av 1,050 at \$4.75, 1 bull weighing 1,250 at \$4.50.

Same sold Regan 3 heifers av 590 at \$4.10.

Veal Calves.

Receipts, 344. Market steady at last week's prices. Best, \$8.75@9; others, \$4@8; milch cows and springers steady.

Spicer & R. sold Parker, W. & Co. 6 av 150 at \$8, 2 av 260 at \$4, 7 av 130 at \$8.25, 2 av 100 at \$6, 7 av 135 at \$8, 2 av 150 at \$6, 4 av 140 at \$8; to Mich. B. Co. 20 av 135 at \$8.25; to Schuman 4 av 130 at \$8.50.

Bishop, B. & H. sold Parker, W. & Co. 5 av 125 at \$7.75, 1 weighing 160 at \$7.50, 2 av 125 at \$7.50, 13 av 110 at \$7.50; to Goose 8 av 275 at \$3.25, 16 av 130 at \$6, to Rattkowsky 6 av 120 at \$7.10.

Sheep and Lambs.

Receipts, 1,342. Market steady at last week's prices; a few extra early sales at \$6.10@6.25. Best lambs, \$6; heavy lambs, \$5.50@5.75; light to common lambs, \$4.50@5.50; fair to good sheep, \$3@4; culls and common, \$2@3.

Spicer & R. sold Nagle P. Co. 13 sheep av 90 at \$3.50, 34 lambs av 65 at \$5.75, 43 do av 75 at \$5.75, 17 do av 65 at \$5.25, 5 sheep av 125 at \$3; to Rattkowsky 3 do av 170 at \$3.75; to Sullivan P. Co. 9 do av 95 at \$3.25, 35 lambs av 85 at \$6.10; to Gordon 67 do av 75 at \$5.75, 8 sheep av 80 at \$2.50; to Mich. B. Co. 8 lambs av 80 at \$5.75, 19 do av 80 at \$5.75.

Haley & M. sold Nagle P. Co. 4 sheep av 105 at \$3.25, 7 do av 115 at \$3.25, 61 lambs av 95 at \$5.75, 22 do av 80 at \$6.

Bishop, B. & H. sold Hammond, S. & Co. 5 lambs av 55 at \$5.25, 5 sheep av 125 at \$3.50, 34 do av 110 at \$3.25, 33 lambs av 72 at \$6.15; to Nagle P. Co. 51 do av \$3 at \$6.25, 50 do av \$5 at \$6.10, 48 do av \$8 at \$6; to Mich. B. Co. 31 do av 92 at \$6, 9 do av 75 at \$6; to Gordon 24 do av 90 at \$6, 24 do av 80 at \$5.75, 7 do av 80 at \$6; to Hammond, S. & Co. 5 sheep av 150 at \$3.40, 3 do av 125 at \$3.40, 41 lambs av 62 at \$5.75, 12 do av 65 at \$4.50, 3 sheep av 110 at \$3.25; to Fitzpatrick Bros. 16 do av 110 at \$3.60, 23 lambs av 80 at \$6.

Hogs.

Receipts, 2,724. Market 20@30c higher than last Thursday.

Range of prices: Light to good butchers, \$7.90@8; pigs, \$7.90@8; light yorkers, \$7.90; stags one-third off.

Bishop, B. & H. sold Hammond S. & Co. 1,835 av 180 at \$8, 619 av 175 at \$7.95.

Spicer & R. sold Parker, W. & Co. 416 av 190 at \$8.

Haley & M. sold same 420 av 180 at \$8. Sundry shippers sold same 610 av 180 at \$8.

Roe Com. Co. sold Sullivan P. Co. 720 av 200 at \$7.95.

Friday's Market. December 23, 1910. Cattle.

Receipts this week, 799; last week, 984. Market steady at Thursday's prices.

We quote: Best steers and heifers, \$6 @6.50; steers and heifers, 1,000 to 1,200 lbs., \$5.50@5.75; steers and heifers, 800 to 1,000 lbs., \$4.50@5.25; steers and heifers that are fat, 500 to 700 lbs., \$4@4.75; choice fat cows, \$4@4.50; good fat cows, \$3.50@3.75; common cows, \$3@3.25; canners, \$2.75@3; choice heavy bulls, \$4@4.50; fair to good bologna bulls, \$3.50@4; choice feeding steers, 800 to 1,000 lbs., \$4.25@5; fair feeding steers, 800 to 1,000 lbs., \$3.75@4; choice stockers, 500 to 700 lbs., \$3.75@4.25; fair stockers, 500 to 700 lbs., \$3@3.75; stock heifers, \$3@3.50; milkers, large, young, medium age, \$4@6; common milkers, \$25@35.

Veal Calves.

Receipts this week, 764; last week, 765. Market steady at Thursday's prices. Best, \$8.75@9; others, \$4@8. Milch cows and springers steady.

Sheep and Lambs.

Receipts this week, 3,506; last week 5,936. Market steady at Thursday's prices. Best lambs, \$6@6.10; heavy lambs, \$5.50@5.75; light to common lambs, \$4.50@5.50; fair to good sheep, \$3@4; culls and common, \$2@3.

Hogs.

Receipts this week, 7,726; last week, 10,962. Market 5c lower than Thursday.

Range of prices: Light to good butchers, \$7.95; pigs, \$7.95; light yorkers, \$7.95; stags one-third off.

LIVE STOCK NOTES.

One of the best authorities regarding hogs in Iowa says: "Old hogs are practically all marketed, and the young hogs are hardly ready to be shipped, comparatively few being counted upon for marketing before another month. Thus there is a gap between the old and young hogs. The supply of young hogs is not so large as is generally supposed, and had the Chicago packers continued to take off prices as they did some weeks ago it would have made considerable difference in the winter breeding. If good hogs continue reasonably high, we may reasonably look for good supplies in another year, but there will not be any more hogs than the trade requires this packing season." Similar reports are coming from Illinois and other hog-raising states.

There have been a great many complaints from live stockmen who market stock at Chicago regarding dilatoriness upon the part of the railroads in moving their shipments. Illinois stockmen have made the complaint repeatedly that the railroads give the preference to dead traffic and that live stock shipments are side-tracked and get to market greatly behind schedule time, resulting in heavy losses. Iowa shippers, too, are making the same complaints, and criticism is not against any of the roads in particular, but is aimed indiscriminately against the lines almost without exception. Walter Slade, of Slade Bros., live stock breeders and shippers of Fulton, S. D., declared that there were delays everywhere when it came down to railroad service. "The crews are overworked and it seems impossible for them to make runs on time. With our train on the Northwestern this last shipment it seemed that the engines provided were not strong enough to pull the load. We reached Chicago nine hours late, getting in at 3 o'clock in the afternoon, when we should have gotten in the yards at 6 o'clock in the morning. It was our poorest run in eight years, and we make frequent shipments. It seems the railroads have too many 'cripple' engines in service."

Prominent stock feeders and country shippers of stock arriving at the Chicago stock yards recently report a general shortage of hogs and a growing disposition to finish off growing young hogs carefully. The recent boom in prices for hogs in that market has inspired renewed confidence, and the deplorable recent growing movement to hurry hogs to market prematurely on account of the rapid decline in prices that was in evidence not long ago has received a check. I. S. Jenkins, president of a savings bank in Lohrville, Iowa, says that country bankers are reporting smaller deposits than a year ago and that farmers are not disposed to accept ruling prices for either corn or hogs. James Hill, of Adel, Iowa, reports fewer cattle on feed and ready for marketing in Dallas county than at any previous time in years. He regards feeder cattle prices as about \$1 per 100 lbs. too high. Mr. Hill says there are very light supplies of hogs in Dallas county, which is one of the largest live stock counties in Iowa. Rudolph Knapp, the widely-known live stock buyer of Illinois, says it is very hard work to pick up any hogs in the country at the present time. G. A. Parrish, a prominent stock feeder and shipper of Roseville, Illinois, reports that old-fashioned "black cholera" has been making great inroads in hog supplies of Warren county and that recent declines in cattle prices have caused general discouragement. Robert Miller, a stock shipper of Sheridan, Illinois, reports that neither cattle nor hogs are plentiful in that part of the country and farmers are unwilling to dispose of their shoats. Oscar Cain, of Bagley, Ia., says that very light supplies of cattle and

hogs may be expected from that section for two months. New corn is selling at 31 to 34 cents per bushel.

Stags greatly outsell barrows in the Chicago stock yards, where there is a big demand from sausage manufacturers. Recent sales have been made as high as \$8.15 per 100 lbs. for the best heavy stags, large weight being at a liberal premium. According to a rule made by the Chicago Live Stock Exchange, all stags are sold subject to 80 lbs. dockage per head, and sales are made in the same manner at Missouri river markets.

VETERINARY.

(Continued from page 584).

good work. But every horse that suffers from chronic broken wind is weak and not able to do full work. They should be fed no clover, nor musty, badly cured fodder of any kind; besides, it is a mistake to allow them to have too much bulky food. Give a teaspoonful of powdered lobelia, a teaspoonful of powdered murfate ammonia and one dram of powdered opium at a dose in feed two or three times a day. A broken-winded horse should have good care and never be obliged to breathe the foul air. For a weak heart give 1/2 dr. fluid extract nuxvomica every two or three hours when its action is required and three times a day for some time.

Bots—Partial Loss of Power—How to Tell if a Cow is Pregnant.—I wish you would tell me how I can ascertain if my horse is troubled with bots or not. I also have a horse that seems to lose control of his hind quarters. When he walks he sways from side to side and while standing in stall he occasionally falls down. Have been giving him powdered buckeye leaves as a kidney remedy, but he does not improve. I also have a cow which I purchased a short time ago and I am not sure whether she is in calf or not. She does not come in heat and I would like to know if she is in calf and would like to injure her if I gave her cantharides? J. L. N., Spring Lake, Mich.—An unthrifty condition, nervousness, loss of flesh, dandruff and a dry harshness of coat indicates the presence of bots and worms. However, I might say that bots do not as a rule cause horses much harm. Therefore, if your horse is in good condition, do not give him drugs. Give your other horse 1 dr. powdered nuxvomica at a dose in feed three times a day. Also apply equal parts turpentine, aqua ammonia and sweet oil to spine three times a week. As your cow does not come in heat I am led to believe that she is in calf; therefore I believe it would be a mistake to give her cantharides. By placing the hand in rectum the calf can be felt.

Scaly Condition of Skin.—Some of my cattle are affected with a sort of dry scab or scaly condition of the skin affecting them mostly on head and neck and they have the appearance of mangy cattle. J. L. Bangor, Mich.—Give each one a teaspoonful of Fowler's solution at a dose in feed twice a day; also apply one part sulphur, 1/2 part carbonate potash and six parts lard twice a week. It will not be necessary to apply this ointment to the entire body, only to the parts most affected.

Enlarged Joints.—I have two pigs that have enlarged joints and to such an extent as to make it difficult for them to get on their feet. Their appetite is good. These pigs are about three months old and apparently in good condition. What can be done for them? E. C. P., Memphis, Mich.—Apply tincture iodine to the swollen joints daily. Also give three grs. iodide potassium at a dose in feed three times a day.

Warts—Bog Spavin.—I have a heifer coming two years old that had a few warts start last spring under her jaw. During the summer I turned her out to pasture and this fall when I gathered the cattle to the barn the warts had developed into big ones, one about the size of a two-quart pail. She is a fine Durham and this spoils the looks of her. Can you tell me what to do? I have been using black oil but it does no good—she has other smaller warts scattered over her body. I also have a horse seven years old that has two puffs, called bog spavins. Can you give me a cure for them? F. S., Evart, Mich.—In my practice I always remove the large warts with a knife. In removing a wart of the size you speak of the blood vessels will have to be tied or she may bleed almost to death. This is really the work of a veterinarian, or you may burn them off with a knife-shaped hot iron. Apply acetie acid to the small ones daily. Bog spavins are very difficult to remove; however, you will obtain fairly good results by blistering with one part red iodide mercury and eight parts lard once a week or ten days; or if you are working the horse apply equal parts tincture iodine and spirits camphor every day or two.

MORE CORN BOOK FREE

Contains 17 lessons on better farming by authorities whose word is accepted by all. Simply send us your name and address. Read how to double your profits. No charge, no obligation. We want every farmer in America to have this book. Your copy is ready. Write for it NOW. Address.

Deere & Mansur, Dept. 5, Moline, Ill.

For Sale--Rebuilt Machinery

20 h. Leader traction engine; 18 h. Rumely; 18 h. Westinghouse; 16 h. Pt. Huron; 16 h. Huber; 16 h. Pitts; 16 h. Garr-Scott; 14 h. Pitts; 13 h. Russell; 10 h. Nichols & Shepard; 1x22 Southwick full circle horse power hay press; 1x18 Geo. Ertel; 16x18 Squarr Deal belt power hay press; 17x22 Eli and a lot of other threshing machinery of different sizes and makes. Write us for special description and price.

THE BANTING MACHINE CO.

114-118 Superior Street. Toledo, Ohio.

Let Me Start You in Business!

I will furnish the advertising matter and the plans. I want one sincere, earnest man in every town and township. Farmers, Mechanics, Builders, Small business man, anyone anxious to improve his condition. Address Commercial Democracy, Dept. D30, Elyria, Ohio.

Wanted-Agents to sell Farmers Account Book, Quick Seller, Big Inducements, Highly Indorsed. L. L. SYPHERS, Ft. Wayne, Ind.

FARMS AND FARM LANDS FOR SALE OR EXCHANGE

Farms For Sale—\$35 to \$100 per acre. Stock Dairy and Truck farms. D. R. REES, 724 Dollar Bank Building, Youngstown, Ohio.

LIST No. 5 & 6 will tell you all about Fruit & Stock Farms near Fremont, White Cloud and Big Rapids, VAN NESS, White Cloud, Michigan.

I SELL FARMS in Oceana, best County in United States. Fruit, Grain, Stock, Poultry. Write for list. J. S. HANSON, Hart, Mich.

120-ACRE FARM—One half mile east 100 acres improved, good buildings and fences. \$80.00 an acre. J. E. CLARK, Milford, Michigan.

Virginia Farms and Homes.

FREE CATALOGUE OF SPLENDID BARGAINS E. B. CHAFFIN & CO., Inc., Richmond, Va.;

Free 200 Page Book About Minnesota

Compiled by the state, describing industries, crops, live stock, property values, schools, churches & towns of each county, and Minnesota's splendid opportunities for any man. Sent free by STATE BOARD OF IMMIGRATION. Room 209 State Capitol. ST. PAUL, MINNESOTA.

CLARK BIRNIE FARM, 2 1/2 miles east of Moravia, 25 acres timber; soil gravel and sandy loam; house has 8 rooms down stairs and three bed rooms up stairs; house heated by furnace; good well; two barns, one 32x40 and 20 foot posts, the other 16x32; spring that never runs dry, runs into barn for stock, etc; spring brook runs through pasture lot; 600 rods of woven wire fence; good cellar under house with cement bottom. Will hold 4,000 bushels potatoes. Price \$4,750. Inquire of R. H. O'DONALD, Howard City, Mich.

We Sell Fine Farms!

Where the sun shines all winter long. In Texas and Oklahoma. In Missouri and Arkansas. In Louisiana and Mississippi. And in 15 other states, East and West. Send for our free list if you want to buy a farm anywhere. No trades. Ask McBURNEY, STOCKING & Co. 277 Dearborn St., Chicago, Illinois.

Fertile Farms in Tennessee \$5 to \$10 per acre

Fortunes are being made on fertile Tennessee farms raising big crops of grain and grasses of almost every kind, also Cantaloupes, Cabbage, Tomatoes, String Beans, Green Corn, etc., also Horses, Cattle, Sheep, Swine, Poultry and Eggs. Write me at once for Free Literature, which advises how to get one of these splendid farms for \$5 to \$10 per acre. Act quickly! H. F. Smith, Traf. Mgr. N. C. & St. L. Ry. Dept. P, Nashville, Tenn.

FOR INFORMATION AS TO LANDS IN

The Nation's Garden Spot—THAT GREAT FRUIT and TRUCK GROWING SECTION—along the Atlantic Coast Line RAILROAD in Virginia, North and South Carolina, Georgia, Alabama and Florida, write to WILBUR McCOY, E. N. CLARK, A. & L. Agt. for Florida, Alabama, Georgia, Jacksonville, Fla. A. & L. Agt. for Virginia and the Carolinas, Wilmington, N. C.

CHOICE VIRGINIA FARMS Along Chesapeake & Ohio Railway as low as \$15.00 per acre. Rich soil, mild winters, nearby eastern markets. Exceptional Fruit Growing Possibilities. Write for illustrated booklet of farms for sale "COUNTRY LIFE IN VIRGINIA" (100 pages) and low excursion rates ADDRESS K. T. CRAWLEY, INDUSTRIAL AGT. C. & O. RY., Box U RICHMOND, VA.

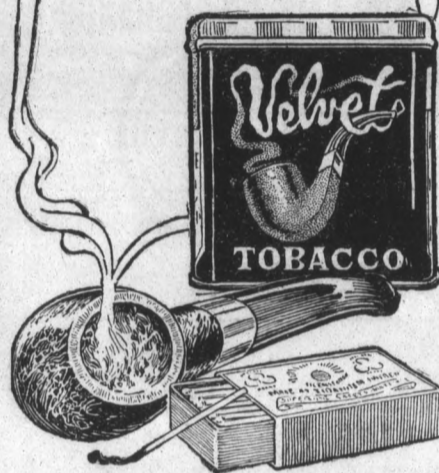
VIRGINIA FARMS You can buy fertile farms with timber, fruit and water for \$10.00 per acre and up—five years ago the price was only \$5.00. Splendid country for fruit growing, dairying, stock raising and general farming. Fine climate, abundant water, convenient Eastern markets, good neighborhood. Our illustrated Booklet, maps, Homeseeker's Excursion rates and other information on request. Write for them now. They tell WHY Virginia land is so low in price. F. H. LaBaume, Agr. & Ind. Agt., Norfolk & Western Ry., Box 2040, Roanoke, Va. \$10 AND UP PER ACRE NOW BUT PRICE RAPIDLY ADVANCING

Velvet
THE SMOOTHEST TOBACCO

Do you realize what a "smooth" tobacco really is? One that can't bite? If not, try Velvet. It means cool smoking. And, it means a whole volume of enjoyment besides—a rich, mellow fragrance that is peculiar to the carefully selected and carefully matured Burley leaves. Try it today and you'll never be content with other tobaccos.

At your dealer's, or if he is sold out, we'll send you a can for a dime, to any address in the U. S. A.

SPAULDING & MERRICK
Dept. D Chicago, Ill.



THE ROMANTIC LIFE OF HERBERT FURLONG.

(Continued from page 595).

clue. Had it not been for the astute Mrs. Armstrong the coining and smashing might have gone on till doomsday, so powerless were the authorities in the matter.

Mrs. Armstrong, after leaving her friend, Mrs. Hughes, pondered over all she had been able to "worm out" of the latter, and, putting all she had heard and the great counterfeit scare together, she thought it high time—in secrecy, of course—to impart what she knew to her brother. Armstrong knew little of detective business and felt inclined to disagree with the views of his sister. She finally decided to talk to me about it. After hearing Mrs. Armstrong's version of the matter I decided to throw no chance away and made an arrangement with her, promising her a substantial reward should her surmises prove correct. She was to act under my instructions forthwith, and, having received the same from me, Mrs. Armstrong at once went to see her friend, carrying with her a bottle of the "soothing syrup" which had proved very beneficial on her last visit. She found Mrs. Hughes in the same good humor, but could glean no more from her than what she already knew. She therefore determined upon a little stratagem. Mrs. Hughes had been so very kind and so very generous that it really was Mrs. Armstrong's turn to do something in return. This took the form of an oyster supper, which was paid for by Mrs. Armstrong, Mrs. Hughes undertaking to go for the bivalves. It was a considerable distance and gave Mrs. Armstrong the opportunity she so much desired. Directly Mrs. Hughes had taken her departure, the female detective, divesting herself of her shoes, crept stealthily up the stairs. She had been in the house on many occasions and knew every inch of it as well as her friend. Gliding quietly up the stairs, and approaching the upper floor, she could distinctly hear two men speaking. The door was closed, but she heard sufficient of their conversation to satisfy her that they were engaged in the manufacture of counterfeit coin. This was all she required for the present. Her friend, returning shortly afterwards, they thoroughly enjoyed themselves, the conversation—still in secrecy—being on the subject of their lodgers. Simple Mrs. Hughes was quite taken with her friend's kindness and generosity and, on her taking her departure, made her promise to repeat her visit at a very early day.

I was delighted with the information given me and immediately made my plans for the capture of the coiners. There seemed to be no difficulty about it. Mrs. Armstrong had simply to do again what she had so recently and so successfully accomplished—get Mrs. Hughes out of the way for a short time and the "job" could be worked.

An evening or two after the female detective called upon her dear friend, who received her with open arms. A second edition of the oyster supper business having been arranged, and Mrs. Hughes having taken her departure, myself and half a dozen of the best officers conversant with coining cases entered the premises and secreted ourselves on the first floor, Mrs. Armstrong, as before, ascending to the top. The report she gave made our eyes glisten. From underneath the door she had seen the fierce light from the furnace. She could detect the labeling of the molten metal, and she hurried down stairs to report the same. Without a moment's hesitation we crept up stairs and made a dash for the door. To our discomfiture we found it fastened. Calling upon those inside to open it we were met by curses and derisive laughter. Two of the most stalwart of the officers, putting their full strength against the door, sent it flying from its hinges. Well was it for the officers that they were in such strong force, otherwise it would have gone hard with them.

The Englishmen (which they were) proved to be possessed of great strength. Even with the handcuffs on they made a dash for liberty, but the force opposed to them was too great, so with very bad grace they submitted to the inevitable.

The officers were about to make a complete search of the rooms when a knock was heard at the front door. It was opened by clever Mrs. Armstrong who saw at a glance that the visitors were the other two wanted. Ascending the steps they were, of course, quickly in custody, and, like their confederates, placed in handcuffs.

The capture was now complete. Two cabs were called, in which the prisoners

and four of the officers made their way to the station. I remained behind to examine the place. Independently of the tools necessary in coining operations I found a large quantity of gold and silver bars, proving that the business done was in keeping with a large amount of counterfeit coin in circulation. Besides there was the customary plant, consisting of a milling machine, moulds, dies, and electric battery, and an electro plate bath with the necessary acids and chemicals. On making further search I found in the bedrooms four revolvers, fully loaded, and about two thousand dollars of the coin. The prisoners were in due course convicted and sentenced for the term of their natural lives.

LITTLE ESSAYS OF FACT AND FANCY.

BY CARL S. LOWDEN.

Stand for Something.

The world is full of men who might be termed "not men but animals." They do very well, but at bottom they are really empty question marks. They stand for no especial thing. They have no influence, and they lack individuality, which is the main factor in the making of a man.

Gladstone was a distinct individual. He was like no other man. Webster, Cromwell, Napoleon, Lincoln, Clay, Washington—all these were distinct characters. The fact is that he who would make a mark in the world must be himself. If he apes some great man he lowers his own character; he becomes common. But if he is faithfully himself, the way to attainment lies just beyond. Individuality is the "open sesame."

Shakespeare says: "To thine own self be true, and it follows as the night the day, thou canst not then be false to any man." That's it; be true to yourself, and the dictations of your conscience. In no other way can success be reached.

The novel without any especial excellence is dreariness, and usually the greatest novels are ordinary, except in one or two particular qualities. These qualities embody the individuality of the author. The book, therefore, stands for something. In one or two respects it approaches perfection. Take "David Harum;" strike from it its humor and human nature, and there is not much left. The personality of the writer is in the book, and in that one respect, as a chronicle of humor and human nature, it nears perfection.

As with books so with men. Some persons are exhilarating; others are quaint, while others are as deeply sincere as Harriet Beecher Stowe and her "Uncle Tom's Cabin." The man who impresses you is the man who has a dominating quality, which is true to himself, and which thus makes that man perfect in that essential. He stands for something; he represents realistically the embodiment of a certain dominating characteristic.

Here is a wise truth by J. W. Alexander: "It should be the lesson of our life to grow into a holy independence of every judgment which has not the sanction of conscience and of God. No man can lift up his head with manly calmness and peace who is the slave of other men's judgments."

A German writer, Heinzelman, says: "Be and continue poor, young man, while others around you grow rich by fraud and disloyalty; be without place or power, while others beg their way upward; bear the pain of disappointed hopes, while others gain the accomplishment of theirs by flattery; forego the gracious pressure of the hand for which others cringe and crawl. Wrap yourself in your own virtue, and seek a friend and your daily bread. If you have in such a course grown gray with unblenched honor, bless God, and die."

HOLIDAYS.

BY ALONZO RICE.

I do not think that from the lengthened year.

Nor yet from out the circle of a week, We should select one day in which to seek

To let our first-class qualities appear; To spread the feast of hospitable cheer. And words of kindly welcome softly speak;

Or, with a countenance serene and meek, Affect in subtle guise the tell-tale tear.

Each morningtide should usher with its ray A life directed by thy noblest plan; Thy heart, like a refiner's scale, obey: "To thine own self be true," thy life still scan

"And it must follow, as the night the day, Thou canst not then be false to any man."

Piles Quickly Cured at Home

Instant Relief, Permanent Cure—Trial Package Mailed Free to All in Plain Wrapper.

Piles is a fearful disease, but easy to cure, if you go at it right.

An operation with the knife is dangerous, cruel, humiliating and unnecessary.

There is just one other sure way to be cured—painless, safe and in the privacy of your own home—it is Pyramid Pile Cure.

We mail a trial package free to all who write.

It will give you instant relief, show you the harmless, painless nature of this great remedy and start you well on the way toward a perfect cure.

Then you can get a full-sized box from any druggist for 50 cents, and often one box cures.

Insist on having what you call for.

If the druggist tries to sell you something just as good, it is because he makes more money on the substitute.

The cure begins at once and continues rapidly until it is complete—a permanent.

You can go right ahead with your work and be easy and comfortable all the time.

It is well worth trying.

Just send your name and address to Pyramid Drug Co., 92 Pyramid Building, Marshall, Mich., and receive free by return mail the trial package in a plain wrapper.

Thousands have been cured in this easy, painless and inexpensive way, in the privacy of the home.

No knife and its torture.

No doctor and his bills.

All druggists, 50 cents. Write today for a free package.

GOULDS

RELIABLE FARM PUMPS



will insure a generous supply of water when and where you want it, no matter where the well or spring may be located. They are durably made, moderately priced and cost little to keep in order. Built to meet every condition and service. Write for our free book.

"Water Supply for the Home"

It will tell you how best to solve water supply problems—pumps \$3.00 to \$300.

When you buy a pump see that it bears the name "GOULDS." It is a guarantee of satisfaction.

THE GOULDS MFG. COMPANY
No. 86 West Fall St., Seneca Falls, N. Y.

HIDES TANNED

FOR Robes, Coats and Rugs.

Send us your cattle or horse hides or any skins that you may have, and we will tan these for you as they ought to be tanned. We have the largest and best plant in the country for doing this work. We are coat and robe makers. Our prices are right, work GUARANTEED. Low prices. Send for circular, also catalogue.

HUGH WALLACE COMPANY,
DETROIT, MICHIGAN.

Don't Wear a Truss

FREE TRIAL OF PLAPAO



STUART'S PLAS-TR-PADS are different from the painful truss, being made self-adhesive purposely to hold the rupture in place without straps, buckles or springs—cannot slip, so cannot chafe or compress against the pelvic bone. The most obstinate cases cured in the privacy of the home. Thousands have successfully treated themselves without hindrance from work. Soft as velvet—easy to apply—inexpensive. Process of cure is natural, so no further use for trusses. We prove what we say by sending you Trial of Plapao absolutely FREE. Write TODAY. Address—PLAPAO LABORATORIES, Block 72, St. Louis, Mo.

PATENTS: For facts about Prize and Reward offers and Inventions that will bring from \$5000 to Ten Million Dollars, and for books of Intense Interest to Inventors, send 8c. postage to P. O. Patent Solicitor, Dept. 89, Barrister Bldg., Washington, D. C.

FIRE FROST PROOF NO PAINT



HOW THE INDIVIDUAL FARMER MAY BUILD A SILO WITH UNSKILLED LABOR AND MATERIAL FOUND ON HIS OWN FARM ACTIVE WORKERS CAN COVER A LARG FARM WITH OUR RAPID CONSTRUCTION. WRITE FOR CATALOGUE CEMENT SILO CO. KALAMAZOO, MICH

LET US TAN YOUR HIDE.



Cattle or Horse hide, Calf, Dog, Deer, or any kind of skin with hair or fur on. We make them soft, light, odorless, wind, moth and water proof, and make them into coats (for men or women) robes, rugs or gloves when so ordered. Your fur goods will cost you less than to buy them, and be worth more. Send three or more cow or horse hides in one shipment from anywhere east of Denver and we pay the freight both ways. Get our illustrated catalog which gives prices of tanning, taxidermy and head mounting. Also prices of fur goods, and big mounted game heads we sell.

The Crosby Frisian Fur Company,
571 Lyell Ave., Rochester, N. Y.

FOR YOUR HIDE'S SAKE

Have it tanned with the hair on for a coat, robe or rug. Moth proof, no smell. Freight paid on 3 hides. You furnish hide, we do all the rest and make coat for \$10.00 up. Robes \$5.50 up. Write for price list.

THE WORTHING & ALGER Co., Hillsdale, Mich.

Harness at Wholesale Prices!

Direct from our shops to you. FREIGHT PAID. We Can Save You Money. Write to-day for a copy of our HARNESS BARGAIN Catalog

JOE'S HONEST HARNESS CO., CARO, MICHIGAN.

Prices Sent Free
Chicago Scale Co.

FARMERS' CLUBS

Associational Motto.—
The skillful hand, with cultured mind,
is the farmer's most valuable asset.

Associational Sentiment.—
The farmer, he garners from the soil
the primal wealth of nations.

NOTICE TO CLUB SECRETARIES.

Only one half of the local Clubs have returned their report blanks, which makes the State Secretary's report very incomplete.

Apparently our membership is decreasing, but in reality we are growing, both in membership and enthusiasm.

This increase will be very evident if the local Clubs will return the blanks as they are the basis of compilation.

Please attend to this at once and oblige your Association Secretary.

The secretary can add nothing to the fine report Editor Waterbury has given, but wishes to thank you one and all for your co-operation of the last year, and extend the best wishes of the season. A Merry Christmas and a Happy New Year to every member of the Association.

MRS. C. P. JOHNSON,

ASSOCIATIONAL SECRETARY'S REPORT.

The Farmers' Club movement has shared in the prosperity of the last year. We report only two Clubs disbanded, Hanover and Wales, against 12 in 1909, and four new Clubs organized, China, of St. Clair, Jolly, of Saginaw, Laketon, of Muskegon, and Pittsford, of Hillsdale Co., and better still, the prevailing enthusiasm in the older Clubs clearly shown by the number of requests for copies of the constitution and by-laws and other literature on Club organization.

Many requests have been received from Missouri State Agricultural College, Platte Valley Stock Farm, etc., for literature on Club organization and they paid Michigan the tribute of being one of the foremost states in this great work.

Mrs. Katherine Grimes, of Tennessee, formerly a Michigan Club worker has been doing a fine work in her adopted state, and your secretary has enjoyed a most delightful correspondence with her.

The amount of work done by the officers of the State Association in 1910, is probably the greatest in the history of the Association. The work for the 5,000 annual reports, including soliciting advertising, consequent correspondence, shipping and mailing reports, and last, but not least, collecting payment for the ads, was a stupendous undertaking, and the amount of correspondence is proven by the bill for stamps, \$12.44, besides 250 postal cards.

Unstinted praise should be given Pres. Holden for his work in engineering the project and securing so many ads.

Of the \$120 due from this source, all has been collected except \$2.50 from one firm which refuses to pay its bill.

There have been three executive committee meetings during the year, the first occurring at the close of the annual meeting, Dec. 8, 1909, with Pres. Holden, treasurer, secretary, Directors Wright, Palmer, and ex-Secretary Mrs. Cheney all present.

The advertising scheme was discussed and a motion made and carried that the secretary solicit each Club for advertising matter. This was not done, as Pres. Holden shouldered that burden and relieved the secretary. Moved and carried that the secretary be paid \$10 for contingent expenses, and the meeting adjourned to the call of the president and secretary.

The second executive meeting was held at the Hotel Wentworth, Lansing, Feb. 24, 1910. There were present, president, secretary, corresponding secretary and Director Hallock.

The secretary's report was read and approved. The advertising scheme for the annual report was discussed and a motion made and carried that Pres. Holden continue the management of that department.

Moved and carried that an order be drawn on the treasurer for \$4.25. Mr. Holden's expense for printing circular, and postage.

Moved and carried that Mr. Holden have more circulars printed.

Moved and supported that we attempt to have the annual report printed by March 15. Carried. This was impossible as the ads. were not in at that time. The copy was taken to press April 4, but owing

to unavoidable delays they were not ready for shipping until July 1.

Moved and supported that the M. S. A. F. C. indorse the postal savings bank and parcels post laws as promoted by the Grange. On discussion the officers considered the ground fully covered by the resolutions on national affairs as passed at the annual meeting.

Moved and supported that the secretary have the resolutions on national affairs printed and a copy mailed to each U. S. Senator and congressman. Carried.

Adjourned to meet on call of president and secretary

The third meeting was held Sept. 23, in the educational building on the state fair grounds. There were present, president, secretary, treasurer, Directors Halladay, Hallock, Palmer, Marks and Mrs. Marks.

The secretary's report was read and approved. The date of the annual meeting for 1910 was fixed for Dec. 6-7, to be held in the senate chamber, Lansing.

Plans, subjects and speakers were discussed, the details of programs and all arrangements for the annual meeting were left to the Associational Secretary to be carried out.

The executive board decided that we have six sessions, calling to order at 10:30 Tuesday morning making this session entirely a business one for the appointment of committees, presentation of resolutions, payment of dues, etc.

Moved and supported that the secretary's financial bill be accepted and new bills allowed. Carried.

Adjourned to meet at annual meeting.

Owing to a cancelled date by one of the prominent speakers, the programs were not ready for distribution until Nov. 11. On that date programs were mailed to all Club presidents and secretaries, reports, blanks and credentials being included in the letter.

Programs were also mailed to all officers, ex-officers, many interested persons, and Lansing and Detroit daily papers.

Jan. 1, 1910, we listed 118 Clubs in 31 counties, with 7,000 members. During the year two are reported disbanded, leaving 116, plus four new ones, making a total of 120 in 33 counties listed at the present time.

A new Club in Oceana county reported at annual meeting of 1909, has failed to respond to all letters. Three Clubs refuse to join the State Association.

The secretary wrote all delinquent Clubs, with a net result of seven reports and \$26 dues.

July 1 and 2 the secretary shipped annual reports to the secretaries of local Clubs. This was a task entirely beyond a woman's strength, so a man was engaged to do the boxing, wrapping and tying. With the mercury around the 100 mark, and seven people working in a 12x13 office, it will be remembered as one of the most strenuous days in the secretary's experience.

Mr. Ross, Directors Palmer, Wright, Woodruff, and Mrs. C. A. Matthews kindly consented to distribute the reports to the Clubs of their respective counties, which materially lowered the shipping bill as those five boxes were sent by freight.

The expense bill on the reports should prove to this Association that a parcels post law is a needed legislation.

There are still on hand about 700 copies of the report and they will be cheerfully forwarded to any Club that failed to receive their package, if they will furnish the correct address.

Requests for assistance have been numerous and various, but as this report is necessarily longer that usual will not give an itemized list, but only say they were answered to the best of the secretary's ability. Letters of sympathy were sent Mrs. A. C. Bird, Mrs. D. E. Wetts and A. L. Chandler, who have all lost loved ones during the year.

The Farmers' Club page in the Michigan Farmer has been eagerly read, noting the reports from 39 different Clubs. Hadley and Elba, and Washington Center leading with 11 each, Ingham and Ray with eight each, Salem, Conway and Handy, Maple River and Odessa seven, Indianfields five. Let us hope for better lists next year.

The County Club Organization, of Tuscola county has been active during the last year and a new organization of the Clubs of Clinton county, deserves especial notice.

Your secretary wishes to thank you one and all for the uniform courtesy extended, and is especially grateful to ex-Secretary Mrs. W. L. Cheney, for her kindness and assistance during the past year.

May we, as Club workers, go home with added enthusiasm, feeling that one motto for success is, "At it, always at it," and "Don't die on third."

MRS. C. P. JOHNSON, Sec.

INDEX

FOR VOL. CXXXV.

From July 1, 1910, to January 1, 1911.

Farm.	dressing alfalfa, disk-	Seed corn, storing.....428
Alectride, the new	ing, seeding in wheat,	Seeding, new, killed....127
abrasive.....425	249; salt and lime or	Should the farmer leave
Alfalfa, a long experi-	plaster as a fertilizer,	his land?.....529
ence with.....428	fertilizer for beans, po-	Shrubby last plea for.561
an experience with.....528	tatoes and oats, inocu-	Silage hauling, low wag-
at Buckell Hill farm,	lating alfalfa, exter-	ons for.....146
.....126, 400	minating quack grass,	Silo, best paint for in-
disking.....206	seeding clover in buck-	side of.....126
how to grow in Mich-	wheat, seeding clover	steel covered, cement
igan.....251	without a nurse crop,	lined.....368
in Allegan Co.....349	279; pasturing clover	tight union between
in Barry Co.....400	meadows, grasses for	the staves and founda-
in Eastern Oceana Co.126	permanent pasture on	tion.....401
in Jackson Co.....163	low lands, manuring	Soil inoculation.....127
in Northern Michigan.110	sod ground for corn,	Sorghum grindings as
in St. Clair Co.....472	rotation of crops 303;	fertilizer.....528
in Wayne Co.....38	the potato crop, lessons	Spraying to kill weeds..187
in wheat.....281	learned from the sea-	Stone silo, plastering a..251
inoculating for.....58	son's experience, late	Stump land, clearing...401
observations on grow-	vs. early planting,	Sugar beets, 18 tons per
ing.....280	saving seed for next	acre.....561
on Cherry Hill Farm.561	year, 327; the potato	Supply and demand, law
time to sow.....127	stalk weevil, 328; po-	of.....561
with oats and peas...281	tato storage, economy	Sweet clover and alfalfa.230
Automobile on the farm.207	in adequate storage,	Tile drain for soil.....425
for pleasure and util-	economy in providing	size of.....304
ity.....267	storage, the need of	Tools, storing the.....401
Barley a desirable crop.400	inoculation in growing	use and care of.....90
Beans, select healthy	alfalfa, 347; leached	Top-dressing wheat with
seed from the field.126	ashes for soil acidity,	stable manure.....560
Black medick.....349	eradicating the Canada	Unsanitary closets.....529
Cellar floor, cementing.472	thistle, seeding run-	Upper Peninsula experi-
Clay soils, management	down land to clover,	ments.....250
of.....348	improving light and	Water supply, the.....74
Clover, corn and cattle.329	weedy soil, 367; essen-	system for the farm...185
seed, how about?.....38	tials in keeping ice,	Weed spraying.....368
sowing in August.....38	seeding clover on fall	Wheat after corn.....206
Concrete.....348	plowed land, destroy-	crop, harvesting the...22
block barn, practica-	ing weevil, using con-	fertilizer for.....126
bility of.....504	crete as veneer in	plowing vs. disking
Corn crop, harvesting	house building, what to	for.....349
the.....251	do with the potato	seeding.....186
crop, care of after	vines, 399; lime as a	Why small potatoes for
harvest.....74	soil corrective, chem-	seed.....561
mid-summer care of...38	ical analysis and soil	Wood, getting the winter's
Cover crops.....303	fertility, rotation, 424;	Workers, among the....163
Crates, making and us-	kafir corn, alfalfa,	Live Stock.
ing.....368	sorghum grindings as	American saddle horse,
Crop conditions, general	a fertilizer, the use of	the perfect.....509
review of.....449	corn for green manure,	Barn, plan for base-
Dry weather farming...126	447; making concrete	ment.....75
Ensilage from shock	blocks, 448; planning	Beans cull for sheep and
corn.....400	for next year, what	hogs.....252
Ensilage corn fodder...474	makes the wheat yellow,	Beet top poisoning....350
Fall crops.....305	471; the joint rot	Boar, the neighborhood.426
work, the.....348	of the bean stem, a	value of pure-bred....402
Farm Notes.—Cultiva-	winter cover crop for	Breed sales at Interna-
tion of the corn crop,	the alfalfa, 504; re-	tional.....533
mustard secured in	storing soil fertility,	Breeders' meetings at In-
clover seed, questions	the bean crop, 527;	ternational.....530
on applying lime, 1;	managing a poor field,	Bulls and boars, pastur-
the promises and dis-	528; applying stable	ing the.....282
couragements of the	manure in the winter,	Butchering and curing,
season, salt as a reme-	testing seed corn in an	home.....233
dy for Canada thistles,	incubator, sawdust as	Calves, diarrhoea in....331
buckwheat culture	a fertilizer, 560.	first year.....40
the relation of	Farm engineering.....305	Cattle feeding, late sum-
the working capital to	wages vs. city prices..529	mer.....128
the fixed capital, millet	work, the.....162	getting on full feed...476
as a forage crop, 21;	Farmer adopts auto...230	getting on winter feed 231
proper care of mea-	Fence posts from osage	summering the young. 76
dows and new seed-	orange hedge.....449	Cholera infected prem-
ing, analyzing soils,	Fertilizer and seed,	ises.....148
lime for acid soils, 37;	kind to use.....126	Colt, the spring vs. the
late summer seeding of	for wheat and clover.187	fall.....209
clover, paris green vs.	for wheat on clay	the weanling.....252
arsenate of lead pas-	soils.....162	training.....372
turing alfalfa, paint-	Fields, name the.....38	Colts, feed for after
ing roofs, 57; cultivat-	Foundation, secure a	weaning.....231
ing the potato crop,	solid.....75	growing the.....111
spraying to prevent	Fur coats and robes...529	Community breeding...507
blight, dodder in the	Furs, money from.....400	Competition in produc-
clover fields, 73; fairy	Golden rod as a pest..280	tion and salesman-
rings in the lawn, 74;	Grain crops, handling the 58	ship.....91
clover and alfalfa dod-	Ground phosphate rock.505	Criticisms beneficial....23
der, seeding alfalfa in	Harrow, the double ac-	Emergency treatment...426
grain, thickening stand	tion disk or cutaway 28	Ensilage for brood
alfalfa in millet, crim-	Hay, a device for distri-	mares.....371
son vs. red clover, 89;	buting in the mow...22	for lambs.....371
crops for green ma-	loss in stored.....401	Ewe flock, care of....147
nure, disking vs. plow-	and straw, keep on	lams, keep growing...427
ing for winter grain,	the farm.....528	Ewes at breeding sea-
killing locust grubs,	caps, weights for...38	son.....350
treating seed wheat for	crop, securing the...280	recruiting.....282
smut, 109; menace of	Hessian fly, the.....368	Eyes of the master, the.188
the dodder pest, white	Highway improvement,	Feeders' and Breeders'
clover, spraying pota-	a plan for.....250	Problems.—Flaxseed
atoes, 125; fall plowing	Hired man and his	meal for calves, 24;
for alfalfa, top-dress-	work.....187	wheat as feed for hogs,
ing fall plowed land	Humus and fertility. 368,	rye as a pig feed, 252;
for alfalfa, how closely	472.	the feeding value of
to clip alfalfa, 145;	Kafir corn.....281	sorghum, 282; utilizing
handling the second	Lillie Farmstead Notes,	the corn crop, the wa-
crop of clover, rust in	2, 22, 57, 90, 126, 146, 230	ter supply, 370; corn
wheat, 146; sweet clo-	280, 369, 401, 472.	and cob meal for the
ver and alfalfa, fresh	Lime and manure.....400	horses, 402; regularity
vs. old clover seed,	Live stock and soil fer-	as an economic factor,
sowing timothy in	tility.....473	the place carrots
last year seeding,	Machinery, care of....328	should occupy in the
treating seed wheat	Manure, a substitute	horses' ration, cotton-
for smut, 161; fall vs.	for, in seeding to al-	seed meal for hogs,
spring plowing for po-	alfa.....400	475; how many sheep
tatoes, the slow de-	Northeastern Michigan	per acre, 506; pota-
velopment of interest	development of.....110	toes for work horses, 562
in alfalfa, eradicating	Peas and oats, when to	Feeding question.....492
wild carrots, cow-peas,	cut for hay.....38	Flock, breeding the...350
185; building a potato	Plowing early.....127	grading up the.....208
warehouse, wireworms,	Potato crop, the.....505	after lambs are wean-
186; seeding a perma-	prospect.....280	ed.....60
nent pasture, 205; har-	seed question.....561	in the fall.....306
vesting sorghum, 206;	Potatoes, fertilizer for.449	Frosting horses' bits...562
ashes as a fertilizer,	Produce, when to sell. 401	Growing baby beef.....3
the corn crop, is it	Pump and pipe troubles.425	Hog chute, a handy...208
profitable to sow salt?	Quack grass, another	crop, maturing the...40
rye for pasture and	way of killing.....529	house, concrete floor
green manure, the	Roads, building stone...21	for.....147
proper use of vetch,	Sand-clay roads, in-	raising, some points on 76
harvesting the potato	crease in.....472	Hogs, give plenty of wat-
crop, 229; pasture	Sandy soils, management	er.....282
grasses for low lands,	of.....304	hauling in hot weather 60
mixing paint 230; al-	Scab in potatoes, sulphur	
alfalfa for low land, top-	treatment for.....75	
	Seasonable work.....561	

The timber harvest ... 410
 The tuberculosis problem ... 238
 The wonderful development of aviation ... 310
 The wool situation ... 94
 What organization will do ... 568
 West Mich. State Fair ... 194, 238
 Magazine Section and Home and Youth.
 A basket granary ... 298
 A biblical scrapbook ... 485
 A bird hunt ... 46
 A Christmas suggestion ... 48
 A dissertation on apples ... 97
 A geography party ... 523
 A little gift ... 541
 A surprise grandpa ... 485
 A wire cotton-reel holder ... 485
 Among our youthful mechanics ... 133
 An evening with "Lige" and "Leap" ... 214
 An hour of mystery ... 364
 An interesting find ... 259
 An old, old remedy ... 213
 An unexpected visitor ... 202
 Ancient Ann ... 171
 Animals that fish ... 462
 Back to nature ... 32
 "Chinko" ... 313
 Factors in rural education ... 433
 Familiarity among animals ... 133
 Filling the Christmas pocketbook ... 541
 Getting Mrs. Parks home ... 122, 132
 Hens that I have known ... 381
 Holiday pastimes ... 541
 How Marjorie earned her Christmas money ... 433
 How Rex paid his debts ... 413
 How to make a sail wagon ... 172
 Japanese color prints ... 539
 Lincoln's Thanksgiving proclamation ... 423
 Little essays of fact and fancy, 97, 133, 171, 215, 345, 379, 435, 484.
 Man's progress in the art of flying ... 171
 Michigan's first consolidated school ... 43
 My Friend Johnny ... 433
 On the flag pole ... 8
 Origin of present day Christmas forms and customs ... 538
 Perry's victory of Lake Erie ... 169
 Pictures for the home ... 377
 Romantic life of Herbert Furlong, 44, 96, 170, 298, 482.
 Sabon's Cabin ... 460
 Sir Muskrat, king of the silent place ... 483
 Some side lights on the annual November holiday ... 432
 Telling the truth about Santa Claus ... 576
 Thanksgiving, its history and significance ... 423
 The apple in history ... 415
 The auto tire and the rubber boot ... 414
 The birthplace of Edison ... 213
 The Bluebird's cruise ... 378
 The bride's tree ... 522
 The curiosities ... 158
 The David of the Palmer farm ... 86
 The game lacrosse ... 134
 The Gates of Bakappelin ... 537, 574
 The Hiltown celebration ... 7
 The long winter evenings ... 462
 The mahogany chest ... 246
 The Meriweather Thanksgiving ... 431
 The mother ... 364
 The northwind's masonry ... 256
 The premature jump of freedom ... 8
 The progress of the Panama Canal ... 311, 344
 The prophecy of Rain in the Face ... 97
 The seventeen year locust ... 38
 The storming of Fort Hornet ... 215
 The talisman of the farm ... 216
 The thrift of the squirrel ... 379
 The vessel that found the Northwest passage ... 97
 The woman in the case ... 134
 Their first Christmas tree ... 574
 Those anti-laziness germs ... 68
 Tobogganing down the Andes ... 95, 131
 Trees of southern California ... 481
 Trimming the Christmas tree ... 541
 Uncle Malachi's souvenir umbrella ... 202
 Watches and watchmakers ... 381
 What's the use ... 8
 Why boys leave the farm ... 486
 Why does popcorn pop ... 247
 Youthful engineers ... 215
 POETRY.
 A Dream of home ... 485
 Be brave ... 460
 Christmas in the Old Home ... 537
 Day dreams ... 122
 Going home tonight ... 541
 Good-natured ... 433
 Grandpa on the farm ... 431
 Halloween ... 364
 Haying time ... 45
 Independence Day ... 9
 Leaving home ... 261
 Memory day ... 240
 Nectar of golden rod ... 202
 Ode to Lake Michigan ... 246
 Off to school ... 215
 Old-home week ... 86
 Only ... 345
 Our bossy cow ... 381
 Out on the steps ... 97
 Portulaca ... 133
 Robby's kittens ... 46
 School times ... 215
 September ... 216
 Shut-in time ... 487
 Thanksgiving ... 431, 435
 The Bells of Yule ... 574
 The county fair ... 171
 The fair weather prophet ... 158
 The Fourth of July ... 7
 The golden age ... 298
 The long ago ... 96
 The mother's quest ... 8, 522
 The nest I did not find ... 313
 The old blue pitcher ... 415
 The old burying ground ... 241
 The old water mill ... 32
 The recluse ... 68
 The smell of the leaves ... 379
 The wee three ... 123
 Three little friends ... 259
 Winter ... 484
 Household.
 A batch of bags ... 11
 A dozen weddings ... 34
 A little preachment to mothers-in-law ... 546
 A little talk on Fletcherism ... 34
 A modish gingham frock ... 48
 A necessary duty ... 488
 A reading and gossiping club ... 488
 Abas with Scrooges ... 544
 About several things ... 545
 Advice on table etiquette ... 385
 Anent the season's hat ... 294
 Apples for sluggish liver ... 295
 Are you too tired to eat? ... 135
 Arranging the table, problem of ... 419
 Artistic in home furnishing, the ... 218
 Bank account vs. whole-some home life ... 316
 Bean water in the sink ... 363
 Beef, what cooks should know about ... 48
 Better stop your kicking ... 70
 Blessed is she who knoweth her limitations ... 418
 Bringing city kitchen to country ... 120
 Carpet bugs, exterminating ... 264
 Christmas gifts ... 437, 571
 for the old ... 516
 hints ... 517
 suggestion, a ... 386
 sweets ... 545
 what to make for ... 384
 City visitor, defense of ... 220
 Clothes make the woman ... 84
 Codfish dishes ... 437
 College, shall our children go to ... 385
 Counterpane, is easily made ... 295
 Country women as money earners, 34, 70, 99, 135, 174, 218, 262, 316, 362, 418, 468.
 Couch, a box ... 317
 Dainty apron ... 545
 Do you want to do some good? ... 47
 Don't be a booster ... 175
 Don't compel Mary to mind the baby ... 489
 Don't shorten the summer ... 176
 Dresses of natural color linen are smart ... 85
 Drying green vegetables ... 71
 Elderberry wine, how to make ... 85
 Fall fashions ... 218
 Family income, her share of ... 10
 Fancy work ... 490
 Farewell for carvings on house furnishings ... 420
 Fashion notes ... 420
 Fashion's follies ... 316
 Feast and frolic of fruit, a ... 244
 Fireless cooker, easily made ... 220
 Flies, a way to kill ... 136
 Fly, menace of the ... 120
 Food, a perfect ... 482
 Frozen dainties ... 100
 Fruit is invaluable ... 157
 Glove protector and other gifts ... 544
 Gifts easily made by deft fingers ... 570
 Grape juice—its manufacture and uses ... 136
 Hallowe'en fun and goodies ... 342
 Hand embroidery, or braiding, ornament some fine belts ... 47
 Hand-made medallions ... 84
 Handy bag is a welcome gift ... 516
 House-balls for children ... 517
 Hemstitching on a machine ... 263
 Holder for lids ... 318
 Home queries, 11, 48, 120, 135, 156, 201, 220, 245, 295, 318, 420.
 House plants in winter ... 318
 How do you arrange your table? ... 294
 How shall I serve? ... 438
 How shall the farmer's wife save time? ... 120
 If you start a club, keep it informal ... 570
 If you won't work don't find fault ... 200
 Importance of caring for the body ... 436
 Improper dieting and the drug habit ... 316
 Kitchen, a complete ... 200
 a white ... 294
 Knitted diamond lace ... 384
 Lace, wide knitted ... 10
 Late summer fancies for the table ... 156
 Let the guest work ... 167
 Making Christmas candy ... 467
 Meat and eggs, necessity of eating ... 35
 Merely a question of vision when parents think their own perfect ... 362
 Milk as a food and disease carrier ... 546
 Money in cottage cheese ... 85
 Menace of the fly ... 120
 The new "hobble" skirt ... 318
 Notes on dyeing ... 201
 Other forms of animal food ... 438
 Over-concentration is worse than work ... 262
 Over-ripe fruit spoils jelly ... 11
 Overshirts are out ... 219
 Papering a room ... 318
 Paraffin in canning ... 71
 Pickling time is upon us ... 200
 Pork is a good winter food ... 317
 Pretty Thanksgiving tables ... 438
 Rick-rack embroidery ... 386
 Recipes.—Sundled strawberries, pies made from cold meat, lily salad, vanilla ice cream, turnip soup, red cabbage salad, breaded rabbit, pineapple dessert, 10; stuffed tomatoes, caramel sweet potatoes, cream cabbage, sponge cake, koffee kuchen, date and nut sandwich, 100; boiled salad dressing, cafe frappe, corn pudding, 295.
 Running water in home ... 47
 Send references to the fresh air society ... 85
 Seventeen children sent to country ... 70
 Short cuts to housekeepers, 11, 35, 48, 71, 85, 120, 136, 176, 201, 219, 245, 293, 295, 318, 343, 363, 386, 420, 438, 468, 490, 517.
 Six-gored skirt ... 571
 Sleeve shields as Christmas gifts ... 488
 Some Christmas dainties ... 489
 Spontaneous response to pie for homes ... 100
 Styles for everybody ... 48
 Tatted all-over ... 571
 wheel ... 362
 Telephone no longer a luxury ... 384
 The Christmas dinner ... 516
 The country girl's chance in town ... 518
 The daughter-in-law in the home ... 466
 The hostess in November ... 436
 The invalid's gifts ... 488
 The kitchen slate ... 71
 The middle blouse ... 48
 This is the wife for me ... 489
 Those uninvited guests ... 71
 To dress up a plain waist ... 35
 To keep the baby warm ... 316
 Too much stress placed on duty ... 10
 Town or country for the retired farmer ... 343
 Training the boy for a husband ... 262
 Two precautions against dust ... 264
 Utilizing old leather beds ... 363
 Vacation, a novel ... 47
 Ventilate the vegetables when they cook ... 220
 Veal is difficult to digest ... 384
 Washing heavy camping suits ... 467
 Wastes turned into cash ... 294
 What foods are needed ... 363
 What the boy can do for Christmas ... 466
 Why some women are nervous wrecks ... 244
 Will woman suffrage cure corruption ... 99
 Wives and mothers must be self-reliant ... 218
 Word of appreciation ... 420
 Farmers' Clubs.
 A debating club ... 29
 A law in line with Memory day sentiment ... 397
 A most successful club fair ... 359
 Annual picnic dates, 19, 29
 Associational meeting ... 576
 Change in program ... 501
 Club discussions, 19, 53, 65, 81, 105, 117, 153, 197, 227, 271, 301, 325, 339, 397, 421, 469, 501, 525, 555.
 Club picnics, 53, 65, 117, 183, 197.
 Experimental work for the farmers' club ... 143
 Famous salaries paid to famous singers ... 29
 Farmers' Clubs in other states ... 105
 Memory Day ... 240
 Memory Day (song and music) ... 240
 Notice to local clubs ... 445
 Prepare for Memory Day ... 197
 Preparation for the annual meeting ... 421
 Program for 18th annual meeting ... 469
 Publish plans for and reports of club fairs ... 227
 Success for the club fair ... 301
 Suggestions offered by Associational Director Palmer ... 421
 The annual meeting, 359, 525, 195
 The associational meeting ... 555
 The corn plant ... 301
 The date of the club meeting ... 339
 The farmers' club and community agriculture ... 81
 The home-coming ... 183
 The new day ... 153
 The share of the farmer's wife ... 339
 The simple life ... 53
 The viewing committee in club work ... 143
 The Wixom Grange and Farmers' Club fair ... 445
 Those Memory Day plans ... 227
 To help the cause of Memory Day ... 240
 What educators think of farmers' clubs in Colorado ... 501
 What the local clubs are doing ... 576
 Will your club be represented? ... 501
 Grange.
 A unique grange program ... 469
 117, 325.
 A successful grange fair ... 501
 August programs ... 65
 A grange day at State Fair ... 197
 Among the live granges, 19, 53, 65, 105, 153, 301, 325, 339, 359, 421, 445, 501.
 Granges in other states, 53, Bringing Jackson Co. farmers into the grange ... 81
 Co-operation ... 554
 County experiment farms ... 105
 December programs ... 469
 Essays in connection with fairs ... 469
 Essentials of a good Pomona grange ... 227
 First time at state grange ... 501
 Grange in the far west ... 227
 Grange life shows in Otsego county ... 143
 Grange participates in local and county fairs ... 143
 Granges and county school commissioners ... 421
 Granges at the fairs ... 301
 Greatest of these ... 359
 July program ... 19
 Looking forward ... 81
 Making a success of the outdoor meetings ... 65
 Men's mass meetings suggested ... 397
 November programs, 339, 397.
 Oceana Center Grange dedicates hall ... 143
 Over 400 new granges this past year ... 325
 Pomona meetings ... 29, 65
 Postal savings banks a reality ... 29
 Preparations for state grange ... 271
 Reason for faith within us ... 19, 53
 September programs, 183, 227.
 State grange of 1910 ... 577
 The coming state meeting ... 525
 The farm labor problem ... 397
 The 4th annual meeting of national grange, 525, 554.
 The grange and Memory Day ... 241
 The grange's crown ... 105
 The nub of the country life problem ... 339
 The old burying ground ... 241
 The older Pomona granges ... 65
 Think on these things ... 271
 This week's state meeting ... 554
 Welcome to the new members ... 445
 Why encourage juvenile granges, 153, 183, 197.
 Why farmers need organization ... 117
 Wixom Grange and Farmers' Club fair ... 445
 Illustrations.
 Acme juvenile grange ... 183
 Aeroplane pictures ... 171
 Agricultural exhibit at State Fair ... 279
 Alfalfa crop on farm of A. J. Russell ... 527
 curing ... 169
 "A pesky sliver" ... 9
 Apiary of Mrs. O. E. Gibson ... 113
 Apple display at state Grange meeting ... 577
 exhibit at State Fair ... 496
 Arm bands ... 437
 Automobile building at State Fair ... 279
 show at West Michigan Fair ... 249
 Baby bag ... 316
 Barn built by W. E. Lecky ... 471
 with curved roof ... 473
 with protecting roof over stable ... 185
 Baby show at Kingsley Grange fair ... 421
 Beans on farm of N. J. Crawford ... 247
 Belt embroidered ... 47
 Berkshire boar, first prize winner at the State Fair ... 330
 Berries of pepper tree ... 481
 Best crop grown by patrons of Delta Co. ... 359
 Birthplace of Edison ... 213
 Black canyon of Colorado ... 257
 Blanc mange with candied violets ... 244
 Bleeding chicken illustrations ... 211
 Boston terrier dogs as money makers ... 34
 Boy with sled and dog ... 485
 with steer ... 97
 with yoke of steers ... 259
 Boys playing Indian ... 485
 Box couch ... 317
 Brood mare and colts ... 146, 371
 Building for housing the exhibit of farm products at state grange meeting ... 525
 Cabbage field ... 182
 Cakes with whipped cream and grapes ... 436
 Car lot exhibit of cattle, hog exhibit at International ... 427
 Carpet and rug weaving ... 174
 Cascades near legendary lover's rock ... 213
 Cedar lodge ... 313
 Cement plastered, steel covered silo ... 367
 Centerpiece of barn filled with fruits ... 436
 Champion fat steer at International ... 531
 two-year-old Short-horn steers at International ... 563
 "Chinko" ... 313
 Christmas design ... 559
 City kitchen ... 120
 Clover dodder ... 89
 Color embroidery designs ... 418, 419
 Colt ... 3
 Corn crop on farm of Geo. Livesey ... 401
 Corn field ... 144
 Cotton-reel holder ... 485
 Cow, a good business ... 77
 Cows in pasture on farm of C. S. Bartlett ... 1
 Cross section of Pedro Miguel locks ... 344
 Cultivating the fruit plantation ... 338
 Cup for Michigan fruit ... 237
 Cutting alfalfa ... 37
 corn with binder ... 471
 Dainty apron ... 545
 Dodder (two species) on clover ... 125
 Dog ... 433
 Doily roll and cover ... 544
 Drawing bay ... 37
 Engine and builders ... 215
 Familiar farm friends ... 133
 Fancy dishes for the table ... 156
 Farm buildings of Ed. Fitzpatrick ... 399
 of G. E. Wilson ... 57
 of Geo. G. Markham ... 161
 of Louis Hartel ... 205
 of Chas. H. Jessup ... 447
 of David Steeby ... 527
 of S. A. Doty ... 229
 Farm house covered with prepared roofing ... 369
 Fashions ... 218
 Fondness for the cow ... 52
 Fruits not afraid of West Michigan Fair ... 270
 Gatun upper lock, at Panama ... 311
 east wall ... 311
 Grand champion car load of fat steers at International ... 503
 fat wether at International ... 506
 Poland China boar at State Fair ... 507
 Shropshire sheep at West Michigan Fair ... 253
 Grain exhibit at West Michigan Fair ... 249
 Grain thresher made by 17-year-old boy ... 133
 Grand Traverse county orchard of 83 acres which sold for \$10,000 ... 73
 Grape vine mulched ... 394
 Handkerchief border ... 386
 Hand-made medallions ... 84
 Haying time ... 45
 Hives in trench before covering ... 392
 Hobble skirt ... 318
 Hog chute ... 208
 Holstein-Friesian cow ... 548
 Horses, good ... 475
 Ice cream horns of plenty ... 244
 Jacoba Irene (cow) ... 388
 Jack-o-lantern ices ... 342
 Japanese color prints ... 539
 Juvenile grange at Pittsburgh ... 153
 Kafir corn ... 281
 King Charles I (painting) ... 377
 Kitchen plan ... 200
 scene ... 262
 Knitted diamond lace ... 384
 Lamb browsing ... 133
 Largest basket in the world ... 298
 Louis and Leah Terpening, their home, ducks and dog ... 541
 Majesty of winter ... 257
 Mare and colt ... 145
 Master Lee Shoop and his dog ... 171
 Michigan's first consolidated school ... 43
 Michigan wheat field ... 109
 Midnight cakes with owls on guard ... 342
 Mrs. Carnahan's flock and prizes ... 99
 Mrs. Foster's home and gardens ... 70
 Muff lining ... 544
 Mules popular in Michigan ... 127
 Murphy, Miss Anna ... 518
 Needle book made of brass rings ... 370
 Northeastern Michigan development bureau's exhibit at Michigan State Fair ... 303
 Northern Michigan farmstead ... 347
 Off to school ... 215
 Ogden grange exhibit at Lenawee Co. fair ... 143
 O. I. C. hogs bred and fed by Fred Nickel ... 451
 Orange tree ... 483
 Orchard of David H. Miller ... 73
 Ottawa juvenile grange ... 197
 Our bossy cow ... 381
 Out on the steps ... 97
 Oxford Down ewe, grand champion ... 351
 Packing apples in orchard of Mr. Young ... 226
 Palms, three varieties ... 481
 Peach tree mulched ... 394
 Pears ... 552
 Pedro Miguel locks at Panama ... 344
 Pepper trees ... 481
 Perry's great battle ... 169
 willow ... 169
 Percheron stallion, 23, 59, 111.
 Picking and packing apples ... 412
 Pioneer school house ... 433
 Plots showing benefit of dried bone and phosphate used with potato ... 54
 Pocket, a convenient ... 570
 Portable hog house ... 163
 Prize-winning Shropshire ewe ... 283
 Reserve champion at International ... 531
 Ribbon case ... 570
 Rick-rack embroidery ... 386
 Road building illustrations ... 21
 Rooster looking for a bite ... 433
 Rove is lonesome ... 215
 Row of Eucalyptus trees ... 483
 Rural cemetery ... 241
 Sail wagon ... 172
 Scenes in the Andes, 94, 131, 133.
 Shamrock II ... 531
 Sheep in pasture ... 91
 Shropshire ram lamb, prize-winner ... 307
 Side elastics ... 437
 Silo in pasture ... 327
 Six-gored skirt ... 571
 Sleeve shields ... 488
 South Boston Grange exhibit ... 501
 Spillway at Gatun ... 313
 Squabs ... 135
 Stately dwelling in Milan, Ohio ... 213
 Studding designs for boys ... 466, 467
 Sugar beet field ... 205
 Sugar beets on farm of J. J. Hirst ... 447
 Supporting large limbs ... 444
 Swarm of bees ... 62
 Sweet corn crop ... 552
 Tatted all-over ... 571
 wheel ... 362
 Teaching colt a new trick ... 45
 The old mill (painting) ... 377
 The Persian Madonna (painting) ... 379
 The season's hats ... 294
 Three little friends ... 259
 Three rural schoolhouses in Kalamazoo Co. ... 45
 Threshing rig and employees ... 89
 Tie rack ... 544
 Tomato field of C. M. Joslin ... 106
 Tools exposed ... 185
 Uncle Samuel, Jr. ... 381
 Vessel that found the northwest passage ... 97
 Vesuvius in eruption (painting) ... 377
 View of natural beauty ... 379
 Welsh pony champion stallion ... 209
 Whisk broom holder ... 545
 Wide knitted lace ... 10
 Wilde, State Deputy J. F. ... 81
 Wixom grange and farmers' club fair ... 445
 Work bag ... 516
 Worthy apple tree ... 292
 Yoke of oxen ... 554

Arcadia, Okla.
 Wilbur Stock Food Co., Milwaukee, Wis.
 Gentlemen:—Received my watch in good condition and was surprised to find it so nice, and I appreciate it very much. It has kept good time ever since I got it and don't see how you could have sent it.
 I think your Stock Tonic is the best made. Have used several different kinds of Stock Tonic, but never found any that will do as much as yours. I have sold ten pigs (would have been six months old the

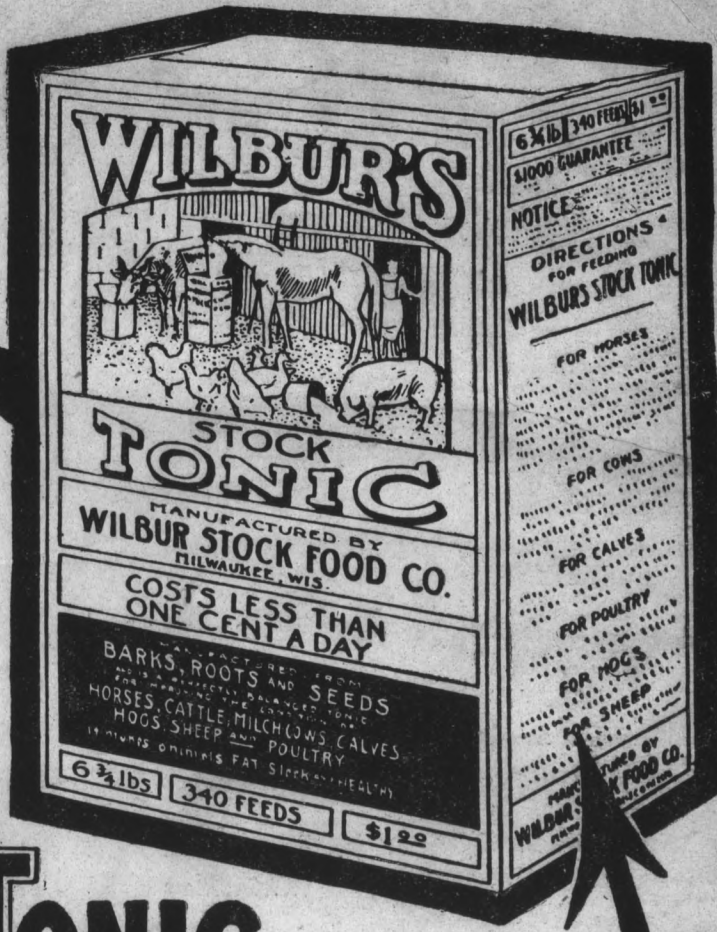
middle of February) and they weighed 200 pounds apiece. Some wanted to know how I fattened them and what I fed them that made them grow so fast, and, of course, I had to tell them it was Wilbur's Stock Tonic.
 I have seven head of horses and they are rolling fat. When I hitch them up they are so high-lifted that I can hardly do anything with them. They are always up and ready to go. Everybody wants to know what keeps them in such good con-

dition and I tell them it is your Stock Tonic that does it. I have a team that is equal to your champion team on your envelopes. They are fine, and eat Stock Tonic three times a day. I thank you for Wilbur Stock Food Co., Milwaukee, Wis.
 Gentlemen:—Enclosed find draft for \$13.00 in payment for Stock Tonic. I have used two pails of your Stock Tonic, it is your past favors, and remain,
 Your agent
 W. M. Randle,
 Kremmling, Colo.

certainly fine. I have used almost everything on the market, but nothing to compare with the Wilbur Stock Tonic. My milch cows, calves, hogs, and colts, after feeding three days, I noticed the change. It has saved me many a sack of grain. My horses are slick and nice, also are working hard every day.
 Will enclose watch certificate and thanking you for past favors, I am,
 Yours truly,
 (Signed) Casper Schwab.

FREE

This Big \$1.00 Box OF WILBUR'S STOCK TONIC



Simply clip out the coupon and mail to me at once.
 Not one cent to pay—not one thing to do.

I want to give you this big 6 3/4 lb. box of my Stock Tonic absolutely FREE. I want you to feed it to your horses, your cattle, your hogs, your sheep and your poultry. I want you to know for yourself why Wilbur's Stock Tonic is fed by over 500,000 farmers and stockmen. Why it saves feed—prevents disease and doubles your profits.

Send Me No Money—Not Even a Stamp—This Big Box of Stock Tonic Costs You Nothing

Not one cent now or any other time do I want for this big \$1.00 box. Contains 340 feeds—enough for a good practical feeding test. I know that every stock raiser who tries this free \$1.00 box will continue to use my Tonic. That's why I can afford this great free offer—that's why I am ready to send one million free boxes to one million American farmers.

Is it worth a two cent stamp to write for my big free \$1.00 box? Do you want to double your profits, and save your live stock? If so clip out the coupon and mail today.

Wilbur's Stock Tonic builds up run

down horses—cleans the blood, softens the stomach. Revitalizes the entire system and positively prevents all disease.

My tonic doubles the milk and butter when fed to milch cows, fattens hogs and beef cattle for market in 40 days less time. Prevents scours when fed to sheep.

As a poultry raiser and egg maker it has no equal—makes strong, healthy chicks, doubles the egg supply, and absolutely prevents Pip, Roup, Gapes, Bowel Trouble and all Poultry Disease.

\$1000.00 Guarantee

I will pay \$1000.00 cash to any person who proves this offer of a FREE \$1.00 box is not exactly as advertised.

Fill out and mail the coupon today - at once.

J. P. Wilbur President
 WILBUR STOCK FOOD CO.
 153 HURON STREET
 MILWAUKEE, WIS.

©5

\$1.00 FREE BOX COUPON

F. P. WILBUR, Pres.,
 Wilbur Stock Food Co.,
 153 Huron St., Milwaukee, Wis.

Please send me the \$1.00 box of Wilbur's Stock Tonic free of charge.

I own _____ horses _____ cattle _____ hogs _____ poultry.

My Name _____

P.O. _____ R. F. D. _____

Freight Sta. _____ State _____