

# MICHIGAN FARMER

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**I**N many sections of the country, cucumbers and muskmelons are planted in large areas but now in some localities the growth of these two, ordinarily profitable, crops has been discontinued. The chief cause for discontinuing is that in certain years, the cucurbits (a name applied to plants of the gourd family), died and the crop was a failure. In a large part, the failure of cucurbits is due to plant diseases. The farmer is apt to ascribe the failure to the weather but even in the cases where the weather has been especially unfavorable, the ultimate causes of the loss of the crop are the plant diseases which have been favored by the weather, that is, there are certain conditions of the weather that are not favorable to the plant, but nevertheless these conditions are at the same time favorable to the parasite and hence the plant, which is weakened by the surrounding conditions, is more rapidly attacked by the parasite and the growth of the parasite is much more vigorous. So in certain years, when the rain is especially plentiful, we find a cucumber disease a great deal more prevalent and much more important as an economic loss. The farmers will say, "there was not rain enough at the time the pickles were growing," or, "there was too much rain," but as a matter of fact, the pickles have been formed but one of the plant diseases have stripped the plant of its leaves and attacked the fruit as fast as it developed and hence there was no crop.

It is my purpose, in this series of articles, to take up the various diseases of cucurbits and the one which I wish to handle in this particular article is the wilt. Wilt has been found in many parts of the United States extending from Massachusetts to Nebraska and Colorado and is especially important in Michigan. The symptoms of the disease are indicated by the name since the effect of this disease on the plants is to produce a wilting which may take in a single leaf or it may affect an entire plant. The disease generally starts at the center of a hill. It is therefore, most common on the older leaves and the disease progresses in the leaf, down the stem and into the main runner, immediately causing a wilting of all parts of the plant beyond the diseased part. The first sign of the disease is a yellowing of the leaves of certain runners or this may even include all the

## CUCUMBER AND MUSK- MELON WILT.



Wilted Tip of a Cucumber Vine. Striped Beetles Spread Wilt Infection.

leaves of the plant of a certain hill. This yellowing of the affected parts is undoubtedly caused by an interference with the water supply.

### Cause.

The cause of the wilting of cucurbits is a bacterial organism which is specific in that it works only on those plants, so far as is known and occurs in nature only on this series of hosts. This germ works especially in the water tubes of the affected plant and the symptoms that have just been described are all traceable to the filling of these water tubes by the germs. Right here may be described the very interesting test which may be applied which will enable the farmer to tell readily whether his plants have been killed by wilt or not. The germs which cause the wilt, are very sticky and hence if the mass of germs can be touched with the finger, long cobwebby threads of the material can be pulled out. If one cuts across a wilted cucumber stem and waits about one-half minute for the bacterial slime to ooze out of the cut watertubes and then touches this mass with the finger, he can draw out the material in a long cobwebby thread—a thing which can not be done with cucurbits unless they are killed by this sticky germ. Since there are several other causes which will cause the wilt of runners and here might be mentioned the attack of certain insects on the runners near the base or even injury by tramping on the runners, it is well for the farmer to know this test since he can by it decide whether the plants are affected or not.

Practically all of our knowledge of this disease has been given us by Dr. Erwin F. Smith, of the Bureau of Plant Industry, and he has been able to produce the disease from pure cultures a great number of times and he has succeeded in spreading the disease by means of the common leaf-eating beetles. Observations in the field bear out this statement of Dr. Smith's and no doubt the source of infection in the field or any spread of the trouble from one plant to another is due to the small striped cucumber beetle. Other insects, of course, may assist in this work but the chief factor in the spread of the trouble is this common destructive insect.

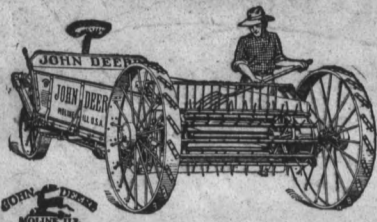
There is an interesting connection between the weather and the amount of the disease and such a growing season



An Illustration of Wilt of the Muskmelon, Showing an Entire Runner Affected. Diseased Plants should be Pulled and Burned to Prevent Spread of the Disease.

## John Deere Spreader

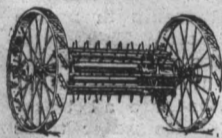
The Spreader with the Beater on the Axle



Take any manure spreader you have ever seen, remove all the clutches and chains, all the countershafts and stub axles, do away with all adjustments and mount the beater on the rear axle.

Rebuild the spreader so that the top of the box is only as high as your hips. Make it stronger. Remove some two hundred trouble-giving parts and throw them away. You will have some sort of an idea of what the John Deere Spreader, the Spreader with the Beater on the Axle, is like.

### The Beater on the Axle



The beater and all its driving parts are mounted on the rear axle. This construction is patented. You cannot get it on any other spreader made.

Power to drive the beater is taken from the rear axle through a planetary transmission (like that on automobiles). It is positive, runs in oil, and does not get out of order.

### Few Working Parts

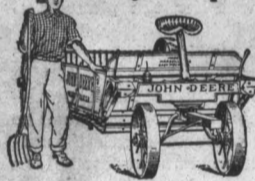
The John Deere Spreader is so simple that there are no adjustments. It has some two hundred less parts than the simplest spreader heretofore made.

There are no clutches to throw it into gear. The lever at the driver's right is moved back until the finger, or dog, engages a large stop at the rear of the machine. All the chains and adjustments have been done away with.



Out of Gear

### Only "Hip-High"



Easy to Load

Because the beater is mounted on the rear axle, it is only "hip-high" to the top of the box. Each forkful of manure is

put just where it is needed. You can always see into the spreader.

Roller bearings, few working parts, the center of the load comparatively near the horses, and the weight distributed over four wheels, make the John Deere Spreader light draft.

Spreader Book Free—Tells about manure, when and how to use it, how to store it, and a description of the John Deere Spreader. Ask for this book as Package No. Y. 5.

### John Deere Plow Co.

Moline, Illinois

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Now is the time to secure your crates for the next season. We will sell you crates all sawn and cut exact lengths ready to nail up, 10c each. Crates consist of 8 side slats, 8 end slats, 5 bottom slats, 4 corners. Posts cut so as to make round corners and when crate is nailed up 3 crates will nest in two. These slats are 1/2 inch x 2 inches except the two bottom slats on the end to which the bottom is nailed. These are cut on a bevel of 1/4 x 1/2 in. at bottom, making the strongest kind of a crate. All material used in making these crates is cut from live timber and is free from knots and all defects. When crate is nailed up it is 17 in. x 14 x 11, will hold one bushel level full and one crate will set on top of another. We will send you these slats one crate in a bundle, including nails, for 10c each. You can easily nail 20 to 25 each stormy day. This advertisement will not appear again.

J. D. DANCER, Vermontville, Mich.

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as the past summer, is especially favorable for the disease. Moreover, it is believed that the hot dry summers such as the summer of 1911, do much to check the spread of this disease. It may be that the dry conditions dry out the wounds made by the insects so that the germs which are carried cannot gain a foothold, or it may be that the temperature conditions alone are sufficient to check the growth of germs.

### Control.

So far as the present evidence goes, the chief factor in the spread of this disease are the insects, and hence following the prompt removal of diseased plants, the next important step is the destruction of the insects which feed upon the cucumber plants. With a small bed, and in my opinion, even with a large acreage, it will pay the grower to practice the removal of wilted vines. Pull them up root and branch and burn them. It will not do to pull them up and pile near the ends of the rows because it has been observed that the insects attack the

diseased plants much more vigorously than they do the healthy ones, and hence the pile of diseased vines would be a very dangerous source of infection. Professor Pettit, in the pages of the Michigan Farmer, has recommended the use of slaked lime and sulphur, (4-1), as a method of controlling these cucurbitaceous insects and I believe that this method is a very common practice in Michigan. Bordeaux mixture, while valuable for other diseases, does not seem to give results for this.

### Loss.

Whole fields in Michigan have been destroyed by this disease and in many cases in the past year, half of the vines died through the wilt. It can be readily seen that this trouble, while in some cases producing small loss, cuts down the yield in affected districts from one-fifth to one-third. Dr. Erwin F. Smith places the loss to different plants at not less than five hundred thousand dollars annually.

Mich. Ag. Col.

G. H. COONS.

there is not much trouble in subduing the wild grass.

### Best Crop to Raise.

If the land is drained so that it would be proper to plant corn there I know of no better crop than corn to grow on this raw, rich land. It could be sown to oats next spring but the probability is that it is rich in nitrogen and the oats might lodge, but you can't get any land too rich for corn. If you do a good job of plowing and take a little pains to do this you can raise a good crop of corn with a minimum amount of cultivation and at the same time entirely subdue the wild grass on the marsh.

However, if the land isn't properly drained then the first thing to do is to drain it. Corn won't grow in a field where it has wet feet and neither can you grow any kind of a crop profitably on such a field, so if it needs draining that is the first thing to do for any crop. When this land is properly tile-drained and properly cleared and broken up it makes some of the best land we have.

COLON C. LILLIE.

### FARM NOTES.

#### Preparing Soil for Alfalfa.

I have a plot of ground two acres in size which I wish to put into alfalfa next spring. Most of it is rather light ground. I had it into corn this season and it brought a fair crop. I have it plowed and will put it into good condition before sowing the alfalfa. Would it be best to use commercial fertilizer or top-dress with a light coat of manure and when would be the best time to apply one or the other? Also, would you sow the alfalfa with or without a nurse crop, of say buckwheat? There is a lake about a mile distant from my place that has a good bed of marl in bottom, which could be easily and cheaply obtained this winter. Would this marl take the place of lime for applying to the land, and if so, how much would you apply to the acre? Any other information you may be able to give me concerning getting a stand of alfalfa will be greatly appreciated.

Mecosta Co.

W. H. W.

As between applying a top-dressing of stable manure or giving an application of commercial fertilizer before sowing the seed, the writer would prefer the latter for the reason that the application of stable manure would add more weed seed to the land, which would perhaps offset the beneficial effects of stable manure. A light application of commercial fertilizer before sowing would stimulate the rapid growth of the plants and the top-dressing of stable manure could then be delayed until fall. If applied in the fall or even in the early winter after the ground is frozen, a light top-dressing of stable manure would help to hold the snow and would be considerable protection to the alfalfa plants, aside from the plant food which it would furnish and it would, in the writer's opinion, be a very much better time to apply stable manure than at the time of seeding.

Now with regard to the use of a nurse crop, there is a great variety of opinions among successful growers. In a favorable season, and on land that is in good condition very good stands of alfalfa have been repeatedly secured when sown in barley or oats. Barley is probably the best nurse crop of any grain crop which could be used for this purpose, and can be cut for hay if desired, provided the beardless variety is sown, and it would be much better in the writer's opinion, than buckwheat.

A new plan which the writer will try next year is sowing fall rye as a nurse crop with spring seeding of alfalfa. Theoretically, this should be a good nurse crop as it will make a good early growth, thus keeping back the weeds, and will stop growing with the coming of warm weather and give the alfalfa a chance during midsummer, when it needs all the moisture available. If the ground is reasonably free from foul weeds, however, a nurse crop is not essential to the securing of a good seeding, and in some seasons greater success will be attained without the use of a nurse crop than with.

Unquestionably, it will pay to haul this marl and give a very liberal application to the land. It would be difficult to advise just how much to use as the water content of this marl will probably be high, but there is no danger of getting on too much and the larger the application the more lasting will be the effect. The marl will be just as valuable as any other form of lime, and on the sort of soil which you mention liberal applications of marl will undoubtedly be a great help in getting a successful stand of alfalfa. Inoculation may also be needed and would help to insure success. Inoculation may be secured by applying soil from a successful alfalfa field or using pure culture on the seed.

vigorous growers, heavy yielders, were of good shape, with smooth surface, and were of excellent quality of table potatoes.

### Improving Conditions.

When our land was first cleared and cropped there was an abundance of decaying vegetable matter in the soil. The early potatoes grew quickly and were of excellent quality. In order to secure paying crops again it will be necessary to make the conditions of the soil as nearly as possible what they were when first taken from the hand of nature. Plowing under barnyard manure and a clover sod, will make a wonderful change in the physical condition and the necessary plant foods in the soil. By the intelligent use of these agencies the old-time heavy yields of early potatoes may again be secured.

### Planting the Crop.

Among the prime essentials to secure a heavy crop we will mention that the ground must be well prepared and the seed planted early. The early potatoes require the moisture already in the soil from the melting snow and spring rains. In all but the very heavy soils the seed should be covered about four inches deep; heavy clay soils are the exception. Some of the best growers, who wish to do most of the work of caring for the crop with the cultivator, plant in check rows three feet apart. Those near market, where land is expensive and labor is "cheaper than dirt," mark the rows three feet apart, and plant the hills 18 inches in the row. With the check rows whole potatoes around the size of a hen's egg are generally planted, one in a hill, while in the "drill rows" larger potatoes are cut, leaving two eyes to the piece, and one piece is considered sufficient for a hill.

We have reason to believe that by giving the early potatoes the proper conditions, using vigorous varieties for seed, and attending the crop well, the early varieties can again be grown in Michigan with profit to the producers. It would divide the work of harvesting the crops into two periods instead of compelling the growers to labor hard and long gathering a large area of late potatoes late in the fall.

Oakland Co.

N. A. CLAPP.

### CLEARING MARSH LAND.

I have taken the Michigan Farmer for some time and enjoy reading it. I have recently purchased a farm of 160 acres. I would be pleased to have Mr. Lillie or some other good farmer tell, through your valuable paper, the best way to handle marsh land that is well drained, but is covered with willows, alders, and wild raspberry bushes, and after getting rid of the bushes, the best crop to grow to subdue the wild grass. Can anyone give me information relative to draining swamp land with tubular wells? The marsh has a foot or so of muck under which there is clay or sand.

Ingham Co.

F. G. M.

Most of the briers, willows, and alders can be cut with a good stout brush hook and then raked up and burned. If some of the bushes are too large to be cut with a brush hook or, being cut, the stumps or roots would be too large to plow to a good advantage then these may be pulled out by the roots by using a good pair of horses or oxen, or if the ground is dry enough the best thing I know of would be a good traction engine that will pull a fairly good-sized tree. After the brush is cut and burned then the land can be plowed with a good heavy breaking plow. Now if it is well plowed

## WHY GROW SOY BEANS?

My attention has been directed to the fact that Mr. Lillie is making something of a feature of growing soy beans. Will he kindly advise me as to the particular reasons for so doing? I had been of the opinion that the soy bean would only do well in our southern states.

Oakland Co. W. L. D.  
I am interested in the growing of soy beans because I believe we need in Michigan another forage grain crop rich in protein. The only thing we have sufficiently rich in protein to mix with corn and oats to balance up a ration for dairy cows and other live stock is field peas. Many people don't like to grow field peas because the stem is weak and they are prone to lie on the ground and it is sometimes difficult to harvest them. Again, peas want rather rich, moist ground, and they must be gotten in very early in the spring because, if they are put in late and there comes a hot, droughty time just at the time they are filling they will not do well. They do exceedingly well in rich, moist ground and especially farther north a little. If we only had some plant adapted to this climate which would be a good yielder, could be easily grown, and as cultivated crop, it would be more reliable and would add a great deal to the live stock industry. While soy beans are grown with greater success farther south, yet they have been grown successfully in Michigan, especially on the warmer soils. They are being grown to a considerable extent in northern Ohio and northern Indiana. They have been grown successfully in the state of New York and Illinois and there is no reason why they cannot be grown in Michigan. I have only tried them two years, several years ago and again this summer. In both instances we had cold, wet years. In both instances I did not give this new plant a fair show. I got them in late both times. This year I put the beans in on ground that was plowed late and didn't get them planted until way along past the middle of June. The ground had dried out so that they did not germinate, and in fact they did not germinate and come up until after we had a heavy rain on July 2. They grew even in this cold season, three feet and three and one-half feet high, and were well covered with pods. In fact, I never saw plants have any more pods or set any fuller than these plants. But being planted so late the crop did not ripen. I cut them and mixed them in with corn silage and put them into the silo, but I am going to try them again.

I have been reading considerable the last few years about the soy bean. I understand that the soy bean is proving to be a wonderful crop in Manchuria, the northern province of China. Since the Russia-Japanese war the farmers of that province have devoted themselves quite extensively to the growing of soy beans, and it is said that it is putting the farmers of that country on their feet. This plant is a wonderful plant in many ways. The beans are very rich in protein and also in oil. They are used in that country to quite a large extent for human food. The oil is also used for numerous commercial purposes and then the residue, like oil meal or oil cake, the residue of flaxseed, makes a splendid food rich in protein to mix with foods not so rich to balance up a ration.

Then again, not so very long ago I came across a paint man, a representative of one of the largest paint manufacturing firms in this country. I was informed by him that the oil of the soy bean was being used largely in the place of linseed oil in the manufacture of paint of all kinds. He said it made a valuable substitute. His opinion was that in the future soy bean oil would be used largely in the place of linseed oil, because he said you couldn't get the farmers in the United States to grow enough flax to produce oil enough for the paint industry, and we have got to have a substitute. They have been trying everything and soy bean oil was the best substitute for linseed oil, and, as I say, in his opinion the oil of this bean is going to be used largely in the future.

I became much interested in the plant and I wanted to know something about this plant, consequently I raised some last year and I intend to keep on raising them until I know for sure whether this plant can be grown successfully in this vicinity or not. I believe from what I have already learned about the plant that it can, that it will be a luxuriant grower. It would be, from what I have learned, a much more valuable plant to grow than flax because the soy bean straw, even after you have harvested the bean crop, makes a very good cattle food, and while

it is coarse and doesn't look inviting the stock seem to like it and relish it. It is rich in protein and makes a valuable food, a splendid substitute for clover hay. I am positive that soy beans would do much better on all the lighter soils in the state than Canada field peas, and I believe it will pay us to try to grow this crop.

The soy bean is as rich in protein as oil meal or linseed oil cake, the common oil meal of commerce, and if a farmer could grow a few acres of this crop and thresh them and grind the meal, even if he didn't take out the fat, he can mix that with his corn and his oats and make a splendid balanced ration with the ordinary roughage which he grows on the farm, especially for dairy cows. It would also be a splendid food to mix with corn to feed to hogs, and probably would take the place of flaxseed meal to be used in feeding in connection with skim-milk for young growing calves.

At the present time the serious objection to this crop is the high price of the seed. One now has to pay \$3 or \$4 a bushel for soy bean seed. But if we could get to raising it in any considerable quantity this would take care of itself because it is said that you can grow from 20 to 40 bushels of soy beans on an acre. These, briefly, are the reasons why I am interested in soy beans.

COLON C. LILLIE.

## FILLING THE ICE HOUSE.

There are a great many people, even on farms, that regard ice as a luxury too expensive to be indulged in for common during the heat of the summer months. This need not be so, at least on the average farm, for no great expense is required in putting up a home supply. During extreme cold weather, with the thermometer hovering around zero, many of us are too much concerned with the immediate present to dream even of putting up the frosty cakes for a time when extreme heat will prevail. But when cold is intense is the time to prepare for heat.

A great many, too, put off the ice harvest until too late and the ice gets spongy or porous and is then poor in quality and keeps badly. Just as soon as the ice is from 10 to 12 inches or more in clear thickness—that is, ice not having a crust of slush ice and snow frozen to it, which is of no account—then we may plan to fill the house. Any outbuilding having the required size and covered by a good roof will do. It need have no floor, and sides only tight enough to hold sawdust.

Many cut blocks of various dimensions, quite often depending upon the depth frozen, but 18x24 inches makes a good-sized cake and one that packs and keeps well. On a frosty day the ice should be placed in the shelter, filling all in, in one day if possible. Build up into a solid block the full height and width required. The cakes should be sawed with true faces so they fit snugly, the closer the better and over every cake before the next be laid, spray with water, the whole then when finished will have the appearance of one block. This extra film of ice between keeps out air, and that is the chief destroying agent to guard against in preserving ice. As ice always contains air and as these air ducts or tubes extend perpendicularly through the cakes as they were originally frozen, we aim to set the cakes on edge, instead of flatwise, as this prevents air circulation and drainage in the ice, thus helping its keeping qualities.

The space of a foot or more next to the walls should be firmly tamped with sawdust all around it and about two feet packed over the top. The bottom should be of such a depth that the natural heat from the soil will not cause the ice to melt, and must be deep enough to provide for the drainage which will result in warmer weather. A string of small tiles or a few small poles placed close together, running lengthwise of the building on the bottom, furnish ideal drainage for the ice.

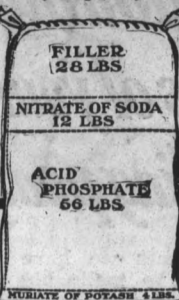
Many claim that ice in houses should have an open space above for free circulation of air at all times. This air circulation absorbs all moisture arising from the bulk below and also during warm spells keeps a cooler temperature in the house. I am inclined to believe this would be plausible where the amount packed was small.

By all means those within convenient hauling distance of some lake, pond or river should at least pack ice for home use. There are often parties who cut and help load cakes at a cent or 1½ cents per cake, which is cheaper than cutting it one's self, besides the attending bother.

Gratiot Co.

G. A. RANDALL.

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



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

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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 4½ per cent. (for cotton and grain), add one bag Muriate of Potash per ton of fertilizer; to increase it 9 per cent. (truck, potatoes, tobacco, corn, etc.), add two bags Sulphate or Muriate per ton.

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

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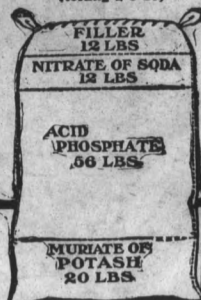
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With our famous patented Variable Device there's no stopping or moving from seat to change number of grains dropped. You can plant more kernels where soil is richest and less where soil is thin. Thus, you will get 2 to 10 bu. more corn per acre, yet waste no seed and do no extra work. These extra bushels are all gain. In one season they more than pay for planter.

Rock Island No. 1 Planter

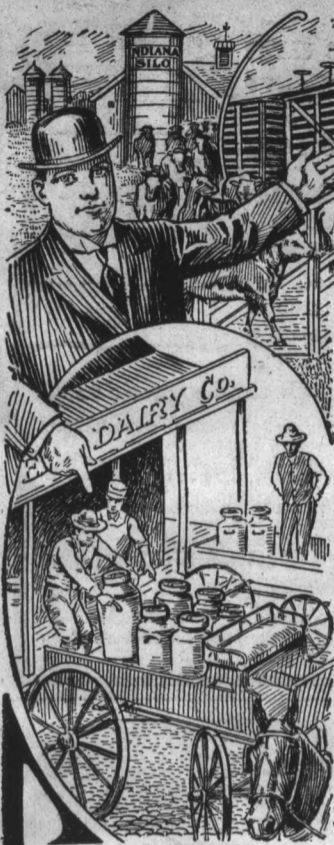
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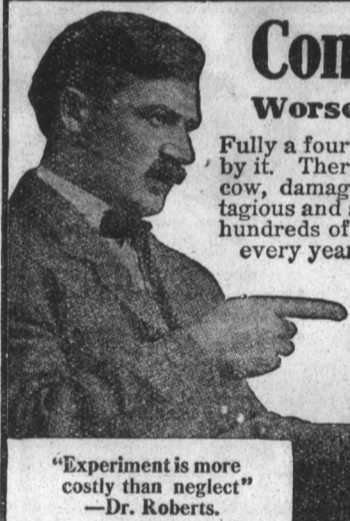
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Improved Keystone Dehorner—quickest, cleanest, strongest and most satisfactory. Clean, shear and sliding cut; no crushing; no bruising. Money back guarantee. Send for booklet.

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Economically increased by balancing rations with O. W. L. BRAND Cottonseed meal. 41 per cent Protein. Cattle require it for best results.

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in every County in Michigan to canvass for simplest cream separator now made, has fewest parts, easiest to clean, easiest to run, no higher in price than any other good make. Big commissions if you make business. Write to O. P. AMANN, Sidney, Ohio.

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Three sizes—550 to 600 lbs. capacity, \$55; 750 to 800 lbs., \$65; 950 to 1000, \$75.

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## Cutting Down Dairy Expense.

WHEN you start out to make your dairying pay by any other method than cutting down expenses you have a ticklish road to travel, unless you can get more efficient work done for the same money, in which case you are cutting down expenses by short cuts disguised. Cutting out expenses is only half the game; knowing what to do and how to do it is the other half. Net profit is what is left of the selling price after all costs and expenses have been deducted.

Dairying is becoming more complex every year and the man with all muscle and no brains cannot keep in step with the times. Plenty of gray matter is what is needed. It is true that a willingness to work and put in long hours is a requisite to a successful dairyman's make-up, but this isn't what worries him. Rather the dairyman's troubles today are the little things which are not on the schedule. I am a dairyman and I am putting it straight when I say that hard work isn't one, two, three with the real problems of putting a dairy farm on a money-making basis.

#### Buy Feeds Intelligently.

The indiscriminate purchase and feeding of various feedstuffs stands as a barrier across many a dairyman's path of success. Much of the money invested in these feeding materials is wasted because they are used to piece out, not to supplement the home-grown foods. Where one has succulent feed like silage there is no doubt that the most economical ration that can be bought now is cottonseed and oil meals, to be mixed and fed not to exceed five pounds a day to cows in good yields of milk. To buy a ton of wheat bran at \$30 that, if pure, contains only 240 pounds of protein, when a ton of cottonseed meal contains nearly 800 pounds of protein and costs \$35, is to part with one's money without reasoning. In the bran the protein costs about 13½ cents a pound, in the cottonseed meal 4½ cents, and in oil meal less than five cents. Confining the cow to her two and one-quarter pounds of protein a day—all that she can use profitably, these two concentrates, fed with silage, fill every requirement of the ration, and, as oil meal and cottonseed meal counteract each other's peculiarities, there is no reason why one should continue to buy for milch cows the diluted grain feeds when they are selling for practically the same prices as the valuable concentrates. Then the fertilizing value of these feeds must be taken into account. When a ton of wheat bran is fed there is a credit as fertilizer due to it of \$4.80, to be deducted from the cost price. When the oil meal is fed the credit is \$6.75 and with the cottonseed meal \$8.50, the latter being a pretty good rebate on the \$35 investment. Intelligent feed buying will help to cut down dairy expenses more than any one thing we can do.

#### Be as Independent as Possible.

In reference to feeding the cows, I believe that in the dairy business the sooner we cut down the feed bills we are paying to the manufacturers of commercial feedstuffs and grain dealers the better. The nearer we can live within ourselves the better. The more food we can raise on our farms that is adapted to milk production the larger profits we will have at the end of the year. This leads me to say, if we are going to raise our own feed, the short rotation of crops, corn, clover and oats and peas, will enable us to go into the market and buy very, very little grain, and that only of a concentrated sort. On farms where alfalfa will thrive a few acres should be set aside for this crop.

Suppose some time the clover does not catch, there are other crops we can put in, as millet, and I am confident that alfalfa will eventually help us out on this proposition. I believe we can raise alfalfa anywhere that red clover can be raised. There is the same trouble that farmers had with clover, but it is coming. I notice more of it in my travels than I used to five or ten years ago and it will not be long before it will be common in dairy localities, and it comes as a splendid substitute for red clover, with double the yield.

#### Economical Concentrates are Necessary.

We have raised the feed crops and find that we must purchase a limited quantity of concentrated feedstuffs to increase the efficiency of the rations. It is repeating an old truth to say that we must have the best cows to make our field crops and purchased concentrates into dairy products. With improved farm

machinery it is possible to raise crops for less money than formerly, and with intelligence in selecting suitable feedstuffs in the market we can make up efficient rations at a reasonable cost, but when we come to feeding these foods we often find that instead of realizing a profit, there is a balance on the wrong side of the ledger. The value has somehow shrunk away. Too many of us under our present system of feeding for milk or butter production support our cows from the farm, rather than make the cows support us. We are like the retired financier, who when asked what line of business he followed, replied: "I am keeping a colored men's boarding house on Fifth Avenue, but instead of the colored men paying me I am paying them."

The number of dairy farmers who realize the market value of the home-grown feeds and purchased concentrates by feeding them to dairy cows is comparatively few. It is to this department of our business that we need to give greater attention, and make it more of a study, for in this direction there is most room for improvement and better profit. But how shall we do differently that we may realize a larger profit from our home-grown feeds and purchased concentrates.

#### Feed Only Profit-producing Cows.

The answer to this question, to be specific and definite, would have to be varied to the surroundings of each individual farmer. I will only attempt to answer them in a general way, leaving you to apply only such as will fit your individual case. The first step in cutting expenses is to save what feed is being consumed by inferior cows and feed it to the ones that can return a profit. There is scarcely a farm in the country upon which may not be found animals that are kept at a positive loss. While it is not possible that each animal be of the best type and quality, yet we should see that each one is a profitable one. The best is none too good. We should keep in mind the better the animal the better the pay—and the animal that is bred for a specific purpose is most likely to give the best results.

#### Accommodate Your Plans to Your Labor.

Another important factor in cutting down dairy expenses is to plan the number of cows kept on the farm according to the amount of labor that is available. Two men can handle a 20 to 25-cow dairy and do the larger part of the farm work. It makes a bad mess of the farm work to keep too many cows. On the other hand three men can handle a 34 to 40-cow dairy and do the farm work to better advantage than two men can for the smaller number of cows. If we keep a third hand we should plan the size of our dairy so as to realize the maximum profit from his labor. This also applies with equal force to the number of horses employed on the farm. It costs considerable to keep horses, therefore, one must plan to keep his teams busy every day when there is profitable work to be done. By managing the whole farm on a far-seeing basis it is possible to reduce the operating expenses of the farm and dairy several hundred dollars each year.

Another plan to cut down the expenses for labor and horse power is to grow a cash crop in connection with the crops that are grown to supply food for the dairy cows. This crop can be handled with the same labor, horsepower and machinery required for the other farm work and if intelligently managed it should go a long way toward paying for the supplemental grain feeds needed to balance up the rations of the cows. My cash crop is potatoes and I figure that it pays more than enough to pay my help and feed bills. Various other crops may be grown that will pay good returns.

#### Grow Your Own Cows.

Another way of cutting down dairy expenses is to breed and raise the young cows needed to replace those discarded from the herd. With well-bred cows selling about us for from \$80 to \$100, and ten wanted where only one can be had, it looks as if the dairyman had best stop buying common scrubs with which to replenish his herd and get into the game of rearing his own cows of the kind and breed best adapted to his needs. The common or mixed bred cow, with no claims to dairy excellence or prepotency, has no longer any valid claim to further consideration as a profitable cow for the dairy. The cow whose yearly average is only 150 pounds of butter or 4,000 pounds of milk, cannot support herself, not to mention her unfortunate owner. She must be able to do twice that, and one

has no surety that she or her progeny will ever be any better than the common scrub, because she has no high source of dairy excellence. The ideal dairy cow with the ability to transmit the desirable characteristics of her descendants, must come from a breed trained for generations to do the best things all the time. Even with the best of breeding there will be many low producing cows. The selection of the best cows and mating them with pure-bred dairy bulls of the leading dairy breeds will be a step in the line of cutting down dairy expenses and will gradually add to the productive qualities of our dairy herds. Mistakes in breeding and the care of the heifer and ignorance of how to feed and develop her will cause disappointment, but the man who will take hold of these problems in earnest, who will study and move cautiously as he goes along, will in the end be rewarded with a herd of high-producing cows, better suited to his needs than any he could buy for the same money.

New York. W. MILTON KELLY.

#### WHAT GRAIN RATION WITH CORN SILAGE, CORN STOVER, AND TIMOTHY HAY?

I put up a silo this year and as this is my first experience in feeding silage I would like advice as to the best grain ration to feed with it. I want a balanced ration to produce milk with profit. For roughage I have corn stover and timothy hay.

Jackson Co.

A. E. B.

I have given my opinion many times in the Michigan Farmer as to the best kind of a grain ration to be fed with just such roughage as this: corn silage, corn stover, and timothy hay, but I will give it again. All of the roughage in this ration is deficient in protein and in order to give the cows a sufficient amount of protein the grain ration must accordingly be rich in this food element. There is no use in feeding corn meal or ground barley with a ration like this because these foods are not rich enough to balance up such a wide nutritive ratio as we find in these three roughage foods. Consequently you have got to feed cottonseed meal, oil meal, gluten feed, wheat bran and those kind of foods which are rich in protein. As A. E. B. doesn't say that he has any kind of grain on hand that he wishes to feed I take it for granted that he will have to buy all of his grain. That being the case, I would buy either oil meal or gluten feed, gluten feed will be the cheapest, and wheat bran and also cottonseed meal. I would feed the cottonseed meal separate and the bran and gluten feed together. Mix the bran and gluten feed in the proportion of 100 lbs. of gluten feed to 100 lbs. of bran. I would feed one pound of cottonseed meal night and morning, putting it on the ensilage after I had put the ensilage into the cow's manger. Then I would feed as much of the gluten feed and wheat bran as the cows would make a profit by so doing. You can commence to feed a small amount and gradually increase. With the best cows you can probably feed a pound of grain, including the cottonseed meal for each pound of butter-fat produced in a week, or a pound of grain to every three and one-half or four pounds of milk produced in a day. Perhaps some of them, if you are a careful feeder will stand more than this. You want to observe each carefully and gradually increase the feed. When you find out she no longer responds to the grain then you must drop back a little, because it will not be profitable. If you are not testing your cows so you know what they are producing, then that will be the first thing to establish. It is simply a business proposition to know just how many pounds of milk each cow is producing every day and how much butter-fat she is producing, in order to know something about how to feed them. I would feed all the corn silage and all the corn stover that they would eat up clean and feed the timothy hay in such quantities so that I would have a sufficient amount of it to last during the winter. If you have an abundance of it I would feed them twice a day of timothy hay what they would eat up clean and corn stover once a day. Don't try to make them eat the corn stover up clean, you will want to save some of it for bedding and it is not a good thing to make them eat all of the corn stover, part of it is not digestible. Give them a chance to pick out the best part of it and let the rest go for bedding.

I can not tell you whether this ration will make you a profit or not because I do not know the capacity of your cows. I am sure that if you have got good dairy cows that you will have no trouble in making a good profit out of this ration.

Some cows do not have the capacity to take good food and convert it into milk at a profit. If you have got many of those cows it would be impossible to compound any ration that will make them pay, but if you have good dairy cows and a well lighted, well ventilated stable, you will have no trouble in making them pay.

#### THE COW STABLE.

I think that every dairyman now will concede that if he wants his cows to produce milk economically in the winter time they must be kept in a warm, well ventilated, well lighted stable. We have learned from experience that a cow cannot produce milk economically in the winter time unless she is kept comfortable, unless she is kept somewhere near summer condition. She won't do it in a cold stable; she won't do it outdoors without any protection; she must have a warm stable. It shouldn't freeze in the cow stable. No cow is comfortable that is kept in an atmosphere that is below 45 degrees, and if you keep the cow in a stable for a considerable portion of the time then this stable must be well ventilated and well lighted. A great mistake is made in keeping the cow in a stone basement or banked barn that is poorly lighted and poorly ventilated. This sort of a stable will keep her warm, but we must have something besides warmth, we must have health as well. The cow must remain vigorous and she can't do it if she lives in an unwholesome atmosphere away from the sunlight. No plant, nor animal, can thrive for any considerable length of time unless it has sunlight, and therefore the stable must be well supplied with windows. Of course, some people will tell you that in days gone by, in pioneer days if you please, the cows were not pampered as they are now, they were not babied. The cows could be turned out in the morning and left out until dark, and then put in the stable, and these stables were none too warm. The barns sometimes were not battened, the snow would blow through the cracks. And they will tell you that those cows lived through the winter and were apparently healthy. There is no question about this. Nobody denies but what a cow can stay out in the cold every day all winter long, if she is fed a sufficient ration, and keep healthy, but she won't give very much milk. There is where the trouble comes. We don't keep a dairy cow in a warm barn because she is tender, because a good vigorous cow isn't tender. We keep her in a warm barn because it is more profitable to keep her there, because she will produce a good quantity of milk if she is kept in a warm stable, and she won't produce a good quantity of milk if she is kept out doors in the cold. Perhaps fewer cows had tuberculosis then than they do today. There is no question but what tuberculosis is a barn disease, and, on the other hand, there is no reason why cows should not be kept in a barn and not have tuberculosis if the barn is properly ventilated and properly lighted. They can be kept just as healthy in a warm barn as they can out of doors, and you can get more for your feed and your investment if you will provide this shelter for them than where you allow them to combat with the cold.

#### MICHIGAN DAIRYMEN MEET FEBRUARY 4-7.

Announcement has been received that the annual meeting of the Michigan Dairymen's Association will be held at Saginaw, February 4-5-6-7. All the allied dairy associations of the state will also convene at that time and place. Secretary Bechtel writes that a splendid program is being completed. There will be important and interesting features from the opening to the close. Every sign indicates a better exhibit than was ever brought together for Michigan dairymen. The hall secured for the display of exhibits is larger than any ever had for this purpose and at this early date exhibitors have established a new record in the amount of space secured. Every dairyman should plan to be present at this gathering.

De Laval Dairy Hand Book, published by the De Laval Separator Co., New York, is a 72-page pamphlet containing articles by many of the best known authorities in the country on subjects pertaining to the dairy and dairy farming. It is, in fact, what its name indicates, a dairy hand book, covering practically every phase of this important business and containing in addition, chapters on the various breeds of dairy cattle. These discussions are condensed and to the point, yet comprehensive, and will furnish a vast amount of valuable information for any dairy farmer. This book will be sent free of charge to any of the readers of The Michigan Farmer who write to De Laval Separator Co., 165 Broadway, New York, mentioning the Michigan Farmer.

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There's no good reason why you should wait till spring before getting one.

On the contrary you may buy a DE LAVAL NOW and save half its cost by spring. Moreover, if you can't conveniently pay cash you can buy a DE LAVAL machine on such liberal terms that it will actually pay for itself.

As to your NEED of a separator, if you have the milk of even a single cow to cream you are wasting quantity and quality of product every day you go without one. This waste is usually greatest in cold weather and with cows old in lactation, and it counts most, of course, when butter prices are high. Then with a separator there is always the sweet warm skimmilk, and saving of time and labor, in addition.

When it comes to a choice of separators DE LAVAL superiority is now universally recognized. Those who "know" buy the DE LAVAL to begin with. Those who don't "know" replace their other separator with a DE LAVAL later—thousands of users do that every year. If you already have some other machine the sooner you exchange it for a DE LAVAL the better.

Why not start 1913 right in dairying. See and TRY a DE LAVAL NOW when you have plenty of time to investigate thoroughly. The nearest DE LAVAL agent will be glad to set up a machine for you and give you a free trial of it.

The new 72-page De Laval Dairy Hand Book, in which important dairy questions are ably discussed by the best authorities, is a book that every cow owner should have. Mailed free upon request if you mention this paper. New 1913 De Laval catalog also mailed upon request. Write to nearest office.

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The fertility of the soil and favorable climatic conditions account for the extraordinary yields of all grains, vegetables and small fruits.

At the recent New York Land Show the prize cups were awarded the Gallatin Valley for the best oats and barley grown in the United States.

This wonderful section of Montana was opened to the markets of the world by the new transcontinental line—the

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We guarantee this successful horse power machine cuts tile ditch, 10 inches wide, 24 inches deep, at the rate of 300 rods per day in ordinary soil.

In our valuable free book, showing The Money Making Way of Draining Land. C. G. Elliott, Drainage Expert of U. S. Dept. of Agriculture, shows how with good drainage—"Land is ready for seeding earlier. Crops begin healthy growth at once. Fertilizers are not wasted by surface washing. Crops are better able to withstand drought. Frost does less injury to crops. Crops make much more vigorous growth. Profits from land are greatly increased. Disease among farm animals is decreased." The

### Cyclone Tile Ditching Machine

pays for itself over hand labor in tiling the first 20 to 40 acres, according to spacing of laterals—the added returns from the land, year after year are clear profit.

When you have finished your own ditching with a Cyclone, you can make money by cutting the ditches for others. You can earn more money with a Cyclone Ditching Machine than with a threshing outfit which costs about ten times as much.

Get the facts and see how much a Cyclone will bring you in actual cash in a year. Our book lays the whole matter before you. If the Cyclone will double your farm profits you want to know it. No experience needed to operate this wonderful machine but we will see that some one goes to your farm to make sure that the machine is set up properly and that you get the right start. You do not pay one cent until we demonstrate and prove to you that the Cyclone does every single thing we claim for it. Write a postal now before you forget. Ask for free booklet showing The Money Making Way of Draining Land. It gives actual photographs of the Cyclone at work, and names of satisfied users. Also valuable information on scientific, money-making drainage. Send that postal now.

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WANTED FOR U. S. ARMY—Able-bodied, unmarried men, between ages of 18 and 35; citizens of United States, of good character and temperate habits, who can speak, read and write the English language. For information apply to Recruiting Officer, 212 Griswold Street, Detroit, Mich., Heavenrich Block, Saginaw, Mich., 1st and Baginaw Streets, Flint, Mich., 14 West Main Street, Jackson, Mich., Huron & Quay Streets, Fort Huron, Michigan.

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## Why the "Mortgage Lifter?"

SOMEONE, sometime and somewhere, applied to the American hog the cognomen, "mortgage lifter." Was there a good reason for giving the hog such a name, and if so, why? These are certainly questions of interest to every farmer. To some the hog has himself given a satisfactory answer. Others have apparently never put the question seriously, either to the hog or to themselves, else there would be no occasion for this discussion. If the reader should chance to be one of these there will at least be profitable food for thought in the following suggestions which are offered as a means to the end of securing for the long suffering and much abused hog a fair chance to answer these purely economic questions for himself.

The question as to whether there was a good reason for giving the hog such a name is fairly answered by the fact that the name has stuck. This fact in turn, implies that the hog's answer to question number one was an affirmative answer—an answer of such a positive and convincing character as to leave no doubt in the minds of those who have observed the hog's "lifting" ability at close range and under reasonably favorable conditions. By reasonably favorable conditions we mean conditions that did not handicap the hog in his task of lifting the mortgage, as the boy was proverbially handicapped in trying to lift himself over the fence by his own boot straps. This, in fact, is an apt illustration of or parallel to the handicap that many men have placed on the hog when they have really put these questions to him and failed to get a positively affirmative answer.

But to those who must be "shown" before they will give the hog a fair chance to answer these questions on his own account, or "give the devil his due," as they would more probably put it—the writer will endeavor to present some of the "lifter's" arguments, although far less forcibly than he could do for himself if given a fair opportunity.

#### The First Requisite of Mortgage Lifting.

The man who is most interested in this vexed question of mortgage lifting has already used his available capital to the limit in lightening the load to be lifted. Hence he must confine his efforts to lines of production which require but a minimum investment and will yield a quick return. In forced recognition of this fact, a host of the very men who ought to have put the important questions which inspired this article to the hog under fair conditions, have taken the only other available course open to them only to find that after lifting the mortgage they have handicapped themselves and their posterity in another and more profitless way. In other words, they have mined the fertility from their farms and sold it in the form of cash crops to pay the mortgage.

Both science and experience tell us that only by a system of mixed farming, in which live stock is made an important factor, can we derive a maximum income from the soil in general agriculture and still maintain its maximum fertility. Here the hog meets the first requisite as a "mortgage lifter" in requiring a smaller initial investment than any other branch of live stock production, and a consequently smaller "overhead" or maintenance charge. Due to the extraordinary prolificacy of the hog the initial investment in breeding stock is small, while the cost of adequate housing facilities is far less than with any other class of live stock. Experience has demonstrated the practicability of the cheap, portable house to be so great as to make a heavy investment in permanent houses unnecessary.

#### Quick Returns Cut Down Interest Charges.

Next to the size of the investment required the point of greatest interest to the man with a mortgage to lift is the length of time required to secure returns on the investment. Here again the hog excels all rivals in his class. He will yield cash returns on the investment in breeding stock within the year, and on the feed consumed within the 50 days as an average. Even the banker would call that a quick return. The hog is also what the banker would term a "liquid asset." He is always easily convertible into cash—more easily under all conditions and in all seasons than any other kind of live stock, and at less sacrifice in price.

#### Economy in Hog Production.

Another important requisite in the mortgage lifting ability of any product

of the farm is economy in the production of that commodity. In this respect the hog excels all other live stock as is readily proven by authentic statistics. In his work on "Feeds and Feeding," Professor Henry has compiled all of the available data concerning the feed required for 100 pounds of gain, as shown by the official records of experiments conducted at many stations throughout the country. All of this available data is compiled into a single table, in the compilation of which six pounds of skim-milk were considered as equal to one pound of grain, according to Danish calculation.

According to this average of results it was found that for pigs from 15 to 50 pounds in weight, 293 pounds of grain were required to produce 100 pounds of gain; for pigs from 50 to 100 pounds in weight, 400 pounds of grain were required for 100 pounds of gain; for pigs from 100 to 150 pounds in weight, 437 pounds of grain were required for 100 pounds of gain, and for pigs from 150 to 200 pounds in weight, 482 pounds of grain were required for 100 pounds of gain. Taking an average of these requirements for 100 pounds of gain for pigs of the different weights up to 200 pounds, we find that the average requirement per 100 pounds of gain for producing a 200-pound hog is 403 pounds of grain or its equivalent in other feeds. Bringing these entirely possible results, as demonstrated at many experiment stations throughout the country to a dollars and cents basis, and allowing a reasonable sum for the maintenance of breeding stock we find that the hog returns to his grower approximately \$30 per ton for the grain or its equivalent which is fed in its ration.

If this grain were all of the value of shelled corn it would represent a price of 84 cents per bushel for that product. But since some of the feeds required are more costly than corn, this price would be somewhat reduced, although as corn may be made to form the bulk of the ration this reduction would not be large. Compared, however, with the gain made by any other class of live stock upon a given amount of feed, the hog will show an economy of production which is most surprising.

#### The Hog as a Forager.

But it will be argued that the hog requires a wholly concentrated ration which necessitates more labor in production than that required by other live stock. This is an argument, however, that will not be substantiated by the facts. Experience and experiments have proven beyond a doubt, that the hog is a great forager and can be most economically produced only where forage of some kind is a factor in the ration. In his work on "Swine in America," Coburn shows that where green alfalfa is substituted for a portion of the grain feed it has a pork producing power as high as 1,333 pounds per acre, while clover has a pork producing power of 800 pounds of pork per acre, provided all of it were utilized. As this, however, is impractical, experiments are cited to show in actual practice, where hogs were pastured upon clover a profit from the pasture of \$44.36 per acre was received. In trials made at the Utah station it was shown that good pasture saved from 43 to 209 pounds of grain per 100 pounds of gain on different rations, the greatest saving being where between one-quarter and one-half the ordinary grain ration was fed upon pasture. Other green forage crops, such as rape, have an almost equal forage value for hogs. For winter feeding alfalfa hay has in some trials reduced the cost of gain very materially, while roots and other coarse forage have a legitimate place in the ration for hogs.

#### The Labor Investment.

Another factor in mortgage lifting ability is economy of labor in production. Here, again, the hog excels where the yards and equipment are reasonably well planned. But in this respect, as well as in the matter of a properly balanced ration for economic production, the hog has often been abused.

Regular feeding on a suitable and well balanced ration, with comfortable but not necessarily expensive housing, with a proper opportunity and incentive for exercise do not, however, require as much labor as that demanded by other live stock with a like "lifting" capacity.

It will thus be seen that if the hog is given a fair chance he will answer these questions in the affirmative for all, as he has already answered them for thousands of successful hog growers throughout the country.

## MATCHING FARM TEAMS.

Matching horses is an art, and it requires some skill and judgment to bring together a pair of horses that resemble each other in all characteristics sufficiently to work in harmony. In order to do this successfully it is necessary to have more than the color of the animals in mind. While it is desirable to have a team closely alike in color and markings, these are not the only characteristics.

Action comes first when considering the mating of horses. Proper action, strong, clean, vigorous movements of the feet and legs attracts a buyer more quickly than anything else. Style is required in the action of any class of horses. A snappy, straight and balanced movement of the motive apparatus, each horse standing up to the bit in about the same way, makes an attractive team, and is pleasing to the eyes of the buyers and of the man who drives it.

In a farm team, strength and conformation might possibly be placed before action; at any rate, it should come second. A team ill matched in regard to strength and staying powers is a mighty poor asset. In selecting horses to work against each other in a team, get them in general conformation as nearly alike as possible, good and strong behind, and muscled well in the back and loin; short and thick in the middle, with muscles, not fat, beneath the hide.

Size, to a certain extent, may be sacrificed for strength and conformation, but only within certain limits. A difference of 100 pounds or so in weight doesn't matter much when a pair is being matched up, but if much more than that the difference in size will be too noticeable and detract from the value of the team. Size

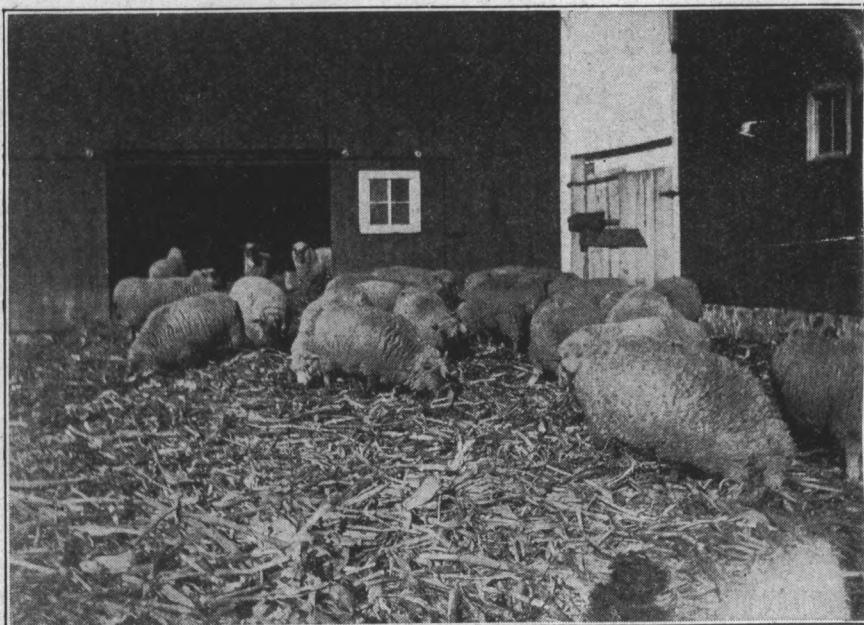
without an accompanying draft in cold weather and if a portable gate is at hand to confine the sheep within the stable in stormy weather the results will be most satisfactory. If an exceptionally warm spell of weather comes, circulation of air can be provided for by opening a window, but under ordinary conditions this will not be required.

Sheep comfort is an important factor in the economic care of the flock. The accompanying cut is suggestive of sheep comfort on a winter day. The sheep lying inside on a winter night with plenty of fresh air to breathe, but protected from wind and draft is equally suggestive. Sheep comfort means sheep profits and sudden changes from close, damp stables to winter air are not comfortable.

## ECONOMY IN FEEDING ROUGHAGE.

There is no farm roughage that is so generally wasted as is corn fodder. This is a cheap and a coarse food, and hence many farmers use it while it holds out, as if it was of little consequence. But along towards spring when the winter supply of feedstuffs begins to give out many of these men wish they had been a little more saving of their fodder early in the season, for they then find that they must go into the market and pay good prices for extra feed, or else they must sell off some of the stock or put the animals on short rations for several weeks until the new grass is ready for pasturing.

A reserve amount of feed should always be kept for these times. Feed less wastefully when the fodder is plentiful and there probably will be sufficient to meet all requirements. Because a food is cheap and plentiful is no reason why it should



Sheep Comfort Makes for Economy in Flock Maintenance.

is an important matter, but it comes after strength, just as strength and conformation follow action in relative importance.

Color comes last of all in the major points to be taken into consideration. A difference in color, however marked, is among the least objectionable features in a team. Yet, strangely, some men believe it the all-important consideration, and will match up horses so unlike in action and temperament that one's whiffle-tree is always scouring the wagon while the other is drawing ahead keen and strong to the bit, so unlike in strength and conformation that one is fagged out hours before the other shows fatigue. Only teams which match in every respect command the real fancy prices at this time.

Illinois. W. H. UNDERWOOD.

## VENTILATION IN THE SHEEP STABLE.

Ventilation is an important factor in the health of all animals confined in stables. Undoubtedly the ideal ventilation for the sheep stable, as well as the cow barn, would be the King system. But most sheep barns will not be equipped with any elaborate system of ventilation, hence the desirability of securing as good ventilation as is possible, without deleterious effects on the sheep, under average conditions and in an ordinary sheep stable. Having a warm covering of wool, the sheep are not easily affected by cold temperatures. Hence, up to lambing time, about the best method of ventilating the stable is by means of an open door into the yard, with a southern or eastern exposure. This affords plenty of fresh air

be wasted or slovenly fed to the animals.

Corn fodder should never be distributed around the yards for the stock to trample upon until they have mused up a big portion of it so badly that it will not be eaten. Not even the claim that what is lost in this way goes to make good, coarse manure justifies such a course. Fodder is an article of food primarily, and it should therefore be treated as such. The economical way of feeding fodder in the yards is in racks where each animal will have a fair chance at the food. Find out just how much the stock will eat at one feeding, and then give them that amount and no more. They will have a better appreciation of the food if it is not kept before them in too great an abundance. It is a demonstrated fact that farm animals will eat much more fodder or other roughage when it is fed to them regularly in normal amounts and cleaned up after each meal than when it is thrown into the yard faster than they care for it. Yet the fodder will last fully as long, or even longer, no matter how much they eat, provided wastage is avoided.

Late in the season many farmers feed out what fodder they have on hand without first husking the ears of corn. This method of feeding saves considerable work and, when the ears of corn are rather small, it is a safe method of feeding small quantities of this roughage. But if waste would be avoided the fodder must be fed in suitable racks. If the fodder is spread on the ground the animals will run over it searching for the ears of corn, and by the time they have secured these the fodder itself will be mused up and soiled so badly that they will refuse to eat much of it.

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## Veterinary.

CONDUCTED BY W. C. FAIR, V. S.

Advice through this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also name and address of writer. Initials only will be published. Many queries are answered that apply to the same ailments. If this column is watched carefully you will probably find the desired information in a reply that has been made to some one else. When reply by mail is requested, it becomes private practice, and a fee of \$1.00 must accompany the letter.

**Wounded Arm.**—This fall my two-year-old filly was on pasture; she either rolled on a piece of glass or was accidentally shot in the arm, which caused a large wound. This caused her considerable pain and lameness, wound has nearly healed, but muscles of arm have lessened in size considerable and I would like to know what to apply. W. S. G., Traverse City, Mich.—Apply one part turpentine, one part aqua ammonia and four parts raw linseed oil every day or two to wasted muscles and it will have a tendency to make them grow.

**Enlarged Stifle Joint.**—I have a colt three months old that has been troubled with an enlarged stifle joint ever since birth. Our local Vet. tells me that the ligaments of stifle are weak. I have applied five or six light blisters which fail to do any good. F. H. B., Eaton Rapids, Mich.—I am inclined to believe that your colt suffers from the effects of navel infection contracted while very young. You will obtain the best results by applying one part iodine and ten parts fresh lard to stifle enlargement every two or three days.

**Abscess.**—I have a colt coming two-years-old that had a swelling appear on side of head and neck which some time later opened and discharged and our local Vet. tells me that it is the result of distemper and others have told me that these abscesses would keep forming until all impurities of blood were thrown off. She eats and drinks well and is growing. W. H. W., Owosso, Mich.—Your filly suffers from an irregular form of distemper (strangles) and if the abscesses do not form in the internal vital organs, she will soon get well. In my practice I give the serum treatment and usually meet with good results. If your Vet. is not equipped to apply this remedy, give 1 oz. doses of hyposulphite of soda, 2 drs. iodine potassium at a dose in feed two or three times a day. The abscess should be opened up freely to allow drainage, then apply one part iodine and ten parts boracic acid twice a day.

**Indigestion.**—I have an old mare that is steadily failing, she eats good, seldom works, and is fed 16 ears of corn daily and all the good timothy hay she wants, but her bowels keep too loose and food comes through her only partially digested. N. O. N., Standish, Mich.—You had better examine her teeth, they may need floating; if so file off sharp edges of outside of upper rows and inside of lower rows of grinders. Give her ½ oz. Fowler's solution, 1 oz. ground gentian and 1 dr. ground nux vomica at a dose three times a day. Better feed her mixed hay and equal parts by weight ground corn, oats and wheat bran.

**Weakness.**—My 11-year-old mare does not appear to be sick, eats, drinks and works well, but sweats profusely and at night after she is through eating perspires considerable in the flanks and behind fore legs. She raised a colt last summer, has been thin all fall, is fed corn and oats three times a day, but the oats are rather musty. She seemed to suffer from surfeit during the summer and our local Vet. thought she had an attack of acute inflammation of the kidneys. J. A., Breedsville, Mich.—You had better clip your mare, especially her body. Give her ½ oz. Fowler's solution, 1 oz. fluid extract gentian, 1 oz. fluid extract cinchona and 1 dr. fluid extract nux vomica at a dose in feed three times a day. Increase her supply of oats.

**Warts.**—I would like to know what I can apply that will remove warts; furthermore, I would like to know what to give my horses to prevent warts coming on. R. L., Attica, Mich.—Apply acetic acid to flat warts every day or two until they are removed, then apply one part iodoform and ten parts boracic acid to sores once a day. Cut off those that have a neck and give each horse a teaspoonful of powdered sulphur at a dose in feed night and morning.

**Lump-jaw.**—I have a four-year-old cow that has a bunch on lower jaw which first made its appearance some three or four weeks ago. This bunch has gradually enlarged since it came on. J. C. C., Redford, Mich.—Apply one part red iodine of mercury and four parts lard to bunch once a week; also give 2 drs. of potassium iodide at a dose in feed three times a day.

**Contagious Abortion.**—Last winter I had contagious abortion in my herd of cows and sold all of them, except one. She slipped her calf in February, 1912. I then cleaned my stable out once a week, using a strong solution of creolin, whitewashed stable, kept cows out of barn nearly all summer; of course, I bought good cows which carried their calves full period and I have had no diseased cow in the stable, except the one I kept and she cleaned out all right last winter. She has been in pasture all summer, came in heat regularly every three weeks, but I did not breed her. Now I would like to know if I am running any risk to breed my sound herd bull to this

cow and a few of my neighbor's cows? I would not like to spread any disease in the neighborhood; therefore, I am consulting you to ascertain if I would be justified in breeding this cow. G. B., Hudsonville, Mich.—All things considered I do not believe that I would use your bull on this cow you mention or your neighbors' cows, unless he has been treated and is free from infection. Your Vet. could determine that by a microscopical examination. Infectious abortion should not be regarded other than a serious ailment in a herd of cows and furthermore it is no easy task to stamp it out. What you should do, is to perhaps sell your diseased cow; however, a heifer is much more apt to abort than an aged cow. Clinging afterbirths in a dairy are an indication of contagious abortion and a dairyman should lose no time in having the afterbirth properly removed very soon after calving; furthermore, the case should be followed up and treated until the cow is perfectly well.

**Acute Indigestion.**—I have a three-year-old cow that bloats after eating and she must have pain for she grunts a great deal. When these spells are on she shrinks in milk and I might add she shows it as much on dry feed as when on grass. Can I give her something with her feed that will afford her some relief? A. L. B., Fremont, Mich.—Give 6 ozs. of hyposulphite of soda in a quart of water as a drench every hour until bloating subsides. Give 4 drs. salicylic acid in feed at a dose two or three times a day and it will perhaps prevent these attacks; besides this is a very good remedy to give in acute cases of indigestion where bloating occurs in bowels, instead of stomach.

**Vertigo—Epilepsy.**—I bought a six-year-old cow four months ago, six weeks later I found something wrong with her. She has spells that begin by trembling, then she falls down, head goes up and to one side, eyes twitch and mouth moves as though she was chewing. These spells last from five to ten minutes, then she gets up and goes to eating and acts all right. She has a good appetite and shows no symptoms of sickness only when the spell is on. We were quietly informed that she had been troubled with these spells occasionally for the past two or three years. She is affected most when pregnant. She should come fresh in April. This is a good cow, therefore I would like to have her cured. Have been a reader of the Michigan Farmer for several years and always read the veterinary column, but fail to find a case like mine. D. V. S., Boyne City, Mich.—Careful feeding, keeping the bowels open and active, daily exercise and never overload the stomach, will perhaps prevent a recurrence of this sickness. Give her ½ oz. bromide of potash and 2 drs. of salicylic acid at a dose in feed three times a day. You should give her 1 lb. of epsom salts occasionally to open her bowels.

**Lymphangitis.**—Some six weeks ago a swelling appeared on inside of hind leg of my four-year-old mare and the limb has remained swollen ever since. Exercise partially reduces this swelling. I took her to a Vet. and he gave her a dose of physic, also medicine to purify the blood. Her heels are also cracked but most of the trouble is high up and on inside of leg, but the whole limb is swollen. She is not lame. T. B., Sullivan, Mich.—Give your mare 2 drs. potassium iodide at a dose in feed three times a day and apply spirits of camphor to swollen leg and especially inside of thigh twice a day. Her diet should be laxative and not overly heating and too nutritious; besides, it should be laxative. Bandaging leg in cotton while she is in stable will have a good effect.

**Conjunctivitis.**—I have a pair of mares nine and ten years old that have a watery fluid running from the eyes that gathers and hardens on face. H. E. M., Defoe, Mich.—Dissolve 40 grains borate soda and 40 grains boracic acid in 4 ozs. of clean water that has been boiled, and apply to eyes three times a day. Occasionally blow a little calomel into eyes, but it will not be necessary to do it more than three times a week.

**Choked Circulation—Loss of Appetite.**—I have a filly six months old that has to be helped up whenever she lays on right side. Her left hind leg appears to get stiff and cold, but after she is helped on foot and walks a short ways, seems to get all right. I also have a young pig, not more than nine weeks old, that sleeps most of the time and appears to have no appetite. A brownish fluid comes from eyes and he breathes short. J. R. H., Port Huron, Mich.—A partial dislocation of stifle may take place, or a choking of the large blood vessels may occur. Give ½ dr. carbonate of ammonia at a dose in feed three times a day. Apply equal parts turpentine, aqua ammonia and olive oil to stifle three times a week. Her bowels should be kept open and the leg hand-rubbed. Give pig 30 drops of tincture gentian (compound) at a dose three or four times a day. Keep it in a dry, warm place.

**Injured Teat.**—I have a valuable cow that was stepped on, injuring one teat, causing us to use milking tube, and I would like to know if she will lose this quarter during time she is dry? She will freshen next February. E. H., Coopersville, Mich.—When she freshens it may be necessary to continue the use of milking tube, but, of course, the tube should be either boiled for ten minutes or dipped in antiseptic solution of some kind every time it is used. This prevents infecting udder.

**Cow Gives Bitter Milk.**—I have a cow seven years old that seems to be perfectly healthy, but she gives bitter, strong smelling milk. She will be fresh about April 10. E. S. S., Muskegon, Mich.—Give your cow ½ oz. salicylic acid and 1 oz. ground ginger at a dose in feed two or three times a day.

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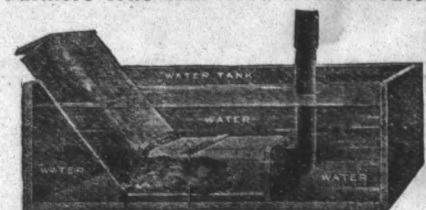
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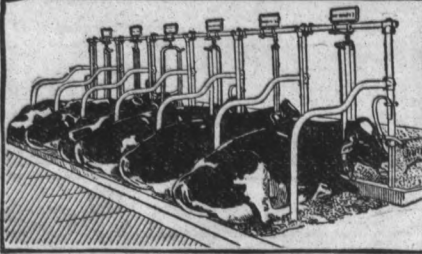
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## HOME CURING OF PORK.

It is a poor financial policy for a farmer to sell his hogs to a butcher for seven or eight cents a pound and buy them back in small pieces at from 15 to 20 cents a pound. Many, therefore, prefer to salt down enough pork in the fall to supply their families with smoked bacon, hams and shoulders for a year. Unless a large quantity of lard is desirable hogs weighing from 160 to 200 pounds are preferable to heavier animals.

When the carcass has been hanging long enough to become cold, (not frozen), remove to a chopping bench, laying it square on its back. Before cutting up it is a good plan to block out the pieces, then trim the lard and sausage meat off till the pieces conform to the proper shape of a ham, side or shoulder. In taking off the head make a cut just back of the ears and thence down through the sticking hole to the throat. Then with a sharp axe split the backbone down through the center from neck to tail; be careful to cut only through the bone, using a knife to cut the meat. In doing this part of the job some people prefer to cut on both sides of the backbone, and take it out by itself for roasting, like the spareribs. Having, however, split open the carcass as indicated, we take one of the halves and proceed to take out the sparerib. This is the most difficult part of the operation to perform properly. On the one hand one is apt to make it too spare, on the other, too generous, or in the case of both spoil its appearance by haggling. The hams and shoulders are next taken off, cutting smoothly in an oval shape. Remember that food which tastes well must, with many people, look well. The side pork, or bacon, is cut in strips from back to belly about four inches wide. Packers usually cut them wider than this, but for farmer's pork this is quite wide enough. The pieces are more easily packed when placed on the edge and coiled around in the barrel.

Pork cannot be kept sweet and palatable unless the barrels in which it is packed are in a clean condition. Unless new, they should be thoroughly scrubbed and scalded. Then, again, do not put the hams and shoulders in the same barrel with the side pork. When this is done the hams and shoulders become too salt for eating and soaking or parboiling causes them to lose their finest flavor. A very good way of curing these parts is to use only a strong brine prepared as follows: For 100 pounds of meat, take eight pounds of salt, two pounds of sugar, one pint of New Orleans molasses, and two ounces of saltpetre. Pulverize the saltpetre, dissolve it in water, and, mixed with the sugar and molasses, stir into the brine. Three gallons of water in proportion to the amount of salt mentioned will make the brine strong enough.

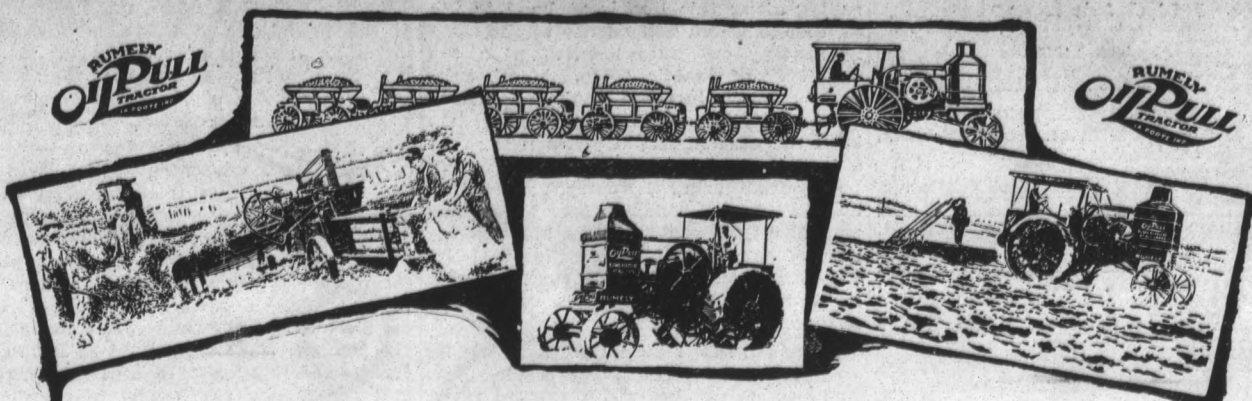
When dry salting is practiced we have followed this formula: Rub onto each piece salt, sugar and saltpetre in the proportion of 10 pounds of the first, two pounds of the second and two ounces of the last. The flesh side of each piece is made white with salt and is packed away for two or three weeks, by which time the meat has become permeated with it. Having "taken salt" remove and dip each piece into boiling water for half a minute. This cleans off all salt and hardens the surface so that it cures nicely. After a few days it may be smoked and put away before warm weather and danger of flies. We are partial to wrapping tightly in paper and burying in the oat bin. Dryness, however, is the main essential and the grain will absorb moisture and is convenient.

Canada. J. HUGH MCKENNEY.

Lambs had such a remarkable boom in prices a short time ago that the movement to market was stimulated, and the increased offerings served to bring about reactions, although prices were still much higher than in former years. Doubtless, the calling of over-due loans made on sheep and lambs has had something to do with the large marketings, the banks of the country being desirous of entering another year with a good showing of deposits. As is generally known, large commission firms handling sheep or cattle are in the habit of making loans to their country patrons, and such firms are accustomed to borrow money from the banks and then reloading the money on live stock, the usual rate east of the Missouri river being seven per cent, while west of the river loans are made largely at eight per cent or higher.

The export movement in sheep from our shores is a small affair these times. Such exports amounted to only 157,263 head for the last fiscal year, although larger than a year earlier, when they were but 121,491 head.

Increased receipts of sheep and lambs this year at western markets are largely attributable to the liquidation by owners in Montana, where the ranges are invaded by settlers.



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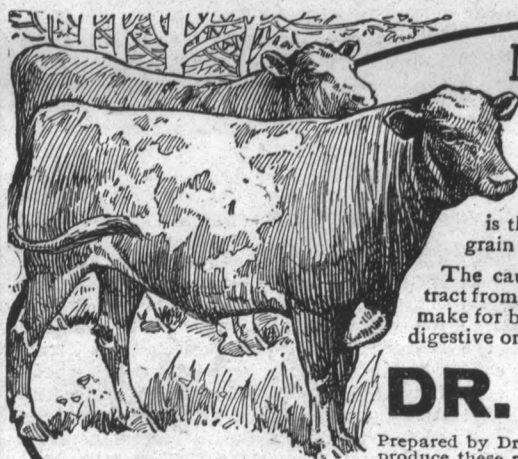
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DETROIT, JAN. 4, 1913.

## CURRENT COMMENT.

On pages 16 and 17 of this issue will be found a zone map and description of the main features of the new parcels post, which went into effect on January 1. While the parcels post, as provided for by the new law and at present in force, will not prove as great a benefit to country people as they may have anticipated or desired, it will be an entering wedge to a more satisfactory parcels post in future years. Any measure of parcels post has been vigorously opposed by various interests, foremost of which were express companies doing business in U. S. That very opposition has directed attention to express rates and at the present time a general reduction of express rates has been ordered by the Interstate Commerce Commission and a certain length of time given the express companies to show cause why the reduced rates should not go into effect as prepared.

So far as the shipment of farm produce is concerned, the regulations are such as to make the parcels post of little use except for local delivery, where the parcels are mailed for delivery from the local post office or mailed on a rural route for delivery from the post office where the rural route originates. For this purpose the new parcels post will be of considerable value to country people. Those living on a rural route at considerable distances from their local trading point will be able to order goods by telephone and have them delivered by parcels post, thus saving many trips to town. For distant shipments of farm produce, such as butter and eggs, the regulations are too exacting as to packages and packing and the rate too high to make such shipments practical. For such shipment butter must be enclosed in a hermetically sealed metal package, and that in a wooden box, and eggs must be wrapped in excelsior or other material and enclosed in a double corrugated paper package to avoid breakage and its consequent results. Thus, except for local delivery farm products can still be more cheaply shipped by express, even at present rates, and with the contemplated reduction of express rates the disadvantages of the new parcels post in this regard will be still more marked.

Consequently before making shipments of goods of this class it will be to the advantage of the shipper to ascertain the express rates and requirements as to packages, etc., and compare same with the parcels post rate. But for the securing of goods, both from nearby trading points and from more distant points, especially where goods are light in weight, the parcels post will be of considerable advantage to country people as it will in sending small articles, gifts, etc., to each other. An example of the

saving along this line is at hand in the advantage which will accrue to the state in sending out auto licenses from the Secretary of State's office. If we estimate that the increase in the number of automobile licenses is as marked as has been the case in recent years it is probable that 50,000 sets of these licenses will be required during the current year. The average cost of sending them by express was about 30 cents each, while the estimated average cost of shipping them by the new parcels post is 10 cents, making a saving of 20 cents each, or a total saving of \$10,000 to the state.

It will thus be seen that by studying the parcels post rates and requirements and comparing them with express rates, using the cheaper and more advantageous in each case, a considerable saving will result for country people. At the same time the defects of the system should be studied in order that needed improvements may be suggested at such time as public opinion shall become crystallized upon the subject, which we believe will be at no very distant date.

In the last issue some of the Taxation. important propositions which are certain to be considered by the legislature during its session, were made the subject of editorial comment. Continuing in our purpose to discuss the more important of these problems in our editorial columns in as non-partisan and unbiased manner, to the end that public thought may be stimulated and public sentiment crystallized and expressed regarding them, let us briefly review the vexed question of taxation.

No governmental question or policy has ever been or ever will be of greater interest to all the people than this matter of taxation. Indeed, it was a matter of unjust taxation that led to the revolt of the colonies which gave birth to our nation, and even under our representative government the question has never been satisfactorily settled, but has ever been a paramount issue in the legislative halls of the nation as well as the several states. Michigan has had her share of difficulty and turmoil over this question. The campaign for "equal taxation" has extended over many years and much progress has been made toward the equalization of the burdens of taxation. The semi-public service corporations of the state, such as the railroads, telegraph, telephone and express companies, long favored in the matter of taxation during the period of their development and the development of the state, have been placed on the tax rolls of the state upon a basis of physical valuation, the same as the farms and homes, while still later the physical value of the mines in which the state is rich has been taken into consideration in fixing their valuation for assessment purposes. But the end is not yet, and in view of the ever changing conditions it is a safe assertion that this vexed question will never be finally settled. The best for which we can hope in this direction is constant progress along right lines.

The interest of our readers in taxation legislation is a double one, since their burden of taxation is affected by such legislation in a two-fold manner. That burden may be increased either by the of other classes of property or the over assessment of their own property. In either case the result is the same, an unequal distribution of the unavoidable cost of modern government. All the farmers ask, or should ask, in this connection is a "square deal." In this connection there is need for sober second thought on their part, as there is ever a class of self-styled "reformers," with selfish interests to serve, who would make the country voter believe that he is abused on every hand, and it is important that we learn to differentiate between real and specious facts and arguments.

It is probable that the tax bills which will come before the present legislature will embody a wider range of ideas upon this question than usual. The report of the special commission on taxation, authorized by the last legislature and appointed by Gov. Osborn will doubtless contribute to that end.

Earning power has come to be recognized as a just factor in determining the value of property. In a large class of property, other than farm property, the earning power of the property itself is, in the very nature of the case, separated from the earning power of the individuals operating the property. In a manufacturing institution, for instance, salaries of executives as well as the pay of the

workmen do not appear in the earnings of the property. This fact was recognized by the special commission in its report, as well as the fact that the farmer's efficiency does appear in the assessed valuation of farm property.

In defending the plan for an excess corporate tax, advocated in the tentative report of this special commission of inquiry, by denying that such a tax upon the earning power of corporations would be a tax on efficiency by comparison with farm property, the following language is used: "When a farm is assessed at its cash value, due allowance being made for the physical personality used in farming, there is nothing left to assess." While still recognizing the justice of considering the factor of income in the assessment of property for taxation purposes, the particular plan of a corporate excess tax was not so strongly recommended by this special commission in its final report. But that there is still reason to believe that the earning power of the property should be taken into account in fixing its assessment for taxation purposes has so many adherents that it will be made the basis of much proposed legislation during the coming session of the legislature. Regardless, however, of whether this idea may prevail, the report of this special commission showed that very many classes of property in the state are assessed at a very much less percentage of their actual cash value than are farm properties, a condition of affairs which should undoubtedly be corrected.

Also there is no doubt that propositions will be presented for the enactment of a law providing for an income tax in Michigan. Wisconsin has such a law and is this year collecting a state income tax for the first time. The merits of such propositions cannot, of course, be discussed in detail until they are presented in concrete form. It would appear, however, that such a plan would be more feasible in correcting any inequalities which may exist in the assessment of all physical properties on the basis of their cash value as nearly as can be ascertained. Also such a law would tend to the more equitable distribution of the burden of supporting the government by including many who now enjoy its protection and advantages without directly contributing to its support, as for instance, the large class of professional and salaried people who are not property owners and contribute to the support of the government only indirectly through the payment of rents and perhaps a slight but indeterminable amount of added cost of goods which they buy through the "loading" due to the incidental expense of taxation which must be borne by the producer. We believe, however, that this would be an almost infinitesimal item. Certainly this would be the case as far as farm products are concerned.

This would certainly be a profitable subject for investigation and to the end that data may be at hand by which practical comparisons can be made, we should be glad to have as many of our readers as can give reasonably accurate figures upon this proposition, provide us with a statement showing the net returns from their farms during the year of 1912. In such a statement the farm should be credited with the total products sold and on hand, produced during the year, and improvements which have been made, and charged with wages and expenses, including depreciation if any. Also make a reasonable deduction for salary at a rate which could be earned elsewhere, specifying the amount of same in statement. Also indicate on the statement the total of taxes paid on the farm and personal property incidental to its operation, but not upon any personal property earning an independent income.

Such data, should the response be general to this request, might be of value at an opportune time in the shedding of needed light upon this vexed question, for which reason we are asking interested readers to send us such statements. What is desired is plain facts which may be used at an opportune time toward aiding in the securing of simple justice for the farmer taxpayers who are our readers and patrons.

As above noted, it is a matter for congratulation that progress toward a just equalization of taxation has been so marked in our state during recent years. Many errors have been made, but on the whole progress has been satisfactory. Progress cannot be made without mistakes, but mistakes can be minimized by a general public interest in and discussion of proposed legislation. "In a multitude of counsel there is wisdom."

## HAPPENINGS OF THE WEEK.

## National.

Both houses of federal Congress were reconvening on Thursday of this week, following the holiday recess.

The government internal revenue report shows a falling off in the amount of beer consumed in Chicago during the past year, there being a discrepancy of 224,085 barrels, as compared with the report of 1911.

Fire claimed many victims and caused heavy loss in property in Detroit during the past year. A review of the twelve months shows that 18 lives were lost and 46 persons hurt in fires that occurred in homes and business places. The loss in property exceeds a million dollars.

Thirty-eight of the 40 men tried at Indianapolis by the federal government in the dynamite conspiracy case were found guilty by the jury last Saturday. The trial, which had continued over many weeks, was one of the most important ever tried in the U. S. The testimony revealed the methods employed by the leaders of the Iron Workers' Union to intimidate open shops and employ only union men. It is probable that the case, because of its importance, and also because of the large number of men found guilty, will be appealed to the higher federal courts. Sentences have not as yet been announced. The maximum sentence according to the number of counts against some of the men, would aggregate 39½ years imprisonment, which, of course, may be modified by Judge Anderson, in whose court the trial occurred.

The executive committee of the United Male Garment Makers of America, of New York, ordered a strike to begin Monday. The order affects 150,000 tailors and 14,000 shops. The workers are asking that labor in dark tenements and also the employment of children, be abolished. They also ask a 20 per cent wage increase with a minimum wage scale of \$10 per week for women and \$16 per week for men, and overtime work to be paid for at time and a half rate. They also ask for clean and sanitary workshops.

Arrangements are being made by the department of commerce and labor for contesting the admittance of former President Castro of Venezuela, who is now enroute to this country from France. General Castro will be held at Ellis Island until a decision in the case is made.

Two lives were lost and 16 families were driven from their homes when a fire visited Newport, R. I., early Monday morning. Ten buildings were destroyed and the property damaged amounted to between two hundred and three hundred thousand dollars.

The bureau of insular affairs reconsiders for congressional action a bill looking toward biennial inspection of insular possessions by representatives of both the executive and legislative branches of government. The bureau also believes appropriations to encourage vocational training should be provided.

A street car jumped the track on the central bridge across the Ohio river at Cincinnati and was precipitated into a vacant lot on the Ohio side. Two men were seriously injured and seven others sustained more or less serious injuries.

President-elect Wilson was entertained by the people of Staunton, Va., his native town, on December 27.

During the year of 1912 permits for buildings in Detroit increased 20 per cent over those of 1911. The aggregate amount of permits reached to over \$25,000,000.

Senator Wm. Alden Smith, of Michigan, left Washington for the Mexican border in connection with his duties as chairman of the Senate committee investigating the Mexican revolution.

The fact that during the special session of Congress demands will be made for free wool and free beef makes it of interest to know that cattle are admitted when less than a year old on a specific impost of \$2 per head; provided they are valued at less than \$14 per head, the duty is \$3.75. Where the value is over \$14 there is an ad valorem duty of 27.12 per cent.

## Foreign.

Terms of peace have not yet been agreed upon by the allies and Turkey at the conference in London. It appears that the allies are determined to hold on to the territory they have won up to this time. It was expected that this attitude would defeat the attempt to arrive at an agreement, but Turkey appears to modify her demands, which action gives increased hope for settlement without further use of arms.

In a test to determine the efficiency of aeroplanes for carrying freight, Morris Farmen, at Toussus-le-Noble, France, with a powerful machine, easily carried a cargo of 880 pounds, together with himself and a passenger.

It is stated that the German authorities have discovered a number of Russian spies who have been arrested and charged with spying in behalf of Russia. Fully 30 men and women of both German and Russian nationalities, are implicated.

## NOTICE TO CORN GROWERS.

The Hon. H. E. Krueger, of Beaver Dam, Wis., will score the corn at the coming corn show at Kalamazoo. All entries must be in by 12:00 o'clock, January 6, 1913. By-laws and score cards furnished on application to J. L. Bradley, secretary, Augusta, Mich.

## CROP AND MARKET NOTES.

Sanilac Co., Dec. 27.—Beautiful winter weather, not much snow, ground frozen hard. Fields slightly protected. Roads are in fine condition for marketing produce, but not much being moved but beans and hay, the latter being so cheap.

(Continued on page 21).

# Magazine Section

LITERATURE  
POETRY  
HISTORY and  
INFORMATION

**MICHIGAN FARMER**  
AND LIVE STOCK JOURNAL  
PUBLISHED WEEKLY  
ESTABLISHED 1843.

The FARM BOY  
and GIRL  
SCIENTIFIC and  
MECHANICAL

This Magazine Section forms a part of our paper twice a month. Every article is written especially for it, and does not appear elsewhere

## The Country and the People of the Philippines.

By E. A. Coddington.

**A** LITTLE more than a decade ago the Philippines were a very vaguely located territory in the southwestern quarter of the Pacific Ocean, which was known as the Asiatic or East Indian Archipelago. We knew not whether there were a dozen or many islands; their inhabitants were always pictured in primitive apparel, armed with spears and shields and they were supposed to be as wild and even more savage than the Indian tribes scattered over our own country; many associated them with the cannibals of the archipelago; but few realized that Spain and the church of Rome had presided over the destinies of these people for more than three and a quarter centuries. About all we did know was that Manila was the principal city and port of entry of this distant and little understood country. Now, this has all been changed. President Taft has served a term of years as Civil Governor of the Philippines; as Secretary of War under President Roosevelt he opened the first Philippine assembly and made a trip around the world which was significant in our relations with other nations; many of our people, from every state in the union, have answered the country's call to serve the Philippine government; many of our foremost citizens and well-to-do people have in their travels visited not only Manila but the principal cities of the Islands; the leading political party of our country regards the Philippines as being of such importance as to warrant making our policy of dealing with them an issue during the next presidential term. But of what importance are these far-off islands and their people to our people and our government? Why are we concerned about them?

### Routes and Distances.

The usual route to the Philippines by commercial steamers today is from San Francisco to Honolulu in the Territory of Hawaii, (2,060 miles), thence to Yokohama (3,445 miles), Kobe (350 miles), and Nagasaki in Japan (387) miles, then direct to Manila 1,318 miles; at least one steamer makes this trip each month. One may go direct from Seattle to Yokohama (4,269 miles), change steamers and go to

Kobe and Nagasaki and direct to Manila. Formerly passengers had to go from Nagasaki to Shanghai (450 miles) and Hong Kong (852 miles), then back 645 miles across the China Sea to Manila. The United States Army transports go from San Francisco to Honolulu, then to the Island of Guam (3,397 miles), and through the San Bernardino Straits to Manila (1,506 miles)—the most direct but by several hundred miles the longest route to the Islands.

The time usually taken is from three to four weeks and the trip is a delightful one, especially in early spring or autumn. It is difficult to overestimate the

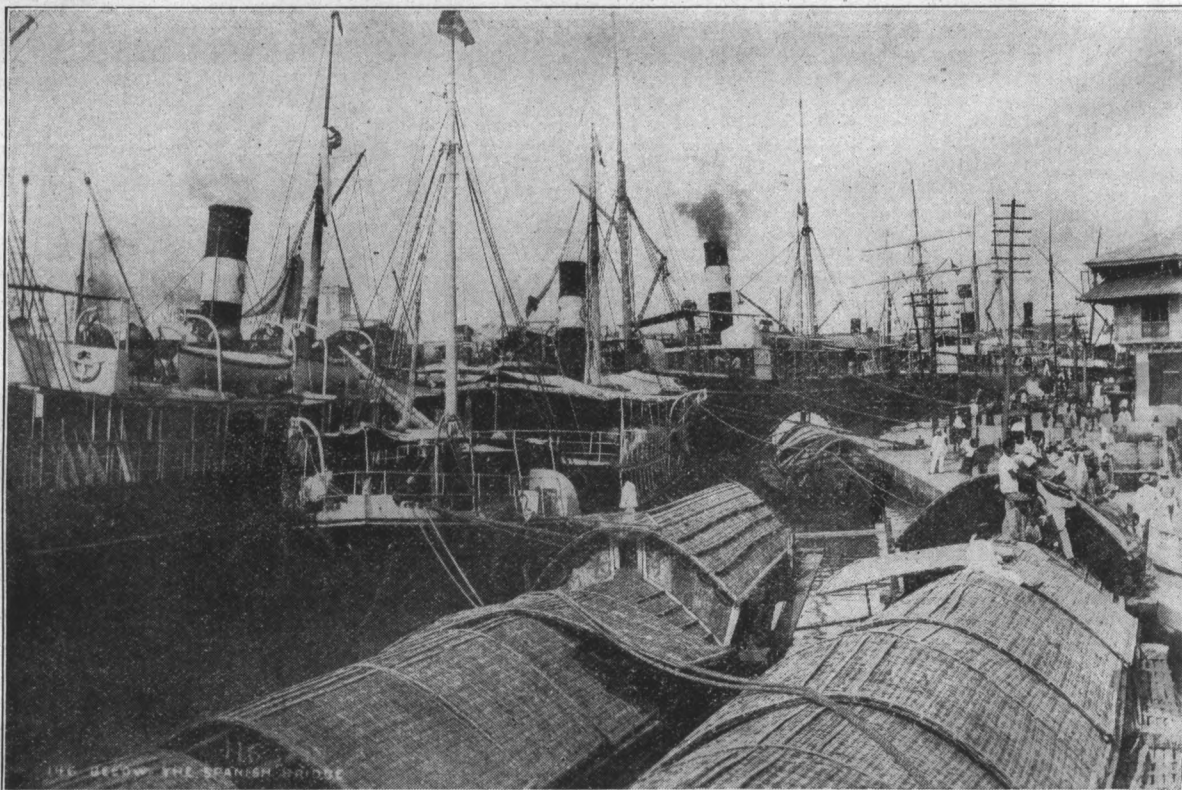
usually a day or more is spent in this Paradise of the Pacific; from Honolulu to Yokohama is 11 days, where a stop of one or two days is made; one day more takes one to Kobe, the great commercial center of Japan; another day through the Inland Sea of Japan to Nagasaki, one of the greatest coaling stations in the world. Here all of the great steamships from both Europe and America take on coal for their long voyages, and here the great struggle for supremacy in foreign trade is going on all the way up and down the eastern coast of Asia. From Nagasaki to Shanghai, the great commercial center of China at the mouth of the Yangtse

silks, tea, and other industries of Japan and China, and the hemp, sugar, coconut and tobacco industries of the Philippines. In some of these products these countries are already our competitors, and they need many of our products for the improvement of their methods of production and the development of their resources. In a short time the Canadian Pacific line will put on steamers which will make the voyage from Vancouver to Yokohama in 10 days; the time from Yokohama to Manila is from five to six days. A line connecting with these steamers, running from Yokohama to Manila, would enable passengers to make the trip from the United States to Manila in 15 or 16 days instead of from 24 to 25 days as at present.

### Climate, Seasons and Storms.

A matter of great concern to those who visit the Philippines, and about which there are many erroneous notions, is the temperature, the climate, and the baguios or storms. As we travel toward the Islands many of our early notions regarding the intense heat of the tropics are completely changed. In the beginning it should be stated that no such high temperatures are ever recorded in the Philippines as in Michigan. One does not ordinarily find the heat of Honolulu or Manila oppressive; going direct from San Francisco to those points in early spring or late autumn the change is like our change from spring to summer; at Honolulu one can usually change winter woollens for spring flannels, and a week or two later these may be changed for summer ducks or linens; these changes, with a daily shower or plunge, give perfect health and exuberance of spirits. After

one arrives in the Islands, especially during the rainy season of July and August, for a short time sleep may be accompanied by perspiration and a slight nausea for a few moments after waking; this is about the only acclimating sensation one ever experiences. The sea breezes are almost constant, ranging through the year from southwest to northeast. The change of the seasons is very gradual and the only well marked seasons are the hot and



Along the Muelle—Inter-island Shipping in the Pasig River. In front are cascoes or lighters; hundreds of Manila's population live in these boats and handle much of the cargo that comes to the Philippines. Back of them are many of the Inter-island Steamers which do the carrying trade of the country.



The Escolta—Manila's Principal Business Street. This picture shows the narrow streets of the city, some of projecting second stories and a number of the different styles of vehicles in use. The Filipino caballo (horse) is a real study.

dry season in March and April, and the rainy and humid season. The average annual variation of temperature in Manila is 6.3 F., and the variation for the Islands during the year is from 71.6 to 86 F. Variation in temperature increases with the latitude and distance from the coast; there are some quite marked regions of high, intermediate, and cool temperatures. While the thermometer never goes as high in the Philippines as in the United States, the rays of the sun are more penetrating and everyone tries to keep out of the mid-day sun as much as possible. If one remains long in the country the tropical heat takes from him more or less of the endurance and hardness acquired in a temperate climate. The average number of hours of sunshine a day for each month ranges from 4½ hours in September to 8 hours and 50 minutes in April. The nights are almost always cool, and the climate from November to April is equal to the best ever known in southern California. As compared with Michigan the climate of the Philippines is more regular and steady. They are free from the radical changes which we experience; much less care is required to make one comfortable in dress; the luxury of an almost even spring or summer temperature the year around, and the almost constant sunshine during the days, contribute largely to the health and joy of life there.

The typhoons, baguios or storms do much less damage than the cyclones of the United States; shipping is well protected by the meteorological observatory in Manila and its stations in all parts of the Islands which give out warnings several hours before there is any danger; the easterly hours before there is any danger; the cheap unprotected houses of the poor people along the coasts; the loss of life is almost wholly by natives who are reckless or disregard the warnings which are always given; rarely does it happen that any considerable number of Europeans or Americans lose their lives in these storms.

#### Area and Population.

Having reached Manila we are interested to know something of the number of islands, their size, the people, their industries and importance. If we call at the Ayuntamiento or Palace (the Insular Government Building) in the walled city, or at the Merchants' Association on the Escolta, the principal business street, we can get almost any information desired. The Philippines include a triangular-shaped territory the base of which is bounded on the south by Borneo and the Dutch East Indies, on the west by the China Sea and on the east by the Pacific Ocean, while the apex in the north is only a short distance from Formosa. The landed area of the Islands is 115,000 square miles, nearly as large as Michigan, Ohio and Indiana. Including their lakes and inland seas, the Philippines are larger than New England, the British Isles or the empire of Japan. While the principal landed areas are on a dozen islands, which are commercially important, there are more than 3,100 islands in the group. The scenery in most parts compares favorably with the beautiful Inland Sea of Japan, while the country and the life of the people abound with myths, legends and history which make them most interesting. The country has a population of nearly 8,000,000, approximately that of Michigan, Ohio and Indiana, larger than Pennsylvania and smaller than New York. The principal cities are Manila, with a population of 220,000, Iloilo (E-I-o-e-I-o) 19,000, Cebu 18,500, and Zamboanga 15,000.

#### Importance of Location.

The importance of the location of the Philippines is readily understood when one learns of the number of great steamship lines which run north and south through this part of the Far East. To and from Europe there are five of the world's greatest lines; the English Mail, German Mail, and the Japan Mail, from London, Bromerhaven and Antwerp, pass through the English Channel and Straits of Gibraltar to the Mediterranean, from which waters they take the same course as the Spanish Mail from Barcelona and the French Mail from Marseilles through the Suez Canal and Malacca Strait to the ports of China and Japan, except the Spanish Mail which goes direct from Singapore to Manila. Six great lines from the United States travel over the same route from Yokohama to Shanghai and Hong Kong and return. Four great lines pass through Manila to German New Guinea and Australia. A number of smaller lines run from Manila to Hong Kong, China and Japan ports, while the North German Lloyd connects Zamboanga

and the southern Philippines with Menado in the Dutch East Indies, Borneo and Singapore. It is plain to be seen that Manila and the Philippines are situated on the world's highway of trade and travel.

The trade of Manila compares favorably with the ports of the United States. Freighters from England, Scotland, France, Spain, and the United States through the Suez Canal, and sailing vessels from around the Horn are always found in Philippine ports. During the fiscal year 1911 nearly 900 foreign vessels entered and cleared the ports of the Islands; 577 steam and sailing vessels are engaged in the inter-island carrying trade, or 1,135 including those employed in harbor duty. One can readily understand the congested appearance which the Pasig river and the harbor of Manila usually present with all of this shipping. From these conditions it is clear that the Philippines is a country of steamships rather than of railroads.

#### Origin and Resources.

Perhaps the most important part of this brief account of the country is its resources, its products and industries—what keep the shops, factories, railroads and steamships of the country busy. The Islands are of volcanic origin and form a part of a chain of islands or upheaval of the earth's surface east of the China coast, ranging from less than 100 miles in some parts of Japan and Formosa to several hundred miles from the mainland in the Philippines and Borneo. Practically all of the islands are covered with grass, palms and tropical vegetation—some of them with immense forests. While much of the coast is high and rocky, in many places it is low and sandy; about the mouths of most of the rivers the land is low and swampy, and the soil mostly alluvial, as the streams are generally short, crooked and very swift. The great river valleys are found on the larger islands of Luzon, Mindanao and Panay (Pan-I). Luzon is about the size of the state of Ohio, Mindanao of Indiana, and Panay of Connecticut. While the country is mountainous, nearly all of the ranges run north and south and the mountains resemble the Alleghenies; some sections remind one of parts of Pennsylvania and Virginia. The rich valleys of the Cagayan River in northeastern Luzon, the Agno, the Pampanga and Pasig

produce a variety of products in such abundance as to supply a large amount of the markets of both Europe and America. The principal products are copra, hemp, sugar, and tobacco, but the number and variety of the products of the land are almost unlimited. All kinds of plant life grow almost steadily the year around without the retarding effects of winter or the severe changes of temperate climates; about the only hindrances to continuous plant growth are occasional drouths in March and April, and too abundant rains in July and August; some plants mature and yield their harvests two and even three times in a single year.

#### Forests and Minerals.

Fully one-half of the area of the Philippines, about 30,000,000 acres, is covered

with forests; the mountains are mostly forested and on many of them there is a large variety of the finest hardwood trees. More than 650 trees, several times as many as are found in the United States, have already been identified and listed, while specimens of many more await identification. These forests include almost every variety of soft and medium grade woods as well as hardwoods which are valuable for building and construction purposes, boat building, paper pulp, corkwood, carvingwood engraving, also furniture, cabinet and ornamental woods, including ebony, camphorwood, sandalwood, incense woods, dyewoods, etc. It is claimed that few countries, if any of equal area, have such valuable forest lands. From explorations already made

(Continued on page 14).

## BRAMBLE HILL

By ROBERT CARLTON BROWN.

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**Synopsis of Preceding Chapters.**—Nathaniel Edgeworth, eccentric, hard-headed and well-to-do, is passing his declining years upon his 400-acre farm on the outskirts of the village of Turtle Creek. His household consists of Mother Hubbard, housekeeper, and Brigadier General (by courtesy) Hornbill, a fellow veteran; Zeb Wattles, an aged musician who, with his daughter Jerusha, occupies a cottage (rent free) upon the farm, also spends much time with his venerable benefactor. Estrangement and finally death, robbed Nathaniel of his only son some years previous, following which, bitter remorse induced him to grant the means of a liberal education to his sole descendant and grandson, Sidney Edgeworth. In like manner he had befriended his sister's adopted daughter, Susan Dunlap. The story opens with Susan's return from boarding school and her full appreciation of quiet Turtle Creek as she views it from her own motor car. Sidney Edgeworth has completed his course at Harvard and rented an expensive apartment in New York where he is searching for a position as diligently and sincerely as his grandfather's allowance of \$500 per month will permit. Among obstacles encountered are two college chums—Doodle, a typical case of "more money than brains," and Jim, of an altogether better sort, who has found a job in Yonkers. Jim's last night in the big city is made the excuse for an all-

cestor's will, only to find that the conditions imposed by that document promise to indefinitely delay his return to New York. By the terms of the will Sid inherits the farm at Turtle Creek, and valuable securities in addition provided, that he lives upon the farm, with the exception of two weeks' vacation each year, for a period of four years and during that time acquires, by gift or purchase, an adjoining strip of rough land known as Bramble Hill belonging to the foster father of Susan Dunlap; or, in lieu of acquiring Bramble Hill, he must make the farm earn \$100,000 during the four years. Otherwise, the entire estate reverts to Susan Dunlap. On serious reflection Sid decides to accept the conditions imposed and considers the possibilities in bee-keeping as a start toward his hundred thousand dollars. The profitable production of wine from the wild grapes going to waste in fields and roadsides is also considered. He wires Doodle for a case of his favorite cigarettes and develops a determination to make the best of his new environment. Jerusha points out the folly of overlooking little things and as a result Sid offers a site for the Old Settlers' Reunion, which is accepted, and prepares to earn a small sum by supplying refreshments for the occasion. At the close of the reunion Jerusha Wattles disappears, concealing herself in the van of the gypsy family which managed the merry-go-round at the reunion, by whom she is discovered the following morning. Escaping from them she makes her way to a Chicago suburb where, through an accident, she falls into the hands of Mrs. Raimor, a schoolgirl friend of her mother. With the knowledge and consent of her father she becomes this wealthy lady's traveling companion, assuming her mother's maiden name—Elizabeth Walters. Meanwhile Sid's first year on the farm ends without flattering results and he is further discouraged by the fact that a new railroad promises to cut through the farm and very materially reduce its earning power. At the second Old Settlers' Reunion Sid learns that Jerusha is in Chicago. Deciding to take the vacation allowed by his grandfather's will, he goes to the city to call upon the girl.

He rang the bell and a large, matronly woman opened the door to him. The rich, contented set to her precise cap spoke the word, "Housekeeper."

Sid bowed and asked for Miss Wattles. "There's nobody here of that name," was the reply.

"A young girl," said Sid, rather perplexed. "A companion or governess, or something, possibly?"

The woman looked at him blankly. "No," she said, "my husband and I are alone here. Mrs. Parker, her mother and the children are abroad."

"Oh!" It was Sid's turn to be blankly astonished. "Well, could you tell me if there was such a young lady here? Jerusha Wattles was her name."

"I never heard of her if there was. There's only one maid traveling with Mrs. Parker, and she's been here for ten years—her name is Mary." The reply was rather curt. Evidently the housekeeper wasn't greatly interested in anybody who inquired for a servant at the front of the house. She eyed Sid suspiciously and started to shut the door.

"You're quite sure you don't know of any such young lady being here at any time?" he faltered.

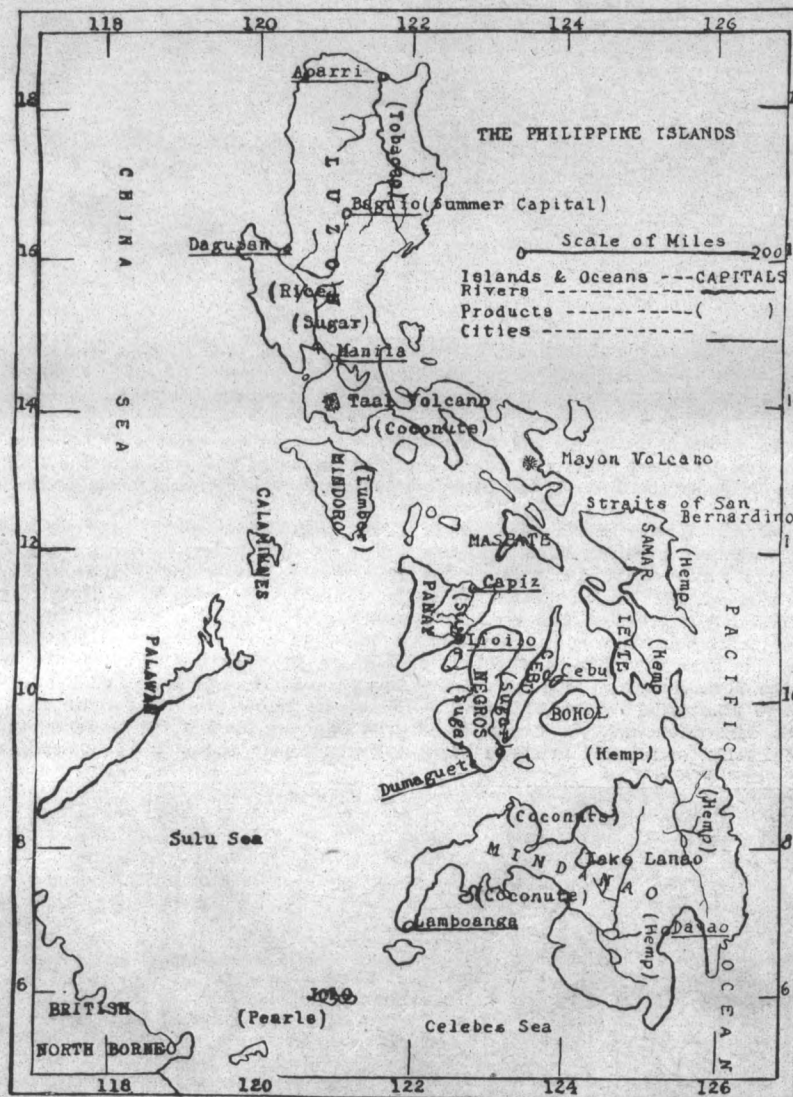
"Quite!" The door closed.

Sid's bubble had burst.

Sid hunted up the policeman who had pointed out the house and questioned him; but he was new to the beat and the Parkers had been gone for two months.

So Sid turned back to the city. It seemed grimy and lonesome. There was only one thing to do; he'd go on to New York and see Doodle and Jimmie and the other fellows. He quickened at the thought of it. He must find a friend.

(Continued on page 14).



Map of Philippines—Principal Islands, with Chief Cities and Products of Each.

in central Luzon, and the Panay, Aclan, Jalaur and Jaro (Har-o) in Panay, the Aguean in eastern and the Rio Grande de Mindanao in central Mindanao, numerous smaller rivers in Negros, together with the abundantly watered and rich slopes along the east coast of the Archipelago, about the lakes, and the coastal plains

night celebration. On their assembling in Sid's quarters in the early morning they find a telegram announcing the death of Nathaniel Edgeworth of Turtle Creek, who, in a heated argument with Brigadier General Hornbill burst a blood-vessel and immediately passed away. After the funeral of his grandfather Sid yearns to get away from Turtle Creek but remains for the reading of his an-

## RETROSPECTION.

BY GRACE AGNES THOMPSON.

Another year has gone to its rest; one more pearl  
Is slipped from the necklace of Time;  
And the days that are numbered are lost  
In the whirl,  
Unknown in the pathless Sublime.

The hours—alas, that some should be  
lost, and for aye!  
Are sunk in the deep vast of Time;  
And the minutes, once ours, we have let  
pass away  
Neglected, unprized in their prime.

But we know that some few were im-  
proved, and they shine,  
Like lamps through the dim, distant  
Past;  
They are gems that are priceless, some  
thine and some mine—  
A guerdon for each that shall last.

## AGAINST ORDERS.

BY EARL R. RICE.

The offer of a prize of fifty dollars for a little skill and effort has put many a boy on his mettle. Especially is this true, if the prize has been one in gold.

"I even dream about that prize," said John Williams to his mother, one day, "and I am going to get it if I can."

"I think you can win it, too," said his mother, encouragingly. "I am sure you will do all you can. Even if you do not win, the effort you make to get a good picture will be worth all your pains."

The prize in question was one offered by the promoters of a camera club in the little town of H—. The conditions were few and simple. The picture must be original, a landscape view, and taken, of course, with a camera of a certain make and size. As usual, all competitors must hand in their work before a given date. All the young people of H— were very much interested and, no doubt, made just as earnest resolutions to win the gold as that indicated by the above bit of conversation between John Williams and his mother.

It is safe to say, however, that none had so thrilling an adventure, with almost its tragic ending, as the one through which John's quest led him.

The opportunities for good pictures around H— were numerous. Coming in from the north the River Raisin makes one of its beautiful curves. The bank on one side was abrupt and bold, the other was overarched with drooping willows. In the near perspective was the high-arched railroad bridge, and in the background a white church spire, flanked with maple green, pointed aloft. John thought of selecting this view, but before he went out to get it a half dozen or more of his competitors had been ahead of him. A beautiful lake, a mile away, with its forest guard of oak, and pebbly beach, tempted him. But it, too, already figured in the plans of his rivals.

"I want a view of my own," he said to himself, over and over again. The opportunity for such a view came in an unexpected way.

An invitation from his Uncle Jim, in the city, came to him late in June.

"Come and stay a week with us," he said. "I can promise a pretty good time now, for I am not very busy at this season."

John was all eagerness. "I'll work hard to make up for it when I get back," he assured his father.

The coveted consent was given and when John went he took along his camera.

It is not any part of this story to tell of the delights awaiting the boy in the city. They were all that a thoughtful uncle could provide, and would be well worth our description. But the one event that came near the close of the week, the one that John will never forget, is our centre of interest here.

When John came to the city he by no means forgot the contest of the camera club. Still in his mind, it made him observing and keen. Everywhere he went his eyes were open for the coveted view. And the day he went to the park he found it.

In the center of the park stood a great tower 185 feet to the top of its weather vane. In its center was a standpipe six feet in diameter at the base and three at the top and reaching to a height of 150 feet. Formerly used to regulate the pressure in the city water mains, it had been unused for some years. But the tower, shapely and majestic by day, and crowned with beautiful lights by night, had been preserved as a noble ornament to the park. A spiral stairway led to a platform ten feet above the top of the standpipe, and from this vantage point a magnificent view could be obtained. A city of 500,000 spread out in front; at

the side flowed a majestic river, and in the distance the sparkling expanse of a lake added its touch to the beauty of the scene.

John and his uncle visited the park and climbed the tower. With his first view from the highest windows an inspiration came to the boy.

"It's just the view I want," he thought, "and I'll get it if I can."

He resolved to come to the park the next afternoon and lay his plans, and, if possible, take the picture on the following morning. But when he arrived the next day, an unexpected difficulty presented itself. He found the tower in the hands of a number of workmen engaged in repairing a damaged terrace near the top. The lower entrance was closed and a sign across the entrance read "No Admittance."

John was told by the foreman in charge of the work that the tower would be closed at least a week.

"My orders are to keep everyone out but the workmen," he said. "On such a job as this we have all we can do to

open during the work of repair. One of the ladders at the base of the tower would reach this window. Once inside, the rest would be easy.

The early dawn had scarcely broken the following morning when John slipped into the park. All was quiet, not a watchman in sight, and he went directly to the base of the tower. Putting the ladder in place he mounted to the window, which, to his joy, he found still open. A little thrill of adventure flashed over him as he passed quickly in.

As he climbed the winding stairs, passing successively the windows of the tower, he noted the ever-enlarging scene opening before him. He was satisfied with the beauty of the scene and the ideal conditions for a picture.

Up and up he climbed and stopped only when he had reached the top of the standpipe, 150 feet above the ground. It was from one of the windows opening outward from this platform that he decided to get his negative.

But John met his first real difficulty at this point. The inside window-ledge

window for him to reach. He turned to the ropes and gently pulled on one of them. To his joy he found he could raise the swinging shelf, and he soon brought it up to the window ledge. As he did so he thought he heard a sound at the base of the tower, and for a moment he hesitated. But it was not repeated, though he realized that the workmen would soon be coming. He must hurry!

Hastily making fast the ropes, he showed his camera through the window and placed it upon the shelf outside. Then he stripped off his coat and leaped up to the window. His first attempt was not successful for his foot caught in the ropes that littered the floor. But he kicked off the clinging folds and tried again. His success was better this time and a moment later he crept out on the platform.

Not until that moment did he realize his position. He was alone, no assistance at hand. He was on a workman's platform barely four feet wide, with a straight fall below him of 150 feet. Safe enough, indeed, for men used to such places, but decidedly unsafe for him!

He looked down and the height made his head swim. A momentary dizziness came over him and he grasped the window-ledge with a convulsive clutch.

But the dizziness passed in a moment and, taking courage, he looked out once more upon the scene he had come to photograph. The look steadied him and for a few moments he worked with his materials, getting them in readiness. He adjusted them carefully and then raised himself upon his knees, with his camera tightly clasped in his hand. Glancing at the plate before him to see that all was well, he waited. But as he waited something puzzled him.

As he looked the distant scene seemed to be changing. It would not remain still. The towers of the city were rising, and the treetops were coming perceptibly nearer. What could it mean? John put his hand behind him and then he knew.

The narrow platform, under his weight, was slowly settling and was already much below its original resting place.

In some way, perhaps when he climbed into the window, the ropes holding the platform had become loosened and were slowly paying out. How far the platform would sink John could not tell. He could only wait. Fascinated, he watched the steady running out of the rope. Would it never stop? Dizzy and almost sick with the suspense he for a moment nearly despaired.

Then with a rally of his courage he glanced below, seeking some way out of the perilous position. He doubted if the ropes were long enough to lower him to the ground. And then, with a shudder, he thought, "What if the ropes' ends should not be tied to the windlass?"

This he knew was possible, and it was plain that the platform might at any moment plunge to the ground below. The sense of his utter helplessness to prevent the catastrophe overwhelmed him with horror. In desperation he peered over the end of the platform and watched the steady descent with bated breath.

As he looked, the tops of the windows next below came into view, and then an inspiration seized him! Could he reach one?

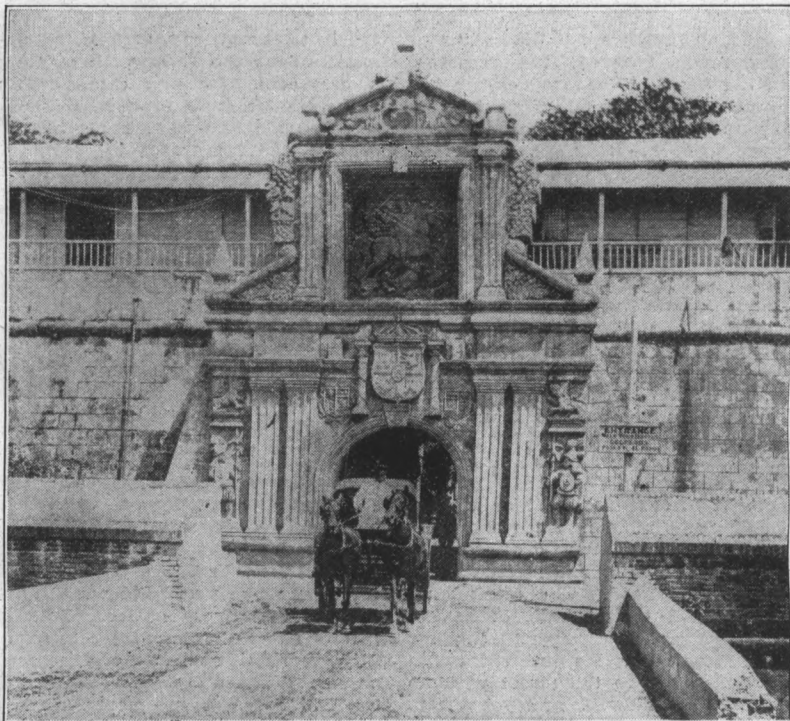
If the platform continued its descent in a straight line it would pass directly in front of one of these windows. If only the rope held out he might yet escape.

Suddenly the platform stopped with a jar. That is, the inside edge stopped. It had struck the top of the window and was held fast by it. But the outer edge continued its descent and in a moment the platform was tipping dangerously. With all his might John tried to push the inside edge off from the window-top. It resisted all his efforts!

Ten, twenty, thirty degrees, the platform tipped. The camera slid to the outer edge and shot down to the ground. A loose piece of board started to follow it, but John reached out one hand and seized it. With a desperate effort he thrust it between the edge of the platform and the tower, prying out with all his might. The platform was forced out until it cleared the ledge and slid slowly downward before the window.

Only a moment longer did John cling to his precarious support, now tilted at an angle of forty-five degrees. The rope was running faster now, and the downward motion more rapid. He must act quickly.

He slid over the edge of the platform into the window facing him. He grasped the sash, smashed in the glass and tumbled, half fainting, in upon the iron stairway. An instant later the platform pitched downward to the earth and the free ends of the ropes dangled along the side of the tower.



One of the most artistic Gates of Old Manila. Back of it is Fort Santiago, Military Headquarters; in front is Plaza Moriones, the Military Plaza, named for Domingo Moriones Murillo, Lieutenant General of Spanish Army and Governor of the Philippines from 1877 to 1880.

keep our men safe. They work 150 feet from the ground. Anything that attracts their attention means danger."

"No. I can't let you up, not even for that," he continued, when John had explained the situation. "You come back in a week and then take all the pictures you want. That's the safest way."

That was good advice and John knew it. But his heart was set on having that view. His week's visit would end in a couple of days and he knew he could not return when all was safe. He watched the work awhile from a distance, and the more he watched the more he resolved to try for the coveted view. Sud-

denly he saw his plan in a clear light. It was this: Fifteen feet from the ground was a row of windows running round the tower. John remembered that the narrow staircase inside had its first landing directly behind the third window at the right of the entrance. These windows had been removed and would probably be

ing himself up to the window-ledge to see what they were used for, John saw a swinging platform hanging six feet below the casement. It occurred to him that he could get out on this, and, though a little risky, get just the coveted view.

But the platform was too far below the



The Ayuntamiento, or Palace, containing offices of the Governor-General of the Philippines, the Vice-Governor, the Philippine Commissioners, and the Marble Hall or meeting place of the Philippine Assembly.

denly he saw his plan in a clear light. It was this: Fifteen feet from the ground was a row of windows running round the tower. John remembered that the narrow staircase inside had its first landing directly behind the third window at the right of the entrance. These windows had been removed and would probably be

ing himself up to the window-ledge to see what they were used for, John saw a swinging platform hanging six feet below the casement. It occurred to him that he could get out on this, and, though a little risky, get just the coveted view.

But the platform was too far below the



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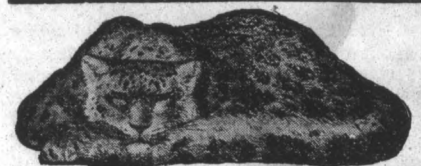
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Established 1894

## NOTICE

At the annual meeting to be held in the City of Hastings on January 14, 1913, to commence at ten o'clock A. M., the members of the Michigan Mutual Tornado, Cyclone and Windstorm Insurance Company will vote on amendments of sections 5 and 7 of the charter of the said Company. Dated Hastings, Mich., December 9, 1912. D. W. ROGERS, Sec.

## SALESMAN WANTED

We are in need of one, possibly two, competent fertilizer salesmen for the south-eastern Michigan territory. Party must be live, energetic, capable and possess some knowledge of commercial fertilizers as well as modern, progressive methods of farming. We do not demand road experience, but some local experience is essential. Our goods are well established in this territory, and we can offer a good opportunity for advancement to the right party. Any communications will be considered confidential, and we would prefer that applicants write full particulars as to age, experience and salary expected in first letter. Address Box J 641, Michigan Farmer Office, Detroit, Mich.

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When the foreman of the repair gang mounted the winding stairway, he found John, weak and exhausted, unable to descend. The foreman needed few explanations, and he asked few questions. He helped the boy to the foot of the tower, and when John departed with his wrecked camera under his arm he said, not unkindly: "Our rules on a job like this are always for a purpose. You see what I mean?"

"I do see what you mean," said John, "and I thank you."

### BRAMBLE HILL.

(Continued from page 12).

What is a vacation without a companion of some sort? Now that Jerusha had failed him he would go on to New York. Chicago seemed sordid anyway.

Sid left the elevated station at Madison Avenue and hunted up a telegraph station. There he sent the following message: "Fitzdun Rainer, The Clendenning, Fifth Avenue, New York.

Am out for a month on parole. Have to go back and serve three more years; but I'm going to make the most of my elusive liberty. Meet me Grand Central, Western Limited, Thursday. Am sick for a sight of Broadway. Sideral."

Feeling much relieved, the message written, Sid stood on the street corner for ten minutes, wondering how to put in his time until dinner. Well, he could at least have a cocktail. He hadn't tried that; maybe it would go better than the beer. He was a bit thirsty; a cocktail, a martini, would just fill the bill. Clapping his hands together to express the joy of anticipation, he turned into a busy corner cafe and ordered the drink.

His mouth was all made up for it. He hadn't tasted a real drink for over a year, but his memory still served him. He knew that elusive flavor.

"Confound it!" the drink bit his lips the instant he touched it to them. Sid swallowed mechanically, but his throat was dry; the cocktail was bitter and wouldn't go down.

Slipping it back to the bar he stared at it biliously for a moment, then shoved it over to the bar-tender with a faint smile. "Give me a little milk and seltzer."

That smacked good. The drink rang true. He hated the thought of having become a mollycoddle through feeding for a year on fresh milk. He pushed through the revolving door to the street with no small disgust at himself, and yet a sort of sneaking satisfaction.

He hadn't more than reached the sidewalk when he was suddenly confronted by a large stout man with one of those little black satchels, a bit rusty at the edges, affected by out-of-town men making hurried business trips to the city. The man had stopped in the middle of the walk and was looking straight at Sid.

It was Sam Dunlap, of Turtle Creek. Sid was sorry he hadn't remembered that Susan's foster father made occasional trips to the city.

"Oh, how do you do?" cried Sid, stepping down from the cafe entrance and extending his hand, his manner very easy in spite of the fact that he was facing Fate and it looked fatal. "Are you enjoying the city? Interesting place; so full of people and things." He felt it was a very asinine finish, but Sam Dunlap was looking at him keenly and he had to say something.

"So this is the way you spend your vacation?" remarked Sam Dunlap.

"Yes, you see, there's so little to do. I'm going on to New York tomorrow."

"Well, I hope you have a fine time, a fine time," replied Sam Dunlap in a very chilly tone, overlooking the hand Sid had twice thrust toward him. "I hope you have a fine time," he added in italics; then looked Sid up and down from the brass nails in the soles of his new blucher shoes to the enamelled brass ventilating holes at the top of his modish fall derby, gave a grunting laugh, and hurried on.

"Funny old gentleman," smiled Sid, looking after him. "Wonder if his ethics don't admit of mixing seltzer with milk?"

Doodle was there to meet the Chicago train and Jimmie had taken an afternoon off to come along.

They fell on old Sideral and slapped his back till it was sore, squeezed his hand till it ached, and shouted greetings above the station din till Sid's ears buzzed.

Oh, it was a great reunion. Everything would be the same, they'd have a good old time in memory of past days; they'd out-do themselves, restamping the old ground.

And they did have a big time; Sid's every minute for a week was occupied, filled, crammed. He got back into the thick of things in amazingly short time, calling on the Van Alstyns, the Rollins,

Miss Yerkees—everybody. Their life did seem a little artificial after Turtle Creek—all afternoon teas and things—but it was good. It was the same old fascinating round to which he was used.

Doodle was the only thing in New York that hadn't changed somewhat. He was the standard, remaining fixed like the sun. Jimmie had become more serious and had stopped drinking. Sid could only take a taste of beer now and then; but Doodle was unsullied by the business world. Still, it seemed he would never leave off talking about Elisabeth Walters, telling Sid something more about her every day, reading an extract or two from a letter he had from her (she was still in Paris with Aunt Rainer) that made him even more erratic than usual for the last week Sid was there. She had said she was coming home; Doodle insisted on Sid waiting to meet her, but Sid was concerned with his own thoughts about the girl back in Turtle Creek; he did hope that Sam Dunlap wouldn't mix in again, on account of what he had imagined in Chicago. Things had been going so nicely as far as Susan was concerned. He hoped Dunlap wouldn't drop down on him again.

Sid had several long, serious talks with Jimmie about the Edgeworth estate and his prospects. Nothing came of them, aside from Jimmie's promise to run out next summer and cast his professional eye over the land with the purpose of seeing what his practical mind might suggest.

Sid, harping back to the octopus will almost daily and making much mention of Susan Dunlap. Doodle would invariably remark, sucking at the ends of his mustache thoughtfully: "Why don't you marry the girl?" Then he'd dilate, as Doodle always did: "You know, when a fellow describes a girl's face by saying it's a good deal like some picture he saw at the Louvre and can't remember it except when he sees her, and says her way of hair dressing isn't in the style book and would be the envy of queens if they could see it; I say, when a man comes to such a sad pass, Sideral, the only proper retort is, 'Why not marry the girl?'"

"The same to you," Sid would answer. "But your path is easier. Your Miss Walters has no foster father to awe you into a serious consideration of your soul. Besides, I haven't any reason to think Miss Dunlap cares any more for me than—well, lots of people."

"Oh, neither have I about Miss Walters, you know. But she's such corking company. She's got so much nerve. Why, Sideral, that girl isn't even awed by an airship; she wanted to go up with me, but Aunt, of course, thinking of the thoughtful newspapers and everything, wouldn't allow it. Think of sailing through the empyrean with a queen like that at one's side! Oh, well, maybe it looks foolish to you, Sideral, but when a man's in—"

"Oh, cut it," Sid would usually interrupt, his eyes very vague and far away. Jimmie had no such sentiment; he was wooing business, and served as a balance between the two.

The vacation did come up to Sid's expectations. It gave him change and mental rest. He was determined to go back to Turtle Creek and do something. It would be glorious to earn that hundred thousand dollars and lay it at Susan's feet. There was the way out of it. Then he'd feel like a man in proposing to her; not like a cad. The change of scene had also brought out a thing very new and strange to Sid; he found, almost to his horror at first, that he had become attached to Turtle Creek and didn't half mind going back. In fact, sometimes at sunset he really wanted to, longed to.

Sid slipped down to the Johnstone one afternoon and looked things over. It was the same select, snug place. But there were no willow trees nodding breezily outside the windows and shaking their silver spangles in a happy dance. He remembered when he had called that tree beside his room in the old Edgeworth house, a "weepy" willow. It wasn't that—not now. Still, distance lends enchantment—and at home, in Turtle Creek, he had been enchanted by the thought of New York.

Yet, when the time came to go home he wasn't ready, he wasn't willing. He was slipping back so easily into the old order of things; the hot and cold water, day and night life.

Twice he put off the date of departure. Then, only two days remaining of his time, he secured a berth and determined to start, just in time to reach Turtle Creek in accordance with the terms of the will.

Doodle, much excited and full of antici-

pation over the home-coming of Elisabeth Walters, tried to delay Sid at the last minute, and made it as hard as he could.

"Just stay over till tomorrow night, old Sideral, and see Aunt Rainer again. She lands tomorrow. Do stay. Then you can meet Elisabeth Walters. She's worth waiting over to see."

"Your description of her always makes me think of Jerusha Watties, but you're not lucky enough to fall in love with a girl like Jerusha," Sid answered. "She is practical; used to save the feathers carelessly dropped by her white turkey, treasured them and trimmed a mighty fetching hat with them. I'd like to stay and see Aunt Rainer, Doodle, but I've got to get back. As for Elisabeth Walters, I don't think she'd be much help to me. You keep on mooning over her, Doodle, and pop up and marry her some day. Then she can exercise that champagne economy of hers with your gilt-edge income. I dare say she'd find it easier than solving traffic problems."

(Continued on page 17).

### THE PHILIPPINES.

(Continued from page 12).

it is believed that Manila is destined to become the future lumber center of the Far East.

The principal mineral products are gold, copper, zinc, coal, marble, gypsum, petroleum and salt; gold has been mined near Baquilo in Benguet, in the Camarines southeast of Manila, and in the northern end of Masbate; considerable coal has been mined in Albay province on the east coast near Mayon volcano and in northern Cebu; Cavite province produces some salt, and marble is found in Romblon, a small island north of Panay.

### Products and Manufactures.

The importance of the rich valleys, productive slopes and fertile plains of the Philippines is better appreciated when one learns the value of their products. Careful estimates show that the Islands furnish about one-third of the copra for the world's market. The report of the Insular Collector of Customs for the fiscal year 1911 shows that 115,602,012 kilos (one kilo about 2.15 lbs.) of copra, valued at \$9,899,457, were exported during the year; of this amount 72,006,406 kilos were shipped to France, 12,240,551 kilos to the United States, and 10,372,700 kilos to Spain. Philippine abaca, or Maanilla hemp, is unquestionably the world's best fiber for making rope and twine; fiber growers the world over have sought to find something to compete with it for these purposes but without success; its superiority and scarcity have made it so expensive that sisal and other fibers are substituted wherever possible. The same report shows that 165,549,626 kilos of Manila hemp were exported during 1911; of this amount 78,002,464 kilos went to Great Britain, and 66,545,219 to this country; the hemp exports were valued at \$16,141,340. Besides hemp there were nearly 4,000,000 kilos of maguey, and 100,000 kilos of kapok (tree cotton) exported during the year, so that the fiber exports alone amounted to nearly \$17,200,000. The exports of raw sugar for the same year amounted to 149,376,454 kilos, valued at \$8,014,360; over \$7,000,000 worth came to this country and the remainder was about equally divided between China and Japan. The exports of Philippine tobacco were, 12,487,152 kilos of leaf and other tobacco, 33,662,000 cigarettes, and 132,217,000 cigars, valued at approximately \$4,000,000. Some of the other exports were nearly a million hats valued at \$307,987, mother of pearl, tortoise and other shells valued at \$274,540, gums and resins valued at nearly \$100,000, and nearly \$90,000 worth of unmanufactured woods. When one considers that practically all of these products are manufactured by methods which are centuries old, the waste and lack of system in production, the general inefficiency of labor and machinery, he can get some idea of the absolutely marvelous possibilities for the products of these agricultural sections.

With the exception of the cigar and cigarette factories, a match factory, a distillery, two chocolate factories, and a small rope factory in Manila, a small sugar refinery in Malabon, a suburb of Manila, a large modern sugar plant on the San Jose Estate at the southern end of the Island of Mindoro, and a few rice and cane mills and distilleries scattered over the country, the Philippines is not a country of factories like Europe or America. It is truly an oriental country, and production by families and groups of families in their homes and in little shops is as far, in the art of manufacture, as the country for the most part has advanced.



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The Ward Book of 1913 is really more wonderful than that. In the preparation of every one of the thousand pages, we spend more money than is ever spent in the decorating of a single Wanamaker window, or the erection of a Marshall Field display. And there is this vital difference: while you are studying the thousand windows of **Montgomery Ward & Co.**, there are no urging clerks to hurry your purchase, no pushing crowd to induce unwise selection.

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Don't read **Montgomery Ward's Book of 1913** as a catalogue—take it as an array of the world's best shop—let each page visualize to you the tempting displays of the world's greatest bargain centers, and then remember that every bargain you see on these pages not only surpasses anything that you could ever hope to see in any other place, but is absolutely guaranteed to be just as you see it in word and picture.

This big book will be sent you without delay or cost. Fill in the coupon opposite and mail today.

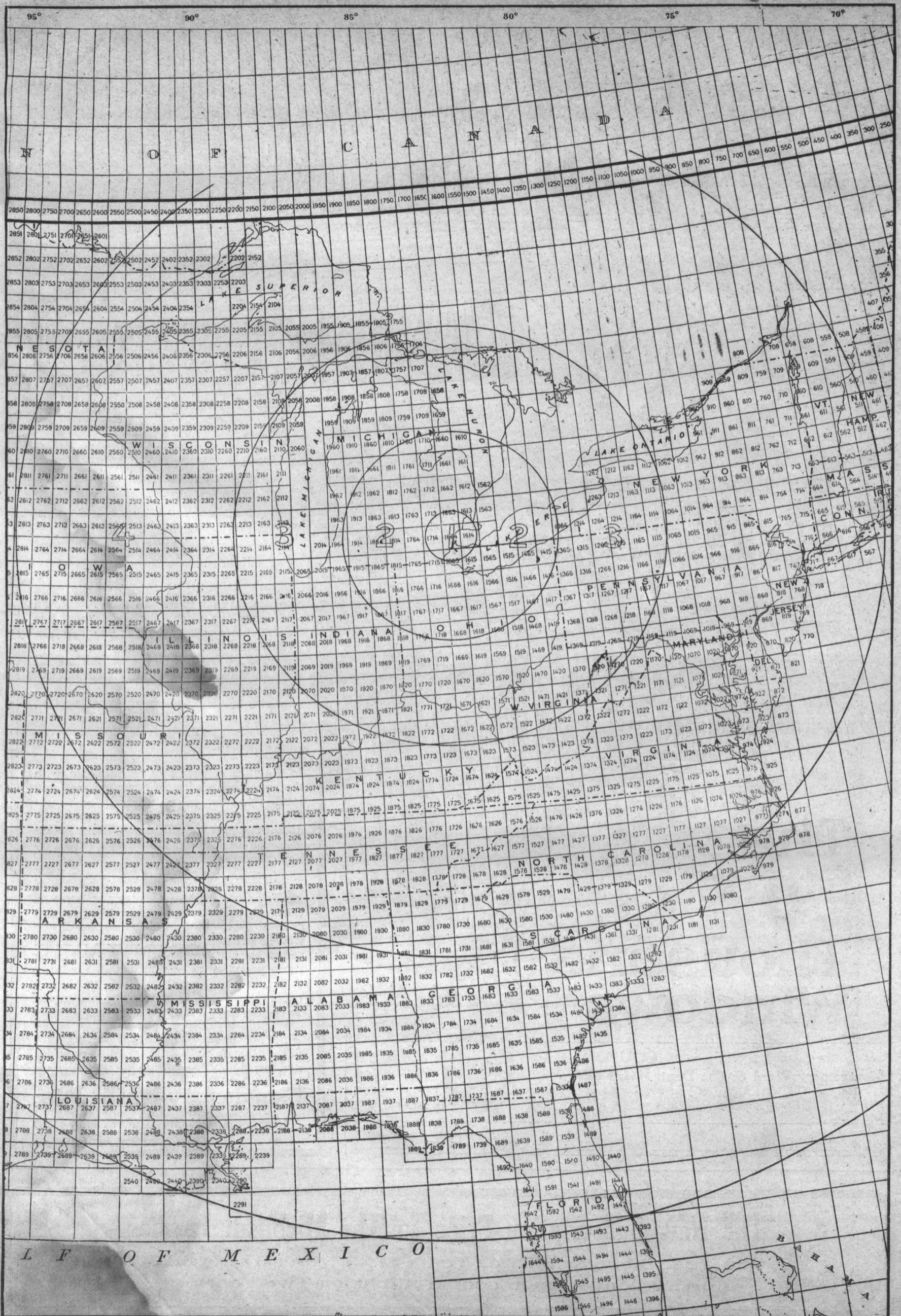
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This year has been one of the best and most productive the Southwest has ever enjoyed. On land as good as you are now farming enormous crops of all kinds have been raised. The land is so cheap that you can buy a farm for your rent money—thousands of acres of highly productive land at \$15, \$20 and \$25 an acre. This land is tributary to

## Rock Island Lines

In Kansas, Missouri, Oklahoma, Texas, the Panhandle Country, Louisiana, Arkansas and New Mexico opportunities for successful farming at low cost are numerous.

An exhaustive study has been made by Prof. H. M. Cottrell, Agricultural Commissioner of Rock Island Lines, of the various sections as to climate, soil, rainfall, what crops bring best returns, etc. This literature is of inestimable value and should be in your hands for study at the earliest moment. A postal card brings it.

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# The New Parcels Post.

In order that our readers may have a clearer understanding of the provisions of the new parcels post law, which went into effect January 1, 1913, we have reproduced on the opposite page a section of the zone map of the country by which the postal rates are determined on parcels, and present the following detailed information in order that the reader may gain a clear understanding of the provisions of the parcels post regulations and thus be saved time and annoyance in learning them from experience.

### The Zone System.

As has been previously explained in these columns, the postal rates on parcels under this new law are graduated according to the distance between points of origin and destination by what is known as the zone system. The map on the opposite page will enable the reader to get a clear understanding of this system. For the purpose of facilitating the making and finding of rates between given points, the entire country has been divided into what are known as parcels post units, the small squares on the map illustrating these several units, which are one-half degree of longitude east and west and one-half degree of latitude north and south. Each of these units is given a number, the numbers running down from the top in blocks of 50 or less, as may be required, in order to facilitate the easy location of any given unit as will be hereafter explained.

The circular lines in the map are zone lines, and all of the units included within the circle which marks the limit of any zone in whole or in part are within that zone in the application of the rate. For illustration, on this map, which is for postoffices in zone No. 1664, in which Detroit is located, all of the nine units through which the first circle passes are included in the first zone, and all of the units through which the circle marking the boundary line of zone two passes, although only a portion of those units are within the circle, are included in zone two in fixing the rate from Detroit.

Each postmaster has a map with the circles arranged so as to mark the limit of each zone from the unit in which the post office is located and each rural carrier is provided with such a map. Only four complete zones out of eight provided for in the law are shown on this map. As will be noted, most of the lower peninsula of Michigan will be within zone two from any given point in the peninsula and all will be included in zone three, while portions of the upper peninsula from any point in lower Michigan will be in zone four.

The method of determining the rate is very simple. Each postmaster is provided with an index of all postoffices showing the units in which they are located. Beginning with the next smallest number shown in the guide line at the top it is only necessary to follow down the map between the meridian lines to quickly locate the given unit and the zone in which it lies.

### The New Rates.

The new rates of postage on parcels under this law are as follows for each point or fraction thereof in weight up to the limit of 11 pounds.

Weight.	First Zone local rate.	Second zone rate.	Third zone rate.	Fourth zone rate.	Fifth zone rate.	Sixth zone rate.	Seventh zone rate.	Eighth zone rate.
1 pound	\$.05	\$.05	\$.06	\$.07	\$.08	\$.09	\$.10	\$.12
2 pounds	.06	.08	.10	.12	.14	.16	.19	.24
3 pounds	.07	.11	.14	.17	.20	.23	.28	.36
4 pounds	.08	.14	.18	.22	.26	.30	.47	.43
5 pounds	.09	.17	.22	.27	.32	.37	.46	.60
6 pounds	.10	.20	.26	.32	.38	.44	.55	.72
7 pounds	.11	.23	.30	.37	.44	.51	.64	.84
8 pounds	.12	.26	.34	.42	.50	.58	.73	.96
9 pounds	.13	.29	.38	.47	.56	.65	.82	1.08
10 pounds	.14	.32	.42	.52	.62	.72	.91	1.20
11 pounds	.15	.35	.46	.57	.68	.79	1.00	1.32

It will be noted in the above table two rates are provided for the first zone. The local rate is for matter mailed for local delivery or on local rural routes; the other rate is for matter mailed to any point within the first zone.

A special rate is provided for seeds, cuttings, bulbs, roots, scions, and plants which are mailable at one cent for each two ounces or fraction thereof, regardless of distance. The weight limit of such parcels, however, is raised to 11 pounds by the parcels post law.

### Mailable Matter.

This law includes as fourth class matter, to which the parcels post applies, all other matter, including farm and factory products not now classed by law in either the first, second or third class, not

exceeding 11 pounds in weight or greater in size than 72 inches in length and girth combined, nor in form or kind likely to injure the person of any postal employee or damage the mail equipment or other mail matter, and not of a character perishable within a period reasonably required for transportation and delivery.

Space will not permit the enumeration of the many regulations regarding the character of mailable matter. It will be of interest to readers to know that chickens, or animals of any kind are not mailable and that perishable matter, or articles likely to be broken, such as eggs, must be packed in a manner specified in the regulations and marked so as to indicate the nature of the contents. All parcels must be so packed as to be easily examined by the postmaster and must, in addition to the address, bear the name of the sender, preceded by the word "From." They must also be stamped with the special parcels post stamps and not with ordinary postage stamps, else they will be held for postage in the office of origin.

There is a provision by which all mailable parcels on which postage is fully paid may be insured against loss in amount equivalent to actual value, but not to exceed \$50, on payment of a fee of ten cents in parcels post stamps, such stamps to be affixed to the parcel. In view of this provision fourth class matter is no longer admitted as registered mail.

In preparing parcels so that they will comply with the regulations as to size, it should be remembered that if a parcel exceeds either the weight or size limit by even a small fraction it is not mailable. In measuring the length of a package the greatest distance in a straight line between the two ends of the parcel is taken, while the girth, as measured by the postal officials, is the actual measurement by tape encircling a parcel at its thickest part. In addition to the name and address of the sender, which is required, it is permissible to write or print on the cover of a parcel or on a tag or label attached to it, the occupation of the sender, also inscriptions such as "Merry Christmas," "Please do not open until Christmas," "Happy New Year," "With best wishes," and the like may be placed on the covering of the parcel in such manner as not to interfere with the address or space required for the necessary stamps. Care should be taken not to include in parcels matter of a higher class, as such parcels are not mailable at the same rate.

The value and limitations of the new parcels post, are further discussed on the Editorial page of this issue.

### BRAMBLE HILL.

(Continued from page 14).

"But you're underestimating her abilities, Sidral; and, as for me, I guess she thinks I'm a painted tin soldier or something stamped out with a cookie-cutter, and much too fragile for practical daily purposes."

"Why not get over looking wistful and reform. Win the girl on your own merits," advised Sid. "I've got a notion or two of my own on this love business. I've a neater, cleaner sweetheart in a

fairer, greener land." I'll be glad to get back and see her. My eyes have been opened a bit. I think I've been wasting a good deal of time."

As Sidney Edgeworth left for home that night the incoming Blue Star liner, Mammoth, was just off Sandy Hook. Mrs. Rainer and Jerusha Wattles were aboard her. Sid didn't guess how close he came, after all, to finding the object of his search, which had decided him on taking a vacation. If he had stayed over just twelve hours things might have turned out far differently and Turtle Creek might never have—but that's skipping pages, and stories happen in certain sequence caused by the crossing of the threadlike wires of Fate.

(Continued next week).

## STEADY HAND

A Surgeon's Hand Should Be the Firmest of All

"For fifteen years I have suffered from insomnia, indigestion and nervousness as a result of coffee drinking," said a surgeon the other day. (Tea is equally injurious because it contains caffeine, the same drug found in coffee).

"The dyspepsia became so bad that I had to limit myself to one cup at breakfast. Even this caused me to lose my food soon after I ate it.

"All the attendant symptoms of indigestion, such as heart burn, palpitation, water brash, wakefulness or disturbed sleep, bad taste in the mouth, nervousness, etc., were present to such a degree as to incapacitate me for my practice as a surgeon.

"The result of leaving off coffee and drinking Postum was simply marvelous. The change was wrought forthwith, my hand steadied and my normal condition of health was restored." Name given upon request. Read the famous little book, "The Road to Wellville," in pkgs. "There's a reason."

Postum now comes in concentrated, powder form called Instant Postum. It is prepared by stirring a level teaspoonful in a cup of hot water, adding sugar to taste, and enough cream to bring the color to golden brown.

Instant Postum is convenient; there's no waste; and the flavour is always uniform. Sold by grocers—50-cup tin 30 cts., 100-cup tin 50 cts.

A 5-cup trial tin mailed for grocer's name and 2-cent stamp for postage. Postum Cereal Co., Ltd., Battle Creek, Mich.

## HURRAH FOR WARM FEET

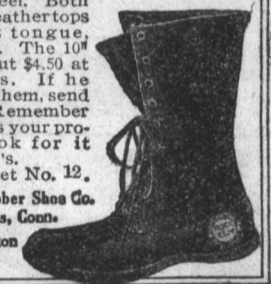
Cheers for comfort at work or on the hunt! Don't take risks—health and pleasure depend on dry, warm feet. You're certain of a good time in

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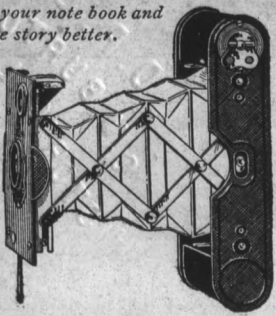
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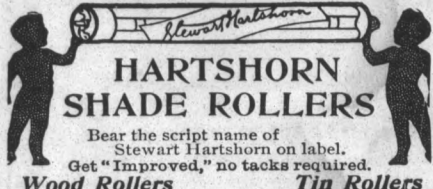
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## When You Buy New Curtains.

THE subject of how to drape the windows so as to satisfy the woman's love for artistic effects and the man's demand for light and a good view of the road is the one problem in domestic economy which has never yet been solved satisfactorily. The man of the house invariably insists that windows were made to look out of, while the wife quietly but firmly, contends that they were made for her to hang curtains over so that the neighbors can't look in.

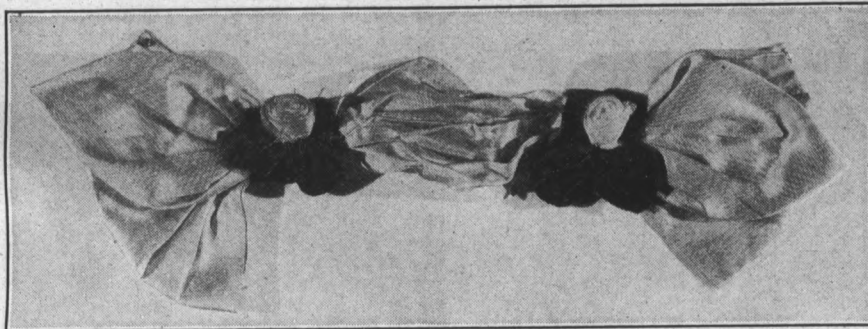
The nearest approach to settling the question in a manner pleasing to both, seems to be in the prevailing mode of putting only one plain, straight curtain over the window, instead of a pair of wide ones which hang in puffy fullness, and arranging colored drapes over the sides of this sheer one. While this mode has been launched for months, it is by no

any one woman to use cretonnes or chintz for all these purposes, a judicious use of them in the sleeping-rooms or even the living room would brighten up every house. In the question of drapes it is always well to remember that too much is bad, not only from the point of taste but of sanitation. Dust and germs find a lurking place in the folds of curtains and portieres, and the only sane kind to use are those which can be easily taken down and cleaned.

### TWO PRETTY BOWS.

BY MAE Y. MAHAFFY.

Many of the new bows and jabots for blouse and shirt waist wear now found in shops are of such simple and readily construction as to tempt the home needleworker, even though her time is quite



means so widely followed as it deserves, partly because it demands a curtain finished alike at both sides, while most of us have them finished with lace down one side and across the bottom; and partly because we are afraid if we tried it the neighbors who didn't know it was "the thing," would think we couldn't afford to buy two curtains.

However, if you are planning to buy new curtains soon, look for those which can be put up one at a window, or make them yourself. A very effective combination can be obtained from plain white scrim, flit lace and madras for the over-drapes. Make a plain, straight curtain of the scrim trimmed down both sides with a border of narrow lace, and with a deep border across the bottom, either of the lace and insertion to match, or of drawn work. Be generous with the border, two feet deep is not too much. Hang this straight across your window, and over it arrange your drapes of madras in any color to match your room. You can get it in deep browns, blues, reds, maroon, or any color you need to harmonize with the wall coverings.

If scrim, flit lace and madras are too expensive for your pocket-book, make your curtains of cheesecloth and home-made lace and the drapes of cretonne or voile. You can get window voiles in the same patterns and colors as the cretonnes, and the effect will be as artistic as the madras and scrim. Many women who can well afford expensive curtains use cheesecloth in the bedrooms because the smoke and dust rots them so quickly that it seems like throwing away money to buy good ones.

So many and so cheap are the drapery fabrics that it seems too bad not to make use of them, especially as their bright colors and pleasing floral designs brighten the rooms so wonderfully. There are cretonnes, and chintz for the sleeping-rooms, and tapestry and repp for the living rooms, in stripes, wreathed effects, and sprawly floral patterns. Deep pinks blues and lavenders vie with the lighter colors for popularity, but you must in every case remember the general color scheme of your room before making your choice.

And of the uses for these fabrics there seems no end. They are used for bed covers, window seat covers, skirt box covers, waste baskets, shoe, laundry and work bags, pin cushions, lamp and candle shades, screens, dresser carfs, curtains and portieres, chair covers and runners for library, dining and service tables. While it would be decidedly overdone for

limited. Two of this type are illustrated, neither of which will require more than a half hour's work, and a trifling outlay for materials.

Number one, in delicate blue velvet ribbon and white coronation braid, is especially lovely. A quarter of a yard of inch-wide velvet ribbon is needed, and of course this may be some other color, if preferred. Two yards of the braid will

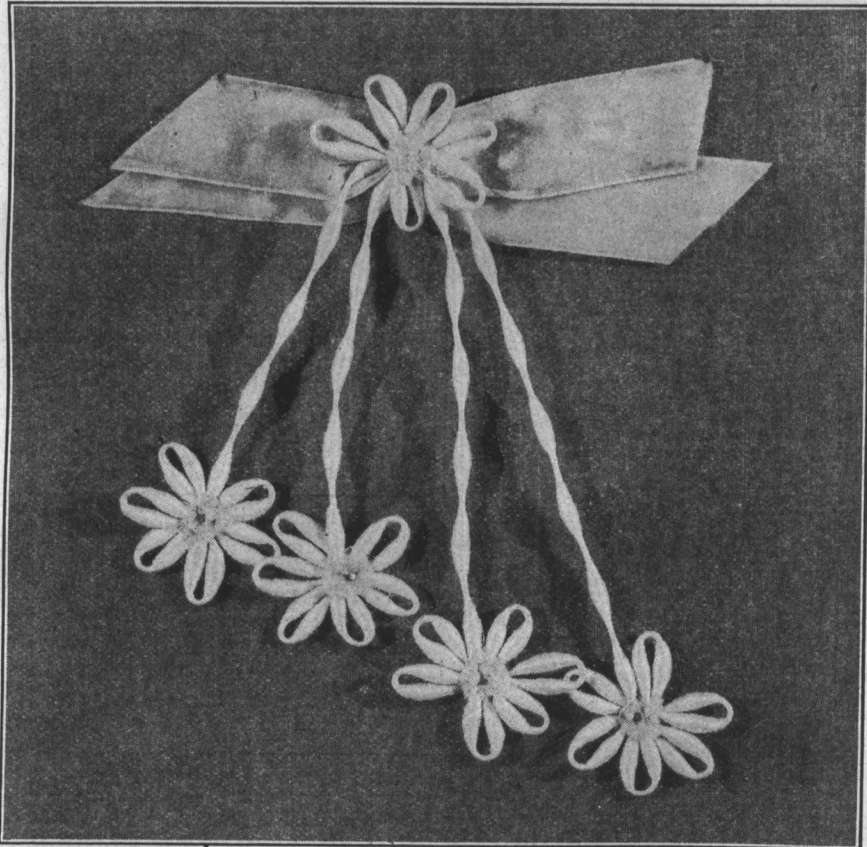
and of the soft satin variety. Fifteen inches will be required. Cut off five inches, and turn back each end of the remaining length an inch and a half, gathering each end to the main strip at these points. Divide the five inches in halves, turning the corners back to form a point in each, and gather at the opposite ends. Tuck one of these points over each of the loops on the larger piece of ribbon by wrapping it around the pink ribbon over the gathers, and then over-casting it together on the wrong side. Have two quarter-yard lengths of inch-wide satin ribbon, either the same shade of pink as the bow proper, or a trifle lighter or darker. One may be lighter and the other darker, as in the bow shown. Fold the ribbon through the center lengthwise, and roll it closely to form buds, which are then tacked upon the black velvet. Inch and a half lengths of inch-wide green ribbon are then gathered through the center and at each end, and caught down close to the bud to simulate leaves.

### THE MAGAZINE CORNER.

BY PEARLE WHITE M'OWAN.

Every woman who has a family that does much reading, knows the tediousness of picking up and sorting the various magazines and papers which have been subscribed for by the members of her household. In spite of her diligence the library table usually presents an untidy and cluttered appearance, because of its constant over-loading. If the magazines and papers are carried to the garret every few days, as tidy house-wives are apt to think necessary, there are sure to be frequent complaints, such as "Mother, where is my last week's Companion?" and, "Wife, did you carry that last Tradesman up stairs? Didn't you know I hadn't had time to read it yet?"

These difficulties are easily settled by the use of a generous supply of paper hooks. Nearly all families use one or two of these, but seldom does one see a



be ample. Pairs of the medallions composing the braid are looped and caught together securely at center to form six-petaled daisies. The central fastening is then covered with a tiny round of the velvet. The remaining velvet is cut in two parts, the ends slanting, and the two pieces are gathered slightly through the center. At this point one of the daisies is stitched, while the others hang from ends of the braid of varying lengths, from three to five inches.

The second bow is made of three and a half inch ribbon, pink in this instance,

special magazine corner. Needless to say, this should be either in library or living-room, wherever the family gathers round the evening lamp to pore over the books and magazines. There should be a hook for the daily papers, another for the local weekly, one or two for the papers or magazines belonging especially to the young folks of the family, one for the trades paper and another for the favorite weekly of the man of the house, one for the religious magazine of the family, and two or three for the various woman's and household publications.

The hooks should be placed as near together as possible and not have the papers, when hung upon them, over-lap those of another kind upon another hook. The effect far from being untidy, gives one a sense of neatness and compactness, while the cover designs of the various magazines present a harmony of colors against the more somber background of the walls.

It is but a moment's work, just before retiring or early in the morning, to place each paper on its proper hook. Except for the dailies, and possibly one or two of the larger weeklies, they need not be carried to the garret or storeroom oftener than once or twice a year, thus avoiding oft recurring complaints.

#### OLD STOCKINGS.

BY ELLA L. LAMB.

What am I doing with such a pile of old stockings? Getting out all the good there is in them, of course. I am not so foolish as to try to mend those raggedest ones. There is such a thing as economy of time. These men's socks I just slash from top to toe and they make fine cleaning cloths, mops, etc.

I'll cut these over for myself after this

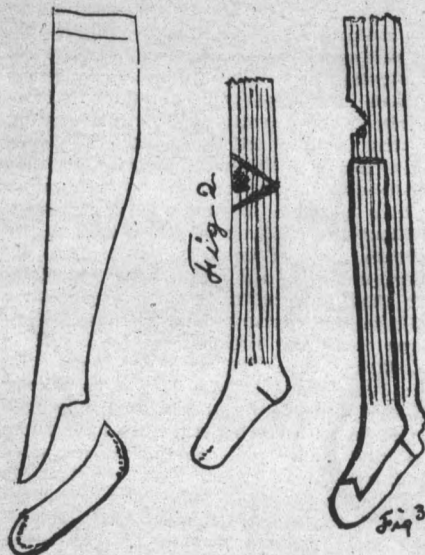
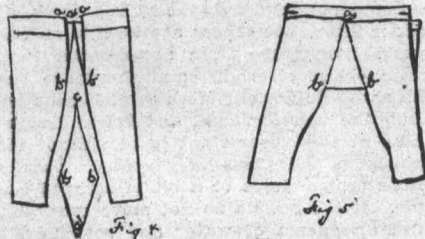


Fig. 1

pattern of mine. (Fig. 1). It takes too long to sew them by hand so I'll use a fine needle and stitch them up on the machine, being careful, of course, to keep the edges stretched as far as possible so the stitches won't break the first time I put them on. Then I open the seams and fell them down by machine, if I can or by hand, if I can't. They will last a long time if I use this firmest pair of better quality for the feet, and longer yet if I buy some of those feet that are all ready to sew on at the ankle.

This bunch of stockings have such unsightly darns at the knees that I will just cut them out like Fig. 2, and reverse the upper portion, which brings the unworn back to the front, and sew it to-



gether on the machine. I must keep the edges stretched well or I labor in vain. That looks better than darns and the child who objects to mended stockings, for everyday wear at least, should learn to keep off his knees while playing. Underwear may be mended in the same way when it is long enough.

These fine ribbed stockings have the making of some stockings for Tiny-tot in them if I cut them out just as in Fig. 3, run them up on the machine, then open the seams and fell them down by hand so they will be as flat and smooth as possible.

These heavy woolen stockings of Sister Susan's and these fleece-lined ones of mine will make some warm drawers for two of the younger children. I will cut off the wornout feet and open the back seams, from the top down, ten inches or so, cut from a third stocking a large diamond shaped piece whose sides are as long as the openings in the tops of the first two stockings and sew in place with the long points at the top like Fig. 5. Finish the tops with side openings,

bands and buttonholes, and crochet around the bottoms with cotton.

I won't have to make buttonholes on these this time as I made them last year of number 30 thread in bands of strong, new cloth and they are sewed with a long stitch and loose tension, onto the drawers I made then. It will be a simple matter to rip them off and sew them on these.

Before I appreciated creepers and rompers for small children, my babies wore pants made like these, only I cut feet on the bottom of the legs and instead of bands I run elastic into the hems at the top. The kiddies wore them in place of stockings. They came up over the diapers and kept them clean and the little fat legs warm as the children crept and played about the floor.

#### CONCERNING STALE BREAD.

BY EVA RYMAN-GAILLARD.

Making toast for breakfast, a pudding for dinner, and using crumbs in a few ways seems to be the limit of some housewives, resourcefulness in the matter of utilizing stale bread, yet hundreds of ways of using it might be named.

If serving dry toast for breakfast, consider the appearance of the toast and the teeth of those who will eat it, and trim off the crust edges before serving. For a hot dinner dish dip the slices of bread in a very thin batter, or merely in hot milk, and fry on the cake griddle, well greased with butter. For supper, toast in the usual way and pour over it a very thin boiled custard, or scalding milk, putting butter in milk or spreading on toast as is most convenient.

The "sippets" and "croutons" served by the famous chefs of wealthy people are stale-bread products made to take the place of wafers with the soup course. The sippets are merely oblong strips of bread, minus the crust, toasted in the usual way, while the croutons are small cubes or triangles of bread fried on a buttered griddle, or brushed over with butter and browned in a very hot oven. The sippets are piled on a plate, as wafers would be, but the croutons are dropped into the soup when served. Another way to use the stale bread is to cut very thick slices and then cut these into squares or rounds. Scoop out the center into box or cup forms; brush with butter and brown in oven, then fill with creamed or hashed meats or vegetables while both bread and filling are hot. The bread may be prepared as long in advance as one cares to do the work but should be freshly crisped before filling. The crusts trimmed from any of these toast-like arrangements should be rolled and added to the crumb supply so there is no waste about the methods.

Bread puddings and stuffings are standard uses but many times a pan of delicious "stuffing" can be made when there is neither roast or fowl to "stuff." When cooking a soup bone or mince-meat take some of the stock when at its best and pour, hot, over scraps of bread, using enough to thoroughly soften it. Season the moistened bread as for any stuffing and pack in a basin. Baked and served hot for either dinner or supper, it makes a delicious and hearty dish, and as it may be prepared a day or two before baking it is a convenient supper dish.

When scraps of bread are left and there is no present use for them dry them thoroughly in the oven and keep in paper bags until there are enough to roll. After rolling put through a collander and keep coarse and fine crumbs separate, for different uses.

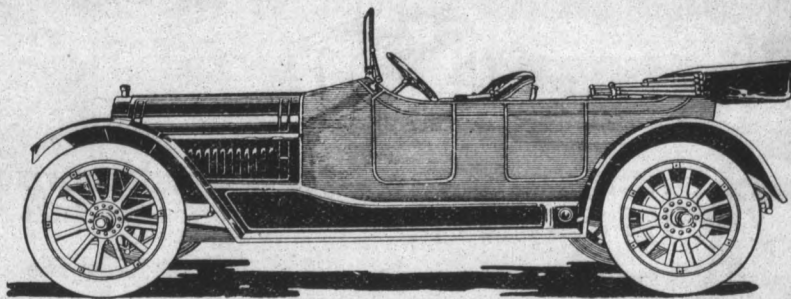
When the supply of potatoes for frying is a little short of being enough, the addition of a few of the coarser crumbs adds to rather than takes from the palatableness of the dish. Used in griddle cakes, either wheat or buckwheat, the crumbs take the place of a part of the flour needed, without detriment to the cakes.

Many a cook who makes a delicious Brown Betty with bread crumbs and apples never thinks that a can of peaches offers a still more appetizing combination when baked in the same way, and that the juice from the can makes a delicious sauce for it by merely heating and adding a little butter and a spoonful of cornstarch. Cherries, raspberries, blackberries and other fruits may be brought from the cellar and all or a part of the can used in this way.

Every recipe for "scaloped" fish or vegetables calls for its layers of bread crumbs; wherever the words "breaded" or "farfale" appears there is another demand for crumbs and 99 times out of every 100 bread crumbs may be used where

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All Mitchell 1913 cars have left drive and center control; Bosch ignition; Rayfield carburetor; Firestone demountable rims; rain-vision windshield; Jones speedometer; silk mohair top with dust cover; Turkish upholstered cushions; Timken front axle bearings; gauges on the dash to show air pressure and oil pressure; gauge in gasoline tank showing amount of gasoline it contains; and a portable electric lamp which also illuminates the instruments on the dash.

**All with T-head motor, electric self-starter electric lighting system, and 36-inch wheels**

	Motor	Bore and Stroke	Wheel Base	Prices F. O. B. Racine
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**Anty Drudge**—"Well, well, well, what are you two little busy bees doing? And where is mother?"

**Children**—"Mother's sick today, and we are doing the washing for her. She told us just how to do it with Fels-Naptha Soap, and it isn't hard at all. Mother said we couldn't have done it the old way, but Fels-Naptha Soap is so easy."

How do you wash? Do you use a boiler, and do you have to rub, rub, rub to get your clothes clean, until you think you will drop? And does night come and find you just finishing a big wash?

Or do you use Fels-Naptha Soap, put your clothes to soak in cool or lukewarm water, while you go out and tend to your chickens, or hunt your eggs. After the clothes have been soaked about thirty minutes, you can come in, rub them lightly, rinse them and hang them out. You can do your work easily and pleasantly with the help of Fels-Naptha Soap. The time and strength you save you can use for pleasure.

For full particulars, write Fels-Naptha, Philadelphia

cracker crumbs are named. In fact, there is rarely a day when some dish being prepared does not offer a means of utilizing stale bread.

From a list of special "crumb" recipes we give the following: Hot crumb-bread: Add a pinch of salt to two eggs and beat well, then add a cupful of sweet milk and two spoonfuls of sugar. Stir in enough bread crumbs to make a medium thick batter and enough flour to make the batter not quite thick enough to keep shape when dropped from spoon. Sift a teaspoonful of baking powder with the flour. Bake in quick oven to get a crisp brown crust. Serve hot.

**Crumb Cake**:—Soak a scant cupful of crumbs in a cupful of sweet milk until soft, then beat five minutes. Add two beaten eggs, a half cupful of butter, a cupful of sugar and one of currants. Use any spices liked in cake, one or a combination, for flavoring, and last of all, add a cupful of flour into which two level teaspoonfuls of baking powder has been sifted.

**Crumb Fritters**:—Beat together two eggs, half a cupful of sweet milk and half a cupful of fine crumbs. To this mixture add flour to make a rather thick batter, after sifting a teaspoonful of baking powder with the flour. Drop from spoon into hot fat. When done, drain and serve hot. Bits of oysters, chicken, fish or similar things that may be at hand may be chopped and added to the mixture and the flavoring may be onion, parsley, or whatever suits the combination.

### COMMENTS ON JELLY MAKING.

BY ELLA L. LAMB.

Thanks for publishing the article entitled, "When Men Dabble in Jelly Making." I have waited in vain for farther comments on it but the caustic criticism of "Facts on Jelly Making," published later must have seared the minds of the readers and made them timid of expressing their appreciation, for surely others besides myself must have found the article helpful, or at least interesting.

Don't let us disparage man's efforts in the culinary art. Why should not a man be able to make jelly if he tried? Many chefs are famous as cooks and lots of men are able to prepare meals. When his wife has the sick headache, the man who can't at least boil or fry an egg and make a cup of coffee is a poor illustration of the superiority of the male sex.

Let us not criticize too sharply, those who have the time to study subjects from a scientific standpoint, especially when they choose to experiment with things that concern the housewife so closely as the preparation of food. Thank goodness, we don't have to adopt every suggestion they may make. There are just as many ways of doing housework as there are housekeepers and doubtless there is not one of us but could learn something of any one of the others. Though it may give us an unpleasant jar to see someone bring as good or better results by a method that makes ours seem like a meaningless ceremony, don't let it have to take the combination of a visit from your husband's rich great aunt, who dislikes children, a teething baby, and threshers on two hours' notice, to make us change our way of procedure.

Am I brave enough to tell of my methods in jelly manufacture? Though I can claim nothing as to its originality, I will tell how I do. I place the prepared fruit in strong muslin sacks, 25-pound sugar sacks do nicely, filling them but half full, and tie securely, leaving a loop by which the bag may be suspended. These bags I put into a large kettle, taking care not to crowd overmuch, and pour in water until they are nearly covered with liquid, cover closely and cook until soft, taking care to shift the sacks of fruit from time to time. My jelly never burns while I am doing up my work.

One must use reason in making jelly as in everything else. Juicy fruit, rich in pectin, such as currants, need no previous cooking at all. Wash the fruit, press out the juice, boil three minutes, add the sugar, pound for pound, bring to a boil, skim and strain into your molds, and your currant jelly is never a failure.

Firmer fruits, like apples, need enough cooking to break down the cell structure and enough water to make the juice thin enough to drain. Small would be the amount of jelly made by me if I had to squeeze out the juice myself. It is done much easier and far better by hanging up the bags and letting them drain over night. I make no boast, but I need not be ashamed to serve my jelly on any occasion. It has one defect, however, that I would not remedy if I could. It does

not keep long—there being no lock on the cupboard door.

Since reading the article in the Michigan Farmer, I boil these bags of fruit the second time and obtain from a third to a half as much jelly as I do from the first boiling. Don't think it is not good flavored, right-colored jelly, for the most critical could find no fault with it. Just try it yourself and see. It saves time if economy of fruit is unnecessary.

It is somewhat difficult for me to store a year's supply of jelly for a large family, so instead of adding sugar to the whole of the juice when boiled sufficiently, I can it as I would fruit, or seal up hot in bottles, the greater part of it, saving only enough to make jelly for immediate use. Later when in need of it, it is only necessary to bring the juice to a boil, add the sugar and proceed as usual.

The bottled juice is easier stored from dust, mold and vermin, than the finished article, and is very convenient to use in making fruit punches, sauces, sherbets, etc.

Sugar is usually higher at canning time and, too, one does not notice the amount required to do a little, so much as when there are so many demands for sugar.

A pound of sugar to a pint of the boiled fruit juice is not absolutely essential to the making of splendid jelly of light color and sparkling transparency. Of course, it requires more fruit juice, but for years I have only used from one-half to two-thirds of the quantity of sugar, according to the tartness of the fruit. To serve with meats I think it superior to that made with the full amount of sweetening.

It is possible to make jelly of apples without the addition of any sugar, as the gallons and gallons of "jell" made by mere men, in the steam vats especially for that purpose at almost every cider mill in the country, bear witness. Perhaps it is not relished by all, as it is of darker color and stronger taste than the home-made article, but it is usually of good consistency and is especially nice to serve with fresh pork. We have some on hand made from one-third sour apples and two-thirds sweet, that is not to be despised for tarts or jelly-roll.

As to the much discussed "jelly-point," my most reliable test is to watch the drops that form on the stirring spoon. When they seem to be torn from the edge of the spoon by their weight I remove from the fire.

### HOME QUERIES.

**Household Editor**:—Will you please tell me how to rid my children of head lice? The hair was full. I discovered them and it seems impossible to get rid of them. —Mrs. R. B.

Wash the heads thoroughly with strong tar soap and then rub in kerosene oil. Comb with a fine comb, night and morning and use the oil once a day until the trouble is over. Eternal vigilance is the price of cleanliness here.

**Household Editor**:—I have a little girl eight months old and she has no teeth yet. Do you think her rather slow? She is cross a good deal and seems to be trying to get some teeth. Could someone tell me what to do for constipation in a child? She was raised on a bottle and seems healthy. —Mrs. C. B.

Some children cut their first tooth at six months, but others are as late as one year. Anywhere from six months to a year old is all right, and there are babies who do not cut teeth until 15 months. Rub the bowels round and round, beginning at the upper right hand side of the abdomen and press very gently. Give a little orange juice or a bit of scraped apple. If the bowels do not move every day use an enema of water and soapuds, a good white soap should be used. It is not wise to give any sort of physic.

**Household Editor**:—Will you kindly insert in the Michigan Farmer the formula for "Sugar Curing Pork?" The formula I refer to contains light brown sugar, saltpetre, black pepper and salt. I believe that was all and have forgotten correct amount of each. —W. C.

I believe this is the formula you mean, though there is no saltpetre used: Mix together one gallon of clean salt, about one pint of brown sugar and not over a half cup of black pepper. Thoroughly mix these ingredients together and apply by rubbing in by hand. Rub one-half of this mixture into every part of the meat possible, the rind side as well as the rest. It is better to have a pan large enough to hold the ham or shoulder and put it directly into the salt and sugar. After you have rubbed it thoroughly, put the meat in a cool place and leave a week or more before applying the rest of the mixture. It is better not to allow the meat to freeze before finishing the applications. Let the meat lie and season for several weeks, then transfer to the smoke-house for the final curing.

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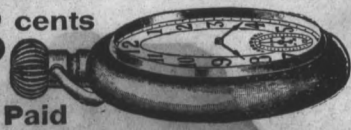
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## CROP AND MARKET NOTES.

(Continued from page 10).

few are willing to sell. Oat market also very dull. Bean threshing about wound up for this season; returns were a little better than expected. Some potatoes shipped in at 75c per bu; home supply about all done. Markets for cattle and hogs are brisk. Farmers can feel satisfied, inasmuch as taxes are not so very high, and a good supply of feed in the barn—just do chores and visit until the summer comes again. Hay, \$10; wheat, 96c; oats, 28c; beans, \$1.95; butter, creamery, 34c; eggs, 25c.

Kalkaska Co., Dec. 26.—The ground slightly covered with snow. Fall grain in good shape; considerable fall plowing done in December, something unusual in this vicinity. The corn was principally put in the silos, as there were several carloads shipped to Fife Lake last spring. Farmers busy cutting wood and threshing beans, which were not a good crop on account of cool, cloudy weather at ripening time. Potatoes have been quite freely marketed. Prices low, ranging from 25@35c. Rough feed quite plentiful. Surplus hogs and cattle are marketed; good demand at fair prices.

Mecosta Co., Dec. 20.—The appearances are now that we will have some sleighing the first approach of the season. The roads are such that it will only need a very little bit to give us good sleighing. The lowest thermometer has been this winter here has been 10 degrees above zero. Farmers have their fall work better this fall than in years. Quite a lot of fall plowing has been done here. Most of the farmers are holding for better prices for their potatoes. They are quoted at 33@35c now. Hay, \$12@13.50 per ton. Fat cattle around 7c. Hogs, 6½c. Chickens, 8@9c. Eggs, 28c. Butter, 28c; butter-fat, 34c.

Genesee Co., Dec. 18.—Weather mild and favorable for finishing up late fall work; much fall plowing has been done. Dairymen are getting higher prices for their products but state inspection is rigid and by some deemed a hardship. Others welcome the officials, believing the law a good one. The great handicap is the hired help question. Pomona Grange working with the Flint Board of Commerce has been successful in securing a farm expert for this county.

## Ohio.

Wayne Co., Dec. 30.—We have had a very pleasant fall, still some farmers are not through with their fall work, there still being some corn to husk. A great deal of fall plowing has been done, more than in previous years. The weather has been fine up to a few days ago, having had a snow fall of between two and three inches, then clearing off and having fine weather again. Hay, No. 1 timothy, \$11; wheat, \$1; oats, 30c per bu; corn, 50c; butter, 30c; eggs, 30c.

## FARMERS' INSTITUTES.

## County Institutes.

Alcona, Harrisville, Jan. 8-9.  
Iosco, Whittemore, Jan. 10-11.  
Gladwin, Gladwin, Jan. 13-14.  
Eaton, Charlotte, Jan. 15-16.  
Ogemaw, West Branch, Jan. 15-16.  
Montcalm, Sheridan, Jan. 16-17.  
Clinton, Ovid, Jan. 17-18.  
Gratiot, Ithaca, Jan. 20-21.  
Isabella, Mt. Pleasant, Jan. 21-22.  
Clare, Clare, Jan. 22-23.  
Osceola, Ewart, Jan. 23-24.  
Grand Traverse, Traverse City, Jan. 23-24-25.  
Manistee, Bear Lake, Jan. 23-24-25.  
Midland, Coleman, Jan. 24-25.  
Ingham, Mason, Jan. 24-25.  
Huron, Harbor Beach, Jan. 24-25.  
Kalkaska, Kalkaska, Jan. 27-28.  
Leelanau, Sutton's Bay, Jan. 27-28.  
Lapeer, Imlay City, Jan. 27-28.  
Bay, Auburn, Jan. 27-28.  
St. Clair, Avoca, Jan. 28-29.  
Antrim, Alba, Jan. 28-29.  
Shiawassee, Owosso, Jan. 28-29.  
Tuscola, Caro, Jan. 29-30.  
Van Buren, Bangor, Jan. 29-30.  
Charlevoix, Charlevoix, Jan. 29-30.  
Sanilac, Marlette, Jan. 30-31.  
Ottawa, Coopersville, Jan. 31-Feb. 1.  
Allegan, Fennville, Jan. 31-Feb. 1.

## One-Day Institutes.

Allegan Co., Moline, Jan. 6; Plainwell, Jan. 7; Allegan, Jan. 8; Monterey, Jan. 9; Burnip's Corners, Jan. 10; Hamilton, Jan. 11.

Lenawee Co., Medina, Jan. 3; Lime Creek, Jan. 4; Fruit Ridge, Jan. 6; Madison, Jan. 7; Hudson Center, Jan. 8; Cadmus, Jan. 9; Rome, Jan. 10; Adrian Township, Jan. 11; Ridgeville, Jan. 17; Blissfield, Jan. 18; Addison, Jan. 20; Onsted, Jan. 21; Tipton, Jan. 22; Tecumseh, Jan. 23; Macon, Jan. 24; Holloway, Jan. 25; Ogden Center, Jan. 27; Morenci, Jan. 28.

Newaygo Co., Sitka, Jan. 6; White Cloud, Jan. 7; Big Prairie, Jan. 8; Newaygo, Jan. 9; Oak Grove, Jan. 10; Ensey, Jan. 11.  
Ottawa Co., Holland, Jan. 6; Zeeland, Jan. 7; Jamestown, Jan. 8; Hudsonville, Jan. 9; Allendale Centre, Jan. 10; Herrington, Jan. 11; Nunica, Jan. 13; Conklin, Jan. 14.

Van Buren Co., Glendale, Jan. 6; Lawrence, Jan. 7; Hamilton, Jan. 8; Keeler, Jan. 9; Covert, Jan. 10; Lacota, Jan. 11. \* Gratiot Co., North Star, Jan. 7; Sumner Township, Jan. 8; Arcadia, Jan. 9; Breckenridge, Jan. 10; St. Louis, Jan. 11.  
Saginaw Co., Bridgeport, Jan. 9; Frankenthum, Jan. 10; Freeland, Jan. 11; Lawndale, Jan. 13; Hemlock, Jan. 14; Chesaning, Jan. 15.

Grand Traverse Co., Monroe Center, Jan. 14; Kingsley, Jan. 15; Williamsburg, Jan. 16.

Bay Co., Munger, Jan. 20; Bangor, Jan. 21; Bedell, Jan. 22; Linwood, Jan. 23; Pineconing, Jan. 24; Bentley, Jan. 25.

Charlevoix Co., East Jordan, Jan. 22-23; Boyne City, Jan. 24-25; Boyne Falls, Jan. 27; Bay Shore, Jan. 28.

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Per H. P. Dearing, Agent, R. No. 5, Jackson, Michigan.

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L. E. CONNELL, Fayette, Ohio.

## FOR SALE—HOLSTEIN BULL CALF

Born June 5, 1912, sire a son of the King of the Pontiacs from a daughter of Hengerveld De Kol. Dam of calf, an A. R. O. daughter of Sadie Vale Concordia's Paul De Kol, her dam a 20 lb. imported cow.

ED. S. LEWIS, Marshall, Mich.

**Purebred Registered HOLSTEIN CATTLE**  
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—Beef type, dairy strain, young bulls, 7 months old for sale. Cash or good note. J. B. HUMMEL, Mason, Mich.

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## Farm Commerce.

## THE NOMID SYSTEM OF DISTRIBUTING FARM PRODUCTS.

## Chapter I.—(Continued).

## The Aim of the Middleman System.

The system of distributing farm products, known as the middlemen system, has shown a tendency in recent years to direct the trade of these products into as few channels as possible. That this has been intentionally brought about by organized effort can hardly be denied. The system so centralized works decidedly to the advantage of the dealers. By having the trade pass through few channels it becomes amenable to the control of those having charge of these channels. This control enables those in charge to dictate to the producer what he may receive for his products and also to arbitrarily set the price at which the same products are to be sold to the consumer. Of course, this control is not absolutely as above stated for it is tempered by minor factors, but in general terms it is substantially as stated, which, naturally, places the middlemen in an enviable position and encourages them to guard that position jealously.

## The Nomid System Corrects this Fault of the Middlemen System.

If the control of the markets is due to the fact that trade is restricted to a few channels, then it appears that a proper remedy would be to increase the number of channels to a point where it would be impossible of control other than by the legitimate factors of supply and demand. This remedy is supplied by the Nomid system. By it a direct channel of trade is formed between the producer and the consumer, the products do not leave the control of either. With such a system more or less generally established there would be a handicap placed upon the middleman, compelling him to make only reasonable charges for the services he does in bringing to the consumer the products wanted. As soon as his charges became unreasonable products would be diverted to the direct avenues because of the economy afforded producers and consumers by direct dealing. On the other hand, if only reasonable charges are made for the services of the middlemen, then trade would probably pass through their hands. In this manner direct dealing would have a very salutary effect upon our present methods of distributing farm products.

## Some Other Advantages of the Nomid System.

Aside from its immediate economic effect, the Nomid system has certain other advantages that should not be overlooked. In the first place, it will teach the producer and the consumer that they are not so far separated from each other as they have grown to believe under our present methods of distribution. They will also learn the extent of the exactions of the middlemen, and, since by this system products will be delivered to the consumer in better condition, he will learn that the producer is often not to blame for the inferior stuff so often received. The system will also have a tendency to break down the prejudices that frequently exist in the minds of many persons of either of these two great masses, against the other, and instead of that prejudice will have a tendency to promote a mutual interest between them, their problem being a common one. Furthermore, the present dependence of these two classes upon middlemen would be changed to an attitude of independence because of a feeding that it is not necessary to go to middlemen for supplies. There is also a good foundation laid for the organization of co-operative associations by this direct method of dealing. This foundation is largely dependent, of course, upon the advantages above mentioned. It would, nevertheless, be a decided advantage and one that should not be overlooked when considering the system.

These and other features should encourage men who are not only working to better their own conditions, but also those of the future generations, to carefully study and undertake the disposition of at least a portion of their products by the direct system.

## Chapter II.

## Bringing Producers and Consumers Together.

Necessity for Closer Relations.—The Nomid system requires that the seller

and buyer become acquainted. It has been and is to the interest of the middlemen to keep the men from whom they buy and the men to whom they sell, strangers, for their acquaintance would weaken the position of the middleman. But when a farmer sells his eggs, or poultry, or butter to a family in the city the farmer and the family must establish some means of communication to learn each others' wants. This they can do by personal solicitation, by advertising, by correspondence, through friends, and by other means.

By Personal Solicitation.—Where the prospective sellers and buyers are near each other a desirable way of getting together is by calling personally and soliciting. This plan is quite generally followed when the parties are not more than 15 miles apart. One reason for the satisfaction that results from meeting is that the parties form a personal acquaintance which tends to bring confidence into the relationship and which goes a long way towards making business successful. The goods themselves must be the final criterion and future business will depend on their quality and quantity, nevertheless in conversing about a contract of this kind it is apt to be understood better and undertaken more quickly than where a personal meeting is lacking.

When possible the solicitor should carry samples. The buyer upon seeing the goods will be more able to decide whether he wants them or not. To a certain extent, the ability of the solicitor to produce a good sample argues that he can produce such quality regularly, and, too, a willingness on the part of the producer to show his goods indicates his confidence in them.

While in a large majority of cities and towns there are ordinances against peddling goods without a license, there are seldom if ever restrictions against soliciting orders, especially where the goods being bargained for are produced, or manufactured by the solicitor.

Most large cities and many smaller ones have in recent years added transportation conveniences to get people to and from the surrounding country. These conveniences furnish additional means for the producer and the consumer to get together. The introduction of the automobile has increased the number of consumers who go into the country to secure special and regular consignments of farm produce, as well as the number of producers who come to the city to contract with consumers to take their products. It is probable that as the automobile becomes more common, our cities grow and greater demand is made upon the soil surrounding them, that the business done in farm products by the aid of the auto-truck will be tremendous.

By Advertising.—If it is impossible or inconvenient for either the consumer or the producer to solicit personally, the establishment of business relations may be done through advertising. The farmer desiring to secure city customers can run a small advertisement in a newspaper of the city in which he desires his patrons. Ordinarily it will require but a single insertion of a short "ad" to secure the required number of patrons. The rate for the popular liner advertising is low, so this method is probably a less expensive one to the farmer than personal soliciting mentioned above. It would lack, however, the personal element which is an important feature of the other method, but this disadvantage would be overcome in part, at least, by the inexpensiveness and the convenience of the advertising. Then, too, after having made a start under the Nomid system the preliminary influences will soon give way to the newly established relations resulting from actual business transactions. If the consumer, on the other hand, wishes to get in touch with farmers a three or four line advertisement in a live agricultural publication circulating near the city of the consumer, will get his name before producers and in all probability will bring him responses. The metropolitan dailies are quite generally subscribed to by farmers in the immediate vicinity of cities and so these publications also furnish a good medium for securing the names of farmers who are interested.

It is not possible to give forms of advertisements that will meet every occa-

sion but the following may be suggestive to the consumer who wishes to use this means of approaching prospective vendors:

**EGGS AND BUTTER WANTED.**—A private family desires weekly supply direct from producer. Goods must be first-class. Richard Roe, 1006 Blank Street, Chicago.

And the following advertisement is merely suggested to aid the farmer to get in touch with city patrons:

**POULTRY AND APPLES DIRECT FROM FARM.**—Can supply families in large or small quantities. Goods are choice. Write John Doe, R. R. No. 9, Medina, Ohio.

Where a grower wishes to dispose of a quantity of fruit or vegetables or any other product in a short time he would find that time and expense of correspondence would be saved if he included in the advertisement a description of the product by grade, or in such manner as the ordinary reader may understand, and the price asked for each kind and grade. The temptation to overstate the merits of one's products should not be yielded to. Where one desires continued success he should deliver goods that measure up to his claims. It is the experience of men who have private customers that the greatest satisfaction in the way of returns comes when they send out consignments that are every bit as good as the description in their advertisement.

By Correspondence.—Oftentimes the consumer has a list of names, or can secure same, of persons who are in a position to supply products that he wants, or the producer has a list of needy consumers; where such is the case direct merchandising of one's products could be arranged for by corresponding with these parties. Usually a personal letter will be accorded greater attention than a circular or an advertisement, and the recipient of a letter soliciting co-operation in such a cause is almost certain to make reply. The character of letter sent to parties, as above mentioned, should be clear and carefully worded and arranged as it is a business message.

At Fairs.—Since there is scarcely a city of any size where agricultural fairs are not held, the wide opportunity afforded farmers and city people to arrange for the sale of farm products at these gatherings, is unexcelled. In spite of the fact that these fairs are usually denominated agricultural fairs they are attended quite as freely by city people as by farmers, and the commingling of the parties and the presence of a sample of the goods that the farmer may have to sell, makes the occasion an opportune one for the transaction of this very kind of business. Our fairs would do well to encourage this feature. One Michigan man who annually exhibits quantities of honey disposes of practically all his product in filling orders taken at the few fairs which he attends, while he pays his expenses with the prize money in most instances. Breeders have made good use of this method of selling surplus animals, but the practice has not attained a wide range in other lines, not as wide as the opportunities merit.

On City Markets.—It is probable that the major portion of direct selling has been carried on by those who patronize the public markets of cities. Most municipalities of any considerable size have some provision for the offering and buying of products as brought in by the farmers and gardeners, but it is a fact to be lamented that these places have not been given more attention. In spite of the opposition of many merchants and wholesale organizations, these institutions have gone on with a considerable degree of success even with an inferior equipment and now that living has become so high that consumers must turn their attention to every possible way of reducing the cost, more interest is being manifested in the public market, and in some instances great strides have been made toward cutting the cost of getting products from the producer to the consumer. Such an instance is that of Des Moines, Iowa, where the inauguration of a city market almost revolutionized the method of trading in farm produce. The city market furnishes an excellent place for the farmer and the city man to get together.

Through Peddling.—Another method of meeting customers is through peddling. To many, however, this method is more or less distasteful, particularly when there is no set route to travel and no regular customers, making it necessary to call out the products carried and depend upon the patronage of persons that may be interested while driving along. On the other hand, where one has an established route and regular customers so that the necessity of disturbing the public by call-

ing out is eliminated, this means of getting together loses its chief objection and becomes quite as pleasant as selling to middlemen.

(Continued next week).

#### THE NEW YEAR EGGS.

The egg market at the present time is a variable quantity. Strictly fresh eggs sell at a high price in jobbing lots as well as at retail, notwithstanding the fact that quotations are not what might be termed high for the season of the year. This is due to the indifferent quality of eggs which are coming in to the markets at this time. Most of the current receipts in the various markets grade from 30 to 40 per cent fresh-laid stock, others being eggs held either by producer or merchant in order to get an expected advance in price for fresh eggs. Consequently, while the market for fresh eggs may be quoted as 30 cents, strictly fresh new-laid stock will sell to the jobbers at say 33 cents, while the sorts from same receipts would sell down as low as 20 to 25 cents.

Storage eggs are still on the market although they move very slowly and at a comparatively low price, the price in Chicago being around 18½ to 19 cents for April firsts. It is alleged by the trade that this is about the grade of eggs which have figured in the sales conducted by the Housewives' League of Philadelphia, the claim being made that the broker who is supplying the eggs is unloading a surplus of held eggs at a good price, quality considered, by this means.

The strictly fresh egg market, however, is certain to be maintained at a comparatively high level. Their production is stimulated by the warm spring. Southwestern eggs are being quoted in increasing quantities at the present time, but there are not enough first-class eggs to supply the demand in this line. The popular method of collecting eggs from producers and distributing them to consumers occupies too much time to permit of consumers getting a first-class article, except during the season when the average quality of the eggs are exceptionally high, as from the middle of March to the middle of May.

There is, however, the best of opportunities to market the New Year's eggs, especially until the time when production increases to a point beyond the demand for immediate consumption, direct from the farm to consumers in the large cities and it would not be at all difficult to get a trade of this kind. Or, if the producer does not care to go to the extra trouble of getting consumers' trade, eggs which are freshly gathered and shipped direct to distributors or to retail dealers in distributing centers will command a good advance over the price which can be received from them in the ordinary channels through which this product passes between the farm and the consumers.

In the egg trade as in the butter trade the middleman is a necessary factor to care for the surplus, at least until such time as producers are thoroughly organized and equipped to do this on their own account, which will not be in the very near future. However, there are too many between the producer and the consumer at present. On part of the fresh eggs produced upon the farm during the early part of the year all of these extra transactions and attending commissions in connection with their sale can be readily eliminated and many of them can on the bulk of the product. In fact, this will apply to all except the season of flush egg production, as above noted, and it is well worth the while of every farmer or farmer's wife who is in the egg producing business to take advantage of this opportunity of increasing the revenue from this source of production.

#### YEAR'S BUSINESS AT GRAND RAPIDS CITY MARKET.

Supt. Kerwin, of the city market, has prepared his report for 1912, which shows that the season was bad for fruit. About one-third of the farmers did not rent stalls, but entrance fees were larger. This is to the advantage of farmers, says Mr. Kerwin, since it is better for them to rent stalls and have permanent location throughout the season, where their customers can always find them. The number of stalls rented was 368, at from \$5 to \$28 a stall. Total receipts from stall rentals, entrance and weighing fees were \$9,117.75, or about \$300 less than last year. A total of 17,387 persons paid entrance fees during the season.

W. S. Stevens, one of the yellow inspectors for Kent county, was engaged by the Grand Rapids Association of Com-

merce to gather statistics as to the amount of fruit and produce sold on the market during the season and the total amount, according to his figures, was approximately \$150,000. Some of the leading items as given in the reports are as follows: 2,307 bu. peaches, \$4,614; 12,000 bu. apples, \$5,400; 2,756 bu. pears, \$1,378; 3,916 bu. plums, \$4,000; 12,481 bu. grapes, \$6,241; 764 bu. crabapples, \$764; 326 bu. quinces, \$652; cherries, \$7,500; small fruits \$26,810; celery, \$15,000; 16,833 bu. potatoes, \$7,374.85; 12,000 bu. tomatoes, \$5,000; cucumbers and radishes, \$25,000; 500,000 lbs. hothouse lettuce, \$40,000.

#### KENT FARMERS ARE ORGANIZING.

The Grand Rapids Fruit Company held another meeting in Grand Rapids Dec. 27, presided over by J. H. Skinner, government farm expert for the county, and further steps were taken toward perfecting the organization. The capital stock will be \$10,000, divided into 1,000 shares, with par value of \$10 each. Already nearly \$1,000 has been subscribed, very largely in the city, practically no soliciting having been done outside. The company will be incorporated, with power to buy, sell and handle all kinds of fruit, dairy and farm products, fruit packages, spraying material and all things needed on the farm. The idea in the main is as follows: To employ a manager the year round, who shall keep in close touch with markets and direct all packing and shipping operations. While Grand Rapids will be headquarters, with a central packing house, there will be outlying packing stations or warehouses at Sparta or any place that is most convenient for a group of the members. Inspectors will be sent to orchards to supervise grading, packing and shipping the fruit. The association will adopt a trademark or brand and fruit bearing the company's mark will be uniform and up to standard.

The company will hold its next meeting January 11, at which time it is expected the necessary stock will be subscribed and the organization perfected. The growing of better fruit is one of the main benefits to come from this movement. The company will look after the marketing end so that the grower may give more time to the producing end, and the system of grading will also stimulate growers to raise a larger percentage of fancy apples and other products.

Kent Co. A. GRIFFIN.

#### MARKETING THE GREAT PROBLEM BEFORE APPLE PRODUCERS.

At the recent meeting of the Western New York Horticultural Society at Rochester, N. Y., Mr. Loomis, president of the International Apple Shippers' Association, was given unusual attention while addressing the society on the topic, "Legislation and Marketing." He spoke in part as follows:

The middleman may be either a dealer in apples, or he may be a commission merchant. As a dealer, he generally is held in but slight regard by the growers, because in the opinion of the grower he generally tries to steal the apples. His supreme disgrace comes, however, when he dares to act as commission merchant.

It is time that the horticultural societies appreciated the exact function that the commission man performs in distributing a crop of apples. The growers of western New York have made the entire section, from Buffalo to Oswego, a great factory for the production of apples. It is estimated that upward of fifteen million barrels were produced this last season in the state of New York, including packed apples, evaporated apples and cider apples. Today there are in storage in the state of New York, 1,500,500 barrels and 585,000 boxes in cold storage and 702,000 barrels in common storage.

Growers of New York have done marvelous work in building orchards which can produce so large an output. They have done marvelous work in the development of those orchards, capable of producing splendid quality. They have devoted years of time and study to the diseases of apples, and how to prevent them. They have become chemists in apple culture.

The growth of apples has become one of the chief industrial businesses of the country; it has attracted to its support many of the best minds of the young men of our country. College men have gone freely into this industry, and today all over the land, from the Atlantic to the Pacific, there are centers of production, like western New York or Hood River, Oregon, where the men who have taken up the culture of apples are among the representative citizens of our country.

While the apple grower has shown so much wisdom in the development and the growth of apples, he has shown very little intelligence in the marketing of the apples. He has bowed down to worship the apple. The apple has become his God. As the Israelites who bowed down to worship the golden calf in the wilderness, so the grower has bowed down to worship, as a center of all things, the apple which he has spent so much time to produce. He has lost his balance, in the sense of proportion, and in doing so, he has committed two great errors.

He has forgotten that great economic truth, that any crop at the place it is produced is worthless. You cannot eat the apples that you produce on your farm. They are not produced for that purpose. They are produced for the purpose of turning them into money, so that money may provide the support and happiness of your family. I say again any crop at the point of production is worthless. It must be moved from that point to the various centers of consumption before it can reach people who are willing to pay any value for that crop. Consequently, when a grower has produced his wonderful crop of apples, his work and his purpose is but half accomplished.

From now on the attention of the growers of apples must be turned in a businesslike way toward the marketing of apples. Organizations must be formed at each producing center to study the best standard for packing and grading the fruit, the best methods to distribute the apples and obtain the largest amount of money possible.

There is bound to be an overproduction of apples if the present methods of packing continue. In fact, that period of overproduction has already been reached, and prices are becoming lower and lower, because the quality packed is not equal to the amount shipped to our markets. There is one way, and only one way, in which we can prevent and remedy this overproduction. Raise the standards of packing and permit no No. 2 apples to be packed whatsoever.

The next subject was, "The Monmouth County Farmers' Exchange," by W. H. Ingling, of New Jersey, general manager of the Exchange. The Monmouth County Exchange takes the place of the middleman. It is an incorporated association with a large capital. The exchange buys supplies for farmers and sells their produce for them. They are in touch with all the great markets by telegraph and by telephone. Their orders often exceed the supply of the day. The producers are paid the average price for each day's sales. In five years the total business saved over \$500,000 to the members, making over \$100,000 per year. (The Michigan Farmer has arranged for articles describing this exchange which will appear in the Farm Commerce Department of an early issue).

"The Genesee County Fruit Growers' Association," was discussed by Roy Shepard, the secretary of the Association. The following are selections from his address: "Experts are sent from the general office all over the country on their motor cycles, to report on the general condition of the growing fruit to be offered. The organization is incorporated under the laws of the state. A fee of \$10 is charged for membership, and also a per acre tax. Expert advice is given as to spraying and care of the orchards. The spraying material and other things are bought through the association at very low rates. The grower who signs the contract loses control of his fruit, and cannot sell it unless he pays the Association the handling charges. Mr. Shepard said the handling charge was ten cents per barrel, and that the prices received for the apples had been close to \$3.00 per barrel on the track. We have a good packer and place our brand on all the packages, and the number of the grower. We have opened up an office and employed a sales manager, and made good sales, but we do not sell to local buyers.

W. H. JENKINS.

#### NOTICE.

To Farmers Who Wish to Sell Produce Directly to City Consumers.

A list of names of Detroit people who desire to get farm products direct from producers will be furnished to any reader of the Michigan Farmer who requests it on a post card or letter, to the Michigan Farmer offices at Detroit. A form letter that may be used in correspondence with prospective customers and other helpful suggestions will be enclosed with the list of names. There will be absolutely no charge, whatever for this service.

#### Breeders' Directory—Continued.

#### FOR SALE HOLSTEIN COWS and BULLS.

2 Fine A. R. O. Cows \$400.  
1 3-year-old Herd Bull \$250.  
Very choice and good enough for most any herd.  
1 Bull Calf 12 mos. old \$150.  
Dam has 19-lb. record in 7 days.  
LONG BEACH FARM, Augusta, (Kalamazoo Co.,) Mich.  
FRED S. KENFIELD, Prop.

HOLSTEINS—Sprngers and heifer calves from A. R. O. stock for sale.  
W. J. MORGAN, Saginaw, W. S., Michigan.

#### SHEEP.

Leicesters—Yearling and ram lambs from Champion flock of Thumb of Mich. Also select Berk shire swine. Elmhurst Stock Farm, Almont, Mich.

"OXFORDOWN SHEEP"—Descriptive and illustrated article sent free.  
PARSONS, "The Sheep Man of the East," R. No. 1, GRAND LEDGE, MICH.

OXFORD EWES—bred to Imported Rams for sale at Farmers' prices. Add res. B. F. MILLER or GEORGE L. SPILLANE, Flint, Mich.

OXFORDS—for sale, at reasonable prices; twenty-five two-year-old OXFORD rams; four two-year-old SHROPSHIRE rams; and five yearling Shropshire rams. PARKHURST BROS., Reed City, Michigan.

Northern Grown Shropshire Sheep and Berkshire Swine. Yearling and two-year-old rams, two boars old enough for service, one of the best Jersey bulls in Mich. 3 yr. old Blue Belts Golden Lad \$8851. Will be sold cheap if taken at once. D. C. Magahay, R.1, Harrisville, Mich.

Reg. Rambouillet Sheep, Pure Bred Poland China HOGS and PERCHERON HORSES, 2 1/2 miles E. Morrice, on G. T. R. R. and M. U. R. J. Q. A. COOK.

SHROPSHIRE FOR SALE  
50 Choice two-year, yearling and ram lambs; 20 yearling ewes from imported sires.  
F. R. OTTAWAY, Flushing, Mich.

#### HOGS.

BERKSHIRE BOARS  
May and June farrow, large size, heavy bone, \$18 and \$20 each. GEO. E. LAPHAM, St. Johns, Michigan.

BERKSHIRES—Boars ready for service \$16; sows ready to breed \$18; sows bred \$20. Stock guaranteed. B. B. KEAVEY, Akron, Mich.

Quick Maturing Berkshires—Best breeding; best type. Satisfaction guaranteed or money refunded. C. S. BARTLETT, Pontiac, Mich.

O. I. C.—TWO BOARS fit to head any herd. Fall pigs ready to ship. C. J. THOMPSON, Rockford, Michigan.

Improved Chesters—Young breeding stock. Also a few tried sows to be bred for spring farrow and early fall pigs. W. O. WILSON, Okemos, Mich.

O. I. C. Extra choice bred gilts, service boars and spring pigs, not akin from State Fair winners. Avondale Stock Farm, Wayne, Mich.

O. I. C's—All ages, growthy and large, sows bred. Males ready, 100 to select from. Attractive prices on young stock. E. H. Jump, Munith, Mich.

O. I. C's of superior quality. 17 choice young gilts and 11 copy young boars, either sex no akin. FRED NICKEL, Monroe, Michigan.

O. I. C. SWINE—Write me for price on Spring Pigs, pairs and trios, not akin. Have a number of service males of good type. Write me describing of your wants. A. J. GORDEN, R. No. 2, Dorris, Mich.

O. I. C. Swine, both sexes. Males weighing 100 to 225 lbs. Herd registered in O. I. C. Association. GEO. P. ANDREWS, Dansville, Ingham Co., Mich.

O. I. C's—Fall pigs, either sex, from prize-winning stock. Also 2 May yearling boars. Cash or write. Rolling View Stock Farm, Cass City, Mich.

O. I. C. Pigs of September and October farrow for sale cheap. JOHN BERNER & SON, Grand Ledge, Mich.

Reg. Chester Whites—Both sexes and bred gilts, also serviceable registered Holstein bulls. Bargains. RAY PARHAM, Bronson, Mich.

O. I. C's—A fine lot of last spring stock for sale, big growthy type, either sex, pairs not akin. Sired by Grand Champion boar, Scott No. 1. Half mile west of depot. OTTO B. SCHULZE, Nashville, Mich.

THIS

## O. I. C.

SOW WEIGHED 932 LBS.  
AT 23 MONTHS OLD

IONIA GIRL

I have started more breeders on the road to success than any man living. I have the largest and finest herd in the U. S. Every one an early developer, ready for the market at six months old. I want to place one hog in each community to advertise my herd. Write for my plan, "How to Make Money from Hogs." C. S. BENJAMIN, R. No. 10, Portland, Mich.

DUROC-JERSEYS—Fall and Spring boars from prize-winning strains. Sows all ages. SPECIAL BARGAIN in summer pigs. Brookwater Farm, R. F. D. No. 7, Ann Arbor, Mich.

LARGE TYPE DUROCS—Spring pigs that are large boned and lengthy. Some open fall gilts of the right sort. Let me tell you about anything you may be in need of or call at MAPLE GROVE FARM, Stockbridge, Michigan.

I HAVE some extra good DUROC males for sale. Prices right, last fall and spring farrow. Breeding and quality my standard. Bred sow sale this winter. H. G. KESSLER, Cassopolis, Michigan.

Duroc Jerseys—for sale; 20 fine service boars of fancy breeding and individual quality. Prices reasonable. John McNicoll, North Star, Mich.

DUROC JERSEYS—6 SPRING BOARS FOR SALE. CAREY U. EDMONDS, Hastings, Michigan.

Duroc Jerseys for Sale—Spring boars ready for service, for sale, for service. Holstein Friesian bull calf, dropped Sept. 23. Write or come and see. R. G. VIVIAN, R. No. 4, Monroe, Mich.

DUROC GILTS—\$20 to \$30. Shropshire Ewes \$20 to \$30. KOPE-KON FARM, Kinderhook, Michigan.

Duroc Jersey SWINE. Spring and summer pigs for sale, both sexes. I pay express, 25 years experience. J. H. BANGHART, Lansing, Mich.

# Markets.

Realizing the importance to our readers of reliable market quotations we spare no trouble or expense to insure the correctness of the quotations in our columns. Special representatives at all leading market centers insure the subscriber accurate market reports, uninfluenced by any factor of trade. All quotations are correct for the dates on which they are made.

## GRAINS AND SEEDS.

December 31, 1912.

**Wheat.**—The trend of the wheat market the past week has been entirely favorable to the selling side of the trade. Prices have shown an advance of a cent over the advanced figures reported a week ago. The strength comes largely from Europe where there is still rumors of war, the market there taking large quantities of American and Canadian wheat. Russia, who earlier promised a good supply of the cereal for European trade is not exporting heavily, and because of this an increased demand is made for wheat from this side. There was improvement in weather conditions in Argentina, but the showing did not offset other bullish news and prices in Liverpool made advance in the face of these better weather conditions. On this side the offerings continue to be small from country places and the demand for flour is active, due to small stores in the eastern states, a heavy consumption and an excellent foreign demand. The visible supply increased 1,841,000 bu. One year ago No. 2 red wheat was quoted on the Detroit market at 96½¢ per bu. Detroit quotations are as follows:

	No. 2	No. 1	Red.	White.	May.	July.
Thursday	1.11½	1.10½	1.15½	1.15½	95¼	95¼
Friday	1.11½	1.10½	1.15½	1.15½	95¼	95¼
Saturday	1.11½	1.10½	1.15½	1.15½	95¼	95¼
Monday	1.11½	1.10½	1.15½	1.15½	95¼	95¼
Tuesday	1.11½	1.10½	1.15½	1.15½	95¼	95¼

Chicago, (Dec. 30).—No. 2 red, \$1.09@1.10; May, 93½¢; July, 88½¢ per bu.  
New York, (Dec. 30).—No. 2 red, \$1.07; May, 97¢@97½¢ per bu.

**Corn.**—Corn failed to follow the course of wheat and values suffered a decline of 1¢ during the past week, due largely to the heavy delivery from farming sections. On Monday, however, rains in sections of the corn belt gave a firmer tone to the market because of the prospect of receipts being restricted but the condition did not last. Country elevators throughout Iowa and Illinois are reported to be well filled with corn and the movement is limited by the number of cars available for carrying the grain to larger centers. One year ago No. 3 corn was quoted at 63½¢ per bu. The visible supply shows an increase of about a million bushels. Detroit quotations are:

	No. 3	No. 2	Yellow.
Thursday	49	50	49½
Friday	48½	49	49½
Saturday	48½	49	49½
Monday	48	49	49½
Tuesday	48	49	49½

Chicago, (Dec. 30).—No. 2, 47½¢; No. 2 yellow, 48½¢; May, 48½¢; July, 49¢ per bushel.

New York, (Dec. 30).—Export, 54½¢ per bu. f. o. b. afloat.

**Oats.**—The oat trade gradually declined to a lower basis during the past week. Offerings of this cereal have been rather heavy, the primary receipts for last week being 1,136,000 bushels, against 1,069,000 bushels for the previous week. Most of the markets report a good supply with the demand ordinary. One year ago standard grade was quoted at 50½¢ per bu. The visible supply increased about half a million bushels. Detroit quotations are as follows:

	Standard.	No. 3	White.
Thursday	36	35	35
Friday	36	35	35
Saturday	35½	34½	34½
Monday	35½	34½	34½
Tuesday	35	34	34

Chicago, (Dec. 30).—Standard, 33¼¢@33½¢; May, 32½¢; July, 32½¢ per bu.

**Beans.**—There is no change in the condition of this trade, prices remaining on the same basis that ruled a week ago, with the market firm but inactive. There are still many farmers who have not threshed their beans, realizing that the quality of the legume will be improved by delaying threshing. The quality of most yields is very low, it being an unusual thing to find beans running well to a good grade. The quotation a year ago was \$2.32 per bu. They are now quoted at \$2.20 per bu. for both immediate and prompt shipment. January beans are quoted at \$2.22.

Chicago, (Dec. 30).—Pea beans, hand-picked, \$2.48@2.55; do. prime, \$2.35@2.40; red kidneys, \$2.50 per bu.

**Clover Seed.**—Seed values have advanced during the past week, due to an improvement in the general demand. Offerings are light.

Detroit.—Prime spot, \$11.50; prime alsike, \$12.75.

Toledo.—Prime cash, \$11.72½; February and March, \$11.85; prime alsike, \$12.90; do. March, \$13.

**Rye.**—This market remains quiet and nominally unchanged at former quotations.

Detroit.—Cash No. 2 rye, 62¢ per bu.

Chicago.—Cash No. 2 rye, 62@63½¢ per bu.

## FLOUR AND FEEDS.

**Flour.**—Jobbing lots in ½ paper sacks are selling on the Detroit market per 196 lbs. as follows: Best patent, \$5.60; second, \$5.30; straight, \$5.20; clear, \$4.90; spring patent, \$5.10; rye flour, \$4.80 per bbl.

**Feed.**—Detroit jobbing prices in 100-lb. sacks are as follows: Bran, \$23; coarse middlings, \$23; fine middlings, \$28; cracked corn and coarse corn middlings, \$29; corn and oat chop, \$20 per ton.

**Hay.**—Market rules lower in most of the markets. The restricted consumption due to the excellent fall weather for pasture, has favored a lower basis of values. Carlots on track Detroit: No. 1 timothy, \$14.50@15; No. 2, \$13@13.50; light mixed, \$13.50@14; No. 1 mixed, \$13@13.50.

Chicago.—Choice timothy, \$17@18; No. 1, \$14@15.50; No. 2 and No. 1 mixed, \$12@13; No. 3 and No. 2 mixed, \$9@11; clover, \$7@11.

New York.—Market lower; standard, \$20.50@21 per ton; No. 1, \$22; No. 2, \$17@20; light clover, mixed, \$19@20; No. 1 clover, \$19.

**Straw.**—Car lot prices on wheat and oat straw on Detroit market are \$9@9.50 per ton; rye straw, \$10@10.50 per ton.

Chicago.—Wheat straw, \$6@6.50; oat straw, \$7@7.50; rye straw, \$7.50@8.

## DAIRY AND POULTRY PRODUCTS.

**Butter.**—Fancy qualities still continue firm in all the markets. Locally there has been no change in values during the week. Jobbing prices in the Detroit market are: Fancy creamery, 35¢; firsts, 32¢; dairy, 22¢; packing 21¢ per lb.

Elgin.—Market firm at 34¢.

Chicago.—Top grades of both creamery and dairy are very firm at an advance of a full cent over last week. Lower qualities barely steady at former values, while packing stock is quoted slightly lower. Quotations are: Extra creamery, 35¢; extra firsts, 33@34¢; firsts, 30@31½¢; seconds, 26@27¢; dairy extras, 32¢; firsts, 27¢; seconds, 25¢; packing, 12@21½¢ as to quality.

New York.—Last week's advance is being well maintained, with all kinds steady to firm except packing stock which is quoted lower. Creamery, extras, 37@37½¢; firsts, 32@35¢; seconds, 29@31¢; thirds, 27@28¢; state dairy, best, 32@34¢; good to prime, 28@31¢; common to fair, 23@27¢; packing, 21@22¢ as to quality.

**Eggs.**—Demand generally good for fancy qualities at falling values. The storage situation remains somewhat unsettled, and offerings of fresh stock are increasing sufficiently to affect prices. In addition weather conditions are favorable to heavy production. At Detroit current offerings, candled, and cases included, are quoted at 26¢ per dozen, which is last week's quotation.

Chicago.—Prices declined sharply at this week's opening, fresh goods going off a full cent and storage stock 1½@2¢. A good increase in receipts of fresh stock and continued mild weather were strong factors. Quality of offerings is still very variable and quotations cover a wide range. Demand is principally for new-laid stock. Miscellaneous receipts, cases included, are quoted at 22½@23½¢; do., cases returned, 22¢@23¢; ordinary firsts, 22½@23¢; firsts, grading 70 per cent fresh, 23@24¢; refrigerators, April, 18¢ per dozen.

New York.—All grades 2@4¢ lower; market fairly steady at the lower range. Fresh gathered extras, 31@32¢; extra firsts, 29@30¢; firsts, 27@28¢; seconds and lower grades, 22@26¢; western gathered whites, 28@36¢.

## FRUITS AND VEGETABLES.

**Apples.**—Detroit trade easy; prices remain unchanged. Detroit wholesale quotations are: Baldwin, \$2.25@2.50; Greening, \$2.50@2.75; Spy, \$2.75@3; Steele Red, \$3@3.50.

**Potatoes.**—The trade is slightly firmer with top quotations ruling two cents higher than last week. Michigan stock in car lots, 55¢ in sacks, 48¢ in bulk.

Chicago.—Market is improved with values established at 3@5¢ above the level of last week. Receipts are less by 94 cars than a week earlier and by 139 cars as compared with corresponding week of 1911. Fancy stock, sold in bulk as high as 42¢ and sacked at 52¢ on Monday.

New York.—Michigan offerings continue to be favored at last week's quotations. Western offerings, 60@62¢ per bu.

**Onions.**—Conditions are unchanged with most of the important markets overstocked.

Detroit.—55¢ per bu.  
New York.—Western, per crate, for white, 50¢@51; 100-lb. bags red and yellows, 40@75¢.

Chicago.—Weak. Home-grown yellow, 40¢; fancy white, 75¢ per 65-lb. sack.

**Cabbage.**—But little improvement can be noted and trade continues weak.

Detroit.—Per bbl., \$1@1.25.  
Chicago.—Holland bringing \$7 per ton. Red cabbage is scarcer and quoted at \$1.25@1.50 per bbl. Common kinds, 70¢ per bbl.

## MISCELLANEOUS.

**Provisions.**—Ruling prices in Detroit are steady to lower. Quotations:

Detroit.—Family pork, \$22@23; mess pork, \$18; clear, backs, \$21@23; hams, 15½@16½¢; briskets, 11½@12½¢; shoulders, 12½¢; picnic hams, 12¢; bacon, 10@18¢; pure lard in tierces, 11½¢; kettle rendered lard, 12½¢ per lb.

Chicago.—Mess pork, Jan., \$17.45; lard do., \$9.60; short ribs, do., \$9.60.

**Honey.**—Detroit.—Steady. Choice to fancy comb, 16@17¢; amber, 14@15¢; extracted, 9½@10¢ per lb.

**Poultry.**—Detroit.—Supplies have not cleaned up as well as expected and the market is rather dull; prices generally lower on all kinds and grades. Dressed.

—Spring chickens, 13@14¢; hens, 12@12½¢; old roosters, 10@11¢; turkeys, 20@22¢; ducks, 16@18¢; geese, 14@15¢ per lb. Live.—Spring chickens, 12@12½¢; hens, 11@11½¢; No. 2 hens, 9¢; old roosters, 9@10¢; turkeys, 18@19¢; geese, 12@13¢; ducks, 15@16¢ per lb.

Chicago.—Fowls and spring chickens, also good quality ducks and geese, are higher. Supplies moderate and demand ample. Quotations on live are: Turkeys, good weight, 15¢; others, 10¢; fowls, good 12½¢; spring chickens, 13¢; ducks, large, fat, 15¢; do., Indian runners, 12¢; geese, full feathered, 13¢; do., plucked, 8@10¢ per lb.

New York.—Dressed stock irregular with prices generally showing sharp declines. Fresh killed western chickens, 12½@17¢; fowls, 12@14¢; turkeys, 14@23½¢ per lb.

**Cheese.**—Market steady; values unchanged. Quotations: Wholesale: Michigan flats quoted lower; business fairly active. Quotations: Wholesale lots: Michigan flats, 16@16½¢; New York flats, 18½@19¢; brick cream, 16½@17¢; limburger, 17½@18½¢; imported Swiss, 28@29¢; domestic Swiss, 21@22¢; block Swiss, 19½@20¢ per lb.

Chicago.—Business very light and the market slow. Prices nominally unchanged. Quotations are: Twins, 15½@16¢; daisies, 16@16½¢; young Americas, 16@16½¢; limburger, new, 15½¢; brick, choice 15@15½¢ per lb.

**Veal.**—Detroit.—Steady, fancy, 12½@13½¢; choice, 10@11¢ per lb.

Chicago.—Firm at a good advance induced by light receipts. Fair to choice, 80@110 lbs., 13@14¢; extra fancy stock, 14@14½¢; fair to good chunky, 12@13¢ per lb.

## DETROIT RETAIL PRICES.

On the Detroit eastern market there was a good movement of produce Tuesday, the activity no doubt being animated by the holiday demand. Apples were offered liberally at prices ranging from 50¢ to 1.25 per bushel, depending on grade and variety. Cabbage was plentiful and generally selling at 25¢ per bu. Chickens were selling at 17@18¢ per lb; geese around 20¢; ducks, 22@24¢; turkeys 25@28¢ per lb. Pork was quoted at \$10.50 per cwt. Onions were sold at 60¢ per bu; carrots, 35@40¢; potatoes, 60¢; parsnips, 45¢ and celery 25¢ per bunch.

In Detroit retail stores apples are quoted at 75¢ to \$1.15 per bu., depending on grade and quality. Potatoes, good quality, 75¢; fresh eggs, 40¢ per dozen; best creamery butter, 42@43¢; chickens of good quality, 21¢ per lb.

## THE LIVE STOCK MARKETS.

### Buffalo.

December 30, 1912.

(Special Report of Dunning & Stevens, New York Central Stock Yards, East Buffalo, New York).

### Cattle.

Receipts, 100 cars. We quote our market 15@20¢ higher on all grades except best heavy grades. Best 1350 to 1500-lb. steers, \$8.75@9.25; good to prime 1200 to 1300-lb. steers, \$8@8.50; good to prime 1100 to 1200-lb. steers, \$7.50@8; coarse plainish 1100 to 1200-lb. steers, \$7@7.50; medium butcher steers, 1000 to 1100 lbs., \$6.50@7.25; butcher steers 900 to 1000, \$6.50@6.75; light butcher steers, \$5.50@6; best fat cows, \$5.75@6.25; butcher cows, \$4.75@5.25; light butcher cows, \$4@4.50; cutters, \$3.50@3.75; trimmers, \$3.25@3.50; best fat heifers, \$7.50@7.75; medium butcher heifers, \$6@6.50; light do., \$5@5.25; stock heifers, \$4@4.75; best feeding steers, \$6.25@6.75; fair to good stockers, \$5@5.25; light common stockers, \$4@4.25; prime export bulls \$6.25@6.75; best butcher bulls, \$5.50@5.75; bologna bulls, \$4.50@5; stock bulls, \$4.50@5; best milkers and springers, \$6.50@7.50; common to fair kind, \$4@5.50.

### Hogs.

Receipts, 110 cars; market opened slow, closed firm. Heavy, \$7.75; Yorkers, \$7.70@7.80; pigs, \$7.80@7.90.

### Sheep and lambs.

Receipts, 60 cars; strong; top lambs, \$9.40@9.50; culls to fair, \$5.50@8.50; yearlings, \$6@8; wethers, \$5.25@5.75; ewes, \$4.50@5. Calves, \$5@12.

### Chicago.

December 30, 1912.

Cattle. Hogs. Sheep.  
Received today ..... 21,000 39,000 38,000  
Same day last year, 17,036 30,677 21,048  
Received last week, 24,516 102,890 74,609  
Same week last year, 43,477 121,678 86,378

With so moderate a cattle run for Monday, it was thought early this morning that a higher scale of prices would be seen, but this expectation was hardly realized, at least so far as beef steers generally were concerned, although one owner of prime-fed Iowa steers was so fortunate as to get \$9.60 for a car load that averaged 1,600 lbs. However, fat butcher stock was active and about a dime higher, some sales looking as much as 15¢ better. Most of the steers sold slowly. Hogs were up a nickel, with active general buying and a \$7.70 top for prime barrows of good weight. Hogs received last week averaged 219 lbs., the same as a week earlier, comparing with 228 lbs. a month ago, 212 lbs. a year ago, 223 lbs. two years ago and 210 lbs. three years ago. Sheep and lambs were active at firm values, and there was an urgent demand for prime stock. Fancy lambs brought \$8.85, a further advance of 10¢.

Cattle were marketed so sparingly last week, especially on Monday, which is usually the day of largest receipts, that prices shot upward at a lively rate, the sales for that day being mainly 25@35¢ higher. There was less snap to trade Tuesday, as it was the eve of the Christmas holiday, no business being transacted in the Stock Yards Wednesday. By Thursday trade was moderate in volume, with poor steers slow of sale. The con-

sumption of poultry during the Christmas and New Year holidays is always extremely large, and all that made such a high market last week for beef cattle was the light offerings. Prime beefs such as sold a week earlier up to \$9.85 and a short time ago up to \$11, were not offered, and the best steers brought \$8.50@9.50, with the bulk of the steer sales at \$7.15@8.60. The cheaper class of light-weight grass-fed steers brought \$5.75@7, and there was a good trade in fat butcher stock, most of the beef cows and heifers selling 25¢ or more higher and canners and cutters about a dime higher. Cows and heifers brought \$4.30@8, with very few selling as high as \$7, while cutters brought \$3.85@4.25, canners, \$2.75@3.80 and bulls \$4.10@7.10. The stocker and feeder traffic was checked a good deal by the limited offerings, and prices averaged a little higher, with the former going at \$4.85@6.75 and the latter at \$6.25@7.75 for weighty lots, but not many feeders were shown prime enough to fetch over \$7.25. The stock steers selling down to \$5.50, were inferior in quality, and selected lots of feeders of extra weights went at \$7.35 and upward. Calves sold very well on the whole at \$4.25@10.50 per 100 lbs. for coarse heavy to prime light vealers, while milkers and springers had a limited outlet on the basis of \$40@90 per head, averaging at least \$10 lower than in October, although prime Holsteins would have sold as high as ever. On Monday six car loads of Montana range cattle arrived on the market and found buyers at \$5.25@7.50 for cows, heifers and steers.

Hogs advanced in a single day last week as much as 17½¢ for the best offerings, the greatly reduced receipts and increasing eastern shipping orders resulting in much greater competition among buyers than had been witnessed in a long time. The general conditions look much more promising for sellers than of late, the most encouraging feature being the growing demand for hogs to supply eastern packers, due to the fact that most of the eastern hogs have been marketed. The best droves of light hogs, averaging around 174 to 196 lbs. sold 10@15¢ below the best barrows of strong weights, although light hogs and the heavier lots of pigs were in excellent demand for the liberal fresh pork trade, fresh hog meats being especially popular, as they are now much cheaper than any other meats. With renewed bright prospects for the future trade in hogs, owners who are so fortunate as to have healthy young hogs following their cattle should consider twice before they market them prematurely for the abundance of cheap feed cannot be put to better use than by converting into beef, pork and mutton. At one time last week prime hogs brought \$7.60, but the week closed with sales at \$7.10@7.55, compared with \$6.80@7.40 a week earlier. Stags went at \$7.25@7.65, boars at \$3@4, throw-out packing sows at \$6.50@7.10 and pigs at \$5.50@7.10.

Sheep and lambs followed the general trend of live stock prices last week, prices undergoing sensational advances because of the meager receipts. There was an urgent general demand, and the greatly inadequate offerings of the best grade forced many buyers to take the poorer lots as substitutes, these, too, advancing sharply. There was the usual good demand for feeders, with offerings greatly inadequate, although on Tuesday a goodly number of Montana feeding lambs that averaged only 31 to 47 lbs. found buyers at \$5@7 per 100 lbs. The worst feature of the boom in killing flocks was the danger that many sheepmen would misinterpret the advance and rush in enough sheep and lambs to glut the market and thereby bring about a slump in values. The advance for the week amounted to 25@50¢ in lambs and 40@50¢ in handy-weight sheep, both wethers and ewes, heavy weights showing smaller advances. Lambs went at \$6@8.75, few selling below \$6.50, and choice feeding lambs would have brought \$7.50. Thursday saw good sales of thin Montana feeding lambs at \$5.50@6.90. Yearlings went at \$6@7.50, wethers at \$5@5.50, ewes at \$3.25@5 and bucks at \$2.50@3.75.

Horses were not traded in during the past week, dealers preferring to abandon the customary auction sales rather than to have horses sacrificed, for there is scarcely any demand just now. Business is resumed this week, but country shipmen should act very conservatively, as no marked improvement in trade is expected much before February.

## LIVE STOCK NEWS.

Regarding the outlook for beef cattle, the men who are the best informed are confident that with the population of the United States increasing from immigration alone at the rate of a million to a million and a quarter a year, in addition to the natural increase, and a marked shortage of all kinds of live stock, the chances for unsatisfactory returns are extremely small, to say the least. It does not seem possible that the production of beef cattle can catch up with, to say nothing of overtaking, our consuming capacity of beef for a long time.

H. G. Fulkerson, of Colorado, who has been prominently interested in the sheep feeding industry of the Arkansas Valley for many years, has 20,000 wethers and 4,000 lambs on his lands this winter. He says that he has faith in the future to the extent that he believes sheep prices will be high enough to make feeding pay. He adds that the few sheep he has marketed so far this winter have paid out satisfactorily, with feed a little cheaper than it was a year ago.

The fact that the annual assessments for taxes are made in Iowa in January is held responsible for many marketings of cattle, hogs and sheep by the farmer-stockmen of that state during the past month.

## 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. Thursday's Detroit Live Stock markets are given in the last edition. The first edition is mailed Thursday, the last edition Friday morning. The first edition is mailed to those who care more to get the paper early than they do for Thursday's Detroit Live Stock market report. You may have any edition desired. Subscribers may change from one edition to another by dropping us a card to that effect.

## DETROIT LIVE STOCK MARKETS.

## Thursday's Market.

December 26, 1912.

## Cattle.

Receipts, 494. Bulls and canners steady; other grades 10@25c higher than last week.

We quote: Extra dry-fed steers, \$7.50 @8; steers and heifers, 1000 to 1200, \$6.75 @7.50; do. 800 to 1000, \$6@6.75; do that are fat, 500 to 700, \$4.25@5; choice fat cows, \$5.50; good do., \$4.25@4.75; common cows, \$3.75@4.25; canners, \$3@3.50; choice heavy bulls, \$5.50@5.75; fair to good bolognas, bulls, \$4.75@5.25; stock bulls, \$3.75 @4.25; choice feeding steers, 800 to 1000, \$5.50@6.50; fair feeding steers, 800 to 1000 \$5@5.50; choice stockers, 500 to 700, \$5 @5.25; fair do., 500 to 700, \$4@4.75; stock heifers, \$4@4.50; milkers, large, young, medium age, \$45@75; common milkers, \$30@40.

Haley & M. sold Thompson Bros. 4 cows av 921 at \$3.60, 15 butchers av 702 at \$4.60; to Mason B. Co. 16 do av 800 at \$5.15; to Sullivan P. Co. 10 do av 854 at \$5.75; to Breitenbeck 6 cows av 870 at \$5.90; to Bresnahan 4 do av 1017 at \$3.85, 7 cows av 900 at \$4.25.

Bishop, B. & H. sold Goose 10 butchers av 477 at \$4.25, 19 do av 380 at \$4.40; to Thompson Bros. 2 do av 810 at \$3.50, 6 do av 1050 at \$4.50, 4 steers av 1100 at \$5.50; to Parker, W. & Co. 17 butchers av 700 at \$4.65; to Newton B. Co. 2 bulls av 1150 at \$5.25, 4 cows av 850 at \$4, 2 do av 900 at \$3.50; to Sullivan P. Co. 7 do av 950 at \$3.40, 1 heifer weighing 790 at \$6.25, 1 bull weighing 1190 at \$5.50, 1 steer weighing 1000 at \$7.50; to Nagle P. Co. 18 cows av 750 at \$4.

Roe Com. Co. sold Thompson Bros. 10 butchers av 562 at \$4.85, 2 steers av 1085 at \$5.50; to Sullivan P. Co. 5 cows av 852 at \$3.60.

Young sold Mich. B. Co. 5 steers av 914 at \$6.75, 2 do av 685 at \$5.50.

Adams sold same 2 cows av 920 at \$5.25, 2 steers av 900 at \$6.5.

Sandall sold Bresnahan 7 cows av 924 at \$3.50.

Spicer & R. sold Mich. B. Co. 3 cows av 900 at \$3.60, 1 heifer weighing 1060 at \$7, 1 bull weighing 1160 at \$5, 1 do weighing 620 at \$4.50; to Kamman B. Co. 1 do weighing 1400 at \$5.75, 1 do weighing 710 at \$4.50, 2 heifers av 840 at \$5; to Rattkowsky 1 cow weighing 1000 at \$4, 3 do av 820 at \$4; to Brown 5 do av 876 at \$4; to Sullivan P. Co. 13 butchers av 888 at \$5, 4 cows av 920 at \$3.75.

## Veal Calves.

Receipts, 208. Market steady at last week's prices. Best, \$9.50@11; others, \$4 @7.50; milch cows and springers strong.

Bishop, B. & H. sold McGuire 12 av 135 at \$10.50, 2 av 130 at \$8, 5 av 125 at \$10.50; to Goose 1 weighing 120 at \$10.50, 1 weighing 230 at \$5.50; to Goose 12 av 150 at \$8; to Mich. B. Co. 1 weighing 140 at \$10.50, 7 av 140 at \$10; to Sullivan P. Co. 3 av 160 at \$6, 4 av 145 at \$11, 3 av 140 at \$10.50; to Thompson Bros. 12 av 120 at \$7.50; to Hammond, S. & Co. 8 av 120 at \$9.60, 1 weighing 390 at \$6.50, 2 av 155 at \$10.50; to Parker, W. & Co. 1 weighing 120 at \$10.

Youngs sold Burnstine 3 av 150 at \$10.50.

Sandall sold Mich. B. Co. 13 av 130 at \$9.25, 2 av 255 at \$4.50.

Kalaher sold same 2 av 120 at \$9.50.

## Sheep and Lambs.

Receipts, 1,835. Market 25@50c higher than last week. Best lambs, \$8.25@8.50; fair to good do., \$7.50@8; light to common lambs, \$4.50@5.50; fair to good sheep, \$3 @4; culs and common, \$2.75@3.25.

Bishop, B. & H. sold Nagle P. Co. 125 lambs av 65 at \$7.50, 23 do av 68 at \$7.75, 12 sheep av 90 at \$3, 8 do av 115 at \$3; to Thompson Bros. 19 do av 110 at \$3.50, 5 do av 120 at \$3.50; to Chapman 5 do av 75 at \$2.50, 129 do av 75 at \$3.50; to Hammond, S. & Co. 13 sheep and yearlings av 120 at \$4; to Sullivan P. Co. 20 lambs av 47 at \$5; to Chapman 18 sheep av 105 at \$3.50; to Parker, W. & Co. 5 do av 75 at \$2, 43 lambs av 67 at \$8; to Sullivan P. Co. 2 sheep av 105 at \$3.

## Hogs.

Receipts, 1935. None sold up to noon; looks 20@30c higher than last Thursday.

Range of prices: Light to good butchers, \$7.40@7.50; pigs, \$7@7.10; light yorkers, \$7.25@7.35; stags one-third off.

Bishop, B. & H. sold Parker, W. & Co. 507 av 200 at \$7.55, 410 av 180 at \$7.50, 250 av 150 at \$7.45.

Roe Com. Co. sold Sullivan P. Co. 14 av 150 at \$7.40, 17 av 180 at \$7.50.

Bishop, B. & H. sold same 193 av 190 at \$7.55.

Spicer & R. sold same 60 av 140 at \$7.40. Spicer & R. sold Hammond, S. & Co. 310 av 200 at \$7.55, 110 av 180 at \$7.50, 100 av 140 at \$7.40.

Haley & M. sold same 160 av 200 at \$7.55, 460 av 180 at \$7.50, 240 av 150 at \$7.40.

## Friday's Market.

December 27, 1912.

## Cattle.

Receipts this week, 680; last week, 2511. Market strong at Thursday's prices.

We quote: Extra dry-fed steers, \$7.50 @8; steers and heifers, 1000 to 1200, \$7 @7.50; do. 800 to 1000, \$6@6.75; do that are fat, 500 to 700, \$5.25@6; choice fat

cows, \$5.50@6; good do., \$4.50@5; common cows, \$3.75@4.25; canners, \$3@3.75; choice heavy bulls, \$5.50@6; fair to good bolognas, bulls, \$4.75@5.25; stock bulls, \$4@4.50; choice feeding steers, 800 to 1000 \$6@6.50; fair do., 800 to 1000, \$5.50@6; choice stockers, 500 to 700, \$5@5.50; fair do., 500 to 700, \$4.50@5; stock heifers, \$4.25@4.50; milkers, large, young, medium age, \$50@75; common milkers, \$30@45.

## Veal Calves.

Receipts this week, 347; last week, 735. Good grades 50c higher. Best, \$10@12; others, \$4@9.50. Milch cows and springers steady.

## Sheep and Lambs.

Receipts this week, 3498; last week, 7711. Market 10@15c higher than on Thursday on lambs; sheep steady. Best lambs, \$8.50@8.60; fair do., \$7.50@8; light to common lambs, \$5.25@5.75; fair to good sheep, \$3.50@4; culs and common, \$2@2.75.

## Hogs.

Receipts this week, 3616; last week, 7478. Good grades 5@10c higher; pigs and common grades steady. Range of prices: Light to good butchers, \$7.55@7.65; pigs, \$7.35; light yorkers, \$7.40@7.55; stags one-third off.

Iowa sheep and lamb feeders have been highly favored with fine and mild autumn weather, and many shipments have been made to market, owners being disposed to take the good profits available for fat stock rather than to wait longer. In parts of Iowa the numerous dogs render the sheep industry nearly or quite impossible, and one farmer had 145 lambs killed by dogs.

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## Breeder's Directory—Continued.

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**LARGE** styled Poland China spring and fall pigs from strong, healthy, prolific breeders, either sex at low prices. ROBERT NEVE, Pierson, Mich.

**P. C. BOARS AND SOWS**—large type, sired by Expansion. A. A. WOOD & SON, Salline, Michigan.

**P. C. BOARS**—large type—sired by Expansion. Satisfaction guaranteed. R. W. MILLS, Salline, Mich.

**LARGETYPE P. C. HOGS**—Largest in Mich. Boars all sold. A few fall pigs. Also some extra large spring gilts to be bred to two of the best young boars I could buy in Iowa. Come or write. Free livery. W. E. LIVINGSTON, Parma, Michigan.

**MULE FOOT HOGS**—Fall pigs, service boars and bred sows for sale. Best quality, price right. G. C. KREGLAW, Ada, Ohio.

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I keep from 1000 to 2000 grade Yorkshire, Poland China and Tamworth cholera immune hogs, and am selling prolific brood sows and thin shoots at prices that make them desirable on cholera infected farms. Will furnish open sows or those bred to cholera immune boars. I expect to have several thousand pigs for sale next Spring from immune stock.

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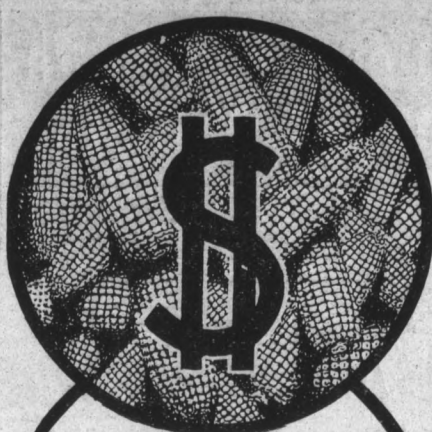
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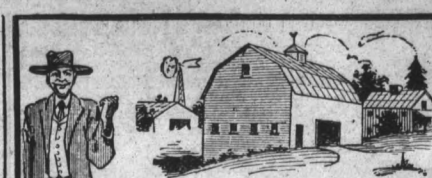
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We have just received from the printer a map showing the new parcel post zones, also fully explaining the parcel post scheme as it goes into effect Jan. 1, 1913.

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and food commissioner and shall comply with such rules and regulations as the dairy and food commissioner shall designate from time to time, carrying out the work of such inspector.

Section 2. The dairy and food commissioner shall, when notified in writing by owner of an apiary, or three disinterested taxpayers in vicinity of said apiary, cause the inspector to examine such apiary as reported, and all others in same locality not reported, and ascertain whether or not the disease exists in such apiaries and, if satisfied of the existence of foul brood, he shall give owner, or caretaker, of the diseased apiaries full instructions upon how to treat such cases as in the inspector's judgment may seem best.

Section 3. The inspector, who shall be sole judge, may visit all apiaries a second time and, if need be, burn all colonies of bees and combs that may be found not cured of foul brood or other contagious diseases.

Section 4. If the owner of the diseased apiary, honey or appliances shall wilfully sell, barter or give away any bees, honey or appliances, or expose other bees to the danger of said disease, or refuse to allow said inspector to inspect bees, honey or appliances, said owner shall, upon conviction before a justice of the peace, be liable to a fine of not less than \$50 nor not more than \$100, or not less than one month's imprisonment in the county jail nor more than two months' imprisonment.

Section 5. In addition to such individual reports as are required under this act, by the inspector of apiaries, he shall make an annual report to the dairy and food commissioner, giving number of apiaries visited, the number of diseased colonies found, the number of colonies treated, also the number of colonies destroyed by fire, also an itemized account of his transportation expenses with affidavit annexed therein.

Section 6. There is hereby appropriated out of any money in the state treasury, not otherwise appropriated, a sum of not exceeding \$500 a year, for the suppression of foul brood among bees in Michigan. The inspector shall receive \$5 per day and actual transportation and expenses for actual time served, which shall not exceed the money hereby appropriated, to be paid by the state treasurer upon orders drawn by auditor general and approved by the dairy and food commissioner. (Act 667 Public Acts 1901).

#### ECONOMY IN HATCHING.

Practically the incubator marks the boundary between the conditions under which poultry growing may be made profitable and those under which it cannot, normally, be made to pay actual expenses. Of course, it must not be asserted on the strength of this that at all times and under all circumstances it is impossible to make a profit out of poultry without the help of the incubator. One man may have a particular strain of fowls for which he can be sure of ready sale at fancy prices; another may be located in a place where poultry products are sure to bring extravagant figures; while still another may have such a low cost of living, such a total lack of other employment and such an overflow of help in his own family that he can make money out of his hens by the old-fashioned methods of poultry production; but these will, after all, prove to be exceptions.

The incubator is to the poultry raiser what the horserake or the self-binder is to the hay and grain grower, and all who have given it anything like a fair trial willingly bear testimony to this. One good-sized incubator will do the hatching, which, if done by hens, would take up the time that would represent the laying of over nineteen dozen eggs, worth, in round figures, from \$3.50 to \$4 at moderate market rates for good, fresh eggs for table purposes, while if produced by high-class, pure-bred fowls they would be worth double or treble that sum at a low computation.

Then again, the life of a good, well-made incubator, properly taken care of, is such that it need hardly enter into the farmer's calculations, and the cost of furnishing it with oil for one hatching of eggs is also very trifling, so that it is safe to reckon that the time spent by the hens doing the work of one incubator, after the farmer had furnished them with the eggs, would cost the equivalent of 200 chickens already hatched. From almost any point of view the employment of hens for hatching and brooding chicks is a waste of capital and energy, while the introduction of artificial hatching reduces the poultry business to something closely resembling an exact science.

Last year this muslin sack of "Bull" Durham was bought by more millions of men than all other high-grade smoking tobaccos combined—more than 352,000,000 sacks sold, nearly a million a day!

This homely muslin sack is a familiar sight the world over—because "Bull" Durham Tobacco is sold and smoked in every corner of the globe! It has been the standard smoking tobacco of the world for three generations.

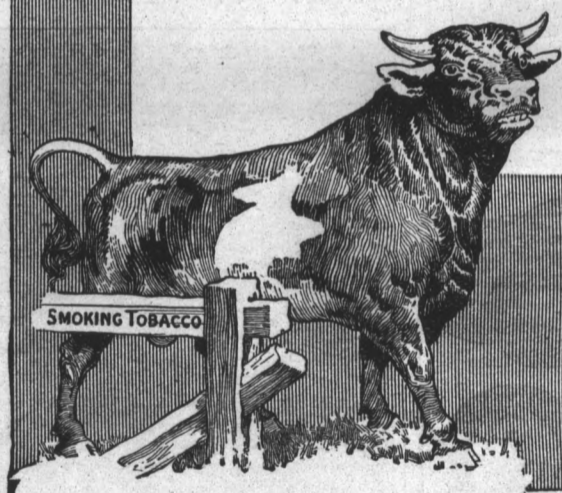
"Bull" Durham comes to you in this plain, muslin sack because the *quality is all in the tobacco*—where it belongs. There are no "premiums" given with "Bull" Durham—the tobacco is a *premium in itself*—and more millions of smokers are discovering this every year. The sales for the last year have been greater than during any other year in the fifty-three years "Bull" Durham has been on the market.

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This famous "Bull" sign is the most widely known and recognized advertisement in the world. "Bull" Durham tobacco is the most favorably known and widely smoked tobacco in the world.



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Only mill made with a double set of grinders or burrs. Have a grinding surface of just double that of any other mill of equal size, therefore, **Do Twice as Much Work.** Grind ear corn, shelled corn, oats, rye, wheat, barley, kafir corn, cotton seed, corn in shucks, sheaf oats, or any kind of grain, coarse, medium or fine. Require 25% less power than any other mill. Especially adapted for gasoline engines. Write for new catalog. **Free Catalogue** Duplex Mill & Mfg. Co., Box 308 Springfield, Ohio

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at Battle Creek Diamond Crystal Poultry Show Dec. 17-22-1912 on solid Am. varieties also 1, 2, 4, hen, 1, 2, 4, chl. 2, 3, pul. 4, ck. 2, pen and several specials on 12 birds, 8 breeders exhibiting W. Wyandotte. Stock for sale, Eggs and chicks by parcels post. Circular free.

**BARRED ROCK COCKERELS** of the Bradley strain, at \$2 and up, while they last. A. A. PATTULLO, Deckerville, Mich.

**WHITE Wyandottes**—25 May and June hatched cockerels weighing from 7 to 8 lbs. from my famous winter laying strain. L. M. OLDS, Ypsilanti, Mich.

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CONDITIONS point to another prosperous year in 1913. To obtain good seed is an important point to consider now. The best seed is, after all, the cheapest. Never before in the 29 years of our business have we had such an immense stock of high grade seed of all kinds. Our 29 years of study and experience in growing and selling seeds adapted to northwestern conditions together with our reputation for square dealing give you assurance that seeds bearing our name and trade mark are the best obtainable.

### NORTHROP, KING & CO'S STERLING SEEDS

Sold by 15,000 Dealers  
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Dealers sell our seeds of all kinds in any quantity desired. If they should not have what you want in stock, they will obtain it from us and sell it to you. If your merchant will not sell you STERLING seeds, send your order to us and we will see that you are promptly supplied. If you do not know who sells our seeds in your town, we will send the dealer's name on request.

#### 1913 Catalogue

Our 29th Annual Catalogue contains 144 pages of honest seed facts. It is beautifully and profusely illustrated from photographs and gives accurate descriptions of practically all seeds best adapted to northern culture. It describes

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##### Of Interest To Every Farmer

On page 129 of our 1913 Catalogue we list something of interest to farmers and stock raisers. This item has never before been offered and it gives us great pleasure to be first again to introduce a new and valuable seed or plant for the advancement of agricultural interests.

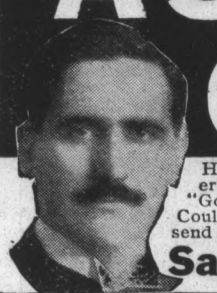
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on the finest spreader ever built. Galloway's improved 1913 model with Mandi's new gear is the marvel of the implement industry. My bed rock factory price, long free trial, long guarantee and liberal terms have no room for argument. Write quick for my advance 1913 proposition. Don't wait. Wm. Galloway, Pres., Wm. Galloway Co., 649CN Galloway Station, Waterloo, Iowa. REMEMBER—We carry stocks of all our machines at Chicago, Kansas City, Council Bluffs and Minneapolis—insuring prompt shipment.



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I want the names of 10 or more men in every township. Send your name quick for my special proposition on a spreader—don't wait—put your postal or letter in the mail NOW.

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is a good pump. As practical fruit growers we were using common sprayers in our own orchards—found their defects and invented the Eclipse. Its success forced us to manufacturing on a large scale. You take no chances. We have done all the experimenting! Large, fully illustrated Catalog and Treatise on spraying Free.

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leads everything of its kind. Throws fine mist spray with strong force, no clogging, strainers are brushed and kept clean and liquid is thoroughly agitated automatically.

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## Horticulture.

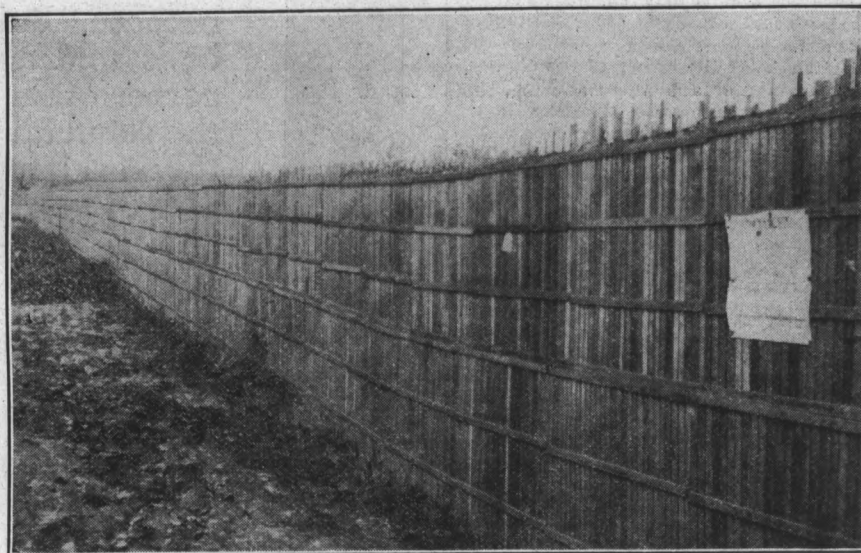
### GROWING MEDICINAL ROOTS SCIENTIFICALLY.

During the fall days in many places in Michigan a big lot of leaves and leaf mould are hauled out of the woods. The material is used for mulching, not for any standard crop of the farm but for root gardens. For the growing of roots has assumed such proportions in the Wolverine state that it has become a great soil-tilling business in itself.

It is not generally known that at Saugatuck, Allegan county, it located proba-

more about fighting root disease. Recently there gathered at Saugatuck 40 members of the Michigan association for the purpose of discussing root disease and the cure. The agricultural colleges have taken up the subject, have made valuable experiments which have been communicated to the different growers. Roots nowadays are treated before being transplanted and with as much care as does a fruit man spray his trees at the right time.

The greatest accomplishment of the local association has been in the character

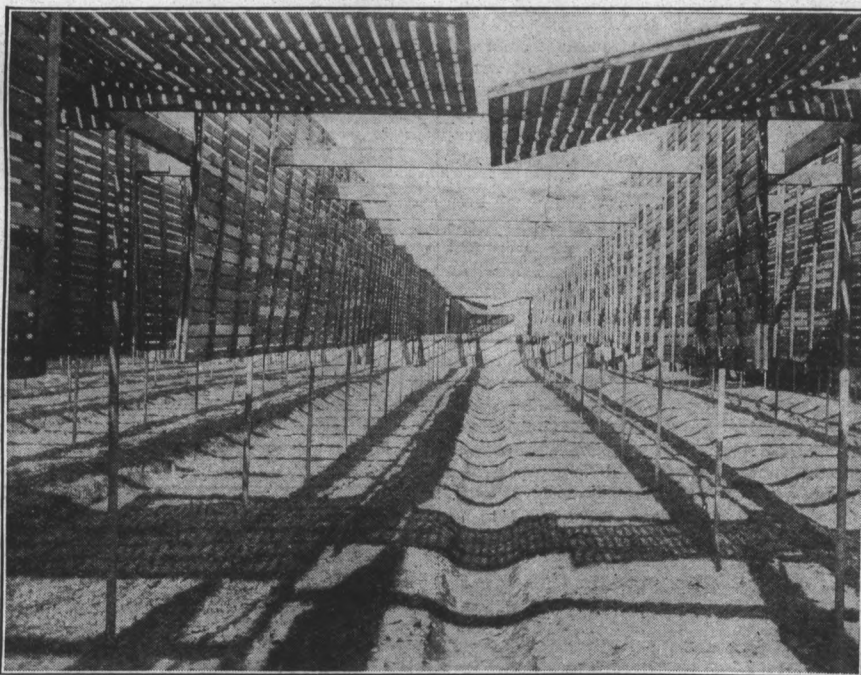


Illustrates Method of Constructing Screens About Root Garden.

bly the largest and most modern root garden enclosure in the middle west. Neither is it widely known that there is probably the most thorough organization of root growers in Michigan that we hear of now-a-days. There are over 150 members of the association representing many sections of the state.

It is claimed by the head of the Saugatuck root growers association which is composed of four members, one of which manages the garden, that the depletion of our woodlands has caused the home-growing of roots which from ages back have been used for medicinal purposes. Natural beds of roots have been put to other branches of agriculture, and the root digger of other days has lost his job. Roots which in earlier times sold for less than a dollar a pound are now worth \$4 and even more. Snake, golden seal, pink, and ginseng are now being

of the enclosure which has been contrived as near as possible to correspond with the characteristics of a woodland root bed. Instead of making the enclosure of brush, second-hand plasterers' lath, costing \$2 a thousand free on board, has been used for the fencing and the canopy. The top is so constructed that the whole of it is in movable sections four feet square. These are called shades, they may be partially lowered, or they may hang in perpendicular position, thus leaving the top of the enclosure entirely open. In this position the shades are left from November to May, so that all of the snows of winter are permitted to cover the leaf mulching. During the summer months the shades are adjusted so that the growing plants get about the same amount of sun that a woodland bed would get. The shades are hung on spike pinions and may be hooked in several different posi-



Modern Root Garden Showing Beds Ready for Mulching and position of Frames for Admitting Sunlight and Snow.

raised in greatly increased quantity. In the last five years not including 1912, according to government statistics, 804,538 pounds of ginseng alone has been produced and sold in this country. It sold for \$5,722,832. Despite the fact that there has been an increase in production, the price a pound has increased. The reason for this is that root growers are producing better roots, they know more about them, the roots are growing older and better in quality. The growers know

the overhead frame work is built of rough two by fours and the frame work is supported by steel posts set in concrete foundation.

The beds shown in one of the pictures are ready for the leaf mulching which is obtained free of charge for the handling. The entire garden shown in the picture is tile drained, the tile sunk under the oval walks. The shades when performing their summer function, are hung so that they drip into the tile drained walks. The

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whole enclosure has been built so that any weather-worn section may be taken out and renewed. The lath of the fence are nailed on in two lengths, about a quarter of an inch apart. The lath sections are fastened by crossing a section at top, bottom and center by pairs of lath, one over and one under, nailed through to one another. They are all built in a form and, of course, are uniform in size. By the use of this description of enclosure and shelter, conditions very close to those of the woodland beds may be maintained.

Illinois.

J. L. GRAFF.

#### GROWING ASPARAGUS FROM SEED.

Growing asparagus from seed, without transplanting, is not only a much cheaper method, but in my opinion it is the best method if the operator can have patience to wait a year longer for a crop. The plan is very simple, and can be done by anyone having even a slight knowledge of farming or gardening work.

Prepare the land by manuring, deep plowing and harrowing, making it as level and smooth as possible for the reception of the seed. Strike out lines three feet apart and about two to three inches deep, in which sow the seed by hand or seed drill, as is most convenient, using from five to seven pounds of seed to each acre. After sowing the seed and before covering tread down the seed in the rows evenly with the feet, then draw the back of a rake lengthwise over the rows, after which roll the whole surface.

As soon as the land is dry and fit to work in spring, the young plants of asparagus will start through the ground sufficiently to define the rows in two or three weeks. At once begin to cultivate with hand or horse cultivator, and stir the ground so as to destroy the embryo weeds, breaking the soil in the rows between the plants with the fingers or hand weeder for the same purpose. This must be repeated at intervals of two or three weeks during the summer, as the success of this method is entirely dependent on keeping down the weeds, which, if allowed to grow, would soon smother the asparagus plants, which for the first season of their growth are weaker than most weeds.

In two or three months after sowing, the asparagus will have attained ten or twelve inches in height. It must now be thinned out so that the plants stand nine inches apart in the rows. By fall they will be from two to three feet high, strong and vigorous, if the directions for culture have been faithfully followed. When the foliage dies (but not before), cut the stems down to the ground and cover the lines for five or six inches on each side with two or three inches in depth of rough manure. As the spring again returns, renew the same process of cultivation to keep down weeds the second year exactly as was done for the first, and so on to the spring of the fourth year, when a crop may be cut that will reward all the labor that has been expended. Sometimes, if the land is particularly suitable, a crop may be had well worth marketing the third year, but as a rule, it will be better to wait until the fourth year without cutting much as it would tend to weaken the plants.

To compensate for the loss of a year in time in thus growing asparagus from seed, such crops as cabbage, lettuce, onions, beets, or spinach, all of which will be marketable before the asparagus will have grown high enough to interfere with them, can be sown, or planted, between the rows of asparagus the first year of its growth with but little injury to it; and as the ground for the asparagus has been heavily manured and well prepared, such crops will, in a measure, make up for the year's loss in time, provided there is a market near enough for their sale.

New York.

T. A. TEFFT.

#### THINNING APPLES ON THE TREES.

Most people know that the scientific culture of the apple orchard means right pruning when the trees are dormant, cultivation from early spring to midsummer, then sowing a cover crop of clover, rye, or vetch, that will feed the trees, and thorough and timely spraying; but the up-to-date orchardist who wants mostly the No. 1 grade, or nearly the whole crop of fancy apples, must do more than I have mentioned, he must thin the fruit on the trees that bear heavily. It is a fact that some of the most successful apple growers of western New York practice a systematic thinning and find it pays well. I think my readers will want to know what some experts said on the

subject at the convention of the Western New York Horticultural Society, in Rochester, N. Y., in December.

Prof. Wilson, of the College of Agriculture, Cornell University, read a paper on "Thinning of Apples." He said that formerly the grower was able to dispose of all grades of apples, but competition has compelled the growing of better fruit, and thinning is one of the means of doing this. First, hand thinning is the most practicable (remove all wormy fruit, then thin to four or six inches, if trees are heavily laden, but in the actual doing of the work much judgment must be used for no definite rules can be formulated. Thin in June, July and sometimes August, or when the apples are one inch in diameter. The results are larger apples, and a larger proportion of first-grade fruit, and an increase in the crop of marketable fruit, 10 per cent or more.

Mr. Taylor said he thinned and had 90 per cent No. 1, no No. 2, and 10 per cent No. 3. The thinned tree yields slightly less in bulk. Thinned fruits are better in color, as proved by the New York Experiment Station, only on heavily loaded trees. Fruit growers who have thinned say the average cost of thinning mature trees is about 50 cents each.

The value of the crop is enhanced. Prof. Beach estimates an increased value of fruit of 15 per cent by thinning. Prof. Fraser says the increase is more than 50 per cent since thinned fruit can be picked and packed from 20 to 30 per cent cheaper.

Mr. Case said he believed it paid to thin twice. He does not thin any until the June drop is over, and does not thin heavily at first until he knows something about how much the wind will do. Take hold of the stem with one hand, when thinning, and push the apples off with the thumb and finger of the other hand. Prof. Wilson said pay no attention to the June drop, but to the size of apples when thinning. Prof. Herrick said it does not pay to thin some varieties, because they are light bearers. We must use judgment and consider the factors of varieties, seasons, etc. George Powell said that with some varieties annual thinning will pay, especially with the Wealthy. Such apples sell for \$3.00 per barrel when ordinary apples sell for \$2.00 per barrel. Mr. Catchpole said he knew it paid him to thin everything in his orchard.

New York.

W. H. JENKINS.

#### TESTS OF SUMMER SPRAYS ON APPLES.

A report of spraying experiments at the Connecticut Station shows that Bordeaux has, on the whole, shown the best fungicidal value of any of the sprays tried. In the work with apples it was found that three sprayings having lead arsenate in the last two keep most of the fungi and insects under control. In the control of black rot on the leaves complete removal of the diseased branches should be combined with spraying. The prevention of rust requires a continuous coating of the leaves from the time they first appear until all danger of infection from the cedar apple stage is over. To reduce the russetting or burning of apples that occurs with Bordeaux used alone, the officials advise using the 4:4:50 formula in the first spraying before the blossoms have opened at the critical time for scab. In the second and third spraying a 1:4:50 formula may be used. Compared with the commercial lime-sulphur sprays, however, even weak Bordeaux is apt to produce more russetting on such susceptible varieties as Baldwin and Greening. No recommendation is made of a substitution of lime-sulphur solutions for Bordeaux on those varieties not seriously liable to russetting or on those very susceptible to fungus attack.

When commercial lime-sulphur is substituted for Bordeaux, however, it should be used at the rate of 1½ gallons per 50 gallons of water for all three sprayings. For the insecticide lead arsenate at the rate of three pounds of paste or 1½ pounds of powder per 50 gallons of mixture may be added to the last two sprayings. The treatment, recommended for the pear and quince is similar to that for the apple. For peaches, cherries and plums, where there is always danger of burning from Bordeaux and also often from commercial lime-sulphurs, especially if used with lead arsenate, self-boiled lime-sulphur appears to be the best fungicide since it produces on the whole, the least injury of any spray tried. The 8:8:50 formula for all three sprayings has given the best results.

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When buying any article of commerce, one must depend almost entirely upon the seller. He must be able to inspire confidence, must show that he knows his business and above all, prove that he is honest. Have you ever been disappointed in fruit not bearing true? We have stood the test for 59 years as

Reliable Nurserymen, Florists and Seedsmen. What better guarantee can we give? Why take any risk? Why not deal direct and at real cost? Everything in Fruit and Ornamental Trees, Evergreens, Roses, Shrubs, Vines, Bulbs, Flower and Garden Seeds.

Satisfaction Guaranteed. 1,200 acres, 47 Greenhouses. Write Today for our 168-page Catalog No. 2, or for Fruit and Ornamental Tree Catalog No. 1; both free. THE STORRS & HARRISON CO. Box 45, Painesville, Ohio. (69)

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#### Hurst Potato and Orchard Sprayers

double your crops—spray anything—trees, potatoes, vineyard, truck, etc. High pressure, cyclone agitation, easy to operate. Brass valves, plunger, cylinder, strainer, etc. Light, strong and durable.

Horse Power Sprayer—works automatically in field and orchard—no hand pumping required. Write to-day. Catalog and Special Free Sprayer Offer to first buyer in each locality. Be first—save money—write today.

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Some States make you spray now; others will follow soon. But you must apply right solutions, at the right time, in the right way. You need a Sprayer with best pumps and adjustments for your purpose.

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Build from this to have these advantages. 40 combinations—Bucket, Knapsack, Barrel, Traction and Power Sprayers—\$3 to \$300. Pumps outside, will not corrode; handle any solution.

Sprayers in units, complete or in parts to build up those already in use. Ask your dealer to show them and write for new booklet, "Spraying Vines, Trees and Fruits." We also make full line of potato machines, garden tools, etc. BATEMAN MFG CO. Box 104-N Greenvich, N. J.

#### SOMETHING NEW "KANT-KLOG" SPRAYERS

Gets twice the results with same labor and fluid. Flat or round, fine or coarse sprays from same nozzle. Ten styles. For trees, potatoes, gardens, whitewashing, etc. Agents Wanted, Booklet free. Rochester Spray Pump Co. 189 Broadway, Rochester, N.Y.

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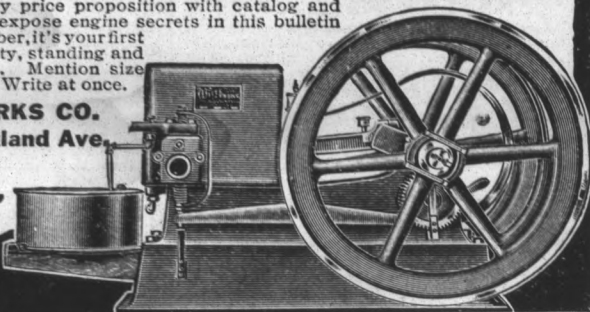
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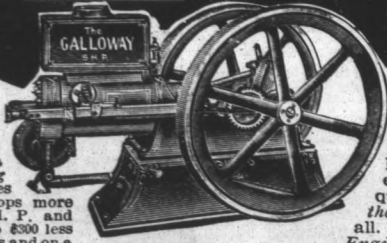


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## Practical Science.

### THE ROLE OF ACIDS AND BASES (ALKALIES).

BY FLOYD W. ROBISON.

In our discussion regarding the role and effect of acids and bases, or alkalies, we have touched upon the delicate balance which the human body (the animal body) maintains with regard to the introduction of either the acids on the one hand, or the alkalies on the other. In this we have noted that while the body does exercise some concern over the introduction of alkalies, or bases, into the system, that it is especially guarding against the excessive introduction of the acid constituents. This statement necessitates some explanation on our part in order that an erroneous opinion will not be inferred by the reader.

#### Fruit Diet Beneficial.

One of the most healthful diets so far as the human individual is concerned, and one which we have observed from the standpoint of health and nutrition there is abundant scientific ground for its use, is the liberal use of fruits in the diet. In view of the statement which we made that the body views with alarm the introduction or presence of excessive acid in the diet, it may seem strange that we should immediately on the other hand, advise the use of large quantities of fruit in the diet, for surely the reader will say at once that the introduction of fruit into the diet is adding this very acid which we have reasoned against. We must therefore, here differentiate between the acids, the introduction of which are objectionable and those acids which are permissible—yea, indeed, even welcome.

#### Acid of Fruits Can be Utilized.

The acid that exists in fruit is an organic acid. The acid of lemons, for example, is citric acid. The acid of oranges and grape fruits is citric acid. The acid of grapes is tartaric. The acid of apples is malic acid. These acids we call organic acids. When they are taken into the system they do not call for a withdrawal of the alkali, or basic, supply of the body, for they are absorbed into the body and converted into normal food compounds and finally eliminated in an oxidized condition through the lungs.

Let us take sulphuric acid, for example, on the other hand. Sulphuric acid results from an oxidation of the proteid in the body or from sulphuric acid directly introduced into the intestinal canal. In whatever way its presence is accounted for in the body, it calls immediately upon the reserve store of alkalies or bases which are stored up in the system and thus neutralized is eliminated. It is the acid which calls for neutralization by the alkali or basic supply of the body that the body is especially guarding against.

#### Kidney Diseases Frequently Marked by Excess of Unoxidized Acid in Diet.

In connection with the common kidney disease called diabetes mellitis, the excess of acids is very marked, and it was through a study of this disease that the term Acidosis first arose. And, as we have stated heretofore, it may be inferred that this condition may arise either through the introduction of acid from without the body, or by the withdrawal of the alkali or bases within the body which, of course, amounts ultimately to the same thing. The presence, therefore, of a considerable quantity or an excess of mineral acids or of any non-oxidizable organic acid contributes to this condition, which we call "acidosis" which, in plain language, is nothing more or less than an acid intoxication. If the intoxication is caused by the administration from without, it may be called direct acid intoxication. If it is caused by the withdrawal of alkalies from within the body to neutralize an excess of acid there formed, we may call it indirect, or auto-intoxication. Such acids as lactic acid, uric acid, oxalic acid, acetic acid, and oxybutyric acid contribute to this condition called acidosis.

The presence of non-oxidizable organic acids in the system is the signal for the excessive oxidation of the proteid matter in the body in the effort of the body to furnish enough nitrogen in the form of ammonia to properly neutralize these acids of excretion. This brings about another undesirable condition for the occurrence of urinary calculi which are exceedingly prone to form in ammoniacal urine or a urine in which the presence of ammonia salts are especially prominent

frequently consists of salts of these un-oxidized organic acids.

#### Careful Restriction of Diet is the Best Safeguard.

We should like to impress very strongly upon the reader the importance of a careful adjustment of the diet to prevent the introduction of any undue amount of un-oxidizable acids. Right at this point should we sound a warning regarding the introduction into the diet of difficultly soluble mineral salts which though neutral in the action call upon the reserve of the body for their destruction and elimination. The one which impresses itself most strongly upon our mind at this time is calcium sulphate. The action of calcium sulphate in the body is an interesting one. Practically neutral until it reaches the intestines it then becomes split, its sulphuric acid withdrawing some natural alkali or base from the intestinal fluids, thus cutting down the supply of the body in that respect. Not only does this disadvantage exist, but the lime, or the calcium, from this salt in turn interferes with the proper absorption of the soaps in the intestine by precipitating a soap such as the calcium soap which is almost insoluble and therefore becomes excreted in the feces instead of taking part in the nutrition of the body.

The effect of calcium sulphate, therefore, while neutral when introduced into the system, encourages acidosis in these two particulars: First, by withdrawing alkali for the neutralization of the acid and second, by taking tribute on some of the fatty acids which are in the soaps, the result of the attempt of the digestive system to utilize the fat in the food.

#### Majority of Ills Due to Malnutrition.

When we take into consideration the well known fact that by far the major ill of mankind and of animals as well are due to faulty nutrition, either directly or indirectly, we may form some appreciation of how serious a matter it is to disturb the metabolic functions even though it may seem in some instances to be only a minor disturbance.

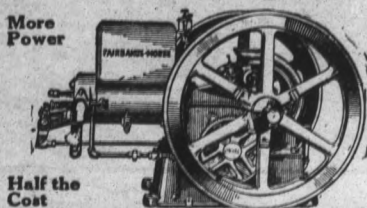
The normal reaction of the blood is slightly alkaline. The appearance of carbon dioxide in the blood which is the body's great purifier, seems to depend very materially on maintaining this slight condition of alkalinity. At any rate any slight disturbance of this alkalinity, or alkaline condition, caused by the introduction or formation of acids is indicated by a complete disappearance of the carbon dioxide.

#### Acidosis Common Among Artificially Fed Infants.

Probably one of the most frequent difficulties with infants is the result of one or the other of two conditions of acidosis that we have just described. It is well known that with infants that are fed artificially, that is, primarily on cows' milk, that the appearance of the symptoms of this disease is more frequent and more marked than in those fed on human milk. Cows' milk contains at first hand, more proteid than does human milk. This means that the amount of unoxidized acids common in the body must be greater than would be the case with an infant fed on a natural diet. In the second place, cows' milk as a rule, contains more fat than does human milk. Especially is this apt to be true among the average families because some effort is usually made to secure a grade of milk that, from a standpoint of cleanliness, is above the average of the city milk supply. Accompanying this, clean milk is usually found to contain a high fat content. Now a high fat content of milk results in a removal of the alkali from the intestine in attempting to utilize the fat. The calcium present in the milk becomes converted in the intestine into the calcium soap the same as we have described under calcium sulphate and thus withdrawing the alkali calls upon the body to furnish in its place ammonia for the neutralization of the acids formed.

Dietitians have observed this point and in our modified milk for infant feeding the fat content is considerably lower than is the case with ordinary cow's milk. It is a significant fact that so apt is this condition to occur, and the balance so delicate in this respect, that dairymen have observed that the progeny of a Jersey cow will develop more advantageously in the early stages of its life upon the milk of a Holstein cow or other breed low in fat than on its mother's milk.

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## Farmers' Clubs

### TAXATION.

Address of Associational President McBride, before the recent State Association of Farmers' Clubs.

The last decennial census shows, since 1900 to 1910, that total acreage has increased four per cent and improved acreage 15 per cent; the productivity of acreage one per cent, while population has increased during the same period, 21 per cent. Wilberforce, the English statesman, said that the difference between a good address and a poor one was that in the former case there was the necessity of something to be said; in the latter case the necessity of saying something.

Prof. Sumner begins a chapter in his political economy by stating that man creates nothing. His work is simply to bring forces and elements together. Now the distinguishing features of commercial and industrial life is the rapidity of movements. During a period of depression movements are slow; dull times we say. Somewhere along this line of these business changes is the cost of government. An overhead charge, our business analyst would call it. "Loading" would describe it to our insurance people. We understand it better by saying that it is the cost of the supervision by government of business relations, and this patrol is met by what we call taxes. The word tax also means a hindrance, a burden, a strain. If we could do away with government, or anarchy, we might avoid taxes. However, something meaner than anarchy is that of receiving the benefit derived from government and acting worse than an anarchist in avoiding the payment. An anarchist, even though mistaken, is the more honest.

The soil to the physicist and chemist is not lifeless, but full of chemical and physical activities. This stored up life may be quickly used up, or depleted so slowly that, with some expense, it may be maintained almost indefinitely. An example of hastened depletion is in mining and lumbering. Michigan had magnificent forests of white pine. These trees have reared costly monuments to their destroyers, while their blackened stumps and the indifferent soils remain, in dumb accusation of a mistaken policy of taxation. In the mutations of chemical and physical life, under modern industrial life, there is going on a constant movement toward the cities. While passing the Hartford Building in Chicago, in company with a northern Michigan mining man, he remarked, "I furnished the money to build that building." That is, the wealth derived from iron ore was used to take the granite and steel, and the labor fed from the soil was concentrated in that building.

It is interesting to know how values are determined upon various forms of property. A well developed mine, such as is bought by the American Exploration Company, or the English Venture Company, is examined by competent engineers. Hammond and Beattie, the principal examiners for the Guggenheims, are men who receive princely salaries, because of their knowledge and integrity. When Stratton's Independence mine at Cripple Creek was sold to the English Venture Company, it was found to have been worked out, and the examining engineers were long under suspicion of dishonesty in their reports. To arrive at the value of a mine the ore must be blocked out on four sides, drafts and shafts at 100-foot intervals. From every ten feet of vein is taken a clipping, or sampling is made to obtain an average sample. These samples are marked, sealed and assayed. The measurements are made to determine the tonnage, and these, with the assays, determines the value of the ton of ore. The cost of mining, reducing and marketing the ore is calculated and then we have the value of the developed mine. The hypothetical value of the undeveloped portion is not even guessed at. English companies figure annual depreciation or, as it is determined, an amortization fund for replacement of the original investment, so that when the mine is worked out a new mine may be purchased, or the investment returned to the investors. Gov. Osborn's contribution to Michigan in matters of taxation was the physical valuation of mining property.

(To be continued.)

## Grange.

### FORTIETH ANNUAL STATE GRANGE.

#### Important Committee Reports.

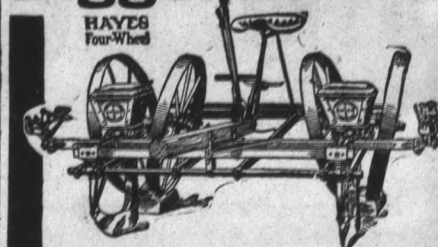
Prominent among the committees to which a great number of resolutions had been referred was that on legislative action, of which Hon. L. L. Kelly was chairman. Among the numerous propositions submitted the Grange voted to recommend to the incoming legislature the following:

A law compelling railroads to maintain a schedule averaging not less than 15 miles per hour in carrying live stock. Amendments making more effective the law prohibiting the pollution of rivers and streams. The creation of a state horticultural commission. The re-submission of the universal suffrage amendment to the electorate. A law limiting the campaign expenditures of candidates for office to 10 per cent of the annual salary of the office. A law prohibiting creamery firms doing business at two or more points or stations from discriminating against any station—in other words, utilizing the methods of some big trusts and monopolies in killing competition. A more stringent law in restriction of hunting, and making trespass by hunters a misdemeanor. Amendments designed to strengthen and improve the state primary election law and to extend its scope to include all state and county officers. A general statute eliminating fees and placing all county officers on a salary. In addition the Grange re-affirmed its former position as regards the so-called tonnage tax and the conservation of natural resources. It also went on record as strongly opposed to the enactment of any measure which shall prevent or interfere with farmers installing and operating telephone lines.

The committee on resolutions, C. E. Passett, chairman, opened its report with a general recommendation to the effect that a large proportion of the immense sums now expended in building battle-ships and in otherwise preparing for conflict might be utilized far more advantageously and appropriately in advancing the cause of universal peace, and in giving its endorsement the Grange went on record as favoring construction rather than destruction in all things. The committee condemned the Aldrich banking and currency bill and was sustained by the delegates. The Grange also concurred in the following recommendations submitted: That the Grange endorse the Page-Wilson agricultural extension measure now before Congress in preference to the Lever-Smith bill; that the laws restricting lotteries be so amended as to prevent gambling in all stocks and bonds; that the franking of mail, a privilege which all recognize as greatly abused, be strictly limited to official business of the United States; that railroads be compelled to pay demurrage for delay in furnishing cars to shippers, the idea being to offset demurrage charged against shippers for delay in unloading freight; that the Grange oppose the so-called Lever oleomargarine bill and in its stead recommend the passage of a law such as outlined by Master Hull in his annual address. (Such a measure, known as the Hausen bill, has since been introduced and is now before Congress); that the reciprocity law now upon our statute books be repealed by Congress without delay; that the Electoral College be dispensed with and the president and vice-president of the United States be elected by direct vote of the people; that the Grange re-emphasize its well-known opposition to the liquor interests of the state. Resolutions warmly expressing the thanks and appreciation of the Grange to the citizens of Sault Ste. Marie and the patrons of the entire upper peninsula were included in this report.

The committee on education opposed the present plan of centralizing schools and its position was endorsed by the Grange. It recommended that prospective rural teachers be required to have at least six months of normal training; that the state be required to furnish uniform text books at actual cost; that Superintendent of Public Instruction Wright be asked to reverse his recent ruling which practically eliminates the ninth and tenth grades from country schools. The delegates concurred and voted to add to the report a resolution favoring a statute permitting the utilization of public schoolhouses as social center meeting places.

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At 1 1/4c per square foot, we furnish our grade AB-700 Steel Roofing in sheets 22 x 24 inches x 1 1/4 inches. This price is delivered on board cars at Chicago.

#### Galvanized Steel Roofing 2 3/4c Per Square Foot

Another big Steel Roofing Bargain. Several thousand squares of the very highest grade specially coated, corrugated, galvanized roofing and siding, made of specially prepared steel, of superior quality. Best roofing, and will last indefinitely. We will furnish it in suitable lengths for any purpose. Only a limited quantity on hand, so we urge you to send us your order immediately. Don't wait to write us again—order today, while this stock exists. Price only 2 3/4c per square foot, and will outlast 4 to 1. Just drop us a line, and tell us the size of your studding and general facts, and we will help you to select proper sheets. If you are not ready to use the material now, we will reserve it for future delivery. If you will give us a small deposit on account, this price of 2 3/4c per square foot is for our Lot AB-800 corrugated material, and is delivered on board cars at Chicago. If you prefer some other style, we will furnish it. We have this same grade in "V" crimped, Standing Seam and Brick Siding. Samples on application.

#### Ready Roofing With Supplies 62c Per 108 Square Feet

We have several thousand squares of a superior quality Ready Roofing, which we are offering in our AJAX BRAND, 1-ply, at a price of 62c per square of 108 square feet, including necessary cement and caps to lay it. This is undoubtedly the most remarkable bargain ever offered in Ready Roofing. This famous brand is put up 3 or 4 pieces to a roll. The price of 62c per square of 108 square feet is loaded on board cars at Chicago. We will, however, make a freight prepaid price on this same grade of roofing, including nails and necessary cement of 75c per roll of 108 square feet, and at this remarkable low price.

#### We Pay the Freight

In full to any point east of Kansas and Nebraska and North of the Ohio River. We will also furnish 2-ply, at 90c; 3-ply, at \$1.05. This Ajax Roofing is guaranteed to wear as long, and give as good service as any Rubber Surface roofing on the market.

We have other grades of roofing which we offer 30 per cent. lower than others quote. Samples free. Get our free Roofing Book before buying roofing of any kind. This is a chance to lay in your roofing. You must send in your reservations at once—use the coupon shown in this advertisement, or merely write us a letter and tell us where you saw this advertisement. While the stock we have on hand would be considered large for any other concern, remember we have hundreds of thousands of customers who are waiting and watching for these bargains, and who will quickly take advantage of our offer; therefore, we urge you to get in your order at once, even though you are not ready to have the material come forward today. Send us your order and tell us when you want it shipped, and we will ship it according to your requirements. Do not overlook this chance—take full advantage of this offer while it lasts.

#### Send for Special Roofing Catalog and Samples

Write at once for our Special Roofing Catalog. Free samples and full instructions for laying roofing. No need to write a letter, simply use the free inquiry coupon shown in this advertisement. We will understand that you simply want full information, samples, prices and specifications, which will be sent you at once, prepaid. Just send your name and address. If you are in a big hurry, send in your order direct from this advertisement. We will fill it for you correctly, and will ship forward without any delay. In any event, write us today.

### SMASHING BARGAINS

#### EXPLANATION

The Chicago House Wrecking Company known to the commercial world as the "Great Price Wreckers" is easily acknowledged the bargain house of the earth.

Our Mammoth plant covers 40 acres, and our list of customers are numbered by the hundreds of thousands, and include people from every walk in life. We sell practically everything under the sun at unbeatable prices. We buy our goods at Forced Sales, taking advantage of Sheriffs, Manufacturers' and Auction Sales. In this way we can sell brand new, clean high-grade goods at prices, in many instances even less than the cost of manufacture.

#### We Supply Everything Needed

Our stock includes everything for the farm, home and personal use, Building Material—Lumber, Roofing, Doors, Millwork, Fencing, Hardware, Plumbing, Heating Apparatus, Furniture, Household Goods, Clothing, Shoes, in fact, every single article needed to clothe a man, woman or child, Sporting Goods, Harness and Vehicles, Jewelry, Sewing Machines, Groceries, etc. You cannot think of a single manufactured article but what we can supply it to you at a saving in price.

#### OUR GUARANTEE

Our capital stock is \$2,000,000. Any bank or Commercial Agency, or any publisher will confirm our responsibility. We have advertised in this paper for many years. Ask its publisher what he thinks of the Chicago House Wrecking Company; get his personal opinion of the values, and our square methods of doing business. We guarantee each and every article that we sell to be exactly as per our representations. Should you buy anything from us that fails to come up to our representations, or does not agree with your expectations, we will take back such unsatisfactory merchandise at our freight expense. We want satisfied patrons.

## LUMBER

Complete houses and barns at an enormous saving. Never before in the history of Building Material has such an opportunity existed. We offer high grade, brand new complete lumber and building material needed for the construction of houses and barns at lower prices than ever before.

#### 20,000,000 Ft. of New Lumber at Our Yards and Warehouses Ready for Quick Delivery

We have upwards of twenty million feet of first-class, brand new lumber for the construction of buildings of every kind. A wonderful stock of the very finest millwork, interior trim, etc.—enough material to construct cities and villages everywhere. It is our determination that 1913 will be the "Banner" year in the history of our Great Lumber and Millwork department, and the way we will accomplish this, is by quoting prices that will undersell any possible competition. The proof of this is in our catalog and literature.

Write today and tell us what you contemplate improving or building during this Spring—talk to us plainly, and we promise you the advice straight from the shoulder. No other concern in the world is able, at one time, and in one carload, every single article required for the improvement of the building you have in mind. No where else can you go and get such service.

House No. 8A

**\$725.00**

**Buys the material to build this 2-story modern, 8-room residence. Write for description.**



#### Personal Service To You

You can get the kind of service that will give you absolute satisfaction—satisfaction from the word "go." If you have ideas of your own as to the kind of building that you want, we will give you the benefit of the Greatest Architectural Department in the world. Will furnish you with plans according to your own ideas, and will quote you a price on the material that will make you a wonderful saving. Dollars saved are dollars earned. Write today for our Book of Plans and Latest Catalog of Building Material and Supplies.

#### GET THESE CATALOGS FREE



**Roofing Catalog**  
A book covering this subject complete. Tells you how to select the best kind of roofing for general purposes; also describes our Siding and Ceiling. It's free. Write for it today.



**Wire and Fencing Catalog**  
A complete description contained in this book of all our wonderful bargains in Woven Wire, Fencing, Barb Wire, Nails, Bolts, etc.



**Book of House and Barn Plans**  
Contains 100 designs of different kinds of buildings and houses, from \$147.50 up. Also shows the latest style barns. It's free.



**Building Material Catalog**  
A 200 page book of bargains in Millwork, Lumber, Paints, Plumbing, Heating Apparatus, Hardware, etc. Just what you need. Write for it today.

### FENCING

#### Brand New Wire Fencing Less Than 1c Per Running Foot

Biggest of all offers of the past. We come to you with the most wonderful proposition ever known, and offer you the very best woven wire fencing at a fraction of its real value; lower in price than ever before, notwithstanding that all other merchants and manufacturers have advanced their prices on fencing. We are determined to simply get all the business in sight, and with that in view, we bought up from manufacturer's sales, 150 carloads of High Grade Woven Wire Hog, Cattle, Field and Poultry Fencing, Barb Wire and Nails, in quantities sufficient to take care of our regular customers and those who will quickly respond to this advertisement.

#### Barb Wire Less Than 2c Per Rod

Galvanized, two-point Barb-Wire, full weight (not the light kind) put up regular on spools, containing about 100 lbs. to a spool. It is made of No. 12 1/2 wire, with good weight barbs. Price per 100 lbs. during this sale, only \$1.95. Order by Lot No. AB-600. Several thousand spools of this Barb Wire, Painted, price per 100 lbs. \$1.75. Order by Lot AB-500. Also have in stock 1000 spools of light weight, new galvanized barb wire, put up 80 rods to the spool, made of No. 14 galvanized wire, No. 15 barbs, barbs 5 inches apart; price per spool of 80 rods \$1.45. Lot AB-400. We also have several other bargains. You never had a chance like this before, and we advise that you send us your order today. Don't wait until the material is sold—we cannot hold this quotation open.

#### Galvanized Hog Fencing At a Material Reduction in Price

100,000 rods of 26 in. Galvanized Steel Spring Wire, 26 in. high, hog fence, put up in 10, 20, 40 and 60 rod rolls, made with 7 bars, spaced 12 in. apart, with No. 9 top and bottom wires, No. 11 intermediate wires, heavier than the regular fencing offered. Price per rod, during this sale, only 15c. Order by Lot AB-900. Same fencing spaced 6 in. apart, per rod during this sale, only 21c. Order by Lot AB-1000. Other heights at proportionately low prices.

#### High Grade Poultry Fencing 48 in. High, Per Rod 27c

A complete stock of all heights of Woven Wire Fencing for every purpose. Do not delay your order, but send it in at once, even if you are not ready to have it shipped. We will hold the material ready to deliver when you want it.

#### Several Carloads of Galvanized Wire Shorts

This is smooth wire, put up 100 lbs. to a coil, first-class for general use. Comes in sizes from 6 to 15 gauge. Price per 100 lbs., \$1.25 per 100 lbs. Lot AB-1200. Other sizes in proportion.

#### Some Big Bargains in Nails

At last we have the bargain of bargains. 10,000 kegs of genuine galvanized wire nails; will outlast all other kinds. Put up in regular kegs. Price per keg of 100 lbs., as follows:

10 pennyweight, \$2.00  
8 pennyweight, \$2.10  
6 pennyweight, \$2.15  
Shingle Nails \$3.00

Also 5,000 kegs of Nails, mixed all kinds in a keg; good assortment, handy to have around your workshop. During this sale only, per 100 lbs., \$1.45. Order by Lot AB-1100. We have other bargains in nails.

Also, in this same job, we have 5,000 kegs of Fence Staples, galvanized; per keg, \$2.00. Lot AB-1400. Crimped wire for reinforcing, cut to any desired length; per 100 lbs., \$2.25. Lot AB-1300.

We have bargains in every line. Write us today for our Wire and Fence Catalog, but the best thing for you to do is NOT WRITE US YOUR ORDER, AND WE WILL HOLD FOR SHIPPING INSTRUCTIONS.

#### SEND IN THIS COUPON

CHICAGO HOUSE WRECKING CO.  
35th and Iron Streets, Dept. AB 42 Chicago

I saw your "Busted Price" advertisement in \_\_\_\_\_ and am interested in the following:

Without any obligation or promise to buy, please send me the following catalogs and full information free:

(Put a check mark opposite the books you want)

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| <input type="checkbox"/> Special Catalog and samples of Metal Roofing. | <input type="checkbox"/> Special Catalog and samples of Ready Roofing. |
| <input type="checkbox"/> Catalog of Lumber and Building Materials.     | <input type="checkbox"/> Book of House and Barn Plans.                 |
| <input type="checkbox"/> Catalog of fencing and wire.                  | <input type="checkbox"/> Catalog of house and Barn Paints.             |

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