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## Capitalizing In The Old Fence Rows

By E. J. WINFIELD

**A**N old stone row widowed of its rail fence will never grow into a thing of beauty. Its care will never insure a big income. There are two general courses for caring for it. One is to let it hide itself under dank underbrush and scrub trees, another is to harvest it once a year and keep it bare. Under either of these courses it will fatten from four feet wide to twenty feet wide in the course of ten years, and the big stones along the edges, too heavy to be rolled up on the sides, will be so many sentinels marking its onward march into the field.

In pioneer days when the plow relieved the monotony of jolting from stone to stone by hooking hard fast on a good solid stump root, the pioneer's first thought was not to conserve either land or beauty. His forty acres were sufficient. His greatest care was to hack and grub until he could get down to the soil. In those days a stone row or a stone pile was a mark of progress. To the man behind the plow they looked more beautiful than the uncleared land, and they marked him to his neighbors as a man worth while. A man was measured by his stone piles.

Today many men live upon their grandfather's reputations. But the stone row which remains even after the age of stone piles has almost passed is not looked upon the same as it was. It is looked upon now as the grandfather's misfortune.

Not from the standpoint of sentiment, however, does the stone row give the greatest concern. The telling criticism is from the standpoint of wastefulness.

A calculating farmer jotted the following facts in his note book two years ago last spring. Two hired men for three days to clear off undergrowth and an old rail fence, \$9.00. Two men for nine and one-half days hauling away stone, \$28.50. Total expense, not counting use of team, \$37.50. Result, seven cords of good wood worth \$16.00, strip of best land on the farm eighty rods long one row wide. Net cost of land, \$21.50.

During the last two seasons this half acre of land reclaimed by taking

away the old unused fence row has more than lifted the burden of debt placed upon it for labor. The result of its clearing has been over a fifty per cent return upon the \$31.50 invested. And, mind you, this return is not stopping at the end of these two years. It will go on indefinitely. Where could that money have been better invested?

In the case of this particular old

"Oh, well, that old row has always been there, and it takes up little space." That is the common feeling.

"Why, that row is about ten feet wide," said Farmer M. We put the tape line to it. It was eighteen feet wide. The width of such rows is very deceiving. Counting the space naturally preserved for clearance beside the stones, the farmer was losing at least twenty-two feet of space across

each year to cut off the growth and keep the wall looking decent. Two men and a team for seven or eight days could have made that strip of ground look decent forever. At the same time it would have been made an income producer.

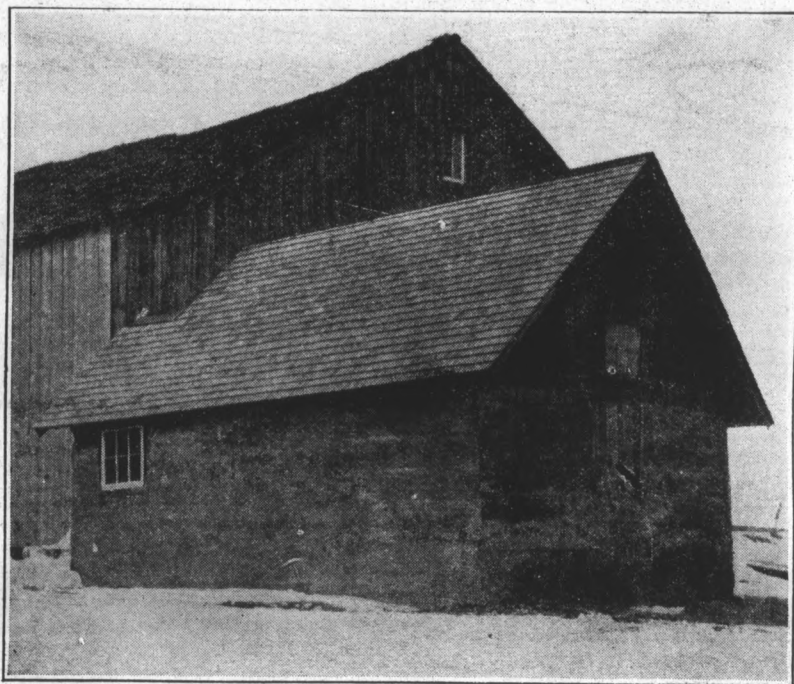
On the top of this old wall a wire fence meandered uncertainly. It seems that it tried to keep to the highest part of the wall, and the wall bowed. It consisted of one forty-rod bow with little bows at irregular intervals. A fence across that field set in a straight line would have taken three feet of clearance.

There is a growing custom of planting the new wire fence on the ground close beside the old wall, presumably to save the trouble of burrowing down through the stone to set the posts. As a matter of fact, the setting of fence on top of the old walls has never proved satisfactory, unless the wall were painstakingly relaid.

When such a wall is relaid it makes a very pleasing fence, but it takes up at least six feet of clearance. In all cases the labor of relaying it is greater than the labor of drawing it away would be.

And the matter of six feet, while it is not much, amounts to quite a bit when it extends for a long distance for a long period of time. A four-foot stretch around the border of an 80x40 twenty-acre field is a little over one-third of an acre. Such a space levies a tax of 1.6 per cent upon every crop grown in the field. Suppose your good field turns out a hundred bushels of corn per acre. While the row is there you do not get 2,000 bushels. You have 32 bushels deducted. Suppose this loss goes on for ten years. You lose quite a crib of corn. This from a strip four feet wide.

This is the day of tearing down old factories to put up those of greater capacity. It is the day when the thing which does not pay is gotten rid of. The manufacturer is capitalizing in things which cut out waste. It is a good time to capitalize in old fence rows. They yield attractive interest, and the neighbors will never miss their natural beauty.



Concrete Ice-house with Milk Room in Rear. (See Description on Page 307).

fence row, the piles of stones and the rotten rails had lain useless for eight years. During these eight years, putting the average for the fields at \$25 an acre, the loss on that strip has amounted to nearly \$100.

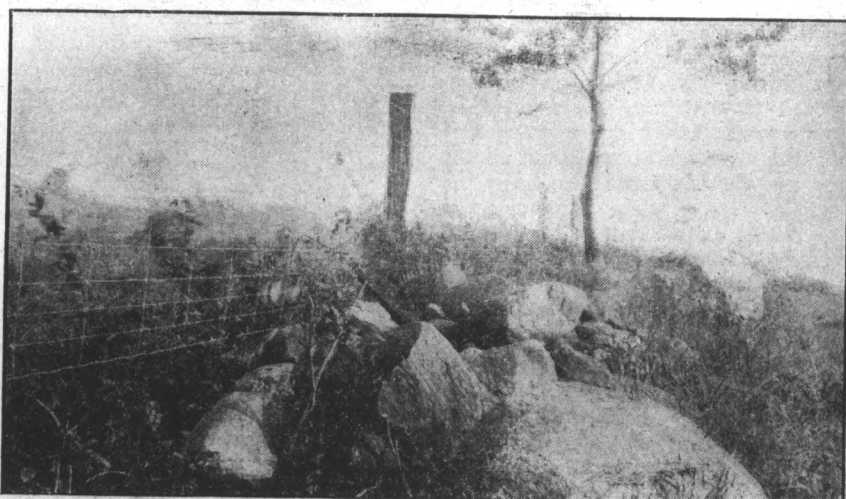
Just what the loss of valuable land occupied by overwide stone rows is has never been taken into consideration at all by many careful farmers.

a forty-rod stretch. He was the owner of eighty acres. This particular field on the one side of the fence which he had into beans contained six acres. Every year he was losing one-eighteenth of this field. This one old row covered one two-hundred-fortieth of his whole farm.

This same farmer confessed that it took one-half day's back-breaking toil



They will Fatten from Four Feet to Twenty Feet Wide in Ten Years.



A Fence Built upon an Old Stone Row is Never Satisfactory.



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DETROIT, OCTOBER 9, 1915

### CURRENT COMMENT.

**Agricultural Extension Work.** A recent report of agricultural extension work as compiled by the Department of Agriculture, shows that there will be available from all sources for extension work in all the states during the fiscal year of 1915-1916 a total of \$4,759,151.

Of this sum \$1,080,000 will come from the Smith-Lever fund so-called, \$600,000 from the states, \$925,527 from co-operative demonstration work by the Department of Agriculture, \$100,380 in work by other bureaus of the department, \$498,754 in extension work by states other than that required to offset the Smith-Lever fund, \$943,819 from the counties which have appropriated moneys to help in the work of county farm bureaus, \$332,837 expended by agricultural colleges in direct extension work, and \$277,831 from other sources including private contributions and appropriations by commercial organizations to support county agents and county extension work.

Of this total, the funds available for extension work from all sources in Michigan aggregate \$86,530, of which \$28,032 is from the Smith-Lever fund, \$18,032 from state funds to offset the Lever funds, \$16,902 for farmers' co-operative demonstration work by the Department of Agriculture, \$18,000 contributed by counties for the support of farm bureaus, \$3,424 in direct extension work by the agricultural college, \$3,040 from all other sources including private subscriptions, appropriations by commercial organizations, etc.

There are now more than one thousand counties in the 48 states which have county agents. There are in Michigan 16 county agents, and this line of agricultural extension work is beginning to assume important proportions. In another column of this issue will be found an article relating to breeders' organizations in one Michigan county which have been largely promoted through the efforts of the county agent. Many other examples of a similar character might be cited. In the not distant future we hope to show in a more practical manner how the activities of the county agricultural agents and the county farm bureaus have contributed toward the solution of some of the important basic problems in the counties in this state where the work has been carried on during the past two or three years.

With the growth of the Smith-Lever fund and the state appropriation which will be required to meet it from year to year, there will be funds available for assistance in other counties as rapidly as they may be organized

and men be secured who are competent to carry on this work in the most effective manner. There seems to be no room for doubt that this line of extension work has been a success in this state as it has been in other states as indicated by the report above referred to. In some cases errors have been made in the organization and financing of the work, but these have in practically every case been eliminated without hindrance to the work itself. In a few instances commercial organizations and business men other than farmers have taken the initiative and contributed largely to the financing of the work. In most cases it has, however, been found that the best method of establishing the work is through the medium of the county farm bureau so-called which is controlled and directed by farm people themselves, and by direct appropriations from the counties to make up that portion of the cost which is not otherwise provided for.

**Fire Prevention** Headquarters in New York which styles itself as The Safety

First Federation of America, has announced that Saturday, October 9, the anniversary of the Chicago fire, has been designated as National Fire Prevention Day, and that plans have been made for a general observance of the day throughout the country. The governor of each state has been requested by the organization to issue a proclamation asking the public to co-operate in the movement. The federation urges that on October 9 all rubbish be removed from public buildings and that a careful inspection be made of heating, lighting and fire extinguishing apparatus; it also has suggested that fire drills be conducted in public schools.

The idea of directing the public mind to the matter of fire prevention on a specific date at this season of the year is an excellent one, and it is with a view of directing the attention of Michigan Farmer readers to this important matter that we have commented upon the action of this New York society. A very large percentage of the fires in farm homes are due to defective chimney flues or careless installation of heating apparatus, including stove pipes. With the approach of the season when heating of the home must be continuously provided for, it is the part of wisdom to see that the heating apparatus is in good condition and is so installed as to reduce the fire risk to the minimum. Chimneys should be cleaned and carefully inspected to insure that they are in proper condition, stoves, if defective, should be repaired, stove pipes should be carefully installed in a most painstaking manner so that the pipe cannot become detached from the chimney nor get pushed in so far as to obstruct the draft.

With the approach of the season when lanterns must be used in doing the chores about the barn, preparations should be made for hanging them in convenient places so as to avoid danger of their being tipped over and thus repeat on a smaller scale the history of the Chicago fire which originated from this cause, and on the anniversary of which this fire prevention day has been appointed.

The lighting apparatus in the home should also receive careful inspection to the end that as much as possible of the risk of fire may be eliminated. Provision for extinguishing accidental fires should also be made as added security to the family and the home. These things will be better done if they are made the subject of special attention at a stated time.

**Milk Prices.** We believe the dairy farmers of Lenawee county are going about the proposition of determining the prices they ought to receive for milk, in the proper manner. At the regular

September meeting of the County Association of Dairymen, held at the court house at Adrian last Saturday, committees reported after careful investigation of several herds, on the cost of a hundredweight of milk as produced upon different farms. These reports varied, as must be expected, but they enabled the farmers to understand better the narrow margin between production and selling prices and also directed attention to the fact that there is much that farmers themselves can do to widen this margin of profit without appealing to the dealers. Better cows, more fertile soil, increased acreage of crops that produce the cheapest feeds, arrangement of barns, suitable equipment for rendering labor more efficient and securing the product in better condition, were all awarded their portion of merit in both the reports and the interested discussions that followed. Some of the discrepancies in the prices offered for milk by different dealers were brought to the attention of the hearers. Farmers were also apprised of the fact that while there has been a heavy production of milk throughout the country during the months of July, August and the first half of September, due to the excellent condition of pastures, the cows have suddenly dropped off in production so that now the flow is down to normal and dealers early anticipate a general shortage in the supply. Already anxiety is being felt by some concerns over the situation which should enable the producer to realize higher quotations than might be expected with the heavy flow continuing. In our next issue we shall hope to report in detail the themes presented at the sessions.

On page 317 of this issue appears the first of a series of children's stories by H. T. Knapp, who so delightfully entertained our junior readers last winter with the exploits of "Billy" and "Tinker" in the great white forest. The new series will take these same characters on even more wonderful journeys than have been heretofore reported. The descriptions will appeal not only to the imagination of the younger boys and girls, but will incidentally unlock a storehouse of information on natural history that will prove instructive to the children and to senior members of the family as well. Because of the entertaining and instructive features of the stories we publish them with the hope that every home where there are children will take advantage of the opportunity afforded to stimulate and develop in the children an active imagination which talent in after years will most likely contribute liberally to their success in life.

### BIG FAIR AT THE SOO.

The unprecedented bad weather for agricultural fairs generally, did not prevent the holding of the best agricultural fair ever held at the Soo, on September 20-21-22. Chippewa county is thought to be the best agricultural county in the Upper Peninsula of Michigan, now known far and near as "Cloverland." At this fair medium clover and alsike were shown measuring five feet seven inches in length, while timothy hay was shown measuring six feet three and one-half inches. Prizes were offered for the longest 20 heads of timothy and many exhibits were brought in by Chippewa county farmers. The first prize bunch of heads averaged nine inches in length, while the third best averaged only a slight fraction of an inch below that measurement, and other exhibits nearly as good were plentiful. It is generally conceded that Chippewa county is the champion hay county of the state and our farmers annually sell off their surplus hay, something like thirty thousand tons.

No better winter wheat was ever shown in Michigan than that exhibited at our fair. The oat crop has been injured by excessive rains and the showing of threshed oats was not as good as usual, for we frequently have on exhibition oats weighing from 40 to 44½ pounds struck measure; while this year, though over weight, they do not generally reach those high figures.

But oats were on exhibition in the straw measuring five feet nine inches, which are very common throughout the county. In vegetables all well informed sections concede to Chippewa county the banner of the state, and this department of the show was fine. The live stock show was excellent in quality, with several good herds of Shorthorn and Holstein cattle and Berkshire, Yorkshire and Hampshire hogs on exhibit.

In the fine arts department the ladies, with beautiful articles of finery, made a much better showing, both in quantity and quality, than ever before. Cash prizes, larger than those offered at the State Fair, were partly accountable for the splendid showing. Strangers who visited the fair said that the show in the ladies department was even better than at the State Fair in the same department.

Chippewa Co. L. C. HOLDEN.

### HAPPENINGS OF THE WEEK.

#### Foreign.

**The European War.**—Greece has entered the war on the side of the Anglo-French Allies and will co-operate with the British and French in an effort to check the Teutonic drive across Serbia for the relief of the Turks. It is expected that Russia will declare war against Bulgaria inasmuch as an ultimatum has been delivered to the latter country from the former demanding that all Austrian and German soldiers and officers be dismissed. England and France have landed large bodies of troops at Salonki, Greece, preparatory to meeting any new eventualities in the Balkan district. Germany and Turkey also report large forces on the frontier, and the announcement has been made that operations against Serbia will begin this week. In the western theater of war fighting has been violent throughout the past ten days and at several points the lines of battle front have been shifted. The British drive in the west near Loos enabled the forces under General French to take advanced positions, however a portion of the advantage has been lost to the Germans through counter attacks. French successes have been more or less continuous and important positions in the vicinity of Artois and in the Champagne district are now in their possession. In the east the Russians have also checked the Germans in most sections along the thousand-mile battle-front. The position of Riga has been improved from the Russian viewpoint and railroads in the northern portion of the war area are less exposed than a week ago. No news of importance has been reported from Galicia.

The Japanese government has started a plan to subsidize a dye stuff and chemical industry in order to make Japan independent of German concerns. The Japanese diet has passed a bill which will enable concerns manufacturing these products to pay an eight per cent dividend on the paid up capital. Gun powder is included in the action of the government.

#### National.

Clashes occur almost daily between United States cavalrymen patrolling Mexican borders and Mexican bandits on the American side. It is not definitely known whether these marauding bands are organized and have a political motive behind their actions or whether they are operating independently to secure what property they may gain possession of. Further land slides make it probable that the Panama Canal will be closed for forty days or more until the debris can be cleared from the channel. This is the first serious interruption of traffic since the canal was opened in August, 1914.

The government allowance to the Texas National Guard for the ensuing year has been docked \$91,000 from the usual appropriation to cover the value of uniforms and other equipment which it is charged were sold to Mexican revolutionists, after official statements that the equipment had been condemned and destroyed.

The conclusion of the Anglo-French loan in this country seems to be regarded with satisfaction both in the United States and in London and Paris.

The American Federation of Labor will undertake to sift the charges that German and Austrian propagandists attempted to improperly influence labor union officials to foment strikes and other labor disturbances in connection with the manufacture of war munitions for the Allies.

Operations in Wall Street last week set a new record. There were days when over one and a half million shares were exchanged. Over eight thousand shares changed hands on the floor of the exchange alone. The public is supporting the market strongly and prices are advancing.

Two boys were drowned Sunday afternoon in the Huron river two miles west of Ypsilanti.



## Concrete Ice-House Construction

Would you please advise through the Michigan Farmer how to build an ice-house. I have thought of building of concrete blocks, making a double wall, the outside wall of eight-inch hollow blocks and the inside of three or four-inch solid blocks, packing the space between with sawdust, the walls being about one foot apart. If there is a better method kindly advise.

J. Y., Ottawa Co.

**W**ITH a concrete house, successful storage of ice depends only upon careful packing, air-trapped drainage at the floor line, and well regulated ventilation beneath the roof. Therefore, the icehouse must be located on a well drained site and, if possible, in the shade of other buildings or trees. It should be turned end to the south.

The size of the building is dependent on the needs of the family. Nearly any household will consume one hundred pounds every day, or ten tons for the season. One cubic foot of ice weighs 57 pounds and a ton in the ice house occupies about 40 cubic feet. If the ice is of poor quality, meltage frequently amounts to one-third the quantity harvested; therefore it is wise to build a house of a capacity twice the calculated needs. For a farm with a small dairy, a sufficient supply can be stored in a building 10 by 14 feet (inside measurements) by nine feet to the eaves and 13 feet to the comb of the roof. With an allowance of one foot on all sides of the ice for a packing of sawdust, the capacity of this structure is 20 tons.

### Method of Construction.

Either concrete blocks or solid concrete may be used for the walls. Dig

building. Likewise, while pouring the concrete for the gable ends, make provision for small ventilation doors two and one-half feet square.

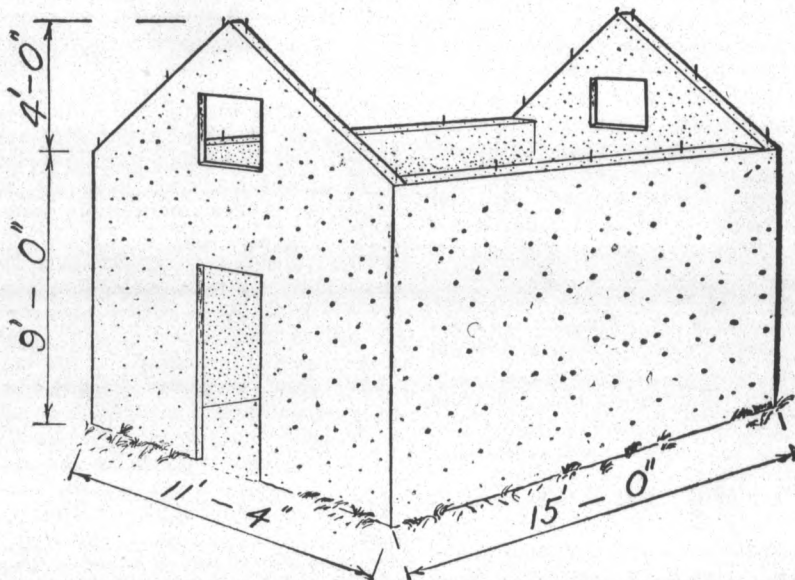
A wooden roof, while not durable like one of concrete, is more easily built. To hold the plates on the top of the side and gable walls, sink half-inch bolts eight inches long, heads down six inches into the concrete. Use eight-foot rafters and cover the building with a watertight roofing material.

Lay a four-inch concrete floor upon the natural ground and give it a slope of a quarter inch to the foot in the direction of the drain at the service door. Place a trash strainer in the drain opening. The water in the "goose-neck" sewer pipe will act as a seal and keep out the warm air of the drain.

Hinge the small doors in the gables to outside and top of the frames, so that they can remain slightly open at the bottom yet shut out rain. The service door also swings outward. The frame is fitted with short removable sections of boards set in slots or grooves so as to hold the packing in place.

### Storing and Removing Ice.

In storing ice use a thickness of 12



Plan and Dimensions of Concrete Ice-house of 20 Tons Capacity.

the foundation trenches ten inches wide and two and one-half feet deep. To remove water from the melting ice lay a string of four-inch tile from a point opposite the building and ending at the service door, so that the top of the last pipe, a sewer "goose neck," will be at the floor line four inches above natural ground level. Fill the foundation trenches with concrete proportioned one to two and one-half to five. Above ground level the walls may be made of blocks (laid in a one to two cement-sand mortar) or of solid concrete. For the solid wall mix the concrete one bag of Portland cement to two cubic feet of sand to four cubic feet of crushed rock, or one part cement to four parts bank-run gravel. Use movable forms, three feet high and extending around the entire building, to hold the mushy wet concrete until it sets. The day after they are filled, the forms may be loosened, moved up and filled again. During the placing of the concrete, reinforce the walls, three inches from the outside, with woven wire fencing or with three-eighth-inch rods spaced 18 inches apart and running in both directions. Stagger the rods by placing half of them three inches from the inside surface of the walls. Imbed two rods or an old wagon tire in the concrete two inches above all door openings. During the construction set a service door frame (2½ by 6½ feet) between the forms at one end of the

inches of sawdust or 18 inches of marsh hay or straw over the floor and around the sides of the house. Set the ice on edge and pack it tightly together without any filler between the cakes. To prevent blocks from slipping, lay them in courses lengthwise in opposite directions in what masons call "headers and stretchers." When the house is full, cover the ice-pack with sawdust or hay weighted down. Keep the service door closed while removing ice and take care that the pack is again well covered. See that the drain works properly and prevents water from standing on the floor.

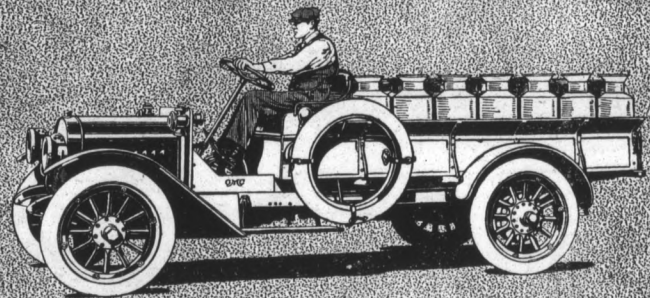
### Materials and Cost.

For building this solid wall concrete ice-house, there will be required 27 barrels of Portland cement, 8½ cubic yards of sand, 17 cubic yards of crushed rock and 74 pieces (250 pounds) of ¾-inch rods nine feet long. If good pit gravel is at hand, haul 18 cubic yards; no sand will be required other than that in the gravel. The approximate total cost of these materials is \$75. Such a structure will not rot out and will keep the ice with minimum shrinkage.

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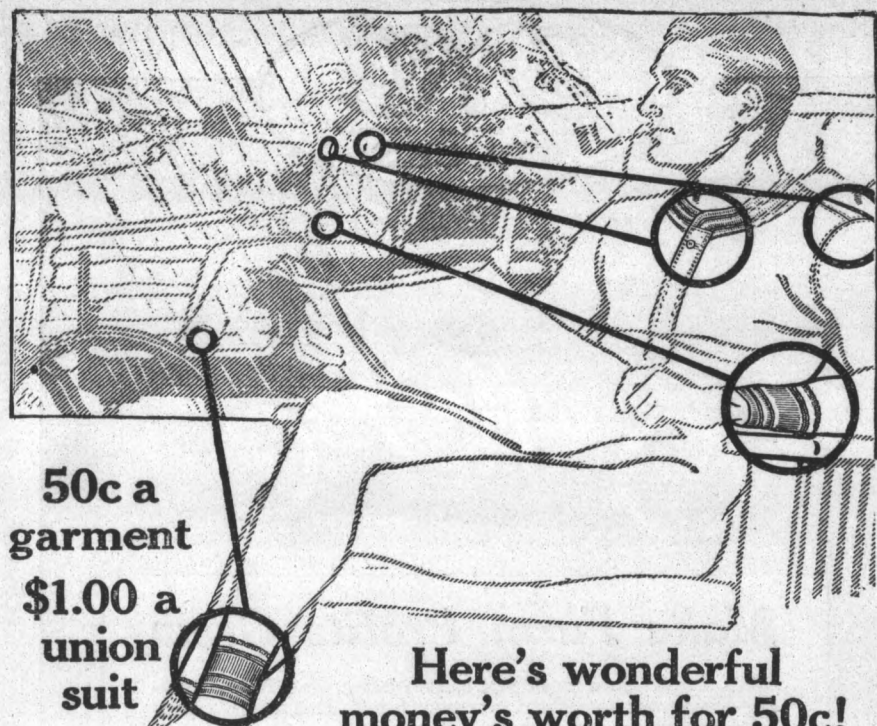
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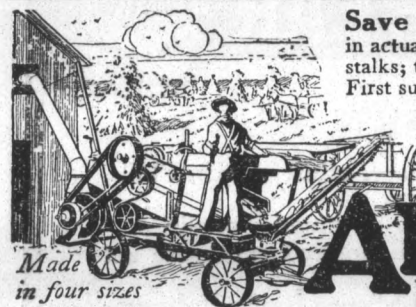


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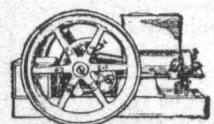
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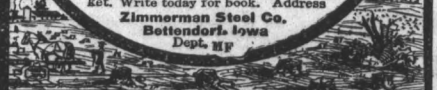
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## Farmers' Vacations

THE lawyers of England were the first people to take a "vacation," or a cessation from labor, at a certain season of the year. The season was during the vacation of the court of law, or the space of time beginning with the ending of one term and the commencement of another. The longest vacation beginning the thirteenth of August and ending October 23. This was the vacation they generally selected to take a journey entirely for pleasure and recuperation.

The practice of the lawyers was soon followed by other professional men—ministers, doctors and school teachers, and they gradually selected the same time as the lawyers. There is not much doubt that professional men and women and people engaged in sedentary pursuits and indoor employments should take a vacation once a year for the benefit of their health, and the lengthening of their lives. The number of people who take these "outings" is increasing every year, and they declare that the time and money spent are not lost as they are thereby enabled to return to their work with renewed strength and higher spirits, and can accomplish more work in a year than if they had continued to remain at home and drudge.

In my judgment no class of people need a vacation more than farmers, and their wives. Their occupation necessarily confines them closely to the farm. They work more hours than any other class, and no matter how many labor-saving machines they may have, much of their labor requires physical strength. They live in a great measure isolated, having too little congenial society. The grange has helped matters in some districts, and the telephone is expected to do more, where established, but it will always be true that farmers and their families need a yearly vacation more than any other class. In taking a journey from home they behold new scenes, new objects of interest, new faces, new employments, new towns, and public institutions. The journey cheers the spirit, rests the mind, and inspires it with new hopes and ambition.

The oyster in its shell is content to crawl about in its muddy bed, but mankind are constituted on a different plan and must have a larger field of action, and higher aims to serve the purpose for which they were created.

The winter is the time when farmer's work is the least pressing, and when he could take a journey with the least hindrance to his business; but a vacation is for pleasure, and owing to the prevalence of cold stormy weather in winter not much pleasure could be anticipated then. Everybody enjoys traveling the most when the fields and trees are clothed with living green; when growing grain is waving in the wind; when the air is loaded with the fragrance of flowers; the woods ringing with the melody of the feathered songsters, and all nature seems rejoicing. This charming season would occur some time in June, when it would be madness for farmers to leave the farm.

I think the best time for farmers to take their vacation would be after haying, harvesting and wheat sowing was done. There is usually a week or two of continuous fine weather in October, neither too warm, nor too cold, for outdoor comfort, when farmers and their wives might take a pleasurable outing.

Pennsylvania. J. W. INGHAM.

#### SOIL AND FERTILIZER QUESTIONS.

#### Amount of Plant Food Removed by Crops.

How much potash, phosphorus and nitrogen for a crop of clover, or, in other words, how much of each does it take from the soil? The clover or

alfalfa producing two tons per acre? How much is a balanced ration for a crop of corn or other grain and how much does it take from soil per acre, the corn producing 15 tons of green fodder and 100 bushels of corn in ear; oats at the rate of 100 bushels per acre; wheat at the rate of 50 bushels per acre. SUBSCRIBER.

The amount of plant food removed from the soil by one ton of mature plants is as follows:

	Nitro. lbs.	Phos. acid lbs.	Potash lbs.
Green corn...	5.8	2.4	7.8
Green clover...	14.0	3.0	9.6
Green wheat...	7.6	3.2	12.0
Green oats...	10.8	2.6	7.6

But this does not prove or indicate that it is necessary to supply this much plant food every year, because we have an almost inexhaustible supply of these elements in the soil. They are a part of the soil, and as we remove a portion of the soil in growing crops, we get down to other soil containing more of the same elements, a portion of which can be made available each year. Most of this food as it exists in the soil is not available for growing plants, that is the reason why it is profitable to supply a small amount of available food by using commercial fertilizer. No one can give the amount to be supplied for a balanced ration, because no one knows just how much is already available in the soil.

#### Fall Plowing for Sugar Beets.

I would be pleased to know something about fall plowing for sugar beets on sod ground and on corn stubble. How does it compare with spring plowing? What would be the proper depth to plow? Does subsoil plowing pay?

Ionia Co.

H. J. G.

It is always safest and best to fall plow for sugar beets. The sugar beet wants a fine seed bed about two inches deep, but the balance of the plow furrow should be firmly packed; it is difficult to get this condition on spring plowed land. It can be done if the plowing is done very early in the spring and heavy rains help to compact the soil. Even with heavy rains the rollers and other packing tools must be used thoroughly. If the land is fall plowed it will settle firmly down to the subsoil and then all that is necessary is to thoroughly pulverize the surface two inches or so for the seed bed.

The land should not be worked too deeply in fitting for sugar beets. The tiny beet plant will not get a good start in a deeply pulverized loose soil. It is quite different from corn or potatoes in this respect. By all means fall plow for sugar beets if possible. If the plowing cannot be done in the fall then plow as early as possible in the spring. Fall plowing is good assurance for a crop of beets.

#### Proper Distance Apart for Tile Drains.

What is the proper width apart to lay four-inch tile in a nearly level field to drain it properly, subsoil being of a mixed hardpan and clay? Ohio men here say six rods. That seems to me a long way for water to percolate, three rods to find the drain, so I would like expert opinion.

Midland Co.

J. M.

In clay sub-soil four rods apart is none too close for tile drains to have them work as rapidly and efficiently as is necessary at times. Six rods apart will do very well in a rather porous soil and where you can put drains in three feet deep, but on heavy clay and hardpan we cannot lay the tile too deep because it takes so long for the water to get through this kind of soil to the drains. Two or two and one-half feet is as deep as I would want to put tile on such soil.

I have some drains now that are three feet and over on heavy clay and after a heavy rain the water will stand so long on top of the soil that crops are ruined, but on most porous soils it works much better. Where the drains are laid four rods apart I think three-inch tile would handle the water as successfully as the four-inch.

COLON C. LILLIE.

When writing to advertisers please mention The Michigan Farmer.





One of Many Live Stock Associations in Wexford County.

THE farmers in Wexford county realize that permanent agriculture can only be continued by keeping good cattle in connection with their general farming.

There is a general sentiment throughout the county for bettering the cattle conditions in this section.

Three Shorthorn associations have been formed in the county and two Holstein associations within the past four months and good work has come from these associations.

At Harrietta, five registered sires have been purchased by the farmers, co-operatively, and they will all be exhibited at the local fair this fall.

At Hoxeyville another Shorthorn association has been formed by the county farm agent, James F. Zimmer, and they received a shipment of Shorthorn cattle from Putnam county, Ohio, early in September. The Holstein breeders at Buckley and Manton are looking for male and female calves for their members and many have been shipped into the county from various parts of the state for breeding purposes. Manistee, Lake, Missaukee and Grand Traverse counties joining Wexford are also coming into these associations and it is hoped to have the work scatter over ten counties within another year.

Mr. Neil Martin, Harrietta, president of the Harrietta Shorthorn Association predicts this will be one of the best Shorthorn districts in northern Michigan.

Mr. L. C. Cornell, Sherman, president of the Holstein Association at Buckley has a movement started for a condensary at Buckley. This advancement in the cattle proposition will mean more silos and better soil for this district.

Mr. Thomas Alexander, Cadillac, president of the Northern District Holstein Association, has over one hundred Holsteins at the present time and is very enthusiastic to have the best Holstein herd in the state.

This association work is one of the many ways of bringing the farmers together and give them an opportunity of exchanging ideas.

Present indications show that 200 farmers will be breeding registered cattle in Wexford county and vicinity by January 1, 1916. Two years ago there were only seven men in this work.

What we need is more grouping together for the general good of all and forget the selfish interest of going at our life work single handed. "United, we stand; divided, we fall," will be the motto of the cattle men in this section in the future.

#### THE FEEDING VALUE OF CULL BEANS FOR HOGS.

Will you kindly tell me the feeding value of salvage beans for hogs? Middlings \$1.60, corn \$1.50 and beans \$1.25 per hundred. What is the best way to feed them, ground or cooked?

Allegan Co. J. D. W.

Cull beans make an excellent hog feed, and at the prices named would be an economical addition to the ration for fattening hogs, and while they may be used as the entire grain

feed where fed cooked, more satisfactory results will be secured by feeding them with corn, which will insure a better balanced ration. For fattening hogs they will be much more economical than middlings at the prices quoted. For very young pigs they would not displace middlings to good advantage. They are a much more satisfactory feed for hogs when cooked than when ground.

#### ENSILAGE FOR BREEDING EWES.

I have fed my sheep on ensilage for two years with seemingly good results, but this year my sheep have been troubled with worms and I lost about 25 during the summer. I fed ensilage once a day, and the other part of the time hay. Now, what I want to know is, whether ensilage is the proper thing for feeding ewes with lambs? Is it likely to be detrimental?

Macomb Co. C. V.

There is no doubt about the value of ensilage as a factor in the ration for breeding ewes. Very many sheep breeders have fed it with entire satisfaction for many years, and in experiments conducted to determine the deleterious effect of ensilage, if any, ewes have been fed on it as an exclusive roughage ration without serious consequences; this method of feeding is not, however, desirable.

The internal parasites from which these sheep suffered could not have been caused by the ensilage. They were undoubtedly caused by running the sheep on infected pastures, pastures which have been used for sheep for some years. In our humid climate there is likely to be trouble of this kind some seasons while sheep are pastured continuously on the same ground.

#### RAPE FOR HOG PASTURE.

In the September 18 issue of the Michigan Farmer, Mr. Lillie told of the results he got by sowing rape in peas. He also stated that he had better rape hog pasture than before. I understand he raises Yorkshire hogs. Does the rape blister them? Does he keep them off the rape while it is wet? Or does he have some remedy that is applied externally? Perhaps a few words on this subject would be of interest. It would here.

Cass Co.

SUBSCRIBER.

Rape does sometimes blister the tops of the ears and sometimes the shoulders of quite young pigs if they are allowed in the rape when it is wet but we have never paid any attention to this and they soon get well without doing anything for them.

When the rape is large enough in the spring we turn the pigs in irrespective of size, and allow them to run in the rape pasture all summer. We never lost a pig, so far as I know, and we have never had one seriously affected by having his ears or his back sore. They get well themselves. Of course, our hogs have considerable shade in shelter made on purpose and also from apple trees and they do not have to go out in the boiling hot sun unless they want to. Possibly if they did not have sufficient shade this rape poisoning would be more serious, but that I do not know.

COLON C. LILLIE.

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Commander-in-chief  
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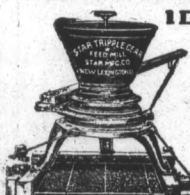
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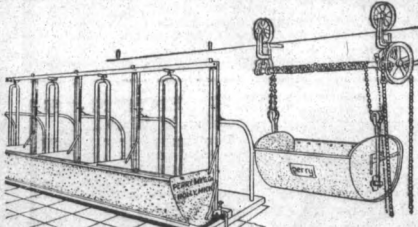
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## Essentials of Tree Repair-2

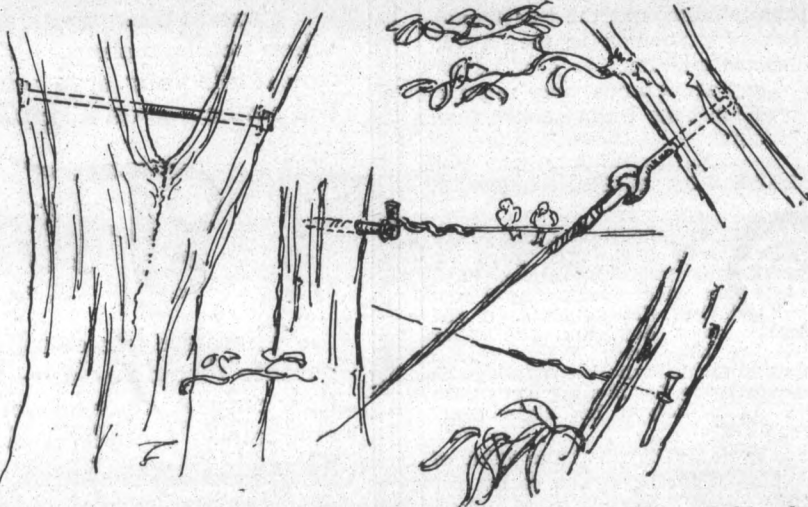
By ELBERT PEETS

**T**HE way to save cambium is to act quickly. If the hub of your wagon barks a tree go at once for the orchard repair outfit (of which more later), and give the wound a preliminary dressing. Exposed cambium will often live and cover itself with new bark if it is kept moist, while if it once dries out it will die back to the point where it is protected by uninjured bark. Merely tying a piece of loosened bark in place for a couple of weeks may give the cambium which still adheres to the wood time to form a new thin layer of bark. Then the old bark should be carefully removed, for it will decay and be a source of danger, and a protective dressing should be put over the tender bark. Liquid grafting wax (the ordinary kind dissolved in alcohol), is the best application to fresh bark

wound. Once a year a man should look over every tree, putting away the grass at its base, prying into every crevice, investigating every unhealthy patch of bark, and giving each injury such treatment as it requires, as prevention is easier than cure, so a stitch in time saves nine.

#### The Use of Braces.

Bracing weak limbs is another sort of tree repair which can easily be done by any orchardist and often returns very high profits on the amount of work expended. The old way of bracing was to run an iron band or a chain around the weak limbs. This method often greatly injures the bark and restricts the growth of the tree. It should not be used. A much better way, when a weak crotch is to be remedied, is to run a heavy bolt straight through the two limbs. A



Different Ways of Bracing. Single Bolt, Eye Bolt and Wire Cable, Lag-Screw and Wire, Nail and Wire.

wounds. Grafting clay, a mixture of clay and cow dung, is also good, but only as a temporary covering. It will cause decay if it is left on too long. If the bark is entirely torn away, trim up its loose edges, scraping the sappy wood as little as possible, and paint with liquid wax or with shellac varnish, or a similar dressing. Then bind cloths or a sack over the wound, to keep the sun off. In about a month, remove the rags and inspect wound. If any dead unattached bark is found, cut it away. Remove splinters or crushed wood. Then give the wound a thorough dressing of pruning paint or tar, over the grafting wax or varnish.

#### The Care of Bark Injuries.

Other bark injuries are caused by sunscald, bark-boring insects, or bark-rot fungi. The invariable rule is to cut or pare away all of the dead bark, cutting it back to a clean line of living cambium, from which the callous will spread. The exposed surface should be scraped of all rotting bark or wood and treated with disinfectants and protective dressings. The great point is to discover these dead patches of bark and clean them up before boring insects and fungi find their way, as they inevitably will, into the wood. The dead bark is duller in color than the living, and gives a hollow sound when it is tapped.

Very large wounds can be covered with sheet copper or zinc nailed down carefully, with the edge just inside the line of cambium around wound. No living bark or callous must be allowed under the metal.

Reference has been made to an emergency repair outfit. In every orchardist's toolhouse should be a box or basket containing a pruning knife, light saw, gouge, mallet, and bottles or cans of such dressings as liquid grafting wax, paint, and tar, and a "borer-kit"—probing wire, carbon bisulphid, and putty. The moment anyone on the place causes or discovers a wound in a tree he should go at once for this repair outfit and attend to the

firmly into it. The drawings indicate the way in which this is done. The bolts must, of course, be painted.

#### The Proper Way to Use Braces.

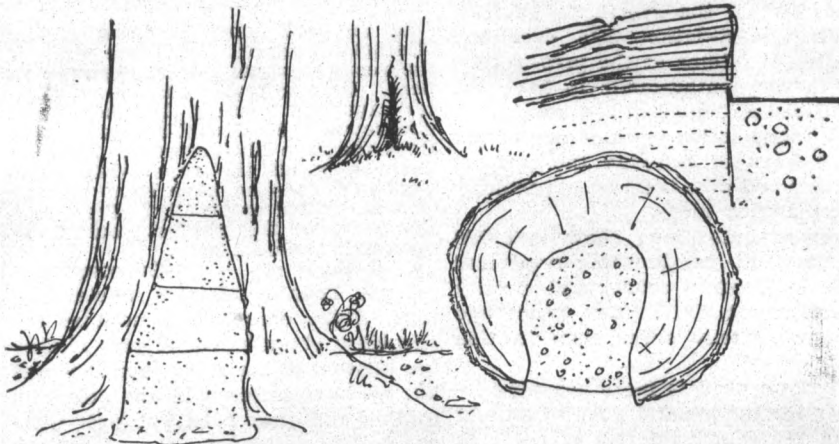
For small jobs of bracing, as peach trees, when it is not desired to use a prop from the ground, I sometimes use a single or double thickness of fence wire. I bore a quarter-inch hole through the limb, in the direction of the proposed brace, and having bent the wire over very sharply, I push the looped end through the hole. Through the loop I place a heavy nail. Then I pull the wire back, so that the nail is pressed against the bark and lying in a direction lengthwise of the limb. The same thing is done at the other end of the brace, and the tree has been strengthened at the total expenditure of a quarter of an hour in time, a few feet of wire, and two nails.

Quite often a whole tree is found to need bracing, perhaps on account of the loss of part of its roots. In that case strong wire cables should be run from the upper branches of the tree (for the sake of good leverage) to neighboring trees or posts, or to "dead men" buried in the ground. In doing this sort of work it must be remembered that trees more often twist off than break off, and the braces must be placed accordingly.

The treatment of cavities is the most spectacular part of tree repair work and the part of which the public has heard most. But neither from the scientific nor the economic standpoint is cavity work as important as the preventive measures and wound treatments I have just described. Large cavity jobs are very expensive, and the work has not been carried on long enough to make us perfectly certain that the results obtained are worth the cost. It is probable that small cavities and shallow large ones in valuable ornamental trees and in some cases in fruit trees, can be treated profitably. But large, deep, complicated holes in trees cannot, at a reasonable expense, be so treated as surely to lengthen the life of the tree. Under those conditions it is better to plant a new tree and spend your money on giving it good soil and care.

#### The Care of Cavities.

Cavity work is undertaken in order to stop the progress of decay by removing all of the wood which has been invaded by the fungus. A treatment which does not include complete removal of the rotting wood including that which, though still strong, contains the fungus, is worse than useless. The cutting out of the infested wood may be followed by some sort



Zinc Work, Before and After. Sections Showing how Zinc is Applied.

strain the brace should only come into play when the limb sags a little under an extraordinary burden.

I have tried several materials for bracing but have settled on heavy galvanized wire and the lighter grades of twisted wire cable (such as is used for bracing telephone poles) as being the most economical, most inconspicuous and efficient and most easily handled, of all. The wire is fixed to the limb, not, of course, by wrapping it around it, but by fixing it to an eye-bolt running through the limb, or, in lighter work, to a lag-screw screwed

of filling, but that is a matter of secondary importance.

The first step, in every case, is to make a careful examination of the cavity, noting its origin, shape, and extent, and deciding upon the advisability of treating it, and upon the method of treatment most suitable. Of the various methods of cavity treatment now in use I shall touch briefly upon the following: Filling with concrete, with asphalt in various forms, and with oakum; covering with sheet metal, and the "open system."

(Continued next week.)



# Dairy.

CONDUCTED BY COLON C. LILLIE.

## LILLIE FARMSTEAD DAIRY NOTES.

I was much pleased to read Mr. Hutchins' article on "Haphazard Breeding of Dairy Cows." He speaks the truth so one can account for the fact that so many farmers will not stick to one breed but are continually crossing breeds. A cross between the different breeds always breaks up, or scatters race characteristics. You are undoing what someone before you has taken pains to build up and fix so it will be transmitted with some semblance to uniformity. Hence this breeding cows first to a bull of one breed and then to a bull of another breed will accomplish nothing. Worse than that, it will tear down what has already been built up. But Mr. Hutchins could and should go even farther in his deductions. One should not only stick to some one family as far as possible of his particular breed. In other words, he should be not only a Holstein man or a Jersey or Guernsey man, but he should practice line breeding as well. The most successful breeder finds that outcrosses in the same breed, that is, a sire from another family of the same breed, tends to scatter the very desirable characteristics which they have discovered and in a measure fixed in other animals, and which they wish to perpetuate. If you go outside of your own particular family that you have been breeding you are liable to lose these desirable qualities. Whereas, if you adhere carefully to the same family these qualities will be still farther fixed. Sometimes it might be desirable to make a slight outcross for the purpose of introducing new blood of marked constitutional vigor, but this will rarely be necessary, in fact, never will be necessary if proper precaution is taken in the selection of breeding animals.

If one starts with grade cows, the most logical way to improve them is by mating them to a bull of the breed, the blood of which is most prevalent in the cows. If these cows contain a predominance of Jersey blood then select a Jersey bull; if Holstein blood predominates then select a Holstein bull. This makes the outcross as light as possible and prevents the scattering or breaking up of breed characteristics. After selecting a given breed never use a bull of any other kind. If at any future time one should desire a different breed it would be best to sell the herd and buy cows of the desired breed, or even grade cows, than to attempt to change the grades of one breed to grades of another breed. Years of careful study and selection would be saved. Having established a herd of any given breed, not only stick to this breed but stick to the particular family of that breed that you happen to have. By breeding in line with proper judgment in selection the most rapid progress can be made. More careful selection is required in this system of breeding because you are combining the same blood and it pulls strong and true. It will magnify undesirable characteristics as well as desirable ones. By the most careful selections the undesirable characteristics can be gradually eliminated. By this system of breeding all of our breeds of domestic animals have attained their present excellent character.

Many herds are actually neglected during the fall months. The pastures fail, and they are not properly fed. They are not stabled at night when the weather turns cold, and if not they can not respond later on as they should. The excuse is given that with

the fall work there is not time to give the cows the attention they deserve. It will pay to have some one person become responsible for the herd's proper attention. Don't neglect the cows. It will pay to look after them even if some of the fall work is neglected. Of course, it will pay to do everything as it should be done, but by all means look after the cows. It will pay better than anything else.

### CULL BEANS FOR COWS.

Can I make a balanced ration with cull beans? I have four head of cattle that will eat them. SUBSCRIBER.

Cull beans are a good food for cows for a part of the grain ration. It is not advisable to use them as the entire grain part of the ration, for beans tend to make a hard fat and a dry, brittle butter. No one can give a balanced ration without knowing the roughage part of the ration. Will you feed alfalfa, clover or timothy hay, or will a large part of the roughage be cornstalks and straw? It makes a difference. One must know this and take the nature of the roughage into consideration to work out or advise a balanced ration which is going to furnish the food constituents, protein, carbohydrates and fat in sufficient amount and in the correct proportions.

Beans are rich in protein and should be fed with corn meal, ground oats or rye, etc., unless the roughage, coarse food, consists of foods rich in carbohydrates and fat. If they do, the beans had better be mixed with wheat bran. So it will be safe to say, mix the beans with corn meal or wheat bran, depending on the nature of the roughage.

### ENSILOING BEET TOPS.

Kindly give me information regarding beet tops for silage. Will they keep put in on top of corn silage? What is the best method of putting them in? SUBSCRIBER.

Beet tops can be put into the silo on top of corn silage with perfect safety; I have done it myself. If you run the tops through an ensilage cutter and cut them up fine they will pack closely and there will be very little waste. If they are put in the silo without cutting, it will pay to keep them well placed so they will fit in closely and exclude the air as much as possible. Even then there may be considerable loss on top because they fit in so loosely that much air is retained and the beet tops will heat and rot until they settle closely together.

One year I got a carload of beet pulp from the factory and run this in on top to settle and practically prevented any loss. After the silo is filled with tops you can prevent much loss by taking a sharp spade and thoroughly slicing the tops on the surface to make the surface fine so the air will be excluded. A good broad axe could be used for this purpose, but the work must be thoroughly done.

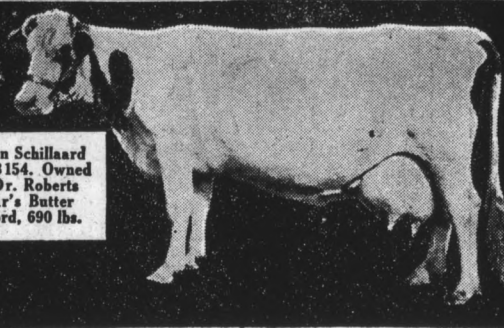
Beets can be elevated into the silo by a blower carrier if they are cut fine. If not cut fine, then the best way is a slat carrier. They could be elevated with a big bucket made of a half barrel by means of a gin pole or crane above the silo, so constructed that it could be swung over the silo after being elevated and dumped after the manner of a swing derrick. A horse team could be used to elevate by having a pulley on the pole and another at the base of the silo to change the direction.

Beet tops are well worth saving when one has cattle or sheep to feed.

We do not always give the cows all the credit that is due them. For instance, many years like the present, some of our hay and our grain crops are nipped by bad weather, so they are practically unmarketable. Yet we can feed them to our cows and other live stock and realize something from them.

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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 every week. Every article is written especially for it, and does not appear elsewhere.

**B**EATRICE sat on the topmost bar of the four-barred gate. This particular bar of this particular gate had been her favorite thinking-spot, since, in her slender-legged childhood, her heels had tattooed the very dents still to be seen in the second bar.

The old man, hobbling slowly across the pasture, did not in the least disturb her reverie. His eyes lingered tenderly on her as he drew nearer.

"Beatrice," he called. "Beatrice, better come in now, dearie."

The girl jumped lightly from her perch.

"Saving me from another scolding, eh, grandfather? Bless your heart!"

## Beatrice and the Rose

By HONORE WILLISIE

"Your father'll be in from the field pretty soon, now," the old man said.

Beatrice put her arm through his and turned him toward the house.

"It's a pretty place, grandfather," she said.

"Yes," said the old man, "I still think so after seeing it for seventy odd years."

Across the pasture lay the old red brick house, almost hidden by Virginia creeper. The Virginia creeper, in turn, was almost hidden by the elms and

maples that filled the great yard. It was a quiet old house, with many windows and gabled roofs.

"Yes, it's a pretty place," repeated Beatrice, "and I should hate very much to leave."

Grandfather Edgren stopped in alarm.

"You are not thinking of leaving it, Beatrice?" he cried.

The girl shook her head.

"It's no use for me to think of leaving it, grandfather, you know."

Father won't let me learn anything but housekeeping. If there were need for my doing the work, I wouldn't complain."

"I wish your mother had lived, Beatrice," the old man said. "She could have done anything with your father. Not but what John means well," he interrupted, "but—but he doesn't see things just as your mother and I would."

The girl's sweet face saddened as her companion spoke, and her dark eyes watched, unseeing, the pigeons dipping about the eaves of the old barn. Then her lips curved into a sudden smile.

"Grandfather," she cried, "the first

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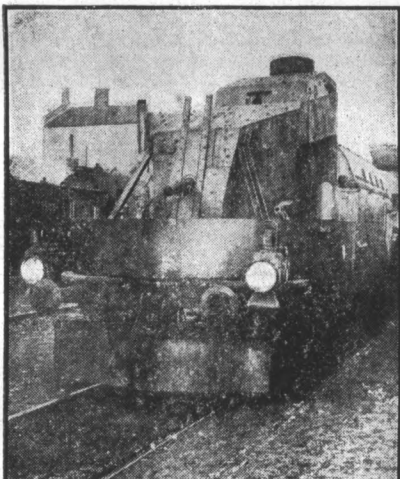
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brier-rose!" She knelt close by the garden fence and smelled the fragile thing. "I'll not pick it yet," she murmured, "not until—"

"Beatrice! Beatrice!" called a heavy voice from the porch.

"Coming, father," answered the girl, rising slowly, and, again taking the old man's arm, she trailed up the bricked garden walk to the vine-covered porch.

"Beatrice," her father began, "are you never going to take the responsibility of the house? It's pretty hard on me to have to run both the farm and the house, while you are out mooning."

Beatrice did not answer until she had helped her grandfather up the steps.

"But, father," she said then, "Bridget does everything better than I could ever hope to, and she has managed so long that she resents a suggestion from me."

Mr. Walcott brought his fist down heavily on the back of a chair.

"That's not the point," he said decisively. "I want my daughter to be a thorough housekeeper, and she'll never learn it by lally-gagging in the woods. My mother would turn over in her grave if she thought I had such a daughter."

Beatrice waited to hear no more, but slipped into the hallway. Grandfather Edgren looked at his son-in-law sadly.

"You don't understand Beatrice, I'm afraid, John," he said.

"No, and I don't want to," snorted John Walcott. "You've no business to encourage her in her laziness, father. Come, supper must be ready," and he followed Beatrice into the hall.

The interior of the old house was as attractive as the exterior. A broad, cool, wainscoted hall stretched through it, with wide-swung doors at either end, through which one caught, on the one hand, a glimpse of summer fields and the lane, where a line of cattle wandered toward the barnyard; and on the other hand, the quaint old garden with its tangle of bloom. It was not strange that Grandfather Edgren and Beatrice loved the place.

The supper hour was not a congenial one, though the old man did his cheerful best to keep up a conversation concerning the condition of the honey bees and the new hives, which were his special care and pride. As soon as possible, Beatrice left the table. When she was gone, her father again manned his guns.

The subject of her distaste for housework, her love of books, her dislike for the society of the farmer youths of the neighborhood, had once occupied the entire meal hour; but a certain quiet dignity that Beatrice was acquiring, with her eighteen years, had lately caused her father to curb his tongue a little. So it was Grandfather Edgren who received full benefit of the fusillade.

"I can't understand it," began John Walcott, pouring a quantity of cream over his strawberries. "What does Beatrice think is to become of her? She turns up her nose at every fellow in the township, and some of them are mighty well-to-do, too. Why, my sisters used to turn out as much work in a day as Beatrice does in a year."

"Beatrice comes of different stock," suggested Grandfather Edgren, mildly.

"She's my child as much as her mother's, ain't she?" stormed Walcott.

"And I tell you I don't see how any child of mine can spend her days sniffing at flowers, fussing over flowerbeds, and mooning at the landscape. I wish she had been a boy. As it is, she'll never amount to shucks."

"I have a feeling," went on the gentle old voice opposite, "that some one of the Edgrens, some day, will amount to a great many shucks; if not Beatrice, then one of Beatrice's children. We have always been quiet people, yet—" here a note of pride crept into the quavering voice—"we have never

been beholden to anyone for sustenance. This property, unencumbered, has been in the family for a hundred and fifty years."

John Walcott looked a little uncomfortable. His place was merely that of regent. The beautiful old farm would belong to Beatrice.

"Of course, I know that," he said, in a slightly more conciliatory tone, "and what I want is to make Beatrice fit to take the responsibility of it."

Grandfather Edgren looked out the window toward his beloved beehives.

"I'm not afraid," he answered. "Beatrice's mother was a dreamer, too, and Beatrice looks like her."

John Walcott's reply caught in his throat as he looked toward the doorway.

"Grandfather," said Beatrice, "will you come into the garden with me?"

Beatrice was very like her mother; very like the old portrait that hung in the hall, and that showed a sweet-faced girl with a laughing baby in her arms. It was one of the griefs of Beatrice's life that she had been so young that she could not realize in whose arms she was held; and it was the great grief of John Walcott's life that those tender arms had held the baby for so short a time. As he looked at his daughter's winsome face above the white gown, a face too sad for its years, a memory of that other face, which he had truly adored, clutched at his heart. Without a word he watched the old man and the girl go out into the garden; and long after Bridget had cleared the table, he sat staring into the gathering twilight.

Grandfather Edgren and Beatrice walked up and down the garden paths together, pausing now before a group of lilies, ethereal soft in the fading light, now before a mass of phlox of wonderful hue and luxuriance.

"They are beautiful, child—beautiful! I don't see how you do it!"

"I think out most of it sitting on the pasture gate. Somehow, I can plan best there," answered Beatrice, smiling whimsically.

That evening, as they stood on the porch, listening to the measured notes of the crickets, Grandfather Edgren was unusually silent. A new idea was stirring in the old man's mind. Beatrice so loved her flowers, she delved over them so persistently, read and studied over them so faithfully, it seemed a pity that her efforts should not lead to some end which might meet John Walcott's approval. After Beatrice and her father had gone to bed, and the house lay quiet in the moonlight, a lamp burned late in the old man's room. He was writing a letter to an old-time friend. The letter told of Beatrice and her work, and asked if the old friend's son, whose private greenhouses were widely known, would stop in to see whether the girl's flowers were salable, if he ever passed that way.

For the next few days, for different reasons, Beatrice and her grandfather went about with an air of absent-minded expectancy—a fact that irritated John Walcott almost beyond endurance. Even the hiving of a new swarm of bees had seldom enthralled Grandfather Edgren as did the possibilities of a reply to his letter. Each morning, as the postman's gig appeared in a dusty cloud, far down the road, the old man hobbled down the lane to intercept it.

Beatrice, at any other time, would have noticed his suppressed excitement; but she was so engrossed with her own work that even her father's scolding voice fell on unhearing ears. Each morning she rose a long hour before breakfast, and was out in the fragrant dewiness of her garden almost as soon as the flowers spread their petals to catch the level rays of the sun. She dug and rooted, slipped and sorted and threw away; now clipping with pruning-shears, now wielding her trowel, now walking back and forth with thoughtful eyes.

It was on the fourth morning after Grandfather Edgren had sent his letter that Beatrice came in to breakfast late, her face flushed, her heavy hair tumbled, her eyes wide with a new joy.

"Grandfather!" she cried.

"For heaven's sake, Beatrice," interrupted her father, "can't you come to your meals on time? You've been up long enough—I heard you at work in the garden an hour ago!"

Beatrice made no answer, but her lip trembled and the joyful look faded a little. She drank her coffee in silence, then waited for Grandfather Edgren to finish his breakfast. Her father glared at the two in a baffled sort of way, then tramped from the room.

As soon as the sound of his footsteps died away, Beatrice leaned toward the eager-eyed old man.

"It has bloomed, grandfather!" she said. "The new rose has bloomed!"

"What?" cried Grandfather Edgren. "I thought it was not due for another week!"

"So did I, at first," replied Beatrice; "but I knew it would be several days early when I looked at it on Sunday; and since then I've been trying to keep you away from it, to surprise you."

The old man rose.

"And is it," he said with trembling eagerness, "is it as—"

"Wait!" cried Beatrice. "Wait till you see it! Come, grandfather!"

They hastened out into the glory and tangle of the garden. The air was all aglow with the yellow of the sunshine and the flitter of dragon-fly wings, and all a-drone with honeybees. Over in the far corner, near the locust-trees, they paused, the old man with a quavering little, "Oh, Beatrice!" and the girl with a sigh of great content.

On a slender stalk, a little removed from the other plants, grew the rose, a thing of such fragile perfection that one trembled lest the butterfly which hovered above it might mar its delicacy. It seemed to have all the brier-rose's shadowy allurements, all the tea-rose's evanescent purity of coloring, and the clinging fragrance of all the garden roses of all the gardens since time was.

The two stood, so absorbed in the beauty of the lovely thing that they did not hear the click of the garden gate nor the sound of footsteps on the bricked walk. These sounded briskly, at first, then hesitated, then moved slowly across the garden toward the locust-trees.

Half-way to the trees, the young man stopped. Beatrice was worth a long pause. In the years among her flowers she seemed to have absorbed much of their sweetness and charm; and it was small wonder that the heart of the man stopped and then went on with unaccustomed rapidity. The slender girl, with masses of waving dark hair above long-lashed gray eyes, with a mouth like a curled rose-leaf and a chin that held the suspicion of a dimple—truly she was as lovely a thing as the rose over which she bent.

At length the young man moved forward. Grandfather Edgren gave a start, and held out a welcoming hand. He knew that the answer to his letter had come.

"I came," said the young man, after he had been introduced to Beatrice, "to see your flowers and to—" His eyes fell upon the rose, and with a half-articulated expression of wonder he bent above it. "Tell me," he cried, "what variety of rose is this?"

"Well, I haven't named it yet," answered Beatrice, flushing a little. "I've been working over it for two years, and it only bloomed this morning."

"You don't mean that this is a new variety which you yourself have bred?"

Beatrice nodded.

(Continued on page 316).



## Big War Predicted in 1913

THE feeling of international unrest in Europe previous to the present conflict, and the prophetic instinct of the people there which foretold an impending calamity, are described in the following letter of Wm. B. Hatch, Michigan Member of American Commission that visited Europe in the summer of 1913 to study agricultural organizations and credit systems. The letter is of peculiar interest because of the events which have transpired since it was penned.

"It is depressing to Americans to witness the tremendous waste of productive energy which even preparedness for war is multiplying in every European country. It is recognized as inevitable that German and France will clash again over Alsace-Lorraine, once French now German. And little Belgium, without any offense, against or from either, has now to double her standing army and defences to prevent destruction, as the battle field between France and Germany. Every European country is largely augmenting its armament and equipment while

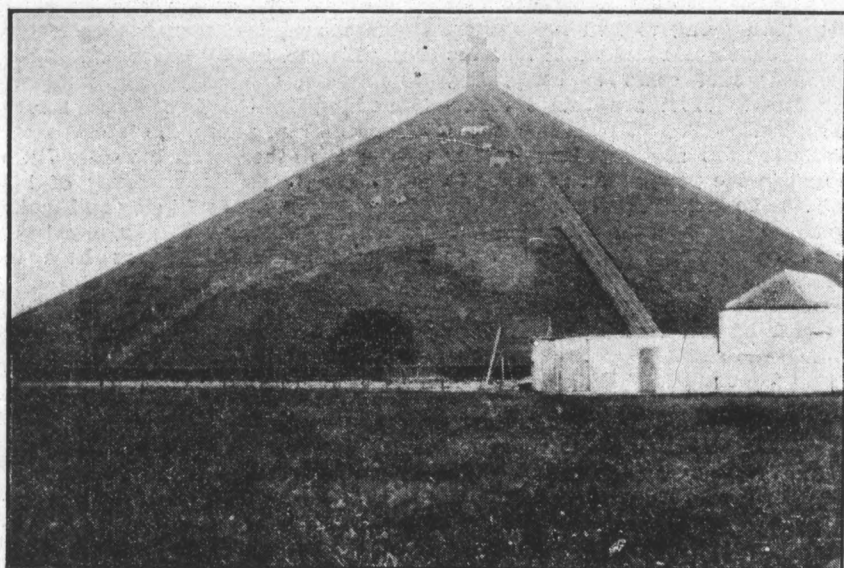
horses which went down with them. And then we bring ourselves down to date and find these same peoples preparing for a repetition. And we ponder our boasted progress of civilization, thank God that America is free from the entanglement thus far, and pray she may ever remain so."

Such was the impression then, and such was the talk then, but nobody seemed to even faintly dream that there was any likelihood of any near-by fulfillment, and yet little Belgium has already realized her almost complete destruction as a battleground.

### ONE BOY'S TRIP TO THE STATE FAIR.

I wish through the columns of your valued paper to tell something of my free State Fair trip. Words cannot express my appreciation to the county board of examiners of Calhoun county, also the teacher of agriculture, C. E. Spaulding, for awarding me so rare a gift.

I left Bellevue on the Grand Trunk Railroad Monday September 6, and



Man made Hill Commemorating the Battle of Waterloo.

Mr. Carnegie is building a Peace Tribunal only a few hours away at The Hague. Italy says Turkey is the next piece of spoils and that this struggle will make the Turko-Bulgarian affair now in progress, an evening zephyr in comparison. English soldiers blame Germany for refusing to agree with the other powers in a cessation of construction of more war vessels for five years. Hungary expects Austria to start something, which will make Hungary a melting pot when the dogs of war break loose. 'The United States of Europe' is the prophecy of some, with frequent comment that Russia will be the one great European state. The war setting and the war atmosphere seems linked in prospect and retrospect by a visit to the scene of the Battle of Waterloo. It is but a half hour by auto through the beautiful beech wood parks of Brussels. In order to capitalize its asset value for tourists, some of the battle-scarred hills have been scraped into one hill, up which you climb some 226 steps, passing cattle grazing along the steep sides. At the top you find an enthusiastic guide beside a huge statue of a lion. He shows you where Napoleon and his army were drawn up; where Wellington and his, faced them; where Blucher was and where he should have been; where was the fatal 'Sunken Ditch of O'Hain.' It seemed under the spell of this atmosphere and from this emanence that we could see Napoleon at Moscow where we were a few days ago, at Austerlitz, at Waterloo, and at St. Helena, and at our feet this great silent cemetery, where, unmarked, and in improvised trenches, still sleep unidentified all nationalities with their innocent

broke camp on the fair grounds Saturday, September 11, and I can assure you it was a week never to be forgotten.

When I tell you that out of the 82 boys in camp only six or eight had ever been in Detroit and a great many had never taken a ride on the railroad, you can imagine something of the pleasure given us. I feel that it is a noble work carried on by the state and hope it may continue to grow and thrive for the benefit of Michigan boys.

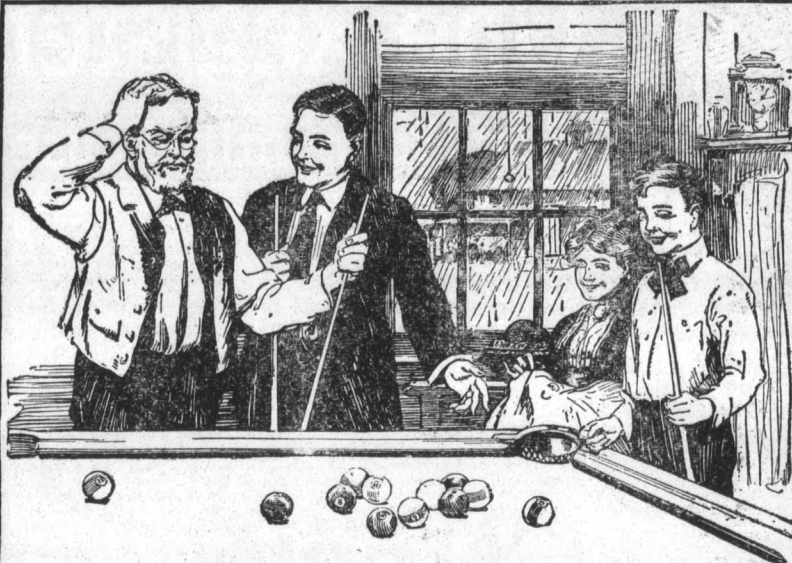
I feel we are very much indebted to the city for the delightful trip given us. Thursday afternoon, September 9, the city's tourist cars called for us at our camp and gave us the pleasure of a four-hour ride through the city. On each car was a lecturer telling us about different places of interest. At the city hall we made a short stop, were lined up on the steps and had our picture taken. A short but interesting address was made by Edward Fitzgerald, secretary to the mayor. We boys responded with our camp cheer. Our next stop was at Parke, Davis & Co., where we were shown the manufacturing processes of the drug concern.

Each day interesting lectures were given on topics concerning the farm and its affairs. My trip, all in all, was very educational as well as full of pleasure. Much credit is due Thomas M. Sattler, L. O. Aldrich and E. S. Jones, popularly known in camp as "Cookie Jones," for their efficient work with the boys.

I would say to the eighth grade boys of Michigan, "Do your work well" the coming year that you may win the State Fair prize of 1916.

Eaton Co.

RAY MILLER.



## Home Billiards Starts When Farm Work Stops

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(467)

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(Patented)

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Why pay for furnace pipes you don't need? The Caloric Pipeless Furnace makes pipes and flues unnecessary. It has just one register. Heat circulates through the entire house, giving upstairs, downstairs and halls the same degree of warmth. There is no danger of catching cold by going through rooms of varying temperature.

You save money on installation because all you have to do is put **Pipeless Caloric Furnace** in your cellar and cut a hole in the floor immediately above for the only register that is required. You do not have to cut a lot of holes in your house and spend time and money putting in pipes. Even if your house is already built you will find it easy to put in the



The Caloric Pipeless Furnace is guaranteed to save 35% of your fuel. This is because there are no pipes to absorb heat, and our special double ribbed firepot has 600 square inches greater heat radiation. Our single register furnace increases the heating capacity 64%. Our guarantee of 35% fuel saving is very conservative. You can pay for the Caloric Pipeless Furnace out of the money you save on fuel.

### Burns Coal, Coke or Wood Economically

This is a hot air furnace and you do not have to bother keeping water in a boiler. Our firepot is guaranteed for five years. The Caloric Pipeless Furnace produces a healthful heat, because the warmed air is moist and every room and hall in the house is heated to equal temperature. It is the one furnace that will not spoil produce in your basement. It lessens fire danger, which is an important consideration, especially where there are children.

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You get this furnace at our risk. We guarantee its results. We freely offer to let you put the Caloric Pipeless Furnace in your house and give it a fair test.

If quality and material are not up to our guarantee—if the Caloric Pipeless Furnace is not as represented, we will make it right at any time within a year.

**FREE BOOK** tells all about the Caloric Pipeless Furnace. Shows why you can heat your entire house comfortably with no pipes and only one register. The Caloric dealer in your town will gladly demonstrate this furnace. If there is no dealer, write for this free book and get details of our protective guarantee.

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"The Range Problem"  
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Delightful, healthy climate. Good Land, Reasonable prices. Close to big markets of large cities of the East. Send for free descriptive booklet and map.  
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**WHY PAY RENT** when you can buy the best farm land in Michigan at from \$12 to \$20 an acre on easy terms. Write for particulars.  
**STAFFORD BROTHERS, Owners.**  
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**Central Michigan Farms.** Very best stock, dairy and general farming country. Splendid water, schools, roads, markets. Real bargain to offer. Write for list A. Benham & Trim, Hastings, Mich.

**For Sale**—93 acre farm, good buildings, all work land, 1 1/2 miles from Main St., 3/4 mile from Albion College and High School. Price \$12,000. **MRS. H. E. DESMOND, ALBION, MICH.**

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When writing advertisers mention Michigan Farmer

### BEATRICE AND THE ROSE.

(Continued from page 314).

"Grandfather's bees suggested it to me, long ago, and I got books, and—"

"But," the young man interrupted, "this is a wonderful thing! I never saw so exquisite a rose—and you have worked it out by yourself!"

"Well, not really by myself. I've had grandfather's help; and the view from the pasture gate, and the flowers themselves, are an inspiration."

The young man looked about the garden.

"Why, the place is full of new varieties!" he exclaimed, and he hurried from one gorgeous bed to another. Then he turned to Grandfather Edgren, who was following in an ecstasy of delight. "Why, this is marvelous! Your daughter is a genius. She has a fortune right here in the garden. This rose alone is worth the price of the entire farm!"

The old man shook his head.

"She doesn't care for the money; but I wanted to see if all her work was worth while."

"Worth while!" cried the young man. "Is the work of a painter or a sculptor worth while?"

Grandfather Edgren's eyes filled.

"I wish her mother were here," he said: "I'm going to find her father. I've told him again and again that the Edgrens would come to something, some time! He'll see things differently now."

Beatrice was still standing by her rose when the young man returned to her. As she looked slowly up into the brown eyes, something only half hidden in their adoring depths made her own eyes waver, and a strange warmth that she had never known before entered her heart. She turned again to the rose.

"Isn't it wonderful," she said, "when one has dreamed and dreamed of a

thing for years, to have it come to you, more perfect than you had dared to hope?"

"Yes," said the young man, but his eyes were still on Beatrice, and not on the rose.

He was holding in bravely, was the young man, considering the tide that was rising.

"And it seems stranger still," she hurried on, "when one has gone on so blindly, year after year."

"Yes," repeated the young man.

The tide was rising fast.

"Will you come and see the syringas?" asked Beatrice.

But it was useless for her to parry, for the flood-tide was sweeping in.

"The rose and all are marvelous," he said, "but don't you know that you are the most marvelous flower in the garden? You are—but I must not go on, must I?"

The man and the girl stood looking at each other in the June sunlight; with robins and bluebirds, bees and butterflies, scent of summer air, bloom of summer flowers, all about them. There came the sound of Grandfather Edgren's cane on the bricked walk. His face was flushed and tremulous, and lighted with a joy that was reflected in Beatrice's own glowing eyes.

"Beatrice," he said, "your father is the most surprised man in three counties. He can hardly believe it! He'll be in from the field in a minute." Something in the two faces before him made him pause. He looked from one to the other, with a tender little smile dawning at the corner of his kind old mouth. "You'll stay and make us a little visit, won't you, my boy? There are enough flowers here to make a week of study."

The young man turned to Beatrice. "Shall I stay?" he asked slowly.

Beatrice did not look up.

"Yes," she answered softly, with a rose tint creeping down to her throat.

## Supply Home Entertainment

**B**UFFALOES when roaming at will on the western plains would confine their grazing to reasonable limitations but as soon as the appetite for salt became insatiable they would travel hundreds of miles to the "licks." Just a hungering for an ounce of salt took them on these terrible races.

How many boys and girls from rural communities have left the country for the city because of an unsatisfied appetite for an ounce of entertainment, cannot be said. Close acquaintance with hundreds who have made this migratory journey, has convinced the writer that the number is not small.

In this day life is being looked upon as complex. While men specialize in their efforts they pity the man with a single idea in his head. A rounded personality is the demand of the times. The person who confines his thinking and his energy to a single notion is sure to break down under the strain and become a candidate for the asylum. We are modifying our school system, our religious institutions and our whole social life to accommodate it closer to the natural demands of the individual—work, play, music, entertainment, exercise, self-control, in fact, all the conditions required to make a boy into a well-rounded man and a girl into capable, charming woman are being given attention. The normal instincts of the boy and girl should be given every reasonable chance to develop.

But it is a sad commentary upon our American farm homes that life there is not fashioned, as a rule, to meet these demands, and the result is and has been, that the young people seeking to satisfy some inherent longing, break the home ties and rush to the cities for their "ounce of amusement."

To appease this longing the churches, Y. M. C. A.'s, and other religious

and social institutions of the cities have introduced regular programs for entertainment and have fitted up rooms with games, like billiards, box ball, bowling alleys, etc., to more effectually accomplish this end. Long ago the saloons realized this pull in the human nature for a chance to engage in friendly competition and provided for it; but pious people defeated their own good intentions by putting the ban on games employed by the retail liquor fraternity instead of giving the young folks a chance to satisfy their natural instincts away from the temptations of that degrading industry. Now the city social leaders are coming to the rescue, as noted above, by competing with the evil one in a perfectly safe and legitimate field; and the beauty of it all is that the program is winning out.

But the home is the foundation of our national existence. Upon it do we depend more than upon any other institution for the defense of American principles of life and government, for education and advancement and for the perpetuity of those religious ideals and beliefs which have made us the most sympathetic and charitable of nations.

Then it is reasonable to think that insofar as it can be done, the American home ought to provide a certain amount of amusements in the way of games and music. Here under parental control and co-operation the boy and girl can satisfy the craving for entertainment. They will be satisfied so far as the demands of their own natures are concerned and will leave the old homestead only when economic requirements dictate or when they go to make homes of their own. And these things they will do with the heart strings unbroken and with the old home as a model in the building of the new.



# Land O' Nod Stories.

By HOWARD T. KNAPP.

## A Journey to Antland

BILLY BE BY BO BUM sat in the shade of an apple tree at the edge of the oat field eating a big molasses cookie. Between bites he pulled the ears of Fuzzy Wuz, his collie puppy, who barked as loud as he could and pretended to bite Billy's hand. But Fuzzy Wuz wagged his tail so hard it seemed it surely must come off, so Billy knew he wasn't angry and rolled him over on his back. Fuzzy Wuz barked louder than ever but his bark said, just as plainly as could be, "I am just the happiest dog alive and am having more fun than you can shake a stick at."

Suddenly Fuzzy Wuz gave a yelp of pain and jumped up so quickly he knocked the cookie out of Billy's hand. Then he sat down and commenced scratching and pawing at his nose in the most comical manner. Billy ran over to his pet, took its head in his hands, and saw a big brown ant had bitten him on the nose. Billy knocked off the ant, and Fuzzy Wuz, still yelping as though his heart would break, put his tail between his legs and started for home as fast as he could go.

Billy started to follow, then remembered the cookie he had dropped and ran back to get it. But when he reached the apple tree, he found the cookie covered with ants. Hundreds of the tiny insects swarmed over the cake, feasting on the delicious crumbs. Billy was so mad he sat down and started to cry, but the first big tear had hardly rolled off his cheek when he heard a faint, squeaky voice calling him.

"Why are you crying Billy Be By Bo Bum?" said the voice. "Don't you know that little boys who cry when there is nothing the matter miss lots of bully fun?"

Billy was so surprised he nearly jumped out of his shoes, for although he looked all around he could not see any one. Another big tear startled to roll down his cheek when he heard the same shrill little voice calling him again. Billy rubbed his eyes and looked up in the apple tree. Then he looked behind the tree trunk, and last of all he looked all around on the ground, but he could not see hide nor hair of the owner of the voice, which kept calling, "Oh, Billy Be By Bo Bum, Oh, Billy Be By Bo Bum, aren't you going to speak to a fellow?"

Billy was beginning to get frightened and had just about made up his mind to run home when he heard a laugh right behind him. He spun around on his heel like a top, and there, astride the branch of a briar bush, sat Tinker Teedle Tee, a funny little old man no larger than your thumb. He was so fat he looked for all the world like a lively puff ball perched on two stubby legs, and in place of a hat he wore a weeny copper kettle, the handle of which was hidden by his long, white whiskers. The cutest red coat and vest covered his chubby body; his pants were green, his stockings white, and the toes of his pointed shoes turned up until they nearly touched his knees. But most wonderful of all, a pair of butterfly wings were folded neatly on his back.

It was his old friend the merry little elf, one of the good fairies who make their homes in the hearts of flowers and live on dew drops and honey and are so old and wise they know all the secrets of the woods and can tell you the history of every dweller of the Green Forest.

"Why are you crying, Billy Boy?" demanded Tinker.

"Because those horrid old ants are eating my cookie," replied Billy, and

the corners of his mouth turned down until he looked for all the world like the little boy who lived on Grumble Corner of Crosspatch Town. "I don't see what ants were made for anyway. They're nothing but lazy, good-for-nothing bugs."

"Oh, you think so do you?" retorted Tinker Teedle Tee. "Well, just let me tell you that those lazy, good-for-nothing bugs, as you call them, are the busiest, hardest working little fellows alive."

"What do they do?" demanded Billy. "Work, Billy Boy, work. From morning until night they do nothing but work, and if you did half as much in a day as those 'lazy ants,' you would be just about the most tired little boy alive when it came bedtime. And they don't grumble or complain like some little boys I know, they're too busy to even think of anything but work."

"What work does an ant have to do?" asked Billy. "I never saw them do anything but run around in the grass."

"Well, you can make up your mind that whenever you see an ant running around, he is on a mighty important errand. Just remember, they have their city to care for, they have to build new homes, gather food, care for their children and, oh, they have a thousand and one things to attend to."

"Their city, do ants live in a city?" asked Billy in surprise.

"They certainly do," replied the elf, "and a mighty snug little city it is too, with everything as neat and clean as a new pin."

And next week I'll tell you how Billy and Tinker visited the ants' underground home.

### HOW WEBSTER WON.

BY C. C. CRAIN.

THE father's choice of a career for his son is not always an easy task nor is it always made wisely. When Daniel Webster was a boy, his father decided that his son should follow in his footsteps. But the farmer's young son had no special liking for work in the field.

One day Daniel and his father were cutting grass with scythes when the boy experienced much difficulty in adjusting the tool. He could "hang" it too long or too short, but not just right. Finally his father said, "Hang it any way you wish." Daniel hung it on the fence.

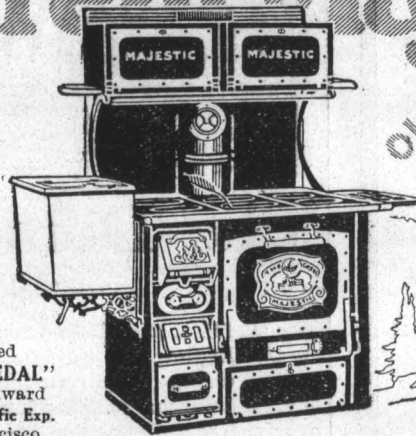
Subsequently Daniel's father saw the folly of his choice and sent him to college. "I remember," the orator once said, "the very hill we were ascending through deep snow, in a New England sleigh, when my father made known this purpose to me. I could not speak. A warm glow ran all over me, and I laid my head on my father's shoulder and wept."

When the future statesman and jurist was fourteen years old, he first enjoyed the privilege of a few months' schooling at an academy. The man whose eloquence later stirred the nation was then so shy that he could not muster courage to speak before the school. He declared:

"Many a piece did I commit and rehearse in my own room over and over again, yet when the day came, when my name was called and I saw all eyes turned toward me, I could not raise myself from my seat."

By practice and persistence Daniel Webster overcame the natural feeling of shyness. Ultimately he demonstrated his wonderful ability as an orator and proved he had chosen his career wisely.

# Great Majestic



Awarded  
"GOLD MEDAL"  
Highest Award  
Panama Pacific Exp.  
San Francisco

## "Old Faithful"—in the kitchen.

A Majestic Range in your kitchen is not merely something to cook with—it's a faithful, silent partner that lightens the work and lowers the cost of cooking.

Faithful in performance—it bakes right always; so built that heat is uniformly circulated to all parts of oven; and a heavy asbestos lining reflects the heat onto all surfaces of baking—top, sides, and bottom. Its big, copper tank, with pocket inset against lining of firebox is, like Old Faithful Geyser, continually bubbling with hot water.

Faithful in fuel economy—its scientific construction puts fuel to the fullest use; distributes the heat to all cooking surfaces and

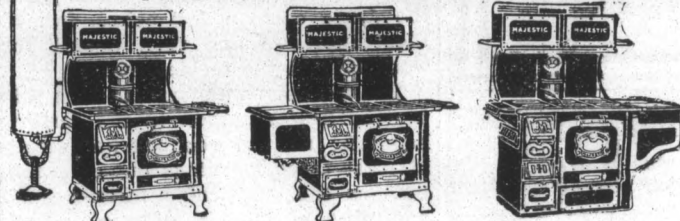
holds it inside—heat can't escape and be wasted, for cold-riveting (no bolts or clamps) makes the Majestic practically and permanently airtight.

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# Woman and Her Needs

## At Home and Elsewhere

## The Domestic Crucible—15

### Grace Gets the Woodbox Filled.

WITH a gay little whistle Grace Ludlow tripped into the kitchen to "begin action for the day," as she put it. She had lingered over a tempting fashion magazine after the men left the table, seeking a way to make over last year's coat, and her search had been rewarded by the discovery of a trig little model with the new fall lines that would make her neighbor's suit look like the vintage of 1910. So it was with much satisfaction that Grace reflected for once her outfit would be the niftiest in the neighborhood.

The fire was out, or nearly so, and the cold September drizzle made a blaze imperative if there had been no other occasion for one. Grace gave the dying coals a few pokes, fanned them into life and then turned for wood to feed the feeble flame.

The woodbox was empty. Now this was no new situation in the Ludlow home, in fact the woodbox was empty at least three mornings out of seven, but on this particular morning the enormity of John's offense struck Grace with peculiar force. To come down from dreams of flaunting one's gay plumage in the face of a discomfited rival, to the damp, cold reality of going out in a fall rain and poking about a woodyard for wet kindlings was some drop, and Grace did not take it good-naturedly.

"Well of all the nerve," she exploded wrathfully. "The idea of John Ludlow's leaving me to bring in wood on a day like this, probably to split it as well! Here's two bushels of peaches to can, bread to bake, pickles to do up and dinner to get, and not even a chip." She walked to the window and surveyed the yard. "I'd need rubber boots or a boat to get out there, and I'll just not do it. I'll call him in and let him bring it in himself, and maybe he'll remember next time."

But on the way to the bellrope she paused. No, she wouldn't do that, she'd just leave things as they were until he came up at noon, and work on her coat. Let the bread spoil, and the peaches, too. If he didn't care, why need she? Besides, if he had to wait for his dinner a couple of hours and then eat without the warm rolls he was expecting, it might help him to remember. Something had to be done to make John realize it wasn't a woman's work to get in the wood. Otherwise she might be splitting and carrying it in all her life, as her mother had done before her.

She cleared the dining-room table, rinsed the dishes under the cold water tap and piled them with her usual neat precision on the table. Then with a final look of disgust at the cheerless kitchen, she repaired to the living-room to begin work on her coat. Of course, she had no pattern, that would have to come by R. F. D., but she could rip the coat, clean and press it and write for the pattern that morning.

What should she use to rip with, a sharp knife or scissors? It would serve John right if she used his new razor that he was so careful of. Too bad he wasn't as careful as his wife. But then, men were like that. They'd all, even the best of them, take better care of their stock than they would of their wives. Why, even her own father spent hundreds of dollars for a sanitary stable for the pure-bred cattle,

and let her mother work in a kitchen with a leaky roof and only one window. It would just serve John right if she did dull his razor; he didn't care if she got wet splitting wood. But then, probably the razor would slip and cut her coat. Scissors would be best after all.

The quick little snip, snip of the scissors cutting the threads followed closely on her decision. With true housewifely instinct to keep the room neat with as little work as possible, Grace laid a paper by her side, and as she snipped the threads she pulled out the ends and laid them carefully on the paper. The snip of the scissors was interrupted in time by a sneeze. Had Grace's mind been less on her coat, she would have rushed for a few drops of camphor on a cube of sugar to forestall the cold. As it was, she gave a little shiver and went on with her ripping.

Sharp scissors and nimble fingers made short work of the job, and by ten o'clock the coat was ready to sponge and press. Not until then did Grace remember that there was no fire. "Press!" she exploded indignantly, "How's a woman going to press anything without a hot iron? I thought I'd get this ready for the pattern this morning. No hot water for sponging, no iron for pressing! I'll wash it in gasoline and hang it in the attic to air, then the pressing won't take long when I have an iron. There's no danger of an explosion with gasoline this morning."

The empty shed where the gasoline was kept was damp and cold, and Grace sneezed again as she carefully squeezed and patted the cloth through its gasoline bath. It took an hour to get all the pieces cleaned to her satisfaction. Then leaving the gasoline to settle to be used again, she climbed to the attic and carefully hung the cloth on the line always kept there. As she opened the windows to let the gasoline odor out, a disgraceful "kerchoo" forced her mind to the fact that she was really catching cold. A series of violent "a-chooings" as she descended told her that the belated camphor and sugar would do no good. Nevertheless, she took the dose, thinking complacently as she swallowed it that this ought to teach John a lesson.

There was still time to write the letter ordering the pattern. She pulled on a wool sweater and sat down at the pretty Circassian walnut desk in the livingroom. Nothing gave Grace such a feeling of real importance as sitting at this desk, her most cherished possession, and no wizard of finance in far away Wall Street affixed his name to letters that morning with any greater sense of his own dignity than possessed Grace as she signed her name to her order, sealed the letter and affixed the stamp.

She glanced through the window as she arose from the desk and caught sight of the men just entering the barn. In ten minutes more at the most they would be in the house. Not until then did Grace really think seriously of what John would say when he came up. Where should she meet him, and what would she say first? She ran to the kitchen and looked about. The bread was slowly spreading itself over the top of the table, and the floor was flooded with water from the pan beneath the refrigerator.

In her wrath of the morning she had forgotten to empty that. She couldn't meet him with such an undignified background. Where should she be when he came? A vigorous sneeze gave her an idea. She'd be in bed! It was cold and damp in the house and she had to go to bed and keep warm. Even then, she'd caught cold.

She made a dive for the bedroom, snatched off her clothes hastily, slipped into her prettiest nightie and burrowed beneath the comforts just as the kitchen door opened.

She heard John stalk through the kitchen to the close and look for her wraps. They were on their accustomed hook, so he'd know she was in the house. He hurried through the dining-room and into the living-room, then appeared in the door of her room. In a moment he was at her side, anxiously question, "Why, Grace, what is the matter? Have you hurt yourself? Are you sick? Why didn't you ring the bell? Shall I call the doctor? Why didn't you have Aunt Ann come over? I'll call her now."

Grace, yawning elaborately, stopped him as he turned to the door.

"It isn't worth while calling anyone," she said. "There wasn't any wood and I was catching cold, so I just came to bed. The house is so damp I know I'll have pneumonia. I'll get up as soon as you get a fire going."

John's pause on his way to the door was only momentary, but it gave Grace time to see his look of solicitude change to a flush. She wasn't sure whether it was irritation at her, or shame for his neglect. The slamming of chairs on his progress to the door, followed by vigorous blows of the axe gave her cause to think it might be a mixture of both. Either way, she didn't care so long as the woodbox got filled, and acquired the habit of staying filled without her aid.

She stretched luxuriously, as in imagination she saw the chips fly in the woodyard. Then as a bumping in the kitchen, followed by the clatter of stove lids told her the fire would very shortly be going, she arose and leisurely began to dress.

DEBORAH.

## THE ALL-HALLOWEEN PARTY.

BY ADDIE FARRAR.

Halloween is the night of all the year when formality is cast aside and young and old join hands in the most mirth provoking and silliest stunts they can think of, and never at any time of the year is the woman who lives in the country more to be envied, for it is she who has at hand the only proper setting for a successful Halloween party, the big barn, the roomy farm kitchen, or the attic that runs the length of the house. Then too, at hand is the very decorations need to make the party an ideal and a huge success—the big yellow pumpkins from the garden, the bunches of wheat or corn husks, the popcorn, autumn leaves, etc. Certainly, it is the time of the year when she can make the most of entertaining and invite her city, town and country friends to a big frolic.

Whether the place is the barn, the attic or kitchen the lights should be supplied by many candles and big jack o'lanterns, hollowed out pumpkins with candles inside that should be hung here and there. Festoons of corn husks, bunches of wheat or oats, with strings of popcorn, cranberries and nuts, and decorations of autumn leaves should be used for dec-



orating and mirrors of all sizes and kinds should be hung about reflecting the candles that may burn in candle sticks made from long necked gourds or tiny squashes,

Doorways may be draped in festoons of yellow and white corn with the husks turned back to show the kernels, and in all corners everywhere possible, should be grinning jack o'lanterns with big red apples strung on strings of varying lengths, hanging from the ceiling.

In one corner of the room have a tub of water in which are floating big apples. This is that the guests may bob for apples, each guest trying to catch an apple in his teeth without touching it in any other way. If he succeeds he will have good fortune for the year.

In the doorway tie a horizontal stick on a long string with an apple stuck on the end of the stick and a lighted candle on the other. Each guest tries to catch the apple in his teeth with his hands tied behind his back, and must always dodge the lighted candle. If he succeeds in getting a bite from the apple he will have wonderfully good luck.

Another way to use the apples in the tub is to give each guest a tiny bow and arrows and have the apples of green, yellow and red. The one who succeeds in firing an arrow into a red apple is assured of good health, while plenty of money is in store for those who hit the yellow, and good luck for those whose arrow penetrates the green. Nut shells, with tiny candles fastened in them, can be set sail in a dishpan of water and will tell the state of love on the part of one's sweetheart. If the ship sails on, love is true; if it goes down, there is no love; if it sails shortly and then overturns it is only a short love. Each ship, of course, must be named by the one who tries the fortune.

Hang a big pear-shaped pumpkin in the doorway with all of the letters of the alphabet burned on it with a hot poker. Keep it twirling rapidly and let the unmarried guests in turn try to stab some letter on it with a long meat skewer. The letter stabbed is supposed to be the first initial of the person they will wed.

Three candles duly named can be lighted and put to the test of telling the state of affections. To find this, the candles must be placed in a row and lighted and the person trying must be blindfolded, turned three times around, and then advance and blow. The candle blown out is supposed to be the one who loves them most. Another funny test is to have three bowls, one filled with clear water, one with dirty water and one empty. Blindfolded, a guest goes and puts his hand into a bowl. If empty, hers is a single life, if clear, an early marriage, and if dirty, bad luck.

Borrow a wedding ring from a matron present and take a hair from the head of the person trying, who must then suspend the ring, tied to the hair, over a bowl of water. If the ring swings and hits the bowl once it will be a year before marriage, if twice, two years, etc. And if it merely swings and does not ring against the bowl a single life is prognosticated.

If there is a big open fireplace it is fun to burn chestnuts for fortunes. Take two nuts, name one for yourself the other for your sweetheart, and place them on the coals. If they burn steadily side by side, a happy married life together is yours, but if they jump from each other then there will be no love nor marriage.

At midnight have the girls who are looking for a husband go down the cellar steps backward, carrying a lighted candle in one hand and eating an apple. At the foot of the stairs have a big mirror. When they reach there they are supposed to hold their candle high and look over their shoulder into the glass, where, 'tis said,

they will see the face of their future spouse.

For supper you can have roasted chicken, hot breads, big platters of doughnuts or sandwiches, with cider, coffee, nuts and apples, and, of course, cakes. And you will not forget the fortune cake, the big cake baked with a ring, a thimble and a coin in it. Each guest is served a piece of this cake and the one who gets the ring is to be wed soon; the one who draws the thimble will be single all her life, and the one who finds the coin will accumulate money. At each plate have a wishing candlestick, made from some vegetable. For this wishing candle have tiny candles that only burn a minute. The wish must be breathed while the candle is burning, if it comes true.

For the center of the table use a big Jack o' lantern set on a mound of harvest vegetables, and about the table place candles in candlesticks made of large carrots, squashes, etc. To make these, slightly shave off the top and bottom of the vegetables and hollow out at the top just enough to have the candle fit snugly.

After supper is served it is good to end up with a dance, but if you do not care for dancing have a big bowl brought into the room, filled with burning alcohol and salt, and let the guests sit in a circle around this weird light and tell stirring ghost stories, rigamarole fashion, that is, someone starts the story and stops at the most exciting joint, letting his neighbor finish. This is a good way to end the evening with fun and mystery.

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# Farm Commerce.

## Vegetable Marketing Exacting

IN the growing and disposing of vegetables there is no factor of greater importance than that of marketing. One may thoroughly understand the principles of vegetable gardening and produce superior products, yet if not able to place his vegetables on the market at remunerative prices, his financial venture must prove a failure.

To one who lives in close proximity to his market and is acquainted with his local dealers, or consumers, there is perhaps no one factor that will count for success with greater force than that of confidence. The producer or vendor of any commodity who caters to the public for patronage, should be careful to study the wants of his customers. By growing superior produce, grading it well, packing it neatly and always giving his patrons a fair deal, he will gain a reputation that will assure future and permanent patronage.

There is an advantage in being able to deal directly with one's customers, because in this way, coming in direct contact with them, it is possible to study their whims and know their wants and expectations and if you have gained their confidence and esteem, by fair treatment, they will not only be glad to welcome you and patronize you, but will recommend you and your product to their neighbors and friends.

One who has the reputation of honest dealing and whose products have gained a standard for quality, can afford to place his name on his packages, if sold in the open market, because the name spells quality to past purchasers, and if the package and contents show neatness and quality, new patrons will be added, his business will grow and he will become proud of his efforts, while his customers will be pleased.

With the great competition in nearly all products of the garden, there will always be some who will seek to gain at least a temporary advantage, by cutting prices, but a good class of customers will hardly drop a vendor of known reputation for the sake of temporary gain, even if the products seem of equal quality.

The gardener near his customers has the advantage in being able to supply them with vegetables fresh from the garden, and this is advantageous to the consumer, as where garden products are out of the ground for even a few hours, there is a loss of crispness and quality that renders them less valuable than those direct from mother earth.

Where commercial gardening is carried on extensively the handling of produce must be entrusted more or less to middlemen. Many of the products of the garden are quickly perishable and the machinery for their quick distribution must be efficient or there will ensue considerable loss to the producer. The vast accumulation of these products at the centers of distribution require that the agents or commission men be fully qualified to meet the emergency and the producers must take the chances of selling through these agencies, where it is impossible for him to supervise his sales.

Until recently the risk of placing produce in the hands of commission men has been great, but with recent legislation regulating the acts of sales agents, there is comparatively little risk, but it is always imperative that the producer and shipper make use of the best known means of placing his produce on the market in the best possible condition.

The slow movement of freight, and sometimes even express, unless fruits or vegetables are very carefully handled, means a loss far beyond the expectation of the shipper. The lack of refrigeration facilities at distributing centers is often the cause of loss even where products have been carefully handled, graded, packed and refrigerated at the shipping station. It is all the liability of loss from the various causes and not always lay the blame at the door of the commission man. Where producers organize, co-operate and study the need of the various markets, having specially commissioned agents to dispose of their produce, doubtless there will be advantages gained over the common rule of selling at random through the average commission house.

New York.

B. F. MACK.

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We market three times a week, on Tuesday's, Thursday's and Saturday's, except in the rush of the season when we find it necessary to make our rounds practically every day in the week. We have to a great extent overcome the peddling feature, as we take orders to be filled on a certain date, and also get orders by telephone. It would be useless for me to make my own prices, as they are made by the grocers and middlemen, they being governed, of course, by supply and demand. Perhaps in some cases we could make our own prices but we have seldom done so.

When working up new trade, we follow the method of the house to house

canvass. Only the very best goods are offered in this canvass, and we have found that the personal equation counts a great deal in the work. For holding trade nothing succeeds better than honesty, fair dealing and promptness. If it is required that an order be filled at a certain hour, we do so. Some may think it would not pay to go to extremes, but we have nevertheless on more than one occasion, when a customer wanted only 25 cents worth of vegetables at five o'clock in the afternoon, hitched up the horse and delivered the goods to accommodate the customer, the distance being three miles. It frequently occurs that a customer gets cranky and will not be satisfied with even the best of service, but we make it a point to cut such off our list.

We aim to supply our customers the year round, as if when we drop them in the fall, we would be obliged to drum up new trade in the spring. During the winter we have the various stored vegetables, potatoes, cabbage, onions, beets, carrots, and such dairy products as butter, and buttermilk, eggs and poultry, besides fresh vegetables from the forcing house,

such as lettuce, radishes, tomatoes and rhubarb.

We give below a memorandum of a load of truck marketed on our one-horse spring wagon July 20 of last year. While this load was nothing out of the ordinary, and could no doubt be duplicated by many others who are in the business, it may be considered as an average load marketed during the summer months. Most of the load had been ordered and was delivered in about three hours, or from six o'clock to nine o'clock on a Saturday morning.

Cabbage, 21 heads at 10c.....	\$ 2.10
Beets, 15 bunches at 5c.....	.75
Radishes, 20 bunches at 5c.....	1.00
Onions, 15 bunches at 5c.....	.75
Apples, three bushels at 30c per peck .....	3.60
Cucumbers (slicers) 20 at 5c...	1.00
Eggs, 30 dozen at 25c.....	7.50
Butter, 27 lbs. at 30c.....	8.10
Buttermilk, 20 qts. at 3c.....	.60

Total .....\$25.40  
Indiana. D. L.

## BOOK-KEEPING FOR CO-OPERATIVE ORGANIZATIONS.

THE very life of a co-operative organization depends upon the confidence its members possess in it, and such confidence is impossible unless the records are unmistakably accurate. The double entry system is the only one which affords a complete check and should therefore be adopted in all cases.

Since the co-operative organization acts as the agent of the grower in marketing his product, the books of the organization must not only contain the usual records of any business enterprise but must also show a clear record of each grower's shipments. The system must be sufficiently elastic to take care of the maximum volume of business at the busy seasons and at the same time be economical.

The six essential requirements for such a system are stated in Bulletin No. 178 of the Department of Agriculture as follows:

- (a) A complete set of financial records showing the business transactions and the results thereof.
- (b) A record of each member's transactions with the organization.
- (c) Capability of taking care of a maximum amount of business during the shipping season.
- (d) Capability of returning to the members the proceeds from their products within a reasonable time.
- (e) Clear pooling records when kept, so that any discrimination can be shown quickly.
- (f) Auxiliary records which will give statistics and valuable information for the conduct of the business. These records must be accurate.

The necessity for providing a regular system for safeguarding the cash is also emphasized in this bulletin, and nine precautions are given which it is said should be adhered to strictly.

- (1) All entries of cash should be explicit, and items supporting such entries should be filed so that they are accessible for reference and verification.
- (2) No entries should be recorded in the cash book which do not relate to cash.
- (3) The full receipts of each day should be deposited in the bank.
- (4) All canceled checks should be filed in numerical order.
- (5) Duplicate checks should always be covered by indemnity bonds.
- (6) Reconciliation should be made each month between cash or check register and bank pass-book balances.
- (7) Permanent record of these reconciliations should be made.
- (8) Checks, sales slips, receipts, etc., should be numbered with a numbering machine. Any which are spoiled should be marked void and left in the book.
- (9) A regular system should be used for the acknowledgement of all



cash sales, or miscellaneous cash items received.

The auditing of accounts also should receive more attention than is frequently the case. At least once a year an expert accountant should go over the books of the organization. To minimize the cost of this, small associations or circles can be formed by the organizations within a certain radius and a competent auditor can be engaged to do the auditing for all.

## Crop and Market Notes.

### Michigan.

**Cheboygan Co., Sept. 27.**—Wheat yielded about 15 bushels per acre, oats 60 to 80 bushels. About one-half the potato crop killed before being ready to dig. Corn seeding is half done. Prospect for clover seed is good. The usual amount of feeding stock on hand. Late apples one-half an average crop. Wheat \$1; butter 28c; cream 28@30c; eggs 26c.

**Emmet Co., Sept. 27.**—Local frosts in August, also frosts last week, did some damage to beans and corn. Grains yielding fairly well. Conditions are favorable for winter grain seeding and an average acreage is being sown. Potatoes are being marketed in a small way at 50c per bushel.

**Genesee Co., Oct. 1.**—Corn now being cut and put into silos, and the crop will turn out better than expected earlier in the season. Wheat seeding in progress with a larger acreage than usual. Sugar beet harvest just begun. Late potatoes are poor. The season has been unfavorable for the bean crop and many fields will not be harvested. Hay is being marketed freely at good prices, though the quality is not as good as usual.

### New Jersey.

**Monmouth Co., Sept. 27.**—Yield of wheat and oats good. Potatoes good where not affected with scab or rot. Corn fair; seeding preparations well under way. Very little feeding stock kept. Apples and pears a good crop. Wheat 90c@1; wool 26@35c; potatoes 40@50c.

### New York.

**Genesee Co., Sept. 27.**—The yield of wheat is 25 to 50 bushels; oats 50 to 90 bushels. Potatoes badly blighted except where frequently and thoroughly sprayed. Corn a good crop; beans below average and affected with rust. About the usual acreage of fall grain sown. Very little feeding stock on hand. Prospects for late apples and pears not good. Wheat 95c; oats 35c; potatoes 50@60c; beans \$2.55@3; loose hay \$12@14; butter-fat 29c; hogs \$7; lambs \$7.50@8; eggs 24c; fowls 12c.

### Pennsylvania.

**Lancaster Co., Sept. 27.**—There is some threshing yet to be done; yield of wheat and oats very good. Most potatoes good, though some did not reach maturity on account of blight. Corn will be a fairly good crop and some already cut. Some plowing has been done, but very little seeding. Prospects for clover seed and alfalfa fairly good.

**Crawford Co., Sept. 20.**—Yield of wheat 30 bushels; oats 50 bushels. Corn and potatoes good. Small crops of pears and apples. Buckwheat crop small. Wheat 90c; butter 26c; eggs 22c; chickens 10@12c.

**Perry Co., Sept. 22.**—Some seeding but lots of plowing to be done. Wheat yielded 14 to 30 bushels; oats 30 to 50 bushels. Potatoes are rotting badly; corn is very green yet. Late apples promise well, while peaches are abundant and many rotting on the trees because of no market. Many acres of clover seed being cut. Live stock looks fine and more than the usual number of cattle. Wheat \$1; rye 75c; oats 45c; butter 22c; eggs 21c.

### Ohio.

**Crawford Co., Sept. 27.**—Very little seeding done yet on account of wet weather, and the acreage will not be as large as last year. Wheat yielded from 25 to 35 bushels. Corn is maturing nicely and will be a good crop. Much complaint of potatoes rotting, also some damage by blight. Prospects for cloverseed not good and the clover will be cut for hay. An unusually large apple crop. About the usual amount of feeding stock. Wheat \$1; oats 30c; corn 80c; timothy seed \$3; hogs \$8; butter-fat 26c; butter 20c; eggs 23c.

**Paulding Co., Sept. 27.**—Wheat averaged about 30 bushels; oats 50 bushels. Potatoes a good yield but rotting badly. Some wheat sown but acreage will be small. Corn is good, though slow in ripening. Clover seed prospects poor and not many fields cut for seed. Alfalfa fair. About the average amount of feeding stock. Late apple crop small, and pears are scarce. Wheat 95c; oats 31c; corn \$1 per cwt;

apples 40c per bushel; butter-fat 27c; dairy butter 30c; eggs 26c.

**Sandusky Co., Sept. 28.**—The recent weather has been unfavorable for the corn crop, which will need about ten days more to ripen. Not much wheat sowed, but a big acreage will go in if weather permits. Wheat yielding 30 to 40 bushels; oats 50 to 60 bushels. Hardly enough late potatoes for home use, as the crop was damaged by the blight and rot. Pasture is abundant and all live stock looks well. Apples a big crop. Wheat \$1; corn \$1.10 per cwt; lambs \$8.50.

**Hancock Co., Sept. 20.**—Corn eared up well but ripening slowly. Wheat yielded 15 to 30 bushels; oats around 40 bushels. Early potatoes good, but late ones very poor yield and rotting badly, also injured by blight. Very little clover seed. The usual amount of live stock on hand. Apples and pears a fair crop. Wheat \$1; wool 30c; butter-fat 23c; lambs \$7.50 per hundred.

**Wayne Co., Sept. 20.**—The usual acreage being prepared for wheat, and some ready to sow. Corn improving, but needs several weeks to mature. Wheat yielded 15 to 30 bushels; oats 40 to 70 bushels. Potatoes blighted badly, also some rotting. Good prospect for clover seed. Late apples and pears fairly good. Wheat \$1.03; butter 25c; eggs 22c.

### Indiana.

**Daviess Co., Sept. 27.**—Hay crop is better than average. Clover seed is a good crop; alfalfa good. Corn cutting and silo filling now on, and corn is ripening splendidly. Plenty of potatoes and all sorts of garden truck. Fall apples are plentiful, but the quality is poor. Winter apples large crop and quality good. Hogs \$6.50@7; cattle \$5.50@8; sheep \$4@6; wheat 90c; corn 80c; potatoes 40c; butter-fat 26c; chickens 12c.

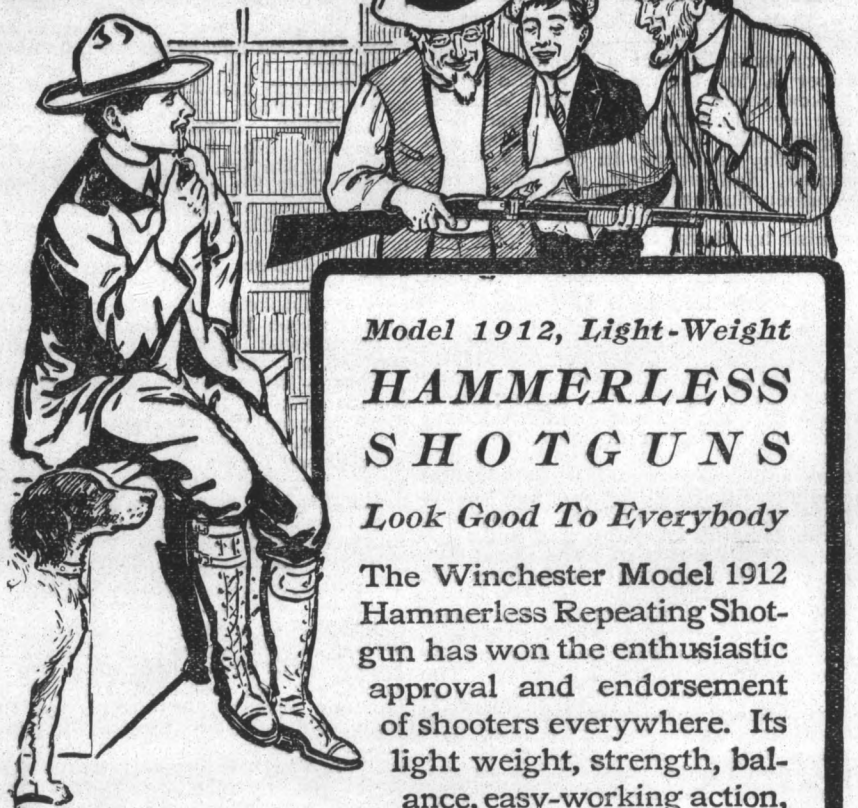
### Nebraska.

**Cass Co., Sept. 20.**—Less than the average acreage of wheat will be sown. Yield of wheat and oats good, but quality poor. No clover or alfalfa seed. Corn made a large growth, but is still quite green. Potatoes not as good as expected. Not much feeding stock on hand. Fall apples are abundant, late apples not a large crop. Wheat 75c; oats 36c; corn 65c; hogs \$7; butter 25c; eggs 15c; fall apples 20c per bushel at orchard.

### Kansas.

**Nehama Co., Sept. 20.**—Wheat yielded six to 12 bushels; oats eight to 10 bushels. A great deal of plowing for wheat to be done, very little seeding as yet. Potatoes big crop; beans are fair, but none for sale. Corn good but backward; will need three weeks to mature. A good amount of feeding stock on hand. Very little clover or alfalfa seed threshed on account of wet weather. Apples a good crop. Wheat 75c; corn 60c; oats 32c; potatoes 80c; apples 60c; butter 30c; butter-fat 31c; eggs 19c; chickens 10@12c per pound.

# WINCHESTER



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Look Good To Everybody

The Winchester Model 1912 Hammerless Repeating Shotgun has won the enthusiastic approval and endorsement of shooters everywhere. Its light weight, strength, balance, easy-working action,

and splendid shooting qualities appeal to men who know a good gun. Its Nickel steel construction means not only a lighter and stronger gun, but a better balanced one, because of the better distribution of weight. This gun loads and unloads easily, has a cross-bolt trigger lock, and a simple take-down system. It is made in 12, 16 and 20 gauges. If in the market for a shotgun, don't fail to examine this,

**"THE MOST PERFECT REPEATER"**

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500 Whiskey barrels, half barrels, and kegs, 200 pickle and kraut barrels, half barrels and kegs; and 2,000 grain bags at 10c each; 3,000 potato and onion bags; 2,000 flour bags.

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Dodge Bros.

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G. M. C.  
Haynes  
Harley-Davidson  
Hudson  
Hupp

Jackson  
Knox  
Lambert  
Lexington-Howard  
McFarlan  
Moline-Knight  
Monroe  
Moon

National  
Oakland  
Olds  
Paige  
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**Champion Ignition Company**

**Flint, Michigan**

# AC Spark Plugs

## Guaranteed Gas Tight



# Markets.

## WEATHER FORECAST.

For week beginning Wednesday, October 6, for the region of the Great Lakes, there will be showers Wednesday or Thursday in the upper lake region with rising temperature, and Thursday or Friday in the lower lake region, followed by generally fair weather during the remainder of the week. The showers will be accompanied by rising temperature and will be followed by falling temperatures.

## GRAINS AND SEEDS.

October 5, 1915.

**Wheat.**—Although prices are being maintained on a lower basis than a week ago, the situation, at the opening of this week was not discouraging from the standpoint of the producer. While cash sales have remained steady, December wheat advanced five cents from Saturday to Tuesday. There is a good demand for flour and mills are taking cash wheat in large quantities, forty million bushels having been disposed of to the manufacturers so far this season, it is stated. Deliveries from farms are moderate for this season of the year and less than at the corresponding period last year. The foreign situation is strong; Liverpool advanced on Monday and the demand there for cargoes was active, that port not getting its usual share of the total. The Pacific coast is not exporting because millers are absorbing all the cash grain. Nearly all the mills are sold ahead for the next three months. The American visible supply increased 4,655,000 bushels. One year ago No. 2 red wheat was quoted locally at \$1.06 per bushel. Quotations are as follows:

	No. 2 Red.	No. 1 White.	Dec.
Wednesday .....	1.07	1.04	1.06
Thursday .....	1.07	1.04	1.06
Friday .....	1.07	1.04	1.06
Saturday .....	1.07	1.04	1.07
Monday .....	1.07	1.04	1.09
Tuesday .....	1.09½	1.06½	1.11

Chicago.—December wheat 99.6 per bushel; May \$1.00½.

**Corn.**—Excellent weather for maturing the late corn crop has acted as a bearish factor and pushed prices to a lower level. The decline for the week amounted to 7c. A few sections may be caught by the frost, but the area will not be large. Receipts are large and buyers scarce at the present time. The visible supply shows an increase of 1,468,000 bushels for the week. No. 3 corn was quoted at 74c a year ago. Quotations are as follows:

	No. 3 Mixed.	No. 3 Yellow.
Wednesday .....	71	72
Thursday .....	70	71
Friday .....	68	69
Saturday .....	67	68
Monday .....	64	65
Tuesday .....	64	65

Chicago.—October oats 59.2c; December 54.3c; May 56c.

**Oats.**—This grain remains steady with last week, offerings have been comparatively small from rural sections, while the eastern demand continues fair to good. The market is active. One year ago standard oats were quoted at 47½c per bushel. Quotations are as follows:

	Standard.	No. 3 White.
Wednesday .....	39½	37½
Thursday .....	39½	37½
Friday .....	39½	37½
Saturday .....	39½	37½
Monday .....	39½	37½
Tuesday .....	39½	37½

Chicago.—December oats 36.6c per bu; May 38.1c.

**Rye.**—This cereal is steady with last week, firm and in active demand. Cash No. 2 is 95c per bushel.

**Barley.**—At Milwaukee the malting grades are 54¢@61c per bushel; at Chicago 51¢@60c.

**Peas.**—Easy at \$2.20@2.30 per bu. for new, with sacks included.

**Beans.**—Prices continue to advance. On Monday \$3.25 was bid for cash beans and \$3 per bushel for October.

At Chicago the trade is quiet and steady. Pea beans, hand-picked, choice, are firm at \$3@3.15; common \$2.62@2.80; red kidneys \$3.50@3.60.

**Clover Seed.**—Prime spot \$12; October \$13; alsike \$10.25.

**Timothy Seed.**—Steady. Prime spot \$3.70 per bushel.

## DAIRY AND POULTRY PRODUCTS.

**Butter.**—Export demand and a light supply brought an advance of 1c over last week's prices. Extra creamery 26c; firsts 25c; dairy 21c; packing stock 18c.

**Elgin.**—Market firm with prices 1c higher; cold weather, the advancing season and some speculative demand are reasons for the advance. Quotation for the week is 27c per pound.

**Chicago.**—Market is firm and light receipts brought higher prices. Extra creamery 27c; extra firsts 25¢@26c; firsts 24¢@25c; seconds 21½¢@22½c; packing stock 19¢@19½c per pound.

**Poultry.**—A good demand for the best broilers and hens caused an advance in prices. Ducks and geese are also higher. Live.—Broilers, No. 1, 15½¢@16c; No. 2, 14¢@14½c; heavy hens 15¢@15½c; others 11¢@14½c; ducks 15¢@15½c; geese 12¢@12½c; turkeys 15c; spring turkeys 18c.

**Chicago.**—Heavy arrivals of springers brought lower prices. Hens are slightly higher; market easy. Fowls, good weights, 13½¢@14c; others 11c; spring chickens 13¢@13½c; ducks 14½c; geese 10c; guinea hens \$2.75@3 per dozen; turkeys, good weights, 14c; spring turkeys 20c.

**Eggs.**—The market is firm at last week's prices. Demand good. Canned firsts 25c; current receipts 23c.

**Chicago.**—A firm feeling prevails with prices higher. Miscellaneous lots, cases included 18½¢@24c; ordinary firsts 22¢@23c; firsts 23½¢@24c.

**Veal.**—Quoted steady at 14½¢@15c for fancy, and 13¢@13½c for common.

## FRUITS AND VEGETABLES.

**Apples.**—Are firm and in good demand; prices higher for good stuff. Fancy \$2.50@2.75 per bbl., and 75¢@80c per bu; common \$1@1.50 per bbl. and 40¢@50c per bushel. At Chicago cold weather brought improvement in the market. Fancy Jonathans sell for \$3@3.50 per bbl.; Grimes Golden \$2@2.50; Greenings \$2.50@2.75.

**Potatoes.**—Market is firm and prices are higher for good quality stock. Michigan tubers sell for 50¢@60c per bu. At Chicago Michigan whites are selling at 38¢@40c per bushel in car lots. At Greenville potatoes are selling at 40c. Quite a few are showing rot; receipts light.

## GRAND RAPIDS.

Potatoes have advanced 10c in the past two days at a number of outside shipping points and were bringing 45c early this week. Blight is reported to have cut the crop in two in Montcalm county and tubers on low ground are rotting. The market was firm at 50c in Grand Rapids on Monday. Sales of some fancy peaches are reported at \$1.50, but the general range is from 50¢@1 and the market is nearly over. The apple movement is hardly under way as yet. Fresh eggs are half a cent higher, bringing 25c, and dairy butter is worth 21¢@23c. Wheat is lower, No. 2 red selling at 98c; corn 75c; oats 35c. In live poultry fowls are quoted at 11¢@12c. Hay is higher, bringing \$13@16c.

## DETROIT EASTERN MARKET.

Prices were being well maintained at the eastern market Tuesday morning. Potatoes are scarce and selling up to 90c per bushel. Tomatoes range from \$1.25@2.25 per bu; cabbage 25¢@40c; onions 75¢@1; peaches 75¢@1.50; apples 80¢@1.40; melons 75¢@1.50 per bu; grapes \$1.25 per bu; peppers 50¢@60c; corn 75¢@1 per bag; celery 25c per large bunch; eggs 35c per dozen; butter 35c; loose hay \$18@22 with some sellers asking \$23 for good timothy.

## LIVE STOCK MARKETS.

### Buffalo.

October 4, 1915.  
(Special Report of Dunning & Stevens, New York Central Stock Yards, Buffalo, N. Y.)

### Cattle.

Receipts 6875. Market 25¢@40c lower; prime native steers \$8.50@8.75; fair to good \$8@8.50; plain \$7.25@7.75; best Canadian steers \$8.25@8.50; fair to good \$7.75@8.15; medium and plain \$7@7.50; choice to prime handy steers \$7.75@8; fair to good grassers \$6.75@7; prime fat heifers \$7@7.50; best handy butchers' heifers \$7@7.25; common to good \$5.75@6.60; best fat cows \$6@6.50; best butcher cows \$5.50@5.75; medium to good \$4.75@5.25; cutters \$4@4.50; canners \$2.50@3.65; best bulls \$6.75@7.10; good butchers bulls \$6.25@6.50; sausage bulls \$5.50@6.25; feeding steers \$6@7.25; stockers \$5.50@6; milkers and springers \$6@100.

### Hogs.

Receipts 15,000; market 15¢@20c higher; heavy \$8.65@8.75; mixed and yorkers \$8.50@8.60; pigs \$7.25@7.75.

### Sheep and Lambs.

Receipts 9,000; market active; top lambs \$9@9.15; yearlings \$7@7.50; wethers \$6.25@6.50; ewes \$5.25@6.

### Calves.

Receipts 900; steady; top \$12.50;

fair to good \$10.50@11.50; grassers \$4@5.60.

## Chicago.

October 4, 1915.

Cattle. Hogs. Sheep.  
Receipts today..16,000 18,000 20,000  
Same day 1914..18,322 25,548 50,104  
Last week.....46,235 99,725 82,650  
Same wk 1914..50,573 88,692 195,114

Cattle receipts today were meager, reflecting the abnormal market conditions resulting from the spread of the cattle plague in Illinois, the arrivals including 4,000 from western ranges. Trade was slow at steady to weak prices. Receipts at Missouri river markets were unusually large, Kansas City getting 33,000 head. Hogs were scarce and a dime higher, with sales at \$6.75@8.35. Sheep and lambs were at least 10c lower.

Cattle started off last week with a small Monday supply and firmer prices for desirable offerings, but later in the week the market suffered from extreme dullness, in common with other kinds of live stock, the cause of this being additional quarantines made by eastern states against Illinois live stock. The quarantine instituted by the state of New York was followed later by the quarantine announced by the state of Pennsylvania, and despite the moderate receipts of cattle, prices for most kinds broke anywhere from 25¢@75c from the Monday quotations, heavyweights catching it much more than the fat lightweights and fat little yearlings. Taking the week as a whole, the bulk of the steers crossed the scales at a range of \$7.75@10, with the light grassers going at \$4.35@6.50, while common to medium warmed-up lots sold at \$6.60@7.65, medium to good handy steers at \$7.70@8.50, good to choice corn-fed at \$8.60@9.45 and choice to fancy steers of pretty good to strong weights at \$9.50@10.25. The choicer class of yearlings found buyers at \$9.50@10.50, with sales all the way down to \$7.15@8.50 for common to fair grades of yearlings. A good business was transacted in butchering cows and heifers at \$4.70@9, but sales above \$8.50 were restricted to a few prime yearling heifers, while the best cows brought \$7@7.50. Cutters went at \$4.15@4.65, canners at \$3@4.10 and bulls at \$4.25@7.50. The calf trade was fairly active on the basis of \$4.50@11.50 for coarse heavy to prime light vealers. Western range cattle were apt to sell to better advantage than their native grass-fed competitors, with steers taken at \$7@8.75 and cows and heifers at \$4@7.50.

Hogs have been marketed so moderately of late that sellers were able to maintain prices much of the time, in spite of the moderate eastern shipping demand, but after the early part of last week bad breaks took place, with much larger receipts and a sudden shutting off of most of the shipping wants, the fresh eastern quarantines against Illinois being the principal bear factor. With hardly any hogs shipped from here on late days, local packers took charge of the market, and prices went down rapidly for all kinds. Lighter weight hogs are becoming more numerous. The usual yearly declines for the fall and winter months will probably take place in prices from now on. At the week's close hogs sold at \$6.55@8.25, with pigs at \$5.50@7.60. Prime hogs averaging 230 to 248 lbs. sold the highest, with the best light hogs taken at \$8@8.10 and heavy packers at \$6.55@7.30. A week earlier hogs brought \$6.65@8.40.

Lambs and sheep underwent sharp advances in prices during the early days last week, with unusually small supplies, the best range lambs selling up to \$9.25, notwithstanding a light eastern shipping demand. Later in the week the receipts were much larger, and with hardly any outside demand, sharp declines in prices took place all along the line. They rallied near the close, with lambs selling at \$7@9.25, the best natives fetching \$9. Yearlings closed at \$6@7.50, wethers at \$5.60@6.50, ewes at \$3@6 and bucks at \$4.25@5.

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Having sold my farm, 1 mile west of St. Johns, Mich., will sell tools, household goods, stock, 14 head choice registered Shorthorns, cows, bulls, heifers, 60 choice registered Poland Chinas, sows, boars, gilts, and pigs, 400 pure-bred S. C. White Leghorns, 12 registered Shropshire Ewes, 3 registered Ewe Lambs, 5 registered Bucks.

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## Veterinary.

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

**Knuckling.**—I have a three-year-old colt that cocks over in both hind ankles. A. E. H., Paw Paw, Mich.—Clip off hair and apply one part powdered cantharides and four parts lard every two weeks and, of course, colt should have rest.

**Exostosis.**—We have a cow that had a lump on her lower jaw for two years. When we first noticed it, it was about the size of a hickory nut and at the end of the first year it was about the size of a man's fist and has not increased in size any since. This lump is as hard as bone and appears to be firmly attached to jaw bone. The cow is in good condition and I would like to know if this is a case of lump jaw. And will it have any bad effect on her milk? L. B. W., Wayne Co., Mich.—Her milk is fit for use and my advice is for you to leave her alone.

**Chronic Laminitis.**—Some time ago my two sorrel mares were foundered and were treated by our local Vet. and both improved, but they are yet some stiff and sore. Lately we have blistered coronet with rather poor results. We are now using white rock packing to bottom and wall of hoof; besides this, we soaked the foot and greased hoof with wool fat. I forgot to say that one is seven and the other nine years old. D. McK., Traverse City, Mich.—I would suggest that you shoe them with a wide-webbed rolling motion shoe in front and continue the treatment you are using, because it is as good as any, and if they were my horses I would let them run out day and night.

**Rheumatism.**—I have a yearling colt which went lame in left fore leg two months ago. When standing in the stable does not favor leg, but limps badly when trotting. Have examined foot several times, cleaning out bottom with knife and tapping wall with hammer, but it causes no flinching. H. L. F., Mt. Pleasant, Mich.—Give colt ½ dr. of sodium salicylate at a dose twice a day and if you can locate soreness apply equal parts tincture iodine and camphorated oil every day or two.

**Capped Hock.**—On account of kicking against the stall the cap of both hocks swelled and I have been applying iodine and glycerine with rather poor results. The soft bunches are still there and I would like to know what will take them off. H. W. A., Fennville, Mich.—Apply equal parts of tincture of iodine and spirits of camphor every two or three days. Remember it is very difficult to reduce chronic capped hock no matter what you apply.

**Scabs on Body—Smut on Straw.**—I have a cow whose body is covered with scabs, especially on rump and shoulders. At first I thought it was caused by fly bites or sting of a bee. The cow chews cud and appears to be well. Our oats in this part of Otsego county are badly affected with smut and I have been wondering if it will injure cattle to eat this kind of fodder. A. R. H., Elmira, Mich.—Give your cow a teaspoonful of salt and a teaspoonful of flowers of sulphur at a dose in feed once a day. Apply one part oxide of zinc and five parts wool fat to sores three times a week. If you will shake the straw well before feeding it, it is not likely to do your cattle any particular harm to eat some of this fodder with smut on.

**Dehorning Cattle.**—What time of the year would you advise me to have cattle dehorned and do you recommend the use of dehorning clippers or to use a saw? O. R. T., Otter Lake, Mich.—November or any of the cooler months is the best time to dehorn cattle. It should not be done when the weather is extremely hot or when flies are plentiful. I much prefer to use dehorning clippers.

**Suppurating Ears—Distemper.**—We have a cat that is troubled with sore ears, causing her great pain and uneasiness. We also have a dog that is troubled much the same way and this ailment, whatever it is, must be contagious as the cat's kittens are all affected with the same disease. I might add that this ailment has existed for the past three years. Mrs. C. A. R., Mt. Morris, Mich.—I am inclined to believe that your cats suffer from feline distemper and your dog canine distemper and some of them perhaps partially recover. However, if I were you I would destroy everyone of them as they are doubtless in a condition which will not be benefited much by medication; furthermore, it might perhaps be communicated to man. A great many cats die of a diphtheritic sore throat. All things considered, you had better get rid of them.

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	Case Round Tread	Case Non-Skid	Grey Tube	Red Tube
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32x3½	13.75	15.40	2.70	3.05
34x4	19.90	22.30	3.90	4.40
34x4½	27.30	30.55	4.80	5.40
36x4½	28.70	32.15	5.00	5.65
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Don't let stomach and intestinal worms kill off your lambs and pigs this year. Get the best of these deadly pests before they get the best of you. Now is the time to deal them a death blow. Don't wait until they multiply by the hundreds—until your lambs and pigs are being eaten up alive. Accept my liberal offer; send the coupon today. Let me rid your stock of worms before you risk a penny. Read this letter:

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I have done it for thousands of farmers and stockmen—I am doing it every day—I'll do it for you. All I ask is the privilege of sending you enough SAL-VET to last all your stock 60 days. If it doesn't do what I claim, I'll gladly cancel the charge. Don't stand by and let worms kill off your pigs and lambs. Don't let your hogs and sheep contract diseases and die. Don't let your horses and cattle continue gaunt and thin-looking as if fed on straw. Get rid of the blood-sucking worms that are stealing your feed and eating up your profits, and even sapping your animals' lives away. I'll rid your stock of these dangerous parasites—I'll do it quick if you'll just fill out the coupon below and mail it to me today.

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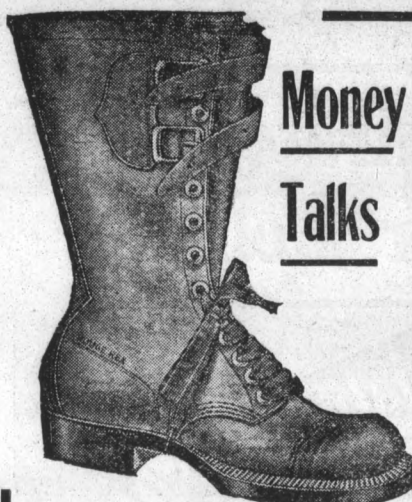
I have.....hogs.....sheep.....horses.....cattle

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And it talks back in an aggravating tone when spent for something inferior in quality, and it makes you feel cheap and sore to think you spent it so unwisely.

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# Practical Science.

## PRESERVATION OF FOOD BY MEANS OF COLD.

BY FLOYD W. ROBINSON.

Two great factors for controlling the preservation of food products are cleanliness and cold. Cleanliness affects the preservation of the product from the standpoint of high temperature as well as low temperature, and also affects the keeping qualities of food products under any other method of preservation.

### Preservation by Refrigeration Popular.

The most universally adopted plan for the preservation of fresh food products has been by the application of low temperatures. There are a variety of reasons why this condition prevails but the main one perhaps is because of the fact that cold more nearly preserves the original condition of the product than any other process of preservation. By using high temperatures the flavor of a food product is altered and its physical characteristics are in some instances quite materially changed. By low temperatures, however, the physical characteristics of the products to be preserved are retained largely in their original fresh condition. The application of low temperatures, however, is not as sure a method of preserving as the application of high temperatures for while high temperatures destroy completely bacterial life, low temperatures simply inhibit or retard their activities. The application of low temperatures, however, does permit of certain definite changes in food products, which changes if not too progressive, may markedly improve the nutritive properties of the food. It is well to remember, however, that these changes are progressively toward the decomposition of food products and if allowed to proceed far enough will ultimately accomplish that end.

### Cause of Decomposition.

Food products decompose because of enzymic changes and bacteriological changes, and changes caused by other micro-organisms such as yeasts, molds, etc. Low temperatures act antagonistically to the normal development of these micro-organisms and consequently delay these decomposition changes. It is well to remember in this respect that while low temperatures retard the activity of micro-organisms, at the same time the micro-organisms themselves are more or less preserved so that in the case of bacteria which would normally perhaps reach the end of the life activity and die, cold storage, or the application of low temperature, prolongs the life period of the organism. The difference in the product caused by high temperature preservation and low temperature preservation is the difference usually recognized between canned or potted meats and fresh meats, for nearly all fresh meats from mammals pass through a certain period of cold storage preservation. Changes have taken place since slaughter in spite of the effect of refrigeration for it is impossible to inhibit entirely bacterial or micro-organism activity, due to such refrigeration as will not actually render unfit for food the article preserved. The changes that occur in meat products, for instance, are probably in the main enzymic in character for we do know that the flavors of meats preserved in cold storage are very much increased.

The degree of cold storage to be attained is a very variable factor, depending primarily upon the individual taste. Some persons like meat which has been in storage but a very short time indeed, and in which product the amount of change is very slight, while others prefer a product in which the

micro-organic changes have proceeded to a very marked degree, such that to some the product would be marked as in the incipient stages of decomposition.

### Foods Quickly Deteriorate Following Storage.

The most marked effect on food products due to low temperature preservation is in the period called the chilling period, in which the product is gotten ready for refrigeration, and in the period immediately upon being removed from storage when the food product assumes the normal temperature of the room. One is pretty safe to say that food products change much more rapidly after being in cold storage and then taking on room temperature again than they do before going into storage at all. This is caused probably by the fact that a certain amount of change has been going on during storage, but more likely to the fact that refrigeration must rupture mechanically the animal cells, permitting therefore the invasion of the bacteria present.

### Drawn vs. Undrawn Fish and Poultry.

In the case of mammals, the contents of the alimentary canal are in every instance removed before the carcass is taken to the refrigerating plant. In the case of fish and poultry, however, this is not always done. In fact, the general practice is to refrigerate fish and poultry in the undrawn condition. It is said that the product can be stored this way and preserved in a very much better manner. However, we are confident that the storing of fish and poultry in the undrawn condition is a factor which more than any other accounts for the so rapid deterioration of the product after being removed from storage.

### Why there is a Prejudice Against Cold Storage.

There has been quite a wide-spread prejudice against cold storage methods and this has been brought about more through the poor practices of the storage houses, we think, than through any other cause. The evil effects of storage have been shown in the case of the storage of eggs perhaps more than with the storage of any other product and storage eggs have occupied a distinctly inferior place in the markets. Much of this criticism of the storage houses is unjust because we are convinced that under proper restrictions and regulations refrigeration is perhaps the most effective means we have for the preservation of articles of food which we like to consume in a more or less fresh condition. The main difficulty with the preservation of eggs by cold, lies in the original condition of the eggs when they go into storage. The condition of eggs which were fresh at the time of storage is even much better on the average after being taken from storage than are the ordinary eggs taken off the market. Without doubt a certain amount of deterioration takes place. There is a loss of flavor which is unavoidable but aside from this, if the storage is proper and the eggs are in a perfectly fresh condition when they enter storage, they should be in a perfectly wholesome and edible condition when removed from storage, even though several months later.

### Refrigeration Promotes Economy.

It is certainly a very commendable undertaking to be able to take perishable articles of food at the time of the year when they are plentiful and by proper refrigeration hold them for a period of the year when there is a scarcity. This should tend not only to secure a much more uniform food material for the entire year but it should tend also to prevent the charg-

ing of exorbitant prices for food materials which are obtained at times of scarcity. The cold storage preservation of food products is decidedly in the interests of the consumers of foods and, at the same time, to the producer who systematizes his business it will be found to be advantageous as well. Meats, fish, poultry, milk, fruit, eggs, vegetables of all kinds may be retained in a comparatively fresh condition if stored under low temperatures under favorable conditions. These products so preserved should be placed on the market under their own distinctive names without any effort to deceive the consumer and if it becomes necessary municipal inspection may control the original wholesomeness of foods which are admitted to storage.

The interests of the cold storage industry lie in having the true character of their product displayed to the consumer. This is the surest, and likewise the quickest, method for cold storage houses to prevent irresponsible parties from spoiling the reputation of cold storage products by palming off their unwholesome products as the product of cold storage plants.

## LIVE STOCK NEWS.

The Pacific coast is about the only part of the United States where there has been any surplus of cattle this year, large numbers having been shipped eastward from there at various times. Long trains of cattle have been shipped from California and Arizona to Kansas City and Omaha, Arizona forwarding thousands of yearlings to Colorado and Texas, and a great many Arizona feeders have been sold in Colorado for around \$6 per 100 pounds.

Missouri River markets have been receiving quite large supplies of cattle, with the runs at Kansas City embracing a large share of grassers shipped from Kansas and Oklahoma pastures. These cattle were mainly of the feeder class.

Word comes from Des Moines that two prominent farmers from central New Mexico have been traveling through central Iowa looking for 500 head of dairy cattle suitable for stocking their farms and those of their neighbors. They were talking of purchasing about 50 pure-breds, about 300 Holsteins, the remainder to be Guernseys and Jerseys.

A marked increase in the amount of live stock on the Belle Fourche reclamation project in South Dakota is shown in a recent report of the United States Department of Agriculture's experiment farm on that project. The report says the tendency is to feed more and more of the farm crops and to sell the live stock products. Pasturing hogs on alfalfa and hogging corn are coming to be much in favor. The results of experiments conducted on the government farm indicate that this is a decidedly profitable way of marketing alfalfa and corn under conditions similar to those which prevail on the Belle Fourche project. The small amount of labor involved is an important factor, and another consideration is the fact that less fertility is removed from the soil than when the crops themselves are sold.

The Missouri river markets are experiencing a big demand for range feeding lambs, with Omaha getting the principal share of this trade. Recent sales were made in that growing market of desirable feeding lambs at \$8.15@8.40 per 100 lbs., while a short time ago prime feeders went as high as \$8.60, with choice fat lambs going at the same time for \$8.50. Many farmers are anxious to stock up with feeders, but in many instances the high prices frighten them. Other farmers are contemplating the purchase of a few breeding rams and ewes of the better class, but these, too, are dear, and not a great many owners care to sell any. There is a great shortage of sheep in the United States, and it is going to take some time to restore the country's supply to normal proportions.

Feeding lambs have sold at the feeding stations nearby Chicago at \$8.15 and there will be many thousands change hands at these places before the season ends. Ordinarily these buyers would get their thin stock at the Chicago market but the government regulations, owing to the foot-and-mouth disease, do not allow of anything being purchased for feeding purposes.



## Grange.

### SHALL SIX COUNTIES ORGANIZE?

In a recent issue of the Michigan Farmer appeared an account of a rally held at Ypsilanti, by the Pomonas of six counties in the southeastern section of the state.

The purpose of this organization shall be co-operation and to promote Grange interests by becoming better acquainted with neighboring Pomonas.

Each of those Pomonas has been asked to adopt or reject the following constitution and by-laws and upon such action depends the future of the movement:

Art. I. This organization shall consist of the Pomona Granges of Washtenaw, Wayne, Jackson, Lenawee, Hillsdale and Monroe counties.

Art. II.—Sec. 1.—The officers shall consist of and rank as follows: Master, lecturer, secretary, and treasurer, and an executive committee consisting of the Master of each Pomona Grange or someone authorized by him.

Sec. II.—The officers other than the executive committee, shall be elected annually at the second quarterly meeting of that committee.

Sec. III.—Any member of the organization may hold, after proper election, any one of the above mentioned four offices.

Art. III.—All business of a six-county nature shall be disposed of by the executive committee which shall meet the first month of each quarter, the date to be chosen by the Master after conference with the remainder of the committee.

It is pertinent to ask at this time what ends such an organization may hope to attain beyond better acquaintance over county lines? What projects may be furthered to mutual advantage? What means may be made use of to bring about a larger concert of action in such a section of the state? Are these ends worth the time and expense of an added organization? Queries like these may well be considered before action is taken by any of the Pomonas affected. Without attempting to exhaust them, these questions may perhaps be opened up here with some profit.

1. There is always the very vital matter of broadening acquaintances. All other co-operative benefits have root in this experience. Besides that, the conduct of a big rally or other union meeting shows us one another's methods; such methods as plans and conveniences of the grounds or buildings, provisions for satisfactory handling of crowds, the welcoming and making strangers acquainted, the decorations, the arranging of speaker's stand, playgrounds and lunch booths, and the various program features of the day. Every locality has its individual ways in these matters, some of which may simply be bad habits acquired through not knowing better methods. Interchange brings helpful suggestion.

2. What projects may be furthered to mutual advantage by such a combination of Granges? It would seem as if a few leading topics or projects might be sifted out of many and a campaign of education and action upon then instituted through such an organization. Among the projects possible to undertake may be named the following: To locate a session of State Grange in this section of the state; to advocate and promote local co-operative efforts through shipping associations, creameries, laundries, egg circles and stores; to harmonize road building plans; to form county farm bureaus; to secure the naming and marking of rural roads; and to cultivate a sectional pride that will stimulate rural betterment and wield influence for high citizenship in public affairs.

3. That means, can a six-county organization bring into play to attain ends of the character mentioned above? One means is provided for in the plan presented for adoption, that of a quarterly meeting of the executive committee. Another might be the holding of six-county rallies, lecturers' conference and Grange deputies' training schools. At all of these meetings plans could be laid to attain the goals desired. Delegates might be sent from one Pomona of the group to another to study special methods in vogue there. Exchanges of speakers, singers, readers or orchestras might be easily expected and encouraged.

4. Finally, are ends similar to those named above worth the time and expense of adding a super-organization to those already existing in the territory? That is the gist of all questions involved. It is my purpose only to clearly raise this question, rather than to answer it. Has the organization of other sectional associations paid for,

## Farmers' Clubs

### OFFICERS OF THE STATE ASSOCIATION OF FARMERS' CLUBS.

President—R. J. Robb, Mason.  
Vice-president—C. J. Reed, Spring Arbor.

Secretary and Treasurer—Mrs. J. S. Brown, Howell.

Directors—Alfred Allen, Mason; Joseph Harmon, Battle Creek; C. B. Scully, Almont; C. T. Hamline, Alma; W. K. Crafts, Grass Lake; Edward Burke, St. Johns.

### CLUB DISCUSSIONS.

**Favor Forceful Preparations for Peace.**—The September meeting of the Wixom Farmers' Club was held at the very pleasant and hospitable home of Mr. and Mrs. John Porter. After a very substantial and satisfying dinner the meeting was called to order by President Nicholson and a very interesting and instructive program, consisting of reports of committees, recitations, select readings, question box, and various other things, was rendered. The question as to how the United States should prepare for peace was discussed at some length, developing some very startling and interesting facts in regard to the two propagandas, viz. peace by moral suasion, christian and other peaceful influence, vs. peace by the above named influence, reinforced by a physical force sufficient to repel any and all invasions from foreign countries. The following resolution was adopted: Resolved, that we are in favor of preparing for peace by necessary preparation to defend ourselves against aggressive nations.—Mrs. R. D. Stephens, Cor. Sec.

**Favor Pure-Bred Stock.**—The Clover Leaf Farmers' Club held its regular meeting at the home of J. H. Miller, Tuesday evening, September 28. The meeting was called to order by the president. The regular business was transacted after which an excellent program was given. Discussion led by Sam Shaffer, "Is it profitable for the general farmer to keep pure-bred stock?" Remarks were made by Messrs. Springer, O. S. Howe, S. Fenner, Guy Howe, Chas. Smith and by Mr. Prescott, a guest from California. Mrs. Brigham led the discussion from the standpoint of poultry raising. All seemed to think it profitable if one's pocketbook would permit them getting started. After the completion of the literary and musical program, Rev. Jenkins, the new pastor of the Methodist church, gave a few observations from the ministerial viewpoint. Refreshments were served, consisting of doughnuts, sandwiches and coffee. A feature of the evening was an exhibit of fruit, flowers and vegetables, provided by the members. The next meeting will be held the second Tuesday in October at the home of Dr. Chas. Smith.—Mrs. Starr Fenner, Cor. Sec.

**Held Temperance Meeting.**—The Ray Farmers' Club held their annual temperance meeting at the home of Mr. and Mrs. J. P. Gilmore, September 9. Owing to it being State Fair week there was not as large an attendance as usual. The president being absent Mr. C. S. Priest was appointed to fill the chair. After a short business session the program was taken up. Roll call was responded to with temperance quotations. The temperance topic was, "What shall we do with the saloon?" The discussion was led by the Rev. Paul, who gave a very interesting talk on the question, after which Mr. J. P. Gilmore took up the question and it was thoroughly discussed. Some thought reading rooms and places of visiting and having a good social time was a much better place for men and boys to spend their time than at the saloon. The Club voted to have an exhibit at the county fair. Meeting adjourned to meet October 14 at the home of Mr. and Mrs. Myron Degroff.—Cor. Sec.

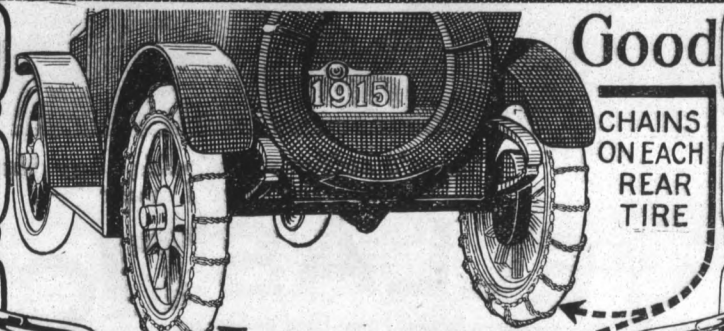
the trouble? Can leadership be found and developed with vision wide enough and willing to give time and thought to constructive building of plans and their execution? Can sufficient enthusiasm be engendered in the rank and file of membership to fire the project? Is the end worth the sacrifice, individually and unitedly? These are phases to be considered before adopting or rejecting a proposition to form a six-county organization.

JENNIE BUELL.

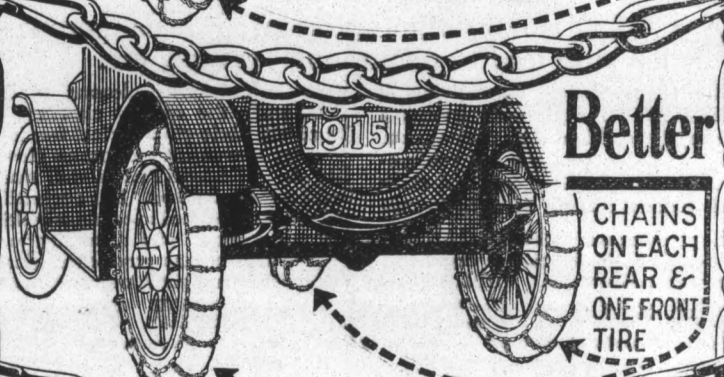
### COMING EVENTS.

Lenawee and Washtenaw Pomonas will meet with Wayne Grange in the tri-county Pomona meeting at Belleville, Saturday, October 16.

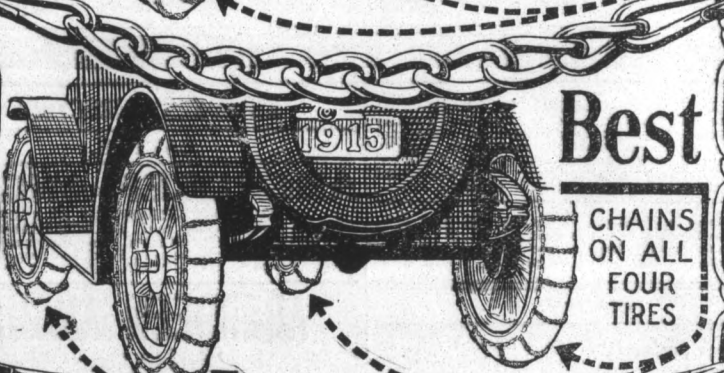
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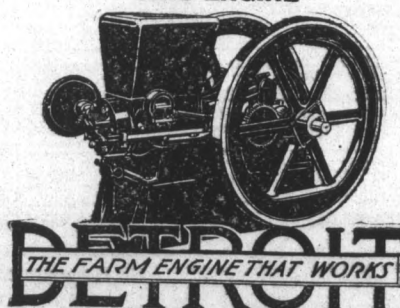
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Handles your corn crop economically. Sizes to run with from 6 to 20 H. P. Engines. **ROSENTHAL Huskers, Shredders, Feed Cutters and Silo Fillers**, have been giving satisfaction for years. **Free Book** Get this Free Book about corn husking and shredding, and details about the Rosenthal. Give H. P. of your engine. We will also send Free Farmers Account Book. **ROSENTHAL CORN HUSKER CO.** BOX 2 MILWAUKEE, WIS.

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Positively the cheapest and strongest light on earth. Used in every country on the globe. Makes and burns its own gas. Casts no shadows. Clean and odorless. Absolutely safe. Over 200 styles. 100 to 2000 Candle Power. Fully Guaranteed. Write for catalog. **AGENTS WANTED EVERYWHERE.** **THE BEST LIGHT CO.** 280 E. 5th St., Canton, O.





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**A COLD is not only unpleasant; it is dangerous—liable to lead to pneumonia, grippe, etc.**

The thick fleece inner lining of VELLASTIC Underwear keeps a warm, dry cushion of air next to your skin which doctors will tell you protects the body against cold and chills and sudden changes of temperature.

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**DIG FOUR SUCCESSFUL POULTRY JOURNAL** the Practical Poultry Paper for Practical Poultry Raisers, devoted to the poultry interests of Michigan, Ill., Ind., and Wis. It should be your paper. Bright, Snappy and Alive. 50¢ 1 year, 3 years \$1.00. Send 12¢ stamps for three months trial. Fig 4 Successful Poultry Journal, 44½ Plymouth Ct., Chicago, Ill.

**BELGIAN** Hares fine pedigree, bucks 4 months \$2.50 each, utility bucks \$1.00 each, fine healthy stock. No Does for sale. Rose Comb White Leghorn Cockerels \$1.00 S. S. Hamburg Cockerels \$1. Riverview Farm, R. 8, Vassar, Mich.

#### POULTRY.

**Barred Rock Cockerels**—for Sept. and Oct. fairs, 500 yearling hens and pullets for shows and breeders. W. C. Coffman, R. 6, Benton Harbor, Mich.

**BARRED ROCKS**—Parks 200-egg strain in season. FRED ASTLING, Constantine, Michigan

**BARRED AND WHITE ROCK COCKERELS** Large heavy boned birds, raised from great laying strains. Prices \$3 and \$5. Send stamp for reply. Riverview Poultry Farm, Box 798, Union City, Mich.

**BIG BAIN SAL OF BARRED ROCKS.** 200 yearling hens that have laid 140 eggs each since Jan. 1st, 1915 to Aug. 1st, 1915 an average of 20 eggs per hen per month. Prices 6 hens \$10, 12 hens \$18, 20 hens \$25, 50 hens for \$60. They are pure bred, large and closely related to our first winners at Chicago, Cincinnati and Indianapolis shows. Suitable males to go with them at \$2 to \$5 each. 1500 young birds growing. G. EARL HOOVER, R. 7, Matthews, Indiana.

**BIRD LAWN BUFF ROCKS, S. O. Buff Leghorns** and Blue Orpingtons. Chicago, Madison and Minneapolis winners. Show birds after November 1. A few Black Orpington cockerels and pullets for sale at \$1.50 to \$4 each. Bird Lawn Farm, Lawrence, Mich.

**FERRIS WHITE LEGHORNS FOR EGGS** Trapped 15 years. 60 first prizes, 15 big shows. Large, vigorous, laying, breeding, exhibition stock \$1.50 up. Shipped O. O. D. or on approval. Satisfaction or money back. 36 page free catalog gives prices and particulars. Write for it and save money. FERRIS LEGHORN FARM, 934 Union, Grand Rapids, Michigan.

**Pine Crest White Orpingtons,** birds ready for fall shows, special prices on pens, pullets, and cockerels and Belgian Hares Mrs. Willis Hough, Pine Crest Farm, Royal Oak, Mich.

**Rose Comb Brown Leghorn Cockerels** from Mad. Ro. winners \$1.00 each. CLAUDIA BETTS, Hillsdale, Michigan

**RHODE ISLAND REDS and PLYMOUTH ROCKS.** Males 5 to 12 lbs. according to age \$2 to \$5; P. R. hens weight 5 to 9½ lbs., eggs 15 for \$1.00; P. R. eggs \$5 per 100. Mammoth Bronze Tom Turkeys, 8 to 38 lbs. according to age \$3 to \$25, 10 eggs \$3. A. E. Crampton, Vassar, Mich.

**R. O. and S. C. RHODE ISLAND REDS** from prize winning strains, fine layers with long bodies and rich red color. JENNIE BUELL, Ann Arbor, Michigan.

**SILVER Laced Golden and White Wyandotte Eggs** for hatchlings. Ten cents each or 30 for \$2.50. I pay parcel post charges. G. W. BROWNING, Portland, Michigan.

**White Wyandotte Eggs**—50¢ for 15, \$4.00 for 100. My two best pens \$2.00 for 15, \$3.75 for 30. DAVID RAY, 202 Forest Ave., Ypsilanti, Mich.

**White P. Rocks, Pekin and white runner ducks,** White guineas, eggs and day old ducks and chicks. H. V. HOSTETLER, St. Johns, Michigan.

**YEARLING BREEDERS, W. Runner and Buff Orpington Ducks,** \$1.00 ducks, or 5 ducks and 1 drake, \$5. W. Emden Geese \$2.50 each, trio \$7. Also R. and S. comb R. I. Red cockerels and W. African Guineas. All fine stock. O. E. HAWLEY, Ludington, Mich.

#### AGENTS WANTED.

to represent a reliable concern canvassing among farmers in your own neighborhood or elsewhere. No experience necessary. Liberal pay, and supplies furnished free to right parties. Reference required. Address, MICHIGAN FARMER, Detroit, Mich.

#### BREEDERS' DIRECTORY

##### CATTLE.

#### ABERDEEN-ANGUS

**HERD ESTABLISHED IN 1900.** TROJAN - ETCAS and BLACKBROS. only. Also breeders of Percheron, Hackney and Saddle Horses. Young bulls and Percheron stallions for sale. WOODCOTE STOCK FARM, Ionia, Mich.

#### ABERDEEN ANGUS

If you are in need of an extra good bull or a few choice young cows or heifers, we have them for sale. Our herd is headed by the Grand Champion Black Monarch 3rd. We invite you to come to our Farm and see them. They are bred right and priced right. U. L. Clark, Hunters Creek, Mich. Sidney Smith, Mgr.

**AYRSHIRES**—One of the foremost dairy breeds. The most economical milk producers. Calves for sale. White Leghorn cockerels; Duroc Jersey swine. Michigan School for the Deaf, Flint, Michigan.

#### THE VILLAGE FARM, Grass Lake, Michigan, GUERNSEY CATTLE.

MILO D. CAMPBELL CHAS. J. ANGEVINE

#### BEACH FARM GUERNSEYS

The buyer of breeding stock should know that the herd from which he buys is healthy. We believe the Beach Farm Herd is as near perfect health as is possible. The tuberculin test does not show the least sign of reaction. We never had a case of contagious abortion. Have sent a whole year without calling a Veterinary or giving a dose of Medicine.

##### WE OFFER FOR SALE

Registered Guernsey Bulls

Very High Bred Grade Guernsey Cows

Bred Heifers, Open Heifers and Heifer Calves.

CAMPBELL & ANGEVINE, Coldwater, Mich.

**GUERNSEYS—REGISTERED BULL CALVES** Containing blood of world champions. HICKS' GUERNSEY FARM, Saginaw, W. S., Mich.

**GUERNSEY BULLS FOR SALE,** ready for service from A. R. Dams. If you want the right kind, write for price and breeding. BYERS & BARNES BROS., Coldwater, Michigan

**REGISTERED Young Guernsey Bulls,** great grand-sons of Gov. Chase, Serviceable age nicely marked, exceptional breeding. Avondale Stock Farm, Wayne, Mich.

**FOR SALE** A choice lot of Registered Guernsey cows, heifers and bulls of May Rose breeding. H. W. WIGMAN, Lansing, Michigan.

**GUERNSEYS**—20 High Grade Bred heifers at reasonable prices. E. D. JEWELL, Lansing, Mich.

**HEREFORDS:** Two last Oct. bull calves for sale. Big fellows. ALLEN BROS., Paw Paw, Michigan

**REGISTERED Holsteins**—Herd headed by Albina Boy's Butter Roy. His dam has A.R.O. records as follows: at 2 yrs. milk 430, but or 18.85; 4 yrs. milk 604.8, butter 27.03; at 6 yrs. milk 620, butter 28.55 lbs. W. B. READER, Howell, Mich.

**High Class HOLSTEINS** My herd is headed by Smithdale Alcatraz Pontiac, whose dam is the famous Alcatraz Polkadot. Have few young bulls and females for sale at reasonable prices. Will buy a few heifers about 15 months not bred. Farm ¼ mile from court house. SETH R. HUBERT, Howell, Mich.

Breeders' Directory—Continued on page 327.

## Preparing the Poultry House for Winter

**T**HE preparation of the poultry house for cold weather is not a matter of great expense but rather a matter of understanding the principles which underlie winter egg production and healthy fowls. One of the greatest handicaps of the amateur poultryman is that he thinks his hen house should be air tight and as warm as he would keep a dwelling house. This is an erroneous notion. If one will but stop and think for a moment of the natural covering of the hen, he will know that feathers are the warmest covering with which nature adorns any of her creatures. If you do not believe this, jump into a feather bed some sultry night in June. I will venture the prediction that before the rosy tints of dawn appear in the east, you will be convinced that there are something much cooler than feathers.

The natural covering of fowls is such that they do not need protection so much against the cold as they do against drafts. There is only a small part of the body of the fowl that is exposed to cold weather. Many poultrymen have found that fowls kept under rather cooler conditions than the average have done much better at egg production than poultry kept warmer.

#### Proper Ventilation Important.

The ventilation of a hen house is perhaps one of the most important features that should be taken into consideration. King states that a three-pound hen should have 1.4 cubic feet of pure air per hour and so we see that in a coop where ten fowls are kept, their health demands that pure air be admitted in rather liberal quantities. A satisfactory arrangement for ventilation of the farm hen-house is what is commonly known as the "muslin front."

In this scheme, only half of the openings are covered with muslin, while the other half is supplied with windows. If openings are few and small it may be necessary to use more than half of the openings as spaces to be covered with muslin. The muslin admits the air rather evenly over the fowl and causes circulation along only the front of the poultry house. The fowl perched upon the roost has an opportunity to breathe freely of the fresh air which passes in front, but at the same time, she does not expose her to the draft, is the ideal poultry house ventilation.

**The Poultry House is Sometimes too Warm.**

Under another caption we have seen that the poultry house is often too warm. This is especially true of farm poultry houses. The professional poultryman has learned long since that poultry ought not to be kept under too warm conditions if winter egg production is expected. It may be well to utter a word of protest against the judgment that dictates battening up every crack, nailing down every window and closing every ventilator as soon as cold weather puts in its appearance. It is true that poultry has been kept profitably in houses that have only tight backs and tight sides. Nearly every reader has observed that birds living in trees all winter seldom have frosted combs or feet. They seek the sheltered places of the tree but have plenty of fresh air.

#### Supplies for the Winter.

We have long since come to recognize the idea of the balanced ration in caring for live stock, but we have been a trifle slow in applying this idea to chickens. The cow demands carbohydrates, proteids, fats, and ash in order that she may produce her product economically. The chicken needs the very identical things with one addition—the chicken's crop works on a different principle than the cow's rumen. The chicken has never gotten away from the idea of the lod stone mill and unless we supply the hen with the stones for milling the food that we give her, we need not expect

that she will grind the grit. She must have carbohydrates, proteids, fats, ash, all these go to make up an egg and in addition, we must give something to furnish the stones for the mill. In other words, grit. When we supply the old biddy with oyster shells, we kill two birds with one stone, we supply her with considerable time which goes to make up the shell of the egg and also furnish the mill stones. So much for helping the hen to produce an egg. Due preparation must be given to keeping the hen healthy if she is to lay. As battery for voracious vermin, a barrel of sand or road dust ought to be at the fowls disposal on winter days. Road dust is nature's own bath for a fowl and it helps the hen to help herself in the fight against the mite.

In preparing the fowls for winter we need to make sure that the hen house has plenty of ventilation because it takes fresh air to oxidize the food which we give the hen in order that she may produce an egg. Better results will be obtained when the hen house is kept cool but free from all drafts. If we are to add to these conditions the proviso that the hen is to be supplied with egg-making material, with health-giving funds of road dust and charcoal, then we may be reasonably sure of healthy fowls and winter eggs.

I. J. MATHEWS.

#### FEEDING THE CHICKENS.

It pays better to feed liberally in the fall of the year than at any other time because at this time the fowls bodily needs are the greatest. The average farmer does not feed enough variety. It will not do to feed the same kind of feed too long. Some farmers who have the variety of feed that poultry need to do well, consider certain grains too good or too expensive for the hens and throw out whatever feed is cheapest or handiest.

"Chickens will eat anything," I heard a man say the other day. True, but why make them? It is not profitable. The hens that get the worst of it in the food supply take a longer vacation than there is any need of and the pullets refuse to lay until warm weather. Damaged or inferior grain is injurious and lacking in the elements necessary for making growth and eggs.

Digestive troubles at this season are often brought on by fowls eating spoiled stuff. It pays to take the time to look about the premises occasionally and see if we can discover any dead thing or spoiling grain about stacks that fowls have access to.

Old corn being rather scarce in the crib at this season makes it necessary to feed new corn. It is not the best of feeds however. We find it best to feed a little old corn with the new and make the change gradually to prevent digestive ailments. New corn fed too freely frequently causes bowel trouble.

There is nothing better than wheat to supply the deficiency of protein when corn is fed largely. Screenings of good quality are about equal to wheat, but poor screenings is an expensive food even at half the price of good grain. Oyster shell is needed to make bone and egg shell but it is too soft to entirely replace grit.

The crisp autumn air sharpens the chicken's appetite and it is a pleasure to feed them and watch them eat. We like to see them come running at meal time as if they meant business. It's a very good sign that they are not thrifty where they act as if they do not care whether school keeps or not. Poultry appreciate regularity in feeding. We try to scatter the feed well so each bird gets its share. We give them skim-milk every day and keep a box of charcoal and wheat bran where they can eat all they want.

Indiana.

FRANCES WOOD.



## Oct. 21 Howell Sale Oct. 21 Sales Pavillion, Howell, Mich.

100 choice registered Holstein young Cows with records from 19 to 24 lbs. Daughters of A. R. O. cows in calf to some of the best 30 lb. bulls in the State. Heifer calves and yearlings with A. R. O. dams and sires, a few bulls.

## Last Sale of 1915 at Howell

Oct. 21, 10:30 a. m. Three Auctioneers, Perry, Ellis, Mack. Catalogs Oct. 10.

## The Howell Sales Company of Livingston County.

F. G. Johnston, Columbus, O., Ped. Expert  
A. R. Eastman, Sec., Howell, Mich.

## Do You Want A Bull?

Ready For Service.

From a grand daughter of The King of the Pontiacs. Sired by a bull that is more than a half brother to the Champion Holstein Cow of the World, and whose dam is a 30 lb. 6 1/4 % fat daughter of Pontiac Aggie Korndyke who has more than 10 daughters than any other living bull. If you want pedigree.

EDWIN S. LEWIS, Marshall, Mich.

I don't want to sell anything but

## HOLSTEIN BULLS

and I have some bull bargains. Don't buy a bull until you know I have not got what you want. Come and see bulls.  
L. E. CONNELL, Fayette, Ohio.

## HATCH HERD

YPSILANTI, MICHIGAN

Registered Holstein-Friesian sires, grandson's of World's greatest dairy sire, out of choice A. R. O. dams and King Pontiac Jewel Korndyke. Brother of K. P. Pontiac Lass 44 lbs; average record of 50 dams in his pedigree 31.25 in 7 days; average per cent of fat three nearest dams 4.37; of his own dam 4.98. Sires in first three generations already have over 600 A. R. O. daughters. A few females bred to "King". Prices reasonable.

## The Two Greatest Bulls KING OF THE PONTIACS DE KOL 2d's BUTTER BOY 3rd

I have young bulls from cows having high official records and Granddaughters of above bulls. Stock extra good. Prices reasonable.

## BIGELOW'S HOLSTEIN FARMS, BREEDSVILLE, MICH.

## Espanore Farm, LANSING, MICHIGAN.

Offers for sale, registered Holstein Cows bred to the great bull Pledge Spafford Calamity Paul. If you need a bull, write for prices and pedigrees of our bull calves.

CHASE S. OSBORN, Owners.  
ADAM E. FERGUSON, Owners.

## Top Notch Holsteins!

Before buying your bull look ahead and think of the fine herd you hope to own in a few years. Fifty per cent, or over, of its value depends on your bull. Therefore, get a good bull. And don't be too particular about the price if you can be sure of the quality. McPherson Farms Co. sells bulls of strictly high quality. These use insure a successful, profitable herd. Write your wishes to McPherson Farms Co., Howell, Mich.

YEARLING registered Holstein heifer. Sire is son of former state champion cow, 32.94 lbs. of butter in 7 days. Very nice every way. \$125 brings her right to your station. Safe arrival guaranteed. Write for pedigree. Hobart W. Fay, Mason, Mich.

Holstein Bull Calf 6 mo. old, 30 lb. sire and from a promising 2 yr. old dam \$60 with all papers. Elmer E. Smith, Redford, Mich.

FOR SALE Registered Holstein Bulls ready for service, and bull calves, also females. FREEMAN J. FISHBEEK, Howell, Michigan.

Holstein-Friesian Breeder—The best families of the breed represented. D. D. AITKEN, Flint, Michigan.

Reg. Holstein Friesian Bull Calves From heavy producing dams. Bargain prices. DEWEY C. PIERSON, Hadley, Michigan.

## HOLSTEINS AND GUERNSEYS

Our Holsteins combine the blood of Belle Korndyke and DeKol 2nd. Our Guernseys are strong in Lady Gemsey, Glenwood Boy of Haddon, and Stranford's Glenwood of Pinehurst blood. Some fine bull calves of both breeds for sale. Boardman Farm, Jackson, Mich.

REGISTERED HOLSTEIN BULL, calved Jan. 2, 1914. Choice pigs of both sexes now ready to ship. Prices reasonable. E. R. CORNELL, Howell, Michigan.

HOLSTEIN CATTLE and Duroc Jersey Swine. Choice pigs of both sexes now ready to ship. Prices reasonable. E. R. CORNELL, Howell, Michigan.

Only \$40.00 Delivered. Magnificent Holstein bull calf, by 24 lb. butter bull. Ten weeks old, 250 lbs. A beauty. WHITE. ROUGEMONT FARMS, Detroit, Mich.

FOR SALE Registered Holstein cow 7 yrs. old. A regular breeder. Will freshen in Nov. Price and description on application. L. C. Gardner, Stockbridge, Mich. R. 5.

REGISTERED HOLSTEIN FEMALES. Choice Yearlings—Two year olds and matured cows. Haven't the room for them, must sell before winter. If interested come and see them. They are good stuff, in nice condition. J. M. WILLIAMS, No. Adams, Michigan.

We will take your note for one year at 5%—then why not buy a

## Holstein Bull

at once, and get pick of 12 from best Breeding in Michigan. Send for prices and pedigrees. LONG BEACH FARM, AUGUSTA, MICH.

Choice Registered Guernsey & Holstein Bulls From two months to two years old. Most of them from A. R. O. cows. All to be sold at farmers prices. Call or write. SWEET ORCHAR FARM, Birmingham, Mich. E. E. Sweet, Proprietor.

## Lenawee County Holstein Breeders' Second Consignment Sale

100 Head of Pure Bred Registered Holstein Cattle.

Fair Grounds Adrian, Michigan. October 22, 1915.

This offering is characterized by—Splendid Individuality, Popular and World Record Breeding, Young and of Vigorous growth, large percentage of A. R. O. cows and offsprings. Cows bred to bulls out of world record dams. Sons and Daughters of Prize winners at National Dairy Show.

Note the quality of Herd bulls to which Offering is bred,—  
6 to—King Pontiac Jewel Korndyke, Sired by King of the Pontiacs, dam Jewel Korndyke 2nd and a daughter of DeKol 2nds Butter Boy 3rd.  
10 to—"King Lunde Pontiac Korndyke 15," a son of King of the Pontiacs and Pontiac Korndyke.

3 to—Sir Johanna Pontiac Pet, a grandson of Colantha Johanna Lad, Rag Apple Korndyke and Pontiac Pet.

3 to—Duke Ormsby Pietertje DeKol 3rd.

5 to—Risinghurst Johanna Ormsby Hope, Sons of the Great Worlds Year Record cow Lindenwood Hope.

20 or more to—Prince Bawn Maxie DeKol, son of Crown Princess Maxie De Kol, 2nd world record Senior four year old 30 day division. Others bred to sires of similar breeding.

All animals tuberculin tested by state-approved veterinary. Remember—Place Adrian, Mich.—Time October 22, 1915. Follows sale at Howell, Mich. Breeders from a distance can attend both sales and select from over 200 head. Catalogs ready October 15th. Write early for catalog.

Auctioneers:—Col. Perry, Columbus, Ohio. Col. Burton, Adrian, Michigan. Cols. Pugh & Son, Toledo, Ohio.

Managers:—S. T. Wood, Sales Manager. Liverpool, N. Y. T. C. Kennedy, Business Mgr., Adrian, Michigan.

Consignors:—Kennedy Holstein Farm Co., Adrian, Mich. Hatch Herd, Ypsilanti, Mich. Geo. W. Rising, Fayette, Ohio. L. E. Connell, Fayette, Ohio. Lenawee Stock Farm, Adrian, Mich. Rogers Bros., Onsted, Mich. R. P. Clement, Adrian, Mich. Dr. B. W. Anthony, Adrian, Mich. Elwin Clark, Adrian, Mich.

## Will Sell or Exchange

Our registered Guernsey Bull La Tette of Maple Lane, 23192 A. G. C. C., four years of age Sept. 30th. Will exchange Pedigree A. G. C. C. Sir imported Raymond of Tette, 2430 A. G. C. C., Lady Whitefoot 31519. THE JENNING'S FARMS, R. F. D. 1, Bailey, Mich.

FOR SALE 35 High Grade Guernsey Cows and Heifers due to freshen this fall and winter. Prices reasonable. The Jennings Farms, R. F. D. 1, Bailey, Mich.

Guernseys registered, for sale at Watervliet, Mich., May Rose breeding, Seven A. R. O. cows in herd. Address J. K. Blathford, Auditorium Tower, Chicago, Ill.

Maple Lane Register of Merit Jersey Herd. Tuberculin tested by U. S. Government. For sale bull calves and heifer calves from R. of M. dams and grand dams, and Hood Farm Sire.

IRVIN FOX, Allegan, Michigan.

LAST BULL Sold to Mr. A. Fleming of Weldman. Just one bull left, age 10 mo. He's a bargain at \$200, breeding conformation considered. Brother to former world's record 3 1/4 yr. old Holstein. M. L. McLaulin, Redford, Mich.

Lillie Farmstead Jersey Cattle. Bull calves from R. of M. Cows, also heifer calves and several bred heifers for sale. Colon C. Lillie, Coopersville, Mich.

Jerseys. Bulls ready for service, extra quality sired by Jacobs's Fairy Emanon, No. 107111, from high producing dams. SMITH & PARKER, Howell, Mich.

FOR SALE—High class Jersey Bull Calves from Register of Merit ancestry. WATERMAN & WATERMAN, Meadowland Farm, Ann Arbor, Mich.

For Sale—High Class Jersey Bull as good as the best Yearling. From high producing dam. Price right if taken at once. J. F. Townsend, Ionia, Mich.

Jersey Bulls for Sale from high-producing dams, with testing Assn. records, also in semi-official test. C. B. Wohner, R. 6, Allegan, Mich.

HILLSIDE Farm Jerseys, yearling bulls, solid color, half brothers to ex-world's-record senior 2yr old and from R. of M. dams, with records from 400 lbs. to 800 lbs. C. and O. DEAKE, Ypsilanti, Michigan.

Must Be Sold at Once. 2 yr. old Jersey bull, grand Fox. Dam made 405 lb. son of Champion Flying Fox. In every respect. Price is right. Write for particulars. E. D. DeGraw, Lamb, Michigan.

Milking Shorthorns 1 bull 8 months old \$125, 2 cows. DAVIDSON & HALL, Tecumseh, Michigan.

Shorthorn Cattle of both Sex for Sale W. W. KNAPP, Howell, Michigan.

## BIDWELL SHORTHORNS

For "Beef and Milk" Registered Bulls, Cows and heifers, Scotch-topped roans, and reds for sale. Farm at N. Y. Central Depot. Also D. T. & L. E. Y. BIDWELL STOCK FARM Box B, Tecumseh, Mich.

Shorthorns For Sale 8 young bulls also female, farm 3 1/2 mile east of Davis crossing on A. A. R. R. W. B. McQUELLAN, Howell, Mich.

Shorthorns—Dairy or beef bred. Breeding stock all ages for sale at farmers prices. C. W. Crum. Secy. Cent. Mich. Shorthorn Breeders' Assn. McBride, Mich.

Dairy Bred Shorthorns of best Bates Strains. Young bulls 7 months old for sale. Price \$100 each. J. B. HUMMEL, Mason, Mich.

For Sale: Shorthorn bull, 2 yr. old, dark roan. Grand-son of Avondale. Also, cows and heifers. E. J. FRANK, Montgomery, Michigan. R. F. D. 3.

## HOGS.

Durocs & Victorias—Grand bunch of Gilts due March and April. Comprising the blood of Superba, Defender, Much Cal, Orleans and others. A few young boars. M. T. STORY, Lowell, Mich.

FOR SALE—Berkshire hogs, both sexes and different ages. Bred gilts for fall farrowing. Poll Angus Bull Calf, not registered. Price right. Chase's Stock Farm, R. 1, Marlette, Mich.

Berkshires. Two fall gilts bred for Aug. & Sept. farrowing and a choice lot of April gilts for sale. A. A. PATULLO, Deckerville, Mich.

Royalton Bred Berkshires—April boar well marked, also the fine mature boar Royalton Emperor. Both registered with papers at fair price. Write to D. F. Valentine, Supt., Temperance, Mich.

Registered Berkshires sold by the pound and shipped on approval. Boars \$5, and sows 10c per pound. B. B. REAVEY, Akron, Mich.

DUROC JERSEYS—A few choice spring pigs ready to ship. Carey U. Edmonds, Hastings, Mich.

Duroc Jersey—March pigs either sex, also am booking orders for fall pigs for Nov. shipment. Inspection invited. E. D. Heydenberk, Wayland, Mich.

HAMPSHIRE Swine—Breeding stock of all ages from most popular strains. Write for breeding. Inspection invited. Floyd Myers, R. 9, Decatur, Ind.

## Big Type, O.I.C.'s and Chester White Swine.

400 fall pigs either sex. special prices for the next 30 days, also bred gilts and service males and we are booking orders for spring pig, all our stock is good enough that I will ship O. I. C. D. and reg. free in the O. I. C. or Chester White Assn. We won, more prizes than all other breeders put together, at Ill. and Wis. State Fairs. Write for Show record.

ROLLING VIEW STOCK FARM Cass City, Michigan.

Chester Whites—Special prices on March boars for next 30 days. Fall Pigs. F. W. ALEXANDER, Vassar, Michigan.

O. I. C. SWINE—Are you on the market for a choice bred sow to farrow the last of Aug. or fore part of Sept. If you are, write me, I have them. A. J. GORDEN, R. No. 2, Dor, Michigan.

O. I. C. Choice Gilts bred for Sept. farrow. ALVIN V. HATT, Grass Lake, Michigan.

O. I. C. GILT BRED SPRING PIGS ready to ship. H. J. FERLEY, Holt, Michigan.

O. I. C.'s—Bred sows, bred gilts, spring pigs both sex. Service Boars. Price low. A. R. GRAHAM, Flint, Michigan.

REGISTERED O. I. C. BOARS & GILTS High class fall pigs at reasonable prices. J. CARL JEWETT, Mason, Mich.

O. I. C. SPRING BOARS of good type and Red Polled bull calves. John Berner and Son, Grand Ledge, Mich.

O. I. C. SERVICEABLE BOARS. Priced to sell, and recorded in buyer's name. H. W. MANN, Danville, Michigan.

## O. I. C.'s STRICTLY BIG TYPE.

March, April and May pigs Sired by Lengthy Prince, White Monarch and Frost's Choice, all big type boars and sows weighing from 500 to 700 lbs. with quality second to none. Can furnish in pairs not akin. Prices reasonable. Newman's Stock Farm, Marlette, Mich. R. 1.

O. I. C.'s Two yearling boars and a lot of last spring pigs not akin. Also a lot of this fall pigs at \$10 each at 10 to 10 weeks old. Good stock. 3 mile west of depot. Otto B. Schulze, Nashville, Mich. Citizens phone 124.

O. I. C. Choice eighteen mos. old boar. State Fair 1915 and Mar. and Apr. gilts, also fall pigs. A. J. BARKER, BELMONT, MICH. R. No. 16.

Way Brothers Stock Farm. The home of the big bone O. I. C. Hogs. Stock for sale. Registered free. J. R. Way, Pompei, Mich.

## Brookwater Farm

This herd won fourteen first prizes, besides several lesser ones, also Grand Champion Boar and Grand Champion Sow at Michigan State Fair. Every entry was bred at Brookwater with three exceptions and they were farrowed there. The Grand Champion Boar Hoosier is for sale also a choice lot of spring pigs and yearling boars. If you wish something considerably better write or visit—

BROOKWATER FARM, R. 7, Ann Arbor, Mich.

Capitol Herd Duroc Jersey Swine. Established 1888 Spring pigs for sale, satisfaction guaranteed. Express prepaid. J. H. Banghart, East Lansing, Mich.

DUROC JERSEYS—Spring pigs either sex. Gilts bred for Sept. farrow to a son of Volunteer Grand Champion at Intern'l Stock Show Chicago. F. J. Dredt, R. 1, Monroe, Mich.

Duroc Jersey—March pigs either sex, sired by a son of State Fair 1915 and Mar. and Apr. gilts, also fall pigs. A. J. BARKER, BELMONT, MICH. R. No. 16.

Durocs of the best of breeding. April farrow either sex or pairs for next 30 days \$20 each. Two fall boars. Oct. farrow \$20 each. Also Holstein bull one year Oct. 6. H. G. KEESLER, Cassopolis, Mich.

DUROC JERSEYS—Fall and either sex, from choice strains. S. C. STAHLMAN, OCHERY LAWN FARM, Shepherds, Michigan.

DUROC JERSEY BOARS a choice lot of spring boars, not akin. W. C. TAYLOR, Milan, Michigan.

J. W. KEENEY, Erie, Mich. Breeder of Duroc Jersey Swine D. M. & T. local from Monroe or Toledo, Keeney Stop.

BIG TYPE P. C. Either sex, pairs or trios not akin. Bred sows and gilts. Have several 1000 lb. boar prospects. Absolutely no larger breeding. Everything guaranteed right. FRANK KRUGER, Ravenna, Mich.

POLAND CHINAS of the big type. Boars ready for service. Sows bred for spring farrow. A. A. Wood & Son, Saline, Mich.

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BIG Type Poland Chinas, boars as big, as good as grow in Iowa with quality to please you.

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