

# MICHIGAN FARMER

AND LIVE STOCK JOURNAL.  
PUBLISHED WEEKLY. ESTABLISHED 1843.

The Only Weekly Agricultural, Horticultural and Live Stock Journal in the State.

VOL. CXXXII. No. 8.  
Whole Number 3439.

DETROIT, MICH., SATURDAY, FEBRUARY 20, 1909.

75 CENTS A YEAR  
\$1.50 THREE YEARS

## FARM NOTES.

### Should we Apply Lime to Our Soils?

A number of inquiries have been recently received asking for information on different phases of the above question, which is sufficient evidence of general interest in this proposition to warrant a rather full discussion of it at this time. The use of lime upon agricultural lands is not a new proposition. The early Roman writers discussed its importance in adding to the productiveness of the soil. In England and other European countries lime has been commonly used as a soil corrective for very many years. Even in our own country, its occasional use extends back more than a century, during which time farmers and experimenters who have proven its value have advocated its more general use.

The functions of lime in improving a soil have often been touched upon, but a brief review of the same at this time will aid the reader to a better understanding of what follows. The function most often mentioned is that of correcting an acid condition of the soil, which occurs most frequently as a result of the slow process of the decay of vegetable matter in a heavy or poorly drained soil. It also has a mechanical effect of loosening up such a soil, making it more friable in cultivation and permitting a more free percolation of water thru it. Quite strangely it has just the opposite effect upon light soils, binding and cementing them together in a manner which makes them more retentive of soil moisture. It also supplies plant food in calcium, which is the elemental base of lime, altho it is not at all certain that most soils are lacking in sufficient quantities of this element to satisfy the needs of most, if not all, plants. A possible exception of alfalfa, clover and other legumes might be made, as applications of lime seem to be particularly beneficial to these crops, except on soils of a calcareous formation. It is possible, however, that the relation between lime and other minor plant food elements in the soil may be out of balance and need readjustment on many soils, as will be noted later.

Lime also has a decomposing effect upon the mineral substances or plant foods in the soil, thereby releasing stored plant foods, particularly potash. The fact that lime does not add potassium to the soil, simply making available for plant food that already contained in it, has probably given rise to the old saying that "The use of lime makes the father rich but the son poor." Lime also attacks the soluble phosphorus in the soil, holding it in a form which appears to be most acceptable to plants. It also aids in the decomposition of organic matter in the soil, hastening its reduction to humus, which is an important factor in soil fertility.

### How Lime is Applied.

In the early years of its use, lime was generally applied in the form of quicklime, or caustic lime, the method being to distribute it in small piles in the field, cover it with earth until slaked, then spread it on the surface and harrow or cultivate it in, applying it at the rate of 20 to 40 bushels per acre. Modern methods of manufacture, however, have supplied it in various forms, as hydrated or water-slaked lime, ground quicklime or burned limestone, in which the process of slacking is deferred until applied to the land; ground limestone which is favored by many authorities, within limitations as hereafter noted; gas lime, a by-product from gas plants, and calcareous marl, which contains a high percentage of calcium carbonate.

For clay soils the best authorities favor

## A FEW LEADING ARTICLES OF THE WEEK.

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the use of hydrated (water slaked) lime is used. As above noted, this form of lime seems to be very generally favored by alfalfa and other legumes, from 1,500 to 2,000 lbs per acre having been profitable applications in many cases, while at least one prominent and successful grower of alfalfa in Wisconsin uses fully four times that quantity of ground limestone per acre on alfalfa land. The reasons for the application of lime to such land are two-fold. First, it promotes the activity of the nitrifying bacteria peculiar to the plants and supplies this

element of plant food in a readily soluble condition to this class of plants which seem to appropriate it more freely than others.

### How Frequently Should Lime Be Applied?

It is the consensus of opinion among investigators who have made a study of this problem that once in five years is sufficiently often to apply lime to soils which may be found to need it. Of course, some soils would doubtless be benefited by more frequent and liberal applications than others, and this is a question which really only the soil itself can answer properly. Where ground limestone is used its chemical composition is that to have a rather important bearing upon this phase of the question. It is nearly always found in combination with magnesia, sometimes with a high percentage of magnesia. While such limestone may be used to correct acidity, a word of caution is sounded by good authorities on the subject as to its frequent use on the same land. This point will merit a fuller consideration, but it has been found by observation and analysis that soils containing an excess of magnesia are generally unproductive soils, notwithstanding the fact that magnesia seems to be a more important plant food ingredient and more abundantly present in the seeds of plants than is lime. It has been found, however, that certain proportions of lime to magnesia must be preserved in the soil in order to keep its productivity up to the highest standard. The limitations of this article will not permit us to go into this phase of the question more deeply than to state that it has been found that while some plants will do well when the proportion of lime to magnesia is as 1 to 1, other plants require the proportion to be as 2 or 3 to 1 for best results.

Now chemical analyses show that the lime content of the soils in humid regions is much lower than that in arid regions, owing to the lime in the soil having been washed in solution from such lands by natural processes. This theory being accepted, the limestone comparatively free from magnesia would appear to be much more desirable for use upon the soil and is sufficient reason for the caution noted above with regard to the frequent use of magnesia limestones to correct soil acidity.

The apparent general interest in this subject above noted is an indication that a very considerable number of the more progressive farmers of Michigan are taking up the subject of soil improvement in a more thoro and earnest manner than ever before. The writer knows of several of them who have already prepared to experiment with the use of lime on their lands in a more or less extensive way during the coming season. One thing, however, is certain—that the intelligent use of lime upon any Michigan soil can do no harm, since the limestone soils of our country are among our richest soils and there seems little doubt that a most beneficial effect will be secured by the application of lime upon our older cultivated lands which have become worn and lifeless and unresponsive to even good cultural methods.

### Growing Cow Peas With Corn.

Which is the proper way to grow the cow pea to combine with corn for filling a silo?

Jackson Co.

F. D.

It is doubtful whether such a combination can be profitably grown in Michigan. Farther south the cow pea may be planted with the corn, the vines running up the hills of corn and all harvested at the same time and put into the silo together. This method, however, does not seem to be a successful one in



The Big Silo is Generally an Indication that the Owner is in the Dairy Business.



The Undergrowth Springs Up Quickly in the Woodlot that is Not Pastured.



Michigan. The writer has seen one crop grown by this method where the corn was planted late which gave very satisfactory results. Altho the corn did not produce much grain, there was considerable growth of forage was produced. The writer has tried this plan two different years, the first year getting a fair growth of peas but the second year the spring was cold and unfavorable for the corn and they amounted to very little. If planted at the same time with the corn this will generally prove to be the case. It is possible that they might be planted into the hills later by hand but this method will not always give satisfactory results and if it is desired to put corn and cow peas into the silo together better results can likely be secured by growing the two crops separately. This, however, increases the difficulty of harvesting and ensiling them to such an extent that it is again doubtful if the operation would be a profitable one.

#### Making Concrete Drain Tile.

I hear of some farmers making their own tile for drainage, with cement and sand. I would like to hear thru The Farmer if anyone has tried it and has been successful and what kind of form one would need and if more than one form would be needed for each size of tile. Also if we could make them cheaper than we could buy our tile. Four-inch tile here costs 2½ cents per foot.

F. B.

Concrete tile have been demonstrated to be a success. The best quality of concrete tile are made of one part cement and four parts coarse sand and three parts pea gravel. This makes a porous tile which is most desirable. Two barrels of cement, one cubic yard sand and three-fourths yard gravel will make 300 four-inch tile, 12 inches long with an outside diameter of six inches. These are stronger tile than clay tile. For tile of about the same strength as clay, one part of cement to seven parts of sand and four parts pea gravel may be used. With these proportions, two barrels cement, one and three-quarter cubic yards sand and one yard of gravel will make 425 tiles of the size mentioned. From these figures the comparative cost of the two kinds of tile may be easily deduced, knowing the cost of material on the farm where the tiles are needed.

The forms and tools required are fully described and illustrated in the booklet published by the Michigan Farmer entitled, "Concrete Construction on the Farm," which is mailed to any subscriber post paid for 50 cents. One form is all that is needed for each size of tile but there must be a number of pallet boards on which the tiles are placed to dry 24 hours before being moved.

#### Alfalfa on Hilly Land.

I have a hilly field of 7 acres and the side hills are red clay and the rest is a gravelly soil. June clover does well on this land. I had corn in the field last summer and will sow to oats this spring and seed down. Could I seed with alfalfa and would it do well on side hills on red clay. The hills slope to the south and east.

Lenawee Co.

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The best authorities on alfalfa culture in the west, where this forage crop has reached its greatest development, seem to agree that it will do well on almost any kind of a soil, from a hard clay to a sandy loam, provided the soil is well drained. There should be little trouble with this side hill on that account, and it might be worth a trial to seed it to alfalfa. However, it seems to be well established that it does not pay to undertake to seed alfalfa in grain, or to use a nurse crop of any kind in seeding it. The better way is to prepare the ground thoroughly, making a fine seed bed and getting it as free as possible from weeds. Then sow when weather conditions are favorable, any time in June, altho the season of the year is not so particular as that conditions are favorable for a quick germination of the seed and a rapid growth of the young plants. It has been found advisable in some sections to make an application of lime before seeding to alfalfa, and it is generally con-

#### Preparing for a "Record Crop" of Potatoes.

I have a piece of sandy loam land lying on the shore of Lake Huron in this county upon which I grew potatoes for several years up to the fall of 1906. In the spring of 1907 I sowed it to oats and seeded with mammoth clover, getting a good catch. Last year, 1908, the clover grew very rank. I did not cut it at all, not even taking off the seed. It is all on the ground. Please tell me how you would handle this land this year to get a record crop of potatoes? What variety would you plant and where can I get the seed?

Alcona Co.

"BILL."

This soil should be plowed early in order to give the vegetable matter time to become partially decayed and converted into humus before the growing season

for the potato crop is over. If plowed early and thoroughly tilled the soil should be sufficiently well supplied with nitrogen and humus so that by applying a liberal quantity of potash and some phosphoric acid in the form of fertilizer, a maximum crop of potatoes might be grown. A fertilizer containing as much as 10 per cent of potash should be used on this sandy land, one with a formula of about 1:8:10, using a half ton per acre, if you want to get a record crop of potatoes. Then by keeping the soil well cultivated so as to retain soil moisture, putting on the fertilizer at least two or three weeks before the potatoes are planted, you should have ideal conditions for the production of a record crop. Use any of the late varieties which do well in your section, probably the Rural New Yorker is more extensively grown than any other variety in the state and it would be easier to procure the seed which could be gotten from almost any potato dealer.

Where one desires to go in for a record crop he should also plan on spraying for protection against blight, as it is a fact established by repeated trials at experimental stations that better crops can be grown even where there is no blight than is possible without spraying the plants with bordeaux mixture.

#### CATALOGS RECEIVED.

Walter A. Wood Machines and Implements for the farm are fully described in a new, handsomely illustrated catalog sent out by this firm. Write Walter A. Wood Mowing and Reaping Machine Co., Hoosick Falls, N. Y., for this catalog and numerous small pocket size booklets, describing the several lines of their harvesting tools and farm implements in which you may be interested.

Storrs & Harrison Co., proprietors of the Painesville Nurseries, Painesville, Ohio, are sending out a handsome, illustrated catalog of seeds and plants for farm, garden and home use for 1909. This catalog contains 170 pages and has numerous half-tone illustrations.

The 1909 seed annual issued by D. M. Ferry & Co., seedsmen, Detroit, Mich., is a 100 page booklet fully descriptive of the complete line of farm, garden and flower seeds carried by this well known firm.

Maple Bend Nursery sends out a new catalog of fruit and ornament trees, shrubs, small fruit plants, etc. Write T. B. West, proprietor, Perry, Ohio, for a copy.

The Quarter Century Offering of Northrup, King & Co.'s Sterling Seeds, is the title given the 136 page illustrated catalog, issued by Northrup, King & Co., seedsmen, Minneapolis, Minn. It is a large size catalog, and contains many half-tone illustrations.

#### This Concern Saved Its Customers a Million Dollars in the Year 1908.

It would be difficult, if not impossible, to pick out a farming community in the United States which has not benefited by the extraordinary low price on building material offered by the Gordon-Van Tine Co., 1593 Case Street, Davenport, Iowa. The saving to its customers, in the year 1908 alone, is conservatively estimated at a million dollars. The tremendous stocks of doors, windows, mouldings, roofing, lumber, glass, and innumerable other items used in the construction of all classes of buildings require several acres of floor space. There are whole trainloads of doors, mountains of mouldings—windows and sash in such vast quantities that one would grow dizzy trying to count them. The variety of millwork sizes and styles is so extensive that every need of the builder is met without a moment's unnecessary delay. The company has its own private switch tracks over which the cars are run directly into the warehouses and loaded very quickly. The loading platforms accommodate seven cars at a time, which can be loaded from both sides of each car. Gordon-Van Tine's prices are undoubtedly the lowest in America. The cash saving averages 50 per cent and in some cases, such as on window glass, runs as high as 300 per cent! When you stop to think that the Gordon-Van Tine Co. sells good, strong doors as low as 80 cents each, plain windows for 63 cents and up, and other staple items in the same proportion, it is easy to understand how, in the aggregate, they were able to save their customer's a million dollars in a single year. They guarantee quality, safe delivery and satisfaction on every shipment, whether large or small. The Gordon-Van Tine Co. issues a Grand Free Millwork Catalog, a Roofing Catalog and a Lumber Catalog. These books are sent, free postpaid, on request, but in writing you should be sure to state which of the three books you desire. The address of the company is 1593 Case Street, Davenport, Iowa. It is worthy of note in this connection, that the financial responsibility of the men interested in the company runs into millions of dollars.

#### Electrical Storms.

The recent electrical storm, tho unusual for January, was a reminder that these storms will be frequent during the summer season. We are apt to forget such dangers until they recur, but we can practically obviate the danger from lightning if we fully understand it. Prof. Dodd's book, sent free by Dodd & Struthers, of Des Moines, Iowa, fully explains those dangers, and tells how to eliminate them in such a practical way that no reader can fail to understand. Note their ad. in another column and write for their free book at once.

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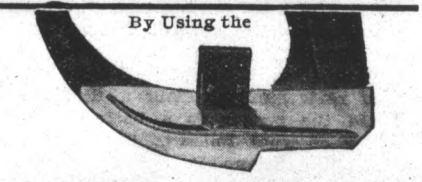
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## PRACTICAL PLANT BREEDING. II.

One of the conditions which makes it comparatively easy for the ordinary farmer to improve his wheat by selection is the fact that wheat does not naturally "cross" easily. Seed from the largest, strongest, and best-yielding plants found may therefore be sown in small plots that are a part of the general field without any danger that the improved type will mix with inferior kinds adjacent to it. Whatever space is thus allotted to breeding plots and multiplying plots may reduce by that much the area given to an inferior general crop until the whole field can be sown with the improved seed. And whatever time is given to breeding operations is constantly putting the farmer into a position for selling pedigreed seed wheat to all his neighbors. The man whose enterprise puts him in the lead in this line is the one who may have either a monopoly of the business in his community or at least can constantly outdistance his competitors.

In addition to the advantage from careful selection of the best plants as foundation stock for breeding purposes, there is always the possibility of discovering some absolutely new type of wheat which has developed as a "sport" from ordinary varieties. No one has yet been able to explain the occurrence of these sports, or mutations—changes from the prevailing type. So far as known they cannot be produced by any particular mode of cultivation or fertilizing—they simply happen, and so may happen on anybody's farm. The classic example of sport is the nectarine, which is sometimes supposed to be a distinct species. Instances are known, however, where one branch of a peach tree has suddenly begun to bear nectarines instead of peaches—a small, smooth-skinned, very sweet fruit entirely distinct in quality. Later, this branch may bear peaches again for a season or two and then return to producing nectarines exclusively. A bud or scion taken from such a branch will usually produce an entire nectarine tree if grafted on a peach stock; and seeds from such a tree will sometimes produce other nectarine trees.

The important thing for our purpose in reference to sports is that they appear suddenly, without warning, and usually remain permanent in type, without much variation; and they occur somewhat frequently in wheat. Professor Webber, of the Cornell Experiment Station, believes that upwards of a dozen new wheat sports might be found each year in the fields of New York. And some of these are pretty certain to be valuable as the foundation for a superior variety. The great danger is that they may be lost thru oversight, perhaps ground into flour or fed to chickens. On the other hand, a few of the seeds from such sports may exist in every harvest or purchased bushel of wheat, and if they find their way into the next year's crop may be recognized in the standing grain. What an opportunity is this, by a little cultivation of the faculty of observation in reference to one's own proper business, to become a world benefactor.

The well-known Fultz wheat was discovered in 1862 as a sport from the Lancaster Red. The heads were saved, planted by themselves, and the seed multiplied by sale. The Pride of Butte wheat was found in a California rye field and saved because of its unusual vigor. Ira W. Green, a farmer of New York, discovered the Gold Coin wheat as a sport from the Hybrid Mediterranean, and "fixed" its type by five years' further selection and at the same time increased its yield about ten per cent. "Minnesota No. 169" was similarly developed by Hays from the Blue Stem wheat. In four years' selection its yield increased nearly five bushels per acre. Patrick Shirreff, the noted Scotch wheat improver, tells how he became a plant breeder in the following words:

"My experiences in the improvement of the cereals arose from the following circumstance: When walking over a field of wheat on the farm of Mungaswell, in the county of Haddington, in the spring of 1819, a green spreading plant attracted my notice, the crop then looking miserable from the effects of a severe winter; and the next day measures were taken to invigorate its growth by removing the surrounding vegetation and applying manure to its roots. In the course of the summer several stalks were cut down by hares; but notwithstanding this loss to the plant, 63 ears (heads) were gathered from it at the harvest, yielding 2,473 grains, which were dibbled in the following autumn at wide intervals. For

the two succeeding seasons the accumulating product was sown broadcast, and the fourth harvest of the original plant amounted to about 42 quarters (nearly 19½ bushels) of grain fit for seed; and proving to be a new variety it was named Mungaswell's wheat."

Notice that it didn't cost this farmer anything to make the original discovery; he was looking over the condition of his crop, with his eyes open; and he could see things—in the daytime. Then notice the scientific "horse sense" in what he did. He isolated the unusual plant and gave it the best possible conditions for surviving to seed production. Then every seed of the 2,473 was "dibbled," planted one in a place—the breeding plot. Next the resulting product was broadcasted under field conditions—the multiplying plot. And finally, with shrewd business sense, the new variety is named and put on sale for seed. Not until this thorough preliminary development and testing was he warranted in the last step; but it paid to work and wait. Such a man, or such a boy, can afford to be laughed at by "mossback" neighbors who think he is "fooling away his time"—and time is always money to the man who would rather work than think.

But even the man who cannot afford to take this degree of care in the improvement of his wheat may find some profit in doing less than has been suggested. The great thing is to make the superior plants, which are nearly always in the minority, become the majority product in his fields. Just before cutting the wheat he may go thru it rapidly with a pail slung before his waist, so that with both hands he can pick into it the largest heads he can find. Enough should be gathered, if possible, to make a bushel of seed. Along in the winter evenings, he and the children may carefully run over these heads and set aside any that are inferior or noticeably different from the rest. The remainder may be pounded out in grain bags and carefully cleaned in a fanning mill that has been thoroughly brushed out inside. If this seed is sown in the usual way across one side of the general field, it will afford a good place in which to make other head selections before harvest; and the rest of its product should be used for seeding next year's field.

This plan will never give as great possibilities as the isolation of complete plants and the more careful breeding processes previously described; but it is a great improvement over ordinary methods of seed selection and is certainly within the reach and ability of any farmer. If skeptical concerning the value of the more exact methods, one can learn enough from the results of this plan to convince himself that scientific care—which simply means exact observation directed by good judgment—does pay on the farm as elsewhere, and in the field of farm crops as well as in stock breeding.

Agricultural College. F. W. HOWE.

## DRAWING OUT MANURE IN WINTER.

The winter so far has been very favorable for this kind of work, because there has been no deep snow to hinder, and no very hard freezing weather, at least in this section. There is no question but what a manure spreader is a paying tool for a farmer who keeps much stock, and farmers who own them in this section have been able to use them almost any day this winter. As I do not own a tool of this kind, I have found a sled to be a good substitute, where the distance to the field is not over 80 rods. I have a sled about eight feet long and four feet wide, the runners of which are made out of a couple of poles about six inches in diameter. This sled will hold a good sized wagon load of manure, and runs quite easily even on bare ground. It is easy work to load such a sled, because there is no high lifting as is the case when pitching on to a wagon. And by standing on the ground it is easy work to spread manure from such a sled, and it can also be spread more evenly than from a wagon. And I would not think of drawing manure and leaving it in piles in the field for any length of time. All things considered, I have found a sled, as mentioned above, the easiest and most economical way of drawing out manure, especially in the winter. At this writing, I have the field, to be planted to corn next spring, half covered, all drawn out as mentioned. Ottawa Co. JOHN JACKSON.

Whatever the method employed, the drawing out of the manure as made saves both time and plant food.—Eds.

# Johnston

**"Continental" Binder**

NOT IN THE TRUST

Three generations of farmers have used the Johnston binder—we have been building them better and better for 58 years—no wonder users call them the "King of Binders."

The Johnston Binder has greater strength and more elevator capacity than any other Binder. Roller bearing wheels, folding dividers, right-hand levers in easy reach of the driver, an adjustable reel and back wing, which can be set for any kind of grain under all soil conditions, a trip that never repeats, a knoter that always ties. Every Binder is guaranteed. Built in 4 sizes. The Johnston Binder meets every requirement of the farmer.

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Standard For Two Generations

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If you are interested in farming, we will mail you our 16-page farm paper for one year absolutely free. Fine illustrations, valuable information. There is no other paper like it.

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DEERE & COMPANY, Moline, Illinois

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One man with a Louden Litter Carrier on Louden overhead steel track system can clean the barns in half the time that two men would take without it. That's Louden economy. On every up-to-date farm—your farm—the Louden Litter Carrier and steel track system will earn its cost many times a year. Track can be bracketed to barn wall—out one door—in at other, and in this way no switch is needed. Manure loaded direct on wagon or spreader—its full fertilizing value thus saved.

## Louden Litter Carriers

are made of heavy galvanized steel—wear for years; have improved worm gear—1 pound on chain lifts 40 pounds in box; box stands at any elevation—raised or lowered any distance up to 25 feet; have many special advantages not found in other makes. Send today for valuable free book on manure uses, and catalog of hay and litter carriers, sanitary steel stalls, cow stanchions, etc., for modern barns.

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35-lb. Roll—108	\$135
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55-lb. Roll—108	225
Sq. Ft.—3-Ply	

Order today, or write for Samples and Booklet



## GETTING READY FOR SPRING WORK.

Before the busy season begins everything possible should be done that will tend to lessen the work when the rush is here, not only because it will save many dollars in hired help but, also, because if everything is left till then the work is liable to be neglected, or if done it will be poorly executed and the crops must suffer as a result.

It is hardly necessary to mention the fact that the wood should be sawed, split and piled before the spring's work begins for nobody but a shiftless farmer will leave this work until spring. A pretty clear indication of a man's ambition is the size of his woodpile. If his woodpile is no larger than he makes it each morning during the year you can usually look for other things to correspond. Some men, tho they hardly deserve the name, go so far as to make the good wife go out each morning and split enough to last for the day. Such men are a disgrace to a community and do not deserve a home if they are too lazy to provide the good wife with the wood she wants to burn.

Then there are the fences. It only takes a short time to go over the farm and fix the fences all up in good shape, putting a new post in here, laying up a rail there and nailing on a board where needed. If these little things are attended to in the spring it will save much annoyance later in the season. When the stock is turned out to pasture valuable time need not then be taken to fix fences, or perhaps they will be neglected entirely and the result will probably be that you will wake up some morning to find some crop nearly ruined.

Then there is the orchard to trim, tho some farmers seem to think that it is entirely unnecessary to do anything to the orchard but to set out the young trees, believing nature will do the rest; as a result they have a very slim crop of very poor fruit. Tho it is true that few farmers possess a thoro knowledge of pruning fruit trees, yet the "suckers," and limbs that are broken, or are injuring other limbs can be removed by anyone and much better fruit and better formed trees will be the result.

The care of the farm team at this time of the year is of the utmost importance. Many horses are left idle all the winter and in the spring are put to hard work without first having been gradually "worked in." As a result the poor horses soon have sore shoulders and are compelled to suffer all summer. It is well to give the horse a good condition powder a short time before the season's work begins to get his blood in good condition and then work him in gradually, feeding more liberally as the work becomes harder.

See that the harness fits him perfectly. Many farmers will buy a collar two or three sizes too large for the horse for the reason that it can then be used on any of the horses and the horse must work in a harness fitting much the same way and then the farmer wonders what makes his horses' shoulders sore. If the farmer was compelled to work in a pair of shoes two or three sizes too large for him for a week he would then begin to realize the importance of good fitting harness for his horses.

The harness should be greased at least once each season as it will add much to the wearing qualities of the harness and also to the appearance. The harness should first be taken apart and thoroly scrubbed in warm soapsuds and when thoroly dry go over it with a coat of good harness oil to which has been added a little lamp black which will give it a fine black color. A harness treated in this way will look almost like new and will last much longer than if it is used year after year without any care whatever.

Livingston Co. C. C. O.

## CLEARING LAND OF SOFT WOOD STUMPS.

Am clearing a piece of timber composed of cottonwood and box elder trees, and would like to know how to destroy the stumps in the quickest manner possible. Illinois. J. L. MEAGHER.

You will find that cottonwood and box elder stumps will both decay very rapidly if the trees have been cut during the summer so that all vitality for sprouting has been destroyed. Under ordinary circumstances these stumps will decay within two or three years sufficiently to be easily jerked out by the pull of a good, strong team. If quicker results are required use dynamite.

Agl. College. J. FRED BAKER.

# Amatite ROOFING

Hume Saw Mill,  
Fairfield, Me.

## Why Use Paint to Protect Your Roof?

**WHY** not get a roofing in the beginning that will protect itself—that needs no painting?

All smooth surfaced ready roofings require a coat of paint or some liquid every year or so. The roofing itself merely acts as a base for the paint. If you fail to put it on, your roof doesn't last very long.

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For Farm Buildings it is especially satisfactory and economical.

Anyone can lay Amatite. It requires no skilled labor. Nails and liquid cement for laps are furnished free with each roll.

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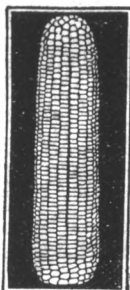
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insures the accurate dropping, by hand or machine, of even, regular size, perfect grains. RESULT—every stand is uniform. Until the invention of the Simplex, accurate dropping was impossible. The Simplex is guaranteed to do the work better than any \$15 grader. Buy one and you'll forget your high-priced machine. So simple your boy can work it. Made entirely of pressed steel; will last a lifetime. You can't afford to be without it, whether you plant one or 1,000 acres. Just slip a dollar bill in a letter, mail to-day, and we will send you, with the Grader, booklet—"Bumper Corn Crops—How To Produce Them." This booklet alone is worth \$5 an acre to you. The Simplex does the work perfectly. Capacity, 10 to 15 bushels per hour. Order today. Money back if not as represented.

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Large Illustrated Catalog and Special Prices FREE.  
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## FENCE AT PANIC PRICES

We purchased raw material cheap during the panic, you get the saving. These low prices won't last long. Write at once for catalogue and prices. **Anchor Fence & Mfg. Co.,** Department L, Cleveland, Ohio

## FARM FENCE

**16 cts. a rod**  
For a 26-inch high Hog-tight Fence. Made of heavy wire, very stiff, strong and durable; requires few posts. Sold direct to the farmer on 30 DAYS FREE TRIAL. Catalogue free. INTERLOCKING FENCE CO. BOX 30 MORTON, ILLINOIS.

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Cheaper than wood, combining strength and art. For lawns, churches, cemeteries. Send for FREE CATALOG. Address **The Ward Fence Co.,** Box 677 Decatur, Ind.

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Square close mesh. Highest quality, superior lock, easily erected, strong, low priced.

Write for new catalog describing the Union Line of Field, Hog, Poultry and Lawn Fences. **Union Fence Co.,** De Kalb, Ill. Kansas City, Mo.

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Made of High Carbon Double Strength Coiled Wire. Heavily Galvanized to prevent rust. Have no agents. Sell at factory prices on 30 days' free trial. We pay all freight. 37 heights of farm and poultry fence. Catalog Free. **COILED SPRING FENCE CO.,** Box 21 Winchester, Indiana.

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For a 22-inch Hog Fence; 16c for 26-inch; 19c for 31-inch; 23 1-2c for 34-inch; 27c for a 47-inch Farm Fence. 50-inch Poultry Fence 37c. Lowest prices ever made. Sold on 30 days trial. Catalog free. Write for it today. **KITSELMAN BROS.,** Box 276, MUNCIE, IND.

Always mention the Michigan Farmer when writing to advertisers.



## PERMANENT MEADOWS AND PASTURES.

It would be a very great favor to the writer if you could give me some information regarding the merits of the enclosed list of seeds said to be best adapted for grass on the usual type of southern Michigan opening soil.

	lbs.	lbs.	lbs.
Italian Rye Grass	3	3	3
Perennial Rye Grass	6	6	7
Orchard Grass	9	7	7
Med. Foxtail	2	3	3
Hard Fescue	2	2	2
Blue Grass	2	3	3
Red Top	3	3	3
Wood Meadow	1	1	1
Rough Stalked Meadow	1	2	2
Meadow Fescue	2	4	4
Sweet Vernal	1	1	1
Timothy	2	3	3
Perennial Red Clover	2	2	3
Alsike Clover	2	1	1
White Clover	2	2	2

Each total ..... 40 43 45  
Cost respectively, \$8.25, \$9.00, \$9.50 per acre.

The amounts represented in totals are supposed to be sufficient per acre for light, medium and heavy soils.

Cost average about 21c per lb.

The enclosed list was taken from the catalogue of one of the largest seed houses we have, and bearing a very good reputation, but the question is, will the list of seeds sent you give good results, i. e., a permanent seeding good for a lifetime as they say; and again, would it produce a good hay crop? Hay in this locality is a very uncertain quality and the usual farmer is very lax in looking for something to take the place of clover and show results. The piece of ground I have in mind is of a great variety of soil, being situated close to a lake and extending back up quite a bluff while the soil is of a sandy loam. A half crop of clover can be obtained, but the second year shows a lesser stand than the first and so on until the crop is very spotted. What method of seeding would you suggest?

Monroe Co.

E. B. GRAY.

The fact that for many years past half or more of the land occupied for agricultural purposes in Great Britain is kept in permanent pasture, leads many men to think that if it is a good thing for England, Scotland and Ireland, it should be good for Michigan. But even there, there is still a question as to the advantage of permanent grass land.

In the southern half of the lower peninsula, there is great variation in the rainfall in the cold weather when the ground is bare of snow, which subjects grasses to great injury, causing most or all of them in a short time to die or become much weakened. Moles, mice and insects are often troublesome in Michigan.

Excepting certain rough and untillable land, it is very generally the best by wise men of much experience to break up land every three to five years in some rotation of crops. This rough land is an ideal place for a wood lot.

All the grasses and clovers are as familiar to me as the individuals in a herd are to the shepherd, or the grower of Holstein-Friesians or Jerseys.

I have grown all of the forage plants and many others, usually in rather small quantity under a variety of conditions for thirty-five years. Mr. G. must sow seeds only of plants that may be expected to survive for ten to twenty years or more. Italian Rye Grass even in England, rarely lives over the first winter, and perennial Rye Grass in Michigan is scarcely able to survive the second winter. They grow well for a short time, occupying the land, but when gone, vacant places are left for weeds and June grass. Wood-meadow and rough-stalked meadow grass are much like June grass as grown in this country, tho less vigorous and are destitute of the vigorous spreading underground rootstocks, often spoken of as "roots." Sweet vernal was popular with fancy farmers many years ago, but so far as I know hasn't a surviving advocate in this country. It is small and lacks vigor. I know of no red clover that can be relied upon for more than two years, unless cut or pastured to keep it from going to seed; excepting a small one, Trifolium medium, that spreads by the roots, and this is an extremely shy seeder. White clover is well known, a shy plant, going out with heat and dry weather; coming in with rains and cool weather. Alsike, a self-seeding plant, is preferable to white clover.

Let Mr. G. purchase each kind of seed by itself and save money. On the higher land sow:

Orchard grass in chaff, 7 lbs. per acre	\$1.00
Tall oat grass in chaff, 4 lbs. per acre	1.00
Awnless Brome in chaff, 4 lbs. per acre	.75
Meadow fescue in chaff, 10 lbs per acre	1.50
Alfalfa, 3 lbs per acre	.50

Approximately probably less than..\$4.75  
For low land, sow:

A little orchard grass	\$.50
Red Top in chaff, 6 lbs. per acre	1.00
Meadow Foxtail in chaff, 3 lbs per acre	1.00
Alsike clover, 1 lb	.20
June grass, 3 lbs in chaff	.50

Approximately .....\$3.20

Sow in spring without any other crop,

and be sure to pasture only a little toward the close of the first year. If the land is thin, it will be economy to add every year barnyard manure or some other fertilizer during the growing season. The longer these grasses survive the more they need fertilizers.

Do not forget that there are no forage crops that will thrive on poor land.

Agricultural College. W. J. BEAL.

## MORE ABOUT THE POTATO BUG'S ENEMY.

While reading my Farmer the other day I was really amused at a piece written by a man from Mecosta Co., signed H. L. U. Now, as a matter of fact, this new bug, known as Perillus claudius, is an enemy of the potato bug, he is right about that, but the way he attacks the potato bug is very different, in my observation, from the way he describes. In consequence of being a very close observer of the insect species, I have seen this bug for three years and watched him very carefully, lest I should catch him doing some mean thing that would overbalance his good quality of murdering potato bugs, but I haven't yet.

But let us see if this man, H. L. S., is right. Now, if this new bug is really an egg eater of the potato bug I have never caught him eating the eggs. I have seen them attack the potato bug dozens of times, and this is the way they do it. They walk along the stalk or leaf where the potato bugs are, and when they get near enough to a bug to reach him they just reach out with those two front legs and grab Mr. Potato Bug and hold him fast. Then they proceed to drill a hole in his side, sometimes they lose their bug but they don't run down the stalk to find him, or at least I never saw them do that.

Now, the bug that deserves the praise of potato growers and that exterminates potato bugs by the millions is the little spotted lady bug. Any potato grower, while working at his crop, will see hundreds of these little fellows on the vines. reds of these little fellows on the vines. They eat nothing but eggs, as far as I have been able to learn. I have seen one ladybug devour a whole batch of potato bug's eggs, perhaps as many as 25 or 30 eggs. But for them, our trouble would be doubled. Now, if the other bug is an egg eater so much the better and we will be careful not to kill him.

Ingham Co.

WM. DEMUN.

## SAVE THE BROKEN FENCE RAILS.

Mr. Waugh has been rather slow in coming to the conclusion that broken fence rails make good firewood. I have been accustomed to using them for firewood all along thru my household experience. It has always been a source of wonder to me why so many farmers think nothing fit for wood that is not cut from a green tree. I have in mind one man who would go into his woodlot every winter and cut good sound trees for his wood while there were logs lying all around that were still sound and if cut and split and piled would make just as good wood. Any wood that, when cut in stove lengths, will hold together to split is good enough for summer wood.

Most housekeepers would rather have wood that will soon burn out in summer, than wood that will last and keep the stove hot so long. I have seen piles of broken rails along the road the past summer, where old rail fences had been torn down to make room for a wire fence, that were burned along with the brush, and that on a farm that does not contain any timber at all.

B. S. F.

## A Big Bill for Postage.

The postal receipts at the Minneapolis postoffice will be largely increased this month on account of the mailing of the largest catalogues ever sent from Minneapolis, by Northrup, King & Co., seedsmen, 29 Bridge Square, Minneapolis, Minn. Over four carloads of paper were used in printing the first edition and the bill for postage will be over \$11,000. It is one of the most complete catalogues ever printed in the United States, having over 430 engravings, most of them from photographs. We have learned that in printing it, one of the largest plants in the northwest was taxed to the utmost, being compelled to work seven large up-to-date presses night and day. If any of our readers will write this old reliable seed house stating that they are interested in good seeds and name this paper, a catalogue will be mailed them without charge.

## Pleased with the Results.

The Leader Jack Co., Bloomington, Ill., who have been advertising their jacks, in renewing their contract say: "We are well pleased with the results of our advertisement in the Michigan Farmer."

## Wire &amp; Fencing

## At Wrecking Prices!

Here's the greatest opportunity ever presented to buy Wire Fencing and Nails at an enormous saving. There's good reason why we can sell our merchandise for less money than anyone else. We purchase our goods in an entirely new and original way. No old-time methods about our business. We recently purchased the contents of a large stock in the Ohio River, containing 20,000 kegs of Wire Nails, besides thousands of reels of high-grade Barbed Wire, Wire Fencing and much additional wire product. Our customers get the benefit of our wonderful operations. The fencing that we are offering in this advertisement is strictly first class in every way. It is as high-grade galvanized material as is manufactured. Nothing better. Equally so the Barbed Wire offered is the finest and best manufactured. It is unimpaired and just as good as the regular first-class material that you buy from your high priced dealer. The Nails are offered just as they are. No deception about our business. We want satisfied customers everywhere.

## SPECIAL FENCING SALE!

We offer 100,000 rods of heavy galvanized fencing, either diamond mesh like illustration, or square mesh. Fencing that is guaranteed equal to the very highest grade manufactured. We have it in all widths. It is put up regularly in 10 and 20 rod reels. Price per rod as follows: 18 in., 14c; 20 in., 15c. Other heights in proportion. 26 in. Fencing, 3 in. mesh per rod, 25c. Galvanized Barbed Wire, \$2.45 per 100 lbs. Two or four point regular galvanized Barbed Wire, put up on reels, per 100 lbs., \$2.45. Painted Barbed Wire, per 100 lbs., \$2.25. Our Special Galvanized high-grade, light weight Barbed Wire, put up on 80 rod spools, price per spool \$1.80. Painted Twisted Wire, per reel, \$2.00. Galvanized Fence Wire, \$1.50 per 100 lbs. At this price we will supply you new Galvanized Wire Shorts. They are put up 100 lbs. to the bundle. By shorts we mean wire in lengths from 50 to 900 ft. Good for all general purposes. Our price on gauges 11, 12 and 14, \$1.50 per 100 lbs. Other gauges in proportion. BB Telephone Wire No. 12, \$2.85 per 100 lbs. Write for price list and catalog.

## MIXED WIRE NAILS, PER KEG \$1.60

These Nails were on board barge sunk in the Ohio River and are more or less rusty. They are practical for use and make a fine handy assortment. Put up mixed, just as they come, 100 lbs. to the keg. Sizes from 3 to 40 D. Per keg, \$1.60. Nails, straight sizes just one kind to a keg with slight surface rust, sizes 3 to 60 D; also Casting Nails and Finishing Nails, all kinds: price per keg of 100 lbs., \$2.00. First-class bright, clean new Nails, 20 D common, per keg, \$2.20.

Ask for Our Mammoth Bargain Illustrated FREE CATALOGUE No. G. P. 29. It shows 10,000 bargains bought by us at Sheriff's Sales, Manufacturers' and Receivers' Sales. Also explains our wonderful Marine and other Wrecking operations. Shows everything in the line of material and supplies, including high-grade Furniture, Household Goods, Rugs and Carpets. Give us a trial. Write today.

CHICAGO HOUSE WRECKING CO., CHICAGO, ILL.

**SAVE HALF** **14** **6** **10** **CTS.** **Per** **Rod**

**ON WIRE FENCING** **For A High Grade** **Heavy Hog Fence**

22 6-10 cents per rod for a 50-inch heavy farm and stock fence. A heavy, closely woven stock and poultry fence 48 inches high, 33 cents per rod; 58 inches high, 36 8-10 cents per rod. Easy to stretch up and stays up stiff and straight. The most popular fence in America. Made in and shipped direct from our own factory at prices just a little more than factory cost. Don't buy a single rod of fencing until you see our Fencing Catalogue, which shows our complete line of wire fencing in all styles and heights; poultry netting, lawn fencing, farm gates, steel fence posts, barbed wire, etc., all at wonderfully low prices. Write us and say, "Send me your free Fencing Catalogue No. 1429," and you will receive it by return mail. Address,

**SEARS, ROEBUCK AND CO.** **CHICAGO**

**BROWN FENCE**

GET OUR FREE SAMPLE which we send for inspection. Test it for strength, stiffness and rigidity, then look to the galvanizing. File it and see how thick that is. We want you to satisfy yourself that for YOU Brown Fence is the best fence to buy for Horses, Cattle, Sheep, Pigs, Chickens, etc. Our fences are made of extra heavy Steel Wire—both strand and stay wires No. 9 gauge. Sells at 15 to 35c PER ROD DELIVERED. WE PAY THE FREIGHT. Easy to put up. Stands staunch, solid and rigid. Won't sag or bag down. Our prices are less than you would pay for much lighter fences—fences not half so durable. Write today for sample and catalog showing 150 styles. The Brown Fence & Wire Co., Dept 49 Cleveland, Ohio.

**SAMPLE FREE**

**THE FROST WIRE FENCE**

It is hard to appreciate the strength and solidity of

unless you have seen a string of it already erected. The Frost is the original Coiled Spring Wire Fence, made from Heavy High Carbon Steel Wire and warranted to last a lifetime. The only fence that provides for a uniform contraction and expansion, and consequently the only fence which successfully resists the action of heat and cold. Factory woven and Field erected. Best and cheapest fence made. Free catalog describing Fences and Gates sent on request.

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DEPT. C, CLEVELAND, OHIO

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**FOR SIDING FARM BUILDINGS**

ASBESTOSIDE is without an equal. It has the same durability and fire-resistance features as our asbestos roofing and keeps a building comfortable in all weathers—particularly adapting it to stock and poultry buildings. Put up in sheets and can be applied by anyone.

Write today for Free Book No. 69, Samples and Prices.

**H. W. Johns-Manville Co.** 72 Jefferson Ave., Detroit, Mich.  
Home Office, 106 William St., N. Y.



## ALFALFA WITH BARLEY.

I am planning to sow alfalfa this spring on a clay field which raised a crop of peas last year. Am thinking of sowing about a bushel of barley to the acre as nurse crop. Please tell me if this is wise, and if it should be put in as early as possible, also if I should sow alfalfa ahead of, or behind the drill. Would also like advice about my sugar beet crop. Expect to put in seven acres on clay soil with 400 lbs. of commercial fertilizer to the acre, which would yield the heavier tonnage, to sow in 21 inch rows or in 28 inch rows? In an ordinary season which would pay best, to sell under the test, i. e., \$4 per ton for 12 per cent test and 33½¢ for each additional per cent of sugar and the same taken off if it falls below 12 per cent, or at flat rate of \$5 per ton? Hand labor costs me \$16 per acre in 28 inch rows and \$18 in 21 inch rows.

P. C. E.

There is some difference of opinion as to whether alfalfa should be sown with a nurse crop or not. Some claim that a light seeding of barley with alfalfa, say three pecks or a bushel per acre, is a very good thing, while others claim that it is better to sow the alfalfa alone. If you seed alfalfa with the barley, it would probably be better to cut the barley for hay before it matures than it would to allow it to ripen and harvest it for a grain crop. The reason, of course, is that you take a grain crop away from the alfalfa earlier in the season. If the barley is allowed to ripen and then it is harvested, you take the shade crop away from the alfalfa during extremely hot weather and this is liable to be detrimental to the young alfalfa plant. I would sow the alfalfa seed ahead of the drill teeth, or if you let the seed drop behind the drill teeth, then I would go over the land afterward with a light smoothing harrow. This might be better because it would get the alfalfa seed in more evenly than it would to let it run ahead of the drill teeth.

Twenty-one Inch or Twenty-eight Inch Rows for Sugar Beets.

In all probability you would get a larger tonnage, all things being equal, to put the beets in 21 inch rows, than you would in 28 inch rows. I would naturally expect this. The reason why I grow sugar beets in 28 inch rows is because it costs so much less to cultivate and care for them. In 21 inch rows you haven't got any kind of cultivator that I ever saw that you could do a real good job with to any advantage, while in 28 inch rows, we can take a two-horse riding wheel cultivator, or a narrow corn cultivator, (many of them are made now so that they can be set up to cultivate 28 inch rows), and do a good job of cultivating. These cultivators have plant shields on them so that you can cultivate the beets when they are real small, just as soon as you can see the rows, and you can do a better job than you can with the small beet cultivators. You say that the company makes a difference of \$2 per acre in the hand labor whether the beets are put in 21 or 28 inch rows. I think there is more difference than that. It costs more than \$2 per acre extra to care for beets in 21 inch rows. One reason is because you can do so much better machine work.

## Selling by Test or Flat Ton Rates.

I think it would be preferable to sell by test. This is my experience. I never raised beets that did not average over 15 per cent sugar, consequently, there ought to be more than \$1 difference between the price of 12 per cent beets and the flat rate, and many times the average test of beets is 16 per cent which would make you \$5.33½¢ a ton. As a matter of fact, I don't think there is any risk at all where there is only \$1 a ton difference between the flat rate and the rate for 12 per cent sugar.

COLON C. LILLIE.

## GENERAL VIEW OF FORAGE CROPS.

The subject of forage crops has grown rapidly within the last 15 or 20 years. This is due primarily to two causes, first, to the general increase in knowledge of what constitutes a food and the best method of using it. Second, to the increase in demand for dairy products, especially of whole milk in large towns and cities, which makes it desirable that a larger supply of succulent food be raised by the farmers engaged in milk production near the point of consumption. In a narrow sense, the term forage crops is frequently applied only to those crops that are suitable for use as green food, and the term conveys the idea of soiling, or carrying the foods in their green state from the field to the animal.

Forage crops, or "roughage crops,"

includes not only those suitable and adapted to soiling, but those used for pastures, for hay and for silage; or in other words, it takes in the entire number of crops of the different classes used to supply the roughage necessary in rations for farm animals. The common language usage of forage would make the term a general one applying to all kinds of rough or coarse natural herbage food, such as the animals might find freely, provided by nature; as hay, pasture, herbage of corn, cow-peas and vetch.

The value of any forage crop is determined by a number of conditions; the first, and probably the most important, is the amount of dry matter, that may be secured from a given area and its usefulness as measured by the kind and proportion of the nutrients contained in it. A second consideration is its adaptability and usefulness for the various purposes, as for example, for a soiling crop, for pastures, for hay or silage. The third reason is its time of growth and season of maturity, which influences its usefulness at specific times, and fourth, the nature of the plant, as having reference both to its composition as a food and the influence that its growth may exert on the fertility of the land, is to be considered. Corn is very highly regarded as a general forage crop, because it can be grown successfully over a wide area. It is capable of producing a large yield of nutritive substance, highly digestible, very palatable, and relished by all farm stock. It serves an excellent purpose as a green forage for use in soiling; it can be so grown as to furnish succulent food thru a comparatively long period of the growing season. It is the best crop to supply succulent winter food in the form of silage; it also serves as an excellent source of both dried roughage and of concentrates when ripened and handled in the usual way. It, therefore, fulfills in a larger degree than any other one plant, the chief requirements of a forage crop. Because of its vigorous habit and its season of growth, it is capable of acquiring its food from sources not so readily available to other plants; therefore, good results can be secured on land that would not be capable of producing crops more dependent on immediately available food supplies.

State College, Pa.

H. C. B.

## How to Secure a Fine Fur Coat Cheap.

One of the most interesting advertisements in these pages is that of the National Fur and Tanning Co. and especially at this season when many of our readers are butchering and have hides and skins to dispose of. Heretofore people were usually compelled to sell hides to the local butcher and accept prices that scarcely paid them for their trouble. The N. F. & T. Co. say they can not only save you a lot of money, but make your hides into the nicest, most comfortable coats and robes from which you will get a great deal more good and satisfaction than from the few cents the butcher will give. Just drop a postal to them mentioning this paper and get their late catalog.

## Resourcefulness of American Captains of Industry.

A notable example of the typical pluck and resourcefulness of the American captain of industry, in the face of unexpected reverses and disasters, and as illustrative of what can, under exceptional circumstances, be accomplished when necessity requires, was the rebuilding and equipment, within three months after the occurrence of the plant of the Michigan Stove Company, Detroit, Mich., manufacturers of Garland stoves and ranges, gas ranges and heaters, which was almost completely destroyed by fire, including 23,000 manufactured stoves and ranges.

## Guaranteed Iron Roofing.

In this issue of our publication we are carrying an advertisement of a company who are putting out what is called ingot iron roofing. They guarantee it to be the purest commercial iron ever made. They guarantee roofs made of this iron roofing, galvanized, to last thirty years without painting. We believe there is no one of our readers who owns a piece of property who will not be interested in this proposition. The guarantee is an unusual one and we strongly recommend that you write to the American Iron Roofing Co., Elyria, Ohio, for their catalog.

## Salesmen Wanted.

All of the big employers of salesmen increase and make changes in their sales forces in the winter and spring. Thus there are always hundreds of good openings for salesmen at this time. Most houses, however, object to breaking in a green man and therefore prefer a trained salesman, as he secures better results. The National Salesman's Training Association fills a long felt want in the business world by training men for high class positions as expert salesmen. Write today for their free book, "A Knight of the Grip," and list of good positions now open. Address Dept. 210, National Salesman's Training Association, Chicago, New York, San Francisco, Minneapolis, Kansas City. Write nearest office.

## Get The True Answer and You'll Refuse Any Substitute For a

GREAT WESTERN  
"The Great Oak"  
Manure Spreader

GREAT Western Dealers are in nearly every locality.

You probably know one. But if your local dealer hasn't a Great Western on hand now, he can get one quickly to show you, by fast freight—no risk or obligation to you—so just insist on seeing and examining every part of a Great Western before you think of buying any kind of a spreader. Do this in justice to yourself.

If any dealer or any agent, tries to substitute any other machine—take your knife and test the "oak" or "pine" parts—take your ruler and measure the sills and frame and spokes, rims and tires, tongue, etc. Take a hammer and test the 5th wheel braces and clips—Only malleable like ours is proof against this test, or hardest use.

Satisfy yourself that you should have a Great Western for the following reasons and many others that this space cannot tell:

1. Made in 7 sizes, for any farm at dollar for dollar value, and price most economical in long satisfactory service. Low for easy loading.
2. All Best Grade, thoroughly seasoned, heavy oak special construction, every machine numbered, set up and delivered ready to use. (No freight to pay.)
3. Special exclusive 16-inch malleable 5th wheel, double braced and absolute proof



We Ask You To Ask Your Dealer These Questions

against breaks or buckling on roughest ground, up or down hill. Double cross braced rigid frame. All bolts and nuts used—no nails.

4. Endless Apron (no "half apron" kind) runs smoothly by interlocking malleable link chain, simplest and strongest. All metal parts of strongest malleable.

5. Every part made at our factory, including our own strong special made clinch tire wheels, cold pressed on solid heavy oak spokes into heavy oak felloes. Axles heavy, cold rolled steel.

6. Guaranteed practically indestructible and absolutely the most satisfactory machine. Will last a lifetime.

## PROVE FOR YOURSELF

We promise you and our dealers in our Special Guarantee on each machine to stand back of every Great Western during all its service. Our dealer in your locality, or we ourselves are always ready to "meet you face to face." You make no "long distance deal" when you buy a Great Western. We never let users of our machines remain dissatisfied with them for any reason. So if your dealer won't let you see and test our machines—write our nearest office. We will fix you up quickly. Also send for our catalog which in itself will convince you to get only our make—for all practical reasons—including highest quality, and service. Will last longer than two spreaders of any other make.

SMITH MANUFACTURING CO., 154-168 E. Harrison Street, Chicago, Ill.  
Omaha, Neb. Kansas City, Mo. Minneapolis, Minn. Columbus, O.

THE 2-in-1  
HARROW

Cultivates  
Pulverizes  
Levels

This is the harrow that interests every progressive farmer. Does 2 days' work in 1.

## Once Over Makes a Perfect Seed Bed

No need to go over the ground two or three times. The 2-in-1 Harrow saves half your time and half the labor and gives you a better seed bed than you get two or three times over with any other style harrow. It does two kinds of work at once. It is harrow and cultivator combined. The spring teeth cultivate and stir the soil, the spike teeth break the clods and pulverize the soil when it is fresh turned and moist, just when it pulverizes best, as every farmer knows.

## Write for Free Circular Today

and learn all about this great combination tool—how the spikes act as runners (also pulverizers) when you use the spring teeth; how the spring teeth hold the spikes to their work; how both work together, or how you raise all teeth and transport harrow on frame. The tool for all soils, a treasure for fruit growers and all top soil and mulch making. Shifts instantly and easily with two levers.

Write now for introductory offer—one man from each locality gets it. Selling is easy where the first one is at work. Write a postal for facts today to

## The Naylor Manufacturing Company

54 Spring Avenue, LaGrange, Illinois  
Dealers Wanted Everywhere

Get In On Our Great Introductory Offer

The First Order From Any Locality Gets the Low Price

## Our Books Free

Modern Farming is the science of getting as big crops from long used fields, as our early farmers get from their new lands.

## Nitrate of Soda

is the mainstay of every practical farmer. It is a wonderful plant-food for all crops.

**OUR FREE BOOKS** cover the whole subject of Nitrate of Soda fertilizing and show how to get larger yields at low cost. Send for books on the crops in which you are interested and make more money.

Wm. S. Myers, Director  
John St. and 71 Nassau  
New York

## Matthews' "NEW UNIVERSAL" Garden Tools

## 6 GOOD TOOLS IN ONE

Seeder, marker, hoe, rake, plow, cultivator, single or double wheel. Adjustments easily made. For planting and all kinds of cultivation.

Send for Free Booklet giving full description of implements.

AMES PLOW COMPANY, Dept. 46.

For Sale by D. M. Ferry Co., Detroit, Mich.

## 6 Styles Seeders

Opens furrow, drops in plain sight covers marks.

Hand Wheel Plows  
Reck wheel gives steadiness & ease.

Note High Arch and Plant Guards.  
Best Oak Handles on all Tools.

BOSTON, MASSACHUSETTS

## Double or Single Wheel Hoe

Cultivator, Plow, Rake, Churns quickly made. Cultivate between or beside the rows. Any depth, any width.

When writing to Advertisers, mention the Michigan Farmer.



## LIVE STOCK

AN UP-TO-DATE "PIGGERY."

The following description, with accompanying illustrations, of a "piggery" which we built last year may prove of interest to some Michigan Farmer readers.

Concrete entered into the construction of the building to a considerable extent the floor being entirely of that material; also the walls around pens to a height of three feet, except at the front over the trof, where there are doors swinging horizontally.

As indicated by the half-tone, the building is two stories high, the upper story being used for the storage of machinery and feed, and also as a workshop. A hay track has been installed by which all machinery, etc., can be elevated at the center, and carried to the desired location in the building.

At the center of the building is located the feed and slaughter room, which is open from first floor to roof, with twelve foot doors on each side, to allow driving thru. This room is fitted with chimney, cookers, kettles, running water, etc.—in fact, whatever is needed to reduce the labor to a minimum.

On either side of this room, there are four pens as shown in the floor plan, with a four foot feed alley running lengthwise between the pens and the corn crib, which extends the full length of the building, except at feed room as shown. The crib, of course, extends to the roof, and is fitted with two sets of doors, one above the other for convenience in handling the corn. The inside wall of crib is of matched boards.

The pens are arranged with the idea of getting plenty of light and air. There are three windows at the rear of each pen, while the end pens will have the two extra windows at the ends of the building. These windows are 3 feet by 3 feet six inches and the center one swings down (inside) while the other two swing up to the joist. The idea of this arrangement is to use the center one for winter ventilation, because swinging from the top down, it will not allow a direct draft on the stock, while in summer, when it is desirable to open them all, the other two may be swung up and hooked to the joist out of the way.

Ventilators from the pens extend up thru the roof. These are placed over the partition wall, between each pair of pens, so that one ventilator will take care of two pens.

The stock doors in each pen swing both ways, and the sill of same will be raised four inches above floor, to avoid

dealer a bunch of lambs that had been shipped in from Chicago at 5½¢ per lb., net. They weighed 64½ lbs. after they had filled up on grass, which was just about Chicago weights.

They were run on pasture until about November 10th, when they were put in and fed on clover hay and corn, lightly of corn till about January 1st, and after that were full fed but at no time over 2½ bu. per hundred. They consumed a little over 150 bu. of shelled corn (my own raising) per 100 lambs.

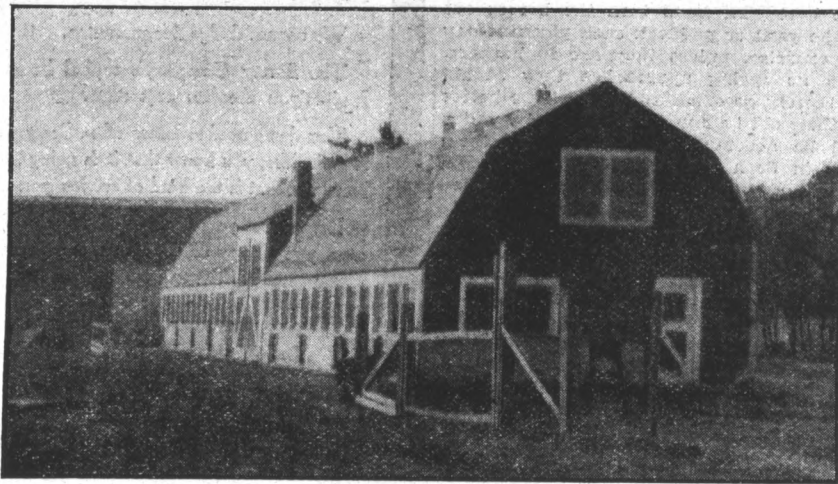
They were sold on January 30th to a local shipper at 7¢ per lb. and averaged 94½ lbs per head, a gain of 30 lbs. in four months, or a cash gain of \$3.14 per head.

Lenawee Co. ABNER WILSON.

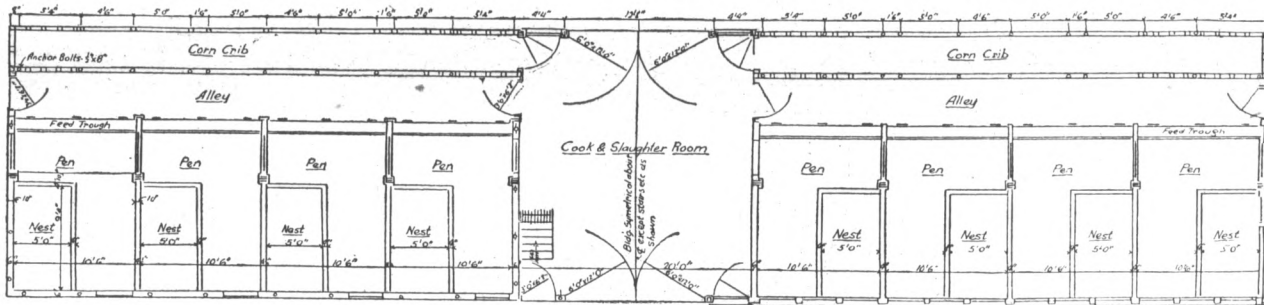
### FAMILY LINES IN THE SWINE HERD.

My advice to the new breeder of pure bred swine is to select his sows from some old and well established herd, rather than to buy them one or two in a place, whenever he finds such as please his fancy. If this rule is strictly adhered to

Gentry's famous Berkshire family of Longfellow—the world beaters—just simply the blood of old Longfellow 16835 over and over again, to which has been added an infusion of fresh blood thru the occasional purchase of brood sows, but this blood never takes a prominent place in the breeding of the herd until it has been neutralized by two or more generations of line breeding to prevent the introduction of an inharmonious force of affinities, which would be liable to fly off and recognize new and dangerous affinities and spoil the result of years of systematic breeding to keep in control the type or model of the animals that it is desired to perpetuate in the herd. Mr. Gentry has not purchased a herd boar for more than twenty years, but during all of this time he has been furnishing breeding boars for many of the leading breeders of the country. I believe that there is more real credit and satisfaction in breeding and developing one excellent sire than in purchasing ten of the same kind. It clearly shows the index of the breeder's ability in caring for his herd, and in the intelligent breeding and selec-



An Up-To-Date Piggery Built by Curtis L. Metler & Co., Wayne Co.



Floor Plan of Lower Story of the Hog House Illustrated above. Designed to Economize Labor and Time.

being clogged with manure, etc. The floor of the building is six inches above grade line, providing for thoro drainage.

The feed trofs are made of concrete, and drain from one point in each pen into a small drain in the alley, for the purpose of carrying off the water when flushing the trofs. A wall four inches high and four inches wide extends around the nests.

The doors between pens slide up and are arranged to fasten at any height, to allow, if desirable, certain sized pigs to pass thru while larger ones are kept out.

The building is so arranged that a manure spreader may be driven the full length of the building and the manure thrown thru the windows into it.

The entire object of the building is to care for the minimum number of hogs at a minimum of cost in labor, etc., and obtain the best results in pork and saving of manure.

Wayne Co. C. L. METLER & Co.

### GOOD GAINS ON WESTERN LAMBS.

I am sending you a report on a bunch of western lambs I have been feeding. On September 28th, I bot of a local

true and practical method of fixing a type and perpetuating the desired qualities is by breeding along family lines. Keep close to one line of breeding until the desirable qualities have become fixed and the animals have sufficient prepotency to enable them to transmit these qualities to their progeny.

It requires less skill and success is far more certain to blend blood by line than it does to outcross and concentrate it by uniting different families. It requires years of systematic and careful breeding to sift out the desirable qualities of different families of a breed and organize them into a single family that has a fixed type and prepotency. The breeders who attempt to multiply variations in their herd cannot succeed like successful breeders who practice line breeding to fix and keep in control a certain type and establish prepotency, all the time maintaining size, vitality and health in their herds.

Each violent outcross brings in new complications—more relatives to multiply the crop of variations. Breeding back to the sire cuts out this diffusion of blood, until the third generation is 87 per cent of one blood and prepotency is a fixed fact. As in the case of N. H.

tion. In all cases I would advise the new breeder to try and develop a breeding boar of his own breeding to have at the head of his herd.

Many times the new breeder will order his foundation stock by letter, and the amateur breeder invariably orders them as follows: A boar and two sows not akin. It is more than folly for the breeder to try and induce the beginner to accept the two sows and a boar bred along similar lines until he can be depended upon to beget uniform pigs when mated with the two sows ordered. The result is right at the start he introduces a too violent outcross and invites and fosters the very elements that will de-

stroy the result of years, and perhaps a lifetime of systematic breeding. By mixing the blood of these two families of animals he invites a conflict between conflicting forces and the type is destroyed, the model lost, and heredity leads the animal back to the original scrub, or worse. The breeder condemns the breed and tries another with similar results until it becomes thoroly fixed in his mind that the pure-bred swine are no more profitable than the common scrubs.

As a practical illustration of what mixing the blood of two or three families of a breed may bring about we may take the mixing of the blood of two or more breeds of swine as an example. If followed up it will result in the loss of the standard type of all the breeds employed in the cross-breeding experiment. The practical breeders who are paying one thousand dollars and over for a breeding boar for use in their herds are close students of pedigree and will not buy an animal unless he comes from a line of practical and systematic breeding for years and can be depended upon to breed uniform litters, when mated with the sows in their herds. They know that a good boar without established breeding

## Piles Quickly Cured at Home

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

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

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

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

We mail a trial package free to all who write.

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

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

Insist on having what you call for.

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

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

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

It is well worth trying.

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

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

No knife and its torture.

No doctor and his bills.

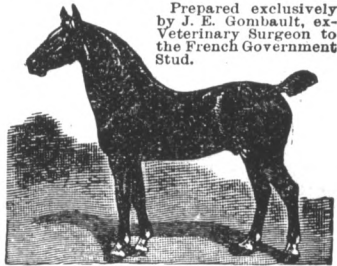
All druggists, 50 cents. Write today for a free package.

## Horse Owners

Look to your interests and use the safest, speediest and most positive cure for ailments of your horses, for which an external remedy can be used, viz:

### GOMBAULT'S CAUSTIC BALSAM

Prepared exclusively by J. E. Gombault, ex-Veterinary Surgeon to the French Government Stud.



### SUPERSEDES ALL CAUTERY OR FIRING.

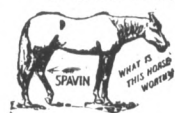
Impossible to produce any scar or blemish. The safest best Blister ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses or Cattle.

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

THE LAWRENCE-WILLIAMS COMPANY, Cleveland, Ohio

### "SAVE-THE-HORSE" SPAVIN CURE.

REG. TRADE MARK



If you are at the end of your rope in trying to cure your horse, the sooner you abandon precarious, vicious and uncertain methods and turn to "SAVE-THE-HORSE," the quicker you will have a sound horse. Its unfailing power is proven beyond question, and our guarantee is a binding contract to protect you.

The Union Insurance Co. of Phila.,—

Office of Resident Agent, Ponca City, Okla. Troy Chemical Co., Binghamton, N. Y.—I was making inquiry of Mr. Wm. Cravens of this city what would take off a bad Bone Spavin on one of my horses and he told me he was using "Save-the-Horse" for a bowed tendon on May Flower, and it was improving so fast that he believed it would cure anything recommended to. So you will see by your horse that I ordered a bottle last July and it cured my horse sound and well of a bad Bone Spavin, and I wish to say that I am glad to recommend it. I believe it to be the best spavin cure made. J. T. ROSS, Glen Ridge, N. J.—I cured a horse twenty-three years old of a bad bone spavin with your great remedy. Used horse right along. THEODORE JACOBUS, Narragansett Park, Providence, R. I.

I have taken Bog Spavins off of four horses with your "Save-the-Horse." I buy it of T. W. Rounds & Co., Providence. Have never yet had to ask for any money back. C. P. JONES.

\$5 a bottle, with signed guarantee or contract. Send for copy, booklet and letters from business men and trainers on every kind of case. Permanently cures, Spavin, Thoroughpin, Ringbone, (except low), Curb, Splint, Capped Hock, Windpuff, ShoeBoil, Injured Tendons and all Lameness. No scar or loss of hair. Horse works as usual. Dealers or Express Paid. Troy Chemical Co., 30 Commercial Ave., Binghamton, N. Y.

**HORSES** Going Blind. Barry Co. Iowa City, Ia. Can Cure.



lines cannot be depended upon to beget uniform litters. In a few rare instances an excellent individual that lacks in blood lines may be an excellent breeder and make a name for himself and owner, but only after a systematic course of line breeding can the owner reap the reward of his success. Prepotency in his blood lines cannot be established until his descendants possess a large percentage of his blood. The most famous sties that the country has ever produced have not been appreciated until after their days of usefulness are passed. It requires years to demonstrate his powers of prepotency and to show that his progeny can transmit his qualities requires a still longer period.

In Berkshire pedigree Longfellow 16835 and Lord Premier 50001 are more popular today than when in their prime. They have set a fixed type that can be depended upon to reproduce itself. Among the Poland Chinas we find the same results from the old Tom Corwins, Perfections, Tecumsehs and Mischiefmakers, all more or less famous for having perpetuated their family characteristics with success.

The value of understanding a good pedigree and breeding his herd along family lines so as to improve and keep in control a fixed type and characteristics is one of the most essential phases of the successful and intelligent management of a herd of pure-bred swine, and the new breeder should familiarize himself with it, for it is worthy of his time, attention and study, for much if not all of his success as a breeder will depend upon his knowledge of how to mate his animals to produce the best results.

New York. W. MILTON KELLY.

#### FEEDERS' PROBLEMS.

I have between 400 and 500 sheep. Would it be profitable to build a silo for them? What part of their ration would this silage supply and what other feeds would you advise?

Kent Co. F. W. R.

That silage may be used profitably in sheep feeding is conceded by practically all breeders who have tried it. It seems to be pretty well agreed, however, that it should not be made too large a factor in the ration but where a small amount, say 2 lbs. per day, is fed it adds a needed succulency to the ration which will take the place of roots quite satisfactorily and is considerably cheaper. After the lambs are dropped and attain a little age, silage is also a valuable feed in promoting a liberal milk flow and may be used more freely at this season of the year. While it might be profitable to build a silo for the number of sheep mentioned in this inquiry, the writer has always held to the opinion that it would not pay with a small flock upon the average farm, where dairy cows were not maintained in connection with sheep. Breeding ewes will consume a variety of roughage and in fact do better when given a variety of feeds than when the ration is made up exclusively of a single roughage even tho it be clover hay. Corn stover, bean pods, etc., make good feeds for the flock of breeding ewes which should not be fed exclusively. Where clover hay is fed once a day and other feeds mentioned once a day, the grain ration need not be heavy during the early part of the season, but if the lamb crop is early, the ewes should have a liberal ration until turned on pasture and the writer has found that it pays to give a small grain ration right along until the lambs are weaned unless it be for a few weeks when the pasture is at its best. With a very little corn and bran and oil meal to balance the ration, peas, if they are available, and oats when not too high in price, a palatable grain ration can be supplied to the ewes and may be made up with a view to economy in the feed bill, so long as the proper ratio of nutrients is maintained. In view of the interest in the feeding of ensilage among the sheep breeders of the state, we would be pleased to have those who have made a practice of using ensilage in the ration for breeding ewes in recent years to give their experience thru the columns of the Michigan Farmer.

#### The Spring Care of the Work Horse.

Other things being equal, the care which the farm horse receives has much to do with his value and serviceability to the owner. There is a vast difference in the care accorded to farm horses by the farmers of any community, particularly in the winter season. A few probably pamper their horses too much and feed them too lightly during the winter season, especially where they are exercised little and worked less. Others feed a poor

quality of roughage to the horses during the winter, giving them little grain, so that they are not in condition to do the occasional tasks required of them, in a satisfactory manner, nor are they in shape to endure the severe spring work and remain in good condition. What is commonly designated as "horse sense" is a faculty which should be exercised in the care of the farm horse. Probably there is no need to sound a word of caution against too heavy feeding of the farm horse during the season when he year like the present one when grains are year like the present one when grain are high in price and when there is a shortage of available feed upon most farms. But even if the horse is wintered properly, it is profitable to exercise a whole-some degree of that same horse sense in preparing him for the more strenuous work of the early spring so that a maximum of service may be secured at the time when it is most needed. Obviously the horse that is kept closely in the barn during the winter, with little work and no opportunity to exercise daily, even if maintained in good flesh, is not in a condition to be put to hard work at once. The best plan is to turn the horses out in the yard or paddock each pleasant day for exercise, unless they are in harness, then as spring approaches they should be thoroly groomed and fed a little better so their old hair will be shed early, which will be accomplished by having them gain in flesh from now on. Then when they are put to work the grain ration should be gradually increased so as to maintain them with as little shrinkage as possible during the busy season. It takes no more feed to keep a horse in good condition thruout the year than it does to let him run down and then bring him back to the desired condition later; in fact, it probably takes less feed to maintain that condition right along and is more satisfactory to the owner from every standpoint.

Then the precaution should be taken to see that the harness fits properly. A good many horses are rendered unserviceable for a time by improperly fitted harnesses which are likely to cause galls and sore shoulders in the spring which it will be difficult or impossible to heal while the horse is at hard work. These can nearly always be avoided by proper attention to the harness and to the care of the shoulders during the early days of spring work.

The horse's feet should never be neglected. Even the colts should be looked over occasionally and, if needed, their feet should be trimmed and shaped up so that a normal and healthy development will be secured. The work horse should be shod frequently enough to prevent the ills which result from inattention to this detail. All of these are little things and many more of a similar nature might be mentioned but the whole proposition is summed up in the one idea above expressed, in the vernacular of the day.

#### ORGANIZATION.

##### Michigan Percheron Association.

Believing an organization of the Michigan Percheron Horse Breeders' would be beneficial to all such breeders, and would stimulate the breeding of the best and ultimately result in making Michigan one of the great Percheron centers of the world.

Having in view the perfecting of such an organization, I wish to come in touch with all Michigan Percheron breeders and request all such breeders to write me expressing their views upon the subject, giving their residence, county, postoffice address and name in full. If this proposition meets approval, a time and place for perfecting such an organization will be fixed, timely notice of which meeting will be given thru the press or otherwise.

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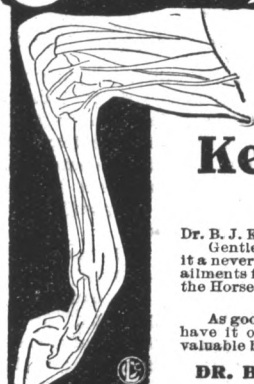
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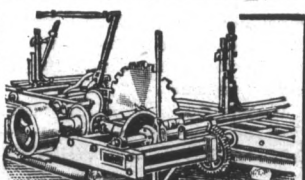
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## WHERE ARE WE ON VENTILATION?

The writer cannot help believing that good ventilation is desirable, even when he reads the statements of scientists favoring bad ventilation. Good ventilation certainly does no harm, while it is a disputed question as to how much injury bad ventilation does do.

We have always assumed that pure air is an aid to health and even to comfort. Generally the feeders of live stock have been in favor of the largest possible amount of ventilation. It took an experiment station to start the ball to rolling in the other direction. If the conclusions of this station be correct, the only thing gained will be the saving of heat in the barns.

One of the Northwestern stations tried to find out how much harm bad ventilation would do feeding steers. Several were kept confined in small quarters, and care was taken not to let in fresh air. One steer was confined in a closed stall for 37 days. The experimenters report that this steer showed no bad results from the confinement but was apparently comfortable. Also no effect on the steer was shown by laboratory or clinical tests. Therefore it was concluded that no bad results could be observed.

But it seems to the writer that the observations lacked completeness. It is well known that depriving creatures of air results in rendering them sluggish. Some of the men that were held prisoners in close buildings during the civil war said that they did not notice greatly the lapse of time, as they passed their days in sleeping, on account of the lack of ventilation in the buildings. In school houses, the children frequently become sluggish and dull because of the lack of ventilation. A man tells the writer that whenever he goes into a church that is badly ventilated, he is so strongly affected that he has a desperate battle with himself to keep awake. That shows the effects of decreased oxygen.

Now the steer in question was being fed for beef, and sleep is a good beef maker. To bring about a condition that leads to inactivity and to sleep is not entirely against the beef producing process. But what would have been the result if the animals had been compelled to sleep without a full supply of oxygen all night and work every day?

The question does indeed have large bearings, more especially on human beings, relative to their cost of living. For instance, among school boards there is opposition to some of the ventilation systems, because the best ventilation systems are expensive in coal. We do not heat stables, generally, and the cost of fuel is in the form of the cost of feed, but it exists all the same.

Bad ventilation apparently increases the chances for the spread of contagious diseases. Tuberculosis has spread in the warm stables and seems not to be able to hold its power where animals are kept out of doors or in barns that are well ventilated. In the prisons that are poorly ventilated it is claimed that tuberculosis affects a large proportion of the inmates, this fact being supposedly due to lack of ventilation.

We have supposed that the presence of carbon-dioxide was injurious to animals, when the amount of such gas exceeds a certain per cent. The experimenters referred to assert that we can safely disregard the presence of carbon-dioxide, which increases to a certain point and then ceases to increase. This theory can be labeled "Important if True."

We should not attach too much importance to a single experiment. It often happens that an experiment or two seem to prove one thing, while many experiments prove the opposite. In the light of the knowledge we now have, it seems safer to ally ourselves on the side of good ventilation.

Illinois.

H. F. THURSTON.

## LIVE STOCK NOTES.

A carload of sheep from Michigan arrived in the Chicago stockyards several days ago, but owing to the Illinois quarantine regulations against Michigan consignments, the railroad was not allowed to unload them, and they had to be shipped back to the Michigan feed lot. The Michigan shipper was misled by recent reports that the Department of Agriculture had removed the quarantine from several counties in Michigan and other states where the recent outbreak of foot and mouth disease occurred, this report having caused some Michigan shippers to believe that the Chicago stock yards were at last open to them. It is true that lifting of the federal quarantine allowed shipments into states which were willing to receive stock from the districts

previously affected by foot and mouth disease, but the Illinois quarantine has expressly forbade Michigan shipments.

Cattle exports from this country have fallen off materially within a year, and it is not at all probable that there will be a recovery this year. Word comes from England and Scotland that the quality of the Argentine beef has improved greatly of late and is now fully equal to that furnished by good American range cattle. Exporters in the Chicago market take medium and good steers, but as a rule do not buy prime beefs, as they are too dear to admit of profits after being landed and slaughtered abroad.

Chicago live stock commission firms have been trying to regulate to some extent at least, the marketing of cattle, as they see that too heavy supplies at one time are the bane of the trade, but it is a big country, and regulating country shipments is an exceedingly difficult matter to bring about. It is an old story that the market is nearly always overstocked on Monday, with a large supply on Wednesday, too, and only moderate offerings on Thursday, with meager receipts on the remaining days of the week. It is a good idea for the country shippers to keep in close touch with an acknowledged leading live stock commission firm and to always get its advice as to the best time for having stock on the market. Experience shows that it is best in the long run to not have several cars of cattle on the market at one time, but to divide them up, having part of them in one day and the remainder on other days, remembering the old adage about not having all the eggs in one basket. It is also well to see that orders for buying feeder cattle are placed carefully and that the cattle are not at the right time, are selected right and do not cost too much money. Buying stocker and feeder cattle right is as important as feeding and marketing them. At present prime feeders of heavy weight that can be returned to market in a short time are very scarce and dear, with sales at \$5.10 to \$5.40 per 100 pounds. Paying these prices looks risky.

Sellers of cattle in the markets of the country have had to contend recently with a wide-spread falling off in the consumption of beef resulting from its dearth. It is a period when the general cost of living is much greater than in former years, and all kinds of meats, especially beef and mutton, are extremely high. The packers claim that their prices are not unreasonable, but it is undeniable that ruling prices in the retail meat markets of the country are extremely high, and the question as to whether it is the fault of the wholesaler or the retailer or both is a matter of no particular importance to the man who buys the meat for his family. Wages and salaries have not increased with the cost of living, and retrenchment is necessary for thousands of families in planning the household expenditures each month. Then the winter has been a remarkably mild one on the whole, and this means a lessened consumption of beef.

The sheep trade has been greatly upset for several weeks by the Illinois quarantine against Michigan flocks, the sheepmen of Michigan having been obliged to turn to other markets than Chicago for an outlet. Buffalo was selected as the most available unloading point, and for weeks that market has been overstocked, prices ruling weak much of the time. Thus Chicago has been deprived of its principal eastern outlet, and this left the market in the control of the local buyers. The demand for feeders is unimpaired, but few suitable flocks are available.

The recent sudden boom in the price of prime heavy hogs to within 5 cents of the long-predicted \$7 top in the Chicago market made a decided sensation, although the cause of the sharp rise was an unusual scarcity temporarily brot about by a snow blockade on the western railroads. Correspondingly meager supplies were offered at all other western receiving points, and it was wholly an exceptional condition that could not last for more than a day. Of course, the big packers fully understood this, and they cordially acquiesced in the big advance in prices asked by sellers, being aware that the rise would be sure to bring about a glut of hogs in quick time. The big increase in receipts came quickly, and the decline in prices was far greater than the advance that preceded it. It may be said that butchers, east and west, do not take kindly to the idea of a \$7 hog market, and the fact that provisions are already selling extraordinarily high is looked upon as a serious obstacle to putting hogs on a higher basis than they have been selling of late. Of late pork has been selling in the Chicago market fully \$5 a barrel higher than a year ago, and other hog products have shown corresponding advances, while a short time ago the wholesale prices of fresh pork loins were suddenly lifted to 12 cents a pound. On the first day of February Chicago stocks of provisions aggregated 146,533,962 pounds, compared with 121,225,904 pounds a month earlier and 129,617,079 pounds a year ago.

Hogs have been selling of late at remunerative prices when of good quality and sufficiently heavy in weight, and owners have reason to be pleased that they matured them on high-priced corn. The recent substantial improvement in the eastern shipping demand is the strongest factor in bringing about the advance in prices that has taken place, and, so far as can be seen now, this outside buying is destined to continue indefinitely. At times recently there have been substantial advances in light hogs, these having been lowered previously to unduly low figures as compared with heavier hogs. Still there is no valid reason for immature hogs and pigs being hurried to market. So large a proportion of the pig crop has been marketed early this season, that it is not expected that the western slaughtering by packers will equal the January and February slaughtering last year of 7,100,000 hogs, that record having been much above any former year's.

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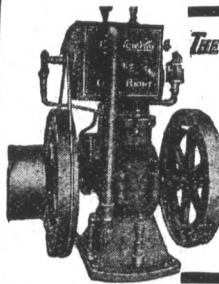
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Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also name and address of writer. Initials only will be published. In acute cases, where we believe that immediate treatment will be necessary, reply will be made by return mail, free.

**Mare Poor Milker.**—My 4-year-old mare dropped a colt, only going ten months; the colt was well developed, seemed all right in every way, but the mare had no milk. The same thing happened when she was six years old, and now is eight and in foal again. She was fed clover hay, bran, oats and some corn. The colts in both cases jumped right up ready to suck, but no milk. G. H. P. Jones, Mich.—Feeding her plenty of milk producing food, such as is fed to cows, is about all you can do. Had you commenced milking her a few days before she foaled she might have given some milk. Feed plenty well salted bran mash, vegetables and clover hay.

**Indigestion—Torpid Kidneys.**—My horse has had a few sick spells. Our Vet. tells me it is indigestion and stoppage of water. H. E. H., Millington, Mich.—Give a tablespoonful of the following compound powder in feed three times a day: Ginger, powdered rosin and fenugreek.

**Snag in Body—Nervous Horse.**—My mare threw herself last October, falling on a snag, making a wound which has never healed. I have applied fat pork, also used carbolic acid and water; but the sore discharges pus and I am anxious to see her get well. What treatment do you recommend? I also have a horse that is very nervous, always on the move and seldom standing still. When hauling a load and stopping to rest he champs bit, paws, bites his mate and is very uneasy. What can be done in such cases? W. W. E., Manistee, Mich.—The wound would have healed long ago if there was no splinter in body. If the injury was on the rib there may be a fractured bone. No matter which, cut down and find out why the wound still discharges, at the bottom of pus pocket you will find a foreign body. Apply peroxide hydrogen twice a day and also carbolic acid and water. Kind treatment and plenty of regular slow work will do more than drugs for your nervous horse. It is possible that he is placed wrong and should be exchanged for one that is better adapted to your work. A nervous horse is not always suitable for doing slow work.

**Dog Has Worms.**—I have a dog that I think a great deal of; he is growing thin and I am sure he has worms; what shall I give him? C. H., Benzonia, Mich.—Give 1 dr. powdered areca nut with a little syrup and in 6 or 8 hours give him 1 dr. jalap and 1½ oz. of syrup; this will physic him.

**Sheep Ticks.**—I have a flock of sheep that I am feeding for market and they are all troubled with ticks. What can be done for them? M. G. G., Vassar, Mich.—You can safely apply any one of the well known sheep dips that are advertised regularly in this paper and good results will follow. You will find the sheep will thrive better right after the ticks are killed.

**Chronic Cracked Heels.**—Some ten months ago I bot a mare that had sore heels; small sores were on hind legs from hoofs to hock and they have never healed. I greased them several times but it don't seem to do any good. F. E. M., Manton, Mich.—Clip hair off sores and apply 1 part oxide zinc and 4 parts vaseline twice a day. Give 2 drs. Fowler's solution arsenic at a dose in feed two or three times daily.

**Malignant Tumor.**—I have a 3-year-old colt that has a bunch on the inside of hind leg. This bunch came on 12 weeks ago. I applied castor oil thinking it a wart; this treatment has not reduced it. The top is raw and a scab falls off it daily. How can it be taken off? W. H., New Boston, Mich.—Cut it off and apply equal parts iodoform, boric acid and tannic acid to sore once or twice daily.

**Indigestion—Accidental Abortion.**—We have a 10-year-old horse that has not done well of late and not seeing a like case in vet. department, write you for advice. He kicks the stall floor, first with one foot then the other; there is a rumbling inside after taking either food or water, and his appetite is not very good. When standing he moves his tongue out and in mouth and drops his head. A 6-year-old cow lost a pair of twin calves at 1½ months. We do not know the cause. Cows standing beside her have gone their full time. We appreciate the Michigan Farmer more each year. C. D. W., Ewart, Mich.—Your horse is nervous, the result of indigestion. He should be exercised daily and fed plenty of vegetables, also give ½ dr. ground nuxvomica, 4 drs. gentian, ½ dr. ginger and 2 drs. powdered rosin at a dose in feed three times a day. I am inclined to believe your cow met with an accident, causing her to calve too soon; however, this will not hurt her or do your other cows any harm. Had she been infected your other cows could not have escaped.

**Bony Tumor.**—Have a horse with hard bunch on hind leg just above hoof. However, it is too high up for ring bone. It does not cause lameness but I have been told it could be removed with little difficulty. If so what shall I apply? O. S., Kalamazoo, Mich.—Such bunches should be left alone if they are doing no harm, for they are difficult to reduce.

**Collar Boil.**—We have a horse with a collar boil which remains raw no matter what is applied. M. G., Traverse City, Mich.—Put 1 oz. sulphate zinc and 1 oz.

powdered alum in 1 qt. water and apply to collar gall four times a day and sore will perhaps heal. If there is a hard bunch it should be cut out.

**Roarer (Thick Winded).**—I have a horse that is thick winded, glands swollen and am told it was the result of distemper. He is a nice horse, therefore I am anxious to have him cured. A. C. M., Allegan, Mich.—It is possible that medical treatment will not help your horse much and you may have to resort to a surgical operation before he will breathe free and make no noise. Apply tr. iodine to glands daily, also give 1 dr. iodide potassium at a dose in feed once a day. If this treatment fails call a competent surgeon who has had experience in this line of surgical work.

**Laryngitis.**—My cow calved Dec. 24th, she took sick six days later and I called Vet. who treated her for sore throat. She still breathes heavy and has trouble in swallowing food; otherwise not sick. Have taken her temperature repeatedly and it has never been higher than 102. She eats fairly well, chews her cud. W. C. E., Howard City, Mich.—First of all you cow has had no fever; the normal temperature of cattle ranges from 101¼ to 102 degrees, therefore her trouble can't be serious. Apply equal parts tr. iodine and spirits camphor to throat once a day, also give her 3 drs. chlorate potash at a dose in feed three times daily.

**Lymphangitis.**—I have a horse that has one thick leg. This trouble came on suddenly and I am told it is blood farcy. He is fed corn fodder, some corn, oats and oil meal, also has oat straw at night, will cornstalks cause stocking? T. J. F., Hart, Mich.—If corn fodder is badly cured and non-nutritious it may cause the limbs to stock. Give ½ dr. ground nuxvomica, ½ oz. gentian and ½ oz. powdered rosin at a dose in feed three times a day until the desired effects are produced; he should have daily exercise and be fed salted bran mash and vegetables to keep the bowels open.

**Bruised Shin.**—I have a mare that goes lame at times but never starts lame mornings, and after she has gone a few miles and rested she will occasionally start lame and limp for ¼ mile. I have known her to show no lameness for a week or two then show some soreness every day. She has not been right for the past six months. M. J. H., Coopersville, Mich.—Your mare strikes herself occasionally when in harness and is worse at times, depending on the roads, the rougher they are the more she will strike, if she was sprained the farther you would drive her the more lameness she would show; this is not the case with her, therefore she must be sore, and not weak on the leg. Shin boots will, perhaps, overcome the whole trouble, or by changing shoes may effect a cure.

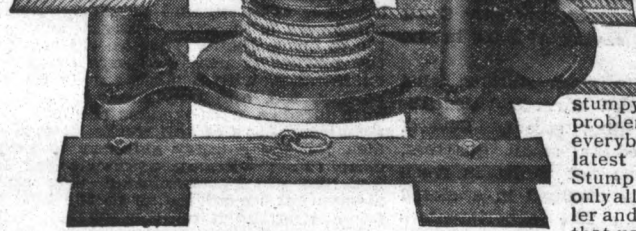
### The Secret of Dan Patch's Success.

Dan Patch seems to have no age limit. The champion of light harness horses established a new world's record for four consecutive seasons, and is now, altho twelve years old, stronger and faster than ever, and is believed to be ready for a new world's record. This fact has led to widespread discussion among horsemen. It has been generally agreed that Dan's great breeding and his unequalled class as an individual are not alone responsible. Scientific training and the most careful attention have had much to do with Dan's continued great form. Just how much can be estimated from the only interview ever given on this subject by Harry Hersey, Dan's trainer and driver since 1903, and the man who has driven the champion to fourteen world's records. Mr. Hersey said: "The success of Dan Patch, 1:55, is due largely to the care he receives both in winter and during his campaigns. Dan's day begins at 5 o'clock in the morning, both winter and summer, when he is fed four quarts of well-screened oats with two tablespoonfuls of International Stock Food, which is one ingredient of the champion's every meal. He always has a fresh bucket of water in his stall, and can drink when he likes. After finishing his morning meal he is 'cross tied' in the stall, the straw well shaken out and fresh straw put in. He is then brushed off, bandages removed, feet picked out, and prepared for his morning jog, which consists of five or six miles in winter. After his jog he is brot to the stable, thoroly cooled off with as few blankets on as will protect him. He is then returned to the stall, his legs are bandaged with woolen bandages and sheet cotton, feet washed out and about ten pounds of clean timothy hay given him, he being a very large hay eater. Dan is then turned loose in the stall until 11 o'clock, when he is given a feed of two quarts of oats and three quarts of bran mash. As soon as the noon meal is finished the feed box is removed and thoroly washed, and he is left alone to enjoy his afternoon nap, which he takes daily, and which lasts from one hour to one hour and a half. At 4:30 p. m. his stall is straightened up, and another ten-pound bunch of timothy hay, with a fresh bucket of water, are given him. At 5 p. m. he is fed four quarts of cooked oats and bran, two quarts of clean oats and two quarts of bran that has been mixed with boiling water and covered for at least two hours before feeding. After eating this meal the feed box is removed and washed and Dan is put away for the night. During the season of exhibitions Dan is fed four times per day. The morning, noon and night meals are the same as in winter, but we give one more meal at 8:30 p. m. a bran mash. The days that he goes his remarkable exhibition miles he is never tied to keep from filling up, but is allowed all the hay he will eat right up to the time the harness is put on him for his preparatory three miles. This has been Dan's daily care for the past four years, and under it he has continually improved in spirit, speed and strength until today he is more fit than any horse I ever knew anything about."

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You will see why we have made the Hercules of steel. The table gives the strength per square inch of each different material. Steel is the only material for the Hercules.

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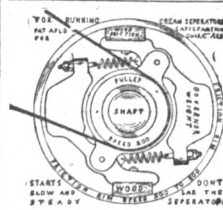


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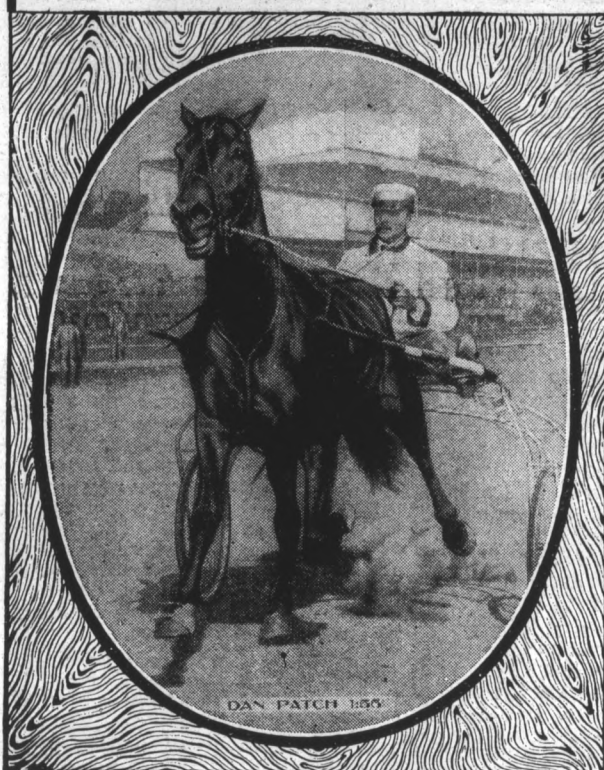
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In Six Brilliant Colors

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My new picture of Dan Patch 1:55, is the Finest I have ever gotten out for framing. It is 21 inches by 23 inches, is printed in six brilliant colors and is free of advertising. It gives his age and a list of all the fast miles paced by Dan. Being made from a "Speed Photograph" it shows Dan as lifelike as if you stood on the track and saw him in one of his marvelous and thrilling speed exhibitions. You ought to have a fine picture of the King of all Harness Horse Creation and the Fastest Harness Horse the world has ever seen. The first edition of this splendid picture cost me \$10,000.00 cash but I offer you one absolutely free. I will mail you one of these Large, Beautiful, Colored Pictures of Dan Patch 1:55 free with Postage Prepaid and full particulars concerning my plan of Giving Away a \$5000. Dan Patch stallion, including the special engraving showing the hairs to be counted, if you will simply Fill Out and Mail Me the Free Coupon Attached.

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ONE IMPORTED BELGIAN BAY STALLION, weight 1,600 to 1,700 lbs.; 1 Registered MORGAN Stallion, chestnut, weight 1,300 lbs. Sell or exchange for other property. H. H. JUMP, Munith, Mich.

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Herd headed by UNDULATA BLACKBIRD ITO 83836, one of the best sons of PRINCE ITO 50006, and Grand Champion Bull at the Detroit and Grand Rapids Fairs of 1907 and 1908. Herd consists of Ericas, Blackbirds, Prides, etc.  
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J. C. BUTLER, Portland, Mich.

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A few young cows soon to freshen, 3 now fresh, 3 bulls and 3 bull calves. Write for what you want.  
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EXTRA FINE—Holstein Bull Calf sired by a son of the greatest bull of the breed—dam gave over 60 lbs. of milk a day only a little past 2 yrs. old. Big growthy calf, beautifully marked. C. D. WOODBURY, East Lansing, Mich.

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One of them could impart the rare qualities of these great ancestors to all their offspring in your herd. Cost nominal considering benefit secured. Why not "build up"? "The Best" is cheapest.  
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HOLSTEINS—Yearling bulls all sold. Have a few well bred bull calves yet for sale.  
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JERSEY BULLS READY FOR SERVICE.  
Three young bulls ready for spring service, out of good cows with records of 400 to 500 pounds of butter in a year with only ordinary care. Also a fine lot of young calves. Write for description and prices.  
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Delaine Ewes. 3 to 6 years old. All safe in lamb. (April 15.) Big boned, big ewes, heavy shearers. Price \$6.00 each. L. R. KUNEY, Adrain, Mich.

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Three choice, dark red, richly bred, young bulls, from 8 to 16 mos. old. They are good enough to head pure bred herds and are priced worth the money.  
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Will make special prices for thirty days, on ewes from 1 to 3 years old, all bred to Imported Cooper, and Mansell rams to lamb in March and April, also on very choice ewe lambs, this is to make room for an importation that is going to arrive this spring.  
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CHOICE FALL GILTS and boar pigs. Right breeding and prices right. Also a few aged sows bred for spring farrow. A. A. Pattullo, Deckerville, Mich.

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Duke, and our new herd boar Prime Bacon 98611, a great son of the noted Lord Bacon, and of intense Masterpiece breeding. Guernseys, M. B. Tukeys, B. Fly. Rocks, Pekin Ducks. Hupp Farms, Birmingham, Mich. G. C. Hupp, Mgr.

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Chester Whites. I have 4 boars farrowed in Feb., long bodied, growthy fellows. Also March and April farrow, either sex. Also a choice yearling boar. W. O. WILSON, Okemos, Mich.

DAMS BROS. IMPROVED CHESTER WHITES, Litchfield, Mich. A won more premiums in '08 than any other herd in Michigan. Stock all ages for sale. Prize winning W. Longhorn and Buff Rock eggs, \$1 per 15. Shorthorn bulls & heifers.

CHESTER WHITES—Five sows bred for April farrow. Fall pigs of superior individuality. Write for description and price.  
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O. I. C.'s—ALL AGES. Thirty sows bred for spring farrow. Shipped on approval. H. H. JUMP, Munith, Mich.

O. I. C. from premium stock all sold except a few October pigs. Hood's Stone House Stock Farm, H. N. Hood, C. Phone 761-3r., Adrian, Mich.

O. I. C. Spring boars all sold have a few choice gilts left to be bred for spring farrow. Satisfaction guaranteed or your money back. A. NEWMAN, R. No. 1, Marlette, Mich.

O. I. C. swine very prolific. My herd is Chief, the world's Champion and Grand Champion, the greatest O. I. C. boar in the world, also a Grand son of Tutsey second, the world champion sow. Place your order now for spring pigs.  
A. J. GORDEN, R. No. 2, Dorrr, Mich.

DUROC JERSEYS—A few bred sows for March and April farrow, for sale.  
CAREY U. EDMONDS, Hastings, Mich.

DUROC Jersey of size and quality. 40 Boars ready for service. 50 sows at Farmers Prices. Satisfaction Guaranteed. J. C. Barney, Coldwater, Mich.

SPECIAL SALE of large, good style, prolific, young and mature Poland China Sows bred to extra heavy boned boars. Robert Neve, Pierson, Mich.

FRANCISCO FARM POLAND-CHINAS.  
Three choice spring boars still on hand. They are priced to sell. P. P. POPE, Mt. Pleasant, Mich.

P. C. SOWS—Extra choice, bred for Apr. farrow. No quarantine on us. WOOD & SONS, Saline, Mich.

P. C. SOWS of spring farrow, weight 175 lbs. up to 275 lbs. They are the kind that makes buyers money, and they are all bred to the two best boars in Michigan. BUFF ROCK COCKERELS, from prize-winning birds, priced to move them quick. All stock shipped c.o.d. WM. WAFFLE, JR., Coldwater, Mich. Both Phones.

POLAND-CHINA Gilts, bred. Light Brahma, B. P. Rock and White Wyandotte cockerels for sale. E. D. BISHOP, Route 38, Lake Odessa, Mich.

Yorkshires—Six splendid young sows bred for April farrow. A fine lot of fall pigs. Write for what you want. Colon C. Lillie, Coopersville, Mich.

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## POULTRY AND BEES

INCUBATOR AND BROODER PAID BIG INTEREST.

I have used incubators the past five years, hatching about 2,000 chickens in that time. Having used three different makes of machines, I may be able to help someone by giving my experience.

It doesn't make nearly so much difference about the make of the incubator as it does who runs it. When running an incubator you have to consider that first, the other work afterwards. The turning of the eggs should be attended to at a certain hour in the morning, and again the same hour at night, or the eggs may lie much longer on one side than the other during the three weeks.

I know my methods of handling the machine differs a great deal from the instruction books, and perhaps will be criticised, but they are satisfactory to me, as they always bring success.

### How Incubator is Operated.

I prefer a 200 to 300 egg machine, as it requires no more care than a small one, and one gets thru sooner. I plan to have the first hatch come off in April, as I never fill the machine with eggs that cost more than 15c a dozen, and there's a reason. Cheap eggs are fertile eggs. Why? Eggs do not hatch well until the hens are laying nearly every day.

When I fill the trays I stand the eggs on end and put in just as many as I possibly can, always removing all the turning devices first. Then I put an empty tray on top of the filled one and stand on end and crowd them down until I can put in some more. In this way a 200-egg machine will hold nearly 300 eggs.

I take a large, heavy comfortable and throw it over the incubator, not including the lamp, and this is left on during the hatch. It saves oil and protects the incubator from sudden outside changes.

I prefer to run an incubator on the same floor with the living rooms, as it saves steps. An east or north room is best. A west or south room gets too much sun in the afternoon and makes trouble by overheating the machine.

The instruction book says to get the empty incubator regulated and then put in the eggs, leaving the lamp alone, and also the regulator, letting the eggs come up to heat as they will, but I find that this sometimes takes two days. I usually put in the eggs at night and turn the lamp up high. With the number of eggs I use they are perfectly safe until morning. I leave the lamp turned up until the eggs are warm enough, which usually takes 24 hours. I test the eggs in from five to ten days and then I can usually put in the turning racks.

I don't leave the incubator to run all night without looking after, but try to be up from 1 to 2 o'clock, when I turn up the lamp. Otherwise the temperature is liable to go down several degrees before morning. I don't let it worry me if I forget the eggs and leave them out several hours while cooling them, as I have done two or three times. Even if they are nearly cold they will usually be all right. Also, if the temperature of the incubator suddenly rises to 110 or 115 degs. while the eggs are in there will be no injury, if this extreme heat does not continue long. In such cases the eggs should be removed, sprinkled with warm water and left out an hour or so.

If you want to go visiting, to be gone all day, while running the incubator, (and you hadn't ought to want to), be sure to turn the lamp so that the heat will run down rather than up, as the eggs will stand cold much better than too much heat.

### Getting the Chicks Into Brooders.

When the hatching time arrives I throw the instruction book away and follow the rule that common sense dictates. The instruction book says "hands off the incubator at hatching time," but I find that if there is ever a time one needs to be on hand it is then. Beforehand I prepare a number of boxes and baskets, covering the bottoms with old cloth, woolen preferred, and when about twenty or thirty chicks have hatched and gotten dry I take them out and put them into a basket, covering it with one or two thicknesses of cloth and setting it by the fire. This I repeat as often as there are more chickens to take out. The lamp must be gradually turned up as the number of eggs in the incubator decreases. The first half of the hatch comes off rapidly;

then they come slower, and then I begin helping them out by gradually breaking away the shell by hand. This lessens the number of chickens that die in the shell. The instruction book says that a chicken that can't help itself from the shell is lacking in vitality and not worth bothering with, but I have found this is not true, proving it by keeping them separate from the others and watching their growth. Those that cannot even make the first opening in the shell, but have to be taken out entirely by hand, are often good chickens in a few days.

By the time there are only fifty eggs left in the machine it is almost impossible to keep up the heat, with the frequent opening of the door that is necessary, so I finish up in the cook stove oven. By watching carefully heat greater than that of the incubator may be safely applied which will hasten the taking in of the yolk by the tardy ones. Those that come from the shell with the yolk not yet taken into the body can sometimes be greased with vaseline, bandaged and made to come out all right.

When the chickens are taken from the incubator as soon as dry and covered and kept warm, they will immediately cuddle down, go to sleep and remain quiet. But if left in the machine and allowed to drop into the bottom they are often not warm enough and do not remain quiet. By crowding and climbing over each other they keep the whole bunch stirred up and often cripple quite a few.

When I started into the chicken business I went to no expense except for my incubator and brooder. I borrowed the money for these of my husband. That fall I was able to return the money, and \$30 besides for interest. In addition I had an entirely new flock of pullets to keep. I built my own brooder coops, mostly of drygoods boxes. My brooder was a good one for outdoor use and had top and bottom heat. With the crate which my incubator came in I built a sort of tent and placed it in front of the brooder so that the chickens could be on the ground even when outside the tent the ground was covered with snow. The tent was covered with unbleached factory muslin which was oiled with boiled linseed oil.

When the chickens were taken from the brooder they were placed in the brooder coops. In these coops were built hovers just high enough for the chickens to stand in. A hole large enough to admit a jug of boiling water was made in the middle to supply heat for the first few nights and during damp spells. I am never troubled by the chickens piling up after they are taken from the brooder, because I always provide hovers as long as they care for them. It is really necessary to keep the chickens in yards for the first few weeks or a great many will be taken by hawks, or get caught in showers.

I will tell you what I feed my chickens. I feed them johnny cake. This I make with sweet or sour milk, or buttermilk, soda and salt. If one has middlings or bran to add to this it makes a better feed but isn't necessary. I mix and bake the johnny cake in the biggest dishpan I can get in the oven, letting it bake half a day. When you wish to discontinue the johnny cake do so very gradually. It is better to have the chickens accustomed to some whole grain from the first.

Barry Co.

K. T.

### SUCCESSFUL METHODS IN DUCK REARING.

With more and more attention given to poultry raising each succeeding year by American farmers, and with the poultry crop considered one of the most profitable branches of agriculture, considering the amount invested, it seems strange that more attention is not given to duck raising.

Ducks do not do well when housed with other fowls but should be housed and yarded by themselves. The houses need not be elaborate or expensive. A form of house used by many large duck raisers is one built in sections, each 8 feet wide and 12 feet long. On some of the larger duck ranches these houses are 200 feet long. The roof slants from front to rear, the building being 7 feet high in front with a height of 4 feet at the back. One sash of 6 lights is all the glass required for each pen, and this should be hinged to allow for ventilation. The sash of course, is on the south side to get the sun. A door on the same side, at one corner, completes the front. The house is made of one-inch matched lumber lined with paper. The roof may be of felt or shingles.

Ducks should have a little more space than chickens, not less than 7 square feet of floor space being allowed for each fowl. Early in the season we allow one drake to four females, but later in the season we thin out the males until we have seven ducks to one drake. It is best to buy breeding stock in the fall, as the prices are then more reasonable. However, it costs something to winter the fowls, and then there is the risk of losing them. In buying it is always well to pay the price and get strong healthy birds, rather than weaklings at a reduced price, as eggs from the latter will be a disappointment when you come to hatch them, and you might conclude that ducks were hard to raise. If you do not wish to purchase stock, and still wish to get into the business, a cheap way is to buy a few sittings of eggs and set them under chicken hens or in an incubator. In four weeks you should be well repaid for your month's wait.

### Feeding the Ducklings.

When the ducks have been hatched they are much easier raised than chickens. Every breeder will have a different ration to feed the ducklings, so I will add the one I have had success with. The little fellows are let alone for 36 hours after hatching, when they are put into brooders previously heated to 90 degs. Never put more than 75 in a brooder, and 50 is better, as they start to grow at once and the space under the hover is soon taken up. The floor of the brooder under the hover is covered with hay chaff and the runway with sand. About a foot from the hover we have a trof filled with mash, consisting of  $\frac{2}{3}$  wheat bran and  $\frac{1}{3}$  corn meal, moistened with milk (but not sloppy). A little grit is scattered over this the first day. Near the feed trof is a drinking fountain made of a pail inverted in a pie tin, which gives them ample chance to drink, but no chance to get their feet wet. The first day the feed is left before them, but after this they are fed every three hours, the remaining food being taken away, but the water is left day and night. After the fourth day, 5 per cent of the mixture is beef scraps, and water is used in place of milk for moistening. When two weeks old make the mash of equal parts of corn meal and wheat bran, with 10 per cent of beef scraps, and gradually increase the scraps until they compose 15 per cent of the mash. This, with a little green food, is used up to marketing at ten weeks old, when they should weigh from 5 to 6 lbs. apiece. Those intended for breeders are fed chopped oats in place of so much corn meal, and are given more range. After five weeks they are fed only three times a day, but water is always before them.

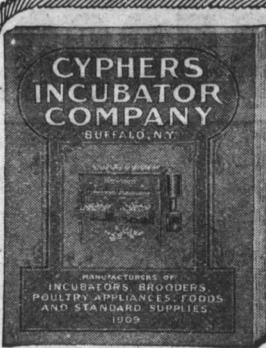
The brooders should be kept clean and dry, as the health of the ducklings depends upon it. The heat in the brooders is gradually reduced, according to the weather, until they are put into cold brooders. After each feed what is not eaten in a few minutes should be removed so as to give them an appetite for the next meal.

### Care of the Breeding Stock.

Breeding ducks will generally begin laying in December or January, but the first two or three dozen eggs are seldom fertile. After this the fertility will run higher than in hen's eggs, until June, when the eggs will be almost worthless for hatching. No breeder has yet found a method of caring for, or of feeding, these fowls which will produce fertile eggs after the natural hatching season is over. The eggs are laid at night or in the morning; so it is best to keep the fowls confined to the houses until nine o'clock, after which they will be thru laying. They do not take to nests but make a nest in the litter. When they leave it they cover the egg with straw. Ducks do not need a warm house, as they will stand considerable cold if their feet are warm. Plenty of straw or other litter must therefore be provided. It should be changed as often as it shows dampness.

The feed should be given in trofs so arranged that the ducks can not get in with their feet to tramp and waste it. The duck house should be well ventilated, but drafts must be guarded against. We have frames covered with muslin which take the place of the window sash during the mild part of the winter; this also helps to keep the house dry.

The laying ducks should always be fed ground feed; we have had good results with a mixture consisting of 3 parts corn meal, 2 parts bran, 4 parts of vegetables cooked and mashed, and 1 part beef scraps. We feed night and morning and think this sufficient, tho there are



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some who feed three times a day. Grit and oyster shells must be before them at all times, as well as plenty of fresh water. Do not look for many eggs, and especially fertile ones, if the water dish is allowed to get empty. In winter we put a hot brick in the fountain which keeps it from freezing for a long time.

#### Range and Green Food Necessary.

Ducks need lots of range and plenty of green food. Our yards are sowed to rye in the fall, which makes excellent green food in late winter and early spring. You will have very little sickness among your ducks if you keep the house dry and renew the bedding frequently. Occasionally one will go lame, but if put in a pen by itself it will soon be all right. When handling ducks always take them by the neck, and not by the legs, or you will injure them. Do not think that because you have no running water you cannot raise ducks. Many large duck ranches have no running water, yet they market several thousand ducks every year. Water to swim in is not considered necessary to successful duck raising.

If your young ducks are weak legged, have sore eyes, or hump their backs, you may be sure that you are feeding too concentrated food, with too little animal food. It is generally a case of all corn meal.

In hot weather shade must be provided in some way if there is no natural shade. Old doors set up on stakes answer the

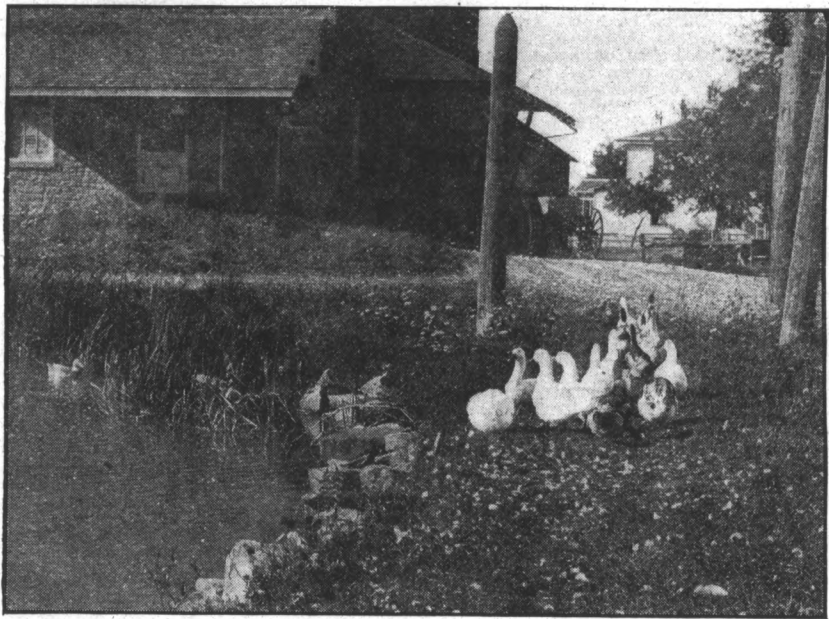
belongs to the inside, but it is desirable to have the part covered.

Nothing is so bad about a hive as a cover warped out of shape, just on account of lack of painting. Give the under side the same number of coats as the upper. For preserving only this would not be necessary, but if one side is left unpainted covers are more apt to warp. You see, the moisture from the bees enters the wood and warps it.

The color is also of importance. This must not be generally known, or one would not see so many hives painted in undesirable dark colors. The predominant color is red. I think this is because it is one of the cheapest paints, and then some paint may have been left from barn painting and it just comes handy for covering the hives.

Dark colors should not be used, as they absorb the sun's rays and make the hive hot. Light colors tend to expel this heat. If you have both light and dark colored hives, just observe and it will be found that the bees in the dark hives cluster out sooner when the sun shines real hot.

The best paint is made by using raw linseed oil and a good brand of white lead. The latter sometimes is adulterated, and such will not wear well but will scale off after one or two seasons. Buy a good brand of white lead, even if it does cost more. Raw linseed oil is better than the boiled. I know that the opposite opinion is held, but the boiled is only



Natural Water is Fine for Ducks But Not Absolutely Necessary.

purpose, or canvas may be made to answer the same purpose. If you do not provide shade you will wonder why your ducks straddle around and suddenly die. This applies to the old birds as well as to the ducklings.

Rats are very fond of duck eggs and young ducks, and must be guarded against or your profits may be gone before you realize it.

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#### HINTS ON HOME HIVE MAKING.

##### Painting the Hives.

The entire parts of hives should be painted. Especially do the covers and bottom-boards need to be well covered with the preservative, the former because they are exposed to the earth's moisture and rot soon, the latter so they will not absorb water and check and warp out of shape to admit wind or rain, and sometimes even bees.

There are, so far as I know, just two high class bee-keepers who contend that hive bodies ought not to be painted and that bees do better in unpainted hives. But against these there are hundreds and hundreds of bee-keepers who have never observed any difference in this respect, and when it comes to durability, appearance and the keeping of their shape, painted hive bodies are much ahead.

The bodies should have two coats. The edges, too, must be covered. They are not exposed, I know, yet if not covered with preservative rot is liable to set in because water works in between the edges. The inside need not be painted, nor the inside fixtures. A small bee-keeper once propounded to me the idea that moths would not infest hives that are painted inside. There is nothing whatever in this theory.

Bottom-boards should be well covered with paint. They are the parts of hives that rot soonest. The part of bottom-boards coming under the hives should also be painted. In a certain sense this

superior when applied hot. Then it will enter the wood pores well. Boiling the oil evaporates part of the water and makes it more viscous. Then when applied cold it does not enter the wood well, but forms a sort of skin on the surface that will afterwards peel or scale off. Less oil is required when boiled because it does not enter the wood so readily, but this is economy at the wrong end. Better use a little more oil and have the painting last a good deal longer.

The oil and white lead should be mixed so as to be of a smooth, creamy consistency. If you have never before mixed any paint let a painter give a lesson in this, or else use ready-mixed paint.

I prefer a wide brush, and not one of the cheapest kind either. Rub in the paint well by using plenty of elbow grease. For new work, have the first coat rather thin and the second one thick. For wood that already has been painted have the paint of ordinary consistency.

When repainting old hives first scrape off the old loose paint, dirt, etc. If this is not done it will scale off anyway and loosen the fresh coat with it. It is not really necessary to take out the bees for painting. Hives can be painted with bees in them. The edges can not well be covered and need not be if they have been painted once before. Neither need the bottom of covers be repainted. You see the paint does not wear off on such unexposed places. The bottom of bottom-boards ought to be repainted, and at the front as far in as can be reached with the brush. The fronts should be painted toward evening, after the bees have stopped flying. I mean the entrance of bottom-boards, not hive body fronts. Smoke the bees before commencing to paint so they will mind their own business. By the next morning the paint will be dry enough so that the bees will not stick to it.

Don't apply paint to hives that are outdoors during cold weather. It does not dry well and will not last so long. Wisconsin. F. A. STROHSCHIN.



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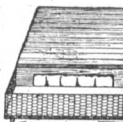


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DETROIT, FEBRUARY 20, 1909.

## CURRENT COMMENT.

The report of the Country Life Commission, which has been awaited with interest by many country people who have taken an interest in this inquiry, was recently transmitted to Congress by the President, together with a special message in which the significance of this inquiry and the reasons for the appointment of the commission were commented upon, and a recommendation was made that \$25,000 be appropriated to enable this commission to collect and digest further data on the subject. Lack of space in which to present the complete report and the message with which it was transmitted compels us to limit comment in this issue to a reproduction of a summary of the report which was inclosed with the document as received, the text of which is as follows:

The report of the commission describes with some fulness the existing conditions of farm life and points out the causes that may have led to its present lack of organization. It suggests methods for the redirection of rural society, for arresting the drift to the city, for maintaining the natural rights of the farmer and for the development of an organized rural life that will promote the prosperity of the whole nation.

Broadly speaking, agriculture in the United States is prosperous and the conditions in many of the great farming regions are improving. Country homes generally are improving in comfort, attractiveness, and healthfulness. Many institutions, organizations, and movements are actively contributing to the increasing welfare of the open country.

There has never been a time when the American farmer was as well off as he is today, when not only his earning power but the comforts and advantages he may secure are considered. There has been a complete and fundamental change in our whole economic system within the past century.

Yet it is true, notwithstanding all this progress as measured by historical standards, that agriculture is not commercially as profitable as it is entitled to be for the labor and energy that the farmer expends and the risks that he assumes, and that the social conditions in the open country are far short of their possibilities.

Rural society is lacking chiefly in a knowledge on the part of the farmers of the exact agricultural conditions and possibilities of their regions, resulting in the widespread depletion of soils with the injurious effect on rural life; in proper training for country life in the schools; in good highway facilities, and in organization for buying and selling.

There is an absence of any adequate system of agricultural credit, a shortage

of labor, often complicated by intemperance among workmen; a lack of institutions and incentives that tie the laboring man to the soil; the life of the farm woman is burdensome and narrow, there is need of adequate supervision of public health.

The farmer is handicapped by the speculative holding of lands, monopolistic control of streams and forests, waste of our natural resources, and by restraint of trade.

Some of the remedies for the conditions set forth lie with the national government, some of them with the states and communities in their corporate capacities, some with voluntary organizations, and some with individuals acting alone.

All organized forces both in town and country should understand that there are country phases as well as city phases of our civilization, and that one phase needs help as much as the other. All these agencies should realize their responsibility to society. Many existing organizations and institutions might become practically cooperative or mutual in spirit, as for example, all agricultural societies, libraries, Young Men's Christian Associations, and churches. All the organizations standing for rural progress should be federated in states and nation.

There are several great forces, or principles, which must be utilized in the endeavor to solve the country life question.

There must be a vast enlargement of voluntary, organized effort among farmers themselves. It is indispensable that farmers shall work together for their common interests and for the national welfare. If they do not do this, no governmental activity, no legislation, not even better schools, will greatly avail. The forces and institutions that make for morality and spiritual ideals among rural people must be energized.

There must be not only a fuller scheme of public education, but a new kind of education adapted to the real needs of the farming people. The country schools are to be so redirected that they shall educate their pupils in terms of the daily life. Opportunities for training toward the agricultural callings are to be multiplied and made broadly effective. This means redoubled efforts for better country schools, and a vastly increased interest in the welfare of country boys and girls on the part of those who pay the school taxes. Education by means of agriculture is to be a part of our regular public school work. Special agricultural schools are to be organized.

The country people everywhere are asking for good roads. Everywhere too they want a parcels post and the extension of the rural free delivery.

The commission has purposely avoided endorsing any particular bill now before Congress, no matter what its value or object. In the opinion of the commission, however, there are two or three movements of the utmost consequence that should be set under way at the earliest possible time because they are fundamental to the whole problem of permanent reconstruction. There should be organized under government leadership a comprehensive plan for an exhaustive study or survey of all the conditions that surround the business of farming and the people who live in the country, in order to take stock of our resources and to supply the farmer with knowledge.

Each state college of agriculture should organize as soon as practicable, a complete department of college extension. Local, state, and even national conferences on rural progress, designed to unite the interests of education, organization, and religion, should be held.

There is need for young people of quality, energy, capacity, aspiration, and conviction, who will live in the open country as permanent residents on farms or as teachers, or in other useful fields, and who, while developing their own business or affairs to the greatest perfection, will still have unselfish interest in the welfare of their communities. The farming country is by no means devoid of leaders and is not lost or incapable of helping itself, but it has been relatively overlooked by persons who are seeking great fields of usefulness. It will be well for us as a people if we recognize the opportunity for usefulness in the open country and consider that there is a call for service.

The suggestions of the commission only outline a general plan whereby the strong resident forces in the open country may themselves build up a new and better rural social structure. To accomplish this, the entire people must be aroused. The time for this is at hand.

In his recommendation for an appropriation to enable the collection of further data, the President mentioned the fact that the commissioners have served without pay, and that the further appropriation would be needed only for the necessary expenses incident to the collection and arrangement of more complete information along lines already started, and others suggested by the work already done.

Quotations from President Roosevelt's message, with which the commission's report was transmitted to Congress, making clear his views on country life and his reasons for appointing this commission, and comments on the report itself must be reserved for a future issue.

## JOIN THE MICHIGAN FARMER TRAVEL CLUB.

On another page in this issue we partially illustrate our "Trip Around the World" post cards. Any of these cards may be mailed to friends you desire to send them to. Aside from that, the educational feature is a grand one. With these illustrated post cards you can prac-

tically see the principal parts of Europe and become better acquainted with all parts of the world. This is a new feature and is one of the most instructive ever used. For school children, for instance, it enables every attendant of the public schools to improve in their studies of geography and history. These cards are hand colored photographic views taken from the photographs used by Charles W. Stoddard, the famous lecturer. Our offer to send a set of 50 of these views, each one different, to any person who will send us one new subscriber at our regular price of 75 cents a year, or two complete sets for one three-year subscriber at \$1.50, has made it possible for every subscriber or some member of their family to take a trip around the world. The sets are packed in neat boxes and we pay all delivery charges. We will send a complete set free for every new subscriber, regardless of the number. Please note the advertisement.

## HAPPENINGS OF THE WEEK.

## Foreign.

The recent elections in Germany show that the socialist party there has fallen off considerably in the number of voters appearing at the poles.

Russian officials are again discussing the question of following the Gregorian calendar. That country follows the Julian calendar, which is thirteen days behind that used by the remainder of the civilized world. International relations make it very inconvenient to have a variation of this kind. There is, however, considerable opposition to the change.

During the past few days other earthquake shocks have been felt in southern Italy, and many of the ruined houses of Messina and Reggio tumbled during the disturbance. The inhabitants have become so fearful of these conditions, that they absolutely refuse to live in houses, and are now mostly residing in tents.

A new system of identifying criminals has been submitted by an Italian authority. Heretofore an impression of the finger tips has been the best clue to recognizing criminals. The new system provides for the taking of a photograph of the back of the hand; the veination of which is an absolutely true mark to identification.

Announcement of the proposed marriage of King Manuel of Portugal to Princess Beatrice of England, daughter of the late Duke of Edinburgh, and niece of King Edward of England, was recently made.

Discovery has been made of rich mines of radium near Cornwall, England. Analysis shows that these mines are richer than the old mines of Bohemia.

The Chamber of Deputies of Spain have passed a measure, providing for home rule for the principal cities. This bill, which is the principle feature of the present administration, will likely be put into operation before the end of the year.

The Governor of Venezuela has revoked the decree, prohibiting traffic by smaller crafts between the island of Curacao and Venezuela.

Henry Vignaud, who has been with the American Embassy at Paris for the past 34 years, has resigned his position.

Thirty-four lives were lost by the collision of two vessels in the Mediterranean Sea, February 12th.

A meeting has been arranged between President Roosevelt and King Victor of Italy. The President will stop at Rome, while enroute on his hunting tour in East Africa.

A ship subsidy bill has been passed by the German Reichstag, providing for a line of steamers between that country and islands in the Indian Ocean and Australia.

## National.

The whole central west is in the grip of the worst blizzard of years. Traffic and communication has been generally disturbed, and in many places it is impossible to move trains at all. Much suffering will likely result from the storm.

The first meeting of the joint committee selected to arrange a plan of progress for the work in conserving our resources will meet at Washington, D. C., March 5. The several state and national committees constitute the joint committee.

Citizens from 42 counties of Eastern Kentucky are organizing for the purpose of putting down all sorts of lawlessness that has been so characteristic of that section and has prevented capitalists from developing the resources thereof.

The national tariff commission convention is in session at Indianapolis, Ind., this week.

A movement, national in its character, has started for the purpose of unifying the laws of the different states of the union. A council of 100 men from each state is to form the nucleus of the working force.

A fire in a theatre at Acapulco, Mexico, last Monday resulted in 300 deaths. The flames started from a moving picture film. There were only three exits to the building and a large number of the victims were crushed while endeavoring to escape.

The war department is about to send a battleship to Liberia, Africa, to protect the American interests there. Reports indicate that the government of that nation is very unstable, and outside interferences may become necessary.

Practically every municipality and organization thruout the country paid honor to Abraham Lincoln, on the occasion of the hundredth anniversary of his birth, February 12. Chief among the ceremonies were those at his birthplace near Hodgenville, Kan., where President Roosevelt and other persons of high rank did honor to the great American.

A measure has been introduced into the

present congress to rescind the action by the last session of that body providing for an increase of salary for cabinet members as far as it concerns the secretary of state. This action was taken in order that Ex-Senator Knox, of Pennsylvania, may become a member of President Taft's cabinet. A law exists which prohibits any member of congress taking advantage of an advance in salary while a member.

A jury has finally been secured for the hearing of the trial of Colonel Cooper and his son, of Kentucky, who are charged with the killing of ex-senator Carmack, of that state.

The inter-state commerce commission has ruled that express companies cannot be compelled to collect for liquor shipped c. o. d.

A movement to modify the recent traffic schedule, which was proposed for France against American goods, has been started by the government there. It was anticipated that should the high schedules be allowed to pass the chamber of deputies, the American government would reciprocate by establishing high tariffs against French importations to this country.

## CROP AND MARKET NOTES.

Gratiot Co., Feb. 12.—February opened with plenty of snow but badly drifted. The first week was warm, accompanied with heavy rain on the 5th, which took practically all the snow. The 9th brought snow, rain and sleet so that wheat is now partially protected at the root though very little snow covers the blade. Hogs sell from 5@6c; veals, 5½@6½c; butter, 18@22c; eggs, 27c; hay, \$7@8; wheat, \$1.02; oats, 50c. It is thought that stock is not feeding as well as they would with steady cold weather.

Kent Co., Feb. 11.—February came in with a blizzard and if we don't get the proverbial six weeks of winter in March, we are likely to get all we need. We now have enough snow to make a good run of sleighing if properly distributed. Stock shippers find little to do just now. String butchers get barely stock enough to satisfy their trade, the older class of hogs and cattle are nearly all gone, and fall pigs are scarcely up to the shipping point in weight. These will begin to go to market inside of two or three weeks. The scarcity and inevitable high price of grain will undoubtedly tell its own story on the spring and early summer meat supply. Times quiet and little or no complaint among farmers.

Oceana Co., Feb. 13.—While other sections of the country are reporting blizzards, snow blockades, avalanches, and earthquakes, Oceana county has suffered from neither, and only once has the mercury gone below zero—when it registered five degrees below for a few hours. There has been a rather uneven distribution of snow, heaping it in some places and leaving others bare. But yesterday and last night the earth was covered with a white mantle, so that today there are smiling faces and jingling sleigh bells. All kinds of farm produce are bringing good prices, which, of course, makes every producer satisfied. Local dealers are paying as follows: Wheat, \$1 per bu; rye, 72c; oats, 55c; corn, in ear, 35c; buckwheat, 65c; potatoes, 60c; onions, 40¢@70¢; beans, 1.35@2; hay, \$10@12 per ton; straw, \$5.50; wood, \$2 per cord; butter, 25c per lb; eggs, 25@28c per doz; apples, 80c per bu. The apple crop was small last season—owing to the heavy crop the year before. We hear many prophesying lots of fruit this season. A large quantity of young trees were planted last spring and many orders have been given for delivery the coming spring, peaches and cherries predominating.

Branch Co.—Weather for January generally unfavorable for wheat. Snow protected same only for about ten days during the month. The last week of the month saw a few days of sleighing, the first of the winter. Stock generally looking well, except hogs, which are far below the average for this season, both in numbers and weight. Wheat, \$1.05; oats, 48c; corn, 63c; clover seed, \$4.50@5 per bu; hogs, 5@5½c; timothy hay, \$7; clover, \$6 per ton.

Eaton Co., Feb. 6th.—Prices have advanced since last report. We have had all sorts of weather, from 21 below zero, to what seemed like summer, and started some plows. There are reports of dandelion blossoms being seen. All kinds of stock doing well. Wheat has advanced to \$1.05, and beans to \$2.10, potatoes to 65c, timothy hay to \$8, clover seed \$5, alsiike \$6@7, hogs \$6@6.75, calves \$6@7, lambs \$6@6.75, sheep \$4@6, cattle \$3@5, chickens 10@11c, eggs 25@28c, butter 20c. The stores pay only 25c for eggs, but one of the large buyers pays 28c for large, clean fresh ones, one or two cents less for small ones.

Genesee Co., Feb. 6.—After the big snow storm of January 28-29, when roads were blocked for several days a warm spell caused the snow to disappear very rapidly and considerable rain fell on the 5th of February. This makes the second fine rain since winter set in and as little or no frost remains in the ground the water soaks in and will fill wells and springs, something badly needed after the excessively dry fall and early winter months. Roads are now getting quite muddy and this interferes with marketing produce. Grain, hay, live stock, dressed hogs and poultry, besides potatoes and other vegetables have been moving rapidly, with prices holding up remarkably well. Farmers are now shipping their baled hay. Great quantities of this product are shipped to eastern markets. Prices have been from \$7@8.50 as a rule. It is not uncommon to find farmers who have one hundred tons or more to sell. Prices on butter and eggs have held up thru all the soft weather we have had. Eggs have been as high as 35c. The present price is 5c less, but they are very scarce at that. Butter has remained at a good figure all winter. Farmers are getting 22@24c, while the creamery product sells at \$28@30c. One of the most remunerative cash crops to the Genesee (Continued on page 199).



# 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.

## DESOLATED TIMEGAD—An African Contribution to Roman History.

BY FRANK J. PHILLIPS.

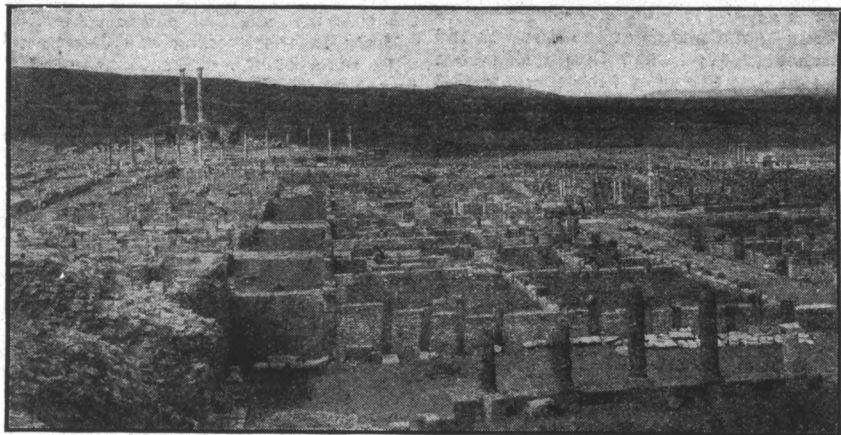
It is natural that Rome should be the lodestar of medieval history since it is Rome that has most materially influenced modern conditions and it is the Roman antiquities which are still so marvelous and so well-preserved as to be the delight of thousands of historians and tens of thousands of tourists. "When you are in Rome or the ancient Roman provinces, see what the Romans did" is already nearly as prominent a saying as "When you are in Rome do as the Romans do." The life of no nation is more replete with true historic grandeur and with enthralling fascination. What a host of historical workshops in which events were made and what a setting in which the world's pendulum swung! What scenes are conjured up when we think of Rome,

Aures Mountain Range in the ancient province of Numidia and was known to the Romans as Thamugade, while to the historian of today it is known as Timegad or Timgad. It was built for the same purpose as were most of the other Roman cities in Africa, that of a complete occupation of the country and as a center from which to disseminate Roman law. Owing to a complete subjugation of the people in the region at the time of construction, it was not considered necessary to fortify the city on all sides as was done with most Roman cities of the time.

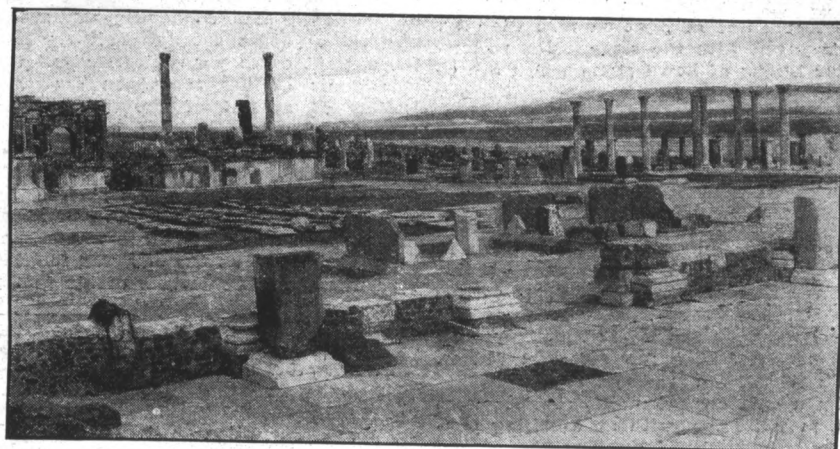
Its manner of construction is a marvel of the versatility of the Roman soldier,

just as Rome itself stands pre-eminent in an all-round national development of art, literature, building, etc. Most of the actual building work was done by these sturdy followers of the sword and battle-axe who wielded to perfection the homely implements of construction, leveling hills and mountains so that their roads which were constructed from one to two thousand years ago are still suitable for travel; erecting cities and mammoth buildings as tho their apprentice days had been spent as hewers of stone rather than as hewers of human heads, and above all completing these marvelous edifices in an incredibly short time yet in so substantial a manner as to outlast

more recent works of supposedly great builders. It is a strong compliment to the Roman soldiery that they were able to build as well as destroy, and that the growth of the Roman empire was due nearly as much to their developmental ability as it was to their ability to subjugate their foes. Modern nations with large armies could certainly learn a lesson from the accomplishment of the Romans before they commenced to decline. Timegad is highly illustrative of Roman achievement when the empire was at its height. It is in a better state of preservation than any of the other remains of cities which were built in its day or previous to its time. From its ruins we may gain a fund of information which will not only serve to convey a remark-



General View of Timegad, Algeria, showing its Regular Construction as Restored by the French. Pile at Left Shows Remains before Restoration.



Ruins of the old Forum at Timegad showing Bases of Statues Flanking the Huge Columns, and the Triumphal Arch in Left Background.

Pompeii, Carthage, Timegad and a hundred other cities which form the crucible of Roman thought and activity, and made the progress in art, literature, building, commerce, war and general mode of living assume a more complete development than was ever known before. It is true that other nations excelled, in one or a few lines of development, what the Romans did, but none had shown such wonderful achievement in all lines of human activity.

### Ruins of Timegad.

The student or traveller who desires to make a study of Carthage and Rome should first journey to North Africa and view the magnificent ruins of Timegad, since these ruins have not suffered the marks of time and depredation that have Rome and Carthage or any of the other great ruins so characteristic of the medieval period. Situated as the site is in the interior of Algeria, far removed from the marts of trade and rarely visited by even the native caravans or tourists, it is natural that these ruins should not be despoiled as are those which are easily reached by the tourist or are occupied by a present city site as is the case with Rome and a few of the less prominent cities. It is easy to comprehend that the final despoliation of the city was one carrying with it some wealth in precious metals and stones with some art of a provincial nature but still worthy of a handsome price. Now the natives find only the artistic remains of the heavy-stoned buildings, which to them mean no more than any other stone in the Algerian wastes, and if they pass that way it is only in pursuit of their business or as a chance guide. Truly, Timegad is a worn, shattered plaything in the world's attic storehouse of old relics and is carelessly thrown aside by all save a few historians.

The city was founded in the year 100 A. D. by the Roman Emperor, Trajan, who decided there was need for another city between the cities of Lambesi and Mascuta and hence started it on the site of a small Roman fort which was already in existence at this place. Timegad is situated, then, on the last spurs of the



Gorge of Constantine, in Algeria.—One of the Sights on the Way to Timegad. The Largest and Deepest Canyon in North Africa.

ably good understanding of Roman buildings and Roman customs in northern Africa but also greatly augment that surrounding Rome itself. We cannot say that even in its most glorious days it had a standing as one of the foremost cities in politics and strategic importance. It never had the distinction of large size but, standing out alone in its desert realm with the bordering fringe of magnificent, greenclad mountains, its columnar ruins shoot up like well-carved pawns on a still greater chessboard—so regular is its construction on streets running at right angles to each other—and teach a lesson better than the ruins of greater cities of its time. What it serves to show in its simple, yet well preserved way means a great chapter in Roman history.

### Entrance to the Ruins.

Stumbling along over a rambling, stony trail which leads in the direction of this ancient city the searcher finally strikes the well-built Roman road which led from Lambesi thru Timegad to Mascuta. This road naturally forms the main street of the town and serves as a basis around which the city is built. Shortly after striking the road, one comes to the city border and the famous triumphal arch which formed a gateway to the city and which probably outranks all others in Africa in beauty and solidity. It is a huge structure with three portals, the largest of which is in the center and was for the use of chariots and horsemen, while the two smaller, flanking portals were reserved exclusively for people on foot. One author describes the facade as being ornamented with four marble columns surmounted with Corinthian capitals. In the panels are two niches framed in smaller columns and holding statues which were undoubtedly of Trajan and others in the imperial family. An original and rare feature was the circular domes which were placed above the two wings and stood out from the line of the center. At the base is an appropriate inscription telling of the founding of the city by Trajan and its building by a legion of soldiers.

Even today this arch, standing as a ruin, has a resemblance closely akin to



its original beauty and grandeur. Because of its immense size and the large blocks of stone used in its construction, it is quite apparent why it should remain as the best preserved ruin in the city. Small portions of other ruins, such as tablets and portions of columns from the forum have been found in nearly perfect preservation, but nothing can compare in entirety with this massive gateway. Glancing at it from a distance, it seems like a fitting entrance to a live, active city in which a long past civilization is still at its height and in which people long since dead are still busy with their part in the game of living. Once at the gate, the full impression of the city's desolation is apparent, the ruins are easily apparent long before the gateway is reached. Broken column follows broken column in the diminishing perspective of the surrounding desert. Some of the streets which have not been cleared are partially filled with piles of debris which remind one of the talus of a rocky cliff. Cracked and broken tablets in memory of long past deeds resemble the broken tombstones seen in our more ancient cemeteries. An occasional salamander blinks for a moment in the intense sunlight and disappears in his rare home of fallen friezes and fluted pillars, while the native birds flutter from pile to pile in strange contrast to the activities which once held sway over the same site. The French government has done a wonderful work in cleaning up and restoring the city, but no restorer of even Herculean power could possibly bring back the appearance of the city in the days when the legions tramped its streets.

The main street leads directly past the forum and straight on thru the city. It is paved with the large, thick rectangular blocks of hewn stone which are so characteristic of Roman roads wherever their remains are found. The road is well preserved and still well suited for travel, since frost heaving and freezing have not affected it as they would have done in a colder climate. Lack of rain has also prevented silting and general deterioration. Ruts are deeply worn in the paving stones and show that this main street was a favorite promenade for the chariots. Footpaths were not separated from the roadbed in those days but consisted of a few feet reserved on each side of the roadway.

On a gala day when the chariots were out in full force, with an admiring populace filling the footpaths, this street must have been an inspiring sight. No sight of vehicles can compare with a line of well carved, burnished chariots, each drawn by four sleek horses and driven by a sturdy charioteer richly clad in the flowing Roman tunic. In the days when the Romans employed the richest colors and gave over to luxury all that could be given, it would have been a great study to have watched from the house tops the concourse filling the street. To the student who had watched the athletic Roman go into decline thru the enervating effects of luxury it would be sorrowful; to one thinking only of artistic effect, it would have been an epicurean delight.

This main street is one of the broadest, if not the broadest of any found in the ruins of ancient Roman cities; its breadth is due to the fact that the city was built all at one time and there were no buildings to interfere with the construction of the streets as was the case in cities of long continued, gradual growth, such as Rome, Carthage and Pompeii. Two beautiful fountains, designed for the combined use of horses and people, were discovered flanking each side of the street. The base stones are so deeply worn that it is evident that immense numbers of people gladly made use of these necessities. In this connection it may be well to note that the water supply for the city was brought from the far distant mountains and was carried to the city by artificially constructed conduits requiring considerable engineering skill in their construction. These conduits supplied the city fountains as well as the open canals in which the water flowed thruout some of the streets much as it does in a few of our western cities in the present time. Hygienic engineers have declared that this is the ideal way for cleaning city streets, and when one arrives on the ancient city site today and finds the long distance necessary to traverse for water, too great credit can scarcely be given to the work of these ancient builders. Today wine diluted with water is used to quench the thirst, and it is only with the greatest difficulty that sufficient water is obtained for this purpose.

#### The Forum.

Just as the triumphal arch is the best

preserved of the city ruins, so the forum, which is centrally located, is the most interesting of the ruins from the student's standpoint, or even that of the casual observer. The main street furnished an excellent place for the promenades and processions, but the forum was the centre of the city's activities, both as to pleasure and the serious phases of city life. The centre of the forum is an open quadrangle, still better paved than the main street, and was surrounded by a walk which was raised two steps above the general level. This walk was covered by a portico to give shade. Along the two sides of the forum were flanking rows of pillars which added materially to the majestic appearance and hinted of old Rome. At the two ends were buildings of various sizes. Compared with the forums of larger cities this one is small in size, but for the purposes for which it was needed in this city it was entirely adequate and fits in more perfectly with its surroundings than a much larger forum would have done. It should be borne in mind that the city was not well situated for a large development, and that the respective sizes of the various important buildings could be almost arbitrarily decided upon in the beginning so as to secure a proper correlation of size. At one end of the forum was the law-givers' court, or "basilica," which was built in a rectangular form and much more simply than were similar buildings on the European side of the Mediterranean sea. It was built of heavy stone with pillars at the sides and ends of the building, but with no pillars inside as was usual in such buildings. At one end of the interior was placed a stone platform on which the judges sat and before which the ancient cases were tried. About the side walls of the room are scattered images of several of the members of Trajan's family. In the great niche, which is at the opposite end of the building from the judges' platform, it is evident that a large statue was placed. No sign of the statue remains and no absolute proof can be found as to whose likeness it was, but as the city was founded by Trajan, and as statues of his family

are found all along the side walls, it is reasonable to believe that this was the emperor's statue. This seems a still more natural conclusion when it is known that it was a well recognized custom of the time and it would be quite out of the ordinary to find any other statue in the place of prominence.

At the other end of the forum was built a rostrum for public speaking, the "curia," or town hall, and a famous statue to Augusta Fortuna. The Romans were noted for addresses to the populace, and so a rostrum for public speaking was nearly as essential as the town hall or the law-givers' court. Many of their greatest speeches were delivered before the public, and as the forum was designed as a common meeting ground for all, no more fitting place could be selected for the rostrum. The "curia" as a meeting place for the city rulers was magnificently furnished and probably excelled in beauty and decoration all other buildings in the city. It was, however, much smaller than the "basilica," since it was designed to accommodate a much smaller number of people. The statue to Augusta Fortuna was the best in the city and was placed as nearly as could be between the rostrum and the "curia" in what was the most commanding position in the forum. It was erected by two women according to the provisions of their father's will and was symbolic of the good fortune which it was hoped would insure the city a long and prosperous existence.

Along the two sides of the forum were placed numerous statues to rulers, prominent citizens and other benefactors. On the side which bordered the main road were rooms for public comfort while directly in the middle of the side was the entrance of the forum, thru which both the rich and the poor, the scourgers and the scourged, sought justice, knowledge and recreation. The comfortable shade made it an inviting place for the loungers and beggars, and here, too, they could view the more or less exciting events characteristic of the forum activity, and gain coins by begging in the forum or at the entrance on the main street.

## The Hop Picker From Port Simpson

BY ANNA GIRMUS.

All was commotion on the beach. Each of the long, strong cedar canims was a center of activity. Women carried down blankets, provisions and cooking utensils in the form of an iron kettle or skillet and helped pack their loads in the boats. Not many words were wasted and the work proceeded rapidly. Only one canoe still remained ownerless, deserted. Now and again some member of the party, usually some of the younger women, allowed her glance to steal in the direction of the silent boat.

It was August and in four weeks the hop crop at Puyallup would be ripe for the picking. It was easier to pick hops than to cut logs or to fish. Then, too, the journey down the coast for miles and miles afforded opportunity for all sorts of adventures and visits to the white man's cities. All these considerations had induced the Siwash about Port Simpson to start on their annual trip.

Most of the canims were ready to receive their passengers, when there appeared on the path a tall, broad shouldered young fellow, carrying in a neat pack slung across one shoulder a bag of provisions and some blankets, across the other his cooking utensils, in his left hand a gun and in the right a fishing rod. Crossing to the empty boat, he disposed of his load and stood up to look at his companions.

The older men only grunted at his appearance. The younger looked interested, for until now it had been that some of the younger men were to go in the canim. Each of the other boats had its full load, ranging from four to eight persons and the necessary supplies. In an emergency, it usually took three or four to manage such a boat, but Skookum Dan was alone and evidently intended to start alone.

Slowly the canim slipped into the water and glided out past the point and down the entrance toward the midday sun. Propelled by the strong pull of the tide, they moved forward almost silently. The bright sunshine warmed the air evening, and gave to all a joy in life that which had begun to cool the previous comes to the well and strong in a clear, almost ideal atmosphere. The voyagers gazed on the familiar scene, stolidly and

settled back as comfortably as possible to make the most of the day.

When the tide ceased carrying them forward, they landed and waited for its return. Your Siwash has no intention of using his muscles when old Mother Nature has provided a so much greater force to propel his boat, and time is for the use and enjoyment of man. When night came they landed and camped. In this leisurely manner the party proceeded.

One evening they reached the mouth of the Skeena River where they were to encamp. As usual, Dan neared the shore first and noted with satisfaction that there were already several canims at the old camping place. Evidently the Siwash from some rancherie (that gathering of houses in which the benevolently disposed Canadian government shelters its red wards of the Northwest), were also on a journey, possibly with the hop fields for their destination. If so, the two parties might proceed together, for they were all friendly tribes. Fastening his own boat at a distance from the others, he strode toward the place where preparations were being made for the evening meal.

"Klahowya," he called cheerfully to one of the men, who appeared to be a leader.

The greeting was returned in kind. Then followed explanations, during which the stranger scrutinized the young man with interest. In the midst of the conversation, Dan stopped, his eyes resting involuntarily on the figure of a young klooch who had come to the fire with a large fish dressed for the skillet. The older man waited for him to finish his statement.

"There is your party," he observed suddenly, as the canims came in view. "Big Abe I know, and some others. All go together morning."

While greetings were being exchanged by the other members of the two parties, the broad-shouldered young giant stood watching the maid at her fire. And truly she was good to look at. The figure, tall and slender for a Siwash woman, would have rejoiced the heart of her civilized white sister with athletic ambitions. The face, altho but a shade less dusky than that of her companions,

demanded and received attention. The features were less dull, less stolid. The chin was smaller. The soft, red lips covered small, even, white teeth. The cheeks were slightly elongated. The brow was rather high, smooth and firm. The heavy black hair was plaited in braids which, in their turn, were pinned about the rather small head.

She turned to break up sticks for her fire, but Dan read her wants. "Wait, I'll bring some," he requested.

Without receiving her consent he took an ax and in a few minutes returned with an armful of dry wood. Soon he had coaxed the fire to a bright blaze while the dark eyes of the maid observed him furtively. The broad, erect shoulders, the alert manner of holding his head, attracted her.

She remembered always that her father had been white and altho several of the young men of her grandfather's tribe had tried to court her, she had treated them with such scant courtesy that they had learned to shun her. The white men whom she had seen, the loggers and ranchers who occasionally had dealings with her people, possessed a manner that she liked. She could not be reconciled to the slow, easy, carelessness of the red men. In her heart was an unrecognized determination to be like the people of her father's race, to progress. She had been eager to start on this journey to the hop fields for she would have an opportunity to see more of the white man's way of living, perhaps to in some way make it her way, and at the very outset this broad-shouldered, black-eyed man of the woods stood at her fire and she could not treat him with the contempt she had shown others.

Early in the evening she disappeared with some of the other women and he saw her no more until the party was getting ready to start the next day. The boat in which she was seated was well loaded, a fact which he observed with pleasure.

Soon his own canim outstripped the others and when they reached the place where they intended to camp he had prepared a fire and an abundant supply of fish was on hand.

The third day, when they were about to embark there was some trouble among the occupants of the crowded boat. The girl with the thick braids of hair, hesitated about taking the place left vacant for her. The dark eyes gleamed angrily at the two young men between whom she was to sit.

"Come, Alice," called one of the women. "You're the lightest, hurry. Bill and Joe won't hurt you. Don't keep us waiting." The other klooches well knew the girl's disdain of their brothers and resented it. To them she was a presumptuous klooch. If her grandfather's people had been good enough to supply her wants so far, they surely were good enough for her to marry.

"Yes, hurry," admonished one of the older men. "The others are all starting." "One or two of you come in my canim," invited Dan. "I am alone and have plenty of room."

Those in the boat looked at the girl. Would she disdain this handsome stranger, too?

"Come," he called to her, "and another can come, too," he added as he saw her hesitate. "Your canim is plenty full then."

One of the young men jumped from the boat and soon the three were on their way with the rest.

Alice sat silent all the day, but the men were more sociable.

"We'll use the sail a little here," Dan said as a slight breeze arose.

The girl sought to help, but he silently motioned her back. Her eyes met his in surprise. Then a gleam of anger flashed out at him. If he thot to win her that way! The lips curved scornfully.

Presently the breeze filled out the sail and the little boat shot forward. Dan's eyes watched the sheet eagerly.

The occupants of the other canims profited by their example and the tiny fleet of sail boats bobbed merrily along. Even long Dick, the laziest of the travelers, straightened up under the exhilarating influence of the motion.

Alice's eyes glowed with excitement. Her face was raised to catch the livening breeze. She eagerly watched the passing trees and every nerve of her body tingled with the desire to do. Dan, watching his sail, still found time to observe the maid. His own body thrilled in response to the tense expression of hers. He, too, would do, that he might win the commendation of those dark



eyes, tho now they held nothing but scorn for him.

The camp was noisier than usual that night. In some mysterious manner a quantity of white man's firewater had found its way there. The next day was spent on the little island altho game and fish were scarce. When a start was made the third day, most of the men were fit for nothing but lying back in the boats.

Alice silently watched the trees rising one above the other on the hills until they were lost in the blue of the heavens, but her soul saw little of the beauty. The drunkenness, the squalor about her, filled her with unutterable disgust, with unutterable longing to escape from such surroundings.

"There is a breeze today, why don't we sail?" she suddenly demanded scornfully of Dan, who, while not quite among the worst of the offenders, was still plainly suffering from the day after.

The tone stung the young man. His eyes met hers squarely. "If you wish it." He reached to adjust the sail.

"What'd be the use," she asked. "The others would not follow. Here the provisions are almost gone and they had to stay where they could get nothing, almost two days. Now I suppose they'll stop somewhere to beg."

Dan remained silent. He knew that he shared in her displeasure. He had never known a klooch to object so strongly to firewater. Strangely enough her objections only increased his wish to please her and when they landed he made special effort to catch fish enough for the entire crowd.

That evening an elderly klooch, Alice's aunt, found the girl seated on a hill overlooking the inlet. She sat down by Alice, who arose to go away.

"Sit down," commanded the elder woman. "I have something to say." After a pause she continued. "You must remember that your maidenhood days are passing. You are much older than most klooches when they take a man. You left one after another of the young men go and now you are acting as if this stranger is nothing. You think because of your white blood that you must have a white man."

Alice made no answer. Her eyes were fixed on the water before her.

"You have been allowed to do as you like until you think yourself better than your mother's people, but I can tell you that if you are proud of your white blood, this young stranger has every bit as much to be proud of, even more. His father, the great MacDonald, was whiter and bigger than your own father and he cared for Dan as long as he lived. He was not ashamed of him."

The girl winced. Her father had disappeared when she was two years old. Her mother, as long as she lived, looked for his return and told her child wonderful stories of the home to which that father would take them. It was this that had aroused the latent ambition inherited from that same father. She had determined that she should never be the woman of a Siwash, but if Dan, too, was a breed, that made a difference.

She did not allow her mother's sister to see her changed opinion, but permitted her to talk without interruption and, when she had finished, silently followed her to the camp. But the next day she treated her new admirer with less scorn.

Several days later they had reached a small island on the landward side of Queen Charlotte's Sound. The provisions were rapidly disappearing and they found nothing with which to re-inforce the larder. "It's early," argued Dan. "Why stay here. Let's cross over to Tyee George's island. We will be sure to find plenty of fish there and maybe get a chance to trade some for meat and flour at some logger's camp."

Big Abe looked for several moments toward the east. "The trees say that a storm is coming from the rising sun," he said simply.

"Maybe tomorrow," responded Dan impatiently.

"The young are wiser than their elders," interposed Long Dick. "Even the wild animals have hid and the storm is not far away."

The other Siwashes acquiesced in this decision and began to arrange for the camp.

Dan scowled. He had no intention to stay on this island perhaps three or four days with an empty stomach. A bit of adventure appealed to him. "I am going," he announced shortly. "Anyone want to come?"

Not one of the men stirred. He started

for his boat. As he was about to shove off Alice jumped in. "Aren't you afraid?" he asked.

"No. Why?" came the answer.

"It may storm."

She laughed.

He set sail and the slight breeze carried them rapidly westward. For an hour they sailed merrily toward their destination, talking of the places they would see on their trip and of the customs of the white people, for Alice had dropped much of her reserve with him. He had been at Puyallup before and, finding her a willing listener, told of the things he had seen. He had never voluntarily thot as much as she of his white blood, but unconsciously he was strangely fascinated by the neat, orderly homes and the thrift of the ranchers.

"It must be good to have such homes

garments and at times hid the shore from view. It required all of Dan's strength and skill to keep the boat pointed toward the land. He found no time to reef in the sail.

There came a slight lull in the storm. Alice half rose to lower the sheet but the wind veered suddenly and before she could dodge the jibboom had struck the side of her head. If Dan had not promptly thrown himself forward and grasped her skirt, in a moment she would have been overboard.

In the interval he lost his bearings and the coming twilight, together with the misty rain, hid the island from view. All that he could do was to keep the boat from capsizing. Alice lay unconscious, with her head against his knee. It seemed to him that he had struggled thus with the elements for hours and



Harbor of Algiers, Africa, at time of the Visit of King Edward.

as you tell of," she said wistfully. "To have meat always, and flour, and vegetables even in winter."

"Some of the women," he continued, "wear clean, white dresses every day and there are no tins around the door."

"And the firewater? The men never drink it?" she inquired.

Dan smiled. "Yes, sometimes."

"Not all of them, for once a man came to our rancherie and he talked much against the firewater."

"That would be a missionary. They don't drink it, but why don't you like for men to drink firewater?"

A shudder passed over her. "It makes me 'fraid," she explained. "The men act different, not like themselves."

A gust of wind interrupted their con-

versation and he must give up. A sudden cessation of rain showed him the shore near at hand but the next instant the wind, as if afraid of losing its prey, veered again, striking the sail squarely and upsetting the tiny craft.

(Continued next week).

#### WASHINGTON'S BIRTHDAY.

BY GEORGE BANCROFT GRIFFITH.

This is a holiday as universally, tho not so noisily, observed thruout our Union as the Fourth of July, and it finds the memory of the Father of his Country even more revered in the twentieth century than it was during his lifetime in the eighteenth. No country of any age in history has developed a citizen of such



Massive Triumphal Arch—Gateway to the Ancient City of Timegad—An Especially Well Preserved Specimen of Roman Architecture.

versation. Dan, who had watched the sky in spite of disobeying the advice of the older men, was kept busy steering the canim. Another gust struck them and still another. Conversation became an impossibility. Besides the present soon demanded their entire attention. The wind increased momentarily and the boat rushed forward like a mad thing. Dan's anxious gaze caught a glimpse of the island in the distance.

The cold rain, which had started in with the wind, began to soak thru their

high, enduring and generally accepted fame. The most noted instance of the bestowal of the Father of the Country, was that of the Roman Senate upon Cicero, but that was for a partisan deed, and, in a few years, and before his own death, his work was undone, and he had no political influence upon his country thereafter. On the contrary, Washington's influence is more authoritative now than it was when he was president. At that time there was a faction which defamed him in a manner which seems

blasphemous to the present generation.

To the men of this day the words of Washington are of authority almost to put an end to discussion, like the words of holy writ to the believers in plenary inspiration. After all allowance has been made for the myths and fables which have grown up about his name, such as the hatchet story, the authentic records of his life and acts are evidence of a character so noble, a wisdom so profound and comprehensive, that the wise and cautious join with the simple and trusting in placing Washington among Americans as "first in war, first in peace, and first in the hearts of his countrymen." And yet this great man never said, perhaps, or wrote, a brilliant sentence. His merit was that he said and did the right thing at the right time. With a scanty, poorly equipped and miserably supplied army he fought thru a war, which seemed hopeless, to ultimate success, while from a document which seemed impracticable, he, more than any other man, wrought out a scheme of government which has lasted now for nearly 120 years. We owe him a higher reverence than any nation has ever paid to one of its great men, and the world outside has for some time acknowledged that this overestimate is in no degree extravagant.

When the tidings of the death of Washington reached Congress on December 19, 1799, that august body immediately adjourned. The day following, in the House of Representatives, upon the motion of Mr. Marshall, it was resolved that the speaker's chair be shrouded with black, and that the members and officers of the House wear black during the session, and that a joint committee of both houses be appointed "to consider on the most suitable manner of paying honor to the memory of the man first in war, first in peace, and first in the hearts of his fellowcitizens." A few days later a series of resolutions were enacted, from which sprang the national celebration of the 22nd of February.

#### THE TALES I HEAR IN THE WIND.

BY CHAS. E. JENNEY.

Oh, why are the tales of the wind so sad,  
That I hear in the winter eves,  
As it howls and shrieks like a fury mad,  
Then shivers and sobs and groines?

And what are the eerie, spell-bound charms  
Of its weird and wailing tone,  
As it tells of the terrors and wild alarms  
That this rock-bound coast has known?

It howls in the attic and shrieks thru the hall,  
And whines in the chimney-top;  
It whispers thru key-hole and cranny in wall,  
And its moaning it never will stop.

I may close my eyes as I sit so warm  
And snug by the fireside glow,  
But its voice will rise to the height of the storm,  
And listen I must to its woe.

It tells of the days when our Land of the Free  
Was stranger to English face,  
And greeted our fathers from over the sea  
With a cheerless and cold embrace.

It tells of the days when the wilderness crept  
To the doors of the dauntless few,  
Concealing a foe who never slept—  
Whose wiles but the Devil knew.

And its voice has a wilder, wilder tone  
As it tells of the ancient time—  
Like the painted Narragansett's drone  
Of a war-song, fierce, sublime.

No tales tonight of the summer days,  
Of flowers and of greenwood blow,  
But of ghosts of the past—a weird, wild maze,  
Enwrapped in their shrouds of snow.

Of wreck and disaster, of shrieks for the drowned—  
For scalps at warrior's belt tied,  
The Night-wind is chanting. Its chorus a sound  
Like demons who laughed as they died.

That shriek that is borne on the chilling blast—  
That sets all the nerves a-shock,  
Was uttered by some poor soul, her last,  
Ere she fell 'neath the tomahawk.

And now it is whispering the saddest tale  
That ever the wind hath told;  
Oh, better the war-whoop howled on the gale,  
Or shrieks from the wreck, wave-rolled;

It sinks to a whisper, low of shame  
For the Past it has seen entombed—  
That Past that the wind, even, scarce dare name,  
When Salem her witches doomed.

Know then why the tales of the wind are sad,  
But, oh, think how awful the blast  
Lang Syne, with its tales which our fathers had  
To hear of the days just passed.



## FARMER BROWN ON RURAL ROUTES.

BY ALICE J. CLEATOR.

I've been a farmer forty year,  
An', fur as I can see,  
I've allus stood fer progress in  
Our own community.  
But they're a gittin' something up  
That don't exactly suit.  
They're handin' a partition round  
To git a rooral route.

Jim Ransom's got a roote mapped out,  
An's ridin' round fer names;  
An' whether you're a judge or fool  
Your name counts jest the same.  
But there's one name that they don't git!  
(Jim thinks he's mighty cute  
A talkin' 'bout his "Uncle Sam"  
An' that 'ere rooral route).

To drive down twice a week fer main—  
The way we've allus done—  
That's plenty good enough fer me,  
(It's enough fer anyone).  
But wife an' gals, they've jined the crew.  
They think 'twould be so cute  
To git their mail in a tin box  
An' talk of rooral route.

My German neighbor, Burgmuller,  
I s'posed he had some sense.  
I called to him this afternoon  
While patchin' my line fence:  
'Hello! Signed that partition yit?'  
He says, "Yah, dot ish goot."  
(He's big a fool as all the rest  
About that rooral route).

At th' cross-roads store and postoffice  
We've gathered (us men folks),  
An' swapped ideas about the war,  
An' our country, an' cracked our jokes;  
Planned fer our country's future, an' held  
Political disputes.  
Where'd be those good old social times—  
'F we had those rooral routes!

The feller at the back of this,  
As fur as I can see,  
Is a rascal called Department, down  
To Washington, D. C.  
I'd like to meet the scamp! He'd feel  
The size of this 'ere boot.  
I'd let him know a few ideas  
About that rooral route.

Today my gal she says to me,  
"Why, what's the matter, pa?  
You look jest like that picture your'n  
After you'd been 't war!"  
Says I, "You're right, my gal; I'm sick!  
I guess I'll take a scoot  
To some place where no mortal knows  
About a rooral route!"

I guess I'm taken back fer onct!  
Wal, wal, to think of it!  
Them rooral routes 're the greatest thing  
That I've heerd tell of yit.  
We've got one, an' it works like fun,  
It does, you bet your boots!  
Jest catch me sayin' another word  
Against them rooral routes!

No hitchin' up to git the mail—  
Jest go to th' box an' see!  
Comes every mornin', 'long about nine.  
We're "rooralites" now, you see.  
It's the slickest thing I ever saw,  
It jest exactly suits  
Us farmer folks, I say Hurrah,  
Hurrah fer rooral routes!

## THE FIVE-ACRE FLAT.

BY NELSON A. JACKSON.

"Well, George, what are your plans  
after you finish the high school course  
next month?" Mr. Willits, a well-to-do  
farmer asked as he looked up from the  
piece of harness he was mending when  
his son came into the shop from school.

"I have been thinking about that a  
good deal for some time past. I have  
wished to talk with you, but there hasn't  
seemed to be any opportunity. What do  
you want me to do father?" George  
placed a piece of board over the end of  
a nail keg and sat down.

"I wish you to feel perfectly free in  
making your choice. I know that you  
will be a good man and citizen whatever  
you do. If you wish to go to college and  
prepare for some profession, I should be  
glad to help you."

"Thank you, father, for your confidence  
and for your offer of assistance. I want  
to be a farmer."

Mr. Willits looked at his son in sur-  
prise. He had hoped for this but had  
not expected it.

"I think you are sensible," he said,  
"and I am very glad that that is your  
choice. I shall be glad to take you into  
partnership with me, if you wish."

"Now I know that you will think me  
queer, but I want a college education  
also, and that isn't all; I want a course in  
an agricultural college besides that. And  
more than that, I intend to pay my own  
way thru for the entire course."

"Well, well, George, you certainly have  
plans, but from my knowledge of you, I  
find that you usually have a way of  
carrying them out. Let's have your  
scheme for this," his father said.

"I am only seventeen years old and  
it'll not do me any harm if I don't start  
my college work for a year or so,"  
George spoke enthusiastically as he un-  
folded his plan. "I thought that probably  
you would hire me by the month for a  
year. That would give me money  
enough to buy the five-acre flat of the  
Miller girls. Of course I could only make

a part payment on it at that time, but  
could finish paying for it within a year.  
I have always thot that that land was  
especially adapted for celery. In one  
year's time I could raise enough celery  
on half of the land to finish paying for  
it and have enough left to give me a good  
start towards my college expenses. You  
needn't look so dubious, father," George  
laughed. "I have looked into this matter  
thoroly. Wall Brothers say that they can  
handle at a good figure all the celery I  
can furnish them. After getting the cel-  
ery business started I could go to college  
and hire someone to look after the crop  
for me. Then we are so near the univer-  
sity that I could run out home any Fri-  
day afternoon and direct things myself  
on Saturday. What do you think of my  
scheme?"

"In most boys of your age I should call  
such ideas mere idle dreaming, but you  
seem to have a pretty level head on  
your shoulders, if you are my son," his  
father replied.

"I guess that I must take after my  
father."  
"Do you know George, at what figure  
the Miller girls hold the flat?"

"Yes, sir. One hundred dollars per  
acre is their lowest figure and I must  
take it all or none. You are perfectly  
willing that I should try this?"

"Certainly. Go ahead, my boy; I'll ad-  
vance the money and you can buy the  
land tomorrow if you wish."

"That's a temptation but I prefer to  
try it out, depending only on myself. If  
I fail, perhaps I'll call on you for help.  
I fully realize that I am going into a  
big undertaking. There is one thing that  
troubles me, the possibility of the Miller  
girls selling the land to someone else be-  
fore I am prepared to buy."

"You had better see them," his father  
advised, "and get the refusal of the land;  
then you are sure of first chance. If it  
is apt to be sold, I guess we can fix it  
all right."

"I know, father, you are willing to  
help, but I have my heart set on being  
absolutely independent in this matter. I  
shall see them tomorrow, tho, and get  
the refusal."

On the first of July George was duly  
installed as one of the hired men on the  
Willits farm at \$25 a month and home.  
One day in the fall he took a load of  
apples, potatoes and vegetables to Uncle  
Spanner, an old gentleman who was  
known to everyone far and near. He was  
crippled with rheumatism, so that he was  
unable to do much work, but everyone  
supposed him to be in comfortable cir-  
cumstances. He lived all alone in a neat  
little cottage on one of the side streets  
of the village. George noticed that Mr.  
Spanner seemed more feeble than usual  
and that his hands trembled more than  
their wont as he paid for his winter's  
supply of farm produce.

On his way home he stopped at the  
post office. There he found a note for  
him from the Miller girls which told him  
that they had a cash offer of \$600 for the  
flat and that they would accept the offer  
unless he could give the same amount in  
cash. It was necessary for them to know  
his answer the next day. George's feel-  
ings went way down as he read this note.  
He was sorely disappointed and at the  
same time justly indignant. They had  
offered him the land for \$500, if he would  
pay \$200 down and give a mortgage for  
the remaining \$300. Now they had come  
up \$100, demanded cash and gave only  
one day's notice.

"Oh, well, I suppose that they think I  
am only a boy and therefore it doesn't  
make any difference," he muttered. "I  
guess I'll have to give up the celery  
scheme and think about something else.  
He thrust his free hand into his pocket  
and rattled in an aimless manner the  
five silver dollars which Uncle Spanner  
had given him in payment. He had been  
in a hurry when he received them, but  
remembered that they looked like bright  
new coins. He took one out and looked  
at it, carelessly at first, but it didn't  
seem just like the common dollar. He  
looked at it more closely, turned it over  
and looked at the date "1804." He start-  
ed with surprise. "Whoa," he shouted  
and, holding the lines between his knees,  
he took out of his pocket the other coins.  
They were all bright 1804 dollars. They  
looked as if they had just come from the  
mint. A few years before George had  
been interested in making a collection of  
coins and he remembered that 1804 dol-  
lars were worth from \$200 to \$600 each.  
These would certainly bring the highest  
price as they were not worn in the least.

"Well, I guess I'll have that land now,"  
he exclaimed joyfully; "why these are  
worth \$3,000. I can go to college next  
week if I wish."

He was evidently talking to the horses.  
Then a little wee bit of doubt entered his  
mind for the first time. He wondered if  
Uncle Spanner knew the value of these  
silver coins. His better self told him  
that of course the old gentleman did not  
know; if he had known he would have  
sold them. But Uncle Spanner did not  
need the money; what difference did it  
make whether he knew the value or not.  
It was a God-send for George; why not  
look on it that way and enjoy the bene-  
fit of his good luck. George went over  
and over this line of reasoning and there  
always came the troubling "but." Could  
he really enjoy the \$3,000 or would he  
always feel as if he had not gotten it  
in just the right way. Should he not  
tell Uncle Spanner and then do as the old  
man said.

He puzzled over it all the way home.  
He said nothing to his people, but thot  
about it more or less all night. He slept  
but little and, when he did, he was either  
chasing 1804 dollars or they were after  
him. At one time he thot that he was  
buried beneath a large pile of them and  
that their weight was crushing him.

The next morning his mind was set-  
tled. He asked for a half day's leave  
of absence and a horse and carriage. He  
drove directly to Uncle Spanner's, who  
was just preparing his lonely breakfast  
when George arrived. "Why, George, tie  
your horse and come right in," the old  
gentleman said in a cheery voice as he  
hobbled down the steps. "What brings  
you here so early? I ain't used to early  
callers."

"Here," said George as soon as they  
were in the house, "are the five dollars  
you gave me yesterday. I can't keep  
them; I don't want them," and he thrust  
the coins into Uncle Spanner's hands.

"Why, what's the matter? I know  
they are old; ain't they good? I didn't  
suppose money would ever outlaw," the  
old man faltered. "I didn't mean to  
cheat you, George, you know I didn't."

"Oh, they're good, all right; they are  
too good! Uncle Spanner, each one of  
those silver dollars is worth \$600.  
You've got \$3,000 right there in your  
hand."

"Pshaw, George, who's been fooling  
you? Them ain't worth no more than a  
hundred cents apiece."

"I tell you, Uncle, I know what I'm  
talking about," George insisted. "I have  
looked up this matter. I have a paper  
at home that tells about a firm that is  
advertising for 1804 dollars and that they  
will pay \$600 apiece for good ones."

Uncle Spanner almost broke down.  
When he could control himself, he said:  
"George, your goodness has saved me  
from the poorhouse. Most boys wouldn't  
never done what you have and it  
wouldn't have been dishonest in them,  
neither."

"Why, Uncle Spanner, I thot you had  
lots of money," George exclaimed in sur-  
prise.

"That's what most everybody thinks.  
There are just two people who have  
known about my money matters. They  
are Mrs. Wainwright who bakes and  
washes for me, and Colonel Johnson, who  
owns this house and lot."

"Don't you own this house?" asked  
George, still more surprised.

"No, I don't own anything, only the  
little furniture you see scattered about,  
and I have got just 60 cents in money  
left. I have wood and provisions enough  
to carry me thru the winter. Then I  
had planned that the rest of my time  
here on earth would have to be spent in  
the county house for the poor. But I  
won't have to go now," and he seemed  
to grow younger every minute.

"Tell me about yourself, won't you,  
Uncle Spanner?" George asked.

"There ain't much to tell. I have al-  
ways lived here, used to rent this house.  
Then when the rheumatism got hold of  
me so that I couldn't work the Colonel  
told me that I might stay right on and  
never mind the rent. I had saved up  
\$2,000, but the past ten years have used  
it all. I have earned a few cents now  
and then, but the townspeople thot, as  
you did, that I had plenty of money.  
These five dollars are some my father  
gave me over sixty years ago and he  
earned them when he was a young man.  
I tell you, George, it came hard to part  
with them, but an empty stomach will  
drive a man to almost anything. I can  
live like a prince all the rest of my life,  
but you must have one of these; you've  
earned it."

The next day George and his father  
went to the city. When they returned  
he went to the local bank and deposited  
\$2,500 for Uncle Spanner. There was not  
a happier man or boy to be found than  
(Continued on page 193).

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lozenges eaten after meals will prevent  
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## WHAT THEY CALL ME—BY MILDRED M'NEAL SWEENEY.



I am Baby Bright Eyes.  
When the morning climbs  
Early, early up the east,  
I am there betimes  
With eyes brighter than the light  
And blue as any skies  
To see the cloud ships come in sight—  
All red and morning-yellow and white.

Every name begins with Dear—  
And you never knew  
How many names there were to give  
Till I came to you.

I am Baby Berry Cheek.  
And I sit all day  
Playing in the gay May wind  
Till you think I've been away  
Thru the meadow and over the hill,  
Where the three leaf's in the grass  
With the berries under, still,  
Waiting any baby's will.

Some for love and some for fun  
And some just sweet to hear.  
But, oh, it is the early sun  
That makes you say the prettiest one.

I am Baby Many-a-Smile,  
And many a one have I  
For who is gay and who is grave  
And who is passing by.  
How could I keep a smile that might  
Be cheering all the while  
And all my best are to delight  
Mother's good mornning and good night.

## THE LIE GEORGE W. TOLD.

BY MAUDE E. HYMERS.

Perhaps he didn't tell a lie  
About the cheery tree;  
I always have believed him  
Tho I wasn't there to see.  
Perhaps he was a truthful boy,  
But in his manhood's prime,  
Our country's father told one lie  
Which grieves me all the time.

'Twas round about rebellion days,  
He said, "When war drums cease,  
Long years of quiet shall ensue  
And days of perfect peace."  
And this is where he guessed it wrong,  
For peace, we know it not;  
And round about July, I long  
To be a Hottentot.

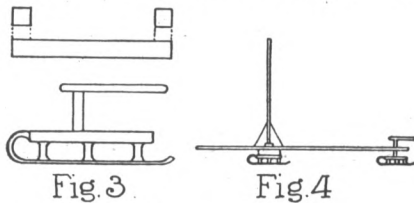
There is no quiet, for the "Fourth,"  
With all its horrid noise,  
Would rob a nervous person  
Of the ghost of promised joys.  
I dodge a cannon cracker here,  
Escape a rocket there;  
My youngest boy sends up a fuse  
That takes off half my hair.

But think you not these tears are shed  
O'er physical distress;  
I hold my person very cheap  
When comes this day of stress.  
Ah no, the pain goes deeper still,  
The grief tho keen is old;  
I weep to think how great the lie  
Our grown up Georgie told.

## INTERESTING FACTS ABOUT OWLS.

BY MARGARET WHITNEY.

Some boys brot in from the woods one  
day a large horned owl about two feet  
high. They found it in the woods where



it had evidently gotten confused and  
could not find its way home before day-  
light. It was kept in the yard in the  
daytime where it usually sat in one place  
winking its large round eyes at the light.  
At night it was carried to the loft of  
an old house where there were plenty of  
mice and rats. Owls have been accused  
of catching little chickens but this one  
was never known to molest them.

The children at the place where the  
owl was kept had an idea that this was  
the only kind of owl there was but, be-  
coming interested in them, found that  
there were many species of these birds,  
and they learned many interesting things  
about them.

Owls are found all over the world and  
in all climates. One species is common  
in Asia, another in Europe, and another  
lives anywhere from the Arctic Circle to  
Cape Horn. There are seventeen species  
in North America alone. The snowy owl  
of Greenland is white, as its name indi-  
cates. Its dismal screech adds to the  
loneliness of the long nights there. It

stays in this bleak, desolate land until it  
can no longer procure its food, when it  
migrates farther south.

Owls vary in size from five inches to  
two feet in height. Their feathers are  
very soft and downy and this enables  
them to fly thru the air with almost no  
sound, and to drop upon their prey which  
has no warning at all of danger. Another  
peculiarity of their feathers is the ruff  
which consists of several rows of stiff  
feathers projecting forward around the  
beak, eyes and ears. Their throats are  
very large and they swallow their food  
whole or in large pieces. Large owls  
feed on rabbits, reptiles and even fish.

Owls generally build their nests in hol-  
low trees but one species makes its  
home in the burrows of prairie dogs,  
and Darwin says that often rattlesnakes  
are tenants with the dogs and birds.  
They seldom leave their nests during  
the day and if they happen to be in a  
strong light they become confused. If  
they try to fly during the daytime they  
bump into the trees. The little birds  
will gather around to torment them, for  
they are at their mercy.

Owls are generally regarded as birds  
of ill-omen and from ancient times have  
been objects of superstition. This makes  
them a prey to ignorant persons and  
they are rapidly disappearing. In the  
south the colored people have a tradition  
that when an owl utters its familiar  
"Whoo, Whoo," they must answer it. So  
if an owl says "Whoo, Whoo" where a  
colored person can hear it he will politely  
tell his own name and the names of the  
persons, if any, who happen to be in his  
company.

## HOW TO MAKE AN ICE-BOAT.

BY HARRY A. PALMER.

I believe every boy, who lives near a  
lake or river, would enjoy an ice-boat.  
It is for this reason that I have attempt-  
ed to tell how to make one.

To construct an ice-boat the follow-  
ing material is needed: A 16-ft. 2x8  
plank; a 12-ft. 6-inch board; a sail 12 ft.

square; four saplings, 18 and 14 ft. long,  
and two 12 ft. long; three skates; 20  
ft. of hay wire; four ½-in. bolts six inches  
long; a broom handle; 50 ft. of small  
rope; three awning pulleys; ½ lb. of  
staples and 2 lbs. of ten-penny nails.

The tools needed are: A file, a saw, a  
hammer, a pair of wire pliers, a chisel,  
a wrench, and a brace and bits.  
Cut the plank into two pieces, one 10  
ft. long, and one 6 ft. Lay the longer  
piece down and place the shorter one on  
top of it, 4 feet from one end so as to  
form four right angles. Bolt these to-  
gether with two bolts, as indicated in  
Fig. 1. In bolting these together, a  
piece of board eight inches square with  
a square hole in the center may be fast-  
ened onto the upper side to fit the bot-  
tom of the mast into.

Take the sail (which can easily be  
made of heavy cloth) and staple the two  
12-foot saplings on opposite sides, as  
shown in Fig. 2.

Make three blocks of wood so that the  
skates may be clamped onto them. But  
first the skates must be filed to a sharp  
edge to prevent side slipping. Bolt one  
of the skates onto each end of the short  
arms. The other is to be the rudder. To  
make this, take the broom handle, cut  
a piece six inches long from it, and square  
both ends. Fasten one end to the block  
on which the skate is clamped, and  
make a handle for the other (Fig. 3).  
The rudder should be placed in the end  
of the longer part of the large arm.

The mast, after being trimmed and  
smoothed, may be cut square at the  
larger end to fit into the square hole be-  
fore mentioned. Next, two pieces of the  
wire may be stapled on each of the four  
opposite sides and to each of the arms to  
stay the mast as indicated in Fig. 4.  
These can be made tight by putting a  
small stick between the wires and twist-  
ing them. Staple two of the pulleys to  
the upper part of the mast, and the other  
half way between the rudder and the  
mast. Make a loop on the end of each  
boom large enough to slip easily on the  
mast. Cut the rope into three pieces,

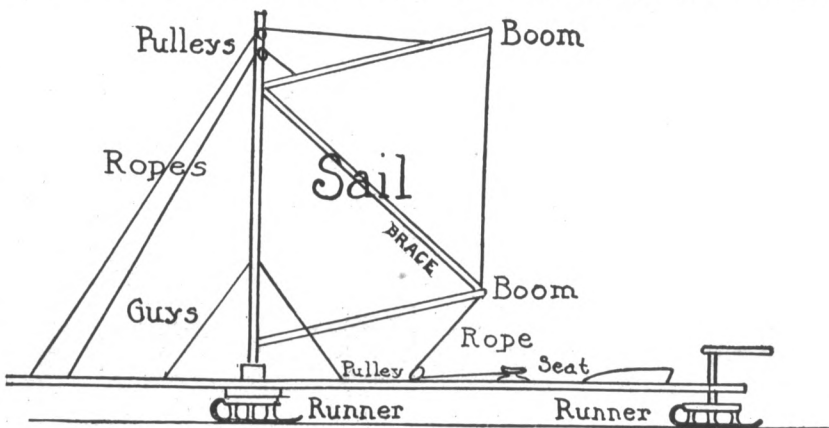


Fig. 5.—The Completed Ice-Boat.

one 20, one 12, and one 16 feet long.  
Run the 20 and 12-foot pieces thru the  
pulleys on the mast, and tie the shorter  
one to the upper boom on the inner end,  
and the longer piece to the outer end.  
The sail can now be drawn up into place  
at will. Run the other piece of rope  
thru the pulley which is on the long  
arm, and tie one end to the outer end of  
the lower boom. The 14-foot sapling  
may be used as a brace on the sail, by  
placing it diagonally across it from boom  
to boom. The boards may be used as  
seats if they are desired. When finished  
the boat should look like Fig 5.

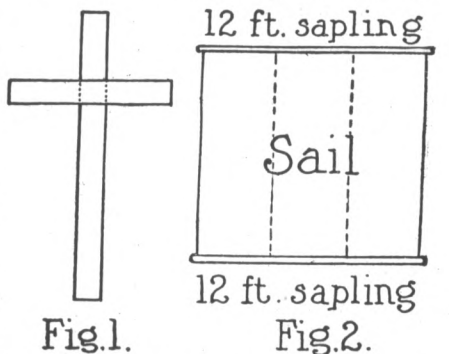
NEW FACTS ABOUT THE BOYHOOD  
OF LINCOLN.

BY PHILIP LUTZ, JR.

It is a little less than a century ago  
that "Abe" Lincoln was the awkward,  
long-legged country boy who lived in the  
wilderness of southern Indiana. He  
spent his years from seven until twenty-  
one in this region—fourteen years in all—  
and yet how little the historiographer  
says about it! They are referred to in a  
general way only; most of them pass up  
these years by saying that Lincoln him-  
self referred to them as his "pretty  
pinching times."

Too little emphasis has been laid upon  
the southern Indiana life of Lincoln.  
He grew to manhood there and formed  
the character that was individually his  
and patterned after no man. "As is the  
die, so is the coin," was true with Lin-  
coln and we should strive to know more  
of "Lincoln, the youth." A little, almost  
tumbling, wooden court house, support-  
ed on coarsely hewn logs and sheltering  
cattle beneath it at night, was the place  
to which Lincoln used to go to attend  
court. It was then at Boonville, near his  
home in Lincoln City, and sloping to the  
beautiful Ohio, that Lincoln received his  
first impulse to become a lawyer. Once  
we think of Lincoln as the lawyer in  
Illinois we know his later life like a novel.  
To most people his early days appear  
veiled in mystery. But no period of his  
career is more astrir with action and am-  
bition, or more illuminated with the light  
of romance.

Historians say that Lincoln was born  
in Hardin county, Ky. In fact he was



born in Larue county, which, however, is  
a subdivision of Hardin county as it used  
to be. Chroniclers continue with their  
biographies by saying that Lincoln, to-  
gether with his father, mother and sister,  
came to Indiana and entered claim to a  
piece of land in Spencer county. As a  
matter of fact, he entered a piece of  
land in Warrick county, which has since  
been set aside and named Spencer  
county.

It was in 1816 that the party came to  
the Indiana side—the same year that  
Indiana was admitted to the Union as a  
state. Lincoln's father entered a quarter  
section of land, built a log cabin and  
lived there until 1830.

It was known that Thomas Lincoln,  
father of Abraham Lincoln, was in poor  
circumstances. To say that Abraham  
Lincoln was the son of a poor carpenter  
and farmer gives an insight to the hard  
conditions which little "Abe" had to face.  
When he came to Indiana he was just  
seven; he remained until he was twenty-  
one.

It is useless to relate the idle tales of  
his boyhood; but when he verged into  
manhood and imbibed into his character  
those qualities and those traits that led  
to his greatness, this part of his life is  
absorbing. It is well understood that if  
Lincoln had done as other boys of his  
day did he would have achieved only  
small things. But he did not do as the  
other young men and boys of his day.  
Therefore they are interesting.

Lincoln saw hardships, had meager  
clothing, coarse food and no advantages  
of securing an education. All who knew  
him agreed that he was unlike other boys.  
He was not fully understood, doubtless  
holding his real character and disposi-  
tion in reserve for his intimate friends



only. He was not fond of work, but whether from sheer laziness or because he was fonder of mental exercise in reading or otherwise is not clear. He enjoyed books and is known to have borrowed much of the reading matter of the neighborhood. After 1820 Spencer county had at Rockport, its county seat, a public library of several hundred volumes of the standard works of that day. Thomas Lincoln and Abraham Lincoln were at Rockport at least two times during the year, but "Abe" Lincoln's name does not appear on record as a borrower of books at the library. The field from which Lincoln could glean knowledge in that neighborhood was very limited, tho he borrowed every book he could get. The list is a short one and the following is almost a complete list: "Robinson Crusoe," "Aesop's Fables," "Bunyan's Pilgrim's Progress," "Weem's Life of Washington," and a history of the United States.

During Lincoln's fourteen years in Indiana he had read and reread this list of literary and historical books over and over again. His good nature among Lincoln City people was not unnoticed; and all agreed to his honesty and good nature. Questions of dispute and petty differences were at first submitted to him in a joking way and later on in a sincere way until he was complimented for his extreme fairness and justice to all. He was told more than once that he would turn out to be a lawyer.

Having read all the literary, and what few law books there were in his immediate vicinity, Lincoln heard of the court at Boonville. He resolved to go to that place, 20 miles distant, and learn what he could of a real court, which was in session there several times during the year. The court house in Boonville, then a village of 300, was a marked contrast with the beautiful structure that now stands where it used to. It was a frame building, the architecture, to say the least, being very novel. A ditch two feet wide and two feet deep had been filled with roughly hewn logs, on which was built a stone wall, eighteen inches high. This constituted the foundation upon which the building proper rested. The building itself was never completely finished; it was weather-boarded but neither plastered nor lathed. It remained in this condition until 1836, after the Lincoln family had moved to Illinois. It was capable of holding only a hundred people and could not be used in the summer. At night cattle would shelter under the structure. Such a place we must then imagine to be the abode where Lincoln received his deep-souled inspiration. Here it was that Lincoln imagined himself pleading the case of a heart-broken mother or a penniless, helpless child!

It was to attend court in this rudely constructed building that young "Abe" Lincoln walked twenty miles thru the wilderness to reach Boonville from his home in Lincoln City.

He was an ardent listener and the lessons which he painted upon his memory at this place are the ones that inspired him to become the great lawyer which he afterwards did become. And, from this fact the little town of Boonville, noted particularly in the last fifty years for the great men it has furnished the state and nation, claims also the distinction of furnishing to Lincoln the material which aided in his later success.

To claim so great a distinction if it could not be verified would be both false and unfair, but from the history of young Lincoln while he was a visitor here attending court, and from the assurance that he received the knowledge he did, which inspired him to become the lawyer he did, it is another laurel in the crown of the little town in southern Indiana.

John A. Brackenridge, then the ablest lawyer in southern Indiana and a practitioner at the court in Boonville, noticed the eagerness and earnestness of this young man. He inquired into his purposes and from what section of the country he hailed. Young Lincoln, who then stood over six feet, by his awkward and convincing conversation, impressed the distinguished jurist with an admiration for this man. He found by conversing with him that he was a reader of good books, was interested in law and even had some hankering to study it some day.

Accordingly Mr. Brackenridge, being a hospitable man, invited the young student to his home over night. He also told him that he had some good books, which would be of interest to beginners and would be glad to lend them to him to read.

Brackenridge lived three miles west of

Boonville on his farm and had his library there. His old homestead still stands and, tho a century old, is still being used as a tenant home. His office, in which he stored away his books, still shows the marks of the place where at that time existed one of the best libraries in the state. The room is but eight by ten feet, and, being pressed for room, Mr. Brackenridge had his books placed upon shelves above the two windows of his room. When Lincoln caught his first glance of the library he was astonished at such a great collection of books, for nowhere in southern Indiana could one be found so large. Mr. Brackenridge was the author of a book in the interest of the Presbyterian church and had several of these on sale at his home. The first night spent in the house found Lincoln sitting up the whole night reading by the burning embers of a log in the fireplace.

Thereafter Lincoln was a regular attendant at the Boonville court. More often was he found upon many nights reading books in the library of Brackenridge. The latter showed a deep interest in his young student and did everything in his power to make Lincoln the lawyer that he dreamed to be.

The greater part of Brackenridge's library is still in existence, tho some of the books are torn and timeworn and show that they have been made brown before a blazing fireplace. They are owned by different lawyers in Boonville and are valued highly because they are the books read by the martyred president. They have been exposed to the glaring fireside more often than to the clear electric light globes in the elaborately furnished law offices where they now rest. Some of these books have paragraphs parenthesized, and in all probability this was done by Lincoln himself, for they are recitals of the essence of character, or deal with fundamental principle of law. References to religion are heavily marked. It is known that Lincoln borrowed books, but which ones he carried to Lincoln City with him are not known. Among those which have markings and were probably read by him are the following: Locke's Essays, 1819; Brackenridge's Law Miscellanies, containing an introduction to the study of law; Coke's Institutes, Abridged, 1792; also Blackstone's Commentaries.

Upon one occasion Lincoln attended a murder trial in Boonville and heard the case from beginning to end. The trial seemed interesting to him but the most exciting feature of the whole case was the argument before the jury. The most eloquent plea was made by a Kentucky lawyer, named Brackenridge, akin to John A. Brackenridge, of Indiana. After his argument before the twelve men the whole court room rose to congratulate him. Lincoln was one of the number and carried his long, shambling, slender frame thru the crowd up to the speaker. Lincoln offered his hand as a token of his appreciation of the speech before the jury but Brackenridge, who was a little high strung, refused it in a patronizing way. Lincoln was smitten by this act and always remembered the name Brackenridge.

Several years afterward at the inauguration of Lincoln thousands of people greeted the war president. Hundreds of this number came from the old Blue Grass state and Lawyer Brackenridge was among this number. Recognizing him as the man who had snubbed him at the court many years previous, Lincoln grasped the man's hand in his old way, and said: "I am more glad to see you than any man I know of. I have always wanted to congratulate you upon that speech you made at Boonville years ago."

Lincoln did not have to tell him that he was the young fellow whom he had ignored at Boonville for Brackenridge followed with a complete apology.

There are perhaps no survivors in southern Indiana who used to know Lincoln as a boy. They have been passing across the shadow one by one in recent years. Redmond Griggsby, a little boy when Lincoln was a young man, is perhaps the last to tell of the feud existing between the Griggsby and the Lincoln families. But all these people are gone now!

The state of Indiana has erected at the grave of Nancy Hanks Lincoln, mother of the martyred president, a beautiful monument. The legislature two years ago appropriated some money to convert the burial place into a park and has provided a maintenance fund—one of the monuments to Indiana's share toward Lincoln.

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

It will be useless to send us subscriptions for any daily—except the Times—at Rural Route prices. If you do not give number of your route publishers will only accept them at first column prices.

If you want the MICHIGAN FARMER TWO YEARS and the other papers one year add 45c to the second column price. For the Michigan Farmer 3 years add 75c. We do not send samples of other papers. Address the publishers direct.

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

**ABOUT PRICE OF DAILIES**—Those having rural mail delivery pay 2d column price, all others pay 1st column price.

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

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

NAME OF PUBLICATION.	See Explanation above.
<b>Daily, (6 a Week.)</b>	
Journal, Detroit, Mich.....	\$ 5 00 35 2 60
Times, Detroit.....	2 00 2 50 2 00
News Grand Rapids, Mich.....	3 00 2 50 1 75
Courier-Herald, Saginaw, Mich., (Inc. Sunday) on R. R.....	2 50 2 30 1 60
News, Cleveland, Ohio.....	2 50 2 55 2 10
Tribune, Bay City, Mich.....	3 00 2 35 1 65
<b>Tri-Weekly, (3 a Week.)</b>	
World, New York, (3 a week).....	1 00 1 40 90
<b>Semi-Weekly, (2 a Week.)</b>	
Journal, Detroit, Mich.....	1 00 1 35 75
<b>Weekly Newspapers and Current Comment.</b>	
Blade, Toledo, Ohio.....	1 00 1 05 85
Commoner, Wm J. Bryan, Editor, Lincoln, Neb.....	1 00 1 35 75
Harper's Weekly, N. Y.....	4 00 4 00 3 30
<b>Cattle, Sheep, Swine, Poultry, etc.</b>	
Americ'n Poultry Journal, Chicago (m).....	50 1 05 35
American Poultry Advocate, Syracuse, N. Y. (m).....	50 1 15 35
American Sheep Breeder, Chicago (m).....	1 00 1 50 80
American Swineherd, Chicago, (m).....	50 1 05 35
Farm Poultry, Boston, Mass. (s-m).....	50 1 05 35
Gleanings in Bee Culture, Medina, O. (s-m).....	1 00 1 40 75
Hoard's Dairyman, Fort Atkinson, Wis. (w).....	1 00 1 40 75
Horse World, Buffalo, N. Y. (w).....	2 00 1 90 1 30
Horseman, Chicago, (m).....	3 00 2 25 2 00
Jersey Bulletin, Indianapolis, Ind. (w).....	1 00 1 60 1 00
Nat'l Fruit Grower, St. Joseph, Mich. (m).....	1 00 1 00 1 00
Kimball's Dairy Farmer, Waterloo, Ia., (s-m).....	1 00 1 00 1 00
<b>Poultry Keeper, Quincy, Ill. (m).....</b>	50 1 05 35
Poultry Success, Springfield, O. (m).....	50 1 05 35
Reliable Poultry Journal, Quincy, Ill. (m).....	50 1 05 35
Shepherds' Criterion, Chicago, Ill. (s-m).....	50 1 05 35
Swine Breeders' Journal, Indianapolis, Ind., (s-m).....	50 1 05 35
<b>Popular Magazines.</b>	
American Magazine (m).....	1 00 1 50 75
Cosmopolitan, N. Y. (m).....	1 00 1 50 1 00
Century Magazine, N. Y. (m).....	4 00 4 30 3 75
Harper's Magazine, N. Y. (m).....	4 00 4 00 3 35
Harper's Bazar, N. Y. (m).....	1 00 1 50 1 00
Lippincott's Magazine, Philadelphia, Pa. (m).....	2 50 3 00 2 50
Metropolitan Mag., N. Y. (m).....	1 50 1 50 1 50
Pearson's Magazine, New York (m).....	1 50 2 00 1 50
Review of Reviews, N. Y. (m).....	4 00 3 00 4 00
McClure's, N. Y. (m).....	1 50 1 50 1 50
<b>World To-day, Chicago, Ill. (m).....</b>	1 50 1 50 1 50
<b>Ladies' or Household.</b>	
Housewife, N. Y. (m).....	35 1 05 30
Housekeeper, Minneapolis, Minn. (m).....	1 00 1 45 60
Home Magazine, Atlanta, Ga. (m).....	1 00 1 40 80
Ladies' World, N. Y. (m).....	50 1 10 40
McCall's Magazine, N. Y. (m).....	50 1 10 40
Mother's Mag., Elgin, Ill. (m).....	50 1 10 40
Vick's Family Mag. (m).....	50 95 35
Woman's Home Companion, Springfield, O. (m).....	1 25 1 40 1 25
<b>Religious and Juvenile.</b>	
American Boy, Detroit, Mich. (m).....	1 00 1 25 75
Little Folks, Salem, Mass. (m).....	1 00 1 65 1 00
Sunday School Times, Philadelphia, Pa. (w).....	1 00 1 55 85
St. Nicholas, N. Y. (m).....	3 00 3 30 2 75
Young People's Weekly, Elgin, Ill. (w).....	75 1 15 65
Youth's Companion, Boston Mass. (m) (new or old).....	1 75 2 50 1 75

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

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



## THE FIVE-ACRE FLAT.

(Continued from page 190).

he and Uncle Spanner when he handed over the bank book with \$2,500 credited to the account of William H. Spanner, Esq. All that Uncle could say was, "God bless you, George, God bless you," as the tears of joy trickled over his wrinkled cheeks.

George realized his old dream and took his college course. He always saw to it from that time on that Uncle Spanner had all kinds of farm produce in abundance, free of charge.

## THE LOWLY APPLE.

How little that is given to commonplace things may be illustrated by the apple. We could jot down offhand more facts about the date or fig, the olive, the banana, or the orange. To most of us apples are just apples—big and little, red and green, fresh and dried.

We have always been intimate with them, and so we have never given them a thought. As boys we have climbed the easy trunks of the old trees, stolen the windfall and stoned the beauty way out on the bending branch till it capitulated or the man got after us.

And yet we should know a lot about this abundant product, as it is the most important of the temperate zones; and, indeed, it is the only fruit that has passed the bounds of luxury and become a staple article.

No fruit of today is of more ancient lineage, none more aristocratic in associations of the past or more revered in remote times; none that has responded more luxuriously to the wiles of cultivation.

That they were cultivated by the lake dwellers of Switzerland in the age of stone is proven by finding carbonized specimens of two varieties, cut lengthwise and dried, in the palafittes of the lakes of Neufchatel, Lombardy, and elsewhere. The folklore of Germany and Scandinavia is full of apple trees and golden apples. In Roman times their cultivation reached a high pitch; the quality and productivity increased by grafting.

We all recall the familiar biblical expressions: "Keep law as the apple of thine eye," "I raised thee up under an apple tree," "Apples of gold in pictures of silver," "Comfort me with apples," etc.

Shakespeare in "The Tempest" makes a character say: "He will carry this island home in his pocket and give it to his son for an apple." In "Merchant of Venice" he likens a villain with a smiling cheek to "a goodly apple rotted at the heart." Another of this poet's references identifies the pippin, which seems ever to have been a superior variety, as thus: "You shall see mine orchard, where in an arbor we will eat last year's pippins of my own grafting."

Milton, as we remember, terms the fruit of the tree of knowledge apples, and Dore thus pictures it.

In its wild state the apple tree (commonly called the crab) is found over a considerable portion of Europe. Its native region is generally conceded to be Southern Europe. They were brot to England by the Romans, and to this country by the French Jesuits.

Generally speaking, the apple is indifferent to locality; it will grow anywhere. It has followed civilization in this country from New England to the Pacific.

Massachusetts and Connecticut grew apples at an early period, and New York received them from other states. In turn, Michigan, Illinois, Wisconsin, and Iowa took them from New York, and thus gradually they meandered to California, Washington and Oregon, where they have attained their greatest commercial value, which must be accepted as the best estimate of their quality.

As to the excellence in quality, and no doubt a great surprise to many, it may be stated that the product last year of yellow Newton pippins grown on less than an acre in the Rogue River Valley, Oregon, which is about 350 miles south of Portland, was 815 boxes (about one bushel each), and the lot was sold in London at a net price to the grower of \$1,711.50. The particular three-acre orchard from which this fruit was taken produced an average of \$500 an acre a year for the last eight years.

In 1905 a lot was sold in London at \$5.48. One thousand boxes were sold in Edinburgh, Scotland, at \$4.83 per box; at the same time apples grown in Scotland were selling at 30 cents a bushel.

In 1907 an orchard of eight acres, in the same region, near Ashland, Ore., yielded 6,000 boxes of Newton pippins,

which were sold at the orchard for \$2,000 an acre.

The highest price ever paid for apples from any orchard in the United States was for Hood River Spitzenbergers and Newtons, the former ranging from \$2.60 to \$3.00 and the latter from \$2.25 to \$2.50 per bushel box. Hood River is in Oregon, about 65 miles east of Portland.

In California, 100 miles south of San Francisco, there are great orchards from which are shipped annually 1,000 cars of apples to England, Germany, and other European countries. It is famous for bellefleurs and pippins. The growers just attend to the growing. The dealers go there and do the buying while the crop is unripe on the trees, and plank down the cash in the commercial center of the district.

## KINKS.

Kink I.—Hidden Picture.



A Scotch bridge and a Scotch poet. Find the latter and give his name.

Kink II.—Charade.

The whole is the name of famous old tale, Of syllables five, and you'll find it on sale At most any place where they sell any books, And you ought to have read it, if only for looks.

The first is a criminal thing to do; The burglars do it when they rob you.

The second is in what you ask, when you call, Of the maid who lets you in at the hall.

The third is an offspring masculine, Whose language is sometimes mascagnin.

The fourth has a sound that twangs of the sea, Tho its spelling is different as different can be.

The fifth is an old-time word for a cowl. If you guess this charade, you're a wise young owl.

Kink III.—Illustrated Pi.



This verse is from one of Jean Ingelow's poems. Arrange it correctly and give name of poem.

Prizes for Straightening Kinks.

All those who send correct answers to ALL the Kinks given above may have choice of a package of 50 post-cards representing a trip around the world, a copy of the rapid calculator or a pair of shears. Where contestant or some member of his family is not a regular subscriber a year's subscription (75c) must accompany answers. Answers must reach us not later than March 13, as correct solutions will be published in issue of March 20. Address answers to Puzzle Dept., Michigan Farmer.

"The Eradication of Farm Weeds by Sulphate of Iron" is the title of an interesting and profusely illustrated pamphlet published by the American Steel & Wire Co., Chicago. It contains excellent half-tone illustrations of the many weed pests which can be destroyed by spraying with sulphate of iron and how it is done; also how sulphate of iron is made as a by-product by this great manufacturing company, together with interesting information touching the many purposes for which it is used. Every farmer should have this pamphlet as it will not only aid him in the identification of these weed pests but provide him with valuable information as to how they may be eradicated at a minimum of expense and labor.

Our 1909 Model



## Wear STEEL SHOES

Absolute Protection Against  
Colds, Rheumatism, Stiffness, Discomfort  
No More Blistered, Aching Feet  
GOOD-BYE to CORNS and BUNIONS!

Off With the Old, Rough Wrinkled Leathers!  
On With the Comfortable STEEL SHOES!

There's more good wear in one pair of Steel Shoes than in three to six pairs of the best All-Leather Shoes. And comfort! The very first time you slip your foot into Steel Shoes, they feel fine. They need no "breaking in." And the longer you wear Steel Shoes the better you like them, for they keep your feet warm, dry and comfortable—though you work in mud or slush up to your shoe tops. Steel Shoes are shaped to fit the foot, and the rigid steel bottoms and sides force them to keep their shape. No warping, no twisting, no leaking possible. And they are light shoes, too.

How Our 1909 Model Steel Shoes Are Made.  
The Wonderful Steel Bottoms

Steel Shoes solve the problem of the Perfect Work Shoe for all time to come.

The soles of Steel Shoes and an inch above the soles are stamped out of a special light, thin, rust-resisting steel. One piece of seamless steel from toe to heel. As a further protection from wear, and a means of giving a firm foothold, the bottoms are studded with adjustable steel rivets.

The adjustable steel rivets of the 1909 model Steel Shoes add the finishing touch of perfection. Practically all the wear comes on these steel rivets. When steel rivets wear down, you can instantly replace them with new rivets. And the rivets at the tip of toe and ball of foot are the only ones that wear. Steel Shoes never go to the Repair Shop, for there's nothing to wear but the rivets. And the Steel Soles shed mud almost as easily as they shed water. The cost is only 30 cents for 50 extra steel rivets. No other repairs are ever needed.

The uppers are made of the very best quality of pliable waterproof leather, and firmly riveted to soles. There is greater strength and longer service and more foot comfort in steel shoes than in any other working shoes in existence. It's in the steel and the pliable leather, and the way they are put together.

## Throw Away Rubber Boots, Felt Boots and "Arctics"!

Rubber or felt boots heat the feet and make them sweaty and tender. Nothing more uncomfortable or more harmful to the feet. One pair of Steel Shoes will outlast at least three pairs of felt or rubber boots.

A man who wears Steel Shoes doesn't have to own three different styles of working shoes. No arctics or felt boots necessary.

## Secret of Steel Shoe Elasticity

Steel Shoes have thick, springy Hair Cushion Insoles, which are easily removable for cleansing and airing. They absorb perspiration and foot odors—absorb the jar and shock when you walk on hard or stony ground. They keep your feet free from callouses, blisters and soreness.

## Steel Shoes Save Doctor Bills

Wear Steel Shoes and you need not suffer from Colds, Rheumatism, Neuralgia, Lumbago, Stiffness of the joints and other troubles and discomforts caused by cold, wet feet. Keep your feet always warm, dry and comfortable in Steel Shoes. They protect your health and save doctor bills, while adding to your comfort.

## Low Prices on Steel Shoes

Sizes, 5 to 12. 6 inches, 9 inches, 12 inches and 16 inches high.

Steel Shoes, 6 inches high, \$2.50 a pair, are better than best all-leather \$3.50 shoes.

Steel Shoes, 6 inches high, extra fine grade of leather, \$3.00 a pair, excel any \$4.50 all-leather shoes.

Steel Shoes, 9 inches high, \$3.50 a pair, are better than the best all-leather \$5.00 shoes.

Steel Shoes, 12 inches high, \$5.00 a pair, are better than the best all-leather \$6.00 shoes.

Steel Shoes, 16 inches high, \$6.00 a pair, are better than the best all-leather shoes, regardless of cost.

One Pair of "Steels"  
Will Outwear 3 to 6 Pairs of  
Leather Shoes

The comfort of Steel Shoes is remarkable. Their economy is simply astounding! Practically all the wear comes on the rivets in the bottoms and the rivets can be replaced very easily. Don't sweat your feet in rubber boots or torture them in rough, hard, twisted, shapeless leather shoes. Order a pair of Steel Shoes today. Sizes, 5 to 12.

## Satisfaction or Money Back

We strongly recommend the 6 inch high, at \$3 a pair, or 9 inches, at \$3.50, as they give best satisfaction for general service.

In ordering, state size shoe you wear. Enclose \$3 a pair for 6-inch size, and the best and most comfortable working shoes you ever wore will promptly be shipped to you. Your money refunded if you are not delighted when you see the Steel Shoes. Send today.

STEEL SHOE CO., Dept. 95, Racine, Wis.  
Canadian Branch, Toronto, Canada.

## Order Blank for Steel Shoes

Steel Shoe Co., Dept. 95, Racine, Wis.

Gentlemen:—

I enclose \_\_\_\_\_ for \$ \_\_\_\_\_

in payment for \_\_\_\_\_ pair Steel Shoes.

Size \_\_\_\_\_

Name \_\_\_\_\_

Town \_\_\_\_\_

State \_\_\_\_\_

County \_\_\_\_\_

R. F. D. \_\_\_\_\_

**Remington**  
AUTOLOADING SHOTGUN

*Loads itself with its recoil  
Has a solid breech ITS SAFE*

This is the greatest game gun in the world. Old hunters write us that it is hard hitting, quick in action and safe. The city sportsman, who shoots only occasionally prefers it, because of its light recoil. The Kick reloads it and you have 5 shots at your command. Five shots, solid breech, hammerless.

Write for descriptive folder and Game Laws of U.S. and Canada.

REMINGTON ARMS CO., Illon, N. Y.  
Agency, 313 Broadway, New York, N. Y.

**EARN \$80 TO \$150 A MONTH**

**WANTED—Young Men for Firemen and Brakemen.**

We prepare you by mail in from four to six weeks for either of the above positions. We have had more calls for our competent men than could be supplied. Positions are secured. Promotion rapid.

REMEMBER, this Association is directed by Railroad Officials of four of the largest roads in the United States. If you want to be a railroad man, cut out coupon and send to us at once for full particulars. Write name and address plainly. Many positions now open. Address

**NATIONAL RAILWAY TRAINING ASSOCIATION**  
OMAHA, NEB. or KANSAS CITY, MO.

Name \_\_\_\_\_ P. O. \_\_\_\_\_ State \_\_\_\_\_ Age \_\_\_\_\_





**YOU CAN GET**  
This Beautiful Set of  
**50 Colored Photogravure Post Cards**  
**FREE!**

A Post Card Trip Around the World from original copyrighted photographs taken by famous travelers—Stoddard, Harper and Gross. Fifty cards in all, each  $3\frac{1}{4} \times 5\frac{1}{2}$  inches, beautifully colored in water colors, with all the features of a hand-colored picture. A full description of the subject is printed on the face of each card.

This magnificent series includes: Scott's Monument, Edinburgh; The Milan Cathedral; Windsor Castle, Church of the Madeline, Paris; Panorama of Venice; The Great Jungfrau; Heidelberg Castle; St. Peter's at Rome; The Beautiful "Como," Italy; Castle of St. Angelo, Rome; Arch of Constantine; Florence; Pyramids of Egypt; Lock Katrine; Stratford on Avon; Lakes of Killarney; Oxford College; together with many other wonderful and historical spots of the world.

These cards are on sale in but few places, usually at 5 to 10 cents each and never less than two for 5 cents so they represent a value of at least \$1.25.

**OUR FREE OFFER:** To any present subscriber of the Michigan Farmer who will send us one new subscription to the Michigan Farmer at 75 cents (or at any second column club-list price), we will send a set of these beautiful cards free, postpaid, and in addition will also send a set free to the new subscriber. You get a set for sending the order to us and the new subscriber gets a set free with his subscription to the Michigan Farmer.

**Three-Year Subscription.**—If you send a new 3-year subscription to the Michigan Farmer at \$1.50 the subscriber will get a set free and we will send you two (2) sets free for sending the order to us.

**Mention Series A cards in sending in your order.**

**NOTE.**—These offers do not apply on orders which have already been sent in. Send all orders to

**The MICHIGAN FARMER, Detroit Mich.**  
Cards alone are 50 cents per set  
The illustrations in this adv. do not show all of the post card views.



## OF INTEREST TO WOMEN

### HOME CHATS WITH FARMERS' WIVES.

BY ELLA E. ROCKWEED.

#### Purchasing Supplies for the Family.

Nothing about the management of domestic affairs calls for the display of good judgment more than the purchase of household supplies. In this is included all such articles as provisions and groceries, clothing, table linen, bedding, also whatever new is bot by way of furnishings which have to be replenished from time to time.

The saying that it is not what a man earns but what he saves that decides the question of thrift and accumulation of this world's goods, is decidedly true and certainly a wife is responsible for a goodly share of results, be they of one kind or the other.

There are many men today who owe whatever of success they have gained to the helpmate whose good sense and business acumen have in reality been the prime factor in its achievement. On the other hand there are those who are handicapped by possessing wives lacking in these qualifications, thereby keeping the family continually on the verge of poverty.

How true it is that marriage is by far the most important step in life judging from almost any standpoint. It decides the weal or woe of both parties for all time and this in more ways than one.

Whenever it is so that she can do it without interfering with her other duties, I believe it is advisable for the mistress of the home herself to do most of the purchasing for the family. She knows best what she wants for household use and should therefore be best prepared to make selections.

On a farm there are times when it is not convenient for her to do this and in many instances the husband is the one upon whom the duty devolves. As a rule women are more economical buyers than men.

It is a splendid idea to allow children under the supervision of the parent, to buy for themselves, beginning in a small way, of course. This is excellent practice for boys and girls alike. In no other way can they learn the value of money than by actually handling it in a commercial way.

In buying the supplies for a family, particularly on a farm where it is some distance to town, it is advisable to purchase certain articles in quantity. By so doing one gets reduced rates and the cash saving will amount to considerable in the course of a year.

When I get six boxes of matches for a quarter or an extra cake of soap by taking a half dozen, I make a nickel on each transaction. It is not difficult to save a number of such coins in a day's shopping by following this plan, besides enjoying the satisfaction of having a supply on hand which will not be exhausted before the week is out.

There is no great saving, probably about one-fourth of a cent per pound, in ordering sugar by the barrel, yet on the whole amount represented it means a pound of good tea or two pounds of coffee practically free with the purchase. Moreover it saves the annoyance and often inconvenience of bringing home a few pounds every time any of the family goes to town.

Tea bot in five to ten pound lots will also insure a saving, and the same is true of coffee. If kept tightly sealed in glass cans these will retain their strength and flavor indefinitely.

Laundry soap by the box means an even greater saving than when bot by the dozen bars, and the longer it is kept the better it wears in use. Starch by the box of five to ten pounds, baking powder by the half dozen or more cans, these are two other articles which it pays to buy in quantity.

Kerosene and gasoline, of which every farmer's family buys such quantities, especially where they are used for fuel in summer, will involve some little loss by evaporation and leakage if bot by the barrel unless kept in a galvanized iron tank. The relief from carrying those commodities in the ordinary small cans with the liability of their contaminating surrounding articles when bot home in a buggy or wagon is considerable and almost any man would willingly buy the tank rather than be obliged to bother with an oil can. Besides that the tank will pay for itself many times over long

before it is worn out. It will last for years. In fact, it will last longer than an ordinary oil can which goes banging around in a wagon back and forth to town every week or so. This I can say from personal experience. We had ours made like a huge round can with a large faucet at the bottom thru which the smaller supply can was filled. The cost was four dollars and a half and would be about the same if made now. The grocer who sells the oil will loan the purchaser a pump by means of which the oil can be transferred from the original barrel to the tank. After once buying kerosene oil in this way no one would be willing to go back to the small can method again.

Many farmers are buying their flour these days, since the old-fashioned grist mills have gone out of existence. The convenience of purchasing by the barrel amounts to something, but as a rule the price is about the same as when bot by the sack.

Rice, tapioca, raisins, baking soda, are other household staples on which a distinct saving may be gained by following this policy.

Going into a stationer's to buy a package of envelopes or a pad of paper we find that the ten cent quality can be had at the popular price of three for a quarter, while the cheaper grades which retail at five cents, largely used in the schoolroom for pencil work, come at six for a quarter, another nickel saved whichever way we put it.

In fact, about the only thing upon which there is no saving when bot in quantity is the postage stamps. Uncle Sam does not offer any discount, no matter how many we purchase. Still, we get twenty-five good envelopes for a nickel every time we buy a package of stamped envelopes. The package costs just fifty-five cents, regardless of size, and for this sum we get twenty-five two cent stamps besides the envelopes.

A few weeks ago merchants everywhere were making great inducements to rid their shelves of left-over stocks before taking inventory. Still more recently they have been offering bargains in odd lots, remnants, and so forth, as after-inventory sales. I know of one woman who found several pieces of cloth, fine and soft, just the thing for making underclothes and all of the same quality. These were mill-ends and remnants left from full length pieces. They over-ran measurement from a quarter to a half yard on each piece, some more, and on the number of these remnants purchased she saved over two yards of nice fine goods. In cutting these short lengths they worked in with little waste, about the same as there would have been had it been a single length. The saving was considerable since the goods had been under-priced to begin with.

I am reminded right here of the fact that not all women can have money to spend as they please. There are men who maintain a tight hold upon the family purse, and it is about like trying to extract water from a rock to get anything out of them. They will not trust with a dollar, the woman they have chosen to fill the responsible position of wife and mother of a family. They bicker and haggle over every expenditure as if she was the cause of it all and were it not for her they would never have to spend a cent. Such men apparently have a very poor opinion of their wives since they are afraid to trust them with their money. Yet is it not a fact that for downright economy women have the men beaten to a finish? That is the way the women look at it, anyway. The most of them pinch a silver dollar till the eagle screams before they let it go, and they rarely fail to get for it full face value when it does go.

Of course, there are extravagant ones and foolish ones among the sex. Not all are captains of finance, by any means.

I believe it is a wise policy on the part of mothers to take pains to educate their daughters so that they may make household purchases intelligently. Take them to the store when you buy goods and show them the difference between cotton toweling and linen. Show them the gloss of a linen thread and demonstrate that the cotton is without it. Show them a

piece of pure table linen and beside it place one of cotton, noting the difference. Then do the same with wool goods. Test it as well as you are able for shoddy and cotton mixture by pulling the threads and examining the same. Explain why some goods fade and others prove fast color. Also tell how starch and other substances are left in the fabric of cotton and linen to fill it out and make it appear heavier than it is. Tell why gingham is superior in wearing qualities to calico. Why stiff silks break and crack while soft pieces will not.

Take them to the shoe counter and examine the different grades of "stock" as represented in several pairs of shoes. Tell why one piece wears better than another. An obliging salesman will explain points which are not clear and give many useful hints about buying foot-wear.

Instruction such as this may be followed up by a visit to the local meat market where the different cuts may be examined and their location in the carcass identified. Tell why the neck, shoulder and round, while equally as nourishing are not so tender as the loin. Show how the different cuts may be identified by means of the bone.

All this knowledge is highly useful to the housewife, and must sooner or later be learned by the girl. No better time for this can ever come than the present. She will not forget the instruction. Such training as this, could the ill-educated and incompetent among housewives have it, would be the salvation from poverty for many a family.

Is it putting it too strongly to say that the well-being of the family lies in the hands of the wife and mother of any household? I think not. Upon her rests the responsibility more than upon any other person. She may or may not be blessed with the co-operation of her husband. If she has this, happy should she be. If she has it not, much still remains for her to do. Her power is shortened but it is not cut off entirely no matter how desperate the conditions. Woman is the queen of the home realm, the shorn of many privileges enjoyed by her more fortunate sisters. The minds of her children are molded as she wills and her influence upon those about her is not subject to any boundaries. Her home is hers and she can so make it despite any and all conflicting circumstances. Its atmosphere may not be all that she could desire yet hers, more largely than that of any other, is the mind which may make it what it ought to be. We see this principle exemplified in the lives of women all about us.

Just so the frugality or the improvidence of the house mother determines to a great extent the thriftiness of the home. Hers may be the influence which shall check expenditure in one direction and encourage it in another. No matter if there are certain conditions beyond her power to control if she does faithfully her duty in her own particular realm it will not be in vain. If she has not had proper training along lines of housewifery she certainly should not be blamed for lacking in this direction. Nearly every woman may be supposed to do the best she knows how.

Frugality, the saving which is not stinginess, economy, which is not miserliness are virtues without which no one can succeed in acquiring the competence such as should be the aim of every adult individual.

In nearly every instance of absolute poverty mismanagement of some kind will be found to be the source. To ge a good manager means everything to a woman as well as to a man.

I believe that, as a rule, it is a mistake to buy any article which is plainly of inferior quality. Such a purchase is sure to be a disappointment in the end. The best grades may cost a little more at first but they wear enough longer to make up for the difference in price. The cheap linoleum, the half-cotton carpet, the dress goods which is not all wool, may look very well at first, but its glory is short-lived.

There are undoubtedly bargains to be had at times and the careful buyer knows them when she sees them, but indiscriminate purchasing of articles of inferior quality cheapens any home whatever the means of the owner, while a few really good ones give it an air of distinction.

Anything which is bot to use or for wear should be of good quality in order to be a truly economical purchase.

Finally, I would remind the reader of the wisdom of following Poor Richard's advice, as sound today as it was fifty years ago. "Never buy a thing you do not want merely because it is cheap."

## HOUSEHOLD ECONOMY

How to Save \$2 on Cough Medicine by Making it at Home.

Cough, medicines, as a rule, are mostly syrup. You can take a pint of Granulated Sugar, add half cup of water, stir and let boil just a moment. This makes a pint of syrup as good as you could buy.

Get 2½ ounces of Pinex, put in a clean pint bottle and fill up with the Granulated Sugar Syrup. The Granulated Sugar costs, say, 4 cents, and the Pinex 50 cents. The recipe makes a full pint of excellent cough syrup, which keeps indefinitely, at a cost of about 54 cents. You couldn't buy as much ready-made cough syrup for \$2.50. This shows a clear saving of about \$2.

This home-made remedy will stop an obstinate, deep-seated cough quickly—usually in 24 hours. It is also splendid for colds, whooping cough, pains in the chest, bronchial troubles and similar ailments. Dose, one teaspoonful every one, two or three hours as required. The taste is very pleasant.

The effectiveness of this remedy is easily understood. The Syrup is an excellent sedative. The Pinex is the most valuable concentrated compound of Norway White Pine Extract, and contains all the natural elements which make the air of the pine forests so effective in curing tuberculosis. There are many pine tar and pine oil preparations, but in making cough syrup on this recipe be sure to use the real Pinex itself. Your druggist has it, or will gladly get it for you.

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## CONCERNING THE EYES.

BY CHARLOTTE A. AIKENS.

Three very common forms of eye defects which interfere with vision and comfort to a greater or less extent, are far-sightedness, near-sightedness, and astigmatism. The eye-ball itself does not see. It has been very aptly compared to a camera. It receives impressions and sends them by means of the optic nerve to the brain. If the optic nerve is diseased or the retina which receives the impression is diseased we have blindness. The impressions either are not received or are not transmitted to the brain so that we are conscious of them.

In astigmatism, near and far-sightedness, the trouble is with the focussing power of the eye. It is difficult to explain the condition and, in fact, there are many varieties of these three conditions. If the eye is of correct form the rays of light will focus properly on the retina and there is perfect vision. The three conditions referred to are all corrected or relieved by proper glasses. All these conditions may cause discomfort, but the near-sighted condition is the most serious. Many of these cases are hereditary or have developed as the result of some weakening disease. No pains should be spared to correct these conditions as far as possible, and to save the eye from undue burdens or strain.

One reason why so many more people wear glasses than formerly is that conditions are better understood and many symptoms which in former years were treated by internal medication are now referred to the eyes and corrected by properly adjusted glasses.

Among the symptoms of eyestrain may be a more or less constant sense of discomfort in using the eyes for reading, sewing, or near work. This often amounts to real pain and the whole eye-ball becomes sore to the touch. The eyelids smart, itch and burn. There is more or less redness of the edges of the lids and eyes. There is an increased sensitiveness to light, especially artificial light. Quite often there is headache or a sense of fullness in the forehead, or the pain may be at the base of the skull. Occasionally there is nausea, indigestion, dizziness and a general nervousness. Very frequently the symptoms are so general that it is hard to believe the eyes are the cause of the trouble. When it gets to the stage where the words on the page blur after a few minutes reading or there is a difficulty in following the lines or the eyes continually "water," it is not so hard to believe the eyes are at fault. When one remembers that the centers of sight are in the closest connection with the other brain centers, it is not hard to see how trouble in the eyes may, thru the nervous system, affect the stomach and the general organism. In a child, such signs as squinting, holding his book close to his face, or headache, should lead one to at least investigate the condition of the eyes. Quite often if glasses are worn for a while and the general health improves, they can be discarded.

Styes or pimples on the eyes are not more serious than pimples elsewhere unless the trouble is persistent. If a child has several styes on his eyes in succession it is quite probable his general health is below par and a physician should be consulted.

In case of cinders, particles of dust, chaff, etc., in the eye, care should be used that in removing them any instrument used and the hands that handle the eyes are clean. Poultices of tea leaves, tobacco leaves and such things should never be applied to the eye. The only good that could possibly come from such poultices is thru the moisture and the heat, and this can be secured by wringing little compresses of soft cotton out of hot water and applying to the eye.

Where the eyes are irritated and inflamed by dirt or smoke, or exhausted by strain from any cause, much relief can be secured by an eye bath in water as hot as can be borne. Use a small glass or cup for the eye bath, fill it with the water and hold the eye down in it. This treatment is far superior to any poultice. It should be continued till each eye has been in the bath at least five minutes, and can be repeated without injury.

Cross eye in children can usually be corrected by a very slight operation on the eyes, and whenever possible this should be done.

In dropping drops of eye lotion into the eye, the patient should sit or lie with the head thrown back and look upward. The lower eyelid is drawn downward and the

drops dropped in the inner corner of the eye. The lotion should be allowed to diffuse over the eye or dry, and care should be used not to force it out by closing the eye or wipe it away. Eye droppers should always be cleansed before using.

When it becomes necessary to use glasses, be sensible about it. Quite often children dislike wearing them because it makes them appear odd, and their parents are indifferent about it. Whenever possible, a reliable oculist who has thoroughly studied the eye and its diseases should be consulted where glasses are needed. The eye is a decidedly delicate organ to experiment with, and the best skill obtainable should be secured. Usually a few days or a couple of weeks elapse before one begins to feel the full benefit of newly adjusted glasses, and a little patience is always needed. It makes a good deal of difference also how the glasses are adjusted and in many cases the full benefit is not received from the glasses because they do not fit on the nose properly, or do not stay in position.

The health of the eye is affected by the general health and especially by causes affecting the nervous system. People who live in the country are less likely to develop eye troubles than city dwellers, many of whom must earn their daily bread by work that entails a constant

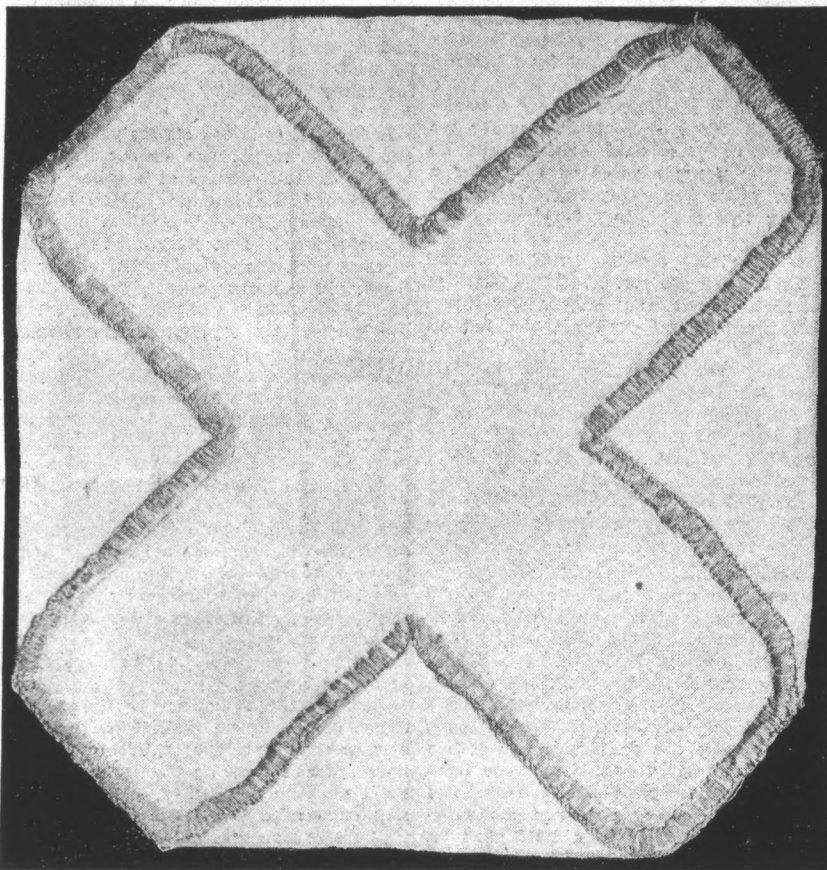
ig the stitches thro both thicknesses of material, proceeding thus around the square.

If more elaboration is desired work a spray of flowers, a swastika, fleur-de-lis or some other design on the reverse side of each corner before turning them down, so the embroidery will fall on the right side. No special stamping pattern is necessary, as a rule, it being quite suf-

## CARING FOR THE CELLAR.

BY H. E. WHITE.

The most critical time for the house cellar is during the latter part of winter and the month of March when the changeable weather accompanied by much freezing and thawing plays havoc with poorly protected fruits and vegetables. When the sudden warm spells come on these products are particularly susceptible to decay; they sweat badly while those near the bottom of the bins or barrels away from the air become so moist that they are sure to rot unless they were perfectly sound when placed there in the fall. This is the time to make the most of thoro ventilation; open the outside door or windows permitting the cool drafts of air to have free vent around the barrels or boxes where the things are stored. Do not let the barrels or other storing equipment come in con-



This Unique Doily is Easily made by the Handy Needlewoman.

strain on the eyes. Prevention of eye trouble is possible in most cases and every care should be used to preserve the strength and vitality of these important organs.

## DOILIES FOR BASKETS, TRAYS, ETC.

BY MAE Y. MAHAFFY.

It is quite the fad at present to utilize low baskets, and trays for passing fruit, cakes, bread, etc., as well as for the collection of odds and ends on the desk and library table, or jewelry or hairpins on the dressing table. The baskets for eatables are always inlaid with a pretty doily and those for other purposes frequently have a pad of silk, satin or cretonne, stuffed with hair or cotton, over which a doily is placed, or not, as preferred.

Any doily of the necessary size may be used for such purposes, but if new ones must be made a unique appearance is given them by turning the corners down, as in the illustration. This little doily was made for a jewel basket, and is equally appropriate as a dainty inside finish to the bottom of a fancy bag. Made in larger sizes the same pattern answers for the dining table trays and baskets.

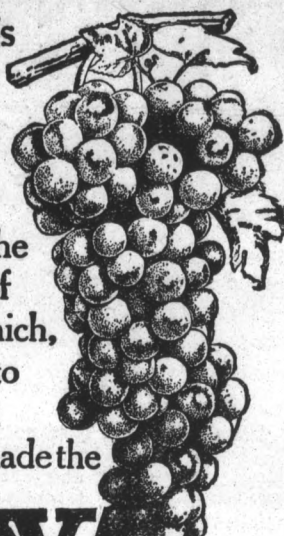
Any color scheme may be followed and small squares or oblongs of linen, crash, or lawn without a noticeable wrong side, furnish the background material, with cotton or silk floss for the working thread. Turn each corner over a little more than a fourth of the doily's width and baste into place. Buttonhole that portion of one side remaining and work down along the edge of the corner, tak-

ing the stitches thro both thicknesses of material, proceeding thus around the square.

I keep a stove in the cellar ready to light a fire when the cold snaps come and often hang up a thermometer as a guide to weather conditions. If the temperature falls to 24 degrees Fahrenheit it may be regarded as the danger point for fruit, while potatoes will not stand quite so much. It is a good plan to sort over fruit and vegetables occasionally taking out all rotten, frost-bitten or specked specimens and at the same time exposing the inner layers to the air so that they will dry.

The necessary requirements for keeping the contents of a cellar in the best condition are dryness, freedom from bad smells and a temperature just cool enough to escape freezing. I would emphasize the first as the most important, for damp air is bound to hasten decay even when the other conditions are right. The flavor of apples and other fruits is greatly impaired by the odor of rotting vegetables such as cabbage or anything else in a state of decay. Remove all such rubbish; its presence is almost nauseating when warm weather comes and it looks as slovenly when hidden away in the cellar as it would if seen above in the kitchen or dining-room. As a rule it is best to keep the cellar a little dark, but too much darkness has a tendency to breed germs of decay—hence the need of some ventilation where much dampness is present if the weather will permit. Use some small detail of a larger design already at hand.

From this pound of ripened grapes was extracted the cream of tartar which, refined to chemical purity, made the



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## CLOTHES AND THEIR CARE.

BY E. J. LYNCH.

The average girl will do well to avoid "striking" effects in hats or dresses and if she must make the same suit do two or three years, she needs all the more to be careful at the time she buys it. A great many styles are very short-lived. Others, with a very little alteration, will look well for years. I know a lady who got a neat, substantial brown suit four years ago which looks neater and better today than many suits but within a year. The only alteration has been a little "taking away" from the sleeves, less fulness at the cuff and top. She has various changes of waists which she wears with it and it has been laid aside for months at a time, but it is today a very neat winter suit, which no one would call out-of-date. To begin with, it was made of good material. Secondly, it was well taken care of. The coat, when taken off was never hung up by one sleeve, as I have seen girls hang their coats. She has a set of a half dozen or so hangers, which she uses for coats and skirts. She never wears her street clothes around the kitchen—a common reason why many a girl's clothes do not long look well. Hangers for coats and skirts can be got for a nickel. Skirts will soon lose their fresh neat appearance if they are carelessly thrown in a heap or tossed over a chair to lie there till the next day. Spots of mud should be carefully brushed away after drying. A good pressing of a skirt that is plaited, after one has been out in damp weather will do wonders in improving it.

In putting on braid on the bottom of a skirt a blunder is often made in neglecting to shrink it. All woollen braid should be wet and dried before putting it on a skirt. Otherwise it will shrink and give the bottom of the skirt a wrinkled look. The appearance of the bottom of a skirt is a pretty good index to a girl's character. If it dips behind and is allowed to become "bedraggled," it spells carelessness. If it is frayed into fringes and worn in that untidy condition it very often spells laziness. The girl who has not ambition enough to keep her own petticoats from getting into ribbons is very likely to develop into the woman who will not have ambition enough to keep her husband's buttons sewed on or his socks darned or his clothing in order. In spite of the best of care spots will appear on clothing some time. A careful sponging with soap and water will remove milk spots, perspiration stains and other spots. Turpentine will remove a good many kinds of grease stains. Gasoline is well worth keeping on hand for removing stains, but don't forget to try common soap and water before giving up, and don't forget to press it after sponging.

A good shirtwaist box is almost a necessity in these shirtwaist days. One can be made for a trifle, taking a common stout packing box—a shoe box is a good size—putting a pair of hinges on the cover, and covering it with some cheap material. The matting that comes around tea boxes makes a neat covering, using plenty of brass tacks to secure it, and any quantity of cretonne can be purchased cheaply which makes a pretty, fancy cover. The top should be padded slightly with hay or excelsior and the inside papered. Such a box will answer the double purpose of a window seat for the girl's room and keeping her shirtwaists in good condition.

Light dresses should be wrapped in a sheet, or an old nightdress makes a convenient cover—before being hung up. All these ways of keeping one's clothing in nice order may seem "troublesome" to many women but if clothes are worth buying they are worth caring for and it is worth something to be able to appear in public with one's clothing always neat and fresh and with a general well-kept appearance.

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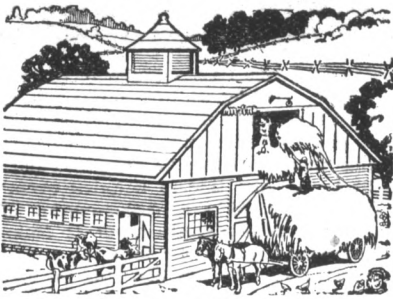
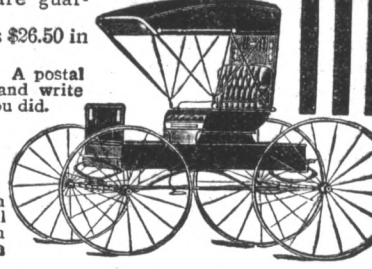
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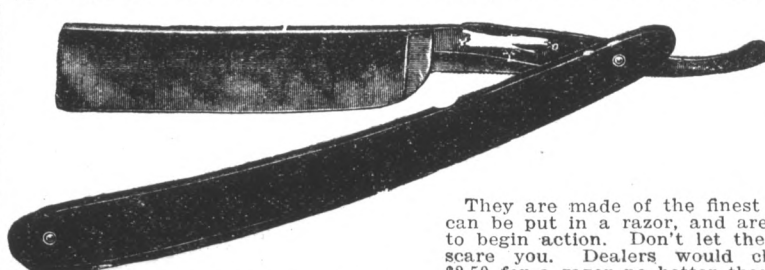
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## A HINT FOR THE HOME DRESS-MAKER.

BY HELEN MORGAN.

How to make clothes at home and not have them look home-made, is a problem that confronts every woman who does her own sewing but who never has regularly learned the dressmaking trade. No farmer's wife or daughter should feel her self-respect lessened one whit because her living comes from the tilling of the soil, yet no woman of good taste and fine spirit wants to look "country-fied."

A friend of mine lately showed me a very pretty fall suit of dark blue cheviot which she had just completed.

"How is it, Hattie," I said, "that you always get your clothes to look as they do. This suit looks better than any dressmaker around here could do it. It looks tailor-made. That jacket is a real work of art. I can get along with a skirt pretty well myself, but I should be afraid to tackle the job of making a jacket. How do you manage to give it exactly the right look?"

"I had intended to buy my suit ready-made," my friend replied, "and I still think that a woman who has lots of work to do and gets but little time to sew, would better buy her suit ready-made unless she is especially hard to fit. If that is the case, so that the ready-made is out of the question, then hire a good dressmaker to make the jacket at least. The skirt may be gotten up at home if one does not feel like hiring it done, but to make a jacket right is a slow job for a non-professional, and one that requires the taking of considerable pains."

"As I said, I intended to buy ready-made. But when I came to look at the suits, I found that anything I liked at all would cost several dollars more than all the material for one equally as good or even better. Now, I have plenty of time to sew after doing my housework, and as I have no way of making money in my spare time, and I need to economize, I do more of my sewing than I should do if my time had a money value. Accordingly I abandoned the idea of a ready-made suit and bot the goods instead."

"The secret of success in making a jacket lies largely in the pressing. Most amateur dressmakers do not realize the necessity of using the flatiron. Of course, a tailor's goose is best for pressing, but a heavy flatiron answers very well. Most women have the idea that they can make a garment complete and then run over it a little with a warm iron, and that will be all that is needed. They don't realize the necessity of putting any more pressing on covert or broadcloth or cheviot than they would on gingham or calico."

"Now in making any kind of heavy goods, thoro pressing is a vital part of the work, and the garment can have no style without it. It is as important as having a good cut, correct fit, and neat stitching. Seams and all stiff places must be dampened ahead of the iron, otherwise the pressing will not stay. When pressing on the right side keep a piece of cotton cloth between the iron and the goods, so as to avoid making any shininess."

"I don't wait till all the seams are sewed before I press, but press each one as soon as it is stitched. I find I can make a neater fit by working in this way. I use an ordinary shirt waist board for pressing. This allows me to get at the sleeve seams properly. While the skirt does not show it quite so badly if the pressing is omitted, still it needs to take its share along with the jacket. In making up even light weight wool goods, all the seams should be carefully pressed."

"I interlined my jacket, putting canvas in the fronts and shelf cambric in the back pieces, fitting each nicely to the outside. The outside and the real lining are of course seamed up separately before being put together, so that no seams show. The lining is as well finished as the outside. Observing these little things serves to give the garment a tailored effect. As I can not work button holes of the kind I like to see, I got my neighbor, who is an expert, to work the three buttonholes."

## SOME DELICIOUS LAYER CAKES.

BY MARY FOSTER SNIDER.

**Rich Chocolate Cake.**—Make a batter with 2 cupfuls of sugar, 1 cupful of butter, 3 rounded cupfuls of flour, 1 cupful of sweet milk, 3 teaspoonfuls of baking powder and the whites of 8 eggs. Beat the butter to a cream, stir in the sugar,

add the milk, then the flour sifted with the baking powder, and lastly the beaten whites. When well mixed, divide into two equal parts, and into one-half grate a cake of sweet chocolate. Bake in layers, and put together with custard, alternating the light and dark layers. For the custard add one tablespoonful of butter to 1 pint of scalded milk and 1 teaspoonful of cornstarch dissolved in a very little cold milk; stir until it comes to a boil, then add the yolks of 2 eggs well beaten with 1 cupful of granulated sugar. Stir just a minute over the fire but do not let it boil, then remove from the fire and flavor with  $\frac{1}{2}$  a teaspoonful of vanilla. Ice the cake if wished or dust it with powdered sugar.

**Fig Cake.**—Cream together 1 cupful of sugar and  $\frac{3}{4}$  cupful of butter, add  $\frac{1}{2}$  cupful of sweet milk,  $1\frac{1}{2}$  teaspoonfuls of baking powder sifted with rather more than  $1\frac{1}{2}$  cupfuls flour, 1 whole egg, and the yolks of 7 others thoroly beaten, 1 teaspoonful of allspice and 2 teaspoonfuls of cinnamon. The spices may be mixed with the flour and baking powder. Bake in layers, and put together with fig filling made by stirring into a plain frosting as much chopped figs as the mixture will hold nicely. Spread with plain icing. This is an excellent cake to make at the same time the chocolate cake is made, as the one calls for the whites and the other the yolks of the eggs.

**Cream Cake.**—Make a batter with  $\frac{1}{2}$  cupful of butter, 2 cupfuls of sugar, 1 cupful sour cream, 3 cupfuls sifted flour, 3 beaten eggs, and  $\frac{1}{2}$  teaspoonful of soda dissolved in the cream. Bake in layers and put together with custard or jelly.

**Orange Cake.**—One cupful of butter beaten to a cream, then stirred with 2 cupfuls sugar and beaten again, add 1 cupful of water, 3 eggs, 4 cupfuls of flour, and 3 teaspoonfuls of baking powder. Mix thoroly and bake in layers. Beat the yolk of an egg with 1 coffee-cupful of granulated sugar, and stir in the juice of 2 large or 3 small oranges, beat in the stiffly whipped whites of 2 eggs, and spread between the layers. Spread with icing if wished and sprinkle with fresh grated cocoanut.

**Jubilee Cake.**—Make a batter with the beaten yolks of 6 eggs, 2 cupfuls of powdered white sugar,  $\frac{3}{4}$  cupfuls butter, 1 cupful sweet milk,  $3\frac{1}{2}$  cupfuls flour, 2 teaspoonfuls of baking powder and the whites of 4 eggs well beaten. Bake in 5 layers. Make a frosting with the stiffly whipped whites of 3 eggs, 2 cupfuls of pulverized sugar, and 1 teaspoonful of baking powder; divide into 5 portions, with the part for first layer mix chopped hickory or walnut meats, with that for second layer mix chopped figs and raisins, for third use the nut meats again, and for the fourth the raisins and figs. Chopped preserved pineapple drained from the syrup is very delicious instead of the figs and raisins, for a change. Spread the plain frosting over the top and sprinkle grated cocoanut thickly over it.

**Ice Cream Cake.**—Make a batter with 3 eggs, 1 cupful white sugar, 1 cupful flour sifted with 2 teaspoonfuls baking powder, a pinch of salt, and 3 teaspoonfuls boiling water. Mix well together and bake in layer cake tins in a quick oven. For the filling whip a coffee-cupful of the thickest sweet cream until it looks like ice cream, add sugar to make very sweet and flavor with vanilla, stir in  $\frac{1}{2}$  pound of chopped blanched almonds, and put very thick between the layers. This is extremely delicious.

## OTHER RECIPES.

**Ham Salad.**—Chop 1 cupful of boiled ham rather fine and add 4 chopped hard boiled eggs, season with celery salt, salt, pepper and a little mustard. Add mayonnaise just before serving and heap on lettuce leaves on small plates.

**Tomato Salad.**—Scoop the inside from ripe tomatoes carefully, leaving the shells thick enough to fill with salad. Take  $\frac{1}{2}$  the pulp, or the same amount of the red without the seeds and add 1 cupful of finely minced celery to each cupful of tomato. Add 1 cupful of chopped hickory nuts to half a dozen tomatoes. Season well and crown with mayonnaise. Should not be filled too long before serving.

**Dandelion Salad.**—Carefully pick over a peck of dandelions, rejecting all that have blossom tops. Cook tender in salted water and drain. Keep hot and cut thru and thru with a sharp knife. Add a little sharp vinegar, butter, pepper and salt. Cover with slices of hard boiled eggs. Dandelions are very tedious to clean and pick over but they will repay the effort because of their healthfulness.



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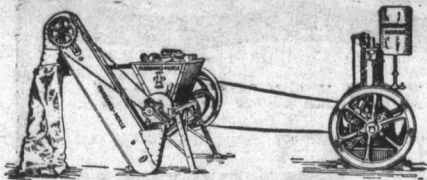
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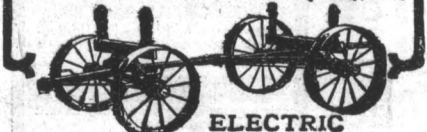
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(Continued from page 186). county farmer is beans, and large acreages are annually planted. At present they have passed the \$2 mark and are bringing \$2.10 on the local market at Flint. Wheat brings \$1.08 altho the offerings are light. Corn brings 68c a bushel; oats, 51c; poultry, fowls, feathers off, 12@14c; turkeys, 15c live weight. Dressed pork is active at \$7.75@8 per cwt. Cows bring \$40@65 and the horse market is brisk in anticipation of the spring. Anything of a good farm team brings \$400 quick. Considerable wood has been marketed here this winter. Many farmers are cutting up their rail fences and selling them at \$2 per cord. Dry hard wood brings \$2.25@2.50 a cord, occasionally a little more than this.

### MICHIGAN CROP REPORT.

**January Weather.**—The temperature was nearly normal during the first two decades, but decidedly above from the 20th to the 29th. The precipitation was light until the 22d, when rain and thunder showers occurred throughout the state, melting much snow and ice. Heavy snow fell on the 29th. In reply to the question, "Has wheat during January suffered injury from any cause?" 157 correspondents in the southern counties answer "yes" and 216 "no"; in the central counties 51 answer "yes" and 86 "no," and in the northern counties 45 answer "yes" and 63 "no." Snow protected wheat in the southern counties 1.04 weeks; in the central counties 1.92; in the northern counties 2.62 and in the state 1.54 weeks. The average depth of snow on the 15th in the southern counties was 0.62 of an inch; in the central counties 2.36 inches; in the northern counties 6.52, and in the state 2.22 inches.

On the 31st the average depth in the southern counties was 6.03 inches; in the central counties 4.94; in the northern counties 1.67 and in the state 4.96 inches. The total number of bushels of wheat marketed by farmers in January at 123 flouring mills was 156,102, and at 104 elevators and to grain dealers 122,461, or a total of 278,518 bushels. Of this amount 191,342 bushels were marketed in the southern four tiers of counties; 78,203 in the central and 8,973 in the northern counties. The estimated total number of bushels of wheat marketed in the six months, August-January is 6,250,000. Sixty-six mills, elevators and grain dealers report no wheat marketed during January. The average condition of live stock in the state is reported as follows, comparison being with stock in good, healthy and thrifty condition; horses 96; cattle and swine 94, and sheep 95.

### NATIONAL CROP REPORT.

**Number and Value of Farm Animals.**  
The Crop Reporting Board of the Bureau of Statistics of the United States Department of Agriculture estimates, from reports of correspondents and agents of the Bureau, the numbers and values of farm animals on farms and ranges in the United States on January 1, 1909, as follows:

Farm Animals.	Per Cent Compared with January 1, 1908.
Horses	100.0
Cattle	100.0
Swine	100.0
Sheep	100.0
Mules	100.0
Goats	100.0
Other Cattle	100.0
Other Swine	100.0
Other Sheep	100.0
Other Mules	100.0
Other Goats	100.0
Other Horses	100.0
Average	100.0

Numbers.	Average Per Head.	Total Value.
20,640,000	\$5.64	\$117,400,000
13,992,000	93.41	1,307,520,000
4,063,000	60.25	244,800,000
3,880,000	107.84	417,080,000
2,720,000	72.30	196,640,000
21,193,000	30.87	654,000,000
4,878,000	11.49	55,900,000
50,073,000	19.02	952,580,000
56,083,000	3.43	192,632,000
56,631,000	3.88	217,736,000
54,147,000	2.92	158,110,000
56,084,000	6.05	339,080,000
6,07	6.07	

Compared with January 1, 1908, the following changes are indicated: Horses have increased 648,000; mules increased 184,000; milch cows increased 526,000; other cattle decreased 694,000; sheep increased 1,453,000; swine decreased 1,937,000.

In average value per head, horses increased \$2.23; mules increased \$0.08; milch cows increased \$1.69; other cattle increased \$0.60; sheep decreased \$0.45; swine increased \$0.50.

In total value, horses increased \$106,522,000; mules increased \$20,143,000; milch cows increased \$52,888,000; other cattle increased \$17,816,000; sheep decreased \$19,104,000; swine increased \$15,764,000.

The total value of all animals enumerated above on January 1, 1909, was \$4,525,259,000, as compared with \$4,331,230,000 on January 1, 1908, an increase of \$194,029,000, or 4.5 per cent.

The details, by states, will be published in the February number of the Crop Reporter.

## THE GEARLESS HAY AND BEAN LOADER

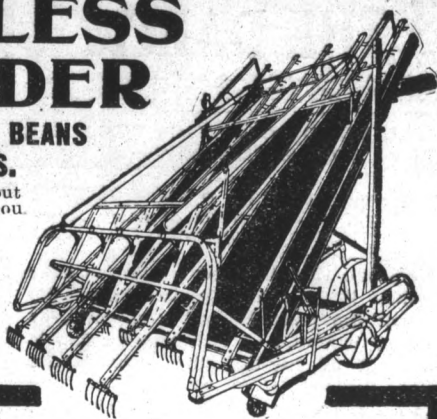
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**My NEW Roller Feed Spreader. Greatest thing in the spreader line today**

Let me tell you something: I'm making a quotation on the Galloway Wagon Box Spreader so low that farmers all over the country are taking notice—and sending in their orders while they can get them at this figure. The name—

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or high-wheel wagon, and is made in 4 sizes, up to 70 bushels. My big, Free Spreader Catalog and my Special Red Hot Proposition are waiting for you—Send a cent for a postal today and get your name to me at once. I'll make you the lowest price ever offered on a first-class Spreader—Freight all paid—and show you how to clean up \$50.00 clear cash profits. Write me personally—TODAY.

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## THE DAIRY

CONDUCTED BY COLON C. LILLIE.

### SHALL WE DOUBLE THE YIELD OR HALVE THE COWS?

Paper presented by P. H. Kieffer, of New York, at convention of dairy farmers held in connection with the recent National Dairy Show.

I assume that the above question asks whether it is advisable to double the yield of the present number of cows, or whether it would be advisable to double the yield of one-half the cows in the United States?

In order to consider the question in an intelligent way, it will be necessary to indulge in figures to prove certain facts and conditions.

Is there need for a larger output? Has the increase in the supply of butter been proportionate with the increase in the population consuming it? Does our supply meet the demand?

Can more butter be sold at this high price of production and cost to the consumer?

In order to have some means of comparison we will take the receipts of butter in the four leading markets of the United States, (New York, Chicago, Boston and Philadelphia), for the past three fiscal years up to May 1, 1908. The figures are:

May 1, '05, to May 1, '06 .... 368,055,278 lbs.  
May 1, '06, to May 1, '07 .... 348,948,680 lbs.  
May 1, '07, to May 1, '08 .... 340,962,760 lbs.

The decrease in the three years, you will notice, is 8 per cent.

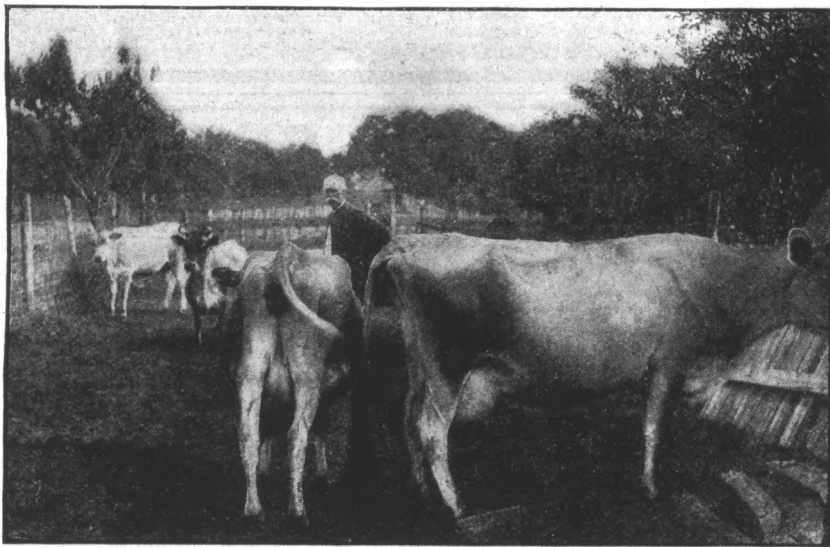
In examining the census of the United States we find that in 1870 there were 38 million people; in 1880 there were 50 million, an increase of 30 per cent; in 1890 there were 62 million, an increase of 25 per cent; in 1900 there were 76

that our population consists of 85,000,000 people, and if our total output of butter per year is 1,721,329,220 lbs., then do we find that our present supply is very inadequate, as 20 1/4 lbs. of butter per capita annually means less than two-fifths pound per week for each person. We are aware of the necessity of the use of this commodity in every household, for it is the most valuable form of fat eaten. It is a conceded fact that in the ordinary consumption of butter, an average family, meaning thereby families who can afford to use butter in the usual way, requires about 50 lbs. per annum for each individual, or about 1 lb. a week per person. Hence the amount of butter required for our present population is twice the amount now manufactured and consumed.

#### A Big Increase in Production of Substitutes.

If our present output falls short of the need, what is the recent growth of the substitutes offered? In the past three years there were produced in the United States 201,242,783 lbs. of oleomargarine, colored and uncolored, which, owing to the short supply of butter and its exceedingly high price, was used as a substitute by a large class of people, willingly and unwillingly. In the last three fiscal years, beginning May 1, 1905, there were manufactured 53,146,659 lbs. of oleo, colored and uncolored; for the year beginning May 1, 1906, 68,988,860 lbs. and for the year beginning May 1, 1907, 79,107,274 lbs.

This shows an increase in oleomargarine of 48 per cent in three years, whereas the decrease in butter was 8 per cent. These are astonishing figures but they are cold facts and, should dairymen allow the growth of this substitute to develop by continuing the high price of butter, the oleo manufacturers will soon have the upper hand. The oleo manufacturers have already taken advantage of the high prices of butter and are sparing no ex-



Cows that will Enable the Dairyman to Lower the Cost of Production.  
(See article, "Shall we Double the Yield or Halve the Cows?")

million, an increase of 22 per cent. Thus the increase in population is considerably over 20 per cent each decade and it would be a safe estimate to assume at least a 20 per cent increase in this decade, making our population of 1910 in the neighborhood of 90 millions. This gives about 7 per cent increase in population in the past three years, while the decrease in the receipts of butter in the four leading markets was about 8 per cent.

It will be clearly seen by these figures that the production of butter is not keeping pace with the increase in population, actually compelling the reduction of the consumption per capita as a consequence.

#### Only 20 Lbs. of Butter Per Capita.

The late Major Alvord, former chief of the Dairy Division of the Department of Agriculture, in the year book for 1900, said that there were 18,112,707 cows in the United States. Of these, 9,700,000 were used in making butter; 800,000 in making cheese; 200,000 in making condensed milk; 7,412,707 in making milk.

From the year book of 1907 we learn that we have 22,000,000 milch cows and these, proportioned in the same way as by Major Alvord in 1900, gives us 11,815,236 cows for butter, which, at 145 lbs. per cow per annum, gives us a total production of butter for 1907 of 1,721,329,220 lbs.

In accordance with the figures given you concerning the population of the United States, it would be safe to assume that we have now at least 85,000,000 people for whom we have only 1,721,329,220 lbs. of butter, making 20 1/4 lbs. per capita annually. If the census figures show

pense in introducing their product all over the country. This year, especially, they are maintaining schools for the education of representatives who are making demonstrations in all the large cities of the east, educating people to the use of oleo. To permit the people to learn the use of substitutes is dangerous to the dairy interests. The use of a cheap substitute will become a custom difficult to overcome.

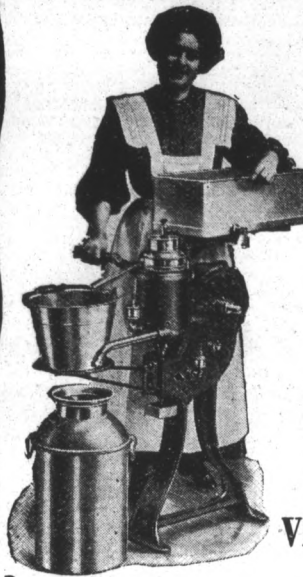
There is no question but that this large increase in the use of oleomargarine is due to the short supply of butter and the exceedingly high price, and it is safe to state that those people would have used butter could they have obtained it at a slight advance even over oleomargarine. I believe that a great many people, when they learn from their grocer that the price of butter is 30c to 40c per lb. not only refuse to use their money to buy even one-half what they would otherwise have but they discontinue its use altogether and may use a substitute. My observations are that we are consuming practically all the butter that will be consumed in this country at the present range of prices. In order to increase the outlet and consumption of butter and keep in the background the manufacture of oleo, which otherwise would rapidly take the place of butter, it will be necessary for dairymen to furnish butter at a lower price or in more reasonable proportion to the income of the wage earner.

#### The Disparity Between Butter Prices and Wage Earnings.

The last United States census report,

## WOULDN'T IT BE FOLLY TO SAY 1909 UNITED STATES CREAM SEPARATORS EXCEL ALL OTHERS IF WE COULDN'T PROVE IT?

Separator buyers are becoming more and more critical. Mere say so has less influence now than ever before. Buyers demand to be shown proof.



This makes us happy, for the more critical Separator buyers are, the more certain they are to become United States Separator enthusiasts.

Simply ask to be shown and the 1909 United States Separator will do the rest. **GREATER CAPACITY FOR SIZE OF BOWL. MORE THOROUGH SEPARATION THAN ANY OTHER.**

In endurance tests has beaten everything on the market and holds the world's record.

Ask for Catalogue No. 111 and it will be mailed you together with a beautiful lithographed hanger in colors.

Selling Agents in nearly every dairy town in the Country; if none in your town, write us and we will be pleased to quote prices.

Separators shipped from our distributing Warehouses in every dairy section of the United States and Canada.

**VERMONT FARM MACHINE CO.**  
BELLOWS FALLS, VERMONT

## Catalogs Can Fool You But Machines Can't— Suit Yourself About Price But See What You Get

Why do 90 per cent of the cow owners buy their Cream Separators and all their other necessities from the dealer instead of buying by mail? You know it's because—"Seeing is believing"—because the Ideal Age has not yet come when all "claims" may be taken for facts. For over 16 years we have made the Omega Cream Separator for the 90 per cent of farmers who want to know—who want to see what they pay their good money for. If the Omega was not as good as it is—If we could not show the farmers that the Omega is the best separator and the greatest bargain—then we would be selling to the 10 per cent who buy by mail. But as it is, we can afford to say, go to your good dealer and examine the—

## OMEGA CREAM SEPARATOR

Get him to show you. Compare with him the price of the Omega with any other separator made and make him demonstrate that the Omega offers the most for your money. He will demonstrate that to you. And he will give you facts—not "catalog talk."

To our Guarantee to you he will add his personal guarantee because he knows the Omega and its makers are good for it.

Write Us Today So we can mail you a copy of our "Butter Profits," and a book giving the reasons why the Omega will increase your dairy profits more than any other separator. We'll also give you the name of the dealer nearest you who will demonstrate the facts. Write us now.

Books  
On  
Butter Fat  
Profits  
Sent Free  
To You If You Write

The Omega Separator  
Company  
Lansing,  
Mich.



Made  
in  
Michigan

### WE GUARANTEE

that you will find every Omega Separator just as represented or you can send it back.

#### CLOSE SKIMMING

If the Omega doesn't skim as close as any separator made, day in and day out, send it back.

#### EASIEST TO CLEAN

If you don't find the Omega the easiest of all separators to keep perfectly sweet and clean, send it back.

#### EASIEST TO TURN

If you can find a separator that turns easier than the Omega, send the Omega back.

#### LONGEST LIFE

If you can find a separator more simple, built for longer service than the Omega will give you—one with a better record in the past for durability—send the Omega back. Look into these points carefully. They mean the difference between hard and easy work—short and long dairy profits.

## SCIENTIFIC

HIGH GRADE Feed Mills for small power Engines. Grind ear corn and all small grains. Lightest running and fastest grinding mills ever built.

### 50 STYLES AND SIZES

Fully guaranteed. Write for Catalog and special prices. **THE FOOS MFG. CO.,** BOX 137 Springfield, O.



Please mention the Michigan Farmer when you are writing to advertisers and you will do us a favor.



says that one-half of the working class in this country receive between \$1.25 and \$1.75 per day. It is conservatively estimated that the average wage of those engaged in employment for remuneration is between \$500 and \$600 per annum.

In the seventh annual report of the United States Commission of Labor, we find the following figures in relation to the consumption of food in proportion to the amount of wages received: On an income of \$200 annually, 49.6 per cent is allowed for food; on an income of \$300 to \$400, 45 per cent is allowed for food; on an income of \$500 to \$600, 43 per cent is allowed for food, and the higher the income, naturally the lower the per cent that will be used for food.

Figuring on the basis of 43 per cent of \$600 to be used for food will allow \$5 per week per family of four for food, and, as far as my investigation goes, if butter could be got at 25c per lb. this class of wage earner would buy a sufficient quantity of butter to meet all the desires of his family; but it can be readily seen that at the present range of prices it is a hard matter even to tempt a man to buy butter for table use when he can buy a sufficient quantity of substitutes at prices conforming more favorably to his earnings.

Mr. Carroll D. Wright, U. S. Commissioner of Labor, in 1890, said: "The whole number of persons in the United States, ten years of age and over, engaged in gainful occupations in 1890 was 22,735,661, but this number included employers, partners, officers and clerks—everybody, in fact, who was engaged in some remunerative calling. A classification of employments into distinct subdivisions has shown that of the number about 15,000,000 can be considered as wage earners and a fairly conservative estimate, based largely upon the earnings of persons engaged in manufacturing and mechanical industries, gives about \$400 per annum as the average individual earnings. This includes boys over sixteen and women."

This makes our previous estimate of between \$500 and \$600 per annum for every wage earner very liberal indeed. By Mr. Wright's figures, there were 15,000,000 workers that could be classed as genuine wage earners when the population was 62,000,000. It is safe to concede that this proportion holds very nearly the same now, in which case each wage earner, including boys over sixteen and women, must support four individuals. If the average wage earner receives between \$500 and \$600 per annum, the 43 per cent to be used for food, as shown by the above quoted table, would give us about \$250 annually to be used for food. Statistics already quoted show that 85,000,000 people in this country today average about two-fifths pound of butter per week each, but those who eat butter without restricting their desires eat about 1 lb. per week. If the national consumption for 85,000,000 people should be 1 lb. of butter per week, and statistics prove that to be more than double the amount at present consumed, I cannot conceive of any large proportion of people refraining from eating butter for any other general reason than that its cost is beyond their means.

Since he has only \$250 to be used for food per annum, it would be unreasonable to expect that the average wage earner can supply each of his family of four with 50 lbs. of butter at an average retail price of 28 to 33c, according to quality. This will figure up to from \$56 to \$76, which you will readily see is out of proportion to the amount of money allowed for food, as butter is not a necessary food for the maintenance of health and strength.

#### Lowering the Cost of Production is the Remedy.

If the increase in the price of butter should continue the next few years as in the past three, it would drive a great many who are using butter today to the use of oleomargarine, butterine, or any other substitutes, as the price now is at a point that is very nearly prohibitive, especially at certain seasons of the year.

You will notice that it is highly essential to dairymen, in order to protect the dairy business, that they study out a way of producing butter at a lower price. The consumption of butter can only be increased in proportion to the reduction in price, which will come thru cheaper production. Owing to the fact that butter, because of its nutritive qualities, will be preferred to any other food stuff not absolutely necessary, the increase in this consumption will grow in proportion to the reduction in price. This argument holds good not only on butter, but also good on cheese, milk and condensed milk.

There need be no fear that the doubling of dairy products will have any such disastrous effect on the market as the doubling of the output of mines and manufacturers would have on their respective markets. The product of mines and manufacturers may be immediately doubled by the installation of men and machinery, but the doubling of dairy products can only be accomplished thru education and patience, and must therefore necessarily be gradual and take many years.

Because of the facts quoted, I feel it incumbent upon me to urge that we double our present yield and not make any reduction in the number of cows.

#### SWEET CORN FOR ENSILAGE.

Can sweet corn be successfully used for ensilage. Have been told that it will get much sourer and will not make first-class ensilage. If it can be successfully used will it require as much extra grain to get the same flow of milk.

Livingston Co. B. B. S.  
I have used sweet corn for ensilage and I do not consider it as good as field corn. My sweet corn was fairly well matured and yet it fermented more than field corn and made a sourer silage. The cows ate it and liked it fairly well, but they were not as ravenous for it as they have been sometimes with field corn silage. Sweet corn cannot be made any better ensilage than field corn, as it has no higher feeding value and you can't raise any more to the acre than you can of field corn. The seed would cost you considerable more and the seed is not as reliable as field corn. It's a pretty difficult thing to get a good stand of sweet corn for a large area, at least this has been my experience, because it is difficult to cure sweet corn and have it have as high a germinating power as field corn. I don't think you need to worry about having your ensilage spoil so that it will be a loss to you if you use sweet corn, but I do not believe that you would be as well satisfied with sweet corn silage as you would with field corn silage.

#### COWS DO NOT GIVE ENOUGH MILK.

I have 3 cows that get all the cornstalks and millet hay they will eat up clean; also about 6 qts. of corn-and-cob meal, oats and bran and a little cottonseed meal each day. In a few weeks' time they dropped off very badly in production. Two of them appear to want to eat dirt when let out to drink. One of them went partly dry in one quarter, the teat appearing to close up.

Kalamazoo Co. C. S.  
I am inclined to think that while you are feeding a pretty liberal ration, that it is not balanced; that is, it does not contain enough protein. The ration otherwise is good, but the roughage consisting of cornstalks and millet hay is deficient in protein, especially is this so if you allowed the millet to get pretty ripe before you cut it. Millet ought to be cut when it is in the milk, and makes a very good feed for cows. I believe that your oats and bran are too high priced at the present time, to give you profitable results, altho they are both a good dairy ration. Usually they are too high priced to be practicable. I would suggest that you mix 200 pounds of corn and cob meal with 100 pounds of cottonseed meal and 100 pounds of oil meal, then I would feed about three pounds of this combination night and morning, making six pounds a day. It will, however, be wise to take into consideration the amount of milk which each cow gives.

I think you can overcome the sore at the end of the cows teat by greasing it with vaseline, or with fried meat grease after every milking. Take a little pains to work the vaseline or fried meat grease up into the opening into the teat.

#### ADDITIONAL REPORT OF HOLSTEIN BREEDERS' ASSN.

In making a report of the recent meeting of Holstein Association for publication in your columns I did not mention a fine paper by Fred R. McDonald, of Lansing, entitled, "What shall be the merits of the Holstein bull calf to save him from slaughter?" Mr. McDonald argued for closer culling of the calves, that nothing should be saved to head herds except those of individual merit and from the best type of producing cows. Veal being high, more should be killed, keeping only the best.

Michigan's oldest breeder and importer, W. K. Sexton, of Howell, also talked on "The Holstein then and now, or how I became an importer." Mr. Sexton reviewed the successes of the Holstein and gave a description of the necessary steps in importing cattle, which was very interesting. He also counseled the young breeder to "go slow," as he had known many good men to go down because they dipped too deeply into what appeared to them success.

J. F. SMITH.

# USUAL CROP OF CREAM SEPARATOR SNARES AND TARES

If actual merit alone prevailed the DE LAVAL cream separator would be the only one made sold, or used.

But the dairy farmer with his dollars is an alluring proposition to those who "need the money", so that every season brings with it a new crop of separator fakes and fables, with some of the old conjurers over again and always a few fresh ones.

Last year the new and improved line of DE LAVAL machines literally swept the field. This year everybody has a "new" machine, which is the one thing they universally harp upon in their talk and advertising. But it is mostly bosh and nonsense. There is mighty little new to them. No more DE LAVAL patents have expired so that there is nothing else "new" that they can lay hold of this year.

There's the usual crop of fakirs appropriating the facts of DE LAVAL separator use and the endorsements DE LAVAL separators have received, and quoting them as though they applied to their own inferior imitations of the standard cream separator.

There's the concern which makes an inferior disc separator and speaks of the "disc" separator being "the machine which has won out universally in Europe, the home of the disc separator". True, but it was the DE LAVAL that has done the winning out in Europe, as it has in America.

There's the political separator concern, with the new "year" or "cents" trademark, whose claims it is to be hoped nobody ever believes, and which manifestly practices the circus man's theory that the great American public over likes to be fooled.

There's the only concern which has stuck to the abandoned DE LAVAL "hollow bowl" of 30 years ago, but will this year desperately join the procession of 10 year back DE LAVAL imitations with a "disky bucket bowl" machine.

There's the "Trust" striving to complete its monopoly of dealer and farmer, harvesting much costly separator experience, largely at the expense of buyers-for-use, through trying to build a cream separator like ordinarily made farm machinery.

There's the "mail order" outfit, with their cheaply made machines, bought here and there, not made by themselves or sold under the real manufacturer's name, all claiming the earth, and many of the things that should be below it.

But the merry lot changes and dwindles every year. They gradually drop out and leave their unfortunate patrons helpless with trashy machines. More will fade away this year. The dairy farmer, like the creameryman, is coming to know something of separators. He doesn't swallow mere "claims" so easily. 98% of the world's creamerymen use DE LAVAL machines. The percentage of farm users content with nothing else is always increasing.

There isn't a single reason why every man who buys a cream separator this year should not buy a DE LAVAL. There are many reasons why he should. The best costs no more than the various grades of inferior imitating machines.

A DE LAVAL catalogue may be had for the asking. A DE LAVAL machine may be tried for the asking.

## The DeLaval Separator Co.

42 E. MADISON STREET  
CHICAGO.  
1213 & 1215 FILBERT STREET  
PHILADELPHIA  
DRUM & SACRAMENTO STS.  
SAN FRANCISCO

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NEW YORK.

173-177 WILLIAM STREET  
MONTREAL  
14 & 16 PRINCESS STREET  
WINNIPEG  
107 FIRST STREET  
PORTLAND, ORE



## THE MAKING OF GILT-EDGE BUTTER.

Buttermaking seems to suggest labor to some people. Those people are the ones who have a poor grade of cows and whose buttermaking facilities are crude. No task can be performed with any degree of success unless the proper facilities are at hand for performing that task. Great progress has been made in every industry, and buttermaking is no exception. But surely, some people are not progressive if one would judge by the amount of unwholesome butter offered for sale in the stores.

The first essential of butter dairying is to have a good breed of cows. Good butter may be made from scrub cows but in smaller quantities, and the cost of keeping a poor cow is as much as for the keeping of a good one.

The cow must have plenty of water, and the water must be clean. Do not compel cows to drink from a slimy, green frog pond in summer, or to drink ice water during the cold season.

Then the cows must have plenty of nutritious food. The farmer should know what kinds of food will produce the richest milk, and should grow and feed accordingly. The cows must have good shelter. The cow that is compelled to stand out in the cold uses the fat-producing qualities of her food for warmth, instead of giving them off in her milk. It is of utmost importance that all cows be kept in healthy condition and that perfect cleanliness be practiced in caring for the milk.

As soon as the milk is drawn from the cow, it should be taken to the place set apart for it. Do not allow the milk to stand in the stable as it will absorb the odors. The milk must be strained as soon as possible. If the old method of using pans or crocks is still adhered to, be sure that no materials liable to produce odors are near where the milk is set. We will suppose, tho, that you have a separator and that the drudgery of washing and scalding crocks has been done away with.

The next important step is ripening the cream. Cream should reach a moderate degree of sourness before churning. Churning sweet cream means that the hogs will get more than their share of the butter-fat. After cream has been put into the ripening can, stir thoroly when more is added. The can must be set in a place that is neither too hot nor too cold. It is a good plan to have a can somewhat larger than the cream can and to set the cream can in the larger can. Then, by pouring hot or cold water around it the cream may be brot to any desired temperature. In cold weather, warm the cream a little each day. The day before churning warm it up to 70 degs. and it will have reached the proper acidity by the next morning. By all means have a thermometer and then you can have the cream just warm enough and not too warm. During the summer cream should be churned at a temperature of 60 degs. and in winter at 63 or 64 degs.

## Hints on Churning.

When cream has been brot to the churning stage the butter can easily be spoiled by using an improper way of churning. The old-fashioned dasher churn is nothing but a butter spoiler. In cream, the butter-fat is in the form of small globules and the dash breaks these, forming grease instead of butter. A revolving churn does not break the globules and therefore is to be preferred. Another thing to be observed is the rapidity with which cream is churned. Too much agitation is harmful. Churn gently. The butter should come in about 30 minutes. When the globules of butter reach the size of a grain of wheat, stop churning. Let stand 10 or 15 minutes, then draw off as much buttermilk as possible without wasting the butter. Next pour in a small pailful of cold water, turn the churn a few times and pour off. Repeat the operation twice. In the third pailful of water, dissolve a handful of salt and let stand over the butter for 15 minutes. By thoroly washing the butter certain elements are removed that cannot be well worked out. When the last pailful of water has been drawn off, take the butter out into a bowl. As you take the butter from the churn, sprinkle a little salt on each ladleful. In this way you can thoroly mix the salt with the butter. Use nothing but the very best grade of salt. One ounce of salt for each pound of butter is about the proper amount to use. Work the butter until the milk and water has been well removed. Then set the butter in a cool place until it has

become hardened sufficiently to mold into bricks.

You will now have a product that will command top prices in any market. If the local customers do not take all of it the remainder can be packed in tubs and shipped to some city, where it will meet with a ready sale.

Comparatively little more labor is required to make gilt-edge butter than is required in the making of a poor grade. There is always a market for the best, while the poorer grades go begging for want of buyers. It is easy to be seen which kind is the most profitable.

Ohio.

S. C.

## BEAN PODS FOR COWS.

Are bean pods a suitable ration for milch cows? Some of our neighbors claim that they "will dry a cow up." We feed them once a day. Remainder of ration consists of clover hay, shredded corn fodder, whole corn fodder, beet tops, crushed corn-and-cob meal and cottonseed meal.

Ingham Co.

H. M. SILSBY.

Where beans are pulled before they get dead ripe and some pains taken to wind-row them or stack them up so that they are not bleached too much by the sun and dew, then properly cared for, they make fairly good feed for dairy cows, or any kind of stock. Such bean pods will not dry cows up. I have seen beans left until the pods and stalks were all dead ripe and fairly well bleached before they were pulled. Then they were pulled and left in windrows, were out in a rain or two and were turned over and bleached in the sun, then finally gathered. After they were threshed they were fed to animals. Now, such bean pods are not good and I would not blame a cow for drying up if she is compelled to eat very much of such food. In fact, I don't think she could help drying up. There is just as much difference in the food value of bean straw as in clover. If the beans are cut before too ripe, and are properly cured, they are palatable, digestible, and a good feed. If they are not, they are no better than straw.

I think you are taking the right course in feeding bean pods, and that is to use them in connection with other feeds, because to insist upon a cow getting almost the entire roughage portion of her ration from bean straw, is not giving variety enough so that she will relish them. But by feeding in connection with clover hay, shredded corn fodder and beet tops, it makes a good variety and the cows will relish them. The beet tops, too, add a succulent food to the ration which is very desirable. The crushed corn and cob meal, if fed in equal parts by weight with cottonseed meal, will make a very good ration to balance this roughage, and from this ration, if fed judiciously, you ought to get good results if fed to good cows.

## A HARD-MILKING COW.

As there has been some discussion as to the truth of the statement that a cow will milk easier if milked a little bit before freshening, I thot I would request your opinion.

Ottawa Co.

J. LA HUIS, JR.

I am inclined to think that milking a cow just before she comes fresh will have a tendency to make her milk easier, for this reason: As the cow approaches parturition, and from natural causes her udder becomes filled with milk, the tendency of the cow is to prevent this milk from being drawn away, because she wants to save it for her offspring; consequently, the muscles at the end of the teat are induced to contract and tighten to prevent the leak. Now if the cow is milked just before she comes in, especially with a strong hand, the tendency will be to cause those muscles to relax. At any rate, milking a cow soon after she comes in, or just before, exerting great strength in doing so, will tend to overcome the obstinacy of these muscles.

Another way to make a cow milk easier is to use a hard rubber plug in the teat, gently rolling the teat between the hands with the rubber plug inserted. You must not press too hard or you will cause inflammation. This will gradually overcome the obstinacy of these muscles in the end of the teat. Some cows, however, are very stubborn in this respect and cannot be encouraged to milk very easily.

## Sold Out.

John Rlenstra, Parkville, Mich., writes: "Please take out my advertisement as I am about sold out. I have had a splendid sale of boars. I shall be glad when I get another crop on hand to use your paper as an advertising medium."

Always mention the Michigan Farmer when writing to advertisers.

## GOOD NEWS FOR CREAM SEPARATOR BUYERS

Seems like we all must know Bill Galloway—the Farmer Manufacturer of Waterloo—and we all know him by the name "Bill" Galloway—not as "William"—just because the name of his firm is The William Galloway Company.

For years Galloway has been the largest individual advertiser in the agricultural papers of the country. We've all read his advertisements and seen his picture in his ads. That makes us feel as if we all knew Bill Galloway personally.

His style of advertising has been full of life and "ginger"—just like the man himself. Some competitors say he's too "breezy"—but after folks find out that he has everything he says he has in his advertising, and does everything he says he'll do, they commence to like his style of doing business.

Galloway has grown wonderfully in the manufacturing line. It's only a little while since he left the farm where he was born and raised. Twelve years ago he was milking cows and teaching calves to drink "skim" milk. Today he's one of the biggest Farm Implement Specialty manufacturers in the country.

First, he started making Manure Spreaders, and they "caught on" quick—because he made the right kind of a machine and sold it on the right plan—at a price that was low. Thousands upon thousands of farmers throughout the country have bought Manure Spreaders on his plan.

Then he took up Gasoline Engines—and made a big success with them.

Now he's got some good news from Cream Separator users. For five years he says he's been hunting for the machine that was good enough for him to endorse and sell on a liberal plan. Galloway says—"You know the way I do business is to leave it all to the other fellow to decide—so I've got to give a machine that will stand up under all conditions and do the work." And then—on my price I don't have enough margin on any one machine to stand for any mistakes, so the machine has got to be right before I'll push it."

He has just completed his manufacturing arrangements for 14,500 of his new Galloway "Oil Float" Cream Separators. Galloway says—"People have been fooled on Separators"—and Galloway ought to know. He says—"The old line manufacturers have been charging too much profit on their Separators, and the mail order houses have been going out with 'fly-by-night' machines at a price too low to make a machine that was any earthly use at all." He says that he now has the machine that's the highest quality—has more points of merit than any machine on the market—one of these points being the mechanism, which floats in a bath of oil—just like the mechanism of a \$5,000 automobile—no oil cups, no oil holes—dust-proof, dirt-proof and wear and friction-proof. Galloway says—"I'll make 14,500 of these machines this year. I'm sending them out to my friends and customers on Free Trial for a month or so. I'll ask them to use them as their own—on their own farms—just to prove them up. Then if they like the machine, they can pay me the low price that I ask for this high quality machine—it's up to them to decide whether they keep it or not."

Galloway says—"It's a wide-open proposition—it's up to the decision of the man who tries out the machine—just the same as all my other propositions"—on which he's built up three of the largest factories in the West in a few years. Galloway is such an enthusiastic fellow that some people don't take him seriously—but when they see the price he asks for the goods he makes—and see the saving he really makes to the farmer—they realize that he's dead in earnest in his business and that he gives them machines that are right.

We think it's a good plan to just drop a line to Bill Galloway of Waterloo and get his Cream Separator Proposition. Owing to the fact that he has sold over a hundred thousand machines throughout the country and that he can easily sell one out of every ten of these customers a Separator because they all know he's a square dealer—better hurry up and get in on this first proposition of Galloway's because it's certainly a dandy.

## Which One Will You Test on Your Farm for Ninety Days? Freight Prepaid

Which will you try, 30 Days' Free or 90 Days' Approval Test?

—Any capacity from 200 to 950 pounds per hour, according to your needs, and I'll save you from \$25.00 to \$50.00 on the price.

—The only Separator whose gearing runs in a "Bath of Oil" like a \$5,000 automobile—Feature worth \$50.00 alone.

—Automatically oils itself—Pour oil at the top, once a month from your oil jug or can—No danger of running dry, or ruining it like others—No oil cups to remember to fill or turn up twice a day.

—Dust-proof—Danger-proof—All gears enclosed—simple but standard built and absolutely dependable.

## GALLOWAY'S New "Bath in Oil" HIGH GRADE STANDARD CREAM SEPARATORS

—Has the only revolving supply tank—worth \$15.00 alone.

—Easiest to clean and the few parts come out easy and can't get back out of place.

—Easiest to run—high crank—low tank. With no high lifting and no "back-breaking" cranking.

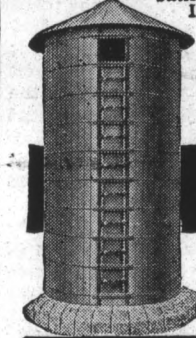
—Gets the finest quality cream and all of it—no lumps or churning, as Nature's true principle is followed without forcing either the milk or cream the wrong way up or down.

—Skims closest in any climate or season, no matter whether your milk is warm or cold.

—Is as handsome a machine, compact and substantial, as you ever saw or could find. Beautiful finish.

## The Saginaw Silo Makes Dairymen Rich

One successful dairyman says: "If it were impossible to get another, I wouldn't sell my 'Saginaw' for 5 times what it cost." Saginaw Silos cut your feed bills in half, and double your dairy profits. Dairymen who are familiar with all Silos say the Saginaw is built better and gives better satisfaction than any other.



It puts more and better milk in your pails, at an astonishingly low figure. In short, the Saginaw Silo is economical, practical, convenient and simple.

## Pays for Itself the First Year

What you save in feed—what you gain in milk and butter—actually makes your Saginaw Silo pay back its cost the first year. Write for our Free Book, "The Modern Way of Saving Money on the Farm." In it experts tell you all about Silage. Get a liberal proposition to you. If we did not make more Silos than anybody else we could not make such an offer. Write for the book—judge our offer for yourself.

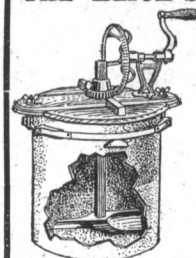
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Guaranteed to skim closer than any separator in the world. Sold direct from the factory. We are the oldest exclusive manufacturers of hand separators in America. You save all agents' dealers' and even mail order house profits. We have the most liberal 30 DAYS' TRIAL, freight prepaid offer. Write for it today. Our new low down, waist high separator is the finest, highest quality machine on the market; no other separator compares with it in close skimming, ease of cleaning, easy running, simplicity, strength or quality. Our own (the manufacturer's) guarantee protects you on every AMERICAN machine. We can ship immediately. Write for our great offer and handsome free catalogue on our new waist high model. Address, Box 1061, AMERICAN SEPARATOR CO., Bainbridge, N. Y.

## THE KLIK SANITARY CHURN



Made adjustable, and can be attached to a 4, 5, 6 or 8 gallon stone jar, making four churns in one.

We do not furnish the jar. Churn butter in three minutes. Dairy thermometer given free. Guaranteed to be the best churn on earth. Shipped direct from factory to consumer, at \$3.50 express prepaid.

Write for free illustrated catalog of 16 pages.

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## THE ROSS SILO

The only Silo on the market with the following important features:

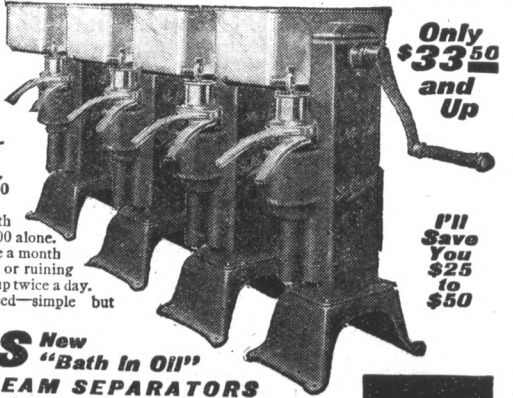
Silo doors on hinges. Continuous all-wood ladder. Triple beveled door and frame.

Oval door frame and extra heavy hoops and lugs. Every stave beveled and hoops bent for exact diameter. Fully Guaranteed.

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Box 14, Springfield, Ohio. We are Engineers at the business.

FOR SALE AT A BARGAIN, fully equipped creamery, almost new. Write C. H. Whittington, East Jordan, Mich.



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—Let me send you my Big New Separator Book—post paid—Free, so you and your wife and the boys and girls can talk it over and then try one of my separators under my easy plan for you to do it.

You'll call it the best if you test it alongside any of the highest priced \$85.00 and \$110.00 separators sold by anybody today—makers—catalog houses—dealers—jobbers or anybody else. Write me today.

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# Ask the WIFE

## SHE WASHES IT

Why not let **her** choose between the light, simple Sharples Dairy Tubular Cream Separator bowl—with just one tiny, plain piece inside, as shown in the upper left hand picture—and the heavy, complicated “disc” or “bucket bowls” shown in the lower right hand picture?

Show her these pictures, made from actual photographs. Ask her which cream separator bowl she would rather wash? She'll put her finger on the Tubular every time and thank you for saving her needless labor.

You will appreciate the many exclusive advantages of the 1909 Tubular "A" Cream Separator.

You will like the low supply can, single frictionless ball bearing supporting the bowl, entirely enclosed self-oiling gears and ball bearing, the plumb bob attached to the frame for quickly leveling the machine and keeping it level, the single piece frame and the great simplicity of the entire machine.

Put your heads together and talk this over. You'll agree that the 1909 Tubular "A" is the finest cream separator money can buy.

## Tubulars Are Entirely Different From all Others

Built on 29 years' experience, in the world's greatest cream separator factory. 1908 sales way ahead of 1907—way out of sight of any other make, if not all others combined. Write for complete catalog No. 152.

## The Sharples Separator Co.

Toronto, Can. **WEST CHESTER, PA.** Portland, Ore.  
Winnipeg, Can. Chicago, Ill. San Francisco, Cal.



## She Will NOT Want These



What woman would choose to wash any of these heavy complicated "bucket bowls" when she can have a simple Dairy Tubular instead? What man would expect any of these complicated "bucket bowls" to be as durable as the simple Dairy Tubular?"

### Something to Remember About Hens.

A. B. C. isn't simpler, or more easy to learn, than the business of poultry keeping, if the keeper will take the pains to remember one or two facts about hens. In the first place, the hen is a liberty-loving bird. Her natural instincts prompt her to roam far a-field in search of natural food—bugs, worms, grasses, etc. In the second place, the exercise she gets in this daily search for food is a perfect preventive of disease and a guarantee of long life and great productiveness. Now the hen-man, who wants to carry on a big business, catches Mrs. Hen and imprisons her in a close coop and a little yard, so that he can have her handy to feed and not trot his legs off hunting her eggs. But it's fatal to the hen, and also to a full egg basket, unless something is done to replace natural conditions in the hen's life. Here is where "The Dr. Hess Idea" is of great and permanent value. Dr. Hess—a stockman and poultry farmer—after long study, formulated Poultry Pan-a-ce-a, a preparation used almost universally by successful poultrymen everywhere, and which is really the actual cause of their success. Anyone possessing medical knowledge or a clear idea of the digestive process, knows how difficult it is to preserve health in idleness, especially if feeding be heavy, as in the case of the hen forced for eggs. Thus, the maintenance of a healthy activity of the whole system is, in the case of the hen, as also in that of feeding animals, the one object to be constantly sought. Every poultryman should aim, therefore, to handle his flock in the most economical manner; and that is possible only when perfect digestion prevents food-waste. If, then, you are struggling with a lazy, droopy, inactive flock of hens, you can change a disheartening situation into a cheering one in short order by the use of Dr. Hess Poultry Pan-a-ce-a. It is a tonic—in no sense a food alone; its mission is to make food available. That is, it aids digestion; strengthens the digestive organs, so that the hen gets more out of her food—elements that make flesh and bone, feathers and eggs. Thus, tho confined and denied the hen's natural right to forage at will, she is yet as prolific and healthy when getting this preparation in regular daily doses as tho at large. But, further than this, if there are old hens, unfit for layers, which are better disposed of Poultry Pan-a-ce-a fats them in a very little while, and for the same reason that it helps the laying hen—it aids digestion. Chickens thrive on it; moulting fowls feather quickly when it's mixed in their feed; in fact, disease and trouble vanish from the poultry farm when Poultry Pan-a-ce-a is made a small part of the daily ration.

Milk-producing farmers in the territory tributary to Chicago have formed an association for the purpose of establishing higher prices, and it is understood that milk is to be raised to 8 cents a quart. Dairymen of Illinois, Indiana and Wisconsin have joined the alliance, and five hundred delegates attended the Chicago convention.



offers you your first opportunity of *knowing* you're getting your money's worth when you buy tinware.

It is impossible to tell the difference between poor and good tinware simply from the way it looks. The cheap, thinly coated ware is just as bright and shiny as the good, honest value.

**Armor Brand Tinware is coated with an extra thick coat of pure tin** and is the only tinware sold under a trademark label by name. That name is your guide to the tinware that wears and wears. Remember the name, **Armor Brand**, and insist on having it. The best dealers carry it in stock. If yours doesn't, send us his name and we'll see that you are supplied.


**THE REPUBLIC METALWARE CO.**  
2 Republic St., Buffalo, N.Y. New York



**I WILL GIVE YOU  
\$10.05 FREE**

In the first place I will give you **\$4.20** in the best Washing Soap you ever used. This year's supply of **\$4.20** in soap you are to keep and use as a personal gift from me whether you keep my washer or return it. In other words I pay you **\$4.20** simply to try my Champion Washer 4 months **Free** in your own home and entirely at my own risk.

In addition to this I make you a special introductory offer of one **\$5.85** high class Wringer Absolutely Free. I want to help you enjoy wash day and to give you **\$10.85 Free in High Class Household Necessities** which will actually save you Ten Dollars Cash.



## DAN PATCH WASHER

**I Will Send You One Of My Famous Dan Patch Washers On 4 Months Absolutely Free Trial.**

Signed M. W. SAVAGE, Minneapolis, Minn.  
President of International Factories Co., Sole Mfgs.

If it is not the best made,—most durable,—easiest to work,—easiest on clothes and the fastest washer I want you to return it after 4 months Free Test and I will not ask you to pay me a cent. I own Dan Patch 1 55, the World's Champion, and I want to mail you Two New and Beautiful Pictures, one shows Dan hitched to sleigh and driven by small children. You Must Mail Me the Free Coupon. Mail me the Free Coupon today,



**\$34.00  
CASH  
FOR YOU**

I have a special and additional \$34. Spot Cash offer I would like to make you. This \$34. Cash you are to receive without your writing letters, without any work and without any canvassing. I will explain this special cash offer if you Mail Me Free Coupon.

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 Largest Atlanta  
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 I am interested in your  
 White Absorbent Paper  
 \$10.00 per 1000 lbs. I am  
 of Dan P.O. 154 without any obligation on my part.  
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 CASH  
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 MAIL ME THIS FREE TRIAL  
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**THE WASHER—THAT WASHES A TUB OF CLOTHES SNOW WHITE IN 1 MINUTE AND 55 SECONDS.**

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## FARMERS' CLUBS

### OFFICERS OF THE STATE ASSOCIATION OF FARMERS CLUBS.

President—A. L. Chandler, Owosso.  
Vice-President—Mrs. Clara L. French, Pompell.  
Secretary—Mrs. W. L. Cheney, Mason.  
Treasurer—D. K. Hanna, Caro.  
Corresponding Secretary—Clayton Cook, Owosso.  
Directors—D. M. Beckwith, Howell; D. M. Garner, Davisburg; T. B. Halladay, Norvell; E. C. Hallock, Almont; B. A. Holden, Wixom; Wm. A. Marks, Fair Haven.

Address all correspondence relative to the organization of new Clubs to Mrs. W. L. Cheney, Mason, Mich.

#### Associational Motto.—

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

#### Associational Sentiment.—

The farmer; he garners from the soil the primal wealth of nations.

#### ASSESSMENT OF FARM LANDS.

Address of Jas. N. McBride at S. A. F. C.

(Concluded from last week.)

#### The Result of Amortization and Income Tax of the Farmer is Far Reaching.

Since it forces an exhaustive system of tenant farming and defers the acquiring of land for ownership. It is only rarely that a man can buy an improved farm and pay for it entirely from the products of that farm. Interest, tax on soil and labor and amortization and often the tax on the contract makes the burden great, if not actually impossible. The same man on the same farm as a tenant will have a greater surplus earned at the end of the year than he would as a nominal owner since he transfers the amortization and the taxes to the actual owner. The landlord refuses to repair the depreciation of cropping and his depleted revenues, based on soil taxes and labor taxes, does not permit it. In the end poorer tenants, a run down and an abandoned farm.

The National bank act forbid farm or real estate loans being made, the reason at that time being that such were not easily liquidating assets. Several years ago it was proposed to repeal this feature of the National Bank act. When the question was asked, "Who buys farm land as a simple interest returning investment?" "Do you know of farms that will pay the bank rate of interest, maintain repairs and pay a salary to manager?" No change was made in the bank act. If I were to summarize I would have the fact of soil amortization determined in all its bearings, social and economic. The farmer extracts per acre nitrogen, potassium and phosphoric acid to the value of one and one half tons of the average copper ore from the Michigan mines, and pays taxes, approximately of 50 cents thereon. Were the same rate of taxes applied to extraction of ore as per soil elements, the burden of taxation would be more equitable, for Michigan produced in 1906, 224,071,000 pounds of copper and 38,522,239 tons of iron ore. When agriculture was the main industry of the state the relative burden of taxation was not so great but when diversified industries makes the farmer in the minority of output, then these inequities are multiplied and again when farm land reaches its maximum value. And to further summarize the farmer's labor should have a return as wages or salary and this be excluded from taxation i. e., a proper analysis be made to place the farmer upon the same plane as the business or professional man, with reference to taxation of salary or income from labor and base farm values upon rental or crop values, with allowance for amortization. Is the taxing value of a farm to include the personal effort of the owner or should it be on the real estate as the loan valuation of 50 per cent of the market value. The insurance companies who make loans on farm property determine 50 per cent of the market value as the point where amortization and death will not affect the valuation. In other words, the real value of farm land is 50 per cent of its market value, and the 50 per cent beyond the actual value is purely personal. A reduction of 50 per cent in Michigan farm properties would be the proper adjustment to other assessments.

There occurs in the writings of the late James G. Blaine the following: God has given us a beautiful country with the ideals of equality of opportunity and equality of burden. Let us preserve our country in its beauty and its ideals." President Roosevelt urges the conserva-

tion of our natural resources. To recognize the fact of soil amortization and classify such property for taxation purposes as different from property to which values inure is "preserving our beautiful country" and conserving our national resources. To place the farmer upon the same plane with reference to taxation as all other producers of wealth is to exclude his salary or wages from being measured in his property, and tax the farm on that basis alone is but preserving our ideals of equality of opportunity and equality of burden. It is not only our right but our duty to insist on a reform in matters of taxation.

#### CLUB DISCUSSIONS.

**Young People Direct Meeting.**—An enjoyable meeting was held by the Sherman Farmers' Club, of Newaygo Co., at the home of Mr. and Mrs. G. W. Coil, on Jan. 16. After serving dinner to about 50 members and guests the meeting was called to order by President W. M. Carter. After opening exercises and song by the club we had our regular business session, and an invitation by our president to hold the next meeting at the home of Mr. and Mrs. Carter, Feb. 20, the meeting was turned over to the young people. They had Mr. Bert Hepkins as temporary president. A fine program of songs and recitations was rendered. Then followed the question box. The following questions were discussed: "Which is the most profitable, potatoes or beans?" answered by Mr. C. Zutima, who that potatoes more profitable than beans. "How to bring the home and school together," answered by Mrs. Coil and Mrs. Gamble, who said parents should visit the school more than they do. "Which gives the best results, whole grain or ground feed?" Members agreed that ground feed gives the best results, especially for cattle. The club adjourned to meet Feb. 20.—Mrs. L. Kemperman, Cor. Sec.

**Receive Report of State Meeting.**—Twentieth Century Farmers' Club convened in January at the home of Floyd Dancer and wife, with good attendance. Committees for the year were appointed and resolutions of respect passed on the death of Seamus A. Smith, the fourth member of our club to pass to the higher life within the year. The delegate to State Association gave a report of that meeting that took up the entire afternoon session and a portion of the report was deferred until the next meeting. A social was planned and will be held Jan. 30 at Mrs. Wm. Hutchins'. The February meeting will be held with Mr. and Mrs. Frank Stuart. Questions for discussion, "How to feed milk cows for best results," and "Are the present highway laws satisfactory?"—Jennie M. Ford, Reporter.

**Planning Joint Meeting with Other Clubs.**—The Hickory Farmers' Club met at the home of Mr. and Mrs. E. Purdy, Thursday, Jan. 28th. A good program had been prepared and was enjoyed by all, the subject for discussion being, "Which is the most profitable crop for the farmer to grow, corn or beans?" It was well discussed, giving corn the preference, taking one year with another. The day being an ideal one there was a good turnout, 52 adults being present. The club enjoyed the presence of Rev. and Mrs. Blanchford, of the Trinity church, Caro. A committee was appointed to meet with committees from the Almer and Ellington and Indanfield's Clubs to make arrangements for a joint meeting to be held in the near future, to which all are looking forward with much pleasure.—Cor. Sec.

**Every Club Family Represented.**—The Indianfields Farmers' Club held the first meeting of the new year at "Maple Lawn," the beautiful farm home of Mr. and Mrs. I. N. Taggett, on Thursday, January 21. It was a warm, spring-like day and with two exceptions all the families represented in the club membership were present. A bountiful dinner was served by the refreshment superintendent, Mrs. Robert Park. After a pleasant social hour the club was called to order by the president, J. M. Miller. Roll call was responded to by "Something new I have learned during the past year," and was often as humorous as it was instructive. Mrs. Ellen C. Purdy read a paper on "how to make our club more interesting." A male quartette furnished two selections and were showered with roses (paper). There were also readings and recitations and a very interesting debate, "Resolved, that life insurance is a detriment to our country." Mr. Robert Park led the affirmative and B. H. Smith the negative. The three lady judges appointed decided in favor of the affirmative. Mrs. Ellen Purdy read a paper on "Club Extension," at the Tuscola Co. Farmers' Institute, Jan. 22.—M. R. Purdy, Sec.

**A Gratifying Outlook.**—The Hadley and Elba Farmers' Club has a very gratifying report to make on the outlook for 1909. We held our election of officers at Mr. Chas. Farrar's, Dec. 17. President, Robert J. Pierson; vice-president, Chas. Davenport; secretary, Jennie Johnson; treasurer, Blanche Bates. The day was stormy, but there was a good attendance, and every person present joined the club. Jan. 14 we met with Mr. and Mrs. F. G. Selby. A large crowd and an overflowing question box combined to make things interesting. The questions covered a large range of subjects, and some were tabled for future use in the club work. Our club now numbers 95, with many of our old members to be heard from yet, so we feel greatly encouraged. The next meeting will be with Mr. and Mrs. Heman Kelly, Feb. 18th. A hearty welcome awaits all who accept the cordial invitation extended to everybody.—Jennie E. Johnson, Sec.

## GRANGE

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

#### STUDY OF THE HOME.

A Maryland woman asks: "Does the Grange present to the women the best that on home economics in the same proportion that it presents the most advanced agricultural knowledge to the men?"

Please read that question again. Does it not strike you that if we are perfectly frank we must reply "No?"

There are several very good reasons for this, but the fact remains, I think, beyond dispute, that the home is not studied as carefully in our farm organizations as is the farm.

One reason that the technical affairs of the house have not been taken up and discussed as thoroly as have the corresponding operations of the farm, is because women have been more diffident about taking part in the discussions in most Granges. They have largely left that part to the men while they have furnished the feasts and creature comforts of the meetings. Another reason is found in the newness of "Household Science," or "Home Economics," or "Domestic Science"—for all of these terms are applied to the study of how to make the work of the home most efficient.

The other day I had the privilege of hearing Mrs. Ellen Richards, of Boston, speak upon the history and progress of this knowledge among homemakers, and no woman in our land knows more intimately of these things than she. I wish every Michigan woman might have heard the story she told. I am sure the Granges and Women's Sections of our institutes would have listened with keen interest, for their pulses are already quickened in a new way to this really old subject. We are ready for more systematic and definite consideration of the work and healthful care of the home than we have, for the most part, been able to give it in the past. When one thinks of how recently people have begun to ask the why of these common operations, one is filled with a great hope for the forward work along these lines that is surely being done, largely thru farm organizations.

Mrs. Richards says it was only in 1871 that the question was first raised, "Cannot chemistry help in the kitchen?" It was in 1874 that the possibility of the presence of impurities in water was suspected, and in that year she herself tested 600 samples of the Boston water supply for purity. It was in 1886 that it was suggested that perhaps milk, also, might hold impurities; and then the fact was learned that it not only could, but actually did, afford the best possible seed-bed for germs to grow in. In fact, the "germ" itself was only discovered about that time and the whole new science of bacteriology began to unfold its wonders, both out on the farm and in the home.

While these are comparatively new studies, the women are by no means going to let the science of the farm outstrip the science of the home, as a few years' time will clearly show.

JENNIE BUELL.

#### THE VALUE OF AN IDEAL IN GRANGE WORK.

Who has ever measured the value of an ideal to any individual or association?

The business man without an ideal can succeed only by accident; the lawyer without an ideal will be little known beyond his town; with no ideal, the politician will soon retire to private life, the editor will find his subscription list shrinking, and the teacher will not be worth her hire. The minister with no ideal will preach to empty pews while his people wonder why the gospel no longer appeals to the young and will mourn the decadence of religious interest generally.

What is true of individuals is equally true of associations. If they live and grow and are worth what they cost they must possess an ideal. The Grange is no exception to the rule. Its life and perpetuity depend upon the appreciation of the task before it.

What shall be our Grange ideal? This question is of primary importance to every organization of "Patrons of Husbandry," and upon its answer will depend

in a large way the success of the Grange in each locality.

Our interests and capabilities differ somewhat with our environments, and so our Grange ideal will vary to some extent, but in unity of thought and action there is always strength. In our educational work we shall be wise if we move together along the same path insofar as we are able.

The time was when the office of lecturer meant little to the Michigan State Grange, but within the past few years it has rapidly developed into a great educational force. The writer will be glad indeed if the day shall come when the State Lecturer's Bulletin shall be published in a paper, thus being placed within possible reach of every member of the order.

However, Sister Buell's contributions to the Grange page of the Michigan Farmer seem destined to accomplish, in part, at least, the same great end. If the Grange is to be "our college," we must concentrate our educational work within certain lines more or less defined. We have been working in this direction for years, and we must take no backward step now.

The work of this year should teach us much that we need to know of that very essential animal, the horse. If the 700 Granges in Michigan could carefully study the "Breeds and Types of Horses" and their care, together with the recent experiments along lines of safe and economical feeding, animal husbandry would receive an uplift such as it has never experienced before. We have very much to learn about the horse, much that it will be greatly to our advantage to know, and it is hoped that the interest inspired by the January programs will not wane until a great deal of good has been accomplished. A study of other farm animals and of soils will follow in time. Let us be ready for each in its turn. Let us read our agricultural papers closely and study the experiment station bulletins upon the subject at hand, thus being prepared to realize as fully as possible this part of our Grange ideal in education.

W. F. TAYLOR.

#### THE GRANGE IN OTHER STATES.

**Value of Grange Fairs.**—Master Buxton, of Oregon State Grange, recently declared that Grange fairs are beneficial to the organization in two ways which he states as follows: First, they are helpful directly by inciting the membership to work for the attainment of results in which they have a common interest. In other words, it gives them something to work for, arouses their interest in the work of the organization and gives them useful training in the matter of co-operation. Second, these fairs are attracting a great deal of favorable attention from the press and the public. Every one sees that the Grange is fostering what is universally recognized as a valuable line of work. At many of these fairs, as well as at the state fair, speakers have been provided who have in this way been able to present the work of the Grange and its claims for their support to thousands who could not otherwise have been reached.

**Change in Representation in Ohio.**—The recent meeting of Ohio State Grange, at Kenton, was a most successful one, the attendance exceeding 1,200. Twenty-two new Granges had been organized and large accessions made during the year to Granges already organized. The treasurer's report showed total resources of \$23,788.95. The committee in charge of the trade arrangement, reported that 64 tons of binder twine had been purchased, worth \$12,000, and also fertilizer to the value of \$21,000. An important change in the representation of the State Grange was made. Proportional representation was adopted which entitles each county having a Grange to one delegate, and each county having a paid up membership exceeding 500 will be entitled to an additional delegate for each additional 500 or major fraction thereof, provided that two delegates shall not be elected from the same Grange. The state master's salary was increased to \$500, with \$250 per day and expenses when on the business of the Grange. The Grange favored county local option, forestry preservation, direct election of United States senators, referendum on the 5 per cent basis and initiative on not over 8 per cent basis, provided that measures be adopted by the majority of votes cast; favored the use of a share of the farmers' institute funds for instruction in household economy in the institutes and recommended uniform specifications for road laws, 50 per cent to be paid by the state, 30 per cent by the county and 10 per cent by each township and abutting property owners. Next year's meeting of the State Grange will be held at Columbus.

**Cass Co. Pomona** recently met with Union Grange. Several subordinate Granges were represented and the following officers were elected and installed: Master, C. T. Wells; overseer, Geo. Tolbert; lecturer, Mrs. Jesse Green; steward, Albert Martin; assistant steward, Ralph Stewart; chaplain, Mr. Springsteen; treasurer, G. H. Redfield; secretary, Jesse Green; gatekeeper, C. C. Simmons; Ceres, Mrs. Redfield; Pomona, Mrs. Ned Carter; Flora, Mrs. Wm. Wagner; L. A. S., Mrs. Geo. Tolbert.



## ADDITIONAL CLUB DISCUSSIONS.

The Salem Farmers' Club held its Jan. meeting at the pleasant home of Mr. and Mrs. Burton Hooper. This was in a large sense, a farewell meeting to Mr. and Mrs. Hooper, as they are going to leave the farm for a home in the nearby town of South Lyon. It is with regret that their many friends bid them good-bye. The report of the state meeting at Lansing was given by our delegate, W. W. Hamilton. The report was instructive and interesting, containing several new suggestions for our club work. An original poem on the new year was read by Mrs. Chas. Ross, which was enjoyed by all. Our old club friend, L. D. Lorewell, gave the club one of his excellent talks. Excellent music was furnished by the young ladies' chorus, also by Misses Ruth Ross and Grace Thompson. An original poem, which was given at the state meeting, was then given by Mrs. May Atchinson. The Michigan Dairy-men's Association was entertained at Salem, Jan. 15-16. It was well attended and the farmers of the vicinity received a good deal of benefit therefrom.—H. C. Thompson, Reporter.

**Do Not Favor Unit System.**—The January meeting of the Napoleon Farmers' Club was held at "Woodside," the home of B. R. Tracy and wife. About 75 members were present. The club was called to order by President T. M. Andrews, after which a pleasing program was given. The bill before the present legislature providing for the unit system of schools, was warmly discussed, in which the "Little Red Schoolhouse" seemed to have the best of the argument. The paper of C. Taylor was thoroughly discussed. Club adjourned, to meet with Wm. Wycokoff and wife the third Saturday in February.—R. B. Chef, Reporter.

**Another enjoyable and profitable meeting** of the Looking Glass Valley Farmers' Club was held Thursday, Jan. 28, at the pleasant home of Mr. and Mrs. H. S. Bliss. About 100 were present. The program began by singing America, followed by prayer, a solo and a recitation, after which Prof. A. C. Anderson, of M. A. C., gave a very interesting talk to the club. His topic was "The Dairy Cow." He favored no particular breed of cows but said, for butter and cream, the Holstein, Jersey and Guernsey are equally good. He spoke of the care of the dairy cow—saying they should not be out of doors so much—an hour being sufficient. Also that our barns should have more sunlight and ventilation. He also thinks it pays to keep a separator of some standard make, in making butter. Several other questions were brot up and discussed after which the meeting adjourned to meet with Mr. and Mrs. Royal Miller, Feb. 11, 1909.—Mrs. Anna O. Lee, Reporter.

**A Farmer's Club Institute.**—The institute held by the Salem Farmers' Club on Feb. 3, was especially enjoyable and successful, being largely attended and full of interest. W. I. Moore, of Hanover, spoke on "Building up the soil," also on "How to make the dairy cow pay." Both of these talks were greatly enjoyed by the farmers and dairymen of this vicinity, who entered with enthusiasm into the discussions. In the evening the commissioner of public schools, Evan Essing, spoke on "The Rural School Problem," and I. N. Moore on "Character Building." Both addresses were much enjoyed. The next meeting of the club will be held on Wednesday, March 3, when a temperance program will be given.—H. C. Thompson, Reporter.

**Hold Semi-Monthly Meetings.**—Another profitable meeting of the Looking Glass Valley Farmers' Club was held at the pleasant home of Mr. and Mrs. Royal Miller, Thursday, Feb. 11. About 70 were present and the bountiful dinner was followed by a lively and interesting program. Mr. Leon Boss favored the club with several fine selections on his phonograph, and Mrs. Miller gave a recitation. Roll call was responded to by short stories and quotations of Lincoln. "The farmer's vegetable and berry garden," was the first subject discussed. Mr. Bliss led the discussion, taking the question from a man's standpoint, and Mrs. Chester Clark followed, giving a woman's opinion on what constitutes a good garden. The discussions were interesting, the general opinion being that the garden should be large enough that a horse may be used, vegetables should be planted in rows and worked early, garden seeds should be tested before planting. The remainder of the time was taken up discussing the advisability of starting the creamery. The club adjourned to meet with Mr. and Mrs. C. N. Plowman and Mr. and Mrs. Geo. Bateman, Feb. 25, a meeting being held each two weeks.—Mrs. Anna O. Lee, Reporter.

**Spencer Leading Shot for 1908.** The official averages of American trapshooters for 1908, which are compiled by The Interstate Association for the Promotion of Trap Shooting, have just been made public. They show that Charles G. Spencer, of St. Louis, Mo., leads all other shooters with the unequalled average of 96.77 per cent for 11,175 targets. Mr. Spencer did this seemingly impossible shooting with a Winchester Repeating Shotgun listing at \$27.00 and Winchester "Leader" and "Repeater" shotgun shells—regular stock loads—the kind any sportsman can buy anywhere by asking for the Red W Brand. Six out of the first nine men used Winchester guns or shells—a showing that tells its own story of winning quality.

**Profit in Grading Seed Corn.** You can't plant irregularly shaped corn accurately. Grade your seed corn and then drop only the perfect grains. This is the secret of profitable corn raising. The farmer who pays attention to the grading of his corn as well as to the choice of seed is the one who will enjoy the bumper crops of the future. See the advertisement of Edwards Mfg. Co., of Cincinnati, O., in this issue.

## THE MICHIGAN FARMER.

(33) 205

**A Badge of Honesty**

Is printed on the outer wrapper of every bottle of

**Dr. Pierce's Favorite Prescription**

and it is the only medicine for woman's peculiar ailments, sold by druggists, the makers of which feel fully warranted in thus taking the afflicted into their full confidence.

**The more known about the composition of Dr. Pierce's Favorite Prescription the more confidently will invalid women rely upon it to cure their peculiar weaknesses and derangements. There's no secrecy about its make-up—no deceptive inducements held out to the afflicted. It's simply a good, honest, square-deal medicine with no alcohol, or injurious, habit-forming drugs in its composition. Made wholly from roots. It can do no harm in any condition of woman's organism.**

Devised and put up by a physician of vast experience in the treatment of woman's maladies. Its ingredients have the indorsement of leading physicians in all schools of practice.

The "Favorite Prescription" is known everywhere as the standard remedy for diseases of women and has been so regarded for the past 40 years and more.

Accept no secret nostrum in place of "Favorite Prescription"—a medicine of KNOWN COMPOSITION, with a record of 40 years of cures behind it.

It's foolish and often dangerous to experiment with new or but slightly tested medicines—sometimes urged upon the afflicted as "just as good" or better than "Favorite Prescription." The dishonest dealer sometimes insists that he knows what the proffered substitute is made of, but you don't and it is decidedly for your interest that you should know what you are taking into your stomach and system expecting it to act as a curative. To him its only a difference of profit. Therefore, insist on having Dr. Pierce's Favorite Prescription.

Send 31 one-cent stamps to pay cost of mailing only on a free copy of Dr. Pierce's Common Sense Medical Adviser, 1008 pages cloth-bound.

World's Dispensary Medical Association, Proprietors, R. V. Pierce, M. D., President, Buffalo, N. Y.



Our New Improved

ONLY

18

Dollars

DROP HEAD Golden Oak or Walnut.

Ball Bearings



STYLE "A" HEAD.

Our \$12 Machine has a smaller head than on the \$15.00 machines but built on same principles. Plain, straight front, Golden Oak or Walnut, 5-drawer Box Top Table. Equals machines sold elsewhere at \$15 to \$20, and will do in a first-class manner, all kinds of family sewing. Guaranteed for 20 years and sold under our 90-day trial offer the same as the higher priced machines.

**Attachments.** With each machine we send free, full set of latest style solid steel Greist attachments, with complete accessories, needles and instruction book. Notice that our machines include all attachments which are not furnished with machines offered by others at a low price.

**90-DAY TRIAL OFFER.** We agree to refund full purchase price, and pay all freight charges, for any machine that is not entirely satisfactory after a 90-days' trial. We take the risk.

ONLY \$12



STYLE "C" HEAD.

**We Pay Freight**

to any station east of the Mississippi river, or south to Tennessee, purchaser to pay excess to points beyond these limits.

**Automatic Lift** furnished on Drop-head machines for only \$1 extra. Raising the leaf brings the head automatically into position. The lowest price ever made on such a device. It is strong, simple and very convenient.

**Machines Sent Subject to Examination.** For \$1 we will ship any machine C. O. subject to examination, purchaser to pay balance (less \$1 sent) and collection charges. Nothing really gained by ordering this way, as our guarantee and 90-day trial offer thoroughly protects every purchaser and the collection charges are saved by sending the full price with order.

**Style A Has Automatic Tension Release.**—By simply raising the foot, it loosens the thread so work can be taken out, instead of pulling it loose with the hand in the old way.

**Send for Free Catalog.**

describing all machines in full as we have not room to give all their good points here. To pay more for a machine is to waste money.

**MICHIGAN FARMER SEWING MACHINES**

90 DAYS' TRIAL—20 YEAR GUARANTEE

Our new \$18.00 style "A" Drop-Head machine has cam thread take up, giving better control of the thread and making a better stitch than any other arrangement. Running it backwards will not break the thread. It has highest arm, side, disc tension, automatic bobbin winder with loose band wheel, high lift for heavy work, self-setting needle and self-threading throughout. This machine, has ball bearing shuttle lever, and hardened ground Roller Feed. The only machine having ball bearings in head of machine. Handsome swell front Golden Oak or Walnut 5-Drawer Drop-head Table, carved drawers, ball-bearing drive wheel and steel ball-bearing pitman. A better machine cannot be gotten at any price. We will place this machine alongside of any made, guarantee it to do the best of work and refund money if the purchaser is not satisfied. Our guarantee means just what it says, and you run no risk in sending us your order.

Our \$15.00 Machine has high arm, style "B" head with needle bar take up, top tension, and in other respects the same as the \$18 machine head. Neat, plain finished swell front Golden Oak, or Walnut table, either 5-drawer Drop-head, or 7-drawer Box Top. Ball Bearings. A good serviceable machine in every respect, but plainer finish and less hand work than on the \$18.00 machine. Guaranteed for 20 years and sold under our 90-day trial offer.



STYLE "B" HEAD.

ONLY \$15

Drop Head or Box Top

THE MICHIGAN FARMER, Detroit.



## MARKETS

## DETROIT WHOLESALE MARKETS.

February 17, 1909.

## Grain and Seeds.

**Wheat.**—This week wheat has had a very strong market. The bulls have had their own way and prices are several cents higher. Besides the hold the Chicago crowd have upon the market the news from every district and factor that has an influence upon the trade is favorable to advances. The receipts from producing sections are small and the demand for wheat to grind into flour is steady and urgent with a good call for the manufactured article. The disturbance of the telegraph systems of the country was a hindrance to an active trade during the opening sessions of this week but when again in commission it is anticipated that an active market will follow. One year ago the price for No. 2 red wheat was 94¢. Quotations for the week are:

	No. 2	No. 1	No. 3	Red.	White.	Red.	May.	July.
Thur.	1.14½	1.13½	1.11½	1.14½	1.03½			
Fri.	1.16½	1.16½	1.13½	1.16	1.03½			
Sat.	1.16½	1.16½	1.13½	1.16	1.03½			
Mon.	1.18	1.18	1.15	1.17	1.03½			
Tues.	1.18½	1.18	1.15½	1.17	1.03½			
Wed.	1.18½	1.18	1.15½	1.17	1.03½			

**Corn.**—Following the strong market for wheat, corn has advanced to a new high mark for the year. The storm cut off much of the offerings from country places and caused dealers to draw from holdings. The visible supply changed but little and demand is good. One year ago the price for No. 3 corn was 57¢. Quotations for the week are:

	No. 3	Yellow.
Thursday	64	65
Friday	64	65
Saturday	64	65
Monday	64½	65½
Tuesday	65	66
Wednesday	65½	66½

**Oats.**—This trade did not respond to the strong markets of the two preceding grains as an advance of only a fraction of a cent is noted. The price is so high and the holdings so limited that an influence of more than an ordinary kind is necessary to disturb values. Demand is better than the supply. One year ago the price for No. 3 white oats was 53½¢. Quotations are:

	No. 3	White.
Thursday	55½	55½
Friday	55½	55½
Saturday	55½	55½
Monday	55½	55½
Tuesday	55½	55½
Wednesday	55½	55½

**Beans.**—There continues to be an active demand for beans but the holders are not anxious to let go at present figures. No trading is therefore being done. The following are the quotations made from bids:

	Cash.	May.
Thursday	\$2.30	\$2.36
Friday	2.35	2.40
Saturday	2.35	2.40
Monday	2.35	2.40
Tuesday	2.35	2.40
Wednesday	2.35	2.40

**Clover Seed.**—This product is changing hands actively at prices slightly below those of last week. It is probable that the demand for seed for seeding purposes will soon influence higher values. The following quotations ruled during the past week:

	Prime Spot.	Mar.	Alsike.
Thursday	\$5.50	\$5.50	\$8.00
Friday	5.50	5.50	7.75
Saturday	5.50	5.50	7.75
Monday	5.45	5.45	8.00
Tuesday	5.45	5.45	8.00
Wednesday	5.40	5.40	8.00

## Visible Supply of Grain.

	This week.	Last week.
Wheat	41,472,000	43,312,000
Corn	6,565,000	6,512,000
Oats	9,697,000	9,997,000
Rye	786,000	815,000
Barley	3,911,000	3,940,000

## Flour, Feed, Provisions, Etc.

**Flour.**—Prices unchanged. Quotations are as follows:

Clear	\$5.35
Straight	5.50
Patent Michigan	6.10
Ordinary Patent	5.65
Hay and Straw.	Prices unchanged.
Carlot prices on track are:	No. 1 timothy, new, \$10.50@11; No. 2 timothy, \$9.50@10; clover, mixed, \$9@10; rye straw, \$7@7.50; wheat and oat straw, \$6@6.50 per ton.

**Feed.**—Prices are unchanged. Bran, \$27 per ton; coarse middlings, \$28; fine middlings, \$31; cracked corn and coarse corn meal, \$27; corn and oat chop, \$25.

**Potatoes.**—This market is strong. The tubers have been moving more freely and prices are advanced. Good stock is quoted at 90¢ per bu.

**Oils.**—Lard in barrels, 56¢ per gal; boiled, 57¢; lard oil, extra winter strained, 83¢; extra No. 1, 60¢; No. 1, 56¢; No. 2, 54¢; headlight kerosene, 9¢; turpentine by the bbl., 48¢ per gal.

**Provisions.**—Family pork, \$17.25@17.75; mess pork, \$16.50; light short clear, \$18.25; heavy short clear, \$18.75; pure lard in tierces, 10½¢; kettle rendered lard, 11½¢; bacon, 13¢; shoulders 8¢; smoked hams, 11@11½¢; picnic hams, 8¢.

**Hides.**—No. 1 green, 9½¢; No. 2 green, 8½¢; No. 1 cured, 11½¢; No. 2 cured, 10½¢; No. 1 green kip, 11¢; No. 2 green kip, 9½¢; No. 1 cured calf, 16¢; No. 2 cured calf, 14½¢; No. 1 horsehides, \$3.40; No. 2, \$2.40; sheepskins, as to wool, lambs, 50¢@1.50.

## Dairy and Food Products.

**Butter.**—Demand continues steady. Prices are unaltered except that dairy goods are a shade lower. Market quiet.

Quotations: Extra creamery, 30¢; firsts, 28¢; packing stock, 19¢; dairy, 20¼¢.

**Eggs.**—Altho quotations for eggs have fluctuated much recently the storm early this week was a bullish feature and strengthened the market considerably. Fresh stock is quoted at 29½¢ per dozen.

**Poultry.**—Receipts are small. Market is strong. Chickens are higher both for dressed and live offerings. Quotations: Dressed chickens, 16¢; fowls, 14½¢; ducks, 15@16¢; geese, 13@14¢; turkeys, young, 22@23¢; do. old, 19@20¢ per lb. Live—Spring chickens, 15¢; fowls, 14¢; ducks, 14@14½¢; geese, 12½@13¢; turkeys, 16@20¢ per lb.

**Cheese.**—Michigan, old, 15¢; do. new, 15½@16½¢; brick cream, 16½@17¢; schweitzer, 18¢; limburger, 16¢ per lb.

**Fruits and Vegetables.**

**Apples.**—Market firm. Best grades are quoted at \$4@5 per bbl. Western apples in bushel boxes, \$2.25@3.50.

**Onions.**—Spanish, \$1.90 per bu; home-grown at 80¢ per bu.

**Cabbage.**—Home-grown selling at 30¢ per lb., an advance of ½¢.

**Vegetables.**—Green onions, 15¢ per doz; radishes, 30¢ per doz; cucumbers, \$2.25@2.50 per bu; lettuce, 15¢ per lb; head lettuce, \$3 per hamper; beets, 45¢; turnips, 40¢; carrots, 50¢; watercress, 40¢; per doz; celery, 35@40¢; spinach, \$1 per bu; parsnips, 60¢ per bu.

## OTHER MARKETS.

## Grand Rapids.

The sensation of the market during recent days is the almost daily rise in wheat quotations. At present quotations are \$1.11, but a prominent miller of the state predicts \$1.25 wheat within 30 days. Of course, flour has closely followed the upward trend and corn and oats are 2¢ higher. Butter and egg prices are practically unchanged. Potatoes are fully 5¢ higher, but very little stock is moving as yet. Dressed hogs are scarce this week and the few offered are bringing 8½@9¢. In live poultry, fowls and chickens are 10¢ higher, while capons have advanced 3¢.

**Quotations follow:**

Grains.—Wheat, \$1.11; corn, 66¢; oats, 54¢; buckwheat, 75¢ per bu; rye, 70¢.

Beans.—Handpicked, \$2 per bu.

Butter.—Buying prices, Dairy, No. 1, 22¢; No. 2, 17¢; creamery in tubs, 30¢; prints, 30½¢.

Cheese.—Michigan full cream is selling at 15@16¢ per lb; brick, 17¢; Swiss, 17¢; limburger, 17¢.

Eggs.—Case count, 25¢; candled, 28@30¢.

Apples.—75¢@1.25.

Potatoes.—70¢@75¢ per bu.

Cattle.—Cows, \$2.50@3 per cwt; steers and heifers, best quality, \$3@4; dressed mutton, 7@8¢; dressed veal, 6½@8½¢; dressed beef, cows, 4½@5½¢; steers and heifers, 5½@7.

Hogs.—Dressed, 8½@9¢.

Live Poultry.—Fowls, 12½@13½¢; young chickens, 13@14¢; roosters, 9@10¢; turkeys, 18@19¢; young ducks, 13@14¢; geese, 9@10¢; capons, 19@20¢.

## Chicago.

Wheat.—No. 2 red, \$1.18½@1.19; May, \$1.14½; July, \$1.00½.

Corn No. 3, 63½@63½¢; May, 65½¢; July, 64½¢.

Oats.—No. 3 white, 52½@54¢; May, 53½¢; July, 48½¢.

Butter.—Steady. Creameries, 22@28¢; dairies, 21@25¢.

Eggs.—Steady. At mark, cases included, 26@29¢; firsts, 29¢; prime firsts, 30¢.

Potatoes.—Car lots in bulk, Fancy, 78@80¢ per bu; ordinary to good, 75¢.

## Pittsburg.

Potatoes.—Michigan, 78@80¢; in small lots, 80@82¢.

Eggs.—Market lower. Fresh candled, 31@33¢; current receipts, 28@30¢.

Apples.—Higher. King, \$6 per bbl; Spy, \$5@5.25; Spitzenburg, \$5@5.25.

Poultry.—Higher. Dressed. Turkeys, 26@35¢; spring chickens, 17@18¢; hens, 17@18¢; ducks, 22¢.

## New York.

Grain.—Wheat, No. 2 red, \$1.19½; corn, No. 2, 73¢; oats, mixed, 54@54½¢.

Eggs.—Market firm. Western firsts, 34¢; seconds, 33@33½¢.

Butter.—Unsettled. Creamery specials, 30@30½¢; western factory firsts, 21@21½¢.

Potatoes.—Western, in bulk, per 180 lbs., \$2.25@2.50.

Poultry.—Dressed, quiet; western spring chickens, 12@16¢; turkeys, 16@23¢; fowls, 13½@16½¢.

## Elgin.

Butter.—Market is firm at 30¢. The sales of the past week amounted to 437,100 lbs.

## Other Potato Markets.

Cleveland.—White stock, 75@85¢ per bu.

St. Louis.—Average offerings higher, 88@91 per bu.

Pittsburgh.—For good offerings, 78@80¢.

## THE LIVE STOCK MARKETS.

## Buffalo.

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

Receipts of sale stock here today as follows: Cattle, 95 loads; hogs, 12,800 head; sheep and lambs, 23,000; calves, 900.

With 22,000 cattle in Chicago our market opened active at strong last week's prices. The quality of the cattle was better today than last Monday. The demand for heavy weight cattle is limited. We are selling cattle on the market at \$5.75@6, that look common compared with cattle that we have to sell at \$6.25@6.50. We do not think this state of affairs will continue very long. Everything indicates that there is no great amount of good cattle on feed, consequently we look for the good weight cattle to sell higher in proportion.

We quote: Best steers, \$6@6.50; best 1,200 to 1,300 lb. shipping steers, \$5.75@6.25; best 1,000 to 1,100 lb. shipping steers, \$5.40@5.90; best fat cows, \$4@4.75; fair to good, \$3.75@4; trimmers, \$2.25@2.75; best fat heifers, \$5.25@5.75; butcher heifers, 800 to 900 lbs., \$4.25@4.75; light fat heifers, \$3.25@4; best bulls, \$4.50@5; bologna bulls, \$4@4.50.

The good hogs today sold 5@10¢ lower and the pigs 25@30¢ lower than Saturday. About everything is sold that got yarded in time for the market. We quote prices today as follows:

Best mixed, medium and heavy, \$6.85@6.90; best yorkers, \$6.75@6.80; light yorkers, \$6.70@6.75; pigs, \$6.60@6.65; roughs, \$5.75@5.80; stags, \$4.50@4.75.

The lamb market today was about 5¢ lower than Saturday. All the handy weight lambs are sold but there are a few heavy weights going over unsold. We look for about steady prices the balance of the week.

Top lambs, \$7.65@7.75; fair to good, \$7@7.60; cull lambs, \$6.25@7.25; skin culls, \$4.50@5.25; yearlings, \$6.25@6.75; wethers, \$5.75@6; ewes, \$4.75@5.25; cull sheep, \$2.50@3.50; best veals, \$9.50@9.75; medium to good, \$7.50@9.25; heavy, \$4@5.

Chicago.

February 15, 1909.

Cattle. Hogs. Sheep.

Received today ..... 22,000 42,000 18,000  
Same day last year.. 36,732 45,647 27,051  
Received last week.. 51,037 145,023 64,993  
Same week last year.. 61,336 249,141 69,885

Cattle were marketed unusually sparingly last week, as was natural after the big decline in prices that was occasioned a week earlier by the too generous supplies. The market was disturbed by the holiday on Friday everywhere in honor of Lincoln's birthday, and on Thursday trade was very dull at weak and partly lower prices. The Wednesday market was decidedly the best of the week, sales on that day showing advances of 25@35¢ per 100 lbs. on an average over those at the close of the previous week. Beef steers went on that day largely at \$5@6.50, a considerably higher range than has been seen on other recent days. The sales of beef steers for the week were at an extreme range of \$4.25@7.10, with packers showing a great partiality for handy little steers that could be purchased below \$5. Butcher stock has shared in the activity and advances in prices, cows and heifers selling at \$3.30@5.50, with scattering sales of prime heifers at \$5.75@6.25, while canners and cutters were much more active than usual at \$1.75@3.25. Bulls sold better at \$2.85@5, and calves were scarce and active at \$3.50@8 per 100 lbs. There was a fairly active demand for stockers and feeders at advances of 15@20¢, the principal drawback to free trading being a lack of desirable cattle, for killers wanted the best cattle and generally stood ready to outbid country buyers for them. General conditions in the cattle trade have not changed, and the receipts should be kept down to small proportions.

Recent sales of stockers and feeders were at \$3@5.50. The cattle market was more active today, with a smaller supply than is usual on Monday, and prices were stronger to a dime higher. No prime cattle were offered.

Hogs were marketed sparingly during the past week, both here and elsewhere throughout the west, bad country roads and dissatisfaction with recent prices causing much of the decrease in the daily offerings. But it is becoming evident that there is going to be a shortage in the future supply of hogs, as an unusually large percentage of the last pig crop was marketed very young. The men who are still marketing little pigs are in error, as they will discover later on. The offerings coming on the market here and at other markets are still deficient in weight, the recent average weight here being but 204 lbs., compared with 212 lbs. a year ago, 219 lbs. two years ago and 217 lbs. three years ago. The spread in prices has narrowed in a marked degree in recent weeks, even the ordinary kinds selling well, but the heavier droves are still bringing the highest figures. Eastern shippers continue to be the best support to the market. Hogs had a sensational decline on Saturday, with a big supply offered, but there was a good rally today, with sales at \$6@6.65.

Sheep and lambs were, on the whole, good sellers last week, despite weakness in prices at times. The strength lay mainly in the very limited receipts, while the continued small shipping outlet except for feeders was the worst feature from the sellers' standpoint. The quarantine against Michigan was maintained by the state of Illinois, thus shutting out Michigan lambs, and these flocks continued to find their way in large numbers to the Buffalo market, thus checking the eastern shipping demand here. But there was nothing the matter with the feeder trade, and feeder lambs had a lively sale at \$6.25@7.30 per 100 lbs., while feeder sheep sold freely at \$4.25@5 and feeder yearlings at \$5@5.75. The market was higher today, lambs selling at \$4.75@7.75, ewes at \$2.50@3.35, the best wethers at \$5.75 and prime yearlings at \$6.85.

## LIVE STOCK NOTES.

The Chicago cattle market presents some curious features, and perhaps the most singular is the extravagant prices that are being paid for prime heavy feeders by reckless stockmen at a time when killers show in every possible way that they will not pay fancy prices for prime long-fed heavy beef cattle except to an extremely limited extent. Paying from \$5@5.50 per 100 pounds for feeding cattle at a period when killers are turning their attention chiefly to steers that can be purchased from \$5@5.75 per 100 pounds, looks hazardous in the extreme to old-time stockmen. True, conditions may improve in the future so much that the men who feed these high-priced cattle may make fair profits in the end, but the work seems to involve too much of spec-

ulation. Recent sales of finished steers at \$6.50@7.10 per 100 pounds have been showing an extremely small percentage of the entire transactions, and by far the greater part of the steer sales have taken place below \$6. Fat heifers, as well as handy-weight cheap steers, are great favorites with buyers. It seems a safer proposition to refill the feed lots with medium-priced cattle, and the same is true of lambs and sheep, for sheepmen have gone wild and are paying high prices for feeding lambs and sheep. In the Chicago market prime feeder lambs have sold recently as high as \$6.30 per 100 pounds, while the best finished mutton lambs were bringing from \$7.60@7.75, and the other day there was a sale of 685 yearling feeders that averaged 77 pounds at \$5.75. Of course, these flocks may be sent back when well finished and sold at prices that will net their owners good returns, but the risk is great, even admitting the short supply of sheep and lambs now being fattened.

## Samson Windmill

Does four times the work of any others—lasts twice as long—has more than twice the pumping capacity of most.

The worst storms or even a cyclone has no terrors for the sturdy Samson. It needs no watching—no attention. It oils and regulates itself. The secret of the Samson superiority is really due to Double Gears and Center Lift.

—found only on the Samson—reduce wear and tear on every part—and do away with the racking side strain, that has been the early end of ordinary windmills.

40-Page Book Free gives helpful and valuable windmill information and tells in detail all about the marvelous Samson.

Write today. Stover Mfg. Co. 194 Samson Ave. Freeport, Ill.

## THICK, SWOLLEN GLANDS

that make a horse Wheeze, Roar, have Thick Wind, or Choke-down, can be removed with

**ABSORBINE**

or any Bunch or Swelling. No blister, no hair gone, and horse kept at work. \$2.00 per bottle, delivered. Book 3 D free.

**ABSORBINE, JR.**, for mankind, \$1.00, delivered. Reduces Gout, Tumors, Wens, Varicose Veins, Ulcers, Hydrocele, Varicocele. Book free. Made only by W. F. YOUNG, P.O.F., 63 Monmouth St., Springfield, Mass.

## FREE BOOK

On the treatment of

"Every Living Thing on the Farm"

with Humphreys' Veterinary Specifics. Sent free. Humphreys' Med. Co., 156 William St., N. Y.

## Oh I'll Die of Asthma

If you have suffered from Asthma as others have, and have tried almost everything under heaven to get cured and failed, you will try this simple remedy. It cured hundreds of other sufferers who believed what I said about it was true. I certainly consider it remarkable, and it is safe too. After you have sat up all night, night after night, and choked and gasped for breath, lost strength and got thin, and imagined the next attack would end all, you'll appreciate this remedy as I do. If you want to try it, I'll send you a free trial treatment, if you will just send me your name and address and enclose 3 cents in stamps to help pay postage. T. GORHAM, 689 Shephard Bldg., GRAND RAPIDS, MICH.

## "ROCKFORD" Engines

ALL STYLES FROM 3 TO 30-H.P. Before you contract or buy a gasoline engine, write for the "ROCKFORD" Proposition and free catalog. Address Dept. 50 Rockford Engine Works Rockford, Illinois

For Sale at a Bargain. A Champion Evaporator capacity 150 to 200 trees. Arch-chimney and pans in good order ready for use. C. HAMILTON, Bronson, Mich.

**FARMERS, ATTENTION!** Cedar fence posts and shingles for sale. JESSE L. BARRETT, Muskegon, Mich.



## THIS IS THE LAST 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.

February 18, 1909.

**Cattle.** Market opened 15@25c higher than last week but closed 15c lower. Common milch cows very dull and no higher.

We quote: Extra steers, \$5.50@6; steers and heifers, 1,000 to 1,200, \$5@5.50; steers and heifers, 800 to 1,000, \$4.75@5.25; steers and heifers that are fat, 500 to 700, \$4@4.50; choice fat cows, \$3.75@4.25; good fat cows, \$3.50@4; common cows, \$3@3.25; canners, \$1.50@2; choice heavy bulls, \$4.50; fair to good bolognas, bulls, \$3.75@4; light bulls, \$3@3.50; milkers, large, young, medium age, \$4@5.50; common milkers, \$2@3.

Bishop, B. & H. sold Newton B. Co. 5 steers av 1,120 at \$6, 10 do av 75 at \$5.35, 2 cows av 990 at \$4.25, 1 do weighing 1,180 at \$4.25, 7 butchers av 1,060 at \$4.25, 8 do av \$5.25; to Mich. B. Co. 2 bulls av 1,330 at \$4.50, 12 butchers av 880 at \$4.50, 11 do av \$3.2 at \$4.50, 6 steers av 910 at \$5.50, 5 cows av 932 at \$3.50, 2 heifers av 645 at \$4.50, 2 cows av 815 at \$3, 6 butchers av 950 at \$3.50; to Schuman 16 butchers av 600 at \$4.35; to Newton B. Co. 6 cows av 1,016 at \$3, 13 butchers av 1,071 at \$4.25, 5 steers av 926 at \$5.35, 3 do av 1,266 at \$6, 5 cows av 1,076 at \$4.25, 1 bull weighing 900 at \$4, 3 canners av 943 at \$2.50; to Hammond, S. & Co. 1 bull weighing 1,060 at \$4, 3 butchers av 843 at \$4.50, 4 cows av 982 at \$3.50, 12 steers av 1,226 at \$6, 1 bull weighing 900 at \$3.75, 22 steers av 941 at \$5.35, 2 cows av 925 at \$3.75, 2 do av 990 at \$4, 6 steers av 1,133 at \$5.65, 8 butchers av 700 at \$4.25, 2 do av 660 at \$2.50; to Newton B. Co. 1 bull weighing 740 at \$4.50; to LaBoe 10 steers av 806 at \$5.20; to Fitzpatrick Bros. 4 cows av 1,005 at \$4.15, 1 cow weighing 750 at \$2; to Heinrich 3 cows av 1,036 at \$4, 23 steers av 982 at \$5.60; to Sullivan P. Co. 1 bull weighing 1,650 at \$4.25; to Newton B. Co. 6 steers av 891 at \$5.40, 1 bull weighing 590 at \$3.50, 4 steers av 790 at \$4.75, 6 butchers av 941 at \$4, 3 cows av 843 at \$2.50.

Spicer, M. & R. sold Mich. B. Co. 1 bull weighing 1,230 at \$4.50, 1 do weighing 1,700 at \$4.50, 17 steers av 1,140 at \$5.50, 2 cows av 1,160 at \$5; to Kamman B. Co. 10 butchers av 910 at \$4.25, 4 do av 652 at \$4.25, 8 do av 647 at \$4.25, 15 steers av 850 at \$5.25; to Sullivan P. Co. 1 cow weighing 1,060 at \$3.50, 1 do weighing 850 at \$3, 1 do weighing 1,040 at \$3.60, 1 do weighing 570 at \$1.50; to Goose 2 heifers av 390 at \$3.75; to Newton B. Co. 4 butchers av 805 at \$4, 4 steers av 762 at \$5, 3 cows av 983 at \$4, 3 butchers av 806 at \$5; to Kamman 1 cow weighing 800 at \$2.50, 2 do av 965 at \$3.50, 7 butchers av 950 at \$4.25.

Roe Com. Co. sold Newton B. Co. 2 cows av 775 at \$2, 21 butchers av 600 at \$3.65; to Sullivan P. Co. 5 steers av 784 at \$5, 1 bull weighing 1,270 at \$4.

Haley sold Schuman 2 heifers av 560 at \$4.25. Same sold Kamman 3 butchers av 683 at \$4.25, 1 cow weighing 950 at \$2.75, 17 steers av 850 at \$5.35.

Same sold Sullivan P. Co. 1 bull weighing 740 at \$3.50, 3 cows av 946 at \$3.15, 3 do av 1,000 at \$4.15.

Vickery sold same 2 steers av 950 at \$5, 1 bull weighing 910 at \$4, 1 cow weighing 1,000 at \$4.

Allen sold Mich. B. Co. 14 steers av 730 at \$5, 6 butchers av 445 at \$3.75.

McAnninch sold same 1 cow weighing 1,350 at \$4, 2 cows av 950 at \$3, 7 steers 786 at \$4.75, 8 butchers av 500 at \$4.

Weeks sold same 17 steers av 968 at \$5.50, 2 do av 1,090 at \$5, 3 do av 1,150 at \$4.50, 3 do av 1,110 at \$4.25.

Robb sold same 8 do av 1,000 at \$5.50, 4 do av 610 at \$4.65.

Thompson Bros. sold same 3 cows av 960 at \$3.85.

Lowenstein sold same 10 cows av 1,128 at \$4.25.

McAnninch sold Bresnahan 4 butchers av 600 at \$4.35.

Belhelmer sold same 6 butchers av 861 at \$4, 2 cows av 1,000 at \$4, 2 steers av 980 at \$5.50.

Haley sold Rattkowsky 1 cow weighing 1,000 at \$2.75, 2 do av 1,155 at \$3.50, 1 do weighing 790 at \$3.25, 3 butchers av 526 at \$3.90.

Bohm sold Kamman B. Co. 4 steers av 865 at \$5.25, 1 heifer weighing 830 at \$4.75.

Wagner sold Hammond, S. & Co. 5 steers av 962 at \$5.25, 1 bull weighing 820 at \$3.75.

## Veal Calves.

Receipts, 411. Market strong at last week's prices. Best, \$8@8.25; others, \$4@7.50. Milch cows and springers, good, steady; common, dull.

Roe Com. Co. sold Newton B. Co. 5 av 130 at \$7.50, 3 av 190 at \$5, 2 av 225 at \$5, 5 av 150 at \$8, 2 av 130 at \$6.50.

Spicer, M. & R. sold Markowitz 6 av 110 at \$7.30; to Newton B. Co. 4 av 130 at \$7.75; to Rattkowsky 2 av 145 at \$8.25; to Newton B. Co. 11 av 140 at \$7.75.

Bishop, B. & H. sold Hammond, S. & Co. 3 av 155 at \$8, 2 av 210 at \$8.25; to Belson 1 weighing 90 at \$5; to Rattkowsky 1 weighing 150 at \$5; to Belson 9 av 145 at \$8; to Mich. B. Co. 9 av 145 at \$7.75, 16 av 160 at \$8.25; to Parker, W. & Co. 7 av 155 at \$8, 4 av 150 at \$8.

Wagner sold McGuire 17 av 150 at \$7.50. Berry sold Newton B. Co. 1 weighing 130 at \$5, 6 av 125 at \$7.75.

Smith sold Nagle 3 av 140 at \$8, 1 weighing 100 at \$5.

Weeks sold same 2 av 95 at \$6, 20 av 130 at \$8.

Rice sold Burnstone 2 av 100 at \$5, 7 av 145 at \$7.75.

Mertz sold same 18 av 135 at \$7.50.

## Sheep and Lambs.

Receipts, 4,149. Market steady with Wednesday, 15@25c higher than last week. Best lambs, \$7.40@7.60; fair to good lambs, \$7@7.25; light to common lambs, \$6@6.50; fair to good butcher sheep, \$4.50@5; culs and common, \$3@4.

Spicer, M. & R. sold Nagle 8 sheep av 90 at \$4.75, 57 lambs av 80 at \$7.25, 15 do av 65 at \$7; to Newton B. Co. 17 do av 80 at \$7, 15 sheep av 90 at \$4.50; to Eschrich 10 do av 69 at \$3, 60 lambs av 55 at \$5.50.

Bishop, B. & H. sold Robinson B. Co. 10 sheep av 83 at \$4, 13 do av 110 at \$5, 9 mixed av 88 at \$5, 32 lambs av 90 at \$7.40; to Harland 23 do av 80 at \$5.30, 1 do weighing 80 at \$7.50; to Young 99 do av 85 at \$7.50; to Mich. B. Co. 29 do av 70 at \$7.15, 5 sheep av 93 at \$4.50, 11 lambs av 67 at \$6.75, 3 sheep av 95 at \$4; to Sullivan P. Co. 3 do av 130 at \$4, 86 lambs av 90 at \$7.50; to Hammond, S. & Co. 6 sheep av 100 at \$3.50, 93 lambs av 95 at \$7.60, 63 do av 80 at \$7.35; to Nagle 438 do av 95 at \$7.50, 71 do av 95 at \$7.50; to Mich. B. Co. 55 do av 70 at \$7; to Fitzpatrick Bros. 24 mixed av 90 at \$4.75, 39 lambs av 70 at \$7.25, 15 do av 70 at \$5, 50 sheep and lambs av 93 at \$5.12½, 5 sheep av 150 at \$3.50, 16 do av 100 at \$4.50, 91 lambs av 97 at \$7.60; to Hammond, S. & Co. 214 lambs av 84 at \$7.50; to Parker, W. & Co. 99 do av 70 at \$7.50, 39 do av 80 at \$7.25.

Wagner sold Sullivan P. Co. 2 sheep av 90 at \$3, 7 do av 80 at \$2.50, 22 lambs av 50 at \$6.

Bohm sold Nagle 37 lambs av 80 at \$7.50, 3 sheep av 95 at \$3.

Rice sold same 67 lambs av 90 at \$7.25. Smith sold same 98 lambs av 85 at \$7.25, 5 sheep av 100 at \$3.50.

Berry sold Newton B. Co. 34 lambs av 70 at \$7.

## Hogs.

Receipts, 2,108. Market 25@35c lower than last week and very dull; quality common.

Range of prices: Light to good butchers, \$6.20@6.30; pigs, \$5.50@6; light yorkers, \$6@6.10; stags, ¼ off.

Sundry shippers sold Hammond, S. & Co. 119 av 160 at \$6.25, 24 av 143 at \$6.15, 10 av 297 at \$6.35.

Sundry shippers sold Parker, W. Co. 141 av 175 at \$6.25, 89 av 176 at \$6.20.

Roe Com. Co. sold same 83 av 166 at \$6.25.

Spicer, M. & R. sold same 325 av 184 at \$6.30, 92 av 179 at \$6.25, 22 av 125 at \$6.25, 67 av 139 at \$6.10, 51 pigs av 91 at \$5.75.

Bishop, B. & H. sold Cooper 36 av 125 at \$6.20, 75 av 115 at \$6.15, 100 av 120 at \$6.10.

Same sold Sullivan P. Co. 115 av 130 at \$6.30, 117 av 200 at \$6.35, 150 at 120 at \$6.15, 43 av 115 at \$6.25.

## Friday's Market.

February 12, 1909.

## Cattle.

Receipts, 32. Market steady at Thursday's prices; run light, quality common. We quote: Extra dry-fed steers and heifers, \$5.50; steers and heifers, 1,000 to 1,200, \$4.75@5.25; steers and heifers, 800 to 1,000, \$4.50@5; grass steers and heifers that are fat, 500 to 700, \$3.75@4.50; choice fat cows, \$3.75@4.25; good fat cows, \$3.25@3.75; common cows, \$2.50@3; canners, \$1.50@2; choice heavy bulls, \$4@4.50; fair to good bolognas, bulls, \$3.50@4; stock bulls, \$3@3.50; milkers, large, young, medium age, \$4@5; common milkers, \$3@3.50.

## Sheep and Lambs.

Receipts, 31. Market active and 25c higher than on Thursday. Best lambs, \$7.25@7.50; fair to good lambs, \$6.50@7; light to common lambs, \$5@6.50; fair to good butcher sheep, \$3.50@4.50; culs and common, \$2.50@3.

## Hogs.

Receipts, 231. Market steady at Thursday's prices. Range of prices: Light to good butchers, \$6.60@6.65; pigs, \$5.75@6.25; light yorkers, \$6@6.50; stags, ¼ off.

Big Money-Saver and Money-Earner for Farmers.

Farmers all over the country are waking up to the fact that a good fanning mill is one of the best helps and biggest economizers they can possibly own. There is no reason for the farmer to be without this great modern help—and saving—no chance for dissatisfaction—for the Chatham Fanning Mill is sold direct from the factory, freight prepaid, and is sent on 30 days' free trial. The Mill must "make good" before you pay for it. The Man-son Campbell Company, 19 Wesson Ave., Detroit, Michigan, have just issued a beautiful new catalog describing the Chatham Fanning Mill, and they will gladly send a copy of it to anyone interested who will write for it. A postal will bring it with their special proposition and new rock bottom factory prices. Write for it.

For your property wherever located. If you want to sell, send description and price. If you want to buy, state your wants. Northwestern Business Agency, 5312 Bank of Commerce Bldg., Minneapolis, Minn.

FOR SALE—Twenty-five acre farm one mile from Charlotte, Mich. Good buildings of all kinds and wind mill. No waste land and in high state of cultivation. L. H. Shepherd, Charlotte, Mich.

CALIFORNIA LAND, \$1 acre cash payment; balance purchase 90 cents month per acre; close San Francisco; no taxes; no interest; 6-acre tracts; level, rich, clear; ready to plow; irrigated; perpetual water rights; immediate possession; particulars, maps, photographs free. STEVENSON COLONY, 1414 Market St., San Francisco.

FARM FOR SALE OR RENT—A 225 acre miles west of Milan, good buildings; land under high state of cultivation. Poultry made \$350 to \$400 yearly. Last tenant stayed 12 years. Possession given March 1st. Address: W. H. SWEET, Ypsilanti, Mich.

Colorado Farms—160 and 80 a., 40 mi. north Denver on U. P. R. R. Irrigated. No better for 8. beets, potatoes, alfalfa and grain. Good water, good health. Write for prices. J. W. Carpenter, Greeley, Colo.

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# HORTICULTURE

## ONION CULTURE.

My first attempt at onion culture resulted in a failure. At that time I planted on poor soils, as I didn't know any better. I soon learned that onions like rich, cool soil, and since I have selected that for them. Tho they require an abundance of moisture, the soil must not be wet. In my experience a rich, well under-drained black sandy loam is an ideal soil for onions.

For five successive years I grew them on the same plot in our garden, each spring giving them a top dressing of one or two inches of chicken manure, and a coat of hardwood ashes, and I saw that they were the best thing for onions. The second year I raised them I changed my chicken yard so that I found that it paid me to go to the trouble of changing around. The ground was sandy, black loam, and had been used for several years. It had been sown to oats in summer and rye in the fall and early winter, and then the chickens fed on the lot in the winter and summer. So it was exceedingly rich and needed no other fertilizer.

The soil is prepared as early in the spring as possible in order to give the young onions the most of the cool weather which they require. I also think that clovers and cowpeas make an ideal preparation for the crop. The ground is plowed about seven inches deep then harrowed and dragged and rolled to make a fine smooth and firm seed bed. We use a seed drill with marker for planting, marking the first row with a line. Drill the seed just thick enough to insure a good stand, thus avoiding the time and expense of much thinning. The drill is set to cover the seed just about half an inch deep. I make the rows one foot apart. As soon as the plants are large enough for us to follow the rows, cultivation begins. We use a wheel hoe for our implement of tillage. At first the sharp hoes are attached and run just underneath the surface of the soil. Later the little plows are used instead and the crop is given shallow and frequent cultivation until the onion tops begin to lop and we can no longer get thru them. Any weeds in the rows that these tools cannot get are taken out by hand. We find the hoes of the wheel hoe, when detached and used by hand, are excellent for the tedious hand weeding.

The first two weeding are the main work of the whole season; the plants are so small and grow so slowly in comparison to the weeds that the task is irksome. After the young plants once get a start their growth is more rapid and the weeding becomes less and less tedious with each cultivation, but the weeds must be kept cleared out even after the cultivation is laid aside or by the time onions are ripe they cannot be found for the weeds. The hands are the best tools for this.

As soon as ripe I pull and let dry for a few days if the weather will permit. Then I top and place them in bushel slatted crates and stack four crates high, placing a 2x4 underneath. To let them have a circulation of air I leave a few inches between the rows of crates. I then cover with a good board roof. This is the best way to cure the crop and I have tried different methods. While it is a little expensive at the start, you can gradually increase your storage capacity some each year and soon can handle 200 to 400 bushels of ripe onions, and in so doing you will not feel the cost so much. Another advantage is that they are already crated for marketing. As opportunity offers I sell as rapidly as possible to commission merchants f. o. b. here. The red and white bring the best prices but are rather harder to grow and it is always more expensive to buy seeds of the red and white varieties.

As to varieties grown here, I have tried nearly all kinds. I grow mostly Yellow Globe and Danvers for green bunching onions; White Multipliers also make good bunch onions. For large ones the Prize Taker is perhaps best. Next comes the Red Wethersfield, the Red Victoria, the Mammoth Gibraltar and the White Globe.

The onion maggot has never given me much trouble. If I see an onion turning yellow in June I carefully lift it from the ground and destroy it. An application of air-slacked lime close to the plants is the best preventive.

Never under any circumstances use

any cheap seeds. There is always a suspicion attached to them. The germinating power and vitality of onion seeds are greatly weakened by age. Everything else may be favorable, but with poor seed you are sure of a failure. The seed may germinate but the vitality will be so weak it will not produce a crop. Send to some reliable seedsmen, pay a price and get a good seed. You have too much at stake to risk success to save a few dollars.

Sorting and grading onions are just as important as sorting and grading other vegetables and fruits. Layers containing bulbs of odd shapes and uneven sizes are not as attractive and will not sell at a high figure. Keeping onions over winter is not always recommended, yet they can be kept if proper care is taken. Still you might not get as good a price as was offered in the fall. Do not keep them too warm; about 35 degrees is the right temperature. Light freezing does not injure them, but do not handle them while frozen. When you are ready to ship sort them over again or the merchants will never buy from you again.

My first crop of onions was planted in 1890 and I have been planting them ever since, and I see that there is money in it if it is run right. It needs good cultivation and good ground, with plenty of manure. I prefer chicken manure and hardwood ashes.

New Jersey.

C. A. UMOSSELLE.

## FERTILIZING ONIONS.

Which will give me the better results, fertilizer drilled in the onion rows or spread over the entire surface, and would the commercial fertilizer be more profitable than manure on muck land? Should manure be spread before or after plowing? Muskegon Co. F. A. N.

If barnyard manure is available the maximum of results can be obtained by the use of these two forms of plant food



A Profitable Onion Harvest, occasionally the result of accident—is quite certain to follow Good Culture and Care.

together. While onions need plenty of nitrogen to develop well, the soil must not lack in phosphoric acid and potash in order to grow a first class crop. However, if one or the other is to be dispensed with, we believe that well rotted barnyard manure used liberally will give superior results to the commercial fertilizers. The best plan is to precede the onion crop with some other cultivated crop and apply the manure to the soil previous to the first crop. Then by cultivating the soil well the manure will have become thoroughly decomposed and the weeds gotten under control by thorough surface cultivation so that the onions will have every chance to make use of the available plant food in the manure and also will not be troubled with weeds, as is the case where soil is freshly turned up for the reception of the onion plants. Some growers even go so far as to precede the onion crop with two cultivated crops and thereby increase the advantage by two years of surface cultivation.

## PREPARING FOR SPRING WORK IN THE ORCHARD AND FRUIT PLANTATION.

When the old canes and the surplus new ones are out of the raspberry rows we still have the problem of getting them out of the spaces between the rows to a place where they can be burned. Some kind of horse rake is desirable for this work if the rows are of any considerable length. Such a one-horse rake can be easily made something on the plan of a weeder but with the teeth which are to catch the trash slanting somewhat forward and of sufficient length to allow of gathering quite a load. We have found our horse cultivator, which has seven spring teeth attached to a frame which

runs a foot or more above the ground an excellent tool for the purpose where one does not have to take too much of a load. The frame is adjustable so the teeth can be made to stand slightly V-shaped with the wide part to the front so it will gather in and take along all trash until full. It will also cultivate when empty, so that by the time the trash is removed the patch is cultivated. If the trash is taken off after the old canes are out, but before the spring pruning is done, it is more easily done as there is not so much trash to fill up the cultivator or rake. The prunings can then be raked up with this tool while cultivating without additional labor. It is a good plan in setting a new plantation to make cross roads every twenty rods to give a place to burn this trash and to enable the pickers to cross rows without going to the end or breaking down bushes.

We used to thin out the canes of red raspberries when removing the old canes in the winter and early spring by taking out the smaller ones and leaving only the larger, more thrifty canes, but we found that when the winters were severe many of the larger ones would prove to be winter killed so far down as to be of little use for fruit the following season, while the smaller ones would often be little damaged; accordingly we are taking out only the old canes and will thin out and prune the new ones when the buds have started sufficiently to show what canes are alive and how far up.

Those who have several varieties of plants to sell next spring will do well to have some plain label stakes made to take the place of those that have stood all winter and are perhaps so dim as to be nearly unintelligible. We always have a book record of the varieties but we want plain label stakes in the spring so we need not refer to the book every time we dig a few plants, and we do not want

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## CRANBERRY CULTURE.

Please give me information with regard to the planting and culture of cranberries on soil suitable to this crop.

Eaton Co. B. YERKES.

Cranberries may be grown successfully on low or marshy ground where the wild sorts grow naturally. The requirements particularly essential to success are that the ground shall be capable of being drained of surface water during the growing season and yet retain sufficient moisture so that the crop will not suffer by drought. There should be sufficient water to enable it being flooded and the surface should be comparatively level so that the flooding may be of even depth. In addition to the location where the cranberries grow wild they do well on swamps which have grown black ash, red maple, cedar or huckleberry brush. Old mill ponds are also sometimes utilized for this crop.

The soil should be prepared by first clearing away all trace of moss and roots. This may be done either by removing the turf or flooding for a sufficient time to drown out the wild growth. The bog should then be ditched to carry off the surface water. A dam should be provided at the outlet of the ditch system which may be closed so that the water will back up and flood the land. In winter it is desirable to have the surface covered with water a foot or more deep from December to April or May; this protects the land both from the weather and insects. If sufficient water is available it may be used as a protection against early spring and late fall frosts.

Plant vine cuttings six to eight inches long in rows about fourteen inches apart. While plantings are sometimes made directly in the muck the better way is to cover the surface with about four inches of sand, the cuttings being thrust down obliquely into the muck. The sand keeps down the weed growth and prevents a loss of moisture from the muck below; also preventing too rank a growth of the vine and permitting work to progress in wet weather. This sand may be drawn on bogs in winter when covered with water and frozen over. An additional inch of sand should be added each four or five years. Where the bog is prepared in this way the vine may be run thru a cutting box and rolled into the surface. They should, however, not be allowed to dry out before planting. Some authorities contend that where cranberries grow naturally it is better to leave the bog in the natural state and take the crops which grow in favorable seasons than to spend the money required in improving unless it be to regulate the water supply. In sections where this crop has been made a specialty it has been found that well cultivated cranberry bogs will yield from 100 to 300 bushels per acre.

## BUSH AND LIMA BEANS.

Before speaking of lima beans as a class, we desire to mention a few varieties of the ordinary running, or pole, beans. Almost since gardens have been made these beans of one variety or another have held a deservedly popular place, especially in the home supply.

In general, these sorts are less hardy than the dwarf or bush varieties, and so will not stand as early planting as these latter kinds. However, with some precaution as to this point, and care as to thoro culture and generous fertilizing they are sure to give satisfactory results. They are rapid growers under favorable conditions, and will come into use ordinarily only a few days later than the low-growing sorts. Do not plant until reasonably certain of warm, settled weather. Plant in hills 3 to 4 feet apart, making sure that plenty of seed, say 5 or 6 beans to the hill are used. These should be scattered somewhat, leaving the center of the hill vacant to give place to the pole.

The Kentucky Wonder is one of the best of the pole sorts. Pods grow 7 to 9 inches long, are solidly meaty and when young are entirely free from strings and of excellent table quality. If the pods are gathered as fast as matured and not allowed to ripen, the vines will continue bearing to the end of the season.

Burger's Green-Pod Stringless is somewhat earlier than Kentucky Wonder and so covers a longer season. The pods are borne in clusters, are entirely stringless and of superb table quality. They are really a valued acquisition to the pole family and should not be omitted from the list of garden necessities. Lazy Wife's—I know of no good reason for calling this bean by the above name any more than to have called it Lazy Husband's. The wives, however, will pardon this heartless allusion as it is easily one

of the best, if not the superior of all these pole varieties. It is an abundant bearer, of high, rich color, luscious quality, and retains its stringless condition until nearly ripe. As a dry shell or winter sort the quality is of the finest.

The Golden Cluster is doubtless the earliest of all the pole sorts; and for this reason as well as its really fine quality is a valuable sort to plant. The Horticultural, or cranberry, is one of the oldest varieties under cultivation, and is truly a valuable sort. Its excellent quality, both as a snap and shell bean, have given it well deserved popularity. Also, its hardy nature makes it the safest bean of all to plant in localities of cool, short seasons. Other varieties, of course are listed and are doubtless good, but the above list we believe, covers all the good qualities to be found in any and will be a safe guide for growers.

Lest we forget it, one point should be borne in mind, viz., that varieties planted near each other (and this includes the entire bean family), mix badly, and while it does not particularly injure them for green use, the dry beans will show it and should not be used for purposes of planting.

## The Bush Limas.

What has been said as to cultural conditions and fertilizing of running sorts, applies with redoubled force to the lima family whether bush or pole. It is little use to expect remunerative results from plantings made on heavy clay or sour, retentive soils; but given good or ideal conditions it is a pleasing crop to grow, either for home or market purposes. Either bush or pole sorts require light but rich soil for best results. One other point should be borne in mind: in germinating and growing, the bean comes bodily up out of the ground, forming the first two leaves or heavy lobes; for this reason they should be planted shallow with eyes down. If planted otherwise, their size prevents them from turning readily or breaking the soil so that many of them fail to grow. For the early crop it is best to start them in boxes 2 or 3 weeks before it would be safe to plant in the open ground, and this will insure a crop of almost any variety before there is danger of autumn frosts.

As to varieties, there is a wide difference as to table qualities, yield and season of maturing and this last consideration is a matter of vital importance, especially in this latitude.

The Burpee Improved is a leading variety of the bush limas. It grows more vigorous than Burpee's Bush Lima, with heavier foliage and matures sixteen days earlier. This one point alone would give immense advantage over all others, especially in this class. On this trial we grew pods 6 1/2 inches in length and 1 1/2 inches broad. The beans, of immense size and delicious flavor, are green in color, with very tender skins. It is a heavy cropper and should have a place in every garden. The Fordhook is our next in choice and is the only stiffly erect bush form of the Potato lima. The table quality is excellent and the season of maturing is 2 to 3 weeks ahead of any of the pole sorts. Dreer's Kumerle was, previous to the introduction of the last named sort, the only bush form of the fat Potato lima. It is a most excellent variety, as to yield and table quality, but its drooping habit of growth makes its pods somewhat liable to discolor.

While other varieties are listed and bidding for favor we believe that the three sorts above named will meet every need, either of the home or market garden, and with our present light upon the subject we would not seek farther for the bush sorts.

## Pole Limas.

With the pole sorts, especially in this latitude, earliness must ever be an important consideration. In this respect, Seibert's Large Early is a general favorite and its heavy cropping qualities make it durable as a market sort. Henderson's Early Leviathan is generally thot to be the earliest pole sort under cultivation. It is very productive and holds up its cropping quality thruout the entire season. It is a strong grower and tenacious climber and withal is one of the most dependable sorts yet introduced. King of the Garden has been our choice of the pole sorts and our personal experience has always been satisfactory. It is a strong grower, very productive and of quality surpassed by no other variety. The Challenger is a thick, meaty bean of good quality and a generous yielder. For latitudes farther south it is no doubt a desirable sort but for this climate it will not be found dependable except it is started early under shelter.

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## HOW TO MAKE LIME-SULFUR WASH.

The extensive use of this mixture for controlling the San Jose scale, other scale insects, aphides, peach leaf curl, twig borers, blister mite, psylla and other pests, makes a brief description of the manufacture of the same on the farm of interest here. Further interest is added by the successful experience that has attended the application of the spray in the summer, when it can be used safely as a fungicide if made one-fifth the strength as when used upon the trees in the dormant state.

Fifty gallons of the solution requires from 15 to 25 pounds of unslaked lime and 15 pounds flour of sulfur. Where a small orchard is to be sprayed use an iron kettle for boiling the materials. Put in the kettle about 15 gallons of water and let come to a boil. Add the lime, using the larger quantities if partially air slaked; the best mixture is made from the best unslaked lime but even with a good quality the spray will in no wise be injured by an excess thereof. Add enough water to the sulfur to make a paste and turn the same into the kettle with the lime water. Or the sulfur may be sifted in and stirred the same as the housewife makes mush for the breakfast table. The former method is better, the purpose being to keep the material from collecting in lumps and not becoming well mixed with the other ingredients. Continue the boiling for about an hour when the color of the material should turn to a reddish amber. If warm water is not convenient, the diluting can be done with cold water to the required 50 gallons. Apply the spray hot. When the sulfur crystallizes by cooling the value of the material is impaired.

In making large quantities steam can be employed to advantage and a building, where the lifting of water may be avoided by having an elevated storage tank, is decidedly economical, but the few trees of the average farmer would not warrant this expense.

## GROWING TOMATO PLANTS.

Everyone knows that the earlier one can place a crop of tomatoes upon the market the more they will net the grower. Thus it is very essential that one get this plant started early. The further north one goes the greater is the expense and care involved in growing these plants successfully.

It is necessary in this section of the state to get as much growth to the plants as possible before setting them into the ground so they may have all the time they can after the soil warms up thoroughly, to grow and mature this crop. Of course, good tomatoes may be grown from the earlier spring varieties where the seeds are sown in out-of-door beds during most favorable seasons but this cannot be relied upon, especially when we are striving to mature the crop as early as possible.

The cost of starting these early plants means quite an item of expense to the grower. Herein is where a great many make a mistake. They figure that the expense of building and maintaining the hotbed will be greater than the extra receipts gained by using earlier plants. Then again some growers never consider the hotbed as an investment while, if properly constructed it should last several seasons with but a small outlay for maintenance.

We have usually sown our seed about April 1st in flats in good tight hotbeds having about three feet of fresh and evenly heated horse manure to furnish the beds with the necessary heat. Care must be taken to have the heating material of the right texture, i. e., not too solid, nor too springy which is often the result of using too much straw or other litter. Be sure to have the heat even throughout the pile before placing in bottom of hotbed. This may be done by thoroughly forking over pile three or four times after it begins to heat. Manure from grain-fed horses is far preferable to those not fed grain as it will heat better and far more readily. From two to three inches of earth are placed upon the manure and seeds are sown as soon as heat has gone down to about 90° in the bed.

We prefer a rich sandy soil for the seed bed, i. e., soil containing no coarse manure or other material that might cause trouble at transplanting time by holding the roots of the plants together. Do not allow a draft to influence the plants and keep the temperature as even as possible. Care must also be taken in watering. The chill should be removed from the water but too warm

water would also be detrimental to the growth of the little plants by causing a weak flabby growth.

As soon as the second pair of leaves are partially developed we transplant into flats, containing good rich garden loam with a liberal supply of thoroly rotted manure worked into it, setting the little plants about two inches apart each way. The plants remain in these flats until they begin to crowd or until the weather grows warm enough to allow of transplanting to the coldframes.

We usually do our second transplanting about May 10, depending upon the condition of the plants and the weather. These extra transplantings take considerable time but they produce a much more stocky plant with a more compact root system than plants produced by the thinning method.

The soil for coldframes we want good and rich. We usually take from one-third to one-half in bulk of well rotted barnyard manure and the balance of good, rich sandy loam and thoroly work the two together. Where the coldframes are made in sections so that they may be removed when plants are taken out. A disk harrow will be found very useful in mixing up this compost with the soil before the frames are set in place in spring. This will save many backaches and do the work quicker and better than could be done by hand. After the soil is prepared and frames in place we transplant from the flats directly into the soil of the coldframe leaving the plants this time from four to six inches apart each way. The more room we can allow our plants at this time, the more stocky they will become, especially if we should have to hold them for some time before setting out.

For our coldframes we use muslin covers made fast to long rollers on the lower edge and tacked fast to upper edge of frame. By this method of fastening the cloth covering it may be rolled down at night or on windy days. These cotton covers should be thoroly oiled with some such mixture as linseed oil to preserve the cloth and to protect and admit more light to the plants. We also use a thin board covering about 4x6 feet in size made of half-inch lumber. These are light to handle and are a great protection on cold nights or in stormy weather.

Care must be exercised to give sufficient ventilation that plants may be strong and healthy and able to go ahead when planted in the field. The greatest difficulty we have experienced with starting the plants was to be able to transplant just at the proper time. Where one is using hotbeds you must choose only the very best days, i. e., warm days with scarcely any wind, to do this work, otherwise the plants will receive a check. Then again, we seldom have such days just when we need them and if one could arrange to have his beds combined and high enough to work under the glass he could obviate, to a great extent, all the bad features enumerated above and utilize much bad weather such as we often experience during the early spring.


For these same reasons we have abandoned our old hotbed method and constructed a house 11x50 ft., giving a bench 4 ft. 2 in. in width on each side upon which to place our flats. The house is just high enough to admit of one's standing erect in path thru center. These same hotbed sash were used as a covering placing them on rafters, the house being of even span.

The heat is derived from an arch at one end of the building which will burn 3-foot wood, the heat passing thru the partition and along under the benches thru common 3-in. drain tile with joints cemented. There are two runs of tile under each bench and terminating at opposite ends where the four leads pass into an 8 in. tile just outside of the building which serves as a chimney. There is also a pipe running thru the roof directly over the arch with a tight damper just above the T, which throws all the heat thru the horizontal tile when the damper is shut.

A transplanting bench is in small room at north end of building which contains the arch, also overhead storage for flats. By this means we are able to keep the plants under cover until time for transplanting into cold frames which comes later in spring after weather has become warmer. The ventilation in the house is given at the ridge which is sufficient for as narrow a house as this.

There is also another factor eliminated by the use of this style of house. This far north it is very difficult to secure the proper soil to fill our hotbeds and flats as early in the season as one wishes, and

# POTASH



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Plan to go on one of these days—take advantage of the low fares offered by the Rock Island-Frisco-C. & E. I. Lines, and see for yourself the opportunities that are open to you in the Southwest. The trip will not cost you much. These special low-fare tickets over the Rock Island-Frisco-C. & E. I. Lines will permit you to go one way and return another, without extra cost. As the Rock Island-Frisco Lines have over 10,000 miles of railway through the best sections of the Southwest, you will see more of the Southwest than you could in any other way, and will be better able to decide where you want to locate.

Ask the ticket agent in your home town to sell you a ticket over the Rock Island-Frisco-C. & E. I. Lines, either through Chicago, St. Louis, Kansas City, St. Joseph, Memphis or Birmingham, according to your location.

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The Southwestern farmer enjoys his winter. He does not know what it is to be shut in by snowstorms. A hard freeze is unknown to him. Besides avoiding the discomforts and hardships of a long, cold winter he also avoids the expense of one, for he does not have to build warm shelter for his stock. Neither does he have long, costly feeding periods, for cattle in the Southwest have good range all the year. He does not have big fuel bills, either. Most days of a Southwestern winter the windows are open and the farmer's wife goes about her housework in comfort. The Southwestern farmer can make money all year, while you are compelled to be idle months at a time. All this tells in the bank account at the end of the year. Why don't you buy a farm in the Southwest and enjoy life? Good land can be bought now for \$5 to \$25 an acre. Next year it will cost more. It will be dollars in your pocket if you investigate this Southwest question now. Go down there and look around. It will do you good to get away from the cold for a short while. Let me send you some interesting books about the Southwest. They will inform you of opportunities waiting for you there, and will open your eyes to new possibilities. Write for free copies today.

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Sheerin's Trees Made Dansville Famous  
 Largest Nursery Center in the world. Annual output more than 6,000,000 Fruit Bearing Trees  
 Alone. Buy direct at wholesale and save 300 PERCENT. Secure varieties now pay in Spring. CATALOG FREE TO EVERYBODY. SHEERIN'S WHOLESALE NURSERIES, Dansville, N. Y.

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Grand lot of PEACH and other FRUIT TREES. We aim to give satisfaction. Send for catalog. Address T. B. WEST, Maple Bend Nursery, Lock Box 286, PERRY, OHIO.



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Were we perfect, which we are not, medicines would not often be needed. But since our systems have become weakened, impaired and broken down thru indiscretions which have gone on from the early ages, thru countless generations, remedies ARE needed to aid Nature in correcting our inherited and otherwise acquired weakness. To reach the seat of stomach weakness and consequent digestive troubles, there is nothing so good as Dr. Pierce's Golden Medical Discovery, a glyceric compound, extracted from native medicinal roots—sold for over forty years with great satisfaction to all users. For Weak Stomachs, Biliousness, Liver Complaint, Pain in the Stomach after eating, Heartburn, Bad Breath, Belching of food, Chronic Diarrhea and other intestinal Derangements, the "Discovery" is a time-proven and most efficient remedy.

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You can't afford to accept a secret nostrum as a substitute for this non-alcoholic, medicine OF KNOWN COMPOSITION, not even tho the urgent dealer may there-by make a little bigger profit.

Dr. Pierce's Pleasant Pellets regulate and invigorate stomach, liver and bowels. Sugar-coated, tiny granules, easy to take as candy.

## FRUIT TREES

We Save You \$2.50 on a \$5.00 Order

Nursery Agents Price.  
2 Apple 3 to 4 ft. @ \$0.25 \$0.50  
3 Cherries 2 to 3 ft. @ .35 1.05  
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Total \$5.00  
Our price on the above, \$2.50  
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Standard varieties. Stock guaranteed as represented or money back. Catalog and any information desired FREE.  
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Everything for the Garden, Lawn and Orchard.  
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### IT PAYS TO SPRAY

The Iron Age 4-row Sprayer gives perfect satisfaction. Puts solution just where needed and in fog-like mist. Pump delivers spray under high pressure, thus reaching every part of vine, effectively killing bugs and preventing blight. Has Orchard spraying attachment. Write for free catalog illustrating this and other Iron Age tools.

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Iron Age  
Four-Row  
Sprayer



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### FOR RAPID, EASY SPRAYING

#### "Auto-Pop" NOZZLE.

Slight pressure on lever starts dense spray. Automatic shut-off. Doubles capacity. Saves solution, time, labor.

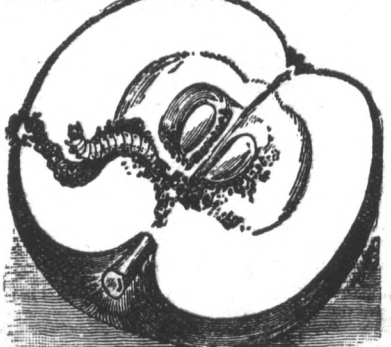
#### INCREASE THE CROPS

by using the "Auto-Pop" nozzle on the "Auto-Spray" pump. Write for factory prices, spraying guide and agency offer.

E.C. Brown Co., 32 Jay St., Rochester, N.Y.

### SPRAYING FRUIT TREES.

The question of spraying fruit trees to prevent the depredations of insect pests and fungous diseases is no longer an experiment, but a necessity.



Our readers will do well to write Wm. Stahl Sprayer Co., Box 108 J. Quincy, Ill., and get their catalogue describing twenty-one styles of Spraying Outfits and full treatise on spraying the different fruit and vegetable crops, which contains much valuable information, and may be had free.

to have our soil upon benches or in storage ready for immediate use. Of course, the cost of such a house amounts to considerably more than the same area of glass with simple hotbed construction, but the idea is this, if it will pay in dollars and cents in a short time is not the expenditure of a few dollars at the start a good investment?

The weather is seldom favorable before the 1st of June in this latitude for transplanting to the open ground. We have set plants as early as May 20 and as late as June 10, but usually about June 1. We always strive to force our plants so that the early varieties which we chiefly grow are full of buds, with even now and then a blossom opened at the time of setting to the open ground. Of course, a great deal depends upon their later care, but good stocky plants which have reached this stage of growth, when set out, will seldom fail to begin to ripen their fruits by the latter part of July and we are sure of the bulk of the crop maturing before September 1st on favorable years.

Any grower who watches the produce markets could not help but notice the great variation in prices for tomatoes grown from early started plants and those ripening away late in September or October. All one needs to figure out is a difference in cost of production. Then by comparing prices at different stages of the season he can determine whether or not it will pay to start his tomato plants early.

Kalkaska Co.

W. S. PALMER.

### HORTICULTURAL PARAGRAPHS.

That fine fruit is and can be produced in Michigan in commercial quantities, is testified to by many excellent orchards, that are considered valuable property, and that are managed by as capable fruit growers as I believe can be found anywhere. I do not believe that the horticulturists of the state are going to concede that a back seat will be necessary for the reason of inferior quality or unprofitable yields. But the progressive men, who still have faith in the industry, know that if a reputation is to be made for Michigan fruit, and it is to occupy a conspicuous place in competition with fruit grown in other sections, more thought and attention must be given by more growers to such things as soil, selection of site, fertilizers, cultivation, spraying and marketing.—Prof. H. J. Eustace.

The organism causing the black rot of cabbages and all its has been found to affect also kale, collards, Brussels sprouts, several varieties of cabbage, broccoli, cauliflower, kohlrabi, rutabagas and turnips.

Wherever plums hang in clusters touching one another, brown rot development is favored, in susceptible varieties. The spores are washed down by rains and any which came to lodge between two plums that touch are apt to be held there, and to find conditions favorable to growth. If one plum of a cluster is seen to be diseased it should be removed and destroyed at once, as others in the cluster are almost sure to go if the rotting one hangs long in contact with them.

### STATE HORTICULTURAL SOCIETY'S MEETING.

The mid-winter meeting of the Michigan State Horticultural Society is to be held in the court house in Lapeer, Tuesday and Wednesday, March 2-3. One whole session will be devoted to spraying in all of its phases, with such well known authorities as Prof. Taft and T. A. Farrand, leading. Delegates will report the best things at the recent state meetings in New York, Ohio, Illinois and Wisconsin. The growing of apples in old neglected orchards will be fully covered, and small fruits, peaches and pears and plums will come in for a discussion. About forty practical questions have already been handed in for answers and a question box will give all a chance to secure the latest information. The best speakers in the state will take part and eastern Michigan is expected to turn out in crowds. Secretary C. E. Bassett will mail programs to all who drop him a card, at Fennville, Michigan.

### High Pressure.

To the potato grower planning the purchase of a sprayer, the question of high pressure must be one of the main considerations. There must be sufficient force back of the spray to turn the leaves in order to thoroughly saturate the plant. We learn that the new Double Cylinder High Pressure Sprayer, recently offered to the general public by the Aspinwall Manufacturing Co., of Jackson, Mich., develops that extra high pressure so much needed for best results. A book describing this sprayer and other potato machinery may be had upon request to the company.

## These New Towns in the Northwest All Need Men

Hundreds of new towns are springing up all over the Pacific Northwest.

The big, easy fortunes being made from fruit, farming and stock-raising, are making these towns grow fast. They all need men who know trades—they need you, whether you have money to invest or not.

Never, in the history of America, has the man who works with his hands had such a chance to make money, as is offered in the west today.

## You Are Losing Money Every Day You Stay in the East

You would not stay another day in the worn-out East, if you knew even half the truth about the great Pacific Northwest.

Families, who went there penniless 5 years ago, are spending this winter in California. They bought good land at low prices—paid for it gradually—today are independent.

Opportunities are greater now than ever, because the country is more developed.

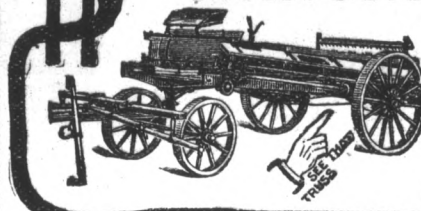
Ask us on a postal to send you our free book, telling you all about Oregon, Idaho and Washington. We'll also tell you what it costs to go there.

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Union Pacific Railroad Co.  
Omaha, Neb.

We will give \$100.00 for  
the 5 best ears of seed corn

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bought in 1909. Write today for full particulars, and ask for our FREE SPREADER BOOK, which proves that the Appleton Manure Spreader is as strong as steel and oak can make it; so simple that any boy who can drive a team can run it as well as any man; and so effective in operation that it never bunches the manure, but pulverizes thoroughly and distributes evenly from the beginning to the end of the load.

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## DOUBLES YOUR CROP

"No tree too high, no field too big for this king of sprayers." For orchards, vineyards, potatoes, weeds, etc. No hand pumping required—works automatically. One man can do more work with this machine than two men with the old style sprayers. Saves labor, time and money.

### HURST SPRAYERS ON FREE TRIAL

No money-in-advance, no bank deposit, shipped direct to you at dealer's wholesale prices. Pay us out of the "extra profit." This Man-Power Sprayer (shown below) is an all-purpose machine for the medium sized growers, cheap in price, light, strong and durable. All our sprayers are GUARANTEED FOR 5 YEARS. We pay the freight. Write a letter or card to-day—and we'll send you Spraying-Guide, Catalog of all kinds of sprayers, and Special-Free-Sprayer Offer for first in each locality this season. Don't delay—Write now.

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TELL the advertisers when writing that you saw their ad. in the Michigan Farmer.

## SPRAYING OUTFIT

WITH GASOLINE ENGINE, HIGH PRESSURE SPRAY PUMP, FITTED WITH RELIEF VALVE AND PRESSURE GAUGE MOUNTED ON 16-INCH WHEELS. COMPLETE AS SHOWN (BARREL AND HOSE NOT INCLUDED)

PRICE F.O.B. CARS CHICAGO

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CAPACITY 100 GALLONS PER HOUR



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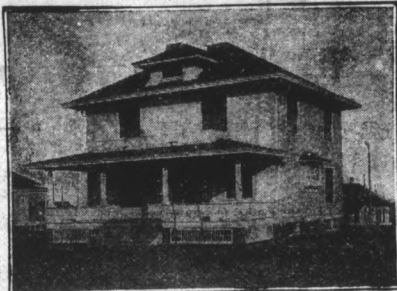
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**Home of Chas. W. Kelly**  
McCook, Neb.

Built of Gordon-Van Tine's Materials

He writes: "Here is a photo of my house; also have interior view, which shows off to good advantage the quality of your oak finish. I can safely say that it cost me less than if I had finished it in pine bought from local dealers. Everything is as good as you claim—and that is as good as can be asked from anyone."

CHAS. W. KELLY, McCook, Neb.

## A Message to the Man Who Wants a Square Deal; Who Loves Fair Play; Who Hates Grafting and Who Wants His Dollar to Go as Far as 100 Cents Will Go Anywhere!

We, the Gordon-Van Tine Co., the largest independent millwork company in America, are fighting for our lives. The powerful combinations controlling the building material business; the grasping lumber trust and the "dealers' secret price agreement" associations hate us like poison. They would, if possible, ruin our trade, drive us from business, and kill the strongest anti-trust competitor they have, in order to again have their full sway of power over the buyer—to charge him their monopoly prices and give him half value. They implored us to be "regular." They asked us to quit; to "come in;" to do less business, if necessary, at bigger profits; to stop selling direct from mill to buyer; to maintain organized prices; to sell through dealers; to be "good." They resent our direct quotations and prices to the buyer; they dislike the 50% saving feature of our selling plans; they deprecate our qualities and sneer at our success. We refused to change. We shall fight with every dollar and resource at our command. We shall

## Stop the "Holdups!" Stop the Extortion! Stop the Grafting!

continue to sell to any reliable man or woman, farmer, town resident, carpenter, builder, contractor or reader of this paper, anything in the line of building materials we have for sale in our enormous stocks. **Direct from America's Largest Independent Millwork, Lumber and Building Supply House**, at a saving of all intermediate dealers', jobbers', agents', trusts' and middlemen's profits. Our anti-trust prices command trade from all classes. We sell at lower figures, quality for quality, than any other house, whether direct or indirect, trust or anti-trust; and nine times out of ten, cheaper to you direct than the dealer himself pays for the identical quality. You, Mr. Reader, can protect yourself against high, unreasonable prices. No matter what you need for building new, for improving, changing or repairing; for building House, Barn, Church, Elevator, Residence, Mansion, Cottage, Store, Hall, Hog House, Sheep Shed or Hen Coop, get first of all our

## Slashing Anti-Monopoly Prices on Lumber, Millwork and Roofing!

On Sash, Doors, Windows, Flooring and Building Supplies of every kind. We will save you big money. We guarantee safe delivery, we ship subject to acceptance on satisfactory examination, we promise complete satisfaction, and prove beyond question the quality of all material to be exactly as represented and up to the official standard of the grades required by the Sash, Door and Blind Manufacturers' Association. Do you want Fair Play? Will you be with us, and protect yourself? You can help stop the Trust's pocket-stripping prices; their infamous attempts to kill the "independents." Every honest buyer despises their underhanded flooding of our mail with fake inquiries from their employees and other "cat's paws;" their attempts to waste our expensive catalogs, time and postage. Their organs attack us week after week; their knocks and spies still continue; their instructions to "cut prices to meet Gordon-Van Tine as a last resort, but soak the consumer on something else to make up the difference"—these are a few favorite stunts to "keep the money at home" and line their own fat purses at your expense. We have saved buyers millions of dollars since we began business.

### Actual Proof of Money Saved

Eagle Grove, Ia., Oct. 23, 1908.  
I have saved over \$400 on two carloads. I also bought one carload of millwork, including five large fancy windows, which were way beyond my expectations in beauty and clearness of glass.  
Yours very truly, R. A. D. McVICKER.

### From a Contractor & Builder

Birmingham, Ia., Oct. 30, 1908.  
Am pleased with shipment of lumber and roofing. Saved \$50 on the barn bill. The grade is far better than handled by our local dealer.  
Yours very truly, W. A. WILSON.

### Lumber Arrived All O. K.

Newark, Neb., Nov. 12, 1908.  
You saved me \$28.97—just the difference between the trust price and your price laid down here.  
Yours very truly, A. O. GRAHAM.

### MILLWORK! 50% SAVING

at Our Anti-Trust Prices. Send for our grand new 1909 catalog of millwork supplies. You can save trust profits by consulting our big list of genuine millwork bargains. Everything for interior or exterior at lowest prices. Each grade and quality guaranteed, or money back. Window glass 8x10 @ 8 1/2¢ up. All sizes base corners, 2¢ up, trust price, 4¢; Corner beads 8¢, trust price, 16¢; Blinds, 24¢ per pair; Sash cord, 75¢; Sash pulleys, 30¢ a doz; Picture moulding, 65¢ per 100 ft. and up; Embossed moulding, 1¢ a foot, all styles and sizes. Coupon will bring this big Price Cutter.

### WINDOWS COMPLETE TRUST PRICE, 57¢

Safe delivery guaranteed. All styles, all sizes, with and without glass. Quality strictly up to high standard. 50% lower than same trust goods. Our window and sash line is complete—one of the largest and finest stocks in America. We have many fine bargains.

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Trust price, \$1.00. This is another great specialty for us. Our sales are enormous—our profits very slender. Send for our bargain list on barn sash, attic sash, cellar sash, transoms, etc. All windows and transoms primed in linseed oil.

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For every purpose. Free from flaws. Safe delivery guaranteed. 77¢ for our 4 panel yellow pine door shown in top illustration. Trust price, \$1.60 to \$2 for identical door. \$3.20 Hardwood veneered door. Finish your home in oak at small cost. We save you from \$3 to \$5 on hardwood doors. Send for bargain list. \$1.70 Front door—24 styles—the latest and newest. Pleasing designs, various woods, graded from trust quarters. Our stock embraces 1/4, 1 1/4, 1 3/4, 1 1/2" thick.

# SEND YOUR BILL TO GORDON VAN TINE CO. DAVENPORT, IOWA FOR ESTIMATE!

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Free Nails and Cement roll. Gordon Van Tine Co.'s Flint-Coated Fire-Resisting Rubber Roofing—the Best Permanent Roof Protection for Houses, Barns, Sheds or Buildings of all kinds. Cheaper than shingles, more satisfactory than tin or slate, superior to the innumerable prepared roofings. It is easily laid—only a hammer needed. Contains no tar, will stand strongest acid tests; made of long fibre wool felt and soaked in hot asphalt, then coated with flint by heavy machinery. Easy to lay as a carpet. Guaranteed for Six Years! Send for Free Samples and Book.

Price per sq. 108 sq. feet. Safe delivery guaranteed.  
1 ply per sq. \$1.25—Trust Prices \$2.00  
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Building Paper 87¢ Per Roll. Book, contains free information on quality, prices, shipping points, our liberal guarantee, etc. Send us your wants, we quote the lowest prices.

### LUMBER!

At Saw-Mill Prices! Direct to you on approval, at next to cost figures. Send us your bill for estimate and note our quotations. Millions of feet of best yellow and white pine—delivered at any railroad station, all freight included. Our lumber trust fight saves you from 25 to 50 per cent on dimension studding, joists, sheathing, barn boards, siding, floors, timbers, shingles, common boards, ceiling, interior finish, ship lap, lath, etc.

Delivered Anti-Trust Prices \$100 to \$300 Less Per Car. On timbers and rough lumber its saving averages \$100 per car; on mixed cars of dressed and rough lumber \$250 saving per car; on finishing lumber, \$300 saving per car. Get your neighbors to join you.

### SHINGLES!

We recognize no competition on shingles. We deliver them at much less than you must pay elsewhere and from clean, perfect stock. Note what your local dealer and the trust are exacting in extra unearned profits. Send us your wants for quotations.

### STAIRWORK!

\$25 to \$50 Less at G. V. Co. Anti-Trust Prices. Stairwork jobs come high when ordered from local dealers. At kinds of fancy prices go in because the buyer isn't wise to their tricks. There is where the consumer "pays the fiddler." Let us furnish your stairwork supplies. We will save you 50% easily; perhaps more. If for a new house, send us your list, we will promptly quote you the lowest anti-trust price for whatever material you select. Everything in the line of stairwork necessities sold by Gordon Van Tine's Mill direct to you, except rough horses. If you want to remodel your home send us your plans.

### 100 ft. 1/2 Round, 25¢

Three sizes. Yellow pine, per 100 ft. 25¢; White pine, per 100 ft. 40¢; Cypress pine, per 100 ft. 40¢. All bargains, too.

### Porch Brackets

Three styles. Two sizes. Special reduction in crates of fifty or more. 5¢ each. Write for price list of bargains.

### Step Ladders, 1¢ per foot.

Six styles from 11¢ per foot upwards. Ladders for every purpose. Our popular family step ladder, 11¢ per foot—4 to 10 feet—6-inch top, worth 100% more.

### Hot Bed Sash

Made in sizes for six and ten inch glass. Sold with or without glass. Open sash, 92¢ and up. Sash complete with glass, \$1.69 and up.

### Corner Blocks 2¢

Small things to save money on, but why pay double when G. V. T. Co. sell next to cost. Corner Blocks, 2¢, 3 sizes. Base Blocks, 4¢, 3 sizes. Head Blocks, 4¢, 3 sizes.

### PORCH-WORK!

Our Anti-Trust Prices on Porches—in Reach of All. Put a good big porch on that new house. Put a bigger porch on the old home, or if none, put a new one there. For complete satisfaction a porch on front or side of your home pays dividends every day. Nothing is so satisfying or pleasant as a good big roomy porch. Easy to own at low prices for material. You will enjoy your home more for it. Every residence needs a large porch.

### ART GLASS WINDOWS 55¢

Per square foot. Designs with our number. For every purpose, doors, windows, etc. Get catalog containing illustration in colors, price list and designs.

\$1.19 WINDOW FRAMES. Trust prices \$2.70. Three sizes, \$1.19 up. All frames made from Northern White Pine.

### DOOR FRAMES 56¢ AND UP

Our stock is very complete. Door frames, inside door jambs, etc., at anti-trust prices that are one-half or less than monopoly dealers charge. Furnished in 2 sizes.

### \$5,000 PLAN BOOK

SEND US 10¢ to cover cost of packing and postage and we will send you a copy of our 1909 edition "Book of Plans." This was compiled by our architects at a cost of \$5,000. It contains 44 complete plans—the most simple and practical work of its kind ever published—contains the best ideas of the architectural world—shows 33 designs for city and country residences, cottages and bungalows ranging in cost from a few hundreds to several thousands of dollars—has 19 plans for FARM, DAIRY AND BARN, granaries, poultry sheds and various out-buildings. It shows how to build with the utmost economy. By building from these plans and taking advantage of our bed-rock prices on material you can save half the usual cost. This plan book is handsomely illustrated with actual pictures of beautiful homes and buildings. Send 10¢, coin or stamps for our free book.

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WE WANT YOUR NAME AND ADDRESS. No matter in what State you live, send us a postal card like this: "Gordon Van Tine Co., 1593 Case St., Davenport, Iowa," and say: "Send me your Grand 1909 Catalog," sign your name and address. Better still, mail this coupon, cut it out, fill in all the blanks and send it to us. We will send you FREE our handsome new 1909 Building Material Book which cost us thousands of dollars to get up. Handsomely printed and illustrated with hundreds of fine photographic views, detailed descriptions of every stick of material truthfully and accurately told, with our line of wonderful Anti-Trust prices set up in clear unmistakable figures. Here are illustrated thousands of genuine bargains in building necessities, at prices that defy competition of every kind. This is what G. W. McQuinn, Salina, Kas. says, after ordering from our catalog: "In building my house I made out a bill of the millwork. Local yards bid was \$292.00. Thinking it high, I ordered the same bill of goods from Gordon Van Tine Co. for \$122.40. The goods was first-class in every respect. The dealers said I would get poor stuff, but I asked them to come and see it; they admitted it was all first-class. I saved \$60.00 on a small bill." Remember, we guarantee satisfaction and safe delivery. We refer you to the Banker's National Bank, Chicago, or any bank in Davenport. We guarantee high-quality, safe delivery, prompt shipment, lowest prices, freight included.

Send Us the Coupon. Help Us Win Our Fight, and Thus Protect Yourself

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