

# MICHIGAN FARMER

AND  
**LIVE STOCK**  
PUBLISHED WEEKLY

**JOURNAL**  
ESTABLISHED 1843.

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

VOL. CXXXIX. No. 5.  
Whole Number 3602.

DETROIT, MICH., SATURDAY, AUGUST 3, 1912.

\$1.00 A YEAR.  
\$2.75 5 YEARS.

**D**ESTROY weeds. Dig them up by the roots, slash them with a spud or hoe, cut them with a scythe or mowing machine, spray them with sulphate of iron, pasture them with sheep and goats, choke them out with grass and heavy growing forage crops, change the crops on fields that are infested, cultivate frequently during the early part of the season. Every farmer should wage a vigorous and relentless warfare on these noxious and unsightly enemies of agriculture. A co-operative united effort on the part of adjoining land owners should make weed killing a common object. Individual effort may succeed in keeping down weed growth on a small area, but a man is up against a difficult proposition when his neighbors persist in producing seed faster than he can destroy the weeds. No complete victory can be gained over the most noxious of these expensive and injurious nuisances until farmers band together and make a concerted and persistent effort to clean up their fields, fence corners and roadsides and employ methods which are both preventative and destructive.

There is no accurate way of getting at the loss which weeds cause to the country annually, but it is safe to say that it amounts to one hundred million dollars, perhaps double that amount. Not alone do weeds make it much more expensive to grow crops, but they make a heavy draft upon the moisture and fertility of the soil, besides they reduce considerably the market value of the products.

For example, a report from the Minnesota grain inspection department shows the average dockage per bushel on wheat for two years to be 19 ounces. This dockage is very largely due to weeds. Minnesota produces annually about 200,000,000 bushels of small grain. Had the land been free of weeds the same amount of plant food, moisture and labor would have produced over three million bushels of wheat or the equivalent in other grains. This makes an actual loss due to weeds of about two and one-half million dollars, or an annual rental of 30 cents per acre on every acre on which small grain is grown. Added to this great loss we must include cost of fighting weeds, loss of fertility and moisture, strain on machinery, extra cost of twine to tie up the weeds, freight charges for shipping the weed seeds, etc.

Weeds are distributed in curious ways. Many a farmer has had his land stocked with weeds because the seeds have been carried by the wind over frozen snow and ice with which the country is covered in the winter. Some are carried by the wind, as for example, thistle and milkweed. Others have burrs or needles which attach themselves to anything with which they come into contact. These find their way from field to field, into the barn and feed lot and finally into the manure pile and are again distributed over the farm. Others get into clover, grass or seed grain, and for some of these the farmer pays the price of

## Controlling Weed Growth on The Farm.

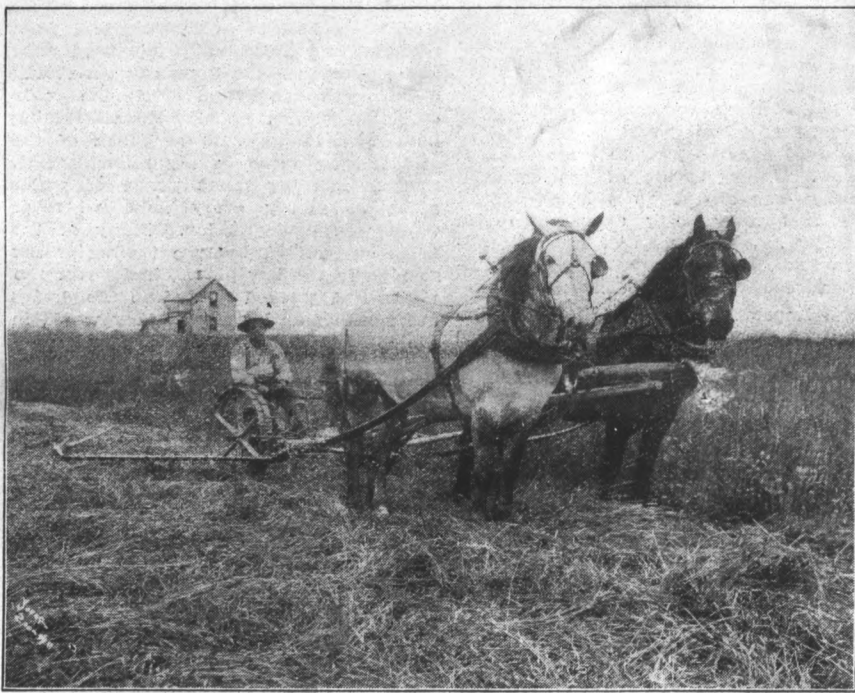
valuable seed. Cheap clover and grass mills, as they are made today, will take seed and seed grain from other localities the cockle out of wheat, kale out of oats, buckhorn out of clover, in fact, they are arranged so as to handle all kinds of seed and grain. It will pay a farmer to place superior samples of weed seed from going back to the field and prevent weeds from getting on his farm, either through seed or manure. Some of the noxious weed seeds live in the soil for years. Several years ago the North Dakota Experiment Station

conducted an experiment to determine the length of time weed seeds retained their vitality in the soil. Wild oats grew after being buried in the soil 20 months. Mustard and some of the other weed seeds grew after being buried 56 months. These facts ought not to discourage the farmer. One season of systematic cultivation will bring most of the seeds into condition to germinate and be destroyed. What few are left to grow later may be removed cheaply by subsequent cultivation. One should keep up the work with vigilance after he has cleaned up a field of the worst of these pests. Careful work one season and the failure to continue the warfare the next will avail little in the work of cleaning up the field. After the most noxious annual weeds have been brought under control a system of rotation of crops which provides for one or more years of cultivation and one or more grass crops on each field in six or seven years, will eventually clean up a field of most weeds, increase the net income per acre and tend to add to the productivity of the soil. Whether the weed is an annual, a biennial or a perennial, if the farmer is to make any headway, it is necessary that he study them and gain a knowledge of their habits of growth as well as of their strong points and their weak points and plan his methods of subduing them accordingly. Annuals are by far the most common and easily controlled, consequently it is, perhaps, better that I should discuss the biennials and perennials in another article.

Farm manure contains many weed seeds which will germinate and grow as soon as the conditions are favorable. For this reason it is my judgment that it is better to apply the farm manure to the grass or clover crops as a top-dressing. In this way the weed seeds being on the surface germinate quickly, but on account of being shaded and crowded out by the grass and clover plants, are unable to secure any foothold. A small weed finds it very difficult to get a start in the thick growth

of grass or clover. I may be wrong in my deductions of this phase of controlling weed growth, but it has been much easier to control the weed growth and handle cultivated crops on my farms since we have been applying the manure to the grass and clover fields instead of on the sod ground which was to be plowed immediately and planted with potatoes or corn. The experience of other farmers along these lines might prove of benefit in considering this phase of handling farm manures and controlling weed growth on our farms.

One of the most effectual means of controlling weed growth, more especially, as it concerns the annuals is to plow the field early in the spring harrow it thoroughly and frequently as many times as may be necessary before planting time. Fortunately this labor is not in the least wasted, because it goes a long way toward preparing ground for planting. The farmer who



Harvesting Hay and Wheat in the Upper Peninsula of Michigan.

These scenes were taken in Chippewa county; the hay field, on the farm of Rolla Winn, cut three tons per acre. The wheat harvesting scene was taken on the farm of Joseph N. Welsh in 1910. The yield was 51 bushels per acre.





plows his ground early and gives every weed seed near the surface an opportunity to germinate and keeps the harrows going until planting time will save a great deal of subsequent work of cultivation. He has warmed up the soil. He has given them moisture and heat, and they naturally grow. By the frequent harrowing he kills them right at the start. The stirring of the soil invites the seed to germinate and then they can be destroyed by the thousands by harrowing again. A weed germinated, sprouted and then buried or uprooted is done for. By keeping up the good work with the weeder or smoothing harrow until it is time to start the two-horse cultivators going in the corn or potato field he has destroyed so many weeds that he will have but little difficulty in keeping his crops free from weeds during the rest of their growing period. Early harrowing and cultivating counts mightily in controlling weed growth on the farm. There is no system of soil management that will clean up a field of weeds in one season, because many of them will not grow the first year. Frequent cultivation hastens their germination and destroys those that grow during the early part of the season. It will not destroy many of the weeds that grow later.

Another way of disposing of these annual weeds is smothering them out with grain, grass, and forage crops. A thick stand of grass, grain or forage will smother out most of the weeds that germinate after the field has been seeded. A thin stand of grain, thin spots in a meadow of low, wet places where crops fail to make a good stand simply invite weeds. If there is no crop to occupy the land and shut out the sunlight the weeds are sure to come in. Whoever saw annuals survive in a field that had a good stand of millet, buckwheat or sorghum? Tile drainage which would remove surface water and enable the crops to make an even stand over the whole of the field would be of great value in simplifying the problem of weed control on hundreds of farms. Not only would weed control be simplified but there would be an increase in the average yield of every crop grown on the field. The trouble on most farms is that these weeds are not destroyed early in the season. They are allowed to grow, the farmer figuring that the cultivation of the crop will destroy them later. Unfortunately, wet seasons and other factors over which he has no absolute control frequently upset his plans, and, as farmers say, "the weeds take the crop."

I know a few agricultural leaders who think that they know about all there is to know about farming who say they would not have a hoe in the corn or potato field. Well, I am not one of those old fogies who seem to think there is a peculiar virtue in a lot of soil massed about a plant with a hoe. When it can be done with a horse it is a much easier task and the more economical way to do it. Nevertheless, I am very sure that there are times and fields where no other tool is better than the good old hoe, and that its use at the proper time in such cases, even if more expensive, will yield returns "some fifty, some a hundred fold." It is easy to say, "Use a weeder or smoothing harrow, early and often," and such advice is good, but there are many times when, on account of wet weather or inability to spare the time, the ground gets hard, so that one of these tools is of about as much value as would be a briar brush dragged over a stone pavement. Weeds get a start in the row or hill, where no horse tool that I ever saw will get them without taking out the plants too. By all means use a hoe rather than allow a few weeds about the hills to seed the field for another year. When some of the bad annual weeds, as wild mustard, are but thinly scattered through the field they may be removed quite cheaply by hand pulling. This method is not in favor with farmers but it is, however, often more economical to remove weeds entirely by hand pulling after some other method of eradication has about cleaned up the field. A few remaining plants allowed to go to seed will give the weeds a good start for another year, and much of the work that has been directed toward destroying them will be lost labor. In such cases hand pulling is certainly practical.

New York. W. MILTON KELLY.

#### AN IMPROVEMENT ASSOCIATION.

There has been organized in Shiawassee county at Owosso, "The Improvement Association." This society is broader than the usual "Chamber of Commerce,"

"Board of Trade," or "Business Men's Association," as such bodies are locally known, and is to embrace the farmers of the county, or at least those who have business relations in the principal city of the county.

The somewhat local view that separates the city man as having interests diverse from that of the farmer in the general upbuilding of the country, particularly in the middle west, is not well founded. In the manufacturing towns of the east, where, for example, shoes and the weaving industry are predominant, there is in a general way no intercommunity interests between town and country. In the middle west, where cities and towns are dependent in a large measure on agricultural products, such a move as this Improvement Association is destined to be effective of great good, in both an economic and moral sense. Among the things proposed for the general good is to employ a regular secretary, who will be the laboring man of the association, and connect up the industrial forces of the country and city. A rest-room for people coming into the city for the day, provided with lavatory and comfortable seats and tables, is projected.

Under the provisions of the recent appropriation for agricultural experts by congress, to be provided under certain co-operative conditions of the country, it is proposed to secure such aid for Shiawassee county. The secretary of the Improvement Association expects to confer with the various individual farmers and associations of farmers and to secure immediate action, if possible. In the matter of commercial fertilizers, i. e., their adaptation to soil and the grade of goods, an agricultural director could save the farmers of any county many thousands of dollars annually. Any qualified expert of wide sympathy and training could do much to establish a higher standard of farming and at cost not to exceed 50 cents a year to the individual farmer. Among some of the essential qualifications should be a knowledge of soils and a working acquaintance in chemistry. Also a man of sufficient address to occupy the country church pulpit on occasions, when demanded.

The Improvement Association also expects to take up the subject of good roads. They will lend a hand to advance parcels post. These questions are particularly the ones that more closely relate to farmers, while securing new industries for the cities, parks, etc., will constitute the additional work of this body.

Another subject of both city and country interest is discussed, that of a county hospital. Perhaps none that the attendant physician knows better the inadequacy of medical attendance under unfavorable home surroundings. The workmen's compensation law is intended to have the industries provide for accidents occurring in those occupations. The hospital at hand would be a great relief to the individual sufferer, and also would extend farther to the many cases of sickness not of direct accident. To the workman who is confined to his bed in an unsanitary boarding house, when better and cheaper attendance at a county hospital could be had the chances for recovery are vastly increased. Intelligent mechanics prefer large cities for work oftentimes because of greater assurance of skilled medical care at a hospital.

At a banquet given by the Improvement Association at its inception there was the most tolerant and liberal feeling expressed by business men towards all who work in this world, which includes about everybody. If Cain had come into the meeting and said something about not being his brother's keeper, he would have found an unsympathetic audience. The city tradesman is not slow to see that for many miles outside the corporation boundaries, good roads, the trolley, the automobile, telephone service and rural mail delivery of the daily paper, has vastly extended his possible patronage. The farmers' employees are getting good wages and their patronage is strictly cash, so he is, in the language of the insurance man, really a better "prospect" for the tradesman than shop men.

One of the economic features of uniting the interests of city and country are those factories whose productions originate on the soil, like sugar beet growing or where, like the automobile industry, the sales of machines and good roads are largely country affairs. The sugar manufacturers are alert for soil improvement and good roads. The factory manager is in most cases a chemist and knows the basic principles of farming. One of the difficult things for most men not ac-

quainted with agriculture to comprehend is that for years the cities have lived on the unearned increment or investment of stored up soil fertility which now has become partially exhausted. When Roman agriculture was depleted grain was shipped in from the conquered provinces. That was the economic thought of their day, and how very similar the proposition of reducing the high cost of living by shipping in duty free Canadian grain or free raw material food stuffs from Argentina.

The Shiawassee county plan of conservation of soil and the upbuilding of city and country, mutually caring for the industrially injured and sick of both city and country, appeals to one's idea of righteousness, rather than the old Roman plan of bringing in cheap corn from outside or its modern counterpart of economic thought of soil depletion at home in order to make some other industry succeed.

Shiawassee Co. JAS. N. McBRIDE.

#### LILLIE FARMSTEAD NOTES.

The subject of midsummer irrigation is not of very much interest in this particular locality at the present time. Saturday morning, July 20, the weather department at Grand Rapids gave out the information that Saturday would be fair and warmer. Early in the morning, the sky was overcast with heavy clouds, we began to pull peas in one field for the canning factory. About eight o'clock it began to sprinkle a little, not enough to stop work. I thought probably it would go away and be a fair day, but it didn't. It rained a little bit harder until 11 o'clock we had to quit work, and from that time on it gradually increased until along towards night there came a steady downpour which lasted until nine or 10 o'clock at night; in fact, it was raining hard when I went to bed; one of the most severe rains in my remembrance. Sunday morning great ponds of water stood in nearly every field, wherever there was a depression. Many of the fields are gullied because the water got so high in the low places, broke over the ridges and washed out. The tile drains are working as heavily as they would in the spring or late in the fall. Much damage has been done. The oat crop, which is just beginning to turn a little bit in many places, is laid flat. It never can be cut clean with a reaper, but then, we ought not to complain, because the news comes that in many localities in the United States they had cloudbursts, and not only crops were destroyed but human lives as well, and nothing of that sort took place here. But certain it is that we have enough moisture, and it doesn't seem as if the land could get so dried out that we couldn't plow oat stubble this year in time for wheat.

There will be an abundance of grassy and weedy corn fields and all other hoed crops this year, and we are much in the same position that the farmers are down in Cuba when the wet season comes. All they can do is simply to sit on the fence and see the weeds grow as well as the crops, and that's all we can do at the present time. The land is entirely too wet to cultivate, but the weeds do grow wonderfully.

It is a wonderful time for pastures and for second growth of meadows. The second growth of clover meadow is simply wonderful. If the weather falls off and suitable weather comes so that the flowers can be fertilized and filled in this section there will be the best crop of clover seed we ever had, but, of course, one ought not to build any hopes on this finicky crop at the present time because conditions may be so that it will not properly fill. I have seen a heavy growth of second clover that did not contain a sufficient amount of seed to pay for hulling.

Part of the wheat has been cut, but none of it hauled in as yet. That that was cut was out, of course, in this heavy rain. In one field near the house, on an acre some of the shocks are floating in a pond of water, but the wind was not heavy and not a great many of the shocks were blown down. I think that if it only stays fair by setting out part of it that the crop can be saved. So far as we were concerned, we were so slow that we didn't get any of the harvesting done. We are just getting the binder ready now and as soon as the ground gets dry enough so that we can run it we will try and cut our wheat.

Haying is practically done in this county. I finally have all of my clover hay hauled. Much of it was injured, some of it quite severely. The surprising thing

to me is, however, that stock eat this hay as well as they do. Of course, it was cut when it ought to have been, just at the right stage of maturity, and it was raked up the same day it was cut, and cocked up. None of it was blistered in the sun, but some of it got soaking wet and the weather was not drying so that a white mold formed on the bottom of the cocks, sometimes on the sides of the cocks where they didn't dry off as quickly as they ought to, yet I put it all in the barn. We have seven calves that I thought were too young to turn out to pasture this spring so, of course, we are feeding them hay. Before we hauled this clover hay we were feeding them a new crop of alfalfa and orchard grass which were mixed together. This was cut and cocked up and cured in the cock and never got a particle of rain on it. I hardly see how you could get a better quality of hay than that, but strange to say, this clover hay that got wet seems to be relished just as well by these young calves as the other, and the same with the horses, they eat it just as well.

COLON C. LILLIE.

#### FARM NOTES.

##### Winter Vetch as a Crop for Green Forage.

What can you tell me about winter vetch as a crop to plow under? Some tell me that I can never get it out of the ground when once in. Is this a fact? I want to sow rye and vetch this fall and plow it under next June, keep it well disked until fall and then sow the alfalfa without a cover crop. What do you think of that plan? Will the vetch kill out by plowing or is it hard to get rid of?

SUBSCRIBER.

The impression that vetch is likely to become a weed on our better soils is well founded. A Mecosta county farmer writes that on a ten-acre field where vetch was sown some 20 years ago and allowed to seed that he has been unable to eradicate it with ordinary cultural methods, although a four-year rotation was practiced on this field. However, it is unnecessary to permit it to seed where one desires to use it as a soil improver. If sown with rye in August and plowed under before the seeds mature to the stage where they will grow, that will be the end of the vetch plants as the plant is an annual and reproduces only from the seed and not from running root stalks, as is the case with many of our noxious weeds. The plan outlined for putting this land in good condition to seed down to alfalfa would seem to the writer to be a very good one, but after plowing the vetch the land should be thoroughly packed down by frequent tillage before the seed is sown in order to provide a good firm seed bed. As soon as this has been accomplished and moisture conditions are right sow the seed, so it will get as good a start as possible before winter.

##### Harvesting Timothy for Seed.

I have 10 acres of timothy that I don't need for hay so think of cutting it for seed. Which is the best to cut it with, the binder or mower, and what kind of a machine is it threshed with for best results?

Kent Co.

O. L. G.

The grain binder is the most satisfactory implement for cutting timothy seed. The cutting should be done at just the right stage to prevent the shelling of the seed. When the seed turns brown is the proper time to cut and the bundles should not be allowed to stand in the shock too long for the same reason. The seed is threshed with an ordinary grain separator, but the wind on the sieve must be carefully regulated so as to not blow the comparatively small light seeds over. The threshing of timothy for seed should be profitable under present conditions since the seed brings an unprecedented high price on the market.

#### ALFALFA.

The amount of seed harvested in the United States during 1911 was approximately twenty million pounds, or enough seed to sow a million acres or more. In addition to this a large quantity of seed was imported from Europe. Alfalfa is now recognized as the big money crop to the farmer. We still have a limited supply of high-grade dry land seed grown in Dakota, Nebraska and Montana and shall be pleased to submit sample and prices upon request. Alfred J. Brown Seed Co., Grand Rapids, Mich.

The Michigan Farmer will be pleased to publish notice of all farmers' picnics and gatherings. If you know of one advise us with place and date at least ten days in advance.



## LIVE STOCK

### CORN SILAGE THE MOST ECONOMICAL ROUGHAGE FOR FATTENING CATTLE.

In the Michigan Farmer for May 11, the results of the season's experiments at the Indiana Experiment Station were given in detail. These results proved conclusively that the cattle feeder cannot afford to eliminate silage from the ration for fattening cattle. The results of similar trials at the Iowa station, as compiled by Profs. J. M. Evvard and W. J. Kennedy, are equally convincing. Regarding the results of the trial, these authorities say:

Silage must be put into the feeding program of every beef producer who wants to fit steers for the market economically and efficiently. The animal husbandry section of the Iowa Experiment Station proved that in part a year ago in a thorough feeding test; it proved it fully this year in a second test. The animals fed on silage made cheaper gains; they lost less in shrinkage, and they returned greater profits than other animals in the test fed on clover hay as roughage. The silage-fed steers put on gains at a net cost that was \$2.01 per 100 lbs. less than the clover hay-fed steers, and the best lot of silage-fed steers made a profit of \$23.46 per animal as against \$17.27 per animal, for those fed with clover hay.

Fifty steers were fed in this test. They were not fancy steers when bought, but average animals from the Nebraska range. They were bought November last and fed 150 days, from November 23 to April 21, 1912. They cost in Omaha \$4.50 and in the station feed lots \$4.65. They sold well, bringing from \$8.10 to \$8.20. These steers were divided into five lots of 10 animals each and put on separate rations as follows:

Lot 1—Shelled corn, cottonseed meal, clover hay.

Lot 2—Shelled corn, cottonseed meal, clover hay, corn silage.

Lot 3—Shelled corn, cottonseed meal, corn silage.

(The above lots were all put on full feed of grain in 40 days).

Lot 4—Shelled corn, cottonseed meal, corn silage.

Lot 5—Shelled corn, cottonseed meal, corn silage.

Lot 4 and lot 5 were handled the same the first 90 days, silage fed heavily, and shelled corn increased to full feed in the 90 days as follows: First month, 6.44 lbs.; second, 10.48 lbs.; third, 14.97 lbs. daily. Beginning the ninety-first day, lot 4 was allowed corn and silage according to appetite, while lot 5 was held back on silage and shoved hard on corn, the object being to make the ration concentrated at the end of the fattening period. Cottonseed meal was allowed in equal amounts of practically 2 3/4 lbs. daily to lots 2 and 5. Lot 1, because of clover, which contains protein, was fed somewhat less for best results.

All feeds were charged at actual market prices as follows: Shelled corn, first month, 50 cents; second, 51 cents; third, 55 cents; fourth, 57 cents, and fifth, 65 cents. Cottonseed meal, \$28 a ton; clover hay, \$15 a ton; corn silage, \$3.20 a ton.

The silage cost is based upon the actual value of corn in field, eight cents below market, at time of siloing. Cost of filling silo, storage of silage, and depreciation on equipment are included. This allows the farmer a field profit on the corn. The actual production cost on this silage would not exceed \$2.40 a ton.

All roughage was fed twice according to the steer's appetite, excepting in lot 5 the last two months, where it was limited.

Hogs following cattle were valued at \$6.10 the first three months and \$7.50 the last two.

The record of feed, gains, costs and profits follow in lots for the entire feeding period, and will be found in the table at bottom of this page.

It will be remembered that last year the Iowa station called attention to the indicated possibility of feeding silage heavily in the early part of the feeding period, decreasing as the animal became finished and quite fat, for the evident reason that the large amount of silage was not desirable in producing rapid and economical gains at the close of the feeding period. It is somewhat interesting to note that lot 5 handled in this manner, heavy silage and light corn at the beginning, with light silage and heavy corn at the finish, returned the largest profit per head, or \$23.46. This in spite of the fact that corn increased to 57 cents and 65 cents, from 50, 51 and 55 cents during the first three months. In other words, everything was against this lot because of the high price of corn, but in spite of this big handicap it won out by a narrow margin.

In making a change of this sort, as the animal becomes fattened, it is advisable to do it gradually, pushing heavily on the corn and coming back gradually upon the silage. The object is to concentrate the ration at the end of the fattening period.

Clover is an exceptionally good cattle roughage, but at present prices its use is quite prohibitive. Had the clover in this experiment been figured at \$10 per ton instead of \$15, the net profits would have increased practically \$3.50, or actually \$3.38, or \$20.65. Even at this advantage it is readily seen that the silage at \$3.20 per ton is a more valuable feed than clover hay at \$10.

The value of silage for a short feeding period is again abundantly demonstrated in that cattle in lot 3 on shelled corn, cottonseed meal and silage made an average gain the first three months of \$3.95, \$8.67 and \$15.17 per cwt. or an average cost of practically 7 1/2 cents. For a short feed the experience of the Animal Husbandry Department has been that silage is a superior roughage.

It is gratifying to feeders of silage to know that the Iowa Station results again show that silage-fed cattle are not heavy shrinkers. This year they all beat those having clover, as last year the least shrinkage occurred on those cattle fed both silage and clover hay.

The least shrinkage occurred on those cattle which received both silage and clover for roughness, being very light at only 21 pounds. This is in accord with the experience of last year. That those which had clover should have a heavy shrink is somewhat surprising, but the facts speak for themselves.

Silage is highly relished by both cattle and sheep, and is fed with profit to these classes of animals. The feeder with the silo must not get the impression, however, that silage is a cure for all ills, but that it has its shortcomings as well as its longcomings. The dairyman has long since concluded that he cannot satisfactorily run a dairy herd without the silo, which furnishes, as nearly as human ingenuity has been able to figure out, pasture conditions in the winter time. The steer feeder is coming to feel that the silo is a valuable adjunct to his business in evidence of which the rapid increase of the number of silos in the corn belt states is unmistakable. Silage is a starchy food, however, and when fed must be supplemented with a protein feed, such as cold pressed cottonseed cake, cottonseed meal, or oil meal. At present prices we would recommend either the cold pressed cake or the cottonseed meal. Another mistake which is usually made in addition to feeding without supplement, is to assume that silage

is a complete feed within itself and use it as a sole feed in thinking that it will produce a marketable finish. It is necessary in finishing animals to add considerable concentrate, especially corn, in that it is the cheapest one we have, especially toward the finish of the feeding period. The truth of the matter is that in finishing steers and heifers, or other cattle for the block, it is necessary and quite imperative that a concentrate grain be fed in considerable amounts throughout the feeding period. Cattle which are being stalked or roughed through the winter can get along nicely on corn silage for grass and subsequent free feed, but for the fattening animal the grain must be added.

The most eloquent friends the silo has are those men who have fed silage. Certainly no greater recommendation can be offered for any feed than this.

### COMBINED GRANARY AND HOG PEN.

We are thinking about building a granary and hog pen combined. Our idea is to build the building 20x24 ft., 16 ft. high to the eaves, on a north slope, the lower six or eight feet of cement and the upper part out of lumber, building steps up to second story what it lacks, say three or four feet, with cement floor. Now what we want to know is, will the hogs do well on cement? Second, keeping the hogs below the granary would the odor affect or injure the grain? Third, would it make it too moist for the grain? We thought by building the two buildings in under one roof would make it cheaper. Any suggestions would be highly appreciated.

Manistee Co. C. C. P.

It would not, in the writer's opinion, be advisable to build a combination building of this kind since there would be more or less condensation of moisture from the hog pen which would tend to make the granary above it damp, unless the floors were made moisture-proof and the hog pen well ventilated. So far as the cement floor in the hog pen is concerned, the concrete is the most suitable material to use. It should be made a little sloping for drainage and a false floor of lumber should be used for a sleeping nest for the hogs. Some use the elevated sleeping platforms and like them, but the better way, in the writer's opinion, is to use a small false floor which can be removed or changed at will.

### LIVE STOCK NOTES.

Profits on the difference between 4,000 and 10,000 lambs is what silos made for Anthony Gardner, of Kansas, during the last winter season. He is one of the largest sheep feeders in Kansas, and he says silos are indispensable. They not only increase his profits per lamb, but also enable him to more than double his operations. He owns two enormous concrete silos, with a combined capacity of 1,300 tons. The farm is located in the \$100 per acre land region, and the land is too high-priced for pasture or range purposes, every acre being required to produce liberally. A live stock journal gives the following particulars: "Last summer was a hot one. Corn over a large section of the southwest was ruined by the hot winds. Reno county suffered along with other sections. Had Mr. Gardner been without silos he could not have cut and saved his corn before the hot winds damaged it; nor could he have made the best use of the Kafir he grew last season. His silos are in their third year. They were filled with corn in the fall of 1910 and 7,500 lambs were fattened with ensilage and grain. In 1911 he cut all of the corn on his half section of land for silage and corn was the principal crop. He topped off one of the silos with 100 tons of Kafir, in order to try it."

Wm. Rea, senior member of the firm of Rea Bros., the widely known and extensive Montana sheep and wool operators, says: "The herds and flocks in Montana are small ones, mere shadows of their former grandeur. Washington, Oregon and Wyoming ranges are badly in need of re-stocking, and these states are drawing from Montana's comparatively small supply for that purpose. Mixed young cattle have been sold of late on Montana's ranges to Washington and Oregon stockmen up to \$40@45 per head, and Wyoming, with a smaller supply of bovine stock on hand than she contained at the opening of last winter, the new lamb crop included, is clamoring for breeding stock. Montana yearling breeding ewes are being purchased to stock Wyoming ranges, costing \$4 per head on the ranges. Canada is also coming to us for mutton sheep, requiring a great number of them, and one purchase ran up to 7,000 head. At the same time the coast demand is enlarging."

Charles Brown, of Clay county, Illinois, who has been selling veal calves of from five to six weeks' old in the Chicago market for \$8.50@9 per 100 lbs., reports an acute shortage of beef cattle in the making and believes that \$10 cattle are by no means improbable in the near future. He expresses much wonder as to where corn belt stockmen are going to obtain feeder cattle during the next few years.

Grass is good on the sheep ranges, and sheepmen generally show a determination to finish off their lambs carefully, so that the supply of range feeding lambs may be expected to be comparatively small.



### GOMBAULT'S CAUSTIC BALSAM

A safe, speedy and positive cure for

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

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

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

THE LAWRENCE-WILLIAMS COMPANY, Cleveland, Ohio.

### KEEP IT HANDY

You can never tell when a horse is going to develop a Curb, Splint, Spavin, Ringbone or lameness. Yet it is bound to happen sooner or later. And you can't afford to keep him in the barn. Keep a bottle of

#### Kendall's Spavin Cure

handy at all times. John Sayer of 324 Bronson Avenue, Ottawa, Ont., writes: I would not be without Kendall's Spavin Cure at any cost.

It is a priceless liniment for both man and beast. Get Kendall's Spavin Cure at any druggist's.

\$1 per bottle—6 for \$5. "Treatise on the Horse"—free—or write to

Dr. B. J. KENDALL CO., Enosburg Falls, Vt., U.S.A.



### O K CHAMPION DIGGERS

Get all the Potatoes



out of the ground in perfect condition. Our Two-Horse Elevator Digger saves time in your harvesting, and saves money on your own crop. We invite comparison with any others.

Free Large Illustrated Catalogue giving particulars, prices, etc., of our full line of Planters, Sprayers, Diggers, etc., on request. Write today.

CHAMPION POTATO MACHINERY CO., 145 Chicago Ave., Hammond, Ind.

### LIGHTNING RODS 8 1/2c PER FOOT

Best Quality Copper—Extra Heavy Cable. Don't do a thing about buying Lightning Rods until you get my Proposition. I have an entirely New Plan—a complete System direct to you with full instructions for installing. Easy to put up.

Buy Direct—On Trial—Freight Prepaid. System guaranteed satisfactory or your money back. Just write me a postal personally for our Proposition and FREE Catalogue which makes every thing plain.

J. A. SCOTT, President The J. A. Scott Company, Dept. J., Detroit, Mich.

### DEATH TO HEAVES! NEWTON'S



GUARANTEED HEAVES, COUGH, DISTEMPERS AND INDIGESTION CURE. Cures Heaves by correcting Indigestion. Book explains, sent free. Cures Coughs, Colds, Distempers, Prentice's Colic, Staggers, etc. Blood Purifier. Expels Worms. A Grand Conditioner. A Veterinary remedy, 20 years' sale. 50c and \$1.00 per can. Use large size for Heaves. At dealers or direct prepaid. THE NEWTON REMEDY COMPANY, Toledo, Ohio.

### SAVE-THE-HORSE

(Trade Mark Registered.)

#### SPAVIN REMEDY

Put Horse to Work and Cure Him

16 YEARS A SUCCESS.

Druggists everywhere sell SAVE-THE-HORSE with a signed contract to cure or refund money.

### FOR SALE, CHEAP.

IMPORTED PERCHERON STALLION, a ton horse. Sound. A Colt getter or will trade for good auto. J. C. BUTLER, Portland, Michigan. Bell phone.

### PERCHERONS

Bred for utility as well as show quality. Stable includes several international winners. Three 2-year-old stallion colts of quality for sale. Come, or write B. F. ANDERSON, R. No. 3, Adrian, Mich.

Mention the Michigan Farmer when writing advertisers

#### Detailed Statement of Results.—Ten Two-year-old Steers in Each Lot.

	Lot 1.	Lot 2.	Lot 3.	Lot 4.	Lot 5.
Initial weight	940.	943.	919.	920.6	922.8
Final weight	1299.7	1299.	1261.3	1246.	1257.
Av. daily gain	2.393	2.373	2.281	2.169	2.228
Average Feed Eaten Per Steer Daily in Pounds.					
Shelled Corn	20.20	16.95	15.60	13.71	14.64
Cottonseed meal	2.28	3.68	3.08	3.08	3.08
Clover hay	9.02	3.90			
Corn silage		22.35	27.10	30.81	28.62
Cost of 100 lbs. gain, excluding hogs	\$12.63	\$11.77	\$10.65	\$10.74	\$10.72
Net cost of 100 lbs. gain on steers, deducting hog profits	\$10.83	\$ 9.62	\$ 9.10	\$ 9.08	\$ 8.81
Necessary selling price at 100 lbs. at Ames to break down even, excluding hogs	\$ 6.86	\$ 6.60	\$ 6.28	\$ 6.23	\$ 6.27
Including hog profits	\$ 6.36	\$ 6.01	\$ 5.86	\$ 5.80	\$ 5.75
Actual selling price* at Ames, deducting cost of shipment and shrinkage from Chicago values	\$ 7.69	\$ 7.72	\$ 7.61	\$ 7.60	\$ 7.62
Net profits on each steer	\$17.27	\$22.22	\$22.03	\$22.45	\$23.46
Pounds shrinkage per steer	34.7	21.0	31.3	32.0	29.0
Per cent shrinkage	2.669	1.617	2.482	2.568	2.307

\*Chicago values are Lot 1, \$8.20; Lot 2, \$8.15; Lot 4 and 5, \$8.10.



# VETERINARY

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

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

**Bloody Milk.**—I have a good three-year-old heifer that occasionally gives bloody milk. I am vealing her calf and let calf suck her twice a day. After the calf satisfies itself I strip cow carefully; before giving bloody milk her bag was caked badly, but we succeeded in softening udder. W. H. A., Merle Beach, Mich.—Put ¼ lb. sugar of lead in 1 pt. tincture of arnica in a gallon of water and apply to affected quarter three times a day. Are you sure that the calf does not injure udder, or does the bag not come in contact with some hard substance that bruises it?

**Septic Navel Infection.**—I have a colt that was foaled April 21; was all right, spry and playful until he was a week old, then he went lame in fore ankle. The swelling extended up to body; later he went wrong in opposite fore leg. I reduced swelling by using arnica and witch hazel. This colt has poor use of his limbs, can get up alone, but gets about with difficulty. I placed him in sling, and he is thriving, but walks badly. The only dubious part of his sickness is his inability to get along. C. B., Otsego, Mich.—Give colt 10 grs. potassium iodide and 10 drops fluid extract of nux vomica at a dose in a little water as a drench three times daily. It is possible that you will obtain fully as good results by giving one-half the dose I have prescribed, and give it six times a day. Feed the mare well and soon as colt can walk about in sun let him do so. Apply alcohol to sore parts and weak quarters.

**Diseased Tooth.**—For the past three weeks my horse has had a very offensive smelling discharge from one nostril. During the past few days he has grown worse. F. W. P., Brant, Mich.—The root of a molar tooth is perhaps diseased and the discharge from it empties into nasal passage. The only remedy is to extract the tooth, then he will get well.

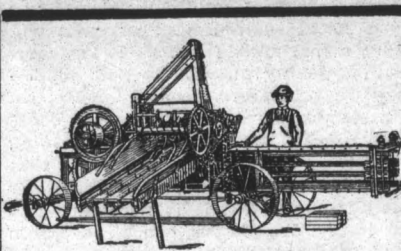
**Acute Indigestion.**—Rupture of Diaphragm or Stomach.—Have lost three horses lately and will give you the symptoms of their sickness. Two of them were taken as with spasmodic colic, roll and tumble and appear to be most easy when on back, remaining in this position for several minutes. After being sick five or six hours they perspire freely, bloat more or less, tremble violently, and death takes place in two or three hours. Our local Vet. has no doubt done all he can to save them. My horses are not the only ones in this neighborhood that have died. If a sick one lives more than eight or nine hours, he remains helpless until he dies. M. D. W., Eagle, Mich.—I am inclined to believe that your horses first suffered from acute indigestion, followed by inflammation and perhaps a destruction of bowel and in some cases may die from rupture of diaphragm or stomach. The symptoms they show indicate stomach and bowel trouble. Your Vet. has perhaps done as much for them as anyone could. During the hot weather this ailment may prove fatal, no matter what is done for them.

**Indigestion.**—Worms.—Have a 12-year-old horse that is in poor condition; bowels keep constive, passes some worms and some days he heaves considerably. L. B., Charlotte, Mich.—Feed him no clover, or musty, dusty, badly cured fodder of any kind; also salt him well in order to increase thirst and if he drinks freely of water the bowels will be less constive. Mix together equal parts ground gentian, cinchona, ginger, bicarbonate soda and muriatic ammonia and give him a tablespoonful at a dose in feed two or three times a day.

**Swollen Groin.**—Have a three-year-old colt that has a swelling on one side of scrotum that causes no pain. Last fall it seemed to bother him and I applied light blister which caused it to open and discharge pus. This swelling is eight inches long, and hard, but painless. H. V. D., Byron Center, Mich.—I advise you to leave him alone, for it is almost impossible to reduce or remove a swelling of this kind. Give him 1 dr. potassium iodide at a dose in feed or water twice daily.

**Spinal Disease.**—Our yearling filly stepped in a hole and must have injured her back, for ever since she travels with fore legs wide apart and her hind quarters wobble. J. C. S., Chesil, Mich.—Give her ½ dr. ground nux vomica and 1 dr. potassium iodide at a dose in feed twice a day.

**Hoven.**—Ascites.—About a week ago I noticed one of my cows was bloated, but thought it was only a slight attack of indigestion and I gave her a pint of raw linseed oil and thought she would be all right. The third morning I found her dead. After skinning her I opened into abdomen and an enormous quantity of water ran out of her. This cow was due to calf in two or three weeks. C. B. H., Fennville, Mich.—Your cow suffered from functional disease of liver and kidneys; besides, her digestion was bad. The dropsical trouble was a result of other ailments and it is doubtful if she could have been cured. You may never have another case of this kind.



## This Baler is Automatic

Other Balers are not real self-feeders. They need a man on the feed-table, doing hard, slow, unsatisfactory work.

Now, Here is a Complete Machine. **Rumely Automatic Baler.**

This Baler is as different from other Balers as a self-binder is different from an old-fashioned reaper.

It cuts out the man on the feed-table, just as the self-binder cuts out the man in the field who bound the sheaves by hand. No other Baler is automatic. No other Baler can operate without a man on the feed-table.

We are able to sell this Baler at a very reasonable price. Write today for our Baler Book and other important information.

**RUMELY PRODUCTS CO., Inc.**  
62812 Main St., La Porte, Ind.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

REG. U.S. PAT. OFF.

## One Dollar a Wheel

Put Empire Low Steel Wheels On Your Wagon Now

Only \$1 to have a set of Empire Low Steel Wheels on your farm wagon for your heaviest hauling. End your drudgery of high lifting at once by sending only \$1 a wheel! Pay balance after 30 days' trial. Your money right back if the wheels are not as represented. We pay the freight both ways. You are not out one cent. Write us today for our "Dollar-a-Wheel" offer.

Your name and address on a postal card will do. We will send you FREE a Perfect Measuring Device to measure your axles with. Send for Catalog of 1912 Models of our Famous Empire Farmers' Handy Wagons. Address: **Empire Mfg. Co., Box 535, Quincy, Ill.**

AMERICAN GUARANTEED FOR 30 YEARS

INGOT IRON ROOFING

Money back or a new roof if it deteriorates or rusts out. No painting or repairs required. Our Indemnity Bond protects you. Costs no more than ordinary roofing. Write for big illustrated book FREE.

**The American Iron Roofing Co.**  
Station G, ELYRIA, OHIO.

5-PASSENGER Hupp Touring Car 1912 model for sale. Cheap, including extra tire, inner casing, speedometer, A-1 condition. Box L-24, Mich. Farmer, Detroit.

**WANTED.**—An experienced farmer, to rent on shares a farm containing 120 acres. High state of cultivation, well drained, well fenced. Man must understand dairy business as well as general farming. Will give possession April 1, or May 1, 1913. Only good man need apply. Must furnish references. Apply at once. Address C. H. BURGESS, Williamston, Mich.

**COMPETENT MAN WANTED.** to care for registered herd of Holstein cattle. Must be good milker, good feeder and general caretaker. Married man preferred. L. E. CONNELL, Fayette, Ohio.

**NEW LEHR BEAN HARVESTER.**  
It is too early to harvest but not too soon to buy a bean harvester. Buy now and you will have it when you need it. The Lehr is a time and labor saver. Fully adjustable. Works satisfactorily. If your agent does not carry ours write to the:

**The Lehr Agricultural Co., Dept. M, Fremont, O.**

**DO YOU KNOW BEANS**

have varied less in price for several years than any other crop you raise? Encourage your bean crop to do its best for 1912 and be sure and be prepared to harvest them on time with a rush. Don't run the risk of losing your hard labor and your most valuable crop by depending on an imperfect tool to harvest them.

The ORIGINAL

**"Patent Miller Bean Harvester"**

has not disappointed the Farmer for nearly forty years and it will not this year. They cost no more than the imitations.

Your best implement dealer has them.

Manufactured by

**LE ROY PLOW CO., LE ROY, N. Y.**

Michigan Distributors—

**JOHN DEERE PLOW CO., Indianapolis, Indiana.**

**FOR SALE.** One Registered Percheron Mare 2 years old. M. A. BRAY, Okemos, Michigan.

**40 HORSE POWER**

**1913 PRATT-FORTY**

Fourth Successful Year

Backed By 39 Years

Manufacturing Experience

Gray and Davis Dynamo Electric

Lighting System. Guaranteed for one

year. Self-Starters, 120-Inch Wheel

Base, Unit Power Plant, Three-point

Suspension, Bosch Magneto, De-

mountable Rims, 26x4-In. Tires, In-

side Control Levers. List price Model

H., \$2,000, fully equipped, Mohair Top, Windshield, Speedometer, etc. If you will write us, we will send you

our catalog and interesting proposition. We also make a full line of carriages and harness. Write today.

**ELKHART CARRIAGE & HARNESS MFG. CO., ELKHART, IND.**

**For Sale.**—Horses, cattle, sheep, swine, poultry and dogs, nearly all breeds. Sires exchanged. South West Michigan Pedigreed Stock Ass'n., David Woodman, Sec'y., Treas., Paw Paw, Mich.

## BREEDERS' DIRECTORY.

### CATTLE.

#### ABERDEEN-ANGUS.

Herd, consisting of Trojan, Erica, Blackbirds and Prides, only, is headed by Egerton W. a Trojan Erica, by Black Woodlawn, sire of the Grand Champion steer and bull at the International in Chicago, Dec., 1910. A few choice bred young bulls for sale.

**WOODCOTE STOCK FARM, Ionia, Mich.**

#### AYRSHIRES.

One of foremost dairy breeds: young bulls and bull calves for sale. Berkshire swine. All pure bred. Michigan School for Deaf, Flint, Mich.

**GUERNSEYS.**—Two nicely marked bull calves dropped in March, at farmers prices. ALLAN KELSEY, Lakeview, Mich.

**For Sale.**—Registered Ayrshire Bull Calves at farmers' prices. Also a few cows and heifers. E. A. BLACK, R. No. 6, Lakeview, Mich.

**GUERNSEY BULL CALVES** for sale, at prices you can afford to pay. (Reg.) W. W. BURDICK, Wayland, Mich.

**GUERNSEY BULL CALVES, YORKSHIRE PIGS, Good Stock.**

**HICKS GUERNSEY FARM, Saginaw, W. S., Mich.**

## A 24-lb. Bull

Have Bull Calves out of—13, 20, 23, 24-lb. Cows A. R. O. By a 24-lb. Bull.

My herd averages 19 lbs. If you want this kind write

**BIGELOW'S HOLSTEIN FARMS, Breedsville, Michigan.**

## HOLSTEINS

I can please any body with a service bull, bulls from one to ten months old, sired by Johanna Concordia Champion. Also cows and heifers bred to him. Write me for anything you want in Holsteins.

**L. E. CONNELL, - Fayette, Ohio.**

**HOLSTEIN BULL** calf sired by best son of daughters in advanced Registry, out of a grand daughter of De Kol 2nd, Butter Boy 3rd, over 100 daughters in advanced Registry. A beautiful calf of choicest breeding. Price only \$50.

**C. D. WOODBURY, Lansing, Michigan.**

## "Top-Notch" Holsteins.

Choice bull calves from 6 to 10 mos. old, of fashionable breeding and from dams with A. R. O. records, at reasonable prices. Also one 2-year-old bull, fit to head a good herd.

**MCPHERSON FARMS CO., Howell, Michigan.**

## 6 HOLSTEIN BULL CALVES

From \$50 to \$80. Send for pedigrees. **LONG BEACH FARM, Augusta, Michigan.**

**FOR SALE.**—6 yearling Holstein Friesian Bulls, 2 A. R. O. bred. Some cows. Also bull calves. 34 years a breeder. Photos and pedigrees on application. W. C. JACKSON, South Bend, Ind., 118 Rex St.

**HOLSTEIN BULL READY FOR SERVICE.**

A fine individual, beautifully marked, two-thirds white. His sire a grandson of Pontiac Korndyke and Hengerveld De Kol, his dam a fine young daughter of Sir May Hartog Posch.

**ED. S. LEWIS, Marshall, Michigan.**

**Holstein Bull Calf**—dropped Feb. 17, 1912, nearly white, 37½% blood. Hengerveld De Kol dams; record Senior 2-year-old, 15.97 lbs. butter.

**GEORGE E. LAPHAM, R. 8, St. Johns, Mich.**

**Holstein-Friesian Cattle.**—The kind that make good.

**GREGORY & BORDEN, Howell, Michigan.**

**Purebred Registered HOLSTEIN CATTLE**

The Greatest Dairy Breed

Send for FREE Illustrated Booklets

**Holstein-Friesian, Assn., Box 164, Brattleboro, Vt.**

**REGISTERED HOLSTEIN CATTLE.**—Bulls all sold. Herd headed by Hengerveld Coin Pietertje LOYD F. JONES, R. F. D. 3, Oak Grove, Mich.

**Big Bull Bargain.**—Choice registered HOLSTEIN ready for service. Hatch Herd, Ypsilanti, Mich.

## Lillie Farmstead JERSEYS

Bulls ready for service, also bull calves and heifer calves. Cows all in yearly test. Satisfaction guaranteed.

**COLON C. LILLIE, Coopersville, Mich.**

**MARSTON FARM—JERSEY CATTLE.**

**T. F. MARSTON, Bay City, Michigan.**

**NOTICE.**—I offer for sale a fine three-year-old Jersey cow. Also two young bull calves at bargain prices. C. A. TAGGETT, R. No. 1, Caro, Mich.

**Jersey Cattle For Sale.**

**C. A. BRISTOL, Fenton, Michigan.**

**BUTTER BRED JERSEY BULLS**

**FOR SALE**

**CRYSTAL SPRING STOCK FARM,**

**Silver Creek, Allegan County, Michigan.**

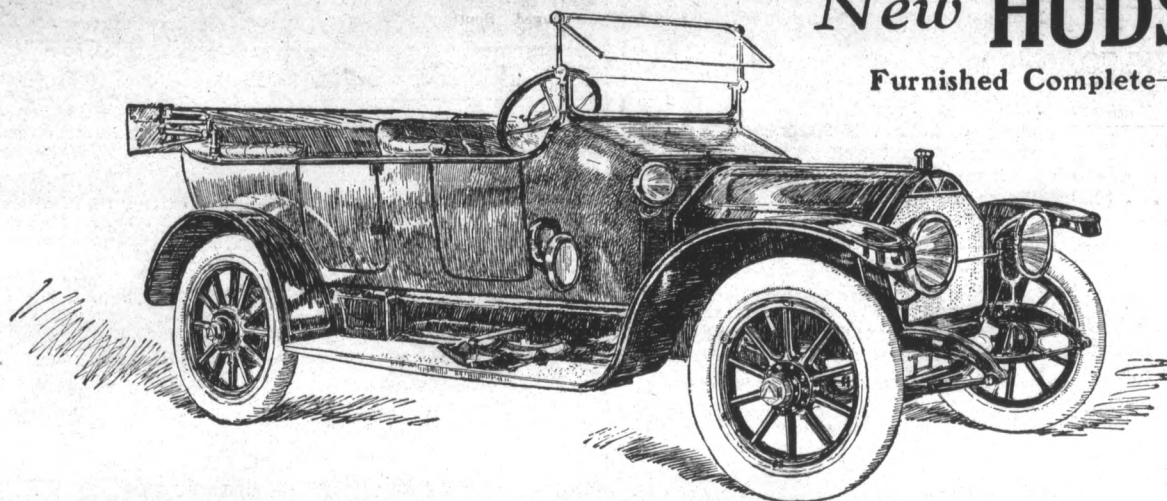
**RED POLLED.**—Choice lot of females any age, also some bull calves.

**J. M. CHASE &**



## New HUDSON "37"

Furnished Complete—No Extras to Buy



*The Masterpiece of 48 Engineers. They Had a Hand in Building 200,000 Cars of 97 Well Known Makes*

## Don't Fail to See This Car

In the HUDSON "37" is expressed the combined skill and experience of the greatest body of automobile engineers in the industry.

These men represent the training of the greatest factories in the world. They have learned what experience has taught the 97 principal makers of Europe and America.

They were active, important members of those various organizations and combined had a hand in the production of more than 200,000 automobiles.

Imagine what strides, what advancement, men of such experience are bound to offer in the car which all have joined in perfecting.

You probably have an ideal of what a motor car should be. Your knowledge of automobile shortcomings undoubtedly has suggested improvements which you would have in a car if it were built to your order.

Well, here is where you will find not only what you wish to see, but also what has been expressed through the experience that has been gained from the 200,000 owners who have used the cars which these men have helped to build.

It is all in the one car. It expresses as nearly the limit of four-cylinder construction as has been reached.

### Electric Self-Cranking—Electrically Lighted

#### The Greatest Engineer of All—Their Chief

At the head of these experts is Howard E. Coffin, the foremost automobile engineer of America, recognized here and abroad as the most startlingly original designer the industry has produced.

His genius is an inspiration to his associates. From him they have gained in ability. On account of them he has become a broader and more versatile builder.

What one man lacked in experience, some one of his associates was able to supply. The problems one was unable to solve, others soon found the answer for.

That accounts for the completeness of this car. That accounts for the fact that you will find on it the very things that you have wished to find on an automobile. That explains why this car will do the things which other four-cylinder automobiles have failed to accomplish.

#### Hadn't You Better Wait?

Even if you are impatient to have a new car now, don't you think it better to see the HUDSON "37" before you buy?

It will only be a few days at the most before your dealer will have a "37" to demonstrate to you. If you buy any other car before you have seen the "37" disappointment is surely in store for you.

No car you can get today, regardless of price, has all the features that are offered in the "37."

Consider for a moment the rapid advancement that has been made in motor car building. It is almost as startling as are the changes in fashion. Think how strange are the open cars of two years ago. What proportion of their original cost do you think such cars now bring? It is not due to wear that their value has declined so much. No, it is the advance that has been made in automobile building since the open cars were put on the market.

With that thought in mind you must recognize the importance of choosing wisely now. Automobiles as now built should be of service for many years and you don't want to feel that you will have to buy a new car in two, three or four years because the one you have just purchased, will at that time be out of date.

#### Your Safety in This Choice

No one is likely to soon have many new ideas to offer that these 48 engineers have not already anticipated.

They all combine in saying that the new HUDSON "37" represents the best that there is in four-cylinder construction.

They proved every move they have made through 20,000 miles of gruelling country, mountainous, mud and snow driving.

The most abusive treatment one of the most skilled drivers in the world could give this car in the thousands of miles he drove it, without developing a single weakness, or discovering a single detail in which improvement could be made either in design, construction, simplicity, easy riding qualities, responsiveness, safety or power, is a guarantee that you will find it expresses your ideal of what a four-cylinder car should be.

#### Some of its Notable Features

**Electric Self-Cranking.** Automatic. Will turn over motor 30 minutes. Free from complications. Simple. Positively effective.

**Electric Lights.** Brilliant head lights. Side lights. Tail Lamp. Illuminated dash. Extension lamp for night work about car. All operated by handy switch on dash.

**Ignition.** Integral with electric cranking and electric lighting equipment. Gives magneto spark. Known as Delco Patented System, the most effective, efficient yet produced.

**Power.** Four-cylinder—en bloc, long stroke. New type, self-adjusting multiple jet carburetor. High efficiency, great economy, 43 horsepower, brake test, 37 horsepower at 1500 revolutions per minute.

**Speedometer.** Clock. Illuminated face. Magnetic construction. Jeweled bearings. Registers up to 60 miles an hour. Eight day keyless clock.

**Windshield.** Rain vision and ventilating. Not a makeshift. Not an attachment. A part of the body.

**Upholstering.** 12 inches deep. Highest development of automobile upholstery. Turkish type. Soft, flexible, resilient. Comfortable positions. Handbuffed leather—the best to be had.

**Horn—Bulb type.** Concealed tubing.

**Demountable Rims.** Latest type. Light. Easily removed. Carry 36x4-inch Fisk tires—heavy car type. Extra rim.

**Top.** Genuine mohair. Graceful lines. Well fitted. Storm curtains. Dust envelope.

**Bodies.** Note illustration. Deep, low, wide and comfortable. You sit in the car—not on it. High backs. Graceful lines. All finished according to best coach painting practices. 21 coats—varnish and color.

Nickel trimmings throughout.

**Gasoline Tank.** Gasoline is carried in tank at rear of car. Simple, effective, with two pound pressure. Keeps constant supply in carburetor either going up or down hill. Magnetic gasoline gauge continually indicates gasoline level.

**Wheels.** Extra strong. Artillery type. Ten spokes in front wheel. Ten hub flange bolts. Twelve spokes in rear wheel. Six hub flange bolts. Six spoke bolts.

**Bearings.** All Roller bearings, thoroughly tested. Latest type.

**Rear Axle.** Pressed steel. Full adjustable, full floating. Large bearings. Heat treated nickel steel shafts. Easily disassembled, an item which indicates the simplicity and get-at-ability of the entire car.

**Models and Price.** Five-Passenger Touring, Five-Passenger Torpedo, Two-Passenger Roadster—\$1875, f. o. b. Detroit. Canadian price, duty paid, \$2425 f. o. b. Detroit. One price to all—everywhere.

**Simplicity.** The HUDSON standard of simplicity is maintained. Every detail is accessible. There is no unnecessary weight. All oiling places are convenient. There are but two grease cups on the motor. Every unit is so designed that it can be quickly and easily disassembled. Think what an advance this is over even the previous HUDSON—the "33"—the "Car with 1000 less parts."

## HUDSON MOTOR CAR COMPANY

7396, Jefferson Avenue, Detroit, Michigan



# The Michigan Farmer

ESTABLISHED 1843.

THE LAWRENCE PUBLISHING CO.  
EDITORS AND PROPRIETORS.

39 to 45 Congress St. West, Detroit, Michigan.

## TERMS OF SUBSCRIPTION:

**Five Years 260 COPIES POSTPAID \$2.75**  
**Three Years, 156 copies, Postpaid . . . \$2.00**  
 One Year 52 Copies, Postpaid . . . 1.00  
 Six Months 26 copies, Postpaid . . . .60 cts  
 Canadian subscriptions 50 cents a year extra for postage.

## COPYRIGHT 1912

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

WE GUARANTEE to stop THE MICHIGAN FARMER immediately upon expiration of time subscribed for, and we will pay all expenses for defending any suit, brought against any subscriber to The Michigan Farmer by the publisher of any farm paper, which has been sent after the time ordered has expired, providing due notice is sent to us, before suit is started. Avoid further trouble by refusing to subscribe for any farm paper which does not print, in each issue, a definite guarantee to stop on expiration of subscription. The Lawrence Publishing Co., Detroit, Mich.

DETROIT, AUG. 3, 1912.

## CURRENT COMMENT.

In another column of this issue will be found an article on the organization of an improvement association with its headquarters at the county seat of one of the important agricultural counties in the state. The plan upon which this association is organized, as outlined in this article, shows that there is a recognition by the leaders in the affairs of both city and country of the fact that their interests are very similar in character, and that what will be beneficial to the one will also be helpful to the other.

One of the most encouraging tendencies of our modern times is this getting together of urban and rural interests which has been noted many times through these columns during the past year. This general recognition of the fact that the interests of our county, state or country should be considered as a unit and that whatever makes for the advancement of any one division or class of people is also beneficial alike to others, promises well for the future material advancement of our prosperity in future years. This tendency has been shown not alone in the matter of commercial organization, but has found expression in a social way as well. Many of the Farmers' Clubs and Granges have a town membership and many of the town organizations have country membership.

There cannot be too great a development of this spirit of unity between urban and rural people along industrial or social lines. It is a work which should receive encouragement from every source and this movement for business unity in the promotion of the interests of an entire county is certainly a move in the right direction.

After weeks and months of discussion of the parcels post proposition the senate committee on post offices and post roads reached an agreement on the post office appropriation bill, including a parcels post provision, which it will be remembered was made a part of the post office appropriation bill instead of being threshed out as a separate problem, pursuant to the recommendation of the postmaster-general. This agreement is practically the parcels post bill as drawn by Senator Bourne, with some compromise provisions.

Briefly summarized, this bill provides that postal rates on parcels shall vary with distances, thus protecting local merchants and competing with the express companies. The most radical provision, however, is the entire elimination of one class of matter, the third and fourth classes of matter being combined. The class eliminated is that known as third class matter which included books, catalogs, circulars, form letters and other printed matter, packages of seeds, plants, bulbs, etc., which class of matter is now available at once cent for each two ounces or fraction thereof.

The rates on this combined class of mailable matter are figured in this new bill according to a zone system, a special rate of one cent per ounce up to four ounces being provided for circulars and small packages of goods. The rates for local city and rural delivery are five cents for the first pound and one cent for each additional pound. Within the 50 mile zone six cents for the first pound and two cents for each additional pound; with the 200 mile zone seven cents for the first pound and three cents per pound for each additional pound; within the 500

mile zone eight cents per pound for the first pound and four cents for each additional pound; within the 1,000 mile zone 11 cents for the first pound and seven cents for each additional pound; within the 2,000 mile zone 12 cents for the first pound and 10 cents for each additional pound; outside the 2,000 mile zone 12 cents per pound and 12 cents for each additional pound.

These rates, according to the senate committee, are based upon the careful computation of actual cost of carrying, distributing and delivering packages, plus actual cost of transportation. The weight limit is fixed at 11 pounds and the maximum charge 12 cents per pound, which are the international limits and rates.

It appears, however, from an analysis of the rates that books and catalogs formerly available at the third-class rates will be obliged to pay a considerably higher rate than at present, and higher even than would be required to be paid by those mailing similar articles from foreign countries to any point within this country. Apparently this compromise was reached as a means of satisfying the people who have demanded an adequate parcels post and those who have objected to its application under the fundamental principle of our post office service, which has not taken into consideration the item of distance in the matter of the charges made, and like most compromises of this character, it would seem to have some serious defect.

In view of the present situation we would reiterate our declaration of some time ago, that it would be better for the friends of parcels post to advocate the thorough investigation of every phase of the question by a joint committee, their report to be acted upon at the next session of congress, instead of favoring the early disposition of the matter in a poorly considered rider to the general post office appropriation bill. What the people of the country want is an adequate parcels post system without the complications and costly preparations which a proposition of this kind would seem to entail, and a schedule of the rates which would be plain to the average patron without the assistance of an expert interpreter of rate sheets.

Possibly this may be the kind of parcels post which is best adapted to a big country like ours, but this ought to be carefully demonstrated by a campaign of education before we make any expensive experiments, since it is not the kind of parcels post that those who have favored the proposition have had in mind.

**To Investigate European Co-operative Credit Systems.**

Hon. David Lubin, delegate of the United States to the International Institute of Agriculture at Rome, has prepared a report to that body on the conference held at Nashville, Tenn., in April, 1912. Michigan Farmer readers will remember that at the session of the Southern Commercial Congress, held at Nashville, the initiatory step was taken toward the investigation of European systems of co-operative rural credit, that a conference was held between the American delegate and officials of congress and that after a conference lasting a week resolutions were passed favoring the formation of a select committee of two members from each state in the Union to visit Europe and investigate the credit systems there developed, with a view to making a recommendation regarding the establishment of a similar system in the United States which would be best adapted to our conditions.

In the report by Mr. Lubin, it appears that the date decided upon for the American committee to start on its journey to Europe is May, 1913, which time has been adopted. The original plan of having two delegates from each state was adhered to and the point is made that by having the committee start in May, 1913, an opportunity will be afforded to ask the state legislatures, most of which will be in session from January 1, 1913, to make the requisite appropriations for the traveling expenses of these delegates. It is estimated that \$1,200 would cover the three months' traveling expenses for each delegate, including his proportionate share of cost of stenographic reports, translations, etc.

In his communication Mr. Lubin says: "It is now in order for the agricultural organizations and the leaders in agricultural industries in the United States to see that each state appoints its delegates to the American committee, to pledge candidates for election to the state legislatures in November to support the requisite appropriations and to work earnestly for this purpose during the ses-

sions of the legislatures." He also suggests that all agricultural organizations appoint committees to take up the work now, to the end that every section of the United States may be represented in this committee which will start for Europe in May, 1913, to investigate European co-operative credit organizations. Correspondence with regard to same should be directed to the Southern Commercial Congress, Southern Bldg., Washington, D. C., and requests for publications on the subject to the American Delegate to the International Institute of Agriculture, Rome, Italy.

Considerable space has been devoted to this proposition of European credit organizations in the editorial columns of the Michigan Farmer. Without question they afford an example by which Americans should profit, and this move toward the sending of a representative body of men who are interested in American agriculture to make this investigation and report a practicable scheme for the organization of a national rural society in the United States, which will be adapted to our needs and conditions, is one which should receive the support of every person who is interested in the further up-building of our agriculture. Indeed, it is believed by many that a national movement of this kind would bring about in a natural way a desirable measure of banking and currency reform, and afford an elasticity to our circulatory medium which is generally recognized as desirable, but for which adequate provision has not yet been made.

## HAPPENINGS OF THE WEEK.

## National.

Two men, a woman and three boys were killed outright when a Lake Shore & Michigan Southern train struck an automobile at a crossing near Alexis, Mich., Sunday afternoon. The approaching railroad train was obscured by a corn field. A number of passengers were hurt when two electric cars collided just outside of the city of Detroit on the Detroit, Jackson & Chicago road. The accident occurred Sunday night during a storm. It was claimed by the officials that the danger lights were obscured by the heavy rain which was falling.

Unusual excitement was caused last week by the arrest of several aldermen of the common council of Detroit upon the charge of graft. Detectives had been employed in connection with the closing of Seventh street to accommodate the enlargement of certain railroad properties. In order to secure the required votes for passing the ordinance closing the street it was necessary to pay for same in amounts ranging from \$100 to \$1,000. It is probable that a grand jury will be selected to review the evidence collected by the detectives and investigate further into the charges that have been made.

Seven balloons started from Kansas City in the elimination contest to determine the three American balloons to enter in the international balloon race in Germany next fall. Two of the balloons were unheard from Monday. The Kansas City No. 2 landed about 24 miles from Detroit on Sunday after having sailed about 640 miles. This is the longest trip made by any of the balloons reporting.

The demand for steel is so urgent at present that premiums are being paid by consumers for prompt shipments. The price for steel rails has advanced, as has also the price for steel pipe.

According to the bureau of statistics the total volume of exports from this country during the past fiscal year amounted to over \$1,000,000,000. The most rapid growth of any export product on the list is in automobiles, which during the past year were shipped abroad to the value of \$28,600,000. In 1902 only \$1,000,000 worth of autos were exported. The republican members of the Stanley steel committee have recommended a law under which an interstate corporation would be required to obtain a charter from the federal government before doing business.

Orders have been awarded the various car companies by the Denver & Rio Grande railroad for 760 box cars, 100 stock cars, 350 coal cars and 50 cabooses, entailing a cost of \$1,000,000.

There appears to be no legal opposition to the merger of the Bell Telephone and Home Telephone Companies in Michigan. Hearings have been held before the state railway commission and it appears from the reports of the hearings that the privilege will be allowed. The only obstacle that is delaying the final decision is whether independent companies throughout the state who have had working arrangements with the Home Telephone people will be protected in their rights when the physical property of that concern is transferred to the Bell Telephone Company. It is the purpose of the commission to see that these rights are properly surrounded with safeguards.

Effort is being made to secure congressional legislation providing for the construction of an ocean-to-ocean road across the United States. It is the purpose of the promoters to follow the old trail across the continent if they are successful in their efforts to get the favor of congress.

The supreme court of the state of Illinois sustained the law enacted by the legislature of that state prohibiting the drinking of intoxicating liquors on railroad trains in the case of Tarantia vs. Louisville & Nashville railroad.

## Foreign.

Mutsuhito, who for 44 years has been Emperor of Japan, died at Tokio last Monday morning. He was the 121st emperor of that country. His son will succeed to the throne. The dead emperor's reign was one of great importance to Japan for, during that period the country was transformed from a simple hermit nation to a world power.

In a dense fog the steamship Empress of Britain, of Quebec, collided with the steamer Helvetia between Cape Magdalen and Fame Point. The latter boat was struck amidships and cut in two. Her crew was saved. The Empress of Britain returned to Quebec with her bow badly stove in and her fore compartments filled with water.

The rebel band in Northern Mexico are now using guerilla methods. The federals under Gen. Tracey Aubert are well scattered over the entire territory and will fight the rebels after the latter's own methods.

Complications are reported in the settlement of the dock workers' strike in London. The representatives of the men reached an agreement with the employers and declared the strike off. The workers, however, affirm that the representatives betrayed them and that they will not consent to the terms of the agreement made. Just what the outcome of this will be it is impossible to state.

## MICHIGAN FAIRS FOR 1912.

The following contains a list of fairs to be held in Michigan during 1912. Most of the dates have been received from official sources but should anyone have positive knowledge of incorrectness in the list we would appreciate greatly if they would advise us with correction. Also, if any fairs are omitted we would be pleased to receive information regarding them. The list is arranged as follows: First, the name of fair; second, where it is held; third, the date.

So. Michigan State Fair, Benton Harbor, Aug. 13-16.  
 Tuscola Co., Vassar, Aug. 21-24.  
 Cass City, Cass City, Aug. 20-23.  
 Caro, Caro, Aug. 26-30.  
 Flint, Flint, Aug. 26-30.  
 Gratiot Co., Ithaca, Aug. 27-Sept. 1.  
 N. E. Michigan, Bay City, Sept. 2-6.  
 Antrim Co., Bellaire, Sept. 3-6.  
 Barry Co., Hastings, Sept. 2-5.  
 Cass Co., Cassopolis, Sept. 3-6.  
 Howard City, Howard City, Sept. 3-5.  
 Marquette Co., Marquette, Sept. 3-6.  
 Sanilac Co., Sandusky, Sept. 3-6.  
 West Michigan State, Grand Rapids, Sept. 9-13.  
 Charlevoix Co., East Jordan, Sept. 10-13.  
 Deckerville, Deckerville, Sept. 10-13.  
 Menominee Co., Menominee, Sept. 10-13.  
 Thumb District, Port Huron, Sept. 10-13.  
 Michigan State, Detroit, Sept. 16-21.  
 Allegan Co., Allegan, Sept. 17-20.  
 Berlin, Berlin, Sept. 17-20.  
 Cadillac, Cadillac, Sept. 17-20.  
 Calhoun, Marshall, Sept. 16-20.  
 Delta Co., Escanaba, Sept. 17-20.  
 Emmet Co., Petoskey, Sept. 17-20.  
 Greenville, Greenville, Sept. 17-20.  
 Huron Co., Bad Axe, Sept. 17-20.  
 Otsego Co., Gaylord, Sept. 17-20.  
 Cheboygan Co., Wolverine, Sept. 25-27.  
 Chippewa Co., Sault Ste. Marie, Sept. 26-27.  
 Copper Co., Houghton, Sept. 24-28.  
 Ionia Co., Ionia, Sept. 25-27.  
 Inter-State, Kalamazoo, Sept. 23-28.  
 Lenawee Co., Adrian, Sept. 23-27.  
 Milford, Milford, Sept. 24-27.  
 North Branch, No. Branch, Sept. 25-27.  
 Oceana Co., Hart, Sept. 24-27.  
 St. Joseph Co., Centerville, Sept. 24-27.  
 Armada, Armada, Oct. 2-4.  
 Eaton Co., Charlotte, Oct. 1-4.  
 Hillsdale Co., Hillsdale, Sept. 30-Oct. 4.  
 Imlay City, Imlay City, Oct. 1-3.  
 Osceola Co., Evart, Oct. 1-4.  
 Fowlerville, Fowlerville, Oct. 8-11.  
**State Fairs and Expositions.**  
 Iowa, Des Moines, Aug. 22-30.  
 Ohio, Columbus, Aug. 26-31.  
 Canada, Toronto, Aug. 29-Sept. 9.  
 Indiana, Indianapolis, Sept. 2-6.  
 Minnesota, Hamline, Sept. 2-7.  
 Nebraska, Lincoln, Sept. 2-6.  
 West Virginia, Wheeling, Sept. 2-6.  
 Kentucky, Louisville, Sept. 9-14.  
 New York, Syracuse, Sept. 9-14.  
 South Dakota, Huron, Sept. 9-13.  
 W. Michigan, Grand Rapids, Sept. 9-13.  
 Wisconsin, Milwaukee, Sept. 10-14.  
 Michigan, Detroit, Sept. 16-21.  
 Illinois, Springfield, Oct. 4-12.  
 International Dairy Show, Milwaukee, Oct. 22-31.  
 National Dairy Show, Chicago, Oct. 24-Nov. 3.

## MICHIGAN FAIRS THAT SHOULD BE WELL ATTENDED.

One of the first and best fairs in Michigan is the one held in Tuscola county at Vassar on Aug. 21-22-23-24. Horse races and other big attractions are promised. Wm. Grant, Sec.

The Caro Fair and Night Carnival is looked upon as one of the most successful fairs in Michigan. It will be held at Caro, Aug. 26-27-28-29-30. F. B. Ransford, Sec.

The Sixty-third Annual Flint Fair will be held Aug. 26-27-28-29-30. This fair will be a great one and not to attend will mean loss of profit and pleasure. Wm. Veit, Sec.

The Southern Michigan State Fair this year promises to be the "Biggest Yet." After much study and thought the board of directors have placed the dates Aug. 13-14-15-16-17, believing that a date at this season of the year in this particular location will give the best results. There are to be many radical changes in the procedures and many novelties offered in the way of free attractions. The buildings and grounds are now in the hands of the ground-keepers and will be renovated and renewed in a large degree.



# Magazine Section

LITERATURE  
POETRY  
HISTORY and  
INFORMATION

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

The FARM BOY  
and GIRL  
SCIENTIFIC and  
MECHANICAL

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

## A CASTLE TOWN AND ITS CHIVALRY.

BY EDGAR WHITE.

WHEN the daily press recently announced the incorporation of "The College Mound Oil Company" it is very likely that not one reader out of a thousand had the slightest idea where the place was. Sixty years ago nearly everybody in the west could have told something about the town on the hill. Then it was a seat of learning, having students from Missouri and many other states. The large castle-like structure, with its imposing towers, stands today on its lofty eminence, just as it did in '51. Now the world rushes by behind the iron horse, and the old college is far away from its pathway. That explains the difference. That is why the ancient town and its quaint school buildings are only a memory to white-haired doctors, lawyers and business men scattered throughout the Mississippi Valley.

If College Mound were in Switzerland, or nestling amid the pleasant hills of old England, it would long since have become immortalized in the printed record of history and of the magazines. The average American doesn't see the picturesque about his own vine and fig tree. To him the place would simply be catalogued among the "lost towns," with the possibilities of a restoration by a big oil concern—nothing more.

Leaving the ridge road on the east you drop down into the valley, which you cross at a lively gait because the road is smooth, and then begin an ascent of the long hill, on the crest of which arises, out of the mists, as an apparition of the dead and forgotten past, the big structure which gives the town its name. Nestling about its feet on the hillside, like the cottages of its tenantry, are the homes of those who have not forsaken the old town with its glory.

Sir Walter Scott, with such a subject, might have called us about the fireside of a stormy winter's night, and peopled the place with fierce men-at-arms, sworn to the bidding of some mighty baron. For the foray, the scout, the tourney he would have the wide swells of blue-grass meadow, the soft carpeted forest, the smooth plateau. Calling up the past he would have the old tavern, with its swinging sign, the six-horse stage coach

College and came back, and some who did not return. There was a day when the students met in the large chapel and in the presence of the president chose the colors under which they would serve. There were some who donned the blue and some who espoused the gray.

Under the trees at Penny's Ridge those of the gray met and chose a tall fair

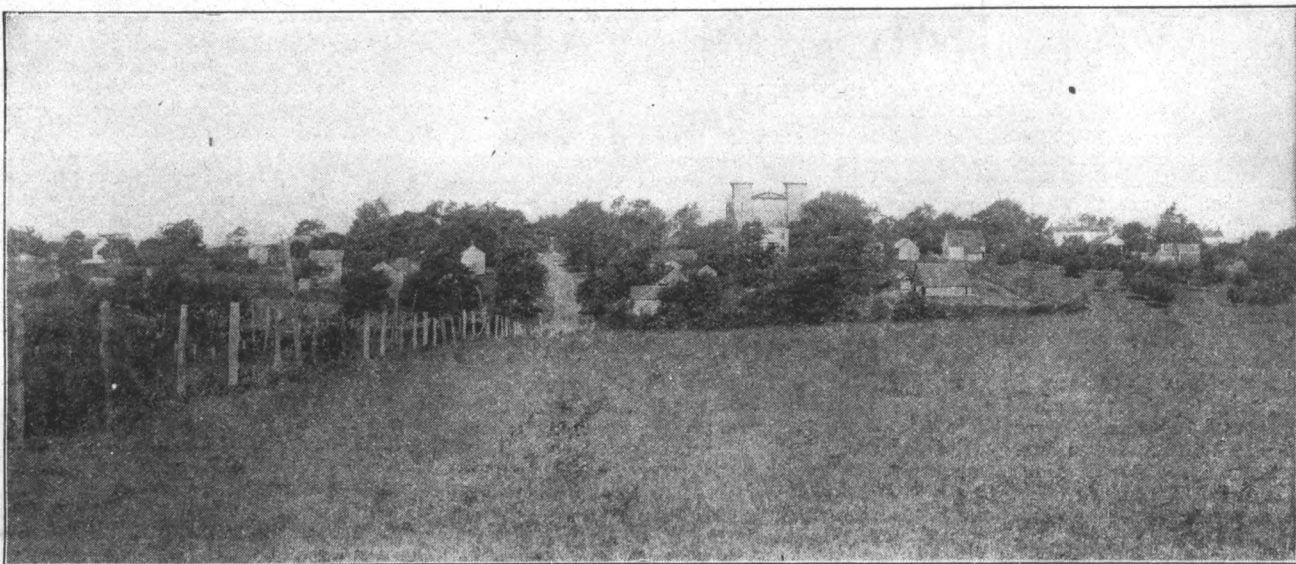
patriotism—the man who would fight and die for his country. Patriotism is only a broadening of the love for the hearthstone."

Of a verity there was character about the town on the big hill. Robert Gipson, five foot tall, lived to be 118 years old, and after being mustered in was rejected because he was too old. He was then

there was not a punctuation mark of any kind, and most of the words disclosed an individuality of spelling. When the old gentleman died some of the distant kin immediately went to law to break the document which had been prepared with such care to outwit the lawyers.

"Why, sure," said the men of Blackstone; "it will be a joke to bust that; why, it doesn't mean anything."

Seven astute lawyers got into the game



College Mound, Showing the Old Castle-like College Structure Erected Ten Years Before the Civil War.

stripling as their captain, and as their lieutenant a dark-eyed, clear-headed student of the law but recently wedded to one of the most beautiful maidens in all that country. Destiny took the captain through a hundred battles, right up to the cannon's mouth, with flashing sabre, and brought him home to his loved ones. It took the dark-eyed lieutenant along the same path up to one hot summer day. The troopers were guarding a southern railroad embankment, when it sent a minie ball squarely into his forehead, and the sweet-faced young woman, waiting in the shadow of the great ca-

45, and lived 73 years after being denied the honor of dying for his country.

"I'll show 'em that I'm only a young chap," he said, and he just kept on living long after those who had turned him down had died of old age.

Robert's son, Smith, born and reared on the great hill, was an illiterate man, but with plenty of good, hard sense. As he was getting along in life a mule kicked him and he thought he was going to die. So he called for foolscap paper, a quill and some ink. Then he disposed of his lands, houses, horses, mules, cattle and farming tools among a score or so

and began figuring on how long they could keep the case in court. It looked like easy money. The will was printed in the newspapers and law magazines as a curiosity of literature. The old testator was ridiculed for trying to beat the lawyers with a Chinese puzzle.

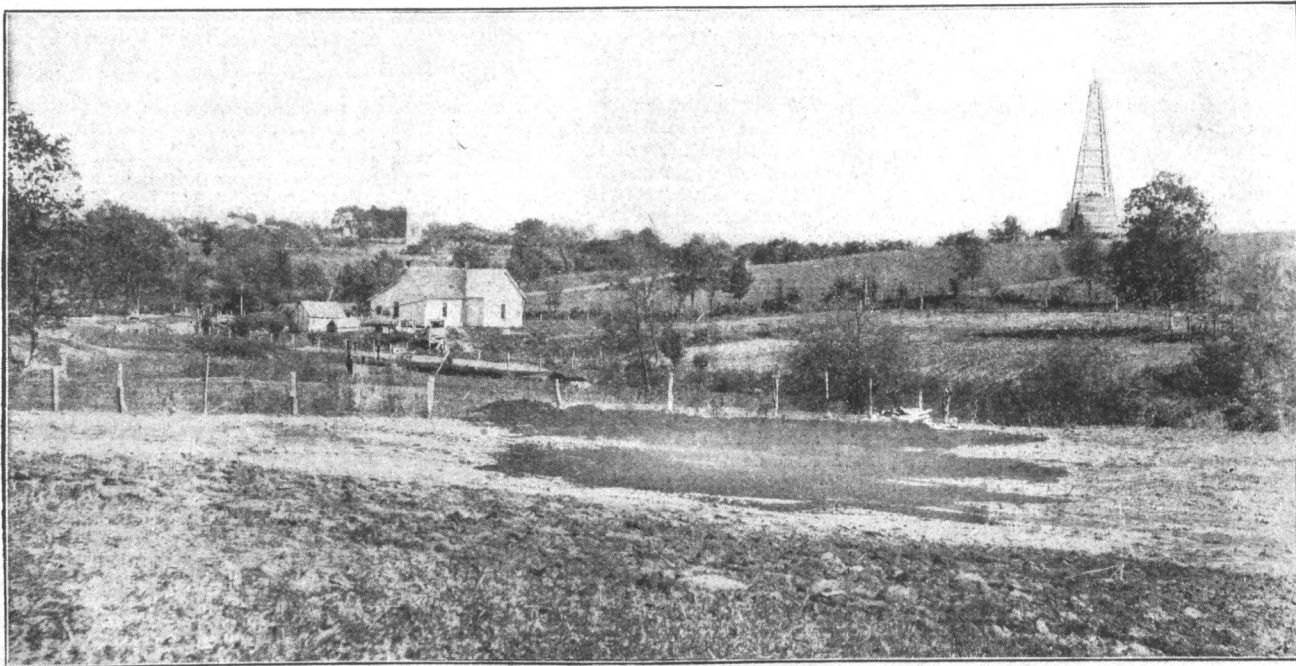
The circuit judge took the will out of the clerk's office one night and sat up with it at home. Next morning he came into court with the problem solved.

"Gentlemen," he said to the array of lawyers, "it is very clear to me that the old man meant so and so," and he went on, taking up that funny looking document phrase by phrase, and shedding the light on it. When he had finished it was as clear as the noonday sun just what the old man wanted to do with his earthly possessions, and the case stopped then and there.

"Uncle" Jimps Dysart, one of the founders of the College, was a Presbyterian from away back. Although a great friend of education, he hadn't had time in his busy life for much "book-larnin'." But it was no handicap. He debated with any sort of talent the Baptists or "Campbellites" sent against him, and invariably won. "Because he wore 'em out," the discomfited ones would say. It was related of "Uncle Jimps" that he refused to join in a meeting where they were praying for rain "because the wind was in the wrong direction."

"Uncle Jimps" was once matched for a debate with a Campbellite—that's the term they used in the old days, and it was intended to convey no reproach—his opponent having been contracted for by the Baptists. Not long before, "Uncle Jimps" had worsted a very learned Baptist debater, and the Baptists declared the only reason was that their champion lacked the physical ability to talk as loud and long as "Uncle Jimps." But the Campbellite was as big and strong as "Uncle Jimps." The Baptists, confident in their gladiator, were out in force, right up in front.

For the first half day the two men sparred for points. In the afternoon "Uncle Jimps" agreed to some proposition his opponent laid down. Then the Campbellite acquiesced in a shot "Uncle Jimps" made at the Baptists. Before



Another View of the Old Town with the College Building on Mound in Left Background.

running from the Missouri river to the capital city of Iowa, the huntsman with plumed hat and flint-lock rifle, the winding horn and the long lean hounds of the chase. For College Mound had all these glories when her big building was young. And then it had its tragedy, too. There were some who went to war from the

thedral structure, laid aside her pretty clothes and selected a dress of black. —ed his task he looked at the document complacently.

"You go to the hills," said Opie Read once to the writer, "when you want character. The feud was born amid the hills, not on the plains. An excess of sentiment is the foundation of the feud. When you broaden the feud you have

"There!" he said to the children, "I have made it so plain that you won't need to spend any money lawin' over it." The will began thus: "in the naim of god amen." In the 2,000 words of it



long both debaters joined forces and were ripping into the Baptists' ranks right and left. "Uncle Jimps" had taken his opponent into camp, and the Baptists who had come to cheer left to weep.

When the Civil war was at its height word reached College Mound that "The Black Horse Cavalry," of Iowa, were headed down for Macon and Bloomington for the startling purpose of wiping out two good towns. Many citizens of College Mound were then fighting in the south, but there were plenty of old farmers about the big hill, and they gathered their flintlocks, scythes and corn-knives and hastened to the threatened points.

The "invasion" it was said, was scheduled to occur on a certain date designated as black Friday. It was a dark, rainy day. The patriots from College Mound patrolled the streets all day waiting to spit the "Black Horse" and their riders, but the enemy never came, and the College Mound army was convinced that the reason was the "invaders" had learned of the reception awaiting them.

College Mound has never had a circus, a merry-go-round or a moving picture show. Its only annual diversion is a big Holiness campmeeting, which runs for ten days every summer. Then the village is roused to its old-time life and hustle, for the campmeeting brings many people to town. Of night all the little

stores and cafes are brilliantly illuminated with oil lamps, and here and there is a street light. To College Mound, and for miles around, it is the harvest home occasion, and everybody quits work and goes to town. The meeting itself is not the only magnet. It is the social opportunity; the meeting of old friends, an occasion when everybody is out.

For 21 years the Holiness people have held their big meeting at the hill town. It was far from the "maddening throng," the lure of theatres, the temptation of the saloon.

If vast lakes of oil are washing the underworld shores about the College the discovery will be read with interest by the alumni now scattered to the four corners of the nation. The commercial experts of a far-off state who made a \$50,000 wager that there was oil in those parts were not attracted by the sentimental atmosphere about the school-castle and its hive of retainers. Their surveyors took no account of the almost sacred history that belongs to everything within reach of vision from the tower loft.

"If we hit it," they say, "we'll make a burg out of this place. Wonder you fellows never thought of getting busy on this proposition yourselves."

It is the spirit of the age. Sir Walter Scott stands no show with steam shovels, pipe-lines and railroad cars.

## A WATERMELON WAR.

• BY ADELA S. CODY.

The vine grew on Mr. Norton's side of the fence but a stray runner had crept through a knothole in one of the lower boards and snuggled down among the petunias that were massed under the hollyhocks which rose in a gorgeous array of red and white along the trim walk which led to Mrs. Fenmore's door. There it flowered and bore a melon that acted like the little green peach which proved so disastrous to Johnny Jones and his sister, Sue, for "it grew and it grew and it grew" in the most remarkable manner until it threatened to reach the tops of the hollyhocks themselves.

Mrs. Fenmore looked at it with admiring eyes and a troubled mind. Daily she asked herself, did it belong to her or to her neighbor?

They were not on "speaking terms" and not by the stiffest bow did they acknowledge that they were aware of each other's existence. So Mr. Norton did not know that the prize melon of Sweetbriar Dale had rambled off his premises and was flourishing among his neighbor's flowers.

She had a hard task to impress upon the mind of her nine-year-old son the fact that the melon did not become theirs just because it happened to grow on their side of the fence, and that "plugging" it to test its ripeness was not to be thought of for one moment. But every time Eddie passed up or down the walk he would pause and furtively push aside its veil of glowing petunias and pound its big speckled side with his fist, listening eagerly to hear the drum-like echo which would proclaim that it was ready to be eaten. And his air of mystery and the hints he dropped when he encountered Clarence Norton were fairly maddening to that young person.

Although Eddie kept his secret darkly, its influence was felt among the boys of the village who took sides with the twain, although ignorant of the cause of the trouble. Eddie was always able to find fine, fat angleworms any hour during the fishing season, and was the best pitcher in the club, and wasn't afraid to hold bumblebees in his bare hand, while Clarence was generous in treats of chewing gum and taffy and always had various kinds of pencils and bits of string to lend or give, so each boy became the head of a gang which upheld him and whatever he did.

Surrounded by their gang as "backers" one day, the boys had a glorious "scrapping match," and Eddie carried home one eye hidden by a thick black "shutter" and wore a corsage bouquet of blue and black marks over his chest, while Clarence surprised his father by the unusual width and vivid color of his nose and a "tattoo" of black and blue spots over his chest and shoulders.

After the heir of his house had been bathed in witch-hazel by the colored housekeeper, Mr. Norton took him by the hand and marched into Mrs. Fenmore's yard.

Mrs. Fenmore came to the door with a bright color in her cheeks and a brighter sparkle in her eyes, enveloped

in an aura of arnica and witch-hazel. "Well?" she questioned, curtly.

"Madam, I have called to protest against the laxity of your control of that young ruffian who assaulted my son and—as you may see—so vilely disfigured him."

Mrs. Fenmore gave her head a toss and said, scornfully, "Poor little Sissy-boy, was its pretty face spoiled by naughty, naughty Eddie? It's too bad!"

Mr. Norton grew red with anger. "You are determined to send that unfortunate boy of yours to the gallows by encouraging his evil tendencies," he said hotly. "From my soul I pity the child who is actually spurred into rowdiness by the parent whose aim should be to safeguard him against it."

"Huh! Your Clarence is a shining example of parental influence in restraining a boy from rowdiness," sneered Mrs. Fenmore. "Look there!" She waved her hand dramatically towards her son, who had appeared in the doorway beside her with a big handkerchief hiding one eye and numerous pieces of court plaster criss-crossing his freckled face.

Mr. Norton frowned fiercely, not so much at this evidence of his son's pugilistic powers, as at the unholy satisfaction that filled his bosom at the thought that Clarence had given at least as much as he had received in the battle. Disguise it as we will, we all admire the one who can give, as well as take, hard blows in the struggles of life, whether those struggles be physical or moral ones.

"The provocation was sufficient to—to—justify the—the—action of my son," he finally stammered; "but I shall see that he is punished in accordance with the gravity of the offense."

"No doubt," scoffed Mrs. Fenmore. "You will probably take him to a show and make him drink pink lemonade!"

Mr. Norton flushed still deeper. Perhaps her shaft struck nearer the mark than she herself guessed.

"At least I shall see that he is not abused again by the poor misguided child who has the misfortune to be your son," retorted Mr. Norton.

The principals in the case grinned reassuringly at each other. The storm area was growing wider and they saw an excellent prospect of excitement before them. Eddie winked his solitary eye and Clarence tried to turn up his nose in scorn, an attempt so remarkable in its effect that Eddie laughed aloud, and the patches over his face became so amusing in their grotesqueness that Clarence echoed the laugh.

"Come here, my son," said Mr. Norton, with dignity.

"Come into the house, Eddie," ordered Mrs. Fenmore, sharply.

That evening Mrs. Fenmore cut the melon from its vine and ordered the colored boy who was her assistant gardener, to carry it to Mr. Norton.

"Mis' Fenmore, ma'am, yoh shorely isn't gwine ter give dat man dis yere fine mellun? It growed in yer garding an' 'longs ter yoh," protested that youth.

"It belongs to Mr. Norton—so take it to him," was the firm reply.

Mr. Norton, seated on his front porch, beheld a negro boy approaching very slowly, bowed beneath what seemed to be an enormous hump upon his back.

He was surprised to see the hump transformed into a huge watermelon as the boy unstrapped it and laid it carefully upon the porch.

"Mis' Fenmore sends yoh dis yere," was the rather sullen explanation of the gift.

Mr. Norton dropped his cigar and smiled indulgently.

"It's just like Kate—all fire and tow—blazing out at one in a perfect fury, but never too proud to acknowledge she is in fault and always willing to make up again. She hasn't changed, I find, since we quarreled and made friends almost daily in old Kentucky," he mused, almost audibly.

"An' she tol' me ter give yoh dis—" went on the boy, handing him a small white missive.

Mr. Norton took it with a feeling of intense satisfaction and turned on the light in order to read it. But the look speedily changed to one of indignation as he perused the curt note.

"Take that thing back and tell Mrs. Fenmore that I do not wish to have any communication with her whatever. I can already see the poisonous influence of her son's example in Clarence."

Clarence had come out on the porch and was eagerly inspecting the watermelon. A look of keen disappointment crossed his features as the negro, with a grin, proceeded to strap the melon on his back.

"Mis' Fenmore, he sez dat he don't want ter have his son pizened, an' here's de mellun back," was the message the boy gave as he began to unstrap the melon in Mrs. Fenmore's dining-room.

"The idea! Does he take me for a Lucretia Borgia? I won't have his hateful old melon on my place one instant longer. Return it at once!" cried Mrs. Fenmore, with blazing eyes.

Eddie, whose face had shone with pleased anticipations at the sight of the returned melon, sighed regretfully and glanced longingly at the forbidden fruit. Sambo looked at her protestingly.

"But, ma'am, he says dat he don't want—"

"Take that melon back this instant!" commanded the lady.

"My back's half broke now, totin' dis yere mellun 'round to folks what don't want it," grumbled the boy in an aside to Eddie. "White folks an' shurely queer. Why doesn't dey give it ter someone what don't hab ter be forced ter eat it?"

"I guess it's fine and ripe," said Eddie, stroking the big speckled side caressingly.

"It shurely is," Sambo assured him as he left the room.

"Mis' Fenmore, sah, sez she ain't no Creeture Bargain, an' she won't have yer ol' mellun, nohow," was the return message as the boy again dumped the melon at Mr. Norton's feet.

"Hey—here! Didn't I tell you that I wanted no communication with Mrs. Fenmore? Take that object out of my sight as quickly as you can, or you'll be sorry that you came bothering me."

"Say, boss, you might as well take it," said Sambo, earnestly. "Dat woman 'sists dat de mellun 'longs ter yoh, an' I dasn't go back wif it. Lemme cut it, sah, an' yoh jest try a slice—"

"Take the detestable thing away at once," commanded Mr. Norton.

Very slowly and reluctantly the negro began to put the straps around the despised melon. Before he had them buckled there was a fierce chug, chug, chug, followed by a blaze of light flying along the road in front of the house. A wild scream rang upon the air and Mr. Norton sprang to his feet crying, "Clarence! Where is Clarence?"

"I seed him chasin' a firebug on de road as I cum in, sah."

The automobile had stopped and as Mr. Norton ran down to the scene two white-faced men were lifting a limp little figure from the road beside it.

"He ran straight in front of us without a bit of warning," apologized one of the men as Mr. Norton put his hand across his eyes with a groan of "Clarence!"

They carried him into the reception hall and laid him on the sofa.

In an agony of apprehension Mr. Norton looked on while Mrs. Fenmore deftly examined the unconscious child with the skill and knowledge of the trained nurse.

She looked up with an assuring smile. "Don't be alarmed, Francis, he is not seriously injured," she consoled him.

"Now bring me some water and cologne."

When Clarence revived he found himself supported by the arm of Mrs. Fenmore, while his father stood gazing at him with a look of such anguish in his eyes that the boy's sole desire was to chase it away.

"See, Papa, I caught it!" he smiled, holding out the firefly which he still held in his clenched hand. "But it must be different from the ones we've always had here for, just as I touched it, there was a big flash and I fell down and hurt my head someway. It must be a new kind of electrical firefly, although it looks just like the others."

"The firefly that knocked you down was an automobile," said his father. "Are you hurt badly?"

"No, I just feel shaky—and my legs are wobbly," answered the boy arising and going to his father.

The gentlemen who had waited to learn the extent of his injuries looked relieved. They offered to send medical assistance but Mrs. Fenmore assured them that it was unnecessary and they went away.

"Is there anything I can do for you, son?" asked Mr. Norton, anxiously. "Is there anything you would like?"

"Yes, I would like to keep Mrs. Fenmore here always, and I'd like a slice of her watermelon right now," was the prompt rejoinder.

Eddie, who had stolen in as a quiet onlooker, darted out and dragged the melon into the apartment.

"Here it is, Ma!" he cried. Mr. Norton looked questioningly at Mrs. Fenmore.

"What do you say, Kate? Shall we divide the melon and unite our future lives, forgetting and forgiving the quarrels and mistakes of the past?"

She blushed as rosy as a girl and said, laughingly, "Get me a knife, Francis! That poor motherless child shall have all the watermelon he can eat."

"Golly, but dis is de premium mellun," laughed Sambo, on Mr. Norton's back porch, his face buried in a semi-circle of the juicy, red meat, while on Mrs. Fenmore's front porch Mr. Norton lingered to say, "Those boys of ours, Kate, are fine plucky little chaps and it would be a pity to have them fighting each other when they ought to be taught to direct their blows against the evils of the age. Since they have inherited their militant qualities from us, we must help each other to show them how to use them for the good of mankind."

### THE GLORIFIED COMMON DAY.

BY DORA H. STOCKMAN.

When the evening shadows gently fall  
And your setting sun is slipping o'er the brink,  
When through Time's telescope you backward look  
Across the vanished years and think—and think—  
Watching the pictures Memory shall recall,  
Which one will you judge then—the best of all?

Will the picture be of childhood,  
Of some joyous care-free day  
When you plucked the Springtime blossoms  
In the sunshine of the May?

Or some soft, deep, silvery moonlight,  
As you tarried at a gate  
By the fragrant blushing roses  
When Love, smiling, sealed your fate?

Will it be the flush of victory,  
That ethereal hour of fame  
When the throng hushed into silence,  
Plaudits to a well-earned name?

Or that fiercer, harder, conflict,  
With strained nerves and muscles tight,  
When you wrestled with the Angel  
Through the long hours of the night?

That picture of the shadows  
Velled in heavy mists of rain,  
Where the trees are sighing, moaning  
Like a soul in mortal pain?

Will the picture you remember paint  
These crises on the way,  
Or will you love the miniatures taken  
From the common day?

Days you gladly bore the burden  
With your loved ones by your side,  
Hearing songs of joyous laughter  
Guiding steps in ways untried;

Banished tons of childish troubles  
With the magic of your smiles,  
Reaching golden cords of prayer  
Past the intervening miles?

When the evening shadows gently fall  
And peacefully your sun slips o'er the brink,  
When through Time's telescope you backward look  
Across the years, and think—and think—and think—  
The sweetest picture Memory shall then recall  
Will glorify the Common Day—the best of all.



## LEGEND OF THE CORN.

BY L. A. THORNTON.

By many a camp-fire's ruddy light,  
This legend quaint, of yore was told,  
When dandelions turned to white  
And maize fields showed their yellow gold.  
And those who listened, aged and youth,  
Ne'er questioned, in their hearts, its truth.

When Iroquois were bold and strong—  
A line of braves of stalwart mein—  
One led the chase, however long,  
His steps a king's, his brow serene,  
With tireless heart and courage high,  
The light of freedom in his eye.

And in a wigwam, dark and low,  
There dwelt a modest Indian maid,  
As fair as fairest flowers that grow  
On meadow-side or woodland glade,  
With heart as tender as a dove—  
A gentle maiden, formed for love.

The brave beheld the maid and turned  
His head to pay her tribute due;  
The maiden looked on him and turned  
For him to speak, as maidens do.  
And then they later named the date,  
When she should go to be his mate.

By nights he watched, in woodland near,  
Lest one should steal his bride away,  
And every sound that reached his ear  
Left him to anxious doubts a prey,  
Until, one night, he woke and found  
Her footprints in the yielding ground.

The maiden, walking in her sleep,  
Chose out no path, but wandered free,  
A trail that easy was to keep,  
And soon he came where he could see  
Her fair young face, her tight closed eyes,  
They knew not terror, nor surprise.

With eager haste to draw her near,  
The lover rushed, in wild alarm,  
The maiden, wakening, screamed in fear,  
And as he clasped her in his arm  
She trembled, stiffened, shrank and changed  
Into a plant, unknown and strange.

He sought to clasp her hands, as fair,  
As lily buds at early morn,  
And found, instead, of fingers fair,  
He held but ears of yellow corn.  
And where her locks had floated free  
But tasseled corn-silk could he see.

This is the legend told of yore,  
When Iroquois their camp-fires lit,  
And when the corn its fruitage bore  
They saw the maiden's form in it.  
For so, the story said, was born  
The first silk-tasseled stalk of corn.

## EXTRACT FROM AN AUTOBIOGRAPHY.

BY UNCLE RETAWAL.

The two children, Alice and James, had been playing tag on the grass plat that bordered my special seed corn patch near the house. They were tired and Alice and "Shep," the dog, were lying on the sod near a deep green stalk of corn, while James went to the house. It was a warm, sleepy day. Shep was soon dreaming of gophers, when Alice was surprised to hear, in a weak but audible voice, "Good afternoon, Miss Alice; how warm the sun is and how quickly 'Shep' went to sleep; he must have been very tired. I have tried to make you hear me for several days but you have gone to the house before it was quiet enough. There is a weed feeding upon the soup my roots need; I wish you would pull him out. Thank you. I shall do better now that the robber is not fattening himself at my expense in the shadow we make while I suffered because of the heat.

"Did not know that cornstalks could

talk? Why, Alice, all plants talk but not with words. Look at my neighbors. What are they telling you? Certainly. They are suffering from the want of moisture. We drink, eat, and sleep the same as you do and you know how you feel when you are thirsty. Think, then, what must be our condition, tied here in one place, if we cannot get water. Yes, those drooping leaves, with curled edges that emit a dry sound as they strike the body when moved by a breeze are telling a story. I call it talking. No, I am the only stalk that can speak in words, and I can only do it on sleepy days like this to tired children who are resting. So our days are often dull, but there are lively times here in this corn patch after dark, I assure you; especially on moonlight nights.

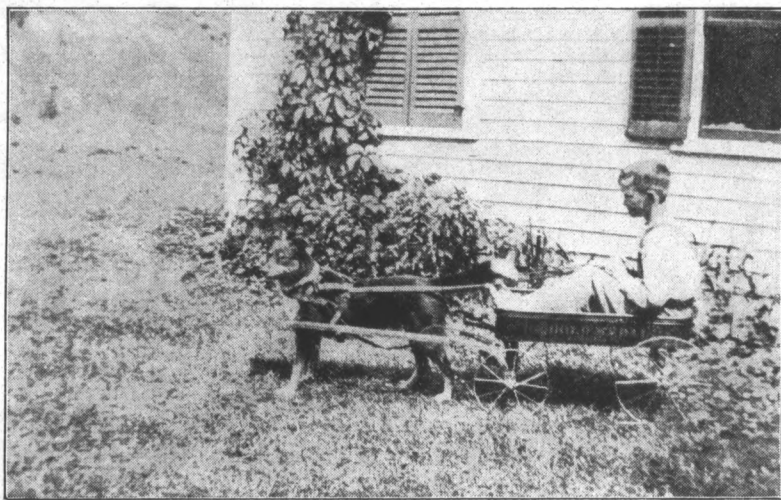
"As I cannot move around my roots must absorb such food as is near them. I am told that many of the plants are thus made sick and die. You see we cannot choose like you; the happiness of our short lives then depends upon the seedbed prepared by the farmer to a great extent. Your father has made this soil to be mellow and rich to a great depth, porous and filled with humus; it holds moisture much better than the fields and has a better class of food, so we live better than the field corn.

"You would like to hear about my life work? Much of it is so common you

attached by horny points in rows to a common center nursing tube. You call the cradles kernels or grains and the nursing tube a cob; both, as one, an ear of corn.

"All of my family are very proud of the way every mother cares for her corn babies. Why shouldn't we be? Are we not monocotyledons? The health and comfort of each little bud as it is being ripened saps the life blood of its mother beyond recovery. There are many plants like that weed you pulled—that can raise baby-buds year after year and not die because of the act, but not so with my family.

"Mother knew when she first arranged the threads of silk running from each of our cells to the open air that she had but a short time to live, so she devoted the rest of her life to the work of providing for her babies. Not only is there a large number, but each baby must be provided with condensed nutritious food for a future use, have its own horny point connection buried in the breast of the nursing tube (the cob) and a house of horny skin that will protect from common injury. She held us up while we nursed through the cob the thin soup that Dame Nature had first helped mother to cook in her leaves by the aid of the outside force, the sun. How mother emitted oxygen you need and inhaled the carbon dioxide you exhale is something



An Ingenious Farm Boy and his Docile, Faithful Friend.

A youthful reader, living in Macomb county, writes as follows: "I thought I would write you a little letter. Will you please put this picture in the Michigan Farmer? My name is Donald Warren and the dog's name is Bose. I made this rig, all but the wagon. We are good friends together. I hitch Bose up whenever I want to."

must know it now; but, like all lives, there may be details interesting to any child. My friends, the summer breeze, the insects, the birds, Grandmother and Grandfather Toad and many of my midnight visitors have informed me of our family history for ages past, not neglecting my own babyhood while with my mother and after being brought to your home by your father.

"It seems I first grew by the aid of Dame Nature and an outward force, the sun, on my mother's body in a bed like this last season. There were many of us baby corn plants, in horn-like cradles,

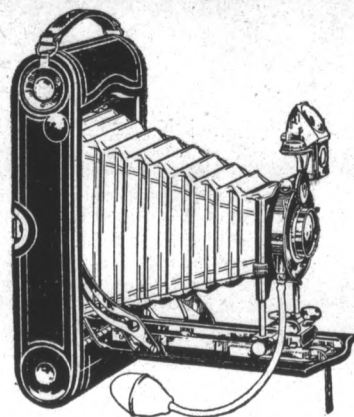
you can study at home, but how she mixed this carbonic acid with the root push thin soup, making it thick and nourishing to us babies, is another story. Dame Nature's workmen were with us night and day. The soil in which my roots rest, if mellow and porous, is filled with oxygen which is in all life and also the great cause of destruction. Oxygen is found in air and water. Both forms are needed by our roots. Keeping one or both from us causes us to turn yellow, droop and often die. If the farmer keeps the soil mellow and fine we can get the air. I said fine, for a lump is a locked matter and a clod is so much wasted soil, as we can not use anything it contains.

"We often suffer after storms from a hardening or crusting of the surface that shuts out the oxygen, or the water stands in the soil and, by its presence, keeps out the oxygen from the air. In either case we must rely upon the farmer to either drain off the extra water or break the soil crust.

"So far as we plants are interested, the soil is a vast storehouse built of pebbles, sand and mud on rocky foundations with joists of limestone containing bins, apartments, dining halls, work rooms, many workmen, for various classes of work, with other inhabitants, good and bad, all needing oxygen.

"Mother's roots gathered nutriment from these bins, by the aid of the microscopic hairs on her active roots, through an osmos process which your teacher can explain. As I said, much oxygen was collected, more than she needed; this she threw away by the transpiration process going on through the stomata or mouths located in the leaves. Thus, you see, my leaves are constantly reversing the effects of your respiration by giving off oxygen and absorbing carbon dioxide from the air. Our leaves, too, are not only digestive and assimilating organs but, as I said before, are stoves, that is, little laboratories in which plant food for our own growth and repair, besides

If it isn't an Eastman, it isn't a Kodak.



## KODAK

means photography with the bother left out—means that the once difficult processes have been so simplified that you can readily take good pictures by following the perfectly simple directions that accompany each camera.

## The Kodak Advantage

Kodaks load in daylight; plate cameras require plate holders which must be loaded in a dark-room. Kodak films are light; glass plates are heavy; Kodak films are non-breakable; glass plates are fragile. Kodak films may be developed in a dark-room but are preferably developed in the Kodak Film Tank in broad daylight. Glass plates must either be developed in a dark-room or loaded into a tank in the dark-room—the film cartridge system is the only practical means of entirely eliminating the dark-room. You may easily develop your own films or may send them by mail for development. Sending glass plates by mail is risky.

With a Kodak there are no extra attachments to buy; it is complete, ready for use. With a plate camera you must buy extra plate-holders or it is of no use you—remember this in counting the cost.

Kodak films give better results for the amateur than glass plates because they have the orthochromatic and non-halation qualities that help overcome the harsh lighting conditions that he encounters.

Plate camera manufacturers advertise the fact that professional photographers use glass plates and that therefore you should. Its true that professional photographers use plates in their studios for their regular work because their dark-room is only a few feet from the spot where their camera stands. For their vacation trips they use Kodaks mostly, just the same as other folks.

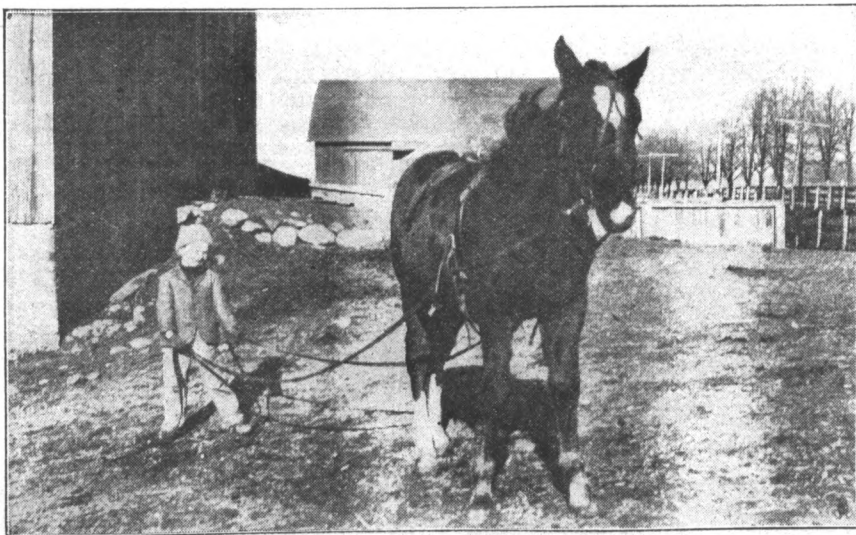
Kodak photography means less trouble, better pictures.

Ask your dealer or write us for the illustrated Kodak catalogue. Kodaks \$5.00 and up, Brownie cameras, they work like Kodaks, \$1.00 to \$12.00.

EASTMAN KODAK CO.,

389 State Street, ROCHESTER, N. Y.

## GETTING THEM INTERESTED.



Six-year-old Don Reid and his Yearling Colt, Nettle.

A Tuscola county reader, Mr. William Reid, sends the postcard photo from which the above is reproduced. It is evident that he believes in getting those born upon the farm interested early in life, the picture showing his six-year-old son, Don Reid, exercising a yearling colt that has already been broken to harness. Don is the proud owner of this filly colt and calls her Nettle.

**WE SHIP ON APPROVAL**  
without a cent deposit, prepay the freight and allow 10 DAYS FREE TRIAL.  
IT ONLY COSTS one cent to learn our unheard of prices and marvelous offers on highest grade 1912 model bicycles.  
**FACTORY PRICES** Do not buy a bicycle for a pair of tires from anyone at any price until you write for our large Art Catalog and learn our wonderful proposition on first sample bicycle going to your town.  
**RIDER AGENTS** everywhere are making big money exhibiting and selling our bicycles. We sell cheaper than any other factory. Tires, Coaster-Brake rear wheels, lamps, repairs and all sundries at half usual prices. Do Not Wait; write today for our special offer.  
**MEAD CYCLE CO., Dept. B-77, CHICAGO**

**DAISY FLY KILLER** placed anywhere, attracts and kills all flies. Neat, clean, ornamental, convenient, cheap. Lasts all season. Made of metal, can't spill or tip over; will not soil or injure anything. Guaranteed effective. Sold by dealers, or sent prepaid for \$1.  
**HAROLD SOMERS, 150 DeKalb Ave., Brooklyn, N. Y.**

**Government Farmers Wanted**—\$60 monthly. Free living quarters. Write today. OZMENT, 17F, St. Louis, Mo.



the building up of our babies, is manufactured out of the crude materials brought up from the bins in the soil. Notice, I said building up of our babies. Our plant babies are not born with full frames like animals. We build up out of the primary elements in the air, water and soil bins our full frames, our babies, and in many cases store food away in our roots for a future use. That is why your father values the corn baby and its store of food so highly. But I am wandering. As you helped, you know how I came here and was buried with other kernels of corn in this soil; but you do not know how I, a little bud-like body, was sleeping in that kernel on a bed of endosperm wrapped in a leaf-like blanket soon to be awakened by the moisture and warmth found in Nature's apartments.

"When the walls of my cradle were broken I first stuck out a toe, capped with a horny nail, determined to enter a bin and help myself to the elements found there, at the same time stretching my bud-like head to reach the light and air. What has happened to me since—" "Wake up, Alice, mother wants you," cried James as he tickled her ear.

#### HOW I CAPTURED A WILD GOBBLER.

BY ISAAC NOTES.

When a small boy on the farm it was my business in the afternoon to stop my plow a little earlier than my brothers, take out my pony and go after the cows, for we lived in the west where the range was free. Also it was my duty to drive up the calves every morning as soon as I got up. So, every morning for years the first things I did were to dress, wash my face and hands, catch my plow pony, hop upon his back, sometimes with only a halter to guide him, and go after the calves, which were generally not far away.

One bright June morning I started on my daily morning ride just at daybreak. We lived a half mile from the river, where the grazing was very fine. Sometimes the calves went to the river bottom and did not come up until late unless I went after them. If I couldn't hear the bell close around the house I knew they had gone to the river, so this morning I rode straight for the river bottom. Pretty soon I heard the bell away up stream. It was near sun-up when I found them, so I hurried them along at a lively rate.

Our farm was in the edge of the woods, next to a wide prairie on the west. On the way home we went along rather near the edge of the prairie—about a hundred yards from it—in the edge of the thin woods, and while passing along through these woods I saw a half dozen wild turkeys run out of the bushes ahead of the calves and go towards the prairie.

There were a few wild turkeys to be found near our farm, but it was difficult to get near enough to kill them with a shotgun, and this was the only kind of gun we had. My older brother George had gone turkey hunting several times in the early morning. By calling them he had managed to get several shots at them, but the woods were so thin that the turkeys could see him a long way off, and the small shot scattered so at long range that he had never been able to kill one.

I had heard a cowboy, who stayed at our house one night, tell about running wild turkeys down on horseback on the plains. He said it was easy to do this if you found them in open country and you were on a good horse. When I saw the turkeys making for the prairie I left the calves and rode towards them. I did not crowd them too much, as I didn't want to make them fly up at first, but I kept close enough not to lose sight of them.

When they got to the edge of the woods, with the prairie in front of them, they turned up along the edge of the timber as though they would go back into the woods to the north. I circled around them briskly through the thin woods, and they turned out into the prairie. The bunch grass on the prairie was tall and afforded them some protection, so they ran out unhesitatingly into the open space among this tall grass. Doubtless they expected that I would pass on up the river bottom. I almost lost sight of them here, but as I rode on briskly towards the place where I knew they were I saw them going on towards the open prairie. I had noticed a big black gobbler with white spots on his wings. He was running through the tall grass about seventy-five yards from the woods. I kept in his direction, taking care not to go fast enough to scare them up just yet, as I feared they would rise

and fly back into the timber. There were a few scattering trees far out on the prairie, and also some clusters of bunch grass, while far across, fully a mile away, was a line of dark green timber marking the course of a creek that ran into the river south of our farm.

When they were too far out to turn back I began to crowd them a little more, keeping my eye on the big white-winged gobbler. With about 300 yards between them and the edge of the woods I crowded them still more, for up to this time they acted as though they might turn back towards the woods at any time but as they got farther out they started running straight ahead. Then I put my horse to a run and began to gain rapidly on the turkeys. The big gobbler was ahead. When I came within perhaps sixty yards of them they scattered. Some rose and flew straight ahead. Among these was the gobbler. He was very big, and made a tremendous roaring sound with the flapping of his wings. You have no idea, unless you have heard them, how much noise a big wild turkey makes in flying.

When I saw him rise I put my horse to his greatest speed, leaning over his neck, shaking out the reins and slapping him on the neck to encourage him. He seemed to realize what was expected of him, and I never knew him to run so fast in all his life. In spite of this, however, the gobbler gained on us frightfully, for he flew like a cannon ball. He was a big heavy turkey, and very fat. I knew this by the loud noise he made in flying, and by his flying so near the ground. He had not risen high, and gradually came lower and lower, for a big turkey never flies high if he rises from the level ground, as he is so heavy.

He flew perhaps 500 yards, then came to the ground with a thump and began running. I was at least 200 yards behind him when he struck the ground. I could not see him, but I had marked the direction well, and felt he would run straight ahead when he came down. As my horse was going at terrific speed it wasn't long before I got sight of him again, running along between the clumps of bunch grass. Pretty soon we were close on to him again. As we continued to gain, he tried to rise and fly again. He flapped his wings terribly but couldn't get off the ground.

By this time he had begun to run as though very tired, and wobbled from side to side. It didn't take me many seconds to catch up with him and pass him a yard or so to the left. I struck at him with a large stick which I carried, and he dodged off to the right and started in a new direction. My well trained pony stopped and turned in the same direction, and we were soon close upon him again. As we overtook and passed him I struck at his head but missed him, and he turned in a different direction. When I turned my horse again the turkey was near a large clump of bunch grass. As we began to crowd him he commenced running around this bunch of grass, weaving from side to side as though about to fall.

He ran around the clump of grass three or four times, then made a dive into the grass head first and sank down with only his tail in view. I jumped off my horse, grabbed him by both legs and dragged him out. He flopped frantically and almost tore loose from me, tired as he was. I didn't realize what a monstrous big turkey he was until I had him in my hands alive.

Holding him by the legs with my left hand I struck him on the head several times with the big end of the stick. Then I climbed on my horse again, with the turkey in my right hand, and galloped home with him dangling at my side.

The sun was an hour high when I got home. The calves stood bleating around the pen, the cows lowed inside, and mother stood in the kitchen door wondering what had become of me, but when she saw the big gobbler in my hand, and heard my story, she was very much pleased and very proud of me.

#### CATALOG NOTICE.

Hoosier Stoves and Ranges, manufactured by Hoosier Stove Co., Marion, Ind., are fully illustrated and described in a handsome 70-page catalog which will be sent to Michigan Farmer readers upon request. The many types of ranges, cooking and heating stoves for both coal and wood which are manufactured by this company to suit every conceivable need for stoves in the home are described and illustrated in detail. Before purchasing a stove of any kind write the Hoosier Stove Co., for their new catalog, mentioning the Michigan Farmer.

#### Well Pleased with Her Machine.

Am well satisfied with my sewing machine and would not be without it again. —Mrs. Clarence Seeman, Gowen.



## Here's The Road to Comfort

A vanished thirst—a cool body and a refreshed one; the sure way—the only way is via a glass or bottle of

# Coca-Cola

Ideally delicious—pure as purity—crisp and sparkling as frost.

**Free** Our new booklet, telling of Coca-Cola vindication at Chattanooga, for the asking.

Demand the Genuine  
as made by  
**THE COCA-COLA CO.**  
ATLANTA, GA.

Whenever  
you see an  
Arrow think  
of Coca-Cola.

## Phelps Guarantees to Save You \$40 on This Special Split Hickory Combination Storm Buggy



H. C. PHELPS, Pres.

**FREE  
BOOK**

Write Today

**G**REATEST winter and summer buggy on earth. Closed up, is wind, cold, and storm proof almost instantaneously! Opened up just as quick, let sunshine in from all four sides. Weighs only a little more than ordinary top buggy. Light, easy-running—no jar, no rattle.

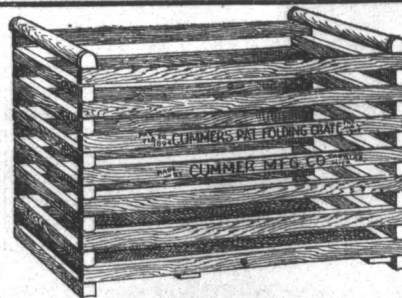
**Ideal for All Seasons—Built on Our Famous Wrought Iron Gear—Guaranteed for Two Years—Thirty Days Free Road Trial**

Phelps spent three years experimenting to perfect this Storm Buggy. A few special points: Large glass front 17x39 inches. Padded doors. Large glass door-lights 19x13 inches. Sliding doors perfectly adjusted. 30-ounce heavy rubber rear curtain to roll up, fitted with 8x12 inch mica window. Handsome robe rail inside. Pockets in front for carrying small articles. Clear road vision on both sides. All glass windows are of double strength and rubber cushioned—there's no jar, no rattle. Plenty of room inside—seat measures 36 inches on top of cushion. Split Hickory special shafts with Twentieth Century bracing. Bradley quick shifting shaft couplings. Oil tempered and tested four and four plate springs. Soft and comfortable spring cushion and spring back. Padded boot over rear. Beautifully and substantially painted—elegantly upholstered. Phelps stands right behind this Storm Buggy—it's the best buy you can make—and still save \$40. Write today for this Free Book showing this and 125 other styles of Split Hickory Vehicles. Each guaranteed. Sold on free trial, \$35 to \$40 below any other price in America, quality for quality. Write at once. Address H. C. PHELPS, President,

**THE OHIO CARRIAGE MANUFACTURING COMPANY**  
STATION 32, COLUMBUS, OHIO



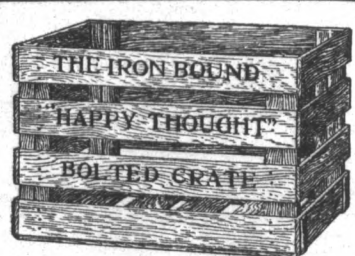
**30 Days  
Free Trial**



The best that money can buy for handling fruit or vegetables. They fold flat and have no sharp edges. Sold direct to consumer. Our catalog for the asking.



FOLDED FLAT



**A FULL BUSHEL, 2747 Cubic Inches**

**The Strongest Crate Made  
for field and storage purposes**

**CUMMER MFG. COMPANY**  
Cadillac, Michigan

When writing to advertisers please mention the Michigan Farmer.





# Woman and Her Needs

## At Home and Elsewhere



### THE MOTHER-IN-LAW'S SIDE OF THE CASE.

THE usual large crop of June brides having been duly harvested, much curiosity is being expressed as to how the output pleases the mothers-in-law. How things are going with Mrs. Mason since John married that Susie Dimples and took her in with his mother is varied by wonderment as to how Susie is getting along with that particular Mrs. Mason. However, the question is put, the thought behind it is the same, there is bound to be trouble between the two women. We have all of us got into the habit of thinking with the jokesmiths, that mother-in-law spells trouble. Though why the jokers always make it the husband's mother-in-law who stirs things up, when nine times out of ten it is the other way around, nobody seems to know.

About once out of one thousand times you hear of a man having trouble with his wife's mother. But ninety-nine times out of one hundred it is the wife who has trouble with the husband's mother. Of course, there is the old theory to go on that a man and woman will agree better than two women, but the chief reason for these "in-law" disagreements is that both women are expecting trouble before hand, everybody has told them it would come, and neither one makes an effort to see things through the eyes of the other.

It is the usual custom to sympathize with the young woman. But this time I am going to take sides with the older one. The poor woman has had little enough sympathy, and while she may not deserve very much, still I think she has a few grounds for complaint on her side.

Why, the two women don't even look at the man in the case from the same point of view. The wife regards him as a man, the wisest, best man in the world, who needs no advice from anyone because he is a fountain of wisdom himself. (N. B.—I am speaking now of those brief days known as the honeymoon). The mother sees him as a boy she has had to watch over and chasten for the last 25 years in order to keep him from going plumb wrong. She has fondled and spanked him with the utmost impartiality, advised him and threatened him, flattered and ridiculed whichever would best bring about the end she desired. She held his hand when his first tooth was pulled; she knew all about the time he first stole his father's razor and crept furtively up to his room to come back with his face haggled in a fearful and wonderful manner, and she thrilled with pride when he cast his first vote, after she and his father had told him how to do it. She knows all his good points and all his shortcomings, though she wouldn't let a soul tell her he had one. In short, she knows he is a very human sort of boy, child she really thinks, and now to see some snip of a girl gush up at him and actually regard him as a man of sound mind and sober judgment is too much for the good lady. It is small wonder that she can not refrain from a snort of disgust.

And when the first question of importance comes up in the new family and he listens to that Susie Dimples, whom the mother has watched grow up from pig-tail and pinafore days instead of going to his own mother for advice, I ask any fair minded jury of daughters-in-law, can the mother be blamed for feeling abused? Of course she can't. If she were a real wise woman she would skillfully hide that hurt feeling and reflect that it is the way of the world, just the way the boy's father did 30 years ago. But the truth is that she is a very human woman and when she is hurt she shows it some way or other.

In the home, too, whether you move in with her or she moves off the farm and leaves you and your new husband to wrestle with the problem of keeping house alone, can she be blamed if she

occasionally seems to interfere? Supposing she stays, can you blame her if she doesn't find it easy to sit down and see some young woman lording it over the home that has been hers for years? Perhaps you are a perfectly capable housekeeper, an excellent manager and the prize-winning cook of your neighborhood. You may be a much better housekeeper than your mother-in-law, and naturally you would resent any suggestions from her. That isn't the point in these disagreements. The fact is that the home has always been hers and she just naturally can't bear to see one of the neighbor's daughters coming in and taking things out of her hands. Can you blame her? What did you and your mother feel when your brother's wife came to the home and wanted to become mistress? You were a great deal quicker than your mother in telling her "not to butt in," and here you are doing the same thing in another home and you think the woman you are pushing out should not resent it.

Now don't begin to say the wife should be mistress in her own home. We aren't looking at things through your eyes to-

day, but through the eyes of your mother-in-law. We are trying to see if she hasn't some grievances.

There'll be a thousand things on which you will disagree, not because either is very much wrong, but because you haven't the same point of view. She doesn't understand you and you do not understand her. There is a great deal of talk about husband and wife being one, but the fact remains that you have an individuality all your own and your mother-in-law can not possibly understand you as your own mother does. She says things which hurt you, not because she wants to hurt you but because she doesn't understand your temperament and has no idea how her words sting. If the truth were known you probably hurt her even more deeply than she does you, for added to the sting of your words is the knowledge that she is slowly but surely being put on the shelf by younger blood.

And she should be forgiven much to balance that. For there is nothing harder than to feel that after years of service you are no longer needed; that other hands are ready to do the work which has for so long been yours and that those hands are preferred to yours.

DEBORAH.

### "FINISHING" THE GIRL'S EDUCATION.

BY KATHARINE A. GRIMES.

A serious problem arises in many homes when the daughter of the family outgrows the local school. This is especially true when the home is in the country, or in a small town where the educational advantages are limited to the first eight or ten grades. In the majority of such cases, a good high school is beyond easy reach, and the only alternatives seem to be sending the girl away to "finish" her schooling, or keeping her at home and letting the education go without finishing.

The average bright girl usually leaves the grades somewhere between the ages of 13 and 15. To take a child out of school permanently at that early date seems wrong, but to send her out of reach of the immediate home influences at that immature stage may easily prove far more disastrous. Either course is open to so many objections that thoughtful parents will hesitate before adopting either unqualifiedly. If some safe middle course might be discovered, it would be a welcome suggestion to many a puzzled father and mother.

Of course, there are girls and girls. Some are staid and sensible at seventeen, while others are childish and immature even in the twenties. It is safe to say, however, that very few girls under eighteen should, even to gain an education, be sent away from the protecting authority of the home. What is gained in one way is so easily lost in another, and far more vital particular, that this plan should be adopted only under the most necessary circumstances.

One case which occurred not long ago may be cited as a fair average result of allowing girls to go away to school too young. A farmer's daughter, whose parents were most anxious to educate her as well as possible, was "passed" out of the rural school at fifteen. The nearest high school was too far away to admit of her attending from home, and there were several potent reasons why it was not thought best for her to board in town. The place was rather rough, and there was a clique of girls in the high school, about her own age, who were known to be objectionable companions for her. Besides she would be compelled to board with comparative strangers, as there were no relatives or close friends with whom she could have a home.

After long and anxious consideration, it was decided to be best to send her to a very select and highly recommended boarding school for girls, in a city 70

miles away. A personal visit to the school impressed the mother with the desirability of the plan and she was assured by the lady principal that only the most carefully reared girls were admitted. Although the expense was rather heavy for people in their circumstances, it was cheerfully made up by parental self-denial, and even by the selling of stock that was really needed on the farm. The girl's welfare must come first, declared both father and mother, looking proudly at the bright, sweet-faced daughter who was the oldest of their brood.

So she "went away to school," carrying with her the highest hopes, fondest anxieties, and proudest dreams of the loving group left at home. Even the little boys willingly accepted the curtailing of their pleasures that "sister" might have a chance for school. Her enthusiastic letters after entering seemed to justify the step that had been taken, and the parents began carefully to plan so that she might have the full four years there.

She returned at Christmas for a brief visit. They all wondered at the change in her, and approved, the younger children admiringly, the parents with doubtful reserve. There were some disappointing features, but she had been there such a little while, and her time at home was so short, that they felt they could not judge fairly. It was not until she came home for the long vacation that they were able to observe fully the effects of her year away from home.

They soon discovered that she had acquired a smattering of French and German, which she took care to air on every occasion. Close attention soon showed that her musical taste, which had been carefully cultivated during previous years by both mother and teachers, had so degenerated that she no longer found any beauty in the grand old fugues and symphonies of the masters, but went into spasms of delight over any light, trashy "drawing-room composition." Mathematics, in which she had once particularly shone, she had learned to "abhor," while history—except for a few semi-historical novels—was a "grind." Her English studies had consisted of learning to read "that perfectly lovely" Browning with an exaggerated accent, and in appreciating the fact that Shakespeare was "too sweet for anything." Her naturally well-modulated speech had become high-pitched and artificial, while, worst of all,

she manifestly burned to impress the simple folks "back home" with the fact that she was rapidly acquiring "culture."

Mother, too, soon discovered that the sweet, natural, unaffected girl who went away had come back an ultra-modern young lady, who understood just how to pad her instep so as to show off her patent leather slippers to the best advantage, how to remedy defects of figure by judicious lacing and "forms," and how to use powders of various shades on her wild-rose skin until she looked like a wax doll. She had also become an adept in the mysteries of manicuring and massage, and watched her round, babyish throat anxiously for incipient wrinkles. In short, the dear, whole-souled, unconsciously attractive child had become a simpering, superficial, self-satisfied miss, aping ways that she had never been taught to see in their true light, because they had never before touched her simple, wholesome life.

Needless to say, her "higher education" ended right there. Father and mother spent more sleepless, anxious nights, trying to decide how best to bring back the genuine sweetness they had unwittingly sacrificed. "We ought to have known better," they told themselves reproachfully, but the mischief was done, and they must undo it, if they could.

The next year she was sent back to the district school, ostensibly to review, but really to put her back into touch with the hearty, wholesome life of the girls and boys who had been her old companions. Her music was once more taken up under the patient, plodding teacher who had built the foundation of her musical education. New and attractive books were bought for the home, and she was allowed to plan a delightful and instructive course of reading for the whole family. The younger children were brought to the front, and "big sister" was asked to superintend their studies and amusements. In every possible way, the self-centered artificiality which she had acquired at school was combated, and the healthful normality of her childhood restored.

And it was restored, but it took several years to do it. Of course, she might have outgrown her undesirable ways, even if allowed to go back to school. But nothing could recompense the woman that she would become for the loss of the natural growth of those years.

In securing the boon of wholesome womanliness for their daughter, the so-called higher education was perforce neglected, in so far as the routine of the schools was concerned. But so far as books, music, and an atmosphere of simplicity and refinement can furnish it, she is receiving a real higher education at home. Under their influence she is taking on the graciousness of genuine culture, and expanding into the rich luxuriance of thoughtful, unselfish womanhood. If, when she has grown older, she still desires a college course, she will find that these years have been spent in the best possible preparatory way.

The question of the girl's education is a serious one. Without doubt, the best attainable is her due, but whether the best is to be secured by sending her away from home while still in her middle teens is to be gravely doubted. The girl of that age needs her mother's watchfulness, her father's protection, and the quiet simplicity of the home atmosphere. After she has become mature in judgment, and has learned to rely upon her own ideas of right and fitness, she may safely be sent away from home, but not before. Books and music may easily be furnished her at home, and her education rounded out by their aid, without the risk and sacrifice incurred by sending her away to "finish" it.

If your meat grinder seems dull just grind a piece of scouring brick through it and see how well it sharpens and also polishes it.—Mrs. J. J. O'C.



## RECONCILED.

BY G. T. EVANS.

Today, because our baby Ruth (She's my new sister), got a tooth, Ma ran outside and hollered, "Oh, Guess what there is to look at, Joe?" (That's not my father's biggest name, It's Joseph), and then father came A-flying in, and ma she said, "The darling's lying on the bed." And she and father went up stairs, Both putting on a lot of airs, As if they thought the baby was A little wonder, just because She had one tooth. And then they kissed Her mouth, and cheeks, and ears, and wrist.

And ma said, "Oh, you dear Blue Eyes, Your tootsie's such a sweet surprise!" They didn't know that I was there, But when I cried, "It isn't fair! To make a fuss about one tooth; I've got just lots more teeth than Ruth, I counted them and there was nine, But you don't even look at mine!" They kissed me, too, and hugged me tight, And then I seemed to feel all right.

## GIRLS WHO WORK TO SAVE MOTHER.

BY E. E. R.

THESE go the two best girls I know of," said my hostess one afternoon as we sat on the porch with our sewing. "Their mother comes first with them, and their own wants are supplied only after hers have been looked after. If there are new clothes to be had mother gets hers first and the daughters take what is left. This is so directly opposed to the general rule that it is worthy of mention. This is not the elder woman's doings, either, but the girls insist on it. Furthermore the mother is not a slave to her children in that home," she continued. "It is the girls and not the mother who get up in the morning and prepare the breakfast. Most of the cooking and baking they also do and they do all their own sewing and mending."

"But pray tell me," I inquired, "what does the mother do in this unique household, where the daughters take so much of the work upon themselves?"

"The mother? O, she has enough to look after. The girls do not want her to work herself to death for her children the way so many mothers do. She looks after the house in general, does quite a bit of work in the flower garden and acts as counsel in whatever way is required. But as for going ahead with the housework she doesn't do it."

Then I fell to thinking how nice it would be if all mothers were as sensible as this one was and brought up their daughters to work and to wait upon mother instead of reversing the situation as is so commonly done now-a-days. Would it not smooth out the wrinkles and take years from the face of many a struggling, hard-worked mother? And would not the result be equally as good for the girls? What better development for a young life than to give it responsibility and the care for others? The self-sacrifice that so few of our young people exercise widens the sympathies and gives a broader scope to human interest—which is invaluable in character building. Let us strive for more thoughtful daughters and fewer tired mothers.

## HUMAN WELFARE QUERIES.

Household Editor:—1. Should one who is nervous clerk in a department store? 2. Kindly advise results from taking patent medicine. Should one who is not always strong physically continually take it or let nature take its course, as in nervousness, loss of appetite and sleep? 3. Do you think a nervous girl should learn dressmaking? 4. Does a dressmaking course by mail prove a success? 5. What is the best remedy for unstrung nerves? 6. How can I send fancy work patterns in for the paper?—M. R.

1. Nervous people are much better with some employment where they can obtain plenty of pure air. Some departments in a store do not require exhausting work, but the long hours and bad air would not help a nervous person.

2. It is inadvisable to take any patent medicine unless told to do so by a reliable physician. Because one person has been helped by a drug it does not follow that another would be. It is not well to "let nature take its course" when one is nervous and suffering from insomnia. Better go to a doctor who knows his business and follow his directions implicitly.

3. Dressmaking would be a poor trade for a nervous woman. It is very exacting, with long hours and close attention to details, both of which are bad for a person afflicted with "nerves."

4. I never knew a person who took a dressmaking course by mail, so can not say if it would be a success.

5. The best remedy for unstrung nerves is plenty of sleep, plain nourishing food,

as well cooked cereals, beefsteak, lamb chops, the white meat of chicken, bacon, milk and eggs, white or brown bread, and no tea, coffee, candy, cake, pastry or stimulants of any sort. Take plenty of gentle exercise in the open air, don't worry, and work as little as possible.

6. Send a good clear photograph or a good hand drawing of your fancy work, with carefully written instructions for making it. Write only on one side of the paper and use a typewriter is possible, though this is not necessary if your writing is distinct.

Household Editor:—I am going with a party to Put-in-Bay. What would you advise me to wear, a foulard dress or a wash dress? I have a new foulard I want to wear, but my mother thinks I should wear a wash dress. Which is right?—Molly.

By all means wear the wash dress for an outing.

Household Editor:—Can you give me a formula for making baking powder?—New Cook.

Sift one pound and two ounces of cream of tartar, a half pound of soda and one-fourth pound of cornstarch together five or six times and put in an air-tight can. It would be better to make only about a quarter of this proportion, as home-made baking powder loses its strength much more quickly than manufactured.

Household Editor:—I have a cake recipe which calls for lemon juice but it does not tell when to put it in. Can you suggest the right way to mix the cake?—Mrs. M.

Mix the lemon juice with the eggs and sugar and sift the soda with the flour.

Household Editor:—My little girl is very funny about her eating. She is three years old and never eats anything unless I coax her. She drinks a great deal of milk, and seems to feel well. What would you advise me to do?—Young Mother.

So long as she drinks plenty of milk and seems to feel well I should not worry much about her. Milk is a food and perhaps your child is not ready for any other sort. See that the food she does eat is suitable to her years, bread or toast, eggs, well cooked cereals, no candy or rich desserts and but little fruit and vegetables. When she is ready for other foods she will probably take them.

To freshen pork cut the slices and place in a basin of buttermilk two or three hours before you wish to fry it. remove from the buttermilk and roll in flour and fry as usual. This way you save all the fat and the pork browns nicer.—L. T. F.

## MICHIGAN FARMER PATTERNS.

These patterns may be obtained from the Michigan Farmer office at the prices named. Be sure to give pattern number and the size wanted.



No. 5814, Misses' and Small Women's Dress Having Three-piece Skirt. Cut in sizes 14, 16 and 18 years. Age 16 years requires 4½ yards of 36-inch material, 5½ yard of 27-inch all-over. Price, 10 cents.

No. 5821, Ladies' and Misses' Bathing Suit. Cut in 8 sizes, 30 to 44 inches bust. Size 36 requires 4½ yards of 44-inch goods, ¾ yard of 24-inch contrasting goods. Price, 10 cents.

No. 5826, Ladies' Surplice Dressing Sack. Cut in sizes 32, 36, 40 and 44 inches bust measure. Size 36 requires 2½ yards of 36-inch goods, 5¼ yards of insertion. Price, 10 cents.

No. 5408, Ladies' Four-gored Skirt. Cut in 5 sizes, 22 to 30 inches waist measure. Size 22 requires 2¾ yards around lower edge and requires 4 yards of 36-inch material. Price, 10 cents.

No. 5372, Children's Dress. Cut in sizes 2, 4, 6, 8 and 10 years. Age 8 requires 2 yards 36 inches wide, ¼ yard of 18-inch all-over. Price, 10 cents.



## Anty Drudge gives good advice

Mrs. Cropps—"Now, Mame, there's no use going on that way about your white petticoats. I can't parboil myself to pieces every Monday just because you go to parties and dirty your starched things. That's plenty good enough to wear on the straw ride."

Anty Drudge—"Why, Mrs. Cropps, your Mame wants to look as nice as other girls, and she can, too, and you won't have to steam and boil and slave to do it, either. Just get a cake of Fels-Naptha Soap and use cool or lukewarm water. Why, Mame could wash her own skirts in no time herself."

Perhaps your daughter wouldn't want to leave the farm, if the work was not so hard. Young folks get tired the same as older people.

If you could lighten Monday's work, wouldn't it make the whole week easier?

If you try Fels-Naptha Soap once, you'll find the secret. Fels-Naptha Soap means as much to the women-folks on the farm as any new invention means to the men-folks. Fels-Naptha Soap washes everything—overalls, blankets, the finest white goods and the softest flannels—without hard rubbing or boiling. Directions are clearly given on the red and green wrapper.

For full particulars, write Fels-Naptha, Philadelphia

## Ordinary Lather Feels Heavy

## JAP ROSE

## Bubbly Lather is Light As Air

These gleaming bubbles instantly absorb every atom of dust, dirt and irritating matter. They cleanse the pores and purify the entire skin tissue so it feels far cleaner, softer and smoother.

JAP ROSE is superior soap, made in a superior way and has a superior effect. The lather springs forth instantly and easily at the slightest rub in hardest water, hot or cold. Use it no other way awhile. You will notice great complexion improvement. Start using JAP ROSE today. Be convinced of its superiority.

All Dealer's Sell  
Jap Rose Soap

MADE BY  
KIRK  
CHICAGO, U.S.A.

Large Transparent  
Cake for 10c

Special Trial Offer: Send a 2c stamp and your dealer's name for a Free trial cake of JAP ROSE Soap.

JAMES S. KIRK & COMPANY, 213 MICHIGAN ST., CHICAGO

ANYBODY CAN LAY IT.

**Rubber Roofing**

Warranted For Twenty-Five Years.

Freight Paid To Any Station East of Rocky Mountain, except Texas, Okla., Colo., N.D., S.D., Wyo., Mont., N.M., La., Ga., Ala., Miss. and Fla., on all orders of three rolls or more. Special Prices to these States on request.

ONE-PLY .... Weighs 35 lbs., 108 Square Feet, \$1.10 per roll.  
TWO-PLY ... Weighs 45 lbs., 108 Square Feet, \$1.30 per roll.  
THREE-PLY ... Weighs 55 lbs., 108 Square Feet, \$1.50 per roll.

TERMS CASH: We save you the wholesalers' and retailers' profit. These special prices only hold good for immediate shipment.

Indestructible by Heat, Cold, Sun or Rain.

Write for FREE SAMPLES or order direct from this advertisement. Satisfaction guaranteed or money refunded. We refer you to Southern Illinois National Bank.

Century Manufacturing Co., Dept. 542 East St. Louis, Ills., or 200 5th Ave., New York City.



## GRANGE

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

### THE AUGUST PROGRAMS.

#### State Lecturer's Suggestions for First Meeting.

Song, by Grange.  
Are our local laws being enforced as they should be? If not, what can the Grange do to help?

Old-time music.  
Three reasons for rotation of crops, by three men in three-minute talks.

Progress in fighting flies, reports on success or failure, by five women and two men.

How to keep butter hard without ice.  
Song, "Help it On," No. 108 in Grange Melodies.

Roll call, "Objections to Woman's Suffrage," responded to by the lecturer calling upon a member, who, after naming objection, asks another member to answer it, until all have been called out.

Song, "Polly put the kettle on and we'll all take tea."

Refreshments, tea and wafers, (with fortune telling).

### READY FOR RALLIES.

In most cases where a rally will be held this summer, the initial steps have been taken, that is, the place, the approximate time and the chief speaker have been decided upon. Besides these, there are a number of minor details which have weight in the final success or failure of the day which it is not out of place to mention:

1. As much of the desirable outcome of a rally centers upon the presence of the advertised speakers, it is of utmost importance that no slip occur in the arrangements for such helpers. Explicit directions as to date, place and how to reach the rally should be sent well in advance to the speakers engaged and an acknowledgement received, in order that each party may know that the other understands the plan. In case of an emergency at the last, the speaker should be expected to make desperate efforts to be present, going to extra expense and exertion on his own part if necessary, since nothing is more disastrous to a Grange effort than failure at this point.

2. A program being a strong feature of a Grange rally, it is essential that live topics be handled by the speakers, and that in a concrete manner without overmuch rambling talk and digression. This is not always an easy thing for a program-maker to manage, but it is an aim to keep in mind. There is no dearth of live topics for discussion this season; the only trouble will be to select the more important ones. The question of equal suffrage should be upon every program, whatever other subjects are brought forward, as it is not only a "live topic" but one which the Grange has especially espoused during the present campaign season.

Stirring music, and lots of it, seems as essential at a rally as a good dinner. Get a hustling, energetic leader—or be one yourself—to induce everybody to sing. This is really not so difficult if familiar airs are chosen and verses or choruses repeated until people catch the spirit of the "general sing." It pays, always and richly. The catchy, suffrage songs set to old tunes meet this need admirably and provoke thought.

3. Preparation of the grounds play no inconsiderable part in the outcome of the day. Clearing up a little each year, if the picnic is an annual affair, and adding conveniences and equipment gradually is the best way. Provision for needs of people and horses should be made, looking to their eating dinner comfortably and spending a delightful day in the open. One important item, all too often overlooked, is to place the seats near enough to the platform. Voices are swept away in open air by even a slight wind.

4. The esthetic side of the day should be provided for in effective decoration. The simpler this is, the more it will comport with the beauty of the outdoors. Nothing excels a large "Old Glory" hung over the entrance, backed by the living green of the trees. Add, this year, some striking yellow suffrage banners and streamers, and little else need be done, unless it be to bank cut branches of trees about the platform.

5. Every rally should bubble over with whole-souled, joyous sociability. I would have a committee on reception, self-appointed or otherwise, meet people as they gather, direct them to the assignments of the grounds and make them acquainted with any strangers. More than this, someone should be on the outskirts

of the audience during the program to lead those who prefer to visit to a distance and, in an inoffensive way, to maintain order and quiet within hearing distance of the platform. All amusements should precede or follow the program proper and by no means be carried on at the same time. More attention needs to be paid to games and amusements in which all can join—particularly children.

6. Finally, the rally is designed to feed the Grange. Because of this, there ought always to be at hand application blanks, and invitations to join should be extended to those persons present who are not now members.

JENNIE BUELL.

### AMONG THE LIVE GRANGES.

Newaygo Pomona was pleasantly entertained by Sitka Grange in June. A well prepared program, a social time and meals fit for a king were among the many pleasant features of this meeting. "Units of Soil Fertility" was given attention by M. J. Thompson, of U. S. Department of Agriculture, who explained in full the elements of plant growth and food. Miss Becker, county commissioner of schools, put forth some forceful thoughts on some of our greatest needs in the rural school. Another important topic, "Our duty to society and school," was well handled by Mrs. George Warren. "How the farm may educate the farmer," by H. W. Zerlant, and "Woman's Suffrage" were also given attention at this session. Fremont Grange will entertain Pomona on the first Tuesday and Wednesday in October.—Sophia Kimbell, Secretary.

#### Two Meetings of Branch Pomona.

Branch Pomona held a very successful meeting with Quincy Grange in June. Notable features of the program were the welcoming address by Miss Leona Stanton, an able address by Superintendent Robinson, on the subject, "Is Agriculture the True Basis of Prosperity," a fine talk by W. Glenn Cowell on primary election, and an able paper by Mrs. McCartney, of Girard Grange, on "Does woman's invasion of the business field improve home conditions?" Butler and Quincy Grange orchestra furnished music for the occasion. The Granges represented were Girard, Butler, Bronson, Batavia, Unity, Coldwater, Four Towns, with Quincy out in full force. Quincy furnished a fine banquet for 260 hungry patrons, which was served in fine shape, everybody receiving prompt attention and an ample supply of all the good things of the season. The Granges of Branch county now have a membership of about 1,350, and most of them are in a flourishing condition.

The Pomona patrons of the county were again entertained on Thursday, July 18, this time by Unity Grange at the beautiful farm home of Unity's master, Bro. M. M. Garrett. The closed business session was held in the spacious parlors, after which a feast was enjoyed in the shade of the well kept orchard, where a table accommodating 100 persons had been placed. After more than 200 had been served a good literary program was rendered, the feature of which was the able presentation of equal suffrage arguments by Sister Woodman, chaplain of State Grange, and Rev. Jones, of Bronson. Unity is one of the youngest Granges in the county and is to be congratulated on the success of this its first effort in the way of entertaining the patrons of the county. The Grange and its master were given a rousing vote of thanks.

## FARMERS' CLUBS

Address all communications relative to the organization of new Clubs to Mrs. C. P. Johnson, Metamora, Mich.

#### Associational Motto.—

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

#### Associational Sentiment.—

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

#### INGHAM COUNTY FARMERS' CLUB HISTORY.

Read by Mrs. W. L. Cheney, on the occasion of the fortieth anniversary of the Ingham County Club, held at M. A. C.

We are told that history is a knowledge of facts, usually considered dry and uninteresting, but we will try in the few moments assigned to us this afternoon to review a few of the many pleasant events that have transpired within the 40 years of existence of this organization to make this history interesting.

First its inception: A few farmers who were thoroughly interested in agriculture in the vicinity of Mason, thought it would be a good thing for themselves and the community to have a farmers' organization, and through the columns of the Ingham County News, then edited by Kendall Kittredge, there was a call for those interested to meet at the editor's sanctum Saturday, Jan. 27, 1872. Less than one dozen men met, but a committee, consisting of A. M. Chapin,

H. A. Hawley and G. W. Bristol, was appointed to perfect an organization.

At an adjourned meeting, articles of association were adopted and the following eleven gentlemen became charter members: A. M. Chapin, H. A. Hawley, A. F. Wood, Enos Northrup, Allen Rowe, Frank White, D. C. Smith, Wm. H. Rayner, L. H. Ives, K. Kittredge, G. W. Bristol. Of these gentlemen, nine have finished their work. Messrs. Ives and Bristol are with us today. All are represented in our membership today but two.

The officers elected were: Pres., D. L. Cady; vice-presidents, A. F. Wood, H. A. Hawley; rec. sec., Frank White; cor. sec., L. H. Ives, treas., Wm. H. Rayner.

The meetings continued each Saturday throughout the winter, with a membership of 23. At the close of the second winter 42 men had become members, and this was the order of business:

1. Reading of minutes of last meeting.
2. Discussion of markets and reports.
3. Inquiries and answers.
4. Results of experiments.
5. Replies to letters of inquiries.
6. Discussion of stated subjects.
7. Miscellaneous.

The year 1874 was an eventful one. The regular weekly meetings were held throughout the winter season, and during the summer six homes were opened for the entertainment of the members and their families, those of Messrs. Wood, Sommerville, Chapin, Ives, Hawley and R. F. Griffin.

In 1875 the Club made itself famous besides the regular meetings, by holding a poultry show, and later a plowing match at the farm of R. F. Griffin. There were ten entries and only one three-horse team.

In 1876 another poultry show was held.

In 1878 farmers' institutes began being held, and there were many under the auspices of the Ingham County Farmers' Club, and the old court house to be filled with interested farmers and their families, and really we can boast just a little over the state institutes that are held now annually at Mason.

This Club also held many seed shows with profit.

At the beginning of these, being on Arbor Day, this Club put itself on record by planting a tree on the court yard with appropriate exercises, Hon. O. M. Barnes giving the principal address.

In passing I just want to mention that \$25 prize won by this body at the state fair at Detroit in September, 1880, when Nettie Wood put into shape for exhibition 100 samples of wool of different breeds furnished by ten men.

(Continued next week.)

### CLUB DISCUSSIONS.

Children's Day Meeting.—The Washington Center Farmers' Club held the July meeting with Mr. and Mrs. Frank Brown, at Social Glen. This was Children's Day and the program was entirely in the hands of the little people. After reading of minutes and miscellaneous business, roll call was responded to by naming your favorite bird. The program was then turned over to the children, of whom there were 27 present, and they entertained the grown-ups with music and recitations the rest of the afternoon. At the conclusion of the program, ice cream, cake and lemonade were served to over 50. The next meeting will be the annual picnic August 8.

Agriculture in the Schools.—At the July meeting of the Ingham County Farmers' Club, which was held at the home of Judge C. B. Collingwood, of East Lansing, more than 100 were present. Pres. Ives, after appropriate opening remarks, introduced as the first speaker, Thomas Gunnison, the first mayor of the town, who cordially welcomed the gathering. Dr. A. C. True, of Washington, D. C., was the next speaker, and told how, in attending different conventions, all were interested in agriculture. At a meeting of the commercial bankers the question was discussed how to help the farmer grow more food stuffs, when someone suggested the best way would be to give the farmer cheap rates for all the money he needed to use, and the question was dropped. Railroads are all interested in the farmer having better crops, for it will give them more freight to haul. He spoke of the country life commission and that a substantial basis for continued prosperity was an intelligent and well-educated people living in the country. What seemed an adequate education now would not be in 25 years from now, and to show the growth of agricultural education, a year ago there were 900 colleges and schools where some agriculture was taught, this last year there 2,600 colleges and schools above the primary grades.

### NOTICE TO GRANGES AND FARMERS' CLUBS.

We will be pleased to publish in the Michigan Farmer the dates of picnics and gatherings held. Secretaries will kindly advise with date and place at least 10 days in advance.

**Ertel's Cyclone 3-Stroke Self-Feed Hay Press Bales with least labor**

WILL BALE 20 TONS OR MORE A DAY AT COST OF ONLY 40c A TON. Make big money baling for your neighbors after yours is done.

The Cyclone is powerful, durable, repair-proof—made almost entirely of finest steel. Unbreakable steel baling chamber, adjustable tension, makes smooth, clean, tight bales, 75 to 125 lbs. as desired. Three strokes each circle. Self-feed. Works at stack, barn or window.

Here's the biggest money maker you can buy. Low price. Free trial and absolute guarantee on every press. Write today—full information free.

G. E. Ertel Co., 245 Ky. St., Quincy, Ill.

## SALESMEN WANTED

Do you want a good position where you can earn from \$1,000 to \$5,000 a year and expenses? There are hundreds of such positions now open. No former experience as a Salesman required to get one of them. If you want to enter the world's best paying profession our Free Employment Bureau will assist you to secure a position where you can earn good wages while you are learning Practical Salesmanship. Write today for full particulars, list of good openings and testimonials from hundreds of our students for whom we have recently secured good positions paying from \$100.00 to \$500.00 a month and expenses. Address nearest office, Dept. 208 National Salesmen's Training Association Chicago New York Kansas City Seattle New Orleans Toronto

## WINTER SEED WHEAT

Write for catalog and circular, describing the most wonderful variety ever introduced in the United States. BERRY'S IMPROVED KHARKOV, of the latest importation, direct from Russia. Has no equal. Largest yield known and withstands the severest winters. Have improved Turkey Red, other varieties and Mammoth White Rye. Large stock Alfalfa, Timothy and all Grass Seed. Write for free samples, special low prices. A. A. Berry Seed Co., Box 169 Clarinda, Iowa

**Chairs & Tricycles**  
For Invalids and Cripples  
**Worthington Co.**  
550 Cedar St., Elyria, O.

Salesmen wanted in all towns. Liberal inducements to good men or women. Permanent position. No capital required as we furnish everything. Experience unnecessary. Address at once: **Herrick Seed Co., Rochester, N.Y.**

**WODWAL BOARD** SAVE ONE HALF BUILDING EXPENSE  
WRITE US FOR SAMPLES, PRICES—NAME OF WOODS BUILDING  
**MC HENRY-MILLHOUSE MFG. CO.**  
SOUTH BEND, INDIANA

WANT INFORMATION? If you want information of any kind, any place, if you want to buy anything of any kind, write us. National Information & Buyers Agency, Denver, Colorado.

**LEARN TELEGRAPHY**—Positions guaranteed. Catalogue free. North-Western Telegraph School, Eau Claire, Wis.

WANTED—Post Office Clerks, City and Rural Carriers. Thousands needed. Examinations soon. Trial examination free. Write today, Ozment, 17 R. St. Louis.

**Hard Milking PLUG**

For hard-milking cows or leaky teats. Prevents leakage where teat opening is relaxed and cures hard milking where due to an obstruction in the canal. Our price 35c each, or \$1.00 for a set of four. **THE MICHIGAN FARMER, Detroit.**

## FARMS AND FARM LANDS FOR SALE OR EXCHANGE

For Sale, Farms of all sizes, at all prices and all kinds of soil. **WISNER & GUTHRIE, Eaton Rapids, Mich.**

To Buy, Sell or Exchange Property—any kind, any price. Northwestern Business Agency, Minneapolis, Minn.

We Sell Farms in Oceana, greatest fruit Co. in U. S. also grain, potatoes, alfalfa, dairying. Write for list, etc. **HANSON & SON, Hart, Mich.**

Beautifully Illustrated Booklet about Delaware, the luscious peaches, strawberries, and of ideal homes. Address State Board of Agriculture, Dover, Delaware.

For 75c Silver, we will mail you 625 names and addresses of property owners in Sacramento Valley which mostly want to sell or exchange, also description, price, terms of some of these ranches. **H. W. Dixon, P.O. Box 136, Oak Park, Sacramento, California.**

**WHY PAY RENT** when you can buy the Best Land in Michigan at from \$7 to \$12 an acre near Saginaw and Bay City. Write for map and particulars. Clear title and easy terms. **Stafford Bros., (owners) 15 Merrill Bldg., Saginaw, W. S. Michigan.**

**CENTRAL MICHIGAN** Write for list of stock and Grain Farms, also our booklet "Facts about Central Michigan", giving complete information regarding the finest farming district in Central Michigan. **HOLMES REALTY CO., Lansing, Mich.**

**Rich Potato Farm Near R. R. 80 Acres, \$4000, Easy Terms**

50 acres of level fields in rich loam soil that raises 250 bushels potatoes per acre without fertilizer; spring-watered pasture for 20 cows, lots of wood and timber; 50 apple and 150 peach trees, small fruit; fine 10-room house, barn 30x34, cow stable 20x20, all practically new; R. R. station, good market, high school, churches, stores, etc.; near owner cannot care for it and it taken now it goes for the low price of \$4000, on easy terms. For further details and traveling directions to see this and a good farm of 41 acres for \$2300; also attractive lakeside farms in Southern Michigan, see page 24-M. "Strout Farm Catalogue" filled with accurate descriptions and pictures of money-making farms, many of which are offered at startling sacrifice prices to settle estate at once, copy free. Station 101, E. A. STROUT FARM AGENCY, 407 South Dearborn Street, Chicago, Ill.



## MARKETS

## DETROIT WHOLESALE MARKETS.

July 31, 1912.

**Grains and Seeds.**  
**Wheat.**—Conditions affecting the wheat trade gave the market a firmer position than it occupied a week ago and prices for both cash and future deals are ruling from one to two and a half cents higher. Much confusion was started by the report of black rust in North Dakota. The upturn in prices caused by this report was augmented by similar reports from other sections in this country and also from Saskatchewan. Later reports modified somewhat the extent of the scare and gave the market a slightly easier tone. Abroad there is a firm tone with cash wheat finding an active demand. The visible supply showed an increase for the first time this season, it amounting to 72,000 bu. A year ago the price for No. 2 wheat was 88½¢ per bu. Quotations for the week are as follows:

	No. 2	No. 1	Sept.	Dec.
Thursday	1.03	1.02	1.03½	1.05½
Friday	1.03	1.02	1.04½	1.06½
Saturday	1.04	1.03	1.04½	1.06½
Monday	1.04½	1.03½	1.04½	1.06½
Tuesday	1.05½	1.04½	1.04½	1.06½
Wednesday	1.07	1.06	1.04½	1.06½

**Corn.**—There was a gain in the strength of the corn market last week. The influence of an advancing wheat market was felt and weather conditions have not been ideal for pushing the new crop as it should, while in Kansas and Oklahoma the extremely hot weather has damaged the prospects for a bumper crop. There is little trading on the local market. The price for No. 3 corn a year ago was 66¢ per bu. Quotations are as follows:

	No. 3	No. 3
	Corn.	Yellow.
Thursday	76	78
Friday	77	79
Saturday	77	79
Monday	76½	78½
Tuesday	76½	79
Wednesday	76½	79

**Oats.**—This cereal shows a greater advance in price than either wheat or corn. Harvesting is progressing rapidly and the outlook for a heavy yield is no more promising than it has been. The visible supply shows a decrease of 641,000 bu. A year ago the price for standard oats was 41½¢ per bu. Quotations for the week are as follows:

	Standard.	No. 3
		White.
Thursday	60½	60
Friday	61	60½
Saturday	61	60½
Monday	61	60½
Tuesday	60½	60½
Wednesday	61	60½

**Beans.**—Cash beans rule the same as a week ago. October quotations have fluctuated a little, a drop of 2¢ last Friday was regained on Saturday, only to be lost again Monday. The new crop is promising. Quotations are as follows:

	Cash	Oct.
Thursday	\$2.25	\$2.25
Friday	2.25	2.23
Saturday	2.25	2.25
Monday	2.25	2.23
Tuesday	2.25	2.23
Wednesday	2.25	2.23

**Clover Seed.**—The quotation for October clover seed remained steady until Tuesday of this week when a 10¢ decline was agreed upon. The market is quiet and quotations are as follows:

	Prime Oct.
Thursday	\$9.85
Friday	9.85
Saturday	9.85
Monday	9.85
Tuesday	9.75
Wednesday	9.75

**Rye.**—This cereal remains steady at last week's quotation, which is 73¢ per bu. for No. 2. The price is merely nominal.

**Flour, Feed, Potatoes, Etc.**

**Flour.**—Prices are steady, except for rye flour which is off 40¢.

Straight	\$5.60
Patent Michigan	5.80
Clear	5.00
Rye	5.00

**Feed.**—Values are higher for all grades except bran and coarse middlings. Carlot prices on track are: Bran, \$26 per ton; coarse middlings, \$28; fine middlings \$31; cracked corn and coarse corn meal, \$32; corn and oat chop, \$31 per ton.

**Hay and Straw.**—Hay is steady while straw rules lower. Quotations: No. 1 timothy, \$21.50@22; No. 2 timothy, \$18@19; clover, mixed, \$16@20.50; rye straw, \$10.50@11; wheat and oat straw, \$9.50@10 per ton.

**Potatoes.**—The advanced prices of last week have improved under a good demand. Michigan offerings are of small volume. The ruling price for southern offerings is \$3.25 per bbl.

**Provisions.**—Family pork, \$19@20.50; mess pork, \$19; clear, backs, \$19.50@21; hams, 15¢; briskets, 12@12½¢; shoulders, 11½¢; picnic hams, 11@11½¢; bacon, 14@16¢; pure lard in tiers, 11½¢; kettle rendered lard, 12½¢ per lb.

**Dairy and Poultry Products.**

**Butter.**—No changes of account have appeared in conditions affecting the butter market. The demand is lively from consumers but slow from the storage people, while the output is about normal for July. Quotations are: Extra creamery, 26½¢; first creamery, 25½¢; dairy, 21¢; packing stock, 19¢ per lb.

**Eggs.**—The factors influencing the egg deal remain steady and the quotations is the same as given a week ago, current receipts, candled, being quoted at 20½¢ per dozen.

**Poultry.**—Receipts are of small volume and prices remain on substantially last

week's basis, except for broilers, which are 4¢ lower. Quotations are: Broilers, 20@21¢; chickens, 13½@14¢; hens, 13½@14¢; No. 2 hens, 9@10¢; old roosters, 9@10¢; turkeys, 16@19¢; geese, 10@12¢; ducks, 14¢; young ducks, 15@16¢ per lb. **Veal.**—All grades steady. Fancy, 11@12¢ per lb; choice, 8@9¢. **Cheese.**—Steady. Michigan flats, 16@17¢; York state flats, 17@18¢; limburger, 17@19¢; domestic Swiss, 22@23¢; brick cream, 17½@18¢.

**Fruits and Vegetables.**

**Cherries.**—Sour are higher and quoted at \$2@2.25 per 16-qt. case; sweet, \$2@2.25 per 16-qt. case.

**Raspberries.**—Reds selling at \$4.50@5 per 24-qt. case; black, \$1.40@1.50 per 16-qt. case.

**Blackberries.**—Steady. Ruling quotations are \$1.50@1.75 per 16-qt. case.

**Huckleberries.**—Selling at \$3@3.75 per bushel.

**Gooseberries.**—Steady at \$2@2.25 per bushel.

**Honey.**—Choice to fancy comb, 15@16¢ per lb; amber, 12@13¢.

**Apples.**—New apples are higher and quoted at \$5.50@6 per bbl.

**OTHER MARKETS.****Grand Rapids.**

There were 450 loads of fruit and produce on the city market Tuesday morning, including about 60 loads of potatoes, which sold at 90¢@91¢. Fruit prices were as follows: Apples, 1¢; blackberries, \$1.60; red raspberries, \$1.75; cherries, \$2; huckleberries, \$1.60@2. Vegetables were bringing the following prices: Turnips, carrots and beets, 10¢; cabbage, 30¢; cucumbers, 30¢; peas, \$1.50; beans, 75¢; parsley, 20¢; sweet corn, 12½¢; celery, 15¢. Hay is bringing \$14@15. Jobbers are paying the country trade 18¢ for eggs and 22¢ for dairy butter. Live fowls are worth 10¢. Old wheat is quoted at \$1. New wheat at 96¢; oats, 55¢; beans, \$2.20

**Chicago.**

**Wheat.**—No. 2 red, \$1.00½@1.02; Sept., 93½¢; Dec., 95½¢.

**Corn.**—No. 3, 72½@73¢; Sept., 66¢; Dec., 57¢.

**Oats.**—No. 2 white, 47@50¢; Sept., 33¢; Dec., 34½¢.

**Butter.**—Volume of business fair at prices which have ruled for several weeks past. Quotations: Creameries, 23@25¢; dairies, 21@24¢ per lb.

**Eggs.**—Last week's advance on miscellaneous lots has been lost, while the better grades have advanced ½¢. Quotations: Firsts 18¢; ordinary firsts, 16½¢; at mark, cases included, 15@16¢ per doz.

**Potatoes.**—Receipts show a heavy increase and the market is easier. Early Ohio from Kansas and Missouri are quoted at 75@77¢ per bu; Illinois stock, 65@72¢; Minnesota, 70@75¢.

**Beans.**—Market quiet with last week's lower values ruling. Quotations are: Pea beans, choice, hand-picked, \$2.85@2.88 per bu; prime, \$2.75@2.78; red kidneys, \$2.50@2.60.

**Hay and Straw.**—No changes of consequence since last week. Quotations are: Timothy, choice, \$23@24; No. 1, \$21@22; No. 2 and No. 1 mixed, \$17@18.50; clover, \$7@10; No. 2 and no grade, \$5@9; alfalfa, choice, \$13.50@14; No. 1, \$12@12.50; No. 2, \$10@11. Straw—Rye, \$10.50@11; wheat \$7.50@8.50; oat, \$7.50@8.50.

**New York.**

**Butter.**—Prices are substantially the same as a week ago. Demand is largely for current consumption. Quotations are: Creamery, special extras, 27@27½¢; do. firsts, 26@26½¢; do. seconds, 25@25½¢; factory, current make, firsts, 22@23¢ lb.

**Eggs.**—Market is steady. Demand and supply are normal and prices remain unchanged. Fresh gathered extras, 23@24¢; extra firsts, 20@22¢; firsts, 18½@19½¢; western gathered whites, 20@24¢ per doz. **Poultry.**—Dressed, unsettled. Western broilers, fresh killed, 21@27¢; fowls, 14½@17¢; turkeys, 16@17¢ per lb.

**Boston.**

**Wool.**—Every feature of the wool market points not only to maintaining present prices but to advances. The past week has been a very active one. Traders are receiving new wools from the west, but there is little opportunity for sorting, owing to the urgent call from buyers who appear ready to take the offerings in original bags. There is scarcely any argument over prices, the sellers having things their own way in this regard. Foreign market prices are above the domestic quotations, thus, furnishing grounds for higher values than those now prevailing. Michigan ¼ and ¾ sold on the market here at 29¢. Unwashed delaine is quoted at 26@27¢.

**Elgin.**

**Butter.**—Market is firm at 25¢ per lb., which is the quotation of one week ago.

**THE LIVE STOCK MARKETS.****Buffalo.**

July 29, 1912.  
 (Special Report of Dunning & Stevens, New York Central Stock Yards, East Buffalo, New York.)

**Cattle.**—Receipts, 170 cars; all grades of cattle weighing 1,200 sold about 10 lower; all other grades sold steady at last week's prices. Best steers, 1,350 to 1,500, \$8.50@9.15; good to prime 1,200 to 1,300, \$8.50@8.75; good to prime, 1,100 to 1,200-lb. steers, \$8.15@8.40; medium butcher steers, 1,000 to 1,100, \$7.40@7.65; butcher steers, 950 to 1,000, \$6.50@6.65; light butcher steers, \$5.75@6.25; best fat cows, \$5.50@6.25; fair to good, \$4@5; common to fair kinds, \$3.25@3.50; trimmers, \$2.50@3; best fat heifers, \$7@7.50; fair to good heifers, \$5.50@6; light butcher heifers, \$4.50@5; stock heifers, \$3.50@4; best feeding steers, \$5@5.25; common do., \$4@4.50; stockers, inferior, \$3.50@4; prime export bulls, \$6@6.25; best butcher bulls, \$5@5.50; bologna bulls, \$4.25@4.75; best

milkers and springers, \$50@60; common kinds, \$25@35.

**Hogs.**—Receipts, 65 cars; market about 5¢ lower. Heavy, \$8.80@8.85; Yorkers, \$8.75@8.80; pigs, \$8.70@8.75; stags, \$5@6.25.

**Sheep.**—Receipts, 32 cars; market active; choice spring lambs, \$7.50@8; culs to fair, \$5.50@6; yearlings lambs, \$6@6.50; bucks, \$2.50@3; ewes, \$3.75@4.50; wethers, \$5@5.25; sheep, culs, \$2@3.

**Calves.**—Steady; tops, \$10.25@10.50; fair to good, \$7.50@10; heavy, \$5@6.

**Chicago.**

July 29, 1912.  
 Cattle. Hogs. Sheep.  
 Received today .... 21,000 45,000 25,000  
 Same day last year .. 27,114 41,730 28,753  
 Received last week .. 30,853 111,115 106,236  
 Same week last year .. 60,351 120,840 119,525

Cattle buyers turned their attention mainly today to fat steers and butcher stock, these selling at steady prices, while the liberal percentage of common to middling cattle moved off slowly at further reductions of 10@15¢. The boom in good hogs last week that was largely due to the liberal shipments from here, aggregating 35,475 hogs, brought about a large run today, and prices broke 10@15¢ promptly, with the decline largely in the better class of swine. Hogs sold at \$7.20@8.35, only one sale being reported at the top, if exception is made of part of a car load at \$8.40. Hogs received last week averaged in weight 240 lbs., compared with 237 lbs. a year ago and 243 lbs. two years ago. Prime lambs were 10@15¢ higher today, with a sale of two double-decks of prime Idaho range lambs at \$7.85, while a sale took place of two double-decks of prime Idaho ewes at \$4.50. The general market was fairly active for sheep and lambs at steady prices. There was a large showing of range stock.

Cattle receipts of late years have been falling off amazingly, both here and at other western markets, and the beef scarcity is startling, the aggregate cattle receipts for the year to date at six leading western markets having been in round numbers about 632,000 head less than for the corresponding period last year. Extremely high prices for beef and the hot weather have greatly lowered the consumption of beef, vegetables and fruits being largely eaten as substitutes, but the meager offerings of cattle here last week forced buyers to pay advanced prices for offerings with the slightest claim to quality, and by Thursday a large share of the killing cattle of both sexes sold fully 50¢ above the low spot of the preceding week. A big share of the beef steers crossed the scales during the week at \$7.25@9.15, with the choicest heavy beefs recovering all of their recent decline and fetching \$8.75@9.75, while the poorer light-weight grass-fed yearling steers went at \$5.80@6.75. A desirable class of yearling steers brought \$8@9.10, and all kinds of cattle selling at \$8.75 and upward were as high as at any time since 1873. Fair to prime cows and heifers had a free outlet at \$4.25@8.25, a fancy grade of heifers being worth up to \$8.60, while cutters sold at \$3.40@4.20, canners at \$2.40@3.35 and bulls at \$3.50@7. A stiff advance in calves put prices on the highest level since January, with sales at \$4@10.10 per 100 lbs. The stocker and feeder trade was checked materially by the scarcity of good offerings, especially of weighty feeders and a sharp rise in values. Stockers and feeders weighing from 600 to 1,000 lbs. brought \$4.15@6.90, with not much doing above \$6.50. Milkers and springers were in better demand at advances of a few dollars per head, buyers paying \$35@75.

Hogs have surprised many people by their big advances in prices lately, the demand on local and shipping account frequently exceeding the offerings. Last week started off with a Monday run of 42,761 hogs, and prices broke 5@10¢, but subsequent days showed very moderate supplies and good advances were scored easily, a much enlarged eastern shipping demand being the strongest factor in the rise. It is a long time since such a bid advance as that of the past week has been witnessed, prime light-weight shipping hogs bringing the highest prices of the year. As is usual at this season, there was an extremely wide spread in prices between prime light butcher lots and coarse heavy packing hogs, there being a liberal percentage or so of a grassy kind included in the receipts. The western packers have slaughtered far less hogs for the summer packing season than last year, and it is evident that there is no excessive supply of marketable hogs left in the country. The large consumption of fresh pork everywhere is a powerful bull point, and owners of thrifty young hogs should hold them until fat and reasonably weighty, for hog prices are very much higher, than in most former years, 1910 excepted. Saturday saw the highest prices of the week, hogs selling for \$7.40@8.50, with one sale at the top. A week ago the top was \$7.90. The marked increase in purchase last week by eastern shippers is largely the cause of the boom, the top being the highest since November, 1910. Pigs sold at \$6.75@8.10, stags at \$8.25@8.70 and boars at \$3.50@4.25. Throwout packing sows brought \$6.60@7.20 and rough packing hogs \$7.35@7.50.

Sheep receipts last week consisted mainly of native ewes, with a few bucks, and western ranges furnished most of the wethers and yearlings. Lambs continued to make up the great bulk of daily offerings, natives being numerous, while Oregon, Washington and Idaho ranges shipped in a good many lambs. Prime range lambs sold at the highest prices of the season, but they were superior to any lambs previously offered. Wednesday's big run of southern lambs at Louisville, from which point packers received 10,000 lambs for the day's supply direct, was a disturbing element in the market, forcing a decline in prices for all except the best grade. Montana

shipped in some big supplies for range wethers. The demand for feeders and breeders was active, and high prices were paid for the better class of both, with nowhere near enough offered. Lambs have been going at \$5@7.50, with fancy range lambs at \$7.75. Feeder lambs brought \$5.25@5.85. Yearlings went at \$4@5.50, ewes at \$2@4.25 and bucks at \$2.50@3.25. Breeding ewes brought \$4@5.25, and yearling feeders sold for \$4@4.50.

Horses had to be good in quality and heavy in weight to suit the few buyers who showed up in the auction ring on different days, and, unfortunately, the offerings consisted largely of an inferior, thin kind, which had to be sold, if at all, at concessions in prices. Receipts for several weeks have been fewer in numbers than a year ago, but they have included too few good animals. Inferior horses are quoted at \$75@100 per head, while superior heavy drafters are worth anywhere from \$250@325, fair to good lighter drafters weighing from 1,550 to 1,650 lbs. going at \$175@225. Very little demand exists for drivers or feeders. Farm workers are slow at \$100@200.

**CROP AND MARKET NOTES.**

**Genesee Co., July 26.**—Too much rain has fallen in the past week or so. Hay fields have been flooded before the crop was secured. In many instances hay cocks were surrounded by water and considerable of the product has been damaged. New hay sells on the market at from \$8@12. Good yields are the rule, although some meadows were thin. Wheat harvest now in operation, with probably an average yield. Some cases weather being unfavorable for harvesting at the proper time. The rains have done considerable damage, yet later crops, like corn, beans and potatoes, will be benefited. Good roads' work is now going forward in several townships and all are to have a share in the improvement already decided upon under state supervision. Prices on farm products are good as a rule, and at the end of the season, no doubt, it will be found that yields have been usually bountiful.

**Sanilac Co., July 25.**—Haying is progressing, about 80 per cent done at this date. A light shower came on the night of July 20, and a hard rain the 23rd which soaked things and put the oats down badly. This was the first good rain we have had in this locality since beans were planted. Beans are about three weeks behind this year. Corn is growing finely. Some fields of wheat will not thresh the seed, some half a crop, very little that is a good stand. Short pasture reminds the stock owners of selling their sheep early this season. Markets quiet. Eggs, 18¢.

**Northern Isabella and Southern Clare Co.'s, July 24.**—Too wet for haying but most of the hay was secured. Wheat is nearly ripe but hardly worth cutting. Beans are doing fine where the ground is not too wet. Oats beginning to turn. Potatoes doing fine. Beets quite weedy, owing to the frequent showers. All kinds of cattle looking well.

**Branch Co., July 23.**—Hay medium, and fine quality, with ideal weather for securing crop. Corn very uneven owing to cutworms, poor seed, and late planting. Oats a large acreage and promise a bountiful crop. Wheat badly winter-killed and many fields sown to other crops. Some other fields which were seeded last fall have been cut for hay, many remaining pieces very poor. New seeding generally good. Large acreage of potatoes and very promising. Fruit crop very light and but very few apples in orchards. Large acreage of beans, looking well. Cabbage crop promises to be large. Cucumbers looking good. Pasture short and cows shrinking on milk.

**Ottawa Co., July 25.**—This has been a very "catchy" time for haying on account of frequent heavy rains. A large amount of hay has been damaged and there is still considerable yet to cut, and it is getting so ripe the quality will be very poor. Since wheat was cut there has been so much rain, and the weather warm, that the wheat is growing quite badly in the shock. The heavy rains have lodged the oats very bad in most fields, so it will be very difficult to cut them. It has been impossible to cultivate or hoe corn for some time, so many fields are very weedy and the general prospect for a crop of corn in this section has not been so poor for many years. The new canning factory at Coopersville has had a good run of peas and there are quite a few more to be harvested as soon as the ground dries off. The factory so far has given general satisfaction. Lima beans will be the next crop to harvest and can, and the wet weather is having a bad effect on this crop as well as all other crops.

**Indiana.**

**Laporte Co., July 29.**—Weekly rains have kept the corn growing at such a record-breaking rate that it is now too large to cultivate. Oats mostly cut and reported about an average crop. New potatoes and green corn a fair yield with prospect for a good yield of late crops. Hay light and not equal to last year. Pastures have greened up and will soon be good if no drouth comes. Clover and alfalfa seeding reported good. Silos will be filled with corn as usual, farmers being pleased with results from feeding ensilage. Butter firm at 30¢ with prospect of an advance soon. Apple crop very short. Farmers are getting interested in expert crop improvement as advanced by the agricultural schools of the state.

**Holstein Breeders Hold Picnic.**

The annual picnic of the West Michigan Holstein Breeders' Association will be held at the Long Beach Stock Farm on the shores of Gull Lake, near Augusta, Mich., Wednesday, August 7. It is requested that the breeders bring their wives and families to enjoy the outing and program.



## THIS IS THE LAST EDITION.

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

## DETROIT LIVE STOCK MARKETS.

## Thursday's Market.

August 1, 1912.

## Cattle.

Receipts, 1,978. Market steady at Wednesday's prices; 10@15c lower than last week.

We quote: Extra dry-fed steers, \$7.50 @8; steers and heifers, 1,000 to 1,200, \$6.25@7; do. 800 to 1,000, \$5@6; grass steers and heifers that are fat, 800 to 1,000, \$5@6; do. 500 to 700, \$4.50@5; choice fat cows, \$4.75@5.25; good fat cows, \$4.50; common cows, \$3.25@3.75; canners, \$2@3.25; choice heavy bulls, \$4.50@5; fair to good bolognas, bulls, \$4@4.25; stock bulls, \$3.50@4; choice feeding steers, 800 to 1,000, \$4.75@5; fair do. 800 to 1,000, \$4.50@4.75; choice stockers, 500 to 700, \$4.25@4.60; fair stockers, 500 to 700, \$3.75@4.25; stock heifers, \$3.25@4; milkers, large, young, medium age, \$4@6; common milkers, \$2@3.

Roe Com. Co. sold Sullivan P. Co. 1 bull weighing 1,480 at \$5, 5 cows av 920 at \$5; to Newton B. Co. 23 butchers av 500 at \$4, 2 steers av 1,355 at \$7.75, 2 do av 1,490 at \$7.75, 5 cows av 972 at \$4.25, 3 do av 813 at \$3.25, 19 butchers av 707 at \$5.50, 30 do av 683 at \$5.25; to Sullivan P. Co. 5 cows av 836 at \$4.50, 1 do weighing 760 at \$3, 2 do av 1,060 at \$4, 4 steers av 807 at \$6, 1 do weighing 570 at \$4; to Regan 11 butchers av 510 at \$4; to Goose 2 do av 357 at \$3.50; to Newton B. Co. 6 do av 671 at \$5.25, 6 cows av 925 at \$4, 1 do weighing 1,000 at \$6, 3 do av 866 at \$3; to Sullivan P. Co. 2 do av 840 at \$4.25, 1 do weighing 1,030 at \$3.25, 6 butchers av 660 at \$4.25, 11 do av 670 at \$4.75, 4 cows av 970 at \$4; to Goose 7 butchers av 421 at \$3.50; to Fry 11 do av 730 at \$4.75, 9 do av 617 at \$4.65; to Mich. B. Co. 1 heifer weighing 650 at \$3.25, 2 cows av 735 at \$3.25, 4 do av 950 at \$4.25.

Bishop, B. & H. sold Sullivan P. Co. 3 steers av 983 at \$6.10, 4 cows av 1,137 at \$4.75, 2 bulls av 1,160 at \$4.50, 2 cows av 840 at \$3, 3 do av 893 at \$4, 4 do av 900 at \$3.10, 3 bulls av 870 at \$4; to Bresnahan 6 cows av 943 at \$3.25, 11 stockers av 540 at \$4, 3 cows av 1,116 at \$3.75, 1 canner weighing 550 at \$3, 2 do av 840 at \$2.75, 1 cow weighing 1,060 at \$5.25, 6 do av 965 at \$4.25; to Kamman B. Co. 6 butchers av 883 at \$5.75, 2 steers av 1,060 at \$7, 7 do av 796 at \$5; to Newton B. Co. 12 butchers av 768 at \$4, 3 cows and bulls av 810 at \$4, 1 cow weighing 950 at \$3.02, steers av 825 at \$5.50, 15 butchers av 800 at \$6, 2 cows av 1,015 at \$5, 5 butchers av 570 at \$4; to Hammond, S. & Co. 1 bull weighing 1,120 at \$4.50, 5 do av 966 at \$4.50; to Applebaum 7 butchers av 747 at \$4.25; to Parker, W. & Co. 18 steers av 1,035 at \$7.50, 6 cows av 981 at \$3.75, 2 bulls av 920 at \$4.25, 5 do av 1,040 at \$4.50; to Cooke 7 steers av 763 at \$5.85, 11 do av 764 at \$6; to Austin 2 stockers av 625 at \$4.25, 2 do av 560 at \$4.25, 7 do av 580 at \$4.50.

Spicer & R. sold Bresnahan 9 cows av 501 at \$3.85, 17 butchers av 713 at \$5.25; to Parker, W. & Co. 27 steers av 946 at \$7.25; to Mich. B. Co. 6 heifers av 603 at \$4.50, 4 bulls av 880 at \$4.50, 4 do av 525 at \$4, 4 butchers av 637 at \$3.50, 7 do av 790 at \$5.50, 1 bull weighing 820 at \$3, 2 do av 415 at \$3.75, 2 do av 915 at \$4.50, 2 do av 640 at \$4, 1 do weighing 850 at \$4.50; to Morgan 4 stockers av 512 at \$4.50; to Schlischer 9 butchers av 422 at \$3.85; to Bresnahan 9 do av 528 at \$4.25, 1 cow weighing 800 at \$2.50, 6 do av 905 at \$5; to Kamman B. Co. 13 steers av 782 at \$5.75, 3 do av 630 at \$5; to Rattkowsky 2 cows av 1,125 at \$4.50, 1 do weighing 820 at \$3.50, 2 do av 1,020 at \$4; to Thompson Bros. 10 butchers av 747 at \$4.50.

Haley & M. sold Mich. B. Co. 1 bull weighing 910 at \$4.25; to Breitenbeck 1 cow weighing 950 at \$4.50, 1 do weighing 1,000 at \$4, 4 do av 917 at \$4, 7 butchers av 856 at \$5.75, 10 do av 817 at \$5.75; to Sullivan P. Co. 2 cows av 1,090 at \$4.50, 15 do av 974 at \$4.60, 5 do av 1,156 at \$4.75, 1 do weighing 860 at \$4, 2 bulls av 810 at \$4.25, 9 butchers av 648 at \$4.85, 2 cows av 810 at \$4.25; to Bresnahan 6 cows av 966 at \$3, 1 canner weighing 730 at \$2.50, 3 cows av 913 at \$3.25, 1 do weighing 680 at \$2.50, 1 do weighing 1,080 at \$5.25, 3 steers av 660 at \$5, 2 do av 600 at \$4.25, 8 do av 671 at \$5; to Regan 6 heifers av 523 at \$4.25; to Newton B. Co. 4 steers av 1,072 at \$7.50, 2 do av 1,135 at \$5.75, 2 bulls av 565 at \$3.75, 13 butchers av 640 at \$4.60, 8 do av 421 at \$4.25, 2 cows av 875 at \$3; to Mich. B. Co. 2 bulls av 1,100 at \$4.50, 1 do weighing 1,100 at \$4.75, 1 do weighing 1,030 at \$4.50; to Lachalt 11 butchers av 800 at \$5.40; to Kamman B. Co. 8 do av 930 at \$6.20, 9 cows av 911 at \$4, 15 butchers av 755 at \$5.50; to Applebaum 3 do av 640 at \$4, 4 do av 417 at \$4.20.

Sandall sold Bresnahan 3 bulls av 563 at \$3.50, 1 steer weighing 1,510 at \$7.50, 2 do av 1,205 at \$5.50, 2 cows av 1,035 at \$4, 3 steers av 666 at \$4.65.

Weeks sold same 5 cows av 858 at \$3.20. Lowenstein sold same 4 cows av 930 at \$3.25, 9 do av 1,033 at \$4.50. McLaughlin sold Hammond, S. & Co. 2 bulls av 1,160 at \$4.55. Same sold Newton B. Co. 3 cows av 983 at \$4, 10 butchers av 783 at \$4.50. Allington sold Rattkowsky 6 cows av 833 at \$4.10.

## Veal Calves.

Receipts, 912. Market strong at Wednesday's and last week's prices. Best, \$9@10; others, \$4@8.

Bishop, B. & H. sold Sullivan P. Co. 4 av 150 at \$9, 5 av 165 at \$9.50, 6 av 165 at \$8, 1 weighing 100 at \$7.50, 1 weighing 130 at \$8; to Parker, W. & Co. 10 av 181 at \$9.50; to Rattkowsky 4 av 148 at \$9.35, 2 av 115 at \$8.75; to Goose 3 av 175 at \$6, 9 av 150 at \$9; to Bray 1 weighing 200 at \$10, 17 av 160 at \$9.50; to Nagle P. Co. 2 av 125 at \$6, 9 av 145 at \$6, 11 av 150 at \$9, 5 av 225 at \$5, 9 av 150 at \$9, 20 av 150 at \$6.50, 6 av 145 at \$8.50, 5 av 160 at \$9, 1 weighing 120 at \$7; to Mich. B. Co. 13 av 150 at \$8; to Sullivan P. Co. 6 av 155 at \$9.50, 19 av 160 at \$9.50; to Newton B. Co. 2 av 130 at \$7, 7 av 140 at \$9.25; to Parker, W. & Co. 11 av 150 at \$9, 7 av 180 at \$6.50, 4 av 155 at \$9.50, 6 av 160 at \$10, 13 av 155 at \$9, 7 av 130 at \$8.75, 6 av 150 at \$9.50.

Spicer & R. sold Bray 2 av 190 at \$9.50, 4 av 140 at \$8, 5 av 180 at \$9.50; to Sullivan P. Co. 12 av 135 at \$8.75; to Goose 6 av 155 at \$4.75; to Burnstone 1 weighing 180 at \$8, 5 av 150 at \$9; to Bray 6 av 170 at \$9.75, 3 av 220 at \$6.25.

Haley & M. sold Patrowsky 5 av 150 at \$9, 2 av 105 at \$7, 13 av 155 at \$9; to Bray 4 av 140 at \$9.50; to Thompson Bros. 2 av 135 at \$8, 3 av 140 at \$9; to Bray 9 av 150 at \$9; to Newton B. Co. 7 av 160 at \$9, 1 weighing 150 at \$7; to Bray 15 av 160 at \$9.50, 3 av 170 at \$7, 3 av 150 at \$10, 3 av 215 at \$6, 9 av 150 at \$9; to Mich. B. Co. 5 av 190 at \$8, 2 av 155 at \$7.50.

Roe Com. Co. sold Goose 5 av 185 at \$6, 2 av 150 at \$10, 16 av 130 at \$8; to Mich. B. Co. 32 av 200 at \$5; to Sullivan P. Co. 6 av 185 at \$6.

Sandall sold Newton B. Co. 15 av 140 at \$8.35.

Long sold Bray 11 av 130 at \$7, 10 av 158 at \$9.50.

Adams sold same 2 av 170 at \$10.

## Sheep and Lambs.

Receipts, 2,808. Market 50c higher than last week's close; steady with Wednesday. Best lambs, \$6.50@7; fair to good lambs, \$5.50@6; light to common lambs, \$4.50@5; yearlings, \$4@4.75; fair to good sheep, \$3@3.50; culls and common, \$2@2.50.

Haley & M. sold Thompson Bros. 1 buck weighing 170 at \$3.50, 12 lambs av 65 at \$7; to Bray 34 do av 55 at \$5, 100 do av 68 at \$6.55, 15 sheep av 115 at \$3.25; to Newton B. Co. 2 sheep av 130 at \$3, 20 lambs av 55 at \$6; to Mich. B. Co. 14 do av 60 at \$5, 46 do av 60 at \$6.75, 51 do av 53 at \$5.50, 4 sheep av 95 at \$3.60, 18 do av 90 at \$3.25, 2 do av 125 at \$3; to Thompson Bros. 4 do av 77 at \$2, 13 do av 95 at \$3.

Bishop, B. & H. sold Mich. B. Co. 6 sheep av 100 at \$3.25, 30 yearlings av 80 at \$4.75, 7 sheep av 110 at \$2.75, 4 do av 80 at \$2.75, 15 lambs av 57 at \$6.50, 69 do av 65 at \$6.50, 20 do av 85 at \$6.50, 102 do av 70 at \$6.50, 42 yearlings av 85 at \$4.50; to Thompson Bros. 15 lambs av 65 at \$3.50, 1 buck weighing 150 at \$2.50; to Sullivan P. Co. 10 sheep av 100 at \$3.25, 21 lambs av 50 at \$4.50, 26 do av 50 at \$5, 7 do av 70 at \$7; to Newton B. Co. 20 do av 70 at \$6.75, 28 do av 65 at \$6.50, 22 do av 70 at \$7; to Mich. B. Co. 22 do av 55 at \$5; to Thompson Bros. 14 sheep av 110 at \$3; to Sullivan P. Co. 65 lambs av 68 at \$6, 49 do av 70 at \$6.50; to Bray 65 sheep av 85 at \$3, 26 do av 85 at \$2.50, 40 do av 80 at \$4, 18 do av 90 at \$3, 37 lambs av 77 at \$7, 97 do av 53 at \$4.50; to Nagle P. Co. 37 sheep av 95 at \$3; to Harland 32 lambs av 65 at \$6.50; to Fitzpatrick Bros. 14 do av 67 at \$6.50.

Spicer & R. sold Thompson Bros. 8 lambs av 75 at \$5.50, 2 sheep av 170 at \$3, 3 do av 95 at \$3.50; to Vosso 26 lambs av 48 at \$5.25; to Mich. B. Co. 19 do av 50 at \$5, 13 sheep av 90 at \$3, 14 lambs av 63 at \$5.50; to Young 12 wool lambs av 80 at \$5, 11 lambs av 58 at \$5.50; to Barlage 10 sheep av 90 at \$2.50, 16 lambs av 60 at \$5.50.

Roe Com. Co. sold Hayes 57 lambs av 65 at \$5.50; to Barlage 38 do av 60 at \$6, 30 do av 60 at \$6.25, 20 do av 50 at \$6, 21 sheep av 100 at \$2.75.

## Hogs.

Receipts, 1,729. Market steady at last week's closing prices.

Range of prices: Light to good butchers, \$8@8.25; pigs, \$7.75@8; light yorkers, \$8@8.15; stags one-third off.

Spicer & R. sold Parker, W. & Co. 250 av 190 at \$8.30, 50 av 200 at \$8.35.

Haley & M. sold same 130 av 210 at \$8.35, 115 av 180 at \$8.30, 210 av 150 at \$8.25.

Bishop, B. & H. sold Hammond, S. & Co. 215 av 200 at \$8.35, 320 av 190 at \$8.30, 600 av 155 at \$8.25, 150 av 130 at \$8, 150 av 180 at \$8.20.

Roe Com. Co. sold Sullivan P. Co. 125 av 200 at \$8.25, 140 av 190 at \$8.20.

Receipts, 1,729. Market strong 15c higher than last week's closing prices.

A Holstein milch cow that brought \$100 in the Chicago market recently, weighed close to 1,500 lbs. and was fat enough to beef right now.

The wool market has developed unusual firmness recently, with consumption reported the largest seen for a period of five years and estimates of the domestic wool shortage placed from 20,000,000 to 30,000,000 lbs. The London wool market has had a good advance recently, and it is reported that only about 5,000,000 lbs. are left of the Montana clip. Wyoming reports a still smaller percentage left, while most of the Texas clip has disappeared from first hands, and Utah and Nevada have sold nearly all the 1912 clip. Recent sales have been made in Montana at 20@22c per lb. for medium clips, and in Ohio fine clips have sold for 25@26c, with the best medium wools at 28@30c.

## We Want HAY &amp; STRAW

We get the top price on consignments, make liberal advancements and prompt remittances.

Daniel McCaffrey's Sons Co.

PITTSBURG, PA.

Reference, Washington Trust Company, or any bank in city

**You Can Regenerate Old Orchards WITH RED CROSS DYNAMITE**

**DU PONT**

By exploding one cartridge in centre of tree squares; the compact subsoil is broken up, a new water-reservoir is created, new plant food made available, and the old trees made to bear as well as ever before.

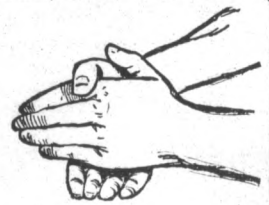
**Write for Free Booklet**

To learn how progressive farmers are using dynamite for removing stumps and boulders, planting and cultivating fruit trees, regenerating barren soil, ditching, draining, excavating and road-making, ask for "Tree Planting Booklet, No. 100"

**DU PONT POWDER CO. PIONEER POWDER MAKERS OF AMERICA WILMINGTON, DEL.**

Addresses of experienced agricultural blasters furnished on request, if desired.—Du Pont Powder Co.

## The Way You Do It Yourself



That's how a Rumely Huller handles clover and alfalfa. A Rumely Huller works just like your two hands. It does not hammer the seeds out. It rubs them out. It does as much work as a thousand pairs of hands—a bushel in five minutes or less.

### A Rumely Huller is Built on Right Lines

**FIRST: It picks off the heads.**

**SECOND: It rubs out the seeds.**

**THIRD: It blows away the chaff.**

**FOURTH: Delivers only the good seeds.**

Just what you do yourself when you pick a handful of clover or alfalfa. The whole process is shown in our new "Fact-Book on Hulling," which has 20 pages and 32 illustrations.

Write For It Today. Free.

**RUMELY PRODUCTS COMPANY, Inc.**

628 1/2 Main Street

La Porte, Indiana

## Health and Comfort

Improve the sanitary conditions in and about your home.

Safeguard the health of your family and lessen the labor of household duties. You can have service equal to that furnished by city mains by installing a

### Fairbanks-Morse Pneumatic Tank System

Pure water under pressure always on tap in kitchen, bathroom, laundry, etc. Installation cost reasonable; operating cost but a trifle. Outfit shown is easily set up in basement of ordinary residence and can be operated by hand, engine or motor. From our complete line you can select an outfit especially adapted to your needs. Write for Catalog WD 601

**Fairbanks, Morse & Co. Chicago**

Detroit

## A Better Barn and Money Saved WITH OUR FREE PLANS

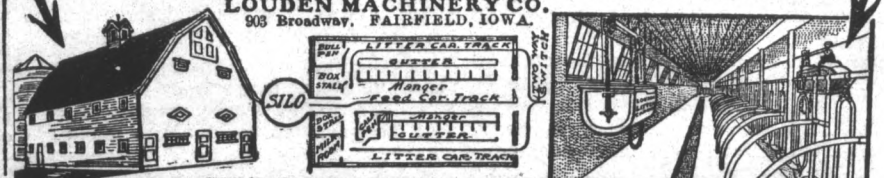
Let us solve your barn construction problems. We maintain a Special Department of the best skilled and Experienced Architects we can get, whose sole work is to prepare

**Special Barn Plans for the man who wants to build.** This work is under the direction of MR. WILLIAM LOUDEN, National Authority on Scientific Barn Construction, Ventilation and Equipment, and Designer of LOUDEN Barn Equipments for 45 years. Our plans will save you worry, mistakes and money in building and get you a better barn.

This Service is Free—no charge or conditions of any kind. Simply write us what you want—we'll do the rest. We manufacture Louden's Modern Barn Equipments—Sanitary Steel Stalls and Stanchions, Feed and Litter Carriers, Hay Tools and Bird Proof Barn Door Hangers. They are labor savers and money makers, standard of the world and used by over 100,000 farmers. Catalog and valuable books free. Write today

**LOUDEN MACHINERY CO.**

903 Broadway, FAIRFIELD, IOWA.





## PRACTICAL SCIENCE.

### FEEDING STUFFS CONTROL.

BY FLOYD W. ROBISON.

For a long time it has been customary for farmers to take in exchange for their grains the mill by-products to be used as adjuncts to the roughages in the shape of hay, corn stover and the like, which were the basis of the feeding rations on the farm. There thus grew up among the milling fraternity a natural market for the refuse by-products of their mills. With the practice of more intensive dairying and the study which dairymen were making of the new ideas regarding the balanced ration, certain manufacturing concerns in the large centers of population began putting upon the market by-products of an entirely different nature than the milling by-products, but designed to compete with the miller in his market. Oatmeal factories had sprung up and the natural product from the manufacture of oatmeal, that is, oat hulls, was produced in enormous quantities. Corncocks, the product from the manufacture of hominy, and other corn products accumulated likewise in the large milling centers in enormous quantities. The temptation offered by a fascinating price was too great for many millers to resist, consequently oat hulls began to find its way in ground corn and ground corncocks began to be introduced. Many concerns, such as the American Cereal Co., The Great Western Cereal Co., and the H-O Company began catering to the demand of the dairymen and placed scientifically balanced rations upon the market, not as an issue subsidiary to their general manufacturing business but as one of the main spokes in their whole manufacturing plant. Oat hulls and corncocks were blended by some manufacturers scientifically, if we may use that term in this connection, and by fine grinding and careful mixing feeds of some considerable merit were thus placed upon the market. In this way the manufacturers were able to utilize to a decided advantage what was otherwise practically worthless and the ground oat hulls and the ground corncocks which would otherwise have found their way into the furnace for fuel were placed on the market to be sold as edible stock foods.

#### Michigan was the Dumping Ground for Worthless Feeds.

Our neighboring states, following the lead of New England, began to make public official examinations of these products and Michigan speedily became the dumping ground, as it were, for products which would not pass muster in other states. During the writer's experience as chemist of the Michigan Experiment Station, following the lead set by the late Dr. R. C. Kedzie, a persistent campaign for the inauguration of a feeding stuffs control law for the state of Michigan was begun. This bore fruit with the passage of such an act by the legislature of 1905, and went into full effect with the active support of the dairymen's association and the Michigan Miller's Association as well.

#### Crude Fibre Declared on the Package.

One of the unique features of this law was the requiring of the branding on the package of the percentages not only of protein, carbohydrates and fats, but of the crude fibre as well. The reason for the writer's advocacy of the plan of including crude fibre in the law was because it was the real index of the net available energy of that feed to the animal. Obviously, the manufacturer could not be required to state on the package the percentage of digestible nutrients, neither could he be required to state thereon the net availability of that feed to the animal. However, with the placing on the package of the percentage of crude fibre, which, of course, represents the roughage in the ration, the feeder thus had at his disposal factors which would give him a very close approximation indeed, to the real intrinsic value of that feed when given to his stock. The statement of the content of crude fibre on the package was a distinct advance over the laws enacted in the neighboring states which required simply the content of protein and fat to be mentioned.

Before going into any other features of this subject we shall append hereto a full copy of the law covering the sale of commercial feeding stuffs in the state of Michigan.

#### The Law.

Sec. 18. Any manufacturer, company, person or persons who shall sell, offer

or expose for sale or for distribution, in this state, any concentrated commercial feeding stuff used for feeding live stock, shall furnish with each car, or other amounts shipped in bulk, and shall affix to every package of such feeding stuff, in a conspicuous place, on the outside thereof, a plainly printed statement, clearly and truly certifying the number of net pounds in the car or package sold or offered for sale, the name or trade-mark under which the article is sold, the name of the manufacturer or shipper, the place of manufacture, the place of business, and a chemical analysis, stating the percentages it contains of crude protein, crude fibre, nitrogen-free extract and ether extract, all constituents to be determined by the methods adopted by the association of official agricultural chemists. Whenever any feeding stuff is sold at retail, in bulk or in packages belonging to the purchaser, the agent or dealer shall furnish to him a certified copy of the chemical analysis named in this section.

(a) The term concentrated commercial feeding stuffs as used in this act shall include linseed meal, cottonseed meal, pea meals, coconut meals, gluten meals, oil meals of all kinds, gluten feeds, maize feeds, starch feeds, mixed sugar feeds, hominy feeds, rice meals, oat feeds, corn and oat feeds, meat meals, dried blood, clover meals, mixed feeds of all kinds, slaughter house waste products; also all condimental stock foods, patented and proprietary stock foods, claimed to possess nutritive properties and all other materials intended for feeding to domestic animals: Provided, that such feeding stuffs, as defined above, shall not include hays, straws, fodders, ensilage, the whole seeds nor the unmixed meals made directly from the entire grains of wheat, rye, barley, oats, flaxseed, maize, buckwheat, wet brewers' grains, malt sprouts, wet or dried beet pulp when unmixed with other materials. Neither shall it include wheat, rye and buckwheat brans or middlings not mixed with other substances, but sold separately as distinct articles of commerce, nor pure grains ground together.

(b) Before any manufacturer, company or person or persons shall sell, offer or expose for sale in this state any concentrated commercial feeding stuff, he or they shall, for each and every feeding stuff bearing a distinguishing name or trade-mark, file annually, with the Dairy and Food Commissioner, a certified copy of the chemical analysis and certificate referred to in this section, and shall deposit with said Dairy and Food Commissioner a sealed glass jar, or bottle, containing at least one pound of the feeding stuff to be sold or offered for sale, together with an affidavit that it is a fair sample of the article thus to be sold or offered for sale. He or they shall also pay annually into the state treasury a license fee of \$20.00 for each and every brand of feeding stuff he offers for sale in this state. Said fee is to be paid on or before April 1 of each year: Provided, that whenever the manufacturer or importer shall have paid this license fee, his agents shall not be required to do so. Whenever any manufacturer, importer, agent or seller of any commercial feeding stuff desires at any time to sell such material and has not paid the license fee therefor, he shall pay the license fee prescribed in this section, before making any such sale. The money collected under the provisions of this act shall be paid into the state treasury and be used to help defray the expenses of the office of the Dairy and Food Commissioner, in addition to the regular appropriation therefor.

(c) Whenever the manufacturer, importer, agent or seller of any commercial feeding stuff shall have complied with the requirements of this section, the Dairy and Food Commissioner shall issue, or cause to be issued, a license, permitting the sale of said feeding stuff, which license shall terminate on April 1 following the date of issue.

(d) All such analyses of commercial feeding stuffs required by this act, shall be made under the direction of the Dairy and Food Commissioner, and shall be paid for out of the funds arising from the license fees provided for in this section.

(e) The Dairy and Food Commissioner shall publish, or cause to be published in bulletin form, at least annually, a correct statement of the analyses made together with any incidental information

concerning same which he may deem proper.

(f) Any manufacturer, importer, company, agent, person or persons who shall sell, offer or expose for sale, without first complying with the provisions of this act, any commercial feeding stuff, or shall attach or cause to be attached to any car, package or other quantity of said feeding stuff, an analysis stating that it contains a larger percentage of any one or more of the constituents named in this section than it really does contain shall, upon conviction thereof, be fined not less than \$100 for the first offense, and not less than \$300 for every subsequent offense, and the offender shall also be liable for damages sustained by the purchaser of such feeding stuff on account of such misrepresentation.

(g) The Dairy and Food Commissioner, by any duly authorized agent, is hereby authorized to select from any package of commercial or other feeding stuff exposed or offered for sale in this state, a quantity not exceeding two pounds for a sample, such sample to be used for the purposes of an official analysis and for comparison with the certificate filed with the Dairy and Food Commissioner, and with the certificate affixed to the package on sale.

(Added by Act No. 12, P. A. 1905).

Sec. 19. The published annual report of the Dairy and Food Commissioner which shall be made to the governor, shall include a complete accounting of all moneys received by the department from every source, and the amount expended by the department.

(Added by Act No. 12, P. A. 1905).

Sec. 20. All acts and parts of acts inconsistent with this act so far as they are inconsistent are hereby repealed.

This act is ordered to take immediate effect.

(Added by Act No. 12, P. A. 1905).

### BOOK NOTICES.

Michigan Bird Life, by Walter Bradford Barrows, S. B., Prof. of Zoology and Physiology and Curator of the General Museum at the Michigan Agricultural College, is a book of 822 pages, containing a list of all the bird species known to occur in the state, together with an outline of their classifications and an account of the life history of each species, with special reference to its relation to agriculture. In addition to the text, this book contains 70 full page plates and 152 text figures. It is published as a special bulletin of the department of Zoology and Physiology of M. A. C., and will be distributed to Michigan people at cost while the edition lasts. The price of the book is 60 cents in cloth binding or 45 cents in paper binding, with 30 cents addition to prepaid express charges from the college. Orders should be addressed to Secretary A. M. Brown, East Lansing, Mich. In addition to the subject matter above outlined this book contains keys which will serve the reader in identifying birds of different species so that he may acquaint himself with their life history, which is fully treated in each case. This book, which is printed upon good paper with especially clear illustrations, will be found a valuable text and reference book for every farmer and will prove a valuable educator for the children of any family. Prof. Barrows, who is an authority second to none on the subject of Michigan birds, has spent several years in preparing this work and the people of Michigan should generally avail themselves of the rare opportunity thus afforded them to secure a valuable book of this kind at a nominal price which merely represents the cost of printing and binding.

Fertilizers and Crops, or the Science and Practice of Plant-Feeding, by Dr. Lucius L. Van Slyke, Chemist of New York Agricultural Experiment Station, is a new book giving timely presentation of facts, not only in practical methods of using fertilizers in crop growing, but placing special emphasis on the reasons underlying their use and on the conditions of greatest efficiency. It is unlike many works of this kind in that while written from the standpoint that plant food constitutes a most important factor in crop growing there are other vital factors as well which directly affect or control the effectiveness with which a crop utilizes the plant food furnished it and includes a brief outline of methods of soil management for the purpose of enabling plants to use their foods most efficiently. The use of stable and green manures, the principles of crop rotation, etc., are also fully treated in this book which contains 710 pages and sells in cloth binding at \$2.50. Published by the Orange Judd Company, New York.

The Potato, by Eugene H. Grubb and W. S. Guilford, is a most complete work. The authors have made a thorough study of the subject here and abroad, in addition to which the senior author is one of the largest commercial growers of potatoes in the country, thus insuring that the discussion of the problems involved and the suggestions made are from the standpoint of the practical grower. In addition to his large farming operations in Colorado, Mr. Grubb is a consulting agriculturalist in a number of large western enterprises, while Mr. Guilford is a director of agriculture in a similar large enterprise in California. The book contains 545 pages. Published by Doubleday, Page & Co., New York. Price, \$2.

## Splendid Prospects

### of Bumper Grain Crops in WESTERN CANADA

Latest reports from the fields of Manitoba, Saskatchewan and Alberta are to the effect that Wheat, Oats, Barley and Flax give promise of an abundant yield. Rains have been sufficient and all grains have advanced rapidly. There are now 16 million acres under crop. Railroads are built and building in all settled portions. The opportune time for getting some of this generous producing land is now. Excursions on all lines of Canadian Railways to inspect the lands. Apply for Settler's Certificate to the undersigned Canadian Government Agent:  
W. C. McINNES, 176 Jefferson Ave., Detroit, Mich.  
C. A. LAURIER, Marquette, Mich.

## LIGHTNING RODS

6½c Per Foot  
Direct to You.  
No Middlemen.  
Heavy Copper Cable 98  
Per cent pure.

If goods when received are not satisfactory, return them at our expense, when we will refund every dollar you paid us.

Let us know your requirements. We will advise just what it will cost you.

INTERNATIONAL LIGHTNING ROD CO.,  
Dept. M, South Bend, Ind.



**Better Farm Implements**  
and How to Use Them  
JOHN DEERE PLOW CO.

**Free**  
**JOHN DEERE Book**  
Illustrating the most important line of farm machines made. Tells when, where and how to use them. It answers every question you might ask about farming implements. Send postal today for package No. X-5  
John Deere Plow Co.  
Moline, Illinois

**Get Quality and Service -  
JOHN DEERE Dealers Give Both**

**Are You Interested In**

pleasant, permanent and profitable agency work? We offer a position as exclusive distributing salesman either all or spare time for the Automatic Combination Tool, a Fence Builders Device, Post Puller, Lifting and Pulling Jack, Wire Stretcher, Wrench, etc. Used by Contractors, Teamsters, Farmers, Factories and others. Weighs 24 lbs., lifts or pulls 3 tons. Write for offer and county desired.  
AUTOMATIC JACK CO., Box 186, Bloomfield, Ind.

**EMPIRE FENCE  
PRICE  
REDUCED**

SEND FOR PARTICULARS  
BOND STEEL POST COMPANY  
16 E. Maunee St., Adrian, Mich.

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

**ALFALFA**

All northern grown, guaranteed to be 99 percent pure and free from dodger. Write for free sample on which we invite you to get Government tests. This seed should produce hay at \$80 per acre annually. Free instructions on growing.

**Grain and Grass Seed**

Northern grown and of strongest vitality. We handle export grade only and can furnish grass mixture suitable for any soils. Write for catalog.  
WING SEED CO., Box 242, Mechanicsburg, O.

**Galvanized or Painted Roofings  
At Mill Prices.**

We manufacture the very best quality of Steel Roofing, in V Crimp, Corrugated, Pressed Standing Seam or Roll and Gap Roofing.

We can save you money. Write us for prices.

Agents Wanted.

The Sykes Metal Lath & Roofing Co., Niles, Ohio.

**Don't Fail** to mention the Michigan Farmer when you are writing to advertisers.



## POULTRY AND BEES

### CULLING THE FLOCK.

Before moulting begins the flock should be culled and all fowls not wanted for wintering or for sale later on should be sold. Under this head come old hens and roosters which are often kept in the flock long after they have ceased to be of any value. There is no use in retaining them, as the food they eat and the space they occupy in the poultry house might better be given to the others. Prices are better at present than they will be later and now is the time to turn unprofitable fowls into cash.

It has been proven that males are an actual detriment to the laying flock, and the practice of keeping three or four over winter, eating their heads off, might well be given up. After the hatching period they should be disposed of.

In preparing for market, fowls fatten far more readily and with less food if not permitted to run at large. A small enclosure, made of wire netting surrounding any kind of open shed provided with roosts, answers admirably for the purpose unless the weather is very cold. Some kind of grit, also fresh water, should be always in reach. Corn is the best whole grain to feed to fattening fowls. A thick mush of corn meal is said to be better still, particularly if made with sweet milk.

A laying flock may be reduced in numbers by judicious culling in such a way as to actually increase the egg yield. It stimulates laying in those remaining when the flock has been over-crowded. A mixed flock of 50 hens might be made to yield better returns by removing all the old ones, even should this leave not more than half the original number. Then give the same feed to those kept over. It is poor policy to keep old hens through the moult and the following winter when the chances are that they will not produce eggs enough to pay for their keep. If it is desirable to keep a larger flock, better sell the older ones and buy an equal number of pullets. Pound for pound, at market prices, this would be a profitable way to manage and give better returns in egg money.

Genesee Co.

E. E. R.

### SUCCESSFUL POULTRY FARMING.

The possibilities of successful poultry farming continue to have a great amount of interest for many people. But intending poultry farmers must disabuse themselves of the common and erroneous idea that profitable poultry keeping in large numbers is a business requiring no special knowledge.

Before commencing, it is essential to realize that there is a very great deal to be learned, a lot of hard work to be done and ceaseless attention to be paid to small details at all times of the year and in all weathers. Poultry farming is not a pursuit to be undertaken by those deficient in business capacity, energy, and intelligence, and who have, perhaps, already failed in some other walk of life. But for anyone who has some capital, and who is active and intelligent, and has gained some knowledge from a practical poultry farmer, there is every reason to expect success.

Some years ago poultry farming proved a failure, except in a very few instances. But since then great attention has been paid to the crossing and making of new breeds. Among these there are many prolific layers, as well as excellent table fowls. Moreover, much assistance is rendered by the perfection attained by incubator makers, and the moderate price at which machines can be purchased. Movable houses, too, are made so cheaply, and in such great variety, that poultry farming at the present day has many advantages not possessed 20 years ago.

The effect of this is that there are numerous successful poultry farms, both large and small, but these are carried on by business people on business principles. There are still a great many failures, attributed in a great measure to the ignorance of practical details, and to the wasting of capital in the purchase of needlessly expensive houses and the wrong class of stock. The fowls have been improperly fed and treated, and no attempt has been made to dispose of the produce of the farm to the best advantage.

An intending beginner should not start at all unless he has sufficient capital to allow for living expenses for two years, while the business is being built up and

the outgoings are probably in excess of the returns. The stock should consist of fowls of some definite breed, and not of mongrels. There are few mongrels that lay as well as pure-breds.

When keeping pure-bred fowls, in addition to the sale of eggs and chickens on the market there is the advantage of obtaining higher prices for sittings of eggs early in the year, and for some of the young stock that are fairly typical specimens and are salable for stock purposes. Most successful poultry farmers do not make their profit from eggs and chickens marketed, but from breeding stock.

Canada. W. R. GILBERT.

### GETTING GROWTH IN TURKEYS.

Young turkeys are very tender up to the age of seven weeks. While it is true that as soon as turkeys begin to acquire the "red head" they are comparatively safe, it is not good policy to neglect them or allow them to take their own course without care during the rest of the season. Because they can find a living for themselves the owner should not consider that they need no food except what the fields afford them. Growing turkeys should be given a liberal feed of grain every evening; they should not go a single day without grain feed of some kind. The evening feed of grain keeps them growing rapidly during the hot weather and it gets them in the habit of coming to the house to roost. Turkeys will grow more rapidly after they become familiar with their owner and are not worried at the sight of a human being.

No one should undertake to grow turkeys unless he has ample range for them as they will not flourish in confinement. If milk is available the curd makes an ideal feed for growing turkeys, and if they are given entire liberty in the meadows, pastures, and grain fields, since they are great foragers, they will get the insects that furnish the meat food essential to their growth and development. The owner's care and the cost of giving growing turkeys one feed of grain a day will be returned many fold by the turkeys making more rapid growth, and they will be ready for market much sooner.

J. M.

### DOES THE BEE MARTIN, OR KING-BIRD, DESTROY BEES?

A Barry county reader wants to know whether the common bee martin, or kingbird, is really destructive of bees. There is difference of opinion as to this—not so much as to whether the bird really catches bees but as to the loss sustained by the apiarist. That this bird, which is a prominent member of the family of flycatchers, is capable of capturing bees upon the wing has been very conclusively proven, but its friends declare that it chooses the larger and slower flying bees, which limits its depredations almost exclusively to drones. Some have sought to prove that the bird is not destructive of bees by examining the crops of birds, reporting failure to find evidence of the consumption of bees. On the other hand, some observers claim that the bird does not consume the body of the bee, more especially the worker bee, merely extracting the juices and discarding the remainder.

In his recently published exhaustive treatise on Michigan bird life, Prof. Barrows, of M. A. C., states that the facts do not warrant the opinion that this bird is an enemy of the bee-keeper. Upon this point he says: "It has been shown most conclusively, by the examination of numerous stomachs, as well as by careful observation of the living bird, that it seldom eats worker bees, usually contenting itself with drones. Of course, it makes an occasional mistake and snaps up an armed worker, undoubtedly paying a severe penalty for its carelessness. The stomach examinations just referred to (281 stomachs), made under our own direction in the United States Department of Agriculture, showed that about 90 per cent of the food consisted of animal matter, most of which was insects. These included beetles, grasshoppers, butterflies, bees, wasps, two-winged flies and even caterpillars. There were 50 honey bees in these stomachs, 40 of which were surely drones, and only four certainly workers."

From the above it seems safe to say that the general bee-keeper has little to fear from this bird, unless these flycatchers are present in such numbers as to endanger the queens when making their flights. To the man who is making a specialty of rearing queens, however, the presence of this bird may be regarded a serious menace.

# THE OHIO State Fair! COLUMBUS

## August 26, 27, 28, 29, 30, 31.

Live Stock Entries Close August 10, 1912.

### Finest Exposition Buildings in the World.

Growing and Prospering. Legislative Appropriation has enabled the erection of additional Live Stock Buildings. Railroad facilities are the best. Look at the map. Ohio farmers are fully aroused to the advantages of breeding pure bred live stock. The "scrub" animal is more unpopular in the Buckeye State than ever before.

We have the money and are ready to buy the prize winners. Premiums paid before close of fair at the State Fair Bank on the grounds. Every modern convenience at the service of exhibitors.

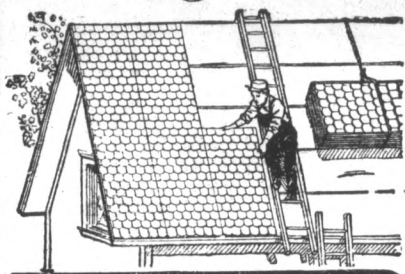
The Columbus Centennial Celebration this year, supported by liberal appropriations from the State Legislature and popular subscriptions will insure the largest attendance in the history of the Fair. Ohio with Five Million People stands solidly behind this great exposition which is a guide board pointing to better things. Half the states of the Union will contribute to the success of the Ohio State Fair. Entries and space reservations should be made early.

Entries Close for Live Stock Aug. 10

Elegant illustrated Color Catalog and Premium List mailed to all requests. Address the Secretary.

A. P. SANDLES, Columbus, Ohio.

## Roof That Building With STEEL Shingles!



Don't even think of putting costly wood-shingles or commonplace composition roofing on your buildings till you've investigated the famous Edwards "Reo" Steel Shingles, now used on 100,000 houses and barns. "Reo" Steel Shingles are not only easier to put on but they last 5 times as long as any other roof. YET THEY DON'T COST A PENNY MORE! "Reo" Steel shingles require no painting; won't rot, won't rust, won't leak, won't burn. Guaranteed against lightning by our \$10,000 Guarantee Bond.

### Edwards "REO" STEEL Shingles

are ready to nail right onto sheathing or old roof. Your hands and a hammer only tools needed. They come in large sheets 24 inches wide, 5 feet to 12 feet long. Genuine Open-Hearth Steel, made absolutely rust-proof by world-famous Edwards "Tightcote" Process (explained in catalog). Our patent Interlocking Device covers nails and makes perfect joint, unaffected by heat or cold. "Reo" Steel

Shingles make the finest looking, most durable roof in the world, bar none—a roof that NEVER NEEDS REPAIRS. Sold at lowest prices, direct from factory, all freight prepaid. Don't buy roofing material till you know more about these "Reo" Steel Shingles. Write for new, big, free Catalog \$67, and Lowest Prices. Send dimensions of building and let us quote you price delivered to your railroad station.

THE EDWARDS MFG. CO., 817-867 Lock St., CINCINNATI, OHIO  
(80) Largest Makers of Sheet Steel Building Material in the World

Blue Bell Barred Rock yearling hens and cocks \$1 to \$2.50. Eggs, 75c a set, two for \$1.25. Lake Ridge Farm, Levering, Mich.

Eggs for Hatching from Standard Silver, Golden and W. Wyandottes, 15, \$2; 30, \$3. Browning's Wyandotte Farm, R. 30, Portland, Mich.

INDIAN RUNNER DUCKS FOR SALE. Great laying strain. Prices reasonable. Also eggs. WM. P. BOOTH, R. 3, Orland, Indiana.

LILLIE FARMSTEAD POULTRY

B. P. Rocks, R. I. Reds, and S. O. W. Leghorn eggs for sale. 15 for \$1; 25 for \$1.50; 50 for \$2.50. COLON C. LILLIE, Coopersville, Mich.

EGGS Buff & White Orpingtons, Buff & White Leghorns, Barred & White Rocks, R. I. Reds and Black Minorcas. Circular ready. H. H. KING, Willis, Michigan. EGGS

WHITE Wyandottes—The most beautiful and useful of American breeds. Send for 1912 circular. A. FRANKLIN SMITH, R. F. D. 9, Ann Arbor, Mich.

Crystal White Orpingtons—the great winter layers. If taken now. Young stock for sale. MRS. WILLIS HOUGH, Pine Crest Farm, Royal Oak, Mich.

Order Booked for Single comb Buff Orpington Cockerels of May hatch. Otis Greenman, R. 4, Bellevue, Mich.

Prize Winning Barred Rocks, R. I. Reds, Mammoth Pekin and I. Runner ducks. Stock for sale. Eggs \$1.25, \$3 per set. Utility \$5 per 100. EMWOOD FARM, R. R. No. 12, Grand Rapids, Mich.

Barred Rock Eggs—Great Laying Strain and prize winners. 15 eggs, \$1.00; 30, \$1.75; 100, \$5. W. C. Coffman, R. 6, Benton Harbor, Mich.

S. C. Rhode Island Reds of quality. Eggs from first S. pen headed by Red Cloud \$2 per 15; Range \$1 per 15; \$5 per 100. E. J. MATHEWSON, Nottawa, Mich.

DOGS.

30 Pure Bred Fox Hound Pups ready to ship in May or June. Some trained hounds. Send stamp. W. E. Lecky, Holmesville, Ohio.



## HORTICULTURE

### A NEW APPLE PEST.

It may be that the title of this letter is somewhat misleading, for the pest of which I shall speak is not new, but only new in respect to its attack upon the apple trees in this part of the state.

At the opening of the season of 1911, just after the leaves had come out, the apple trees were seen to be covered with minute lice. They occasioned considerable comment at the time, but soon disappeared, and so far as the writer knows they did little, if any, harm. This year they came again and their work is noticeable in all the orchards as far as I know, and upon some sweet cherries as well.

There are many species of the aphides or plant lice, as they are generally called, and there are some very interesting facts about them.

The eggs are deposited upon the twigs in the fall, after which the cold weather kills off the lice. These eggs hatch in the following spring, producing a generation of females which quickly develop, and give birth to another generation, also females, and so they go on multiplying throughout the summer, until in the fall both males and females are produced, which meet, after which the females once more lay their eggs upon the branches, and succumb later to the cold of the gathering winter.

The green apple aphid is most prevalent here. It puts its little bill into the tender bark, and sucks out the sap for food. For this reason it can not be killed by any poison applied to the surface of the tree. No spray can reach that part of the tree from which it gets its food.

By thus sucking the sap from the tree, it weakens its vitality, occasions dropping of the fruit, and some species of the aphides fasten on the fruit itself, and prevent its development.

The lime and sulphur sprays have no effect upon this pest. Oil sprays are used sometimes, but their use is, without doubt, attended with some risk to the trees, and our impression is that the direct results of the oil sprays are not very satisfactory.

A solution of nicotine will kill any of these plant lice, if applied at the proper time. We can buy this, or we can obtain the tobacco stems and steep out the nicotine at home. The formula given by Mr. L. M. Geismar, of the Upper Peninsula Experiment Station, is "One pound of tobacco stems steeped and diluted to eight gallons, after which a pound of soft soap is added.

The solution of nicotine can be applied to the trees in connection with the regular spray, immediately after the blossoms fall and thus the only additional expense will be in the direct cost of the preparation.

Without doubt these lice are subject to conditions of the season which may be against them next year, but they have such a start now that it would seem that the only safe way would be to give them a good liberal dose of tobacco extract next spring.

Oceana Co.

W. F. TAYLOR.

### CULTIVATING ORCHARDS.

Without doubt our best fruit growers who practice cultivating in their orchards have the work so well organized that they keep ahead of it and always keep their orchards in fine shape. But, I presume there are many like myself who are running a general farm in connection with their fruit growing, and at this time so many things that need doing are crowding upon us that our orchards are apt to be neglected. It has always seemed to me that the things that I knew just had to be done got done some way and other things that could be passed by for the time were simply crowded out entirely. And now I have some of this very same work that has gotten ahead of me.

Two of our orchards which are on sand and quite badly infested with sand burrs were plowed and disked early in the spring and dragged once or twice since. Then we put our time in getting in corn, potatoes, and cucumbers. In the meanwhile we attended to the spraying, then followed the cultivating of the hoed crops. And now, when we are, as we think, somewhat caught up with our work, these orchards are staring us in the face with a growth that is too heavy to do anything with but to

plow under, and there is an objection to plowing. A good many of the trees are pretty thoroughly loaded with fruit, and as they are naturally low tree, now they are nearly resting on the ground. While plowing seems at this time to be impractical I hardly know what I can do to kill out these sand burrs other than wait until next year and then put these orchards on the necessary list.

Our young orchards are closer at hand, and if a man and team are out of a job for a while, cultivating can be done. The spring-tooth harrow is a fine cultivator and easy to use, so these orchards have nothing to complain of.

In cultivating, there is one thing we bear in mind and that is to get our orchards in proper shape before it is too late. If we cultivate too late we are apt to do great injury to the trees by having unripened wood for the winter season.

I mentioned sometime ago, in an article, that I believed in removing all dead and diseased peach trees as soon as possible after they were known to be such. Till July 13 I could not find time to do it but on the morning of the 13th we had a very heavy rain, which blocked our farming operations for several days so I got a team into the orchards immediately after the rain and commenced pulling trees. Of course, it was quite muddy but the trees were up-rooted the more easily for it. I made it a complete job and removed all unhealthy looking trees as well as those diseased. By the time I got this job completed the ground will be dry enough to harrow and unless we get some more beating rains in the next two weeks this harrowing will be the last for this season. I will try to have the weeds pretty thoroughly killed out so they will not bother when it comes to sowing a catch crop. R. G. THOMAS.

### SCALE-INFESTED, BUT NOT FRUIT TREES.

It is not the fruit trees alone that are subject to the San Jose scale. There are several other trees and shrubs that are subject to attack.

The mountain ash has been extensively planted as an ornamental and is deserving of attention for this purpose. But it is liable to become a rare tree unless something comes along to eat the scale, for not many will care to plant it if it must be sprayed. The scale finds it a choice feeding ground and settles upon it with as much contentment as the proverbial pig in a clover field. Among the trees in a nursery there is nothing more subject to attack. If it is near fruit trees it may become a bad breeding nest before the evil is suspected. This is not saying that the scale chooses a mountain ash in preference to other trees. Ordinarily it has no choice. It is carried to a tree by some means of distribution over which it has no control. But the kind of food it has does make a great difference with its multiplication. If sustenance is good and is in plenty the scale thrives and increases, otherwise it tends to race suicide.

The Japan quince is another plant beloved of the scale, in which it shares about equal honors with the mountain ash. The moral is on the surface. Either spray or dig up this pretty shrub, otherwise the scale will be present till the quince dies, which will not be long.

Those who have Camperdown elms should be told to look for scale, unless they already know about it. The American elm is exempt, though it has troubles of its own sufficient to meet all reasonable requirements.

The dogwoods should not be overlooked. The red branched species is a refuge for the scale and should be thoroughly sprayed.

Frequently the wild thorn is allowed to grow along fences or in brush lots near orchards, affording a distributing point for the scale. Like all pest-breeding trees it should be either sprayed or destroyed.

Another tree which feeds and fattens the scale in the purple leaved plum, *Prunus pissardi*. It makes a pretty tree with its highly colored foliage and its wealth of white blossoms in their season, but should be sprayed, and that thoroughly, otherwise it is a source of sorrow.

Osage orange hedges are not as common as they once were, but there are still some of them left, together with stray shrubs that have escaped from cultivation. If the scale were to do no other damage than destroying the osage orange it might remain in peace, but it does not. The best way to dispose of osage is to dig it out, thus putting the scale out of the job.

Owners of currants and gooseberries

should not be surprised to see them die. The scale can kill them in two years.

These are the most important among the trees and shrubs outside the orchard fruits which are attacked by this scale, but the list is far from complete. However, these should receive attention as well as apples and plums.

Oakland Co.

FRANK D. WELLS.

### THE WHITE GRUB IN THE STRAW-BERRY BED.

A correspondent writes me that the grubs are working great havoc in his new strawberry bed and wants to know what can be done to prevent further damage.

Now that the larvae of the June beetle are already established in the soil, the only thing to be done to to hunt out the predators and kill them. If there are plants that do not appear to be doing as well as they ought, it is altogether likely that a grub is working at their roots. If taken in time, a plant may be saved by removing the enemy. Work employed in destroying these pests is time well spent, for, if left unmolested a single grub will often destroy several plants, making a clean sweep as he works from plant to plant.

The presence of these grubs may be more easily detected during the heat of the day, when the foliage of the plants being worked upon will show wilt. Then, too, this is the feeding hour of these larvae, hence they will usually be found near the surface, that is, near the base of the plant. At other times one has to dig down several inches before the grub is found.

These larvae are doing considerable damage in our new spring-set bed. This was to be expected for this piece of ground was in strawberries the two preceding seasons. We knowingly took extreme chances because of the fact that this particular piece of ground is especially adapted to the growing of strawberries, possessing large quantities of humus and being rich in plant food.

At present vacancies in the row of plants are quite numerous. However, much of this vacant space will be filled in by directing runners across from the row opposite. This is another advantage possessed by the double hedge-row plan of culture.

In dealing with this problem, prevention is better than cure and a grub infested soil had better not be set to strawberry plants. Short rotations will aid in solving the problem, as the beetles will then seek other grounds as a depository for their eggs.

Emmett Co.

M. N. EDGERTON.

### SYSTEMS OF PLANTING STRAW-BERRIES.

The hill system is on the decline as a favorite way of planting this fruit. The land is marked both ways, as for corn, except narrower, and the plants are set at the intersections which requires a greater number of plants than for the other systems. After the runners start it is difficult to keep the plants confined to a sufficiently limited space, requiring extra labor.

The matted-row system is less expensive. It is started by marking the field 4 ft. one way and 2½ or 3 ft. the other. Plants are set at the intersection, cultivated both ways and as the runners develop they are allowed to form a matted row, i. e., a row that occupies a strip of land from one to one and one-half feet wide. Cultivation is then done in only one direction. The saving comes in the fewer plants required and in the smaller amount of labor needed to train the runners.

The hedge row is formed by having the plants set in a straight line. In this system no two plants are permitted to grow side by side as in the matted row.

There are two kinds of hedge rows—the single and the double. The single hedge row consists of a single row of plants about every 32 inches. The double hedge row has two rows set 24 inches apart and then a 32-inch space to the next row, i. e., every other space between rows is 24 inches and the remaining spaces are 32 inches.

### SAND OR WINTER VETCH.

The demand for this legume is steadily increasing. Those who have tried it out are well satisfied. If interested ask for full information. We import the highest grade seed obtainable and shall be pleased to submit samples and prices on request. Alfred J. Brown Seed Co., Grand Rapids, Mich.

## BUCKEYE BROADCAST FERTILIZER AND LIME SOWERS

Made in One and Two-Horse Sizes

The Two-Horse Buckeye is made in 8 and 10 foot widths. Width of One-Horse Buckeye is 5 feet. These machines have a wide range of quantity—from 75 to 3000 quarts per acre.

### ABSOLUTE FORCE FEED SOWS VERY EVENLY

Successfully handles all brands of Standard Commercial Fertilizers, Nitrate of Soda, Land Plaster, Granulated Calcium Chloride, Marl, Crushed Limestone, Lime, Dry Wood Ashes, etc.

Absolutely Guaranteed to do ALL claimed for it. Insist on seeing it at your local dealer's. Send for Buckeye Lime Sower folder.

"The Buckeye—a Wise Buy."

THE AMERICAN SEEDING MACHINE CO.  
INCORPORATED  
SPRINGFIELD, OHIO, U.S.A.



### Auto-Fedan Hay Press 4 Models



Let us place the Auto-Fedan on your farm and put it in operation. If it is not thoroughly satisfactory in every respect—if it will not bale hay 20 per cent cheaper than any other machine on the market—we will not ask you to buy, and will refund you the freight and take charge of the machine.

Write us today for catalog and prices. (37)  
Auto-Fedan Hay Press Co., Box 16, Albion, Mich.

### Duplex FARM Tool Grinder



Grinds your plow shares, cultivator points, axes, sickles, knives and all tools. Edge or side of wheel can be used.

No Engine too small for it. Will last a lifetime. Special attachment for grinding discs furnished free. Write for circular.

Pays for its if in one season. Duplex Mill & Mfg. Co., Box 408, Springfield, O.

### GOEN SEED WHEAT.

A Red, bearded variety, very hardy, and good yielder. Good crop this year. Sample free. Price \$1.50 a Bushel; Sacks free.

COLON C. LILLIE, Coopersville, Mich.

## SEED WHEAT

GYPSY WHEAT. Splendid Standard variety, proved by Ohio Experiment Station, test running 20 years, to be the highest yielder of any variety in the State. POOLE—best beardless variety on the market. We can please you if you are looking for good seed. Write today. Our catalog No. 42 "How to Grow Alfalfa" will be mailed free.

WING SEED CO. Box 542, Mechanicsburg, Ohio.

## Wheat to Sow.

10 Big Yields—Smooth and Bearded—Hardy and Reliable—Clean and Pure—Sold Right from Farm—Close Prices. If you don't like it—we take it back Return your money and pay freight.

Write for wheat catalog No. 36—it is free.

A. H. HOFFMAN, Bamford, Lancaster, Co., Pa.

## AGRICULTURAL LIME

fresh Burned and Ground ready for use with the drill. For free Circular and full information address THE OHIO & WESTERN LIME COMPANY, Huntington, Indiana.

### AGRICULTURAL LIME

The government and experiment stations advocate the use of LIME to increase the productivity of the soil. Most soils need LIME. We manufacture a LIME containing the proper analysis to be most beneficial to the soil. Prepared ready for use. QUALITY THE BEST. PRICES RIGHT. Send for booklet, sample and prices.

Agents Wanted.  
SCIOTO LIME & STONE COMPANY  
Delaware, Ohio.

## CORN HARVESTER

with Binder Attachment cuts and throws in piles on harvester or windrow. Man and horse cuts and shocks equal with a corn Binder. Sold in every state. Price \$20.00. W. H. BUXTON, of Johnstown, Ohio, writes: "The Harvester has proven all you claim for it; the Harvester saved me over \$25 in labor last year's corn cutting. I cut over 500 shocks; will make 4 bushels corn to a shock." Testimonials and catalog free, showing pictures of harvester. Address

NEW PROCESS MFG. CO., SALINA, KANSAS.

Mention the Michigan Farmer when writing to advertisers.



## THE DAIRY

CONDUCTED BY COLON C. LILLIE.

### THE PRESENT STATUS OF OLEO.

It is really too bad for the cause of pure food and honesty that the manufacturers of oleomargarine will not be satisfied with the present law governing that product, known as the Grout bill. Nothing can be fairer to their interests. Under this they are allowed to manufacture oleomargarine and only have to pay one-quarter of a cent a pound revenue tax, just enough so that the government will keep track of the manufacturer, but if they persist in coloring it yellow in imitation of butter so that it is liable to be sold for butter and deceive the consumer then they have to pay on this colored oleomargarine 10 cents a pound. Now the oleo interests have made a great cry about the 10 cent tax. They have interested many laboring men's organizations throughout the country and a great many of the city consumers because they hold up to them that oleomargarine is taxed 10 cents a pound while the farmer's butter is not. But as a matter of fact, it is only the colored oleomargarine that is taxed 10 cents a pound while oleomargarine in its natural color is only taxed one-quarter of a cent a pound, and statistics show that very little of the colored oleomargarine is sold. Most of it that is manufactured and put upon the market is oleo in its natural color and they only have to pay one-quarter of a cent a pound tax. Consequently the tax upon oleomargarine does not make a burden to the consumer. Nevertheless, by not stating the case as it is, by misrepresentation, the oleo manufacturers have got many consumers to believe that on all the oleomargarine which is sold the manufacturer has to pay 10 cents a pound tax.

The oleo interests in congress for the last several years have attempted to change this law and remove the 10 cent tax. They have brought forward the Lefer bill, which is a good bill in many ways, as it requires that the original packages of oleo must be small and the revenue stamp must be placed upon each package, but they insist that they shall have the right to color oleomargarine. Now the dairymen claim that they have no right to color oleomargarine unless they color it some other color than butter; because, when oleomargarine is colored in imitation of butter it is colored for the purpose of selling for butter and deceiving the consumer.

Now the dairymen is not the only one affected in this—the consumer is also hit. If the consumer pays for butter he ought to have butter. If he pays for oleomargarine he ought to get oleomargarine, and get it at a proper price per pound. It is a pure-food proposition in this respect, purely and simply. There is a law which prevents people from selling corn syrup for maple syrup, even though they color it and flavor it in imitation of maple syrup it is against the law to sell it as maple syrup, and that is right. Maple syrup is a special product, and it cost more money to produce than it does corn syrup. It is a better product, that is, many people think it is, and they are willing to pay a better price. Now it is a fraud for the manufacturer to take common corn syrup or glucose and color it and flavor it so that it imitates maple syrup and sell it as maple syrup. It is a fraud on the consumer, and it is an injury to the producer of maple syrup. This is exactly the case with oleomargarine. The same can be said of vinegar. It is believed by many that cider makes a much better vinegar, more wholesome, than could be made from acids, but it cost more to make cider vinegar than it does acid vinegar. Consequently manufacturers are all the while trying to disguise acid vinegar so that it looks like and tastes like, and will sell for cider vinegar. Now there is a law against this. This law is to protect the consumer more than it is the producer, but it protects the producer as well because cider vinegar is more costly to produce.

And so with oleomargarine. Oleomargarine, we will admit, for the sake of argument, is a wholesome product. It is made out of animal fat. There is nothing in it deleterious to health, but its natural color is the color of lard and tallow. Now if it is prepared so that it is wholesome and sold as oleomargarine it is a substitute for butter. The dairymen can have no objection to this because

there is not enough butter being produced at the present time to supply the demand if oleomargarine or the substitute for butter was taken off the market. People would not have enough to spread upon their bread. But when this manufacturer of oleomargarine attempts to color tallow and other animal fats so their product looks like butter and sells it for butter, then it is a fraud. It is a cheaper product than butter, it is not as good as butter, everybody knows that. There is no use in denying it and there is no use arguing about it, and the only reason that the manufacturer insists that it be colored yellow is so that it can be sold for butter and get a better price, or butter price for it, and when they do that they defraud the consumer and the producer as well.

The dairy interests of this country have brought forward a bill to offset the Lefer bill. The bill was introduced by Congressman Hagon, of Iowa. This bill sticks to the color distinction. If you take away the color distinction then there is no use of having any legislation at all. Besides that, it changes the original package somewhat, and it prohibits the manufacturer of oleomargarine from using butter in the manufacture of their product. These are the essential features. Why should the oleomargarine manufacturer be allowed to take good pure butter and mix it with a lot of tallow and lard and sell it for oleomargarine? If a manufacturer of butter should use any other animal fat in connection with butter-fat and attempt to sell it for butter, then it would be adulterated butter, but the manufacturer of oleomargarine can take creamery butter and mix it with animal fat, in some brands as high as 40 per cent being creamery butter, and then sell it for oleomargarine. They do this so as to make oleomargarine look like, taste like, and smell like butter so that they can sell it for butter and get a butter price for it. Now the Hagon bill, which will prevent this, ought to prevail. There ought to be the color distinction and the manufacturer of oleomargarine ought to be prevented from using butter.

The government cannot prevent the manufacture of colored oleomargarine but it can use its taxing power. Hence a tax of ten cents a pound is put upon this product so that it will practically prohibit its manufacture.

### BUILDING SILO IN BARN.

I intend building in the barn a silo 10 ft. square and digging 3 ft. beneath the ground. The foundation is to be built of stone and cement, and the main part boarded with two fold of inch boards with rubber roofing between them.

Arenac Co. SUBSCRIBER.  
My advice would be first, don't build your silo in the barn; build it outside of the barn. You will need the room later on in the barn and you will wish a hundred times that you had built it outside. Then again, the silo in the barn will warp your barn out of shape, the pressure of the silage is so great. I nearly spoiled a barn by putting my first silo inside.

Then again, don't build a square silo. Build one ten feet in diameter, make it round. You don't want a square silo. You can build a much stronger silo and have it round than you can to build it square with the same material.

If you want to build a serviceable round silo and do the most of the work yourself you could build a lath and plastered one as follows: Make a circular wall for the foundation, you go into the ground if you wish to but I would advise you not to go into the ground, build it on a level with the ground and make it a little higher to get the capacity. Then, on top of this circular wall put a circular sill made out of inch boards, double. Then set your studding on this circular sill 16 inches apart, lath the studding on the inside and plaster it with cement mortar made two parts sand to one part cement. You can clapboard it on the outside. Get six-inch lumber and have it split so that it will be one-half inch thick and put it so that one piece will come directly above the other, not have it lap. Then it will go on nicely. In building this silo re-inforce it with common fence wire, galvanized wire, for hoops. Put them on before you put on your siding on the outside. Wrap the wire around twice a foot at the bottom and then every three feet above that. Fasten the wire to the studding. This will assure you ample strength. For a roof put two 2x8's across the center three feet apart, leaving an open space three feet, and slant your roof from these two beams to the edges. Put two 2x4's on

top of the 2x8's and then make a cap to go over them by using two other 2x4's and nailing boards across so that it will just fit down over the pieces fastened to the 2x8's. You can have this cap in sections so that it can be easily taken off. When you fill the silo remove the caps. In this way you avoid having any dormer window or anything of that sort. Other kinds of silo would serve your purpose nicely. A stave silo can perhaps be erected with the least trouble, while a cement silo has the advantage of being more permanent.

### DAIRYING A LARGER BUSINESS THAN FARMING.

Men talk about dairying as if it were on a par with raising wheat, or corn, or clover, or any other one particular crop. When, in fact, growing these is the mere production of crops while dairying is a business in itself; it is making a manufactured product, it is converting the corn and the clover and the other food stuff grown upon the dairy farm into a marketable, manufactured product, whether it be butter, cheese, milk, or butter-fat. So the dairymen is more than a mere crop producer. Crop production is but a part of dairying, an elementary part. A man must be a successful crop producer, a successful farmer, if he makes the greatest success out of dairying. But the fact that one does produce good crops is not proof that he will succeed with dairy cows. He must also have an ability to select, feed and care for cows.

### WINTER DAIRYING.

Fifteen or twenty years ago I thought there was but one side to the question of winter dairying. All arguments were in favor of having the cows freshen in the fall and go dry in the summer time. Since then dairy markets have changed so much that there is two sides to the question at the present time. Fifteen or twenty years ago we used to sell butter in the summer time for 12 and 15 cents. Our creamery has sold butter for this price for storage purposes. The commission men did not think they could afford to hold and store butter unless they could get it down below 20 cents. The price of cheese and market milk and all other dairy products has always been based on the price of butter and consequently they were low in the summer time. Now there is no question but what a cow will give more milk in a year if she freshens in the fall, if she is properly taken care of and fed in the winter time. If the cow freshens in the fall and the dairymen is provided with good corn silage and clover hay and a grain ration to balance the feed and has to good warm stable to keep her in she will keep up the flow of milk with very little falling off all winter long and then when summer comes and the pasture grass is luxuriant the cow will flush up for a time like a new milch cow. The period of lactation is prolonged. On the average the winter milker gives the largest amount of milk. Where one has little pasture there isn't any question today but what it is more profitable to have the cow freshen in the fall. On the other hand, if a man is so situated that he has an abundance of cheap pasture, waste, cutover, or rough land that cannot be plowed but which contains plenty of grass, it is a question whether it would not be better for him to have his cows give the larger amount of milk in the summer time, and therefore they would necessarily freshen in the spring.

The consumption of ice cream in this country is growing to enormous proportions. It, to my mind, has much to do with the summer price of butter. Fifteen or 20 years ago very little butter-fat was consumed for ice cream, while now there is an enormous amount of it. This cuts down the supply of butter for storage, advances the price, and makes conditions better for the dairymen. It gives a man with cheap land for pasture a chance to make something out of it. Of course, it has always been the case that the man who furnishes market milk must have his supply of milk distributed as evenly throughout the year as possible, and do all that we possibly can, I think we will always have the greatest supply of milk during the growing part of the year because it seems to be natural for the cows to freshen at that time and man can do his very best and yet he will not get the entire herd to freshen in the fall when he wants them to. But it is not so bad now with present summer prices of dairy products if you have your cows freshen in the

## Genasco

THE TRINIDAD-LAKE-ASPHALT  
Ready Roofing

Are you tired of tinkering with leaky roofs? Lay Genasco—made of Nature's everlasting waterproofer. It is leak-proof to stay. The Good Roof Guide Book tells you why.



Write for this Book and samples—free.  
The Kant-leak Kleet, for smooth-surface roofings, prevents nail-leaks.

The Barber Asphalt Paving Company

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

Philadelphia

New York

San Francisco

Chicago

## Make More From Your Cows

Proper feeding means better health and a larger milk yield. Silage is the best substitute for green feed, which acts as tonic and laxative and makes June butter bring top prices. You ought to feed silage and you ought to cut it with the

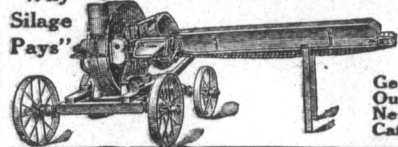
## BLIZZARD Ensilage Cutter

which cuts either green or dry feed slick as a whistle, knives are adjustable even when running at full speed. Elevates by draft in any direction and to any height. The Blizzard also has the original and most successful Self Feed Table. Comes to you in only three pieces, mounted or unmounted ready for business and built by the pioneer manufacturers of ensilage cutters.

**GUARANTEED** Every part is perfect and guaranteed. So is the machine as a whole. We test every one at a speed 50 per cent greater than you will ever run it in actual use.

Don't purchase any cutter until you get our new catalogue showing 1912 improvements. Write for it, also "Why Silage Pays," a sensible book every raiser of stock should read. Free if you send your name and address.

THE JOS. DICK MFG. CO.  
1439 Tuscarawas St. Canton, O.



Get Our New Catalog

## DE LAVAL CREAM SEPARATORS

### THE BEST SUMMER FARM INVESTMENT

When dairy production is largest waste is greatest and quality poorest without a separator.

The De Laval Separator Co.  
New York Chicago San Francisco

## Shoo Fly THE ANIMALS FRIEND



Keeps flies and other insect pests off of animals—in barn or pasture—longer than any imitation. Used and endorsed since 1885 by leading dairymen and farmers.

\$1 worth saves \$20.00

in milk and flesh on each cow in a single season. Heals sores, stops itching and prevents infection. Nothing better for galls. Kills lice and mites in poultry houses.

SEND \$1, enough Shoo-Fly to protect 200 cows, and our 3-tube gravity sprayer without extra charge. Money back if not satisfactory. Write for booklet, FREE. Special terms to agents.

Shoo-Fly Mfg. Co., Dept. H, 1310 N. 10th St., Phila.

Editor knows from experience that Shoo-Fly is O.K.

## \$15 95 and Upward AMERICAN SEPARATOR

FREE TRIAL. FULLY GUARANTEED. Easy running. Easily cleaned. Whether dairy as large or small, obtain our handsome free catalog. Address: AMERICAN SEPARATOR CO. BAINBRIDGE, N. Y. BOX 1061



spring, because you will get something for the grass that grows on the hillsides and in the cut-over lands that cannot be utilized in any other way only by pasturing, and the indications are that the summer price of dairy products will continue to be higher than formerly. I don't see any chance for breaking the butter industry, no matter how much the oleomargarine proposition is pushed for there will always be a large class of people who will prefer good butter and who will buy it at any reasonable price. We might be much concerned about this if the only market for dairy products was butter and cheese, but the growing demand for market milk which will continue just as long as our population keeps increasing, and the increasing amount of ice cream used which is not dependent upon increase in population but rather on the extension of the present market, there is no chance for a falling off of demand for summer dairy products, and consequently there will be no falling off in prices.

Figured in any way, the prospects for dairying in the future are more flattering than they have been in the past. To be sure, labor is higher, feed is higher, but dairy products are higher in proportion than the labor and the feed, and with the understanding that we now have of the business we can produce milk and butter-fat cheaper than ever before. By keeping a close tab upon our cows as we can through the cow-testing associations, we place dairying on a true business basis. We can easily eliminate the less profitable animals in the herd, select the most profitable ones for future use, and by adopting a modern standard method in feeding and caring for the animals there is no question but what a man can make more money out of dairying today than he ever could before. I realize that in many instances the production is lessened owing to the fact that unprofitable cows are disposed of more closely than before. While this means a smaller quantity of the dairy products it does not mean a lessening of the profit. This is an advantage to the dairyman rather than an advantage to the consumer, but of course we are figuring from the producer's end, rather than from the consumer's end.

A dairyman must be a good dairy farmer. He must realize that much of his profit from his herd depends upon the cheapness by which he can produce the feed upon his farm. He must learn to produce a maximum quantity of feed upon his own farm. He must use by-products. He must utilize the silo to its fullest capacity. He must grow red clover, the alfalfa plant to furnish the protein and the bulky part of the ration. He must balance these two feeds with a proper grain ration which will give the cow the proper proportion of protein to carbohydrates. He can raise the most of this upon his own farm, and his skill as a farmer will in a large measure determine his profits in dairying.

#### PASTURE IS GOOD.

We have the best pasture this spring we have had in years. We rented a farm in the neighborhood with about 35 acres of additional pasture and we didn't have to turn the young cattle onto the cow pasture at all in the spring, and then I built a good-sized exercise yard for the cows down on the creek flat so I didn't let them onto the main pasture until there was a good growth. If you let them out early and allow them to roam over the pasture they do not give the grass a chance to grow and at the same time there isn't much for them to eat so early. So I fenced in a big yard, something like two acres. There is a creek running through it and it has quite a lot of shade. We turned the cows in this enclosure early. They ate their rations in the barn, we did not allow any for the grass grazed from the enclosure, and we kept them there until the grass got a good start, and the consequence is that they had good pasture and that pasture has held out well until the present time. Now the dry weather begins to tell. There is an abundance of grass, the June grass is getting ripe and is drying up and it isn't so palatable as it was. Ever since we turned the cows onto the pasture we haven't been able to get them to eat very much ensilage. We finally decided to leave it out of the ration entirely and will not feed it again till the pasture gets short. We have more ensilage left on hand probably than the cows can consume this year but if there is no occasion to feed it this summer it will keep until next year.

## Raise a big crop of GOOD wheat



**WHY** be satisfied with 15 or 20 bushels per acre when you can double the crop if you try? Those who use the A. A. C. Co. fertilizers are harvesting large crops of first quality A-1 wheat, and if you are not yet acquaint-

ed with the merits of these fertilizers it will pay you to investigate them. To ripen large crops of early plump grain requires a large amount of available phosphoric acid derived from the best sources. Our

### BANNER BONE FERTILIZER WITH POTASH

is guaranteed to analyze not less than 24% of total phosphoric acid, 20% available phosphoric acid and 4% actual potash, and is giving most excellent results.

Consult our nearest local agent for prices and terms, or send your name and address to us and we will mail you free, postage paid, a 52 page book on Fertilizers and Dr. Widdsoe's article on "How to Fight Drought with Fertility."

WE WANT AGENTS FOR UNOCCUPIED TERRITORY

**The American Agricultural Chemical Co.**

Detroit Sales Department, Detroit, Mich.

## A Hay Press That Carries Its Own Power Plant

### Combination Solid Steel, Big-Capacity Press With Gas Engine Mounted on Same Truck

This sensational Money-Making Hay Baling Outfit, which we introduced in 1910, has just about doubled the profits of the hay baler. Many balers cleaned up \$10, \$12 and even \$15 a day right along. Hay now commands a big price, and everyone wants theirs baled.

It's a compact, big-capacity, all-steel press, handling 2½ to 3½ tons per hour. Carries its own power plant, completely equipped. Easy to move. Coupled up short, you don't need a 40-acre field to turn it around. Always ready for business. You can get in a big day's work every day. The press has a big feed opening. It's a self-feeder, too! Feeds direct from fork. Friction clutch sprocket on press. Lever convenient for feeder; starts or stops press instantly. No condenser box, no dangerous foot tamping, no balance wheels, no complicated gears, no high-speed machinery. Simple block dropper. Extra-length tying chamber. Lever brake. **IT'S A WONDER FOR WINDROW WORK.**



## Sandwich Motor Press

Engine is the very best quality. Hopper-cooled type—requires little water. Has both batteries and magneto. Heavy steel roller, chain drive. No belts to lose power of cause trouble. Chain delivers full power of engine.

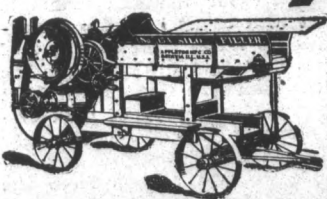
Comes completely and fully equipped. Engine can be removed for other work. Can furnish outfits with 4, 5, 7 and 9-horsepower engines.

Both press and engine are of the very best quality—made for hard, continuous service—yet the cost of the outfit is very reasonable.

#### Horse-Power Presses, Too!

We make a complete line of hay presses—not only motor presses, with which we furnish engine (or you can use your own engine).

**Sandwich Manufacturing Company, 198 Main Street, Sandwich, Ill.**  
Branches: Box 198 Kansas City, Mo.; Box 198 Council Bluffs, Ia.



### Fill Your Silo Cheaply

Many things enter into the cost of filling your silo, but the most important one is your silo filler. A poor machine means a high cost, and an

**Appleton Quality Silo Filler** means the lowest cost. The positive feed table, the large throat, big feed rolls, the four spiral tool steel knives and the powerful blower mean great capacity. The solid oak frame means strength. The single lever control, the handy side table, the flexible top distributor mean convenience. In fact, the whole machine means satisfaction, while our guarantee

that our Silo Filler will, under equal conditions, do more and better work with less power and will last longer, means absolute safety for you. More silos will be built and more ensilage fed this year than ever before. We have already sold more Silo Fillers this year than we did in all of 1911. To insure prompt delivery you should arrange for a machine at once. Write to-day for free illustrated booklet.

**APPLETON MANUFACTURING COMPANY, 420 Fargo Street, Batavia, Ill.**

When writing advertisers please mention The Michigan Farmer.

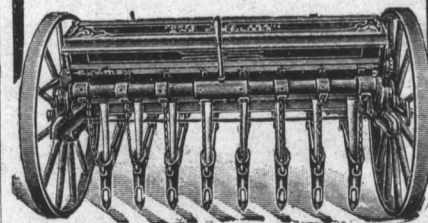
## \$10,000.00 Deposited With Bank to Protect You

You'll be a delighted customer if you buy this Greencastle Grain Drill, or we'll have to take machine back and pay freight both ways. There's no other way out of it—we've put up a \$10,000.00 legal bond with our bankers to refund all your money if this Drill isn't exactly what we say it is—we would not—date not—dispute your word after you've tried the Greencastle. Try it 80 days free at our risk—sow all your seed—and if the

### Greencastle Grain Drill

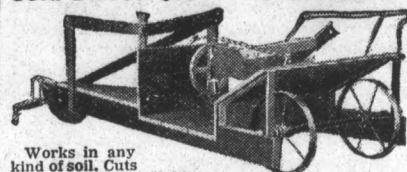
does not more than satisfy you, ship it back and we'll return your money in full—or forfeit \$10,000.00. We know that this Drill is perfect—will sow grain, seed or fertilizer accurately and stand up to its work in any soil—that's why we guarantee it one year and let you try it one full month free. We sell direct from factory—save you \$20 to \$30 dealer's profits. Write for booklet, copy of guarantee and \$10,000.00 bond. If you answer this right away we will make you special price offer to introduce this drill in your locality.

**HERTZLER & ZOOK CO., Box 103, Belleville, Pa.**



## The PERFECT CORN HARVESTER

Sold Direct \$18 Can Be Adjusted to Cut for Shock or Silo



Works in any kind of soil. Cuts stalks—doesn't pull like other cutters. **ABSOLUTELY NO DANGER.**

**Cuts Four to Seven Acres a Day** with one man and one horse. Here is what one farmer says:

Trotwood, Ohio, Sept. 28, 1911.  
Dear Sir:—I am pretty well satisfied with my machine. It does good work. I cut 13 acres of drilled corn in three days. Yours truly, **SAMUEL LAVY.**

**SOLD DIRECT TO THE FARMER**  
Send for booklet and circulars telling all about this labor-saving machine; also containing testimonials of many users. Send for this circular matter today.

**LOVE MANUFACTURING COMPANY,**  
1222 Citizens Street, Lincoln, Illinois.

It pays to bale your hay in

## DERICK'S STANDARD Baling Presses

Catalogue Free

**P. K. DERICK'S SONS,**  
46 Tivoli St., Albany, N. Y.

## FENCE PRICES BUSTED

**15c PER ROD**

buys this High Grade Hog Fencing; heavier than usual kinds offered. 28 inches high, 7 bars, weighs about 6 lbs. to a rod, all heights at proportionate prices. 48 inch Poultry Fencing, 27c

**\$1.25 PER 100 GALVANIZED WIRE**

This price is for No. 6 gauge. Other sizes in proportion. This is our Galvanized Wire Short, put up 100 lbs. to a bundle, suitable for Fencing and general purposes.

**BARB WIRE**

Best and strongest; standard weight. Made of No. 12 gauge, galvanized, put up 100 lbs. to a reel, per 100 lbs.

**\$1.95**

**FENCE CATALOGUE FREE** Quotes low

Fencing, Wire Gates, Lawn Fence, Fence Posts, etc.

**Chicago House Wrecking Co., Dept. L 12, Chicago**

## ERTEL'S 1-HORSE WONDER HAY PRESS

Guaranteed to be strictly a one-horse machine and to bale more hay than any other one-horse machine on the market.

Built almost entirely of steel; no side strain; powerful leverage makes bales so that 10 tons can be loaded into 36-foot car; light draft, low step-over and no jar makes it easy on horse; low platform and hopper makes it easy to feed. Automatic feeder makes smooth bales. Made with or without self-feeder. Get free book and price before buying elsewhere—it will save you money.

Every machine guaranteed.

Sent on 5 days free trial.

**GEO. ERTEL CO.,**

Manufacturers

285 Ky. St., Quincy, Ill.

**4 BUGGY WHEELS** PRESENT PAID \$8.15  
With Rubber Tires \$18.45. Your Wheels Rebuilt, \$10.50. 1 make wheels ½ to 4 in. tread. Tops, \$6.50. Shafts, \$2.10; Repair Wheels, \$5.95; Axles \$2.25; Wagon Umbrella free. Buy direct. Ask for Catalog 28.  
**SPLIT HICKORY WHEEL CO., 528 F St., Cincinnati, Ohio.**