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ONE OF THE GREATEST OFFERS EVER MADE—See Page 427.

The Secret of a Successful Farm Life.

By C. L. CHAMBERLIN.

I HAVE consented to relate for publication the experiences which I regard as the turning point of my life, chiefly because I now see the folly of my former way of living. I am making public many things of a very personal nature in the hope that other farmers who are living as I once did may change about in time without waiting for the compelling event which drove me into present conditions and opened my eyes to a realization of at least some of the things which constitute a successful farm life.

I am firmly convinced that the possession of too much land and the practice of too much hard labor in the effort to go on acquiring more is the endless chain that binds many farmers to a life lacking in most of the legitimate pleasures of living. The experiences which prompt me to this belief are all the more impressive because forced upon me, yet I see no reason why thousands of farmers who now slave along the same paths I followed may not make a change and profit by my experiences before such reversal of policy shall have become compulsory in their case as in mine. I am only an average middle-state farmer and what has affected me may with equal propriety affect many others whose ways of life are similar to what mine were previous to the last three years. Since this is a record of personal experiences the reader will, I trust, overlook the frequent reference to myself and my way of doing things.

A Common Experience.

At the age of 21 years I was left with 80 acres of good farm land well furnished with buildings located in the center of the region designated in the geography of boyhood memory, as "The Lake States and Kentucky." I soon married and for 16 or 17 years devoted my energies almost wholly to farming with the object of adding to my number of acres. And I certainly succeeded. The 80 became a hundred and as rapidly as the money accumulated, additional twenties, thirties and forties were added from near by and adjoining lands, until I found myself in full ownership of 280 acres, well fenced, fairly well drained and with all the buildings I considered necessary. My family, consisting of wife and two children, as well as I, had been shut off from all but a very few local social enjoyments and so intense was my desire to acquire wealth, which meant to me more land, that I always toiled in the fields until dark during the busy seasons and cared for my team and did the other chores about house and barn by lantern light.

I had spent little money on machinery as it seemed to be the unnecessary outlay of a lazy man with which I could dispense by doing more hard work with my muscles. I was naturally strong and healthy and never spared myself at any task. I demanded long hours of my help but never shirked personally, always taking the lead in any difficult work in which we were engaged. I hired one man by the year who, with his family, occupied a small house on a sixty acres I had purchased on the opposite side of the section in which my home farm lay. I gave him \$25 a month, rent, and a few other privileges. I engaged another man from May till November at \$1.50 a day and board. At odd times other men were employed by the day.

It had long been my secret ambition to give my son, a lad of sixteen, a half section of land when he became of age, and yet be able to provide for his sister, still a child, and have sufficient to maintain myself and wife our natural lives. I knew I was succeeding and believed I would be able to accomplish what I sought before re-

tirement. But retirement came sooner than I had anticipated.

A Compulsory Pause for Thought.

Up to this time my experiences were the same as those of thousands of farmers. There are any number nursing some similar ambition and bent on satisfying it through the acquisition of wealth by long hours of hard toil. Some of them learn as I did how futile such plans are. My real experiences began that fall when my son was 16 and just beginning his third year in the village high school three miles distant. I had insisted on his keeping in school. I wanted him to be a worthy manager of his half section.

One day I had been lifting to an unusual degree by the old lever plan, attempting to put a foundation under a corn house without taking my men from the fields where corn husking (by hand) was just being begun. After a final, intense effort I felt a dull pain in my abdomen and this was followed by a peculiar sickness and weakness throughout my whole body. It was unusual for me to be ill and I knew I had over-exerted but was not prepared for the words of the physician my wife had summoned:

"You have lifted too heavily, my friend, I am sorry to say it, but in plain words you have injured yourself permanently, and must never exert yourself by doing heavy work of any kind. No, there is no cure."

Retrospection.

I will not attempt to relate the shock these words gave me. All the hopes of my life had been suddenly dashed aside. What had life to offer me in the future, me, whose sole enjoyment was hard work, whose only recreation, to walk over my broad acres, view the growing crops and speculate on their probable yield? After a few days I pulled myself together and took stock of my situation. I had 200 acres of as fine farming land as any I knew of, but my son attending the town school was daily growing away from the life I had pictured for him. And why should he not? The thought then came for the first time. What had a farm—my farm—or any farm operated as mine had been—to offer a bright twentieth century lad? True, we made money but we never had time or inclination—I had not—to enjoy the spending of it or to derive any direct gain other than a living, and putting the remainder into more land. Old Johnny Dane really got as much out of life as I or the boy when I gave the old fellow a home, board, clothes and tobacco for what chores and odd jobs the old man, crippled in mind and body, could do for me. And now I was deprived of my one pleasure, hard work, making money.

A Change of Policy.

Work? I must work, but how? At what? I could see only one way during the days I lay gaining bodily strength and mental vigor sufficient to guide me in laying out the future. I resolved to spend a portion of my money in ways that would not only permit me to continue to work, but would also make life easier, and I hoped, more enjoyable for my family. And in doing this I changed the whole policy of my life and began its most valuable experiences.

It was fall and I always did fall plowing, generally taking that as my own personal employment. The two men were in the corn, old Johnny as usual was looking after the stock, repairing fences, and doing various odd chores. I resolved that I would plow as I always had—only different. From the village agent I bought a wheel plow and started in riding and managing the implement by its easily operated levers. I soon found I was actu-

ally doing more work in a day than in former years, or rather, my big team and the wheel plow were doing much that I had previously accomplished by my own strength. I was doing all this with scarcely any strain or muscular fatigue and with absolutely no return of that pain or bodily sickness against which my physician had warned me. Why could I not have used a riding plow for years and thus performed this work with economy of time and physical effort? I could—just as any man can now, but I did not realize until then what I had been missing.

Unexpected Results.

I was surprised, too, at the interest Will, my boy, took in the plow. He rode it all one Saturday and even begged to remain at home from school the following Monday to complete that field. Formerly it had been necessary at times to exercise parental authority to compel him to remain out of school and assist in farm work for a day or two during busy times. I let fall a word or two that I had decided upon a number of improvements and new articles for our use and noticed that he brightened up wonderfully but I did not know till long afterward just what thoughts my words had aroused in him or what the results would be.

Drawing manure was commonly a task of mine. Early that winter I realized the impossibility of handling the tangled mass by hand and I made my plans accordingly. I piled the manure temporarily under a long open shed next the cattle barn, where it would be protected. Usually I drew it out in the spring, dumped it in piles and later scattered it by hand. Sometimes the piles were left until plowing or cultivating time, when I would rest the team and scatter for a few rounds ahead. That winter I purchased an up-to-date spreader and with some help at the barn did the spreading all ready for the plow or spring-tooth cultivator in about the time it usually required to draw it to the field and leave it in piles. I did this with the employment of only a trifle of bodily effort and saved in fertility—why, I can hardly yet realize the saving from getting an even distribution in the places where it is needed, without first leaving the manure in piles to soak out wastefully in a few spots.

A Study in Economy.

When I look back and reflect on my former extravagant outlay of time and effort I cannot but wonder that I had never before realized the advantages of using machinery. Now, of course, I am compelled to conserve my strength, it is no longer possible for me to abuse my body by long hours of hard labor. But even if I were again willing to come in from the fields at dark, so exhausted that I could hardly drag around with the barn work still to do, in order that I might save the money I put into labor-saving machinery, the economy of time should have led me to see the wasteful folly of such actions. The use of machinery permits the use of the mind acting through wood and steel instead of only a sort of low instinct operating through human muscles as is the case when a man does everything by hand. I have already spoken of the amount paid for help. The first year after I began using labor-saving machinery I dispensed with the day man at \$1.50 the day and board, thus saving during the usual six months of such employment, at least \$300. And the sum paid for machinery did not greatly exceed this and the machines are still in condition for use many years.

I always try to raise all the hay I need for my live stock and in gathering it in usually hire besides the two regulars, old Johnny, Will and myself,

an extra man for several days during the season. It was customary after the grass had been cut, for Johnny to drive the horse and rake; Will and I bunched up; the two, or three, men drew in, and with a fork mowed away. I saw that handling hay by hand was not for me, and decided to put one man's wages into helpful machinery that would still allow me to work at it. I bought a tedder and a loader. They had been used by a few other farmers in my community but I had never had any use for such expensive means of "letting a man be lazy," which was my former estimate of their real purpose. Now I kept on the mower; Will drove the tedder so that the grass was dried rapidly. Johnny drove the team on the wagon and Jim, my steady man, loaded from the machine. At the barn, Johnny set the fork and Jim, assisted by a day man, as the mow filled worked the hay back while a ten-year-old son of Jim's drove the team at thirty-five cents a day. The money paid the boy and the extra day man was no more than I had formerly paid the extra hand, and I still dispensed with the other hand. Best of all, the time was shortened and no one felt overworked, although haying, at best, is no sport.

Other Beneficial Results.

That fall the round of spring work was repeated; the spreader, the plow and a new disc plow helped to shorten the hours and lighten the work. In October I began feeding about seventy hogs and fifty head of cattle. I had formerly bought feed from the village mill three miles distant, or by making a double trip, had hired this mill to grind my own grain. It now seemed possible for me to save time and effort by doing my own grinding. I purchased a gasoline engine and a feed grinder and sheller and did my own grinding, largely on days when bad weather prevented working in the corn or plowing. The time of man and team making trips to town was the first economy noticed as a result of this venture. Another result was noticed after I had studied up on rations and mixing feed and had put it into practice.

I studied out a system of rations by which the largest amount of food could be eaten, digested, absorbed and assimilated without stalling, and by the use of my own mill I ground the foods in proper proportions, one lot for the younger hogs that must first build bone and muscle and another lot for the fully grown animals that were ready to take on fat at once. This method of preparing my own feed proved after all, the greatest gain in grinding my own feed. It is something that any farmer can and should do, but unfortunately it is something that he cannot see and learn without trying—at least, he won't.

Balancing the Account.

I figured five per cent as interest on money I had put into my new machinery and 10 per cent as the annual depreciation from use. This made an annual loss or expense of 15 per cent on my investment to be returned before I could count any gain from the use of machinery. I found that the time of man and team making trips to the mill was just about equaled by the 15 per cent on the money invested in grinding machinery, plus the fuel cost. Then I had the labor required to handle the grain and machinery to figure against the gain from a better compounded ration. Of course, I could not tell how much I realized, but that I was far ahead was plainly evident when the amount received for the stock was compared with what I had received the year before when the price per hundred was practically the same.

It is unnecessary to prolong this (Continued on page 427).

Who Should Grow Alfalfa.

I FANCY I hear a chorus of replies in the one word—Everybody. But should everybody grow alfalfa? Well, yes, they should if they could, but the trouble is that they can not, and to try would therefore be to fail in a large number of cases.

The man who takes the advice of the trained field man, or of the successful alfalfa grower who knows why he is successful, is pretty sure to make good, but the fellow who simply sows alfalfa because he has read enough about it to turn his head, but has not gotten hold of that portion of the truth which will teach him the difficulties in the way, and help him to overcome them, will be pretty sure to go wrong with his new venture.

There are large areas in Michigan where conditions are right for the growing of this truly valuable crop. The soil is good and well drained, it contains plenty of lime, perhaps even enough of nitrogen-fixing bacteria. In short, everything is right for a good stand and a rapid and profitable growth.

Favorable Natural Conditions.

Within a few miles of the home of the writer is just such a location. There, the first successful stand of alfalfa of which the neighborhood boasted, was sown in wheat. The field remained a profitable one for years. Not because wheat is a good crop to seed with, but simply because other conditions were right.

In a few instances, the first cutting has yielded three tons per acre, in the better portions of fields in this particular locality.

Now, any man living on one of these farms where alfalfa grows for the asking, would be one of the poorest men to go to for advice if he knew nothing about the matter beyond his own experience. I have heard men talk of alfalfa culture in farmers' institutes, who had been successful, and did not know why, and I have always felt that they did more harm than good, because they could not realize that their success was due to conditions that were local and not general, rather than to any particular skill on their own part. But shall we grow alfalfa? Surely everyone whose farm is adapted to it, should grow it. It will yield more and better hay than can be grown from any other source if the crop does well. It will gather more nitrogen than clover, and add more organic matter to the soil. Its deep rooting system will bring up from below the surface large quantities of mineral matter, and store them near the top of the ground where other crops that do not root as deeply can get them. In the words of Professor Moore, of Wisconsin, "Alfalfa will farm your second, your third, your fourth, and your fifth farm."

Amending Unfavorable Conditions.

But can we not make conditions favorable to the culture of this valuable plant, where they do not exist? Yes, often we can, and should do this, but there are conditions so bad that the expense of mending them would seem to be too great to be incurred.

We can add lime to the soil that is in need of calcium, but whether it will pay to do so or not, will depend somewhat upon the distance which we must draw the lime, and again, it will depend upon the natural fertility of the soil as well as upon the possibilities of drainage. If the soil is wanting in the proper bacteria, the seed can be inoculated very easily and cheaply. Excellent results are being secured every year, from the culture distributed from our experiment station, and in view of this fact, inoculation by soil is fast becoming a thing of the past.

Much is being written and said upon the subject of liming the soil, and most people are familiar with the means now employed to this end.

Marl and ground lime-stone are splendid sources of calcium. Lime-stone is ground finely and furnished at reasonable cost, and many beds of good marl are being discovered every year. Still it is not an easy matter to lime a large area. Lime is heavy stuff and if we have to haul it far, we shall be made conscious of the fact. A small amount of ground lime-stone will do no good. If the soil is acid, we should apply from two to four tons per acre. It is not a great task to lime an acre, but when we test all the farm for lime and find instead a condition of acidity that surprises us in every field, when we multiply our acres by four, and think of the weight of each load of lime-stone, then we begin to wonder if we shall ever grow alfalfa all over the farm.

Personally, I believe it will pay to haul lime onto every field that is otherwise adapted to the culture of alfalfa. But will it pay to lime our poor light lands in the hope that this plant will succeed in such a location and make us money?

Organic Matter Necessary.

Sometimes in hearing and reading so much about this matter, we are tempted to believe that alfalfa will grow anywhere if we but lime and inoculate. "But the truth is not like the seeming." Alfalfa will not do well in a soil which is low in organic matter, and organic matter is lacking in nine-tenths of our lighter soils.

The time may come when we shall grow alfalfa very generally throughout Michigan, but if so, it will be after we have attended to the improvement of conditions in many localities.

For the man on a light sandy farm, who has been growing 40 to 50 bushels of corn per acre, 50 to 100 bushels of potatoes and 10 bushels of buckwheat, losing a stand of clover once out of three times, to expect to improve conditions by substituting alfalfa for clover, is but to fail.

We do not say that such land will not grow alfalfa after conditions that have caused these light yields are corrected, but the same causes which keep this man from getting a good stand of clover, will lead to a failure in his catch of alfalfa.

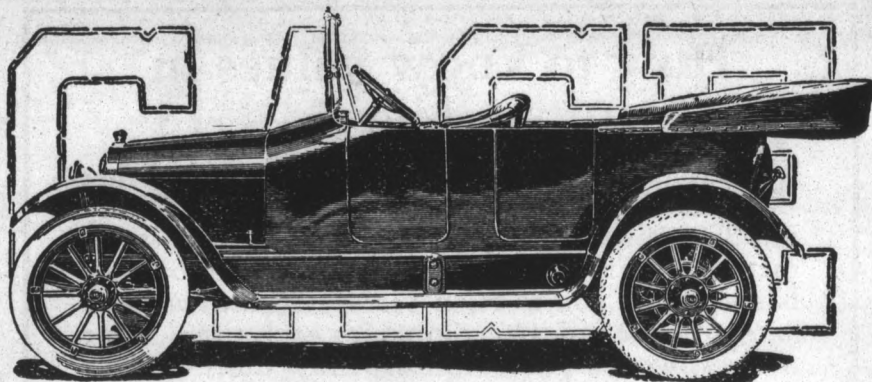
The first step in reclaiming these light soils is to put the organic matter back into them. If we are farming soils of this type, we must steadily and persistently work to this end. We must apply as much stable manure as we can get, we must practice a short rotation. If we sow winter vetch in the corn at the last cultivation, mixing with it a little rye at the first, we shall provide a covering for the ground during the winter, and in the spring, we shall have a considerable amount of matter to turn under. We can also sow rye and vetch in our potato fields at the last cultivation. True, we shall dig some of it with our potatoes, but there will be enough remaining to cover the ground nicely and help to keep the soil from blowing.

If we grow beans in our rotation, we can seed the ground to vetch just as soon as the beans are off, and insure good winter protection in this way.

In short, we should not leave our light sandy lands uncovered for a single winter. If we follow this practice for a period of years, we shall protect them from the winds, prevent their washing in large measure, and greatly increase the content of organic matter in them.

As organic matter increases, our yields will become correspondingly greater, and the failures in getting a catch of clover will be much less frequent.

Then, we can be liming these soils field by field, as we have the time, and little by little we can extend our areas of alfalfa with profitable results. Oceana Co. W. F. TAYLOR.



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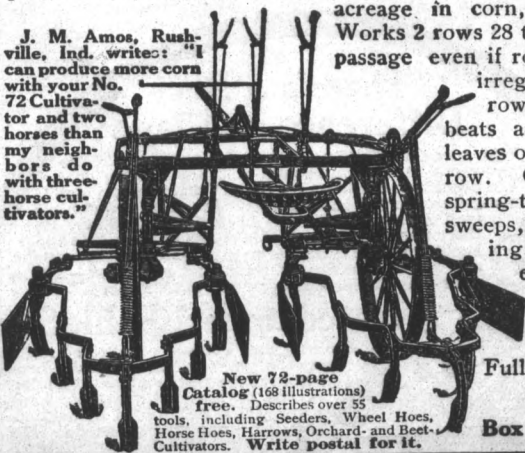
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The number of uses to which such engines are constantly being put are rapidly increasing. The gasoline engine was first used most extensively on a considerable number of farms for running a feed grinder, buzz saw, etc. For this purpose a heavy duty, substantial type of stationary engine was largely used, and a later development of uses for these engines included the running of all kinds of stationary farm machinery and the driving of generators to produce electric current for the lighting of the farm buildings. With the necessity which arose for the spraying of fruit trees to combat the ever-increasing parasitic pest of the orchard, the use of the gasoline engine was extended to the driving of spray pumps for this purpose. With the development of the cream separator into a household necessity another task was turned over to the gasoline engine on many farms. In not a few households a small gasoline engine is also used for pumping water to be delivered under pressure at convenient points in the house, and the running of washing machines and similar devices for lightening household tasks.

Perhaps the latest development in the use of gasoline engines on the farm is in providing power for running heavy farm machinery. These engines are now employed to furnish the motive power for operating the mechanism of grain binders and potato diggers, thus lightening the burden on the horses and enabling the accomplishment of much more rapid work in these harvesting operations without increasing the horse power units employed. It is probable that the use of the gasoline engine in this connection will be greatly increased in the not distant future, in fact, so many uses can be found for the small, light-weight gasoline engine on the farm that such an engine, because of its portability will be in demand upon every farm. These uses will include the running of concrete mixers, which can be easily and cheaply constructed and which will do a much better job of mixing this popular farm building material than can possibly be done by hand, to say nothing of the lessened expense. Then there is wood sawing, the running of the light farm machinery, such as corn shellers, feed cutters, root cutters, fanning mills, grindstones, emery wheels, etc., to which a comparatively light type of portable engine is well adapted.

The great variety of uses to which the gasoline engine can profitably be put upon the farm will tend to the adoption of specialized types of engines for these various purposes. On many farms today will be found at least two gasoline engines because of their special adaptability to different kinds of work to be performed.

In purchasing a gasoline engine it is the part of wisdom for any farmer to secure catalogs and descriptions of the various types and kinds of gasoline engines which are now upon the market and make a selection with a view to the adaptability of the engine to the work which he desires it to perform. Where there is a great variety

of this work, an engine should be selected which will be fairly efficient in each class of work. Where an engine is desired for a single kind of work, it should be selected with a view to its adaptability for that particular work. Where the same engine is to be used for a variety of tasks in different locations, its portability as well as its efficiency in operation is a point well worth considering. In any event, an engine made by a reliable manufacturer who will back up the advertised claims of efficiency made for his product should be selected, and every manufacturer who has faith enough in the engines which he is building to seek the farmer's patronage in this manner can safely be counted in that class.

Economy in a purchase of this kind is not necessarily based upon low first cost; a good gasoline engine properly cared for will last for many years, even though used constantly. This kind of efficiency will be secured, however, only where good materials and good workmanship are used in constructing an engine of efficient design, and these factors are cheaply purchased at even a considerable increase in first cost.

A good gasoline engine will perform any work to which it is adapted much cheaper than it can be accomplished by hand or horse power. There is a place for such power on practically every efficiently conducted farm, and where proper forethought is used in the selection of this power equipment, it will be a source of satisfaction and profit to every owner.

Oakland Co. A. R. FARMER.

FARM NOTES.

Treating Seed Oats for Smut.

Please advise how to treat seed oats for smut. SUBSCRIBER.

The formaldehyde treatment is now most generally used in the treatment of seed oats and other grains for smut. This treatment is given by making a solution of one pound of formaldehyde to 40 or 50 gallons of water and sprinkling or spraying the oats until every kernel is thoroughly wet, shoveling them over in the meantime to insure an even distribution of the solution. They should then be covered for a time and finally spread to dry just before drilling.

Automatic and comparatively inexpensive machines are now manufactured for the purpose of treating grain for smut with formaldehyde solution.

Fertilizer for Beans.

I have a field of ten acres which I desire to plant to beans. The soil is sandy and has been run for years. It is now seeded to vetch and rye to be plowed under this spring. Will commercial fertilizer help the beans? What shall I use?

Montcalm Co. S. T. Y.

The vetch and rye might profitably be supplemented by a small application of mineral fertilizer for beans. It is the opinion of many successful bean growers that a little fertilizer aids in the early development of the plants and also in the early ripening of the crop. As both the vetch and the beans are leguminous plants, it would not be advisable to use a fertilizer containing much, if any, nitrogen. A liberal percentage of phosphoric acid would be beneficial on any Michigan soil, and the lighter soils are quite generally deficient in potash. It would be advisable, in the writer's opinion, to get fertilizer containing a liberal percentage of phosphoric acid, and as much potash as can be secured in mixed goods this year, using about 200 pounds per acre, sowing through the drill runs each side of the row, as the seed is easily injured by contact with the fertilizer, particularly in dry weather.

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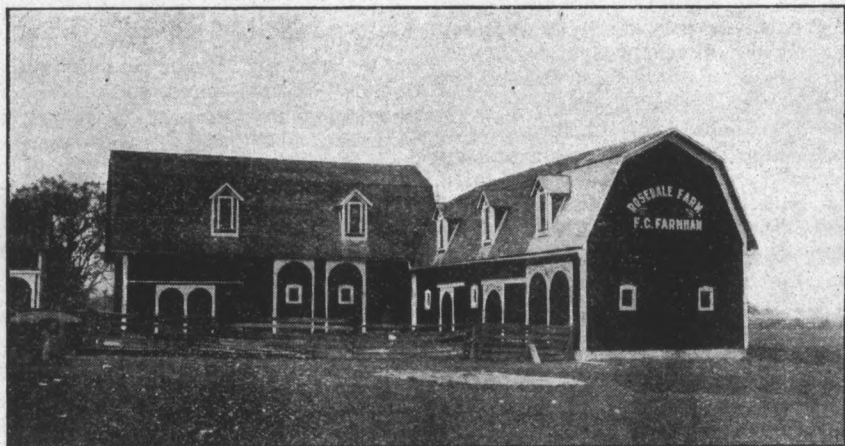
Good Roads in Michigan.

ONE of the features of the recent state good roads' convention, held at Grand Rapids, was a forceful, informing talk by John C. Ketcham, of Barry county, master of the State Grange. Much had been said by previous speakers at this convention on the trunk line bill, with more or less criticism of the attitude, or alleged attitude, of this great organization of farmers toward trunk lines and road construction. He made it plain at once that the Grange stands for good roads, that here is a question compared with which the tariff is a pigmy. Continuing he said: "The Grange also stands for federal aid for good roads, believing that if it is important to spend millions for improvement of harbors it is also worth while to build roads to these harbors. The Grange is opposed to a double award paid by the state for the same specifications as to width and thickness of gravel on trunk line roads. We believe that business should come before pleasure and careful traffic counts have shown that 80 per cent of the traffic on roads is business traffic; further, it is shown that 75 per cent of this is local business. A traffic study also shows that 50 per cent of the pleasure riding is local rather than long distance, hence we believe in local, farm-to-market road building. The trunk line program appears to us like centralization and discrimination rather than democratization of the road construction work as it should be."

soon be building at the rate of 1,000 miles a year. So the time is near when there will be good roads into every market."

The important uses of the split log or plank drag in earth road maintenance were shown by Professor Cox of the University of Michigan. This inexpensive tool is not to be used for grading purposes. It is to be used only when roads are wet and its value is apparent from the fact that 80 per cent of the total road mileage in Michigan will remain earth roads.

Reports made by the county road commissioners from various sections were interesting, with differing opinions and results according to local conditions. W. A. Reynolds, of Mecosta, reported good results from use of slag, while other sections reported poor results due, as Commissioner Rogers pointed out, to differing qualities in the slag itself. The use of lots of water in macadam road building was recommended. Most of the counties have found that a good engineer is one of the first essentials. Commissioner Bryant, of Kalamazoo, stated that macadam must have a surface binder or it will not last over two or three years. He believes that the counties should go slow and not plunge exclusively into cement, brick or any one material until sure of the best for local needs. It was found that nine-foot roads out of Kalamazoo



Farm Barns of F. C. Farnham, of Hillsdale County.

er than democratization of the road construction work as it should be."

Jesse Taylor, president of the Ohio Good Roads Federation, gave a hot good roads talk, urging the four-fold system of road building by federal, state, county and township aid, all working in co-operation. In a graphic way he showed that bad roads leave towns and merchants high and dry and lonely for months each year while much of the trade is carried on over rural routes with the mail order houses.

George Deihl, of the New York highway department, pointed to the millions of dollars spent in good roads work in that state and stated that cars can go anywhere there now, even in the spring. Last year 150,000 foreign cars were attracted to New York by the system of improved roads, so that the investment pays financially.

"Kent county wants better roads of a strictly permanent character," said Alvah Brown, chairman of the county commission. "We think that concrete is about the best material for this section and feel that an eight-foot roadway, with shoulders, is wide enough except close to cities where traffic is dense. Put your extra money on the ends."

State Highway Commissioner Rogers led his hearers up on a mountain, as it were, and gave them a view of the promised land by saying: "We have nearly 70,000 miles of road in Michigan, outside of cities, and 15,000 miles of improved road will reach every market in the state. We have built nearly 3,000 miles already and will

were too narrow and they are now building 14 to 16 foot roads. Valuable details of road organization and construction were given by Engineers Cox and Nielson of the state highway department. The work of the good roads bureau of the national government was described by J. J. Tobin, who pointed to the frequent lack of efficiency and advised "more roads for the money," rather than "more money for the roads."

On closing day, Frank Hamilton, chairman of the Grand Traverse County Commission presided, and the Western Michigan Development Bureau, the West Michigan Pike, the Northeastern Michigan and the Upper Peninsula Development Bureaus and Grand Highway Association had their innings with many valuable addresses.

The West Michigan Pike Association elected Wm. H. Loutit, of Grand Haven, as president and arranged for the third annual tour which starts from St. Joseph, July 12, ending at Mackinaw City, July 16.

The statement made by Mr. Diehl, of Buffalo, Professor Cox, of Ann Arbor, and others, that one-half the money appropriated annually for good roads work is wasted, caused some of us to sit up and think.

Kent Co. ALMOND GRIFFEN.

USE THE KING DRAG NOW.

The early spring is the best time to start the use of the King drag. If road dragging is begun early and repeated after heavy rains the dirt roads will be kept in good condition.

DODGE BROTHERS MOTOR CAR

The two owners of this business are also its actual active superintendents—not by proxy, but in person.

The manufacture of every part and piece used in the car must conform to gauges and measurements determined by them.

They fix the formulas followed in melting, shaping and forging the steel, iron and brass.

From the handling of the raw metals to the final assembly, the departments in charge of every process and operation are responsible to Dodge Brothers themselves.

They have themselves designed many of the wonderful time-saving, labor-saving machines which make this car possible at the price.

Their idea of manufacturing is that the car should be made so good that it will practically sell itself.

No manufacturing detail is so small that it escapes their scrutiny.

No suggestion from dealers or customers is too trivial to receive consideration.

They know exactly how every part should be built—not in theory, but from practical experience in manufacturing the vital parts for more than half a million cars.

They have reduced to a simple science the problem of using the best materials and the best methods money can buy, and still saving time and money at every step.

They are skilled specialists in large production and small economies, who hold the quality of the car at the highest possible level.

That this is a statement of fact is evidenced by the car itself.

You will look in vain for anything cheap or ordinary in the inside or the outside of Dodge Brothers' car. In proof of this:—

The leather is real grain leather. The tufting is deep and soft; the filling, natural curled hair.

The 35 h. p. motor is cast en bloc, with removable head.

The rear axle is of the full-floating type. The bearings are Timken thru-out—with S. R. O. ball bearings in clutch and transmission.

The springs are made of Chrome Vanadium steel, and are self-lubricating.

The wheels are hickory, with demountable rims.

The body is all steel, including frame, with a perfect stream line effect.

The fenders are of a special oval design. The magneto is an Eisemann waterproof.

Everywhere you will find drop forgings and drawn work instead of castings.

The car is giving satisfaction everywhere. Its performances provoke nothing but praise.

You will realize the very first ride you take that it has all the responsiveness, comfort and power you want in any car.

There will be no mistaking the buoyant spring action—the freedom from gear shifting—the fine balance which makes it stick to the road—or the dogged pulling power of the silent motor.

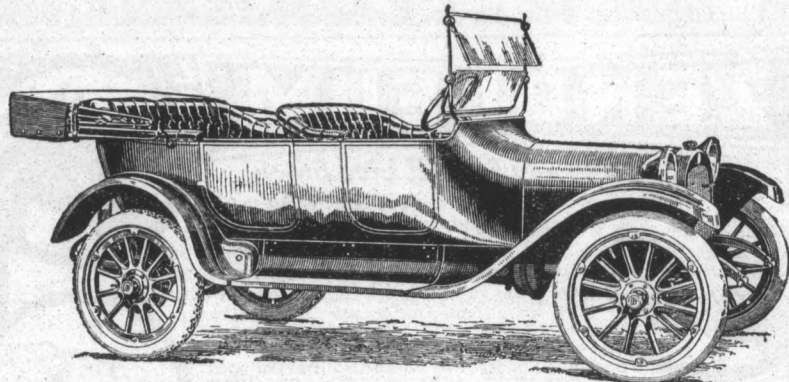
If you care to have it we will be glad to send you our Book B, which gives an unbiased opinion of the mechanical value of the car, written by an engineer not connected with this company.

The wheelbase is 110 inches

The price of the car complete is \$785

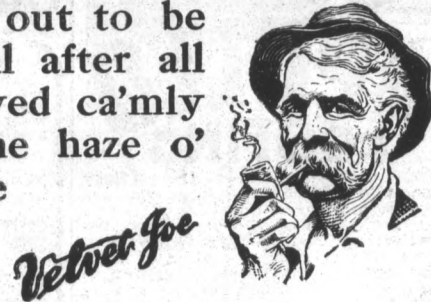
(f. o. b. Detroit)

Canadian price \$1100 (add freight from Detroit)



DODGE BROTHERS, 116 Joseph Campau Ave., DETROIT

MANY a mountain o' trouble
turns out to be
a mole hill after all
when viewed ca'mly
through the haze o'
pipe smoke



All our "imaginary" troubles and most of the real ones find it hard to withstand the cheerful influence of a pipe of VELVET, The Smoothest Smoking Tobacco. 10c tins and 5c metal-lined bags.

Liggett & Myers Tobacco Co



Use NATCO Drain Tile—Last Forever

Farm drainage needs durable tile. Our drain tile are made of best Ohio clay, thoroughly hard burned. Don't have to dig 'em up to be replaced every few years. Write for prices. Sold in carload lots. Also manufacturers of the famous NATCO IMPERISHABLE SILO, Natco Building Tile and Natco Sewer Pipe.

NATIONAL FIRE PROOFING COMPANY, Fulton Building, PITTSBURGH, PA.

Red Wood the Proved Wood

For all kinds of building construction Redwood has proved itself. It is the permanent wood—lasts for generations, does not rot or decay, resists fire and will not shrink or swell.

Redwood railroad ties down twenty-five years show no traces of rot or decay. In the states where Redwood is known it is preferred because it has proved itself. Fence rails erected over fifty-five years ago are still perfectly sound. U. S. Government reports show many instances of Redwood permanence.

In the San Francisco fire Redwood proved its fire-resisting qualities. Buildings shingled and sided with Redwood remained standing while others were destroyed.

Erect a Redwood Silo

When you erect your silo you have the choice of many different materials. Consider every one of them and the answer is Redwood. It's Nature's own wood for Silos.

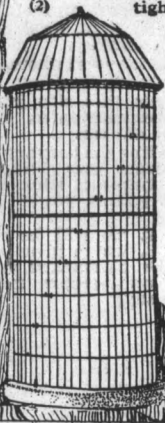
It means permanence—will not rot or decay. Redwood will not shrink or swell—a statement proved by the U. S. Government reports. And this means a tight silo, year in and year out. No continual tightening or loosening of hoops. Silage ferments best next to a non-conductor of heat and cold. Redwood holds the heat and keeps out the cold, resists the moisture from silage fermentation. A Redwood Silo means sweet, clean, palatable silage the year 'round.

REDWOOD. Insist on getting Redwood. Write us for "The Story of the Redwood." Book No. 10. It tells you where and how Redwood can be economically used. Send today.

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C. W. Penoyer, Pres., J. H. Browne, Gen. Sales Mgr.
General Sales Offices, Hobart Building, SAN FRANCISCO
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The Pacific Lumber Co. of Illinois,
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John D. Mershon, President and General Manager
John D. Mershon Lumber Company
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CHICAGO, ILL.



Feeding the Farm Horses.

THE attitude toward the horses kept on the farm has changed greatly during the last twenty years. Formerly the horses were the pets of the whole family. The fathers were ready to favor them at every possible turn and call them by endearing names. When a new colt arrived on the farm in some cases all the members of the family rejoiced and were interested as to the particular marking and leading characteristics. All were anxious to say what the name should be. The girls were listened to with as much consideration as the boys. While the boys considered the colt as theirs to rear and drive, the girls were as anxious to suggest a name that would represent the colt's place in the family, so to speak, as father or the boys.

It was formerly the delight of the farm boys to study the character of the horses by their make-up, and suggest feeds and methods of handling that would enable them to do the best service. The so-called wise sayings of the men in the neighborhood who loved a "hoss," as they termed it, were cherished and talked over. The action and appearance of the horses when being given one kind of feed or another, were noticed, and debated upon on many occasions. While the knowledge of the instructors was empirical and guess work, to a great extent, they believed that they had reached the facts in the case when they came to draw their conclusions. They were conscious that they were right—because they had the results to prove it.

During those days the farm horses were given due consideration and appreciated according to their full worth. The horses that were nimble on foot were used for road and light work, while those that were heavy, bony and slow of movement, were known to be adapted to the heavy work. Construction and adaptation was pretty well understood.

At the present time we are under the reign of unfavorable conditions for the farm horses. They are not the center of interest as they formerly were. Young men have been sent away to be educated and the training has not been along the lines of horse feeding, with but few exceptions, and that with a part of those attending the agricultural colleges. The talk has been transferred from the horses to the automobiles. A majority of the young people of both sexes do not profess any love for, or any interest in, the horses. The exhilarating effects on the individual brought about by being carried along at a high rate of speed has had its intoxicating influence, and to come down to the common pace that can be endured by the horses, is too prosy to be enjoyed, and to again awaken an interest in, and a love for, the horses, is a difficult task.

The result of the change of attention from the horses, is manifested in the lack of condition of the farm horses at the present time. But few of the farmers give the feed, care and attention to their teams that they did a score of years ago. It is not because the horses are not needed to perform the usual work on the farm, but there seems to be a great lack of interest in the horses and they are neglected too often to the sorrow of the owners.

Some Modern Methods.

While the attention of many has been diverted from the study of methods of feeds and feeding, there are some who have been faithful to their first love, and have worked out and solved some important problems in horse feeding.

While the prices for horses have been advancing, the prices for feeds have also been advancing. One of the first considerations in planning a ration for horses is the prices for the

feeds. The old plan of feeding only oats and timothy hay, is so expensive that other feeds, and combination of feeds, must necessarily be considered, in order to reduce the costs of keeping, during both the time when they are not in constant use, and during the busy season.

It is a general rule, well understood, that oats cost more in proportion to their feeding value than corn. Hay, as a rule, is more expensive than ensilage, and yet it is known that ensilage, when fed in small quantities, is a safe feed, and is easily digested. It is near the value of grass as feed, for horses when not at hard work. The value of wheat bran is underestimated as feed for horses. In my own experience I have found a mixture of bran and oats, equal parts, a better feed than oats alone, and it is also cheaper than the oats, as bran is bulky for its weight.

Winter Feeding.

In feeding through the winter when the horses are comparatively idle, it is not necessary to use expensive forage feeds or much grain. They will be better for a change from heavy work and heavy feeds. A variety of forage feeds, like bright straw, some corn stover, or a moderate allowance of ensilage and a light feeding of hay with a small allowance of grain will give more satisfactory results than constantly feeding timothy hay and oats. Persistently feeding a narrow ration of oats and hay, usually brings on a condition known among "hoss doctors" as hide-bound, and it was not uncommon in the past to resort to physicing, bleeding and condition powders to put a horse thus afflicted in a suitable condition to begin the work in the spring. When a variety of feeds are used, constipation and hide-bound are rarely known. If a horse seems predisposed to constipation, an occasional feeding of a small quantity of roots or small potatoes, say two quarts at a time, will correct the difficulty and serve a good purpose. The roots are certainly much cheaper than the drug compounds which are often resorted to for the correction of this condition when it has been brought on by injudicious feeding.

The Summer Ration.

As the time approaches for spring work, the amount of grain should be increased, and the work or exercise gradually increased. The hardening process should not be hurried, if the future welfare of the horse is considered. Changing to a more sustaining ration should not be sudden. The skill of the feeder can be brought into play in compounding a ration that will support and sustain the horses under heavy work and at the same time keep up a healthy condition of the body. Economy, as well as efficiency, should be considered.

At the present time oats are more expensive in proportion to their value as feed than corn. Corn meal is better than corn, but it is too heavy to feed alone. An equal amount in bulk of wheat bran, mixed with the meal, makes a good grain feed that is not only safe to use, but can be relied on to sustain the horses. I will suggest a ration for consideration.

If one has chaffed feed or ensilage, take for each horse weighing around 1,300 pounds, one peck of ensilage, four quarts of the corn meal and bran mixture, and one pint of a mixture made of equal parts of cottonseed meal and oil meal, mix thoroughly, and feed at each feeding when the horses are at heavy work. During resting days feed only half rations of grain.

With such a grain ration the horses will not require as much hay as would be required without the ensilage. Eight pounds of good, clean timothy

ZENOLEUM

A Remedy for All Live Stock

A Standardized coal-tar disinfectant, insecticide, animal dip; always the same.

Use Zenoleum; get more milk from your cows; more pork from your hogs; more wool from your sheep; more eggs from your hens; more work from your horses. In short, make more money in the Live Stock business by using this great preventative.

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Prices: postpaid—8 oz. 25c; qt. 50c; gal. \$1.50. Ask for our free 1915 Live Stock Life Insurance Policy.

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Use Zenoleum Lice Powder for Poultry.



Unload Hay or anything in Half the Time

You can unload your hay quicker than a man can unhitch and hitch a team. Man on the load is master of whole situation. You can clean up a load in three forkfuls if you will let your engine operate an

Ireland Hay Hoist

Entire cost 10¢ a load. One man with an Ireland will do any lifting in half the time of two men and a team. A score of uses on any farm pulling sticks or timbers, elevating ice, drilling, digging or scraping dirt. Operates safely and easily. Special pulley for your engine. Guaranteed every way. Write for details—also about our drag saws, wood saws, saw mills and shingle mills.

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Made from the well known APOLLO BEST BLOOM Galvanized Sheets, in all standard patterns of Formed Roofing and Siding. Fireproof, durable, reasonable in cost—accept no substitute. Sold by weight by leading dealers everywhere. APOLLO BEST BLOOM Galvanized Sheets are also unexcelled for Culverts, Tanks, Silos, Cisterns, Stack Covers, Bins, Etc. Send for free "Better Buildings" booklet. AMERICAN SHEET AND TIN PLATE COMPANY, General Offices: Frick Building, Pittsburgh, Pa.



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REPUBLIC ENTRANCE ARCH AND FENCE Make an Attractive Permanent Improvement



Every community is interested in the proper care of the last resting place of loved ones, and those who have charge of that sacred spot are so of public approval if they protect and adorn it with the Republic Ornamental Entrance Arch and Fence. These arches and fences are economical, because substantial and permanent. Uprights of heavy tubular iron, connected with artistic scroll work of wrought iron securely riveted. All galvanized or painted, as desired. We build arches also for parks, private grounds, country homes, etc. Lettering in upper panel made to order without charge. Our Free Service Department will work out your Cemetery Fence Problems. See your committee now and have your new fence and arch up by Memorial Day. Illustrated Catalog giving various designs—see on request.

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and clover hay in the morning, the same at noon and twelve pounds at night, ought to meet the needs of most horses. The life, wind and capabilities of the horses can be thus better conserved than would be possible if oats and timothy hay were the only feeds used.

I am aware that this plan of feeding the farm horses, is a digression from the rules adopted by farmers in the past, but it is given in good faith, believing that in several ways, better results can be obtained than by the old stereotyped rules. It has the merit of economy, and I believe it will maintain a healthy condition of the animals as far as feed is concerned. Experiments and the experience of those who have used corn and corn meal and wheat bran, have proved that those feeds can be used with safety and profit.

Wayne Co. N. A. CLAPP.

LIVE STOCK NEWS.

At the Nebraska Experiment Station, six lots of cattle were fed upon corn and the following supplements: Lot 1, prairie hay and cold pressed cottonseed cake; lot 2, corn silage and cottonseed cake; lot 3, corn silage and prairie hay; lot 4, a heavy ration of corn silage and alfalfa hay; lot 5, a light ration of corn silage and alfalfa hay; and lot 6, alfalfa hay. The respective daily gains per head were 1.92, 2.01, 1.75, 2.24, 2.04, and 2.29 lbs., and the cost per pound of gain 9.53, 9.21, 9.08, 7.76, 8.33, and 7.21 cents, respectively.

At the Ontario Station, one hundred pounds of meal, when fed to 40-lb. pigs, proved equal to 406.9 lbs. of skim-milk and to from 37.6 to 48.5 lbs. of tankage, depending upon the grade used. The skim-milk was fed in the proportion of about one and one-half pounds to one pound of meal, the tankage one pound to about six pounds of meal.

For several weeks the hog markets of the country have shown less weakness than was the rule previously, and the market has been fluctuating in prices within moderate limits most of the time. From appearances it would appear that the packers are disposed to hold values from further breaks in order to discourage stock feeders from marketing pigs and young hogs prematurely. Still the movement of hogs marketward is on a much larger scale than a year ago, as was the case during the winter packing period, and at last advices western packing points had slaughtered since March 1, 1,297,000 hogs, comparing with 870,000 for the corresponding time last year. Recent sales of hogs were at about \$2 per 100 pounds below the prices current a year ago, while corn sold about seven cents a bushel higher than then. Packers have no cause to complain, as they bought hogs during the winter packing season much of the time for \$6.50@6.85 per 100 lbs., and profits made on provisions have been and still are substantial, notwithstanding the marked decline from prices of a year ago.

Cattlemen have become a good deal discouraged over the long time required for stamping out the foot-and-mouth disease and the consequent curtailment of the market movement resulting from the numerous quarantines. Many stockmen owning cattle approaching maturity are in doubt as to whether it is best to let the cattle go or to hold on longer, hoping for better market conditions after all quarantines are called off. While it is impossible to know what the future may bring forth, probably the best course to follow is to let the cattle come to market whenever they are fat enough, for feeding cattle already matured is expensive and does not pay as a rule. Where the cattle are doing well on feed and the owner has sufficient corn and other feeds, the proper thing to do is to finish them off, so that they will grade as good, for in the absence of any feeder outlet in the Chicago market, killers insist upon buying thin steers at a big discount from the prices paid for cattle that are at all fat. Naturally, prices for all sorts of cattle are far lower than a year ago, with the commoner steers selling especially lower, but perhaps stockmen owning cattle may derive some consolation by turning backward and recalling what at this time in 1908 steers offered on the Chicago market were selling at an extreme range of \$4.25@6.65.

A demand for breeders is reported in various quarters by men handling high-class, draft and other horses. The enormous foreign demand for horses to supply the armies of the countries at war is greatly lowering the horse population of the United States.

John Deere Implements



John Deere Two-Way Plow

The Sulky with the Steel Frame and Patent Auto Foot Frame Shift

Slight foot pressure swings frame and accurately locates plow bottom. Automatic shifting hitch—clevis cannot fail to move to position.

Automatic horse lift. Operator's foot releases latch. Pull of team raises bottom. Hand lever also provided.

For hillsides or uneven fields it throws dirt all one way.

Write for John Deere Two-Way Book, handsomely illustrated in colors—and secure full information free.



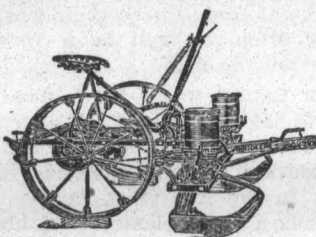
John Deere Corn Planters

John Deere No. 999. The full variable, accurate drop planter. Plants two, three or four kernels as desired—all you do to change number in the hill is to move foot lever. Drilling distances varied and changed from hilling to drilling made just as easily.

Accurate—because it has the "Oblique Selection" or natural drop,—an improvement over previous methods, kernels do not have to be tipped on edge to enter the cells. Surface of hopper bottom and openings to seed cells are oblique, or sloping, and the kernels naturally move toward and fill the cells rapidly.

Many Improvements Make it the Most Accurate Planter

All corn plates for this planter have 16 cells. Therefore, the same drilling distances are obtained with one plate as can be secured on other planters that use 8, 12 and 16 cell plates, and without change of plates.



John Deere No. 999 Planter

Write us for free booklet "More and Better Corn." It tells how to select and test your seed corn, how to prepare the seed bed and the gain in dollars and cents by using an accurate corn planter.

Easily detachable runners enable you to use other furrow openers, if ever desired.

Simplified check heads, disc marker without rope, and underhung reel are also improvements you will appreciate. Fertilizer attachment can also be furnished for this planter.



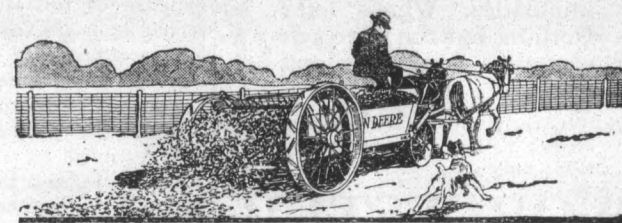
John Deere Syracuse Chilled Plows

The Chilled Plows with Perfect Fitting Parts

Perfect fitting shares—proper suction and penetration.

Parts are made right in the factory at the start—over forty years of careful study have been devoted to the manufacture of these plows by the Syracuse Chilled Plow Company.

Write us for information on Syracuse Combination Plows Nos. 61 and 62. These are splendid plows for use in sandy loam fairly free from grit, or in sticky soils where good cleaning qualities are desired. Work well in tame sod or old ground. There is a Syracuse Chilled Plow made for your soil.



John Deere Spreader

The Spreader with the Beater on the Axle

The beater—the business part of a spreader—and all its driving parts, is mounted on the rear axle. This is a patented feature. You cannot get it on any other spreader. Here is what the beater on the axle means to you:

It means: No clutches to give trouble—all taken off.

It means: No chains to break or get out of line—all thrown away.

It means: Less than half the parts heretofore used on the simplest spreader—some two hundred parts are done away with.

It means: Manure is not thrown on the axle—straw and trash cannot wind around it.

It means: You get big drive wheels and a low down spreader, without stub axles—that means traction and strength.

It means: Drive wheels back out of way when loading—you see where you place each forkful.

The John Deere Only Hip High

The top of the box is only as high as your hips. The John Deere Spreader is easy to load. You see where you place each forkful.

To start spreading, you pull back the lever at the driver's right—that's all. A boy can operate it.

Call on nearest John Deere dealer and see the spreader with the beater on the axle. Write for "Farm Manures and Fertilizers", a valuable text book free.

Better Farm Implements and How To Use Them



Better Farm Implements and How to Use Them

FREE BOOK Illustrates and describes the most complete line of farm implements. Tells how to adjust and use farm tools under varying conditions. It is a practical encyclopedia of farm implements worth dollars to you—a 168 page text book.

It tells about John Deere Implements: Steel plows, cultivators and harrows; corn planters, disc harrows and beet tools; farm and mountain

wagons; manure spreaders; portable and stationary grain elevators and corn shellers; hay loaders, stackers, sweep rakes, mowers and side-delivery rakes, motor hay presses; grain drills and seeders; full line of chilled plows; grain binders and corn binders; hit-and-miss and volume-governing gasoline engines.

To get this book, free, state what special implements you are interested in and ask for the book as Package No. X-5.

John Deere, Publicity Department, Moline, Illinois



THE TRADE MARK OF QUALITY MADE FAMOUS BY GOOD IMPLEMENTS

Easier for the Shearer and better for the Sheep



Wool Means Money!

Why not get all there is from your sheep? You can easily net from 15 to 20 per cent more on every sheep you shear with a Stewart No. 9 Shearing Machine. Don't labor with hand shears, in the old, hard, sweaty way. Don't have aching, swollen wrists. Don't scar and disfigure your sheep with uneven shearing and spoil the wool with second cuts. Take off the fleece smoothly and quickly in one unbroken blanket with a

Stewart No. 9 Shearing Machine

It gets a length and quality of wool that will bring the highest price. The Stewart runs so easily a child can turn the handle while you shear. Extra profits soon pay for it. It's the most perfect hand operated shearing machine ever devised. Has ball bearings in every part where friction or wear occurs. Has a ball bearing shearing head of latest improved Stewart pattern. Price complete, including 4 combs and 4 cutters of the celebrated Stewart pattern, only \$11.50.

Write for FREE catalogue showing most complete line of Sheep Shearing and Horse Clipping Machines. CHICAGO FLEXIBLE SHAFT CO. 115 N. LaSalle St. CHICAGO, ILL.



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So writes a farmer and his wife who have taken The Breeder's Gazette for twelve years. Thousands of farmers who have made money attribute a large part of their success to The Breeder's Gazette. It is the big, well-printed and illustrated farm weekly that tells how other successful farmers are making money. No matter what other papers you are receiving, you should have The Breeder's Gazette. Ask for a free copy.

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Booklet Free \$3 Package guaranteed to give satisfaction or money back. \$1 Package sufficient for ordinary cases. MINERAL HEAVE REMEDY CO. 463 Fourth Ave., Pittsburgh, Pa.



Grit —fine in Man but no good in Butter

As your customers aren't anxious to spread gritty butter on their bread don't use common gritty salt in your butter making.

Worcester Salt is free from grit, salt dust and all impurities. What's left? Nothing but the pure salt crystals—fine, even and clean.

Give your butter every chance to bring top prices by using only

WORCESTER SALT

The Salt with the Savor

For farm and dairy use Worcester Salt is put up in 14 pound muslin bags and in 28 and 56 pound Irish linen bags. Smaller sizes for table use. Good grocers everywhere sell Worcester Salt. Get a bag.

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Dairying in Northern Michigan.

It is always interesting to watch the development of a new country, but it is especially so to note the progress of agriculture in the Upper Peninsula of Michigan.

It is eleven years since the writer first crossed the straits and saw for the first time, this part of our growing state.

He will not soon forget his impressions of the live stock situation as it appeared to him at that time.

Almost the only business of any importance, that pertained to agriculture, was cutting hay and selling it wherever and whenever the price was best. Timothy hay controlled the situation. I recall that one real estate man told me that the farmers' institute lecturers had been to their town and told the people to sow clover, that they had sown it, and now they could not get rid of it. He was much disgusted with the fellows, who at the expense of the state, had gotten the farmers of his locality into such serious trouble.

Great Advancement in Agriculture.

The writer is now on his tenth trip through the peninsula, and though he has resolved to write about the Holstein cattle, and to stick religiously to his text, he can hardly help telling of the wonderful advance in all lines of agriculture that is so apparent on every hand.

Nature has seemed to fit this part of Michigan especially for the home of the dairy cow. There are all breeds here already, but among the dairy breeds the Holsteins seem to have the preference if numbers are to be taken as an indication.

At the hospital at Newberry is one of the best herds in the north. In comparatively a few years this herd has grown from a small beginning to a very valuable acquisition. Here are some really good cows, and their sires are being distributed to many parts of the north, to be used in improving the native animals in the hands of the small farmers who are now improving the land and making new and comfortable homes all over this part of the state.

At the experiment station at Chatham, is a splendid beginning in the work of Holstein breeding. The state has purchased several fine heifers whose dams are in "The A. R. O. Class" and the sire at the head of this herd is fully up to the requirements.

Use Pedigreed Bulls.

The farmers in the vicinity are encouraged to use this bull in their own herds, and one can easily see what this must mean to them and to the community generally in just a few years. Some of the county farms have been made object lessons in the way of better breeding of live stock. Pure-bred bulls have been secured and their calves from registered cows have been distributed to become the sires of better dairy cattle on the farms of the pioneers of the counties adopting this plan. In addition to this, there are private breeders of pure-bred Holstein cattle whose stock would be hard to excel anywhere in the world. It is indeed wonderful to know that this part of our state which, until recently, was so little known by those of us below the straits, and not at all as an agricultural district, is fast becoming the home of great and profitable herds of pure-bred cattle.

What I am saying here must not be taken as reflecting any discredit upon any other dairy breed. Indeed, there are here some of the best Jerseys to be found anywhere, and the old notion that the Jersey cow is too tender for a cold climate should be abandoned in the light of the record of Eminent Bess, who, when she made her marvelous record within a few miles of the shore of Lake Superior, was the largest producing Jersey cow in the

world. Yes, the Jersey cow does admirably here. The man who wishes to practice intensive dairying will find her the same reliable companion on his way to financial success, as she has ever proven in all climes where dairying has become a business. The Guernsey, too, has made good here, and the reader must not think, if he is partial to this breed, that the experience of these people has taken aught from the honors which these excellent cattle have won.

Excellent Pastures.

There are, however, special reasons for the popularity of the Holstein in this section—here is the region of "Green Pastures" as the summer through. Nothing like it in the country below the straits. As sweet and tender grass as cattle ever ate, green from the time the snow goes off in April until it comes again in November. And the amount of grass produced on the better soils is far beyond the usual growth in the regions further south. Young cattle will make splendid gains all summer here, and cows will give milk in full flow until September without any grain. Of course, this is not true in the case of the lighter soils. There the pasture is not as good and does not hold out as long.

The Dairy Business Prospering.

This is also a country of large areas and as yet it is not the home of "intensive farmers." For these reasons it is but natural that men here should want to grow young cattle for beef purposes as well as to keep cows for milk.

True, much yet remains to be done. Many of the people here are like those of other localities in that they do not yet appreciate the necessity of breeding better stock. But this country is in the making. In every county are strong men perhaps, but few of them in some counties, but they are here, and they are putting forth their energy in behalf of modern methods. Their work is apparent. Slowly, perhaps, but surely, the rank and file of the people will come to see their way, and upper Michigan will be a very bright spot on the map.

Live Stock Expert Doing Much Good.

The state has kept Mr. W. F. Raven here for some time to assist the farmers in adopting better methods in breeding. In the live stock business Mr. Raven is a "past master" and his work is bearing fruit already in many counties.

Among the agencies that are making for the development of this region, we must not fail to mention the Michigan Farmer. It is truly inspiring to see how fast The Farmer is making its way to the homes of these people. On this trip, we have the company of one of the men sent by the publishers of this paper to take subscriptions, and it is a wonder to see the people subscribe so willingly.

The people want the paper. They realize with us, that from the southern boundary to Lake Superior, Michigan is all one state. Her timber is soon to be a thing of the past, but her agriculture and her mining will remain, together with her ever increasing manufactures, to keep her well to the front among her sister states.

Live Stock Industry a Great Factor in Development.

Some day Michigan will be a greater state than ever she was in the past. Agriculture, the surest and safest foundation on which a nation can stand, will underlie her entire structure. This will mean greater wealth, more of the kinds of business that help society, larger and better schools, a larger number of happy homes, and to these important results the live stock industry of the Upper Peninsula will contribute its full share.

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A KICKING COW.

I have a cow whose first calf was born January 22. We have used the strap method since January 29 in order to keep her from kicking forward and occasionally backward. We put the strap around the body close up to the udder and draw it very tight. Are we not injuring the cow? Do you know of a better way to control her? If you recommend tying hind foot back will you kindly give full details of how to do it? I used it once but have forgotten how I fixed the rope so as to quickly loosen it if necessary. Macomb Co. J. I. C.

Buckling a strap or tying a rope around body tight in front of udder will not injure the cow. If you tie foot, have a short strap to buckle around ankle with ring on strap to which attach rope. Have ring and staple behind the cow and tie with bow knot so it can be pulled out quickly.

Remember that the udder of a heifer is quite tender and her teats may be chapped, especially as she was outdoors in these dry winds. Apply linseed oil to her udder and teats and rub well with the hands, both before and after milking. Wash the udder before applying the oil, with warm water and dry it with a clean cloth. Vaseline will do if you haven't the linseed oil. Zinc salve is also good. It hurts the heifer when you milk her or she would not kick. Perhaps the finger nails are too long, or there are hard calluses on your hands. Remove the cause of pain and sympathize with the heifer and you can do away with tying her when you milk, in a short time.

PAINTING A SILO ON THE INSIDE.

Do you advise painting a silo inside with hot coal tar? If so, should the painting be done when I am taking the silage out or should I wait until summer when it is empty? Sanilac Co. J. R. S.

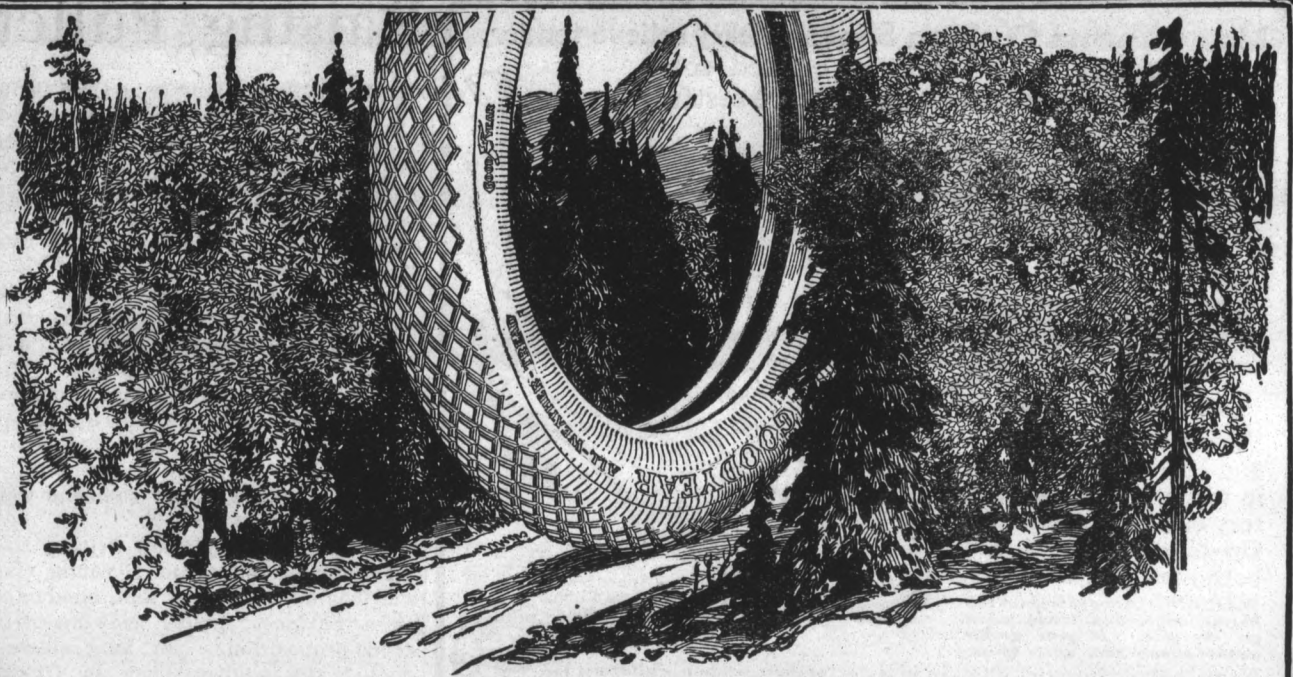
It is not necessary to paint a silo on the inside. It has been recommended by some, but only practiced by a few. Not enough air will get through the wood to cause any appreciable loss in the silage, and as to preserving the wood it does not seem to be necessary, for a stave silo will last for years, in fact, no one knows how long without being painted.

If the silo is to be painted it is best to paint it before it is ever used, and it is not necessary to use hot coal tar. Coal tar that has been thinned with gasoline is quite as good and much more pleasant to apply.

A cement silo would be benefited more by an application of coal tar than a wooden one.

FOOD VALUE OF BEET PULP.

In a test for five weeks conducted by the Massachusetts Station, six cows were fed by the reversal method on a ration of hay, bran and cottonseed meal to which was added 4.3 lbs. of either corn meal or of beet pulp daily. The herd lost in live weight 33 lbs. on the corn meal ration and gained 37 lbs. on the beet pulp ration. There was no substantial variation in the yield or average composition of the milk. It required for the corn meal ration 112 lbs. of dry matter to produce 100 lbs. of milk and 20.51 lbs. to produce one pound of milk fat; for the beet pulp ration 110.72 pounds and 20.54 pounds respectively. In a similar experiment to the above, molasses, beet pulp and corn meal were compared. The amounts of digestible nutrients in each ration were approximately the same. The herd gains were similar. There was no wide variation in milk yields and only a slight advantage in the production of milk-fat with the corn meal ration. It required for the corn meal ration 104.4 lbs. of dry matter to produce 100 lbs. of milk, and 18.72 lbs. to produce one pound of fat; for the molasses beet pulp ration 108.1 and 19.87 lbs., respectively.



The Maximum Tire

Yet Price Reductions for Two Years Total 45%

Since the beginning there have been two policies on tires. One has been to skimp tires to make the price attractive. The other has been to secure lowest cost per mile.

Goodyear started many years ago to build the best tire possible. We went to extremes. We created a department of experts—costing \$100,000 yearly—just to find ways to build tires better.

We created the Fortified Tire.

That means a tire protected against trouble in five exclusive ways.

These features were costly. For a long time, these Fortified Tires cost users one-fifth more than other standard tires.

Jumped to the Top

Yet Goodyear tires, despite the price, became the largest-selling tires in world. They have remained so ever since.

Their success is amazing. Last year we sold about one Goodyear tire for every car in use. Yet we have a hundred rivals.

Then came price reductions.

Multiplied output brought down our cost. Rubber and fabric also

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Tires Never Skimped

Yet never in one item have we skimmed these tires. Every year something has been added. And we still are spending \$100,000 yearly to find ways to better them.

They still excel in these ways:

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We form in each tire hundreds of large rubber rivets to combat loose treads. In each tire base we vulcanize 126 braided piano wires to make the tires secure.

Our anti-skid tread—the All-Weather—is made double-thick and tough. That combats wear and puncture. The grips are sharp and resistless.

You need these protections, and you ought to get them. They mean less trouble, more mileage, less expense. Men all around you are enjoying these savings. Ask them what they mean.

This quality tire at today's quantity price is the greatest value in Tiredom. Any dealer will supply you.

GOOD YEAR
AKRON, OHIO

Fortified Tires

Fortified Against

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- Blowouts—by our "On-Air" cure.
- Loose Treads—by many rubber rivets.
- Insecurity—by 126 braided piano wires.
- Punctures and Skidding—by our double-thick All-Weather tread.

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WHITE LEGHORN CHICKS—We can fill some more orders for April, May and June delivery. Order now. April \$12 per 100. May and June \$10. Eggs for hatching March and April \$6 per 100. May and June \$5. Satisfaction guaranteed. **H. B. BRACKNEY & SON, Clayton, Michigan.**

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Raising Pullets For Market.

THERE are many who find it a good business to raise pure-bred and high-bred cows for market, but I think few have thought seriously about raising pullets for market. Most people who keep fens will hardly sell pullets at any price, only cockerels and old hens, thinking even if they are not needed to keep up the flock no one would want to pay the real value of a pure-bred, well-grown pullet just ready to lay in winter. The fact is that there are a large number of people who have neither the equipment, time, or knowledge to grow them economically and successfully, and would prefer to pay someone well for doing it.

Pullets Bring Good Prices.

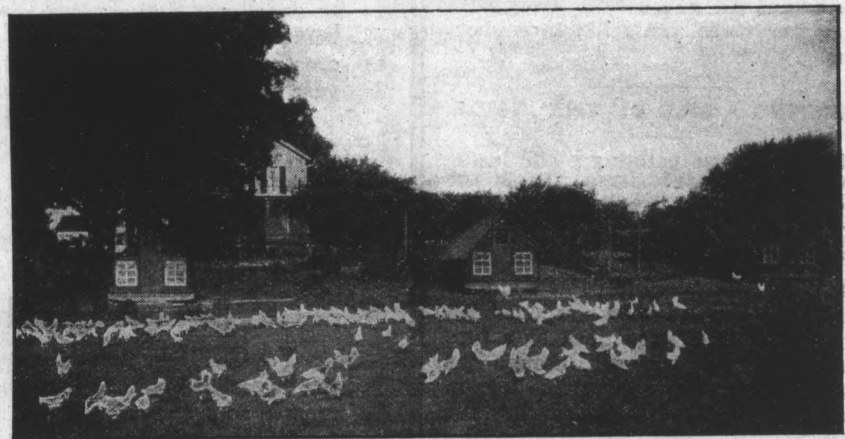
I want to tell about a young man who has demonstrated that, conducted as a business, pullet growing is a good proposition. Not long since I visited the poultry farm in Otsego county, New York, owned by Charles Ingoldsby. Mr. Ingoldsby, Sr., is very successful in operating a mammoth hatcher of 7,000 egg capacity, and a flock of 600 White Leghorn hens. His son, wishing a separate business, began to raise pullets to sell. He found he could sell the pure-bred pullets, ready to lay November 1, for \$1.00 to \$1.25 to farmers and others. Having all his father's equipment for hatch-

turing successfully. At the price Mr. Ingoldsby gets these would be worth \$375. A run of one-half an acre of grass land where the colony houses are located, and possibly a fence to inclose it, beside the interest on the money invested in an upkeep of equipment, feed for chicks, and small items as kerosene for incubators, and gasoline for colony houses, cover nearly all the expenses.

It is possible to pay a large part of this expense, if the cockerels are handled in a way to get the most out of them, thus making the amount received from the pullets mostly all profit. This is done by separating them from the pullets as soon as they can be distinguished, and feeding them so as to force growth, and fatten quickly, then selling for fancy prices direct to wealthy people in large villages or in cities when they weigh from one and a half to two pounds. If sold as dressed fowls they are easily shipped by parcel post.

Alfalfa a Good Feed.

It is important that the pullets should have a large grass run to keep them economically, and develop vitality. I can testify that there is nothing so good for them as alfalfa. The better way to feed it green is to cut it in short lengths with a clover cutter



Colony Houses and an Incubator, the Only Equipment Necessary for Raising Pullets for the Market.

ing and brooding, and the advantage of a poultry course at Cornell University, he went to work to learn the cost of raising a pullet to six months when best equipment and scientific feeding and care were given. He found he could raise a pullet so as to give him a good margin of profit close to 60 cents, I think. Last year he enlarged his business which netted \$600 for the summer's work.

Having spent a day with the Ingoldsbys, investigating their plant, I will try to describe more in detail the details of scientific chicken growing. First, much less money is invested in an equipment for raising pullets than for laying hens. All that is needed are incubators, which can be placed in the cellar of a house, and colony houses. Mr. Ingoldsby uses the gasoline Cornell colony house, and the chicks are kept in it until grown and ready to sell, or put in the house for layers. He formerly used incubators before installing his mammoth hatcher. Two incubators of about 300 egg capacity is needed for one colony house for 300 chicks, figuring on 50 per cent hatch- es. The cost of the material for the Cornell colony house 8x9 for about 300 chicks, is close to \$38.

Inexpensive Equipment.

For full information about their construction and management write to the poultry department of Cornell University, Ithaca, New York. The cost of the two incubators of standard make, and the colony house will not be far from \$100. One hatch with this equipment should produce 150 pullets, as a minimum, and probably 200, another in April would make the total from 300 to 400. Three hundred pullets will probably be grown to ma-

and put it in slatted boxes in the yards. Alfalfa will not thrive well when pastured. I think nearly half the grain ration could be left out with plenty of alfalfa. Sometimes, my hens, where eating alfalfa, have left the grain almost untouched, and still lay more eggs than when on the best grain ration.

New York. **W. H. JENKINS.**

HOW TO FEED THE INCUBATOR CHICKS.

I have experimented for a number of years with the best way to feed incubator chickens. My greatest mistake, when I first started, was feeding too much. Don't be afraid they will starve to death, for they do much better on a little feed. During my first experience with incubator chicks I lost nearly all of them, and afterward I found out the loss was caused by over-feeding. My second experience was with 22 chickens, and I raised every one. Only 22 out of 50 eggs hatched. I fed hard boiled eggs for the first week. One-half an egg for the 22 per meal was all the feed they had the first week. The second week I still fed egg but more of it, and I also fed the little scraps of beefsteak which was left from dinner; cut the steak very fine, or grind it. Be sure to keep plenty of fresh water before them. I make a fountain by turning a tin can upside down in a pail lid or saucer. This plan keeps the chicks from running through the water and making it filthy. Do not feed incubator chickens until they are 36 hours old. Feeding too soon is one of the mistakes nearly all amateurs make.

Alcona Co. **MRS. F. TIMMONS.**

FARM-GROWN FEEDS FOR THE HENS.

A considerable part of the food we are giving our hens this winter was grown on the farm. Some of this material is not reckoned of much value in dollars and cents, but it serves the purpose and also adds somewhat to our own profits from the birds. The rations recommended for laying hens, should we follow them out literally and purchase all the feed, would make our hens cost us almost as much as we could hope to get from them. We find it is not necessary to purchase all these things and seemingly the birds do just as well.

In the first place we raise all the green feed the flock needs. A patch of rye, planted near the hen runs, so the birds can have a feed whenever the snow is not too deep, helps out materially. Late-cut clover takes the place of costly alfalfa, which as yet we have not raised. Unthreshed oats and barley straw are thrown in the pens and the hens do the rest. Corn was raised on the farm. We purchase wheat and bran, also some oats. Buckwheat is grown at home and a row of Russian sunflowers were planted last year to give a variety to the diet. For the dry mash we have used corn, ground cobs and all, bran and ground oats. The bran and oats are purchased.

Home-grown Green Feeds.

As to green feed, we store a goodly quantity of cabbage, mangels, beets, carrots, turnips, kohlrabi and potatoes. Cabbage, mangels and beets are fed raw. Other vegetables are cooked and fed as a moist mash. This latter is never fed on excessively cold days. Such roots are largely composed of water, anyway, and make heavy demands upon the body heat. Wet mashes are always given in the morning. For the coldest weather, we prefer to give the birds a bunch of clover hay to peck at. Also, sometimes, we give sprouted oats. These contain less water and do not draw on the natural heat, as heavier greens do. Pumpkins and squashes are frequently fed, boiled and mixed with bran and corn meal. In a mash of this kind a minimum quantity of water is used to mix the mash. Such feeds as these are principally valuable for the variety they add to the ration and for their bowel-regulating and appetite-building qualities.

A Variety of Feeds.

Last fall we fed out quite a quantity of watermelons for which there was no market. One or two were thrown in each pen in the morning and the birds fell to and cleaned them up with right good will. The melons were fully ripe when fed and everything but the rind was eaten. Ripe cucumbers were fed in the same way, but pumpkins and squashes are not relished raw. Chopped apples, if of mild flavor, are eaten, but we feed most of the apples boiled and mixed in a mash. Using the farm-grown feed, much of which is of little value, materially lessens the cost of maintaining the flock.

So far as we can see, these rations produce just as many eggs as more costly feeds, therefore we credit ourselves with a larger profit on the balance sheets.

N. H. CHAS. H. CHESLEY.

POULTRY NOTES.

Screenings, the small grains of wheat, if not moldy or musty, make as good poultry food as the large grains, and can often be purchased at one-half the cost of good wheat.

The best disinfectants for a poultry house are pure air and sunshine.

The meat food supplied poultry should always be sweet and fresh. Animal food that smells badly should be used as fertilizer and not as poultry food.

T. Z. RICHEY.

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Tells why chicks die

E. J. Reefer, the poultry expert of 743 Main St., Kansas City, Mo., is giving away free a valuable book entitled "White Diarrhoea and How to Cure It." This book contains scientific facts on white diarrhoea and tells how to prepare a simple home solution that cures this terrible disease over night and actually raises 98 per cent of every hatch. All poultry raisers should certainly write Mr. Reefer for one of these valuable FREE books.

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DETROIT, APRIL 3, 1915.

CURRENT COMMENT.

The farm reading table should be well supplied with wholesome literature throughout the year. While the summer season is the busy season on the farm, yet on the well conducted farm every member of the family will have some time to read every day, and good literature should be at hand for their enjoyment at such times.

On Page 427 of this issue appears an offer of five high-class magazines for four months and the Michigan Farmer one year, all for the small sum of \$1.16, of which \$1.00 only need be remitted at the time of ordering. This special combination price is made for the benefit of our subscribers only. Renewals as well as new subscriptions can be accepted in this combination, and if any subscriber whose time has not yet expired desires to secure this valuable combination at this special bargain price his subscription to the Michigan Farmer will be advanced one year beyond the date to which it is already paid.

Tell your neighbors about this offer, as it will enable them to supply the reading table with a variety of high-class magazines at a price never before offered them.

Our special article for **Farm Life**, this week touches briefly upon an important phase of farm life. A man who has for many years been a close student of American agriculture was heard to remark recently that there was too much talk about farming as a business and agriculture as a profession, that to his mind farming was a life rather than a business or a profession. There is much of truth in this idea which should appeal strongly to every progressive American farmer. Farming is, of course, a business; but it is what might properly be termed a family business, and a business in which, to a greater extent than is true of any other occupation, the pleasures of life must be counted as a factor in the business itself.

Too many farmers and farm families are not getting the essential advantages which would make life better worth the living to them; on too many farms hard work is the order of the day, and too little thought is given to the matter of labor saving conveniences, particularly in the farm home. There has been far less progress in this direction than in the equipment of the farm itself with labor-saving devices for the accomplishment of field work. Quite probably the outside equipment has come first for the reason that it has seemed more important to the business itself, but the

equipment of the house with labor-saving devices should not be neglected for a moment longer than is absolutely necessary upon any farm.

Elimination of unproductive labor is one of the greatest problems in farm management, and it is one of the common failures among even progressive farmers. Thought and study devoted to an analysis of this factor of farm management would be time well employed for every Michigan Farmer reader. It is true that a farm business cannot be systematized to the extent which is possible with a manufacturing business, where every man can be employed at specialized work continuously, but a great deal more system, especially in the matter of saving unproductive labor, could be applied on practically every farm with exceedingly profitable results.

Farm surveys which have been conducted in various parts of the country, including Michigan, indicate in practically every case that the farm labor income is low, too low to make farming seem a really attractive business proposition; yet in every such survey there is a very wide variation in this item of farm labor income, running up in some cases to a very liberal sum indeed, depending largely upon the ability of the farm owner or operator in this department of farm management.

Right now, at the beginning of an active farming campaign, is an excellent time to make and carry out more effective plans for the elimination of unproductive labor and a corresponding increase in farm profits or labor income. An additional and very desirable effect of such a course will be the possibility of devoting more time to pleasure and recreation by every member of the farm family during the strenuous season's campaign which is before us.

Reference has previously been made in these columns to the efforts being made to organize the bean growers of the state with a view to a better solution of the marketing problem.

Mr. McBride, who has represented the State Board of Agriculture as field agent in marketing, conceived an idea relating to the relief of the present congested condition of the potato market while engaged in the work on beans.

This idea was the employment of the machinery in the Michigan beet factories for the drying of chipped potatoes which might be sold in foreign markets, thus taking the surplus product off the market and helping to maintain the price of this staple foodstuff at a point which would cover the cost of production. A resolution was introduced in the Legislature by Representative Follet authorizing the Secretary of the Public Domain Commission to investigate this question and report upon its possibilities. Secretary Carton has secured a large amount of information upon this topic and will make a report at an early date. The outcome is yet in doubt, but this movement to bring needed relief to a low market illustrates the beneficial possibilities of a market bureau to do similar work in Michigan through a permanent office.

There is much to be learned about the proper marketing of farm products, and most of this will probably be learned through adverse conditions. Necessity is the great mother of invention in every line of human activity, but it is most helpful to have the machinery at hand by which new ideas can be carried into effect when they are developed by this means, since quick action is at such times most desirable.

The public will doubtless await with interest the report which will be forthcoming as a result of this inquiry, whether anything more practical comes from the idea or not. The in-

vestigation itself will broaden the knowledge of Michigan people relating to the possibilities of their agriculture, and from this standpoint will be well worth the getting, with the added possibility that immediate results may also become apparent.

Public sentiment is now about ready for the reversal of the old adage, "In time of peace, prepare for war." With the greatest of world wars in progress there is now an inclination on the part of many public spirited citizens to inaugurate a movement for international peace, once present complications are settled.

The various plans which have been advanced with a view toward bringing about international peace have included: First, disarmament of nations; second, an international court of arbitration for the settlement of international disputes; third, an international police and naval armament of sufficient force and power to enforce the decisions of such an international court; fourth, an end of making preparations for war between nations.

Of these ideas advanced to date, practically all agree upon the necessity of an international court of arbitration in any comprehensive scheme looking toward the establishment and maintenance of world peace. The disarmament of nations is also desirable as an insurance of world peace, while the maintenance of an international police force sufficient to compel the acceptance of arbitration decrees in all cases of international disputes is the most generally favored of practical ideas upon this subject. The last mentioned, but perhaps not least valuable method of maintaining the world peace, the putting an end to preparations of war between countries, gives promise of good results. The best method of securing this desirable condition which has so far been advanced would appear to be the placing of a tariff penalty on any country which insisted on warlike preparations against any other country. As an illustration, where complaint made against any country for making such preparations by any other country was substantiated, an international provision by which the tariff on goods from that country or carried by ships of that country imported into other countries would be increased by an additional 10 per cent would automatically go into effect. The natural effect would be a forcible demand for peace on the part of the people of the offending country, since no nation could long stand such a discrimination in their commercial relations with other countries. It is held by some that the United States alone could enforce peace upon the rest of the world by a declaration of such a policy at the present time. In any event, this question of world peace is one which will hold a large degree of public interest from this time on until its successful solution shall have been worked out.

HAPPENINGS OF THE WEEK.

Foreign.

The European War.—Since the advance made by the Allied forces at Neuve Chapelle in northern France a fortnight ago, and the capture of Przemyśl in Western Galicia by the Russians, there has been little of seeming importance reported. The Germans are holding the Russians at bay at the north and before Warsaw. In the Carpathian district Russian advances are noted and Austria fears an early invasion of the plains of Hungary. At the south no activity is observed, Serbia being disease stricken and Austria fears to take the offensive because of the threatening attitude of Italy who as yet has not taken up arms. The western battle line has changed but little; the Allied forces have pushed forward at a few points in northern France and the French forces are in possession of new territory in Alsace-Lorraine. Otherwise former lines remain intact. The naval attack on the Dardanelles continues and the Allied fleet is making slow

progress. The defense is stubborn and there is general belief that the co-operation of land forces will be necessary to open the straits. The Russian Black Sea fleet opened an attack on the Bosphorus forts guarding Constantinople, Sunday.

The German cruiser Prinz Eitel Friedrich will either interne at, or leave Newport News this week. She has been making repairs and her time limit will expire soon. British cruisers are lying outside the harbor and in order to prevent an attack on the German vessel within the three mile limit if her captain chooses to go to sea again, she will be accompanied by the U. S. battleship Alabama.

The Mexican situation shows no improvement. The situation at Mexico City is still acute. Villa's troops are now endeavoring to take the city of Matamoros opposite Brownsville, Texas, from Carranza's forces. Artillery will be needed and there is fear that Americans on this side of the boundary line will be endangered.

The militarists, headed by Count Okemo, won in the recent Japanese elections. Out of 387 seats in the new house the popular party will have 231 members. The diet will convene before May 25.

Mrs. Andrew Borden, mother of Sir Robert Borden, premier of Canada, died at her home at Grand Pre, Halifax, N. S., Monday morning.

National.

The trend of events in the financial circles of this country during the month of March has been most encouraging. The stock market of New York has been decidedly bullish. Standard industrial issues and railroad stocks have been prominent among those showing strong advances. The liquidation of American issues held by foreigners continues, but so far the ability to absorb them has been an encouraging feature among the transactions of the exchanges.

Tin workers in the Pittsburgh district are taking a referendum vote on the matter of working for less wages than they were receiving some time ago. The majority of the votes so far as counted, are favorable to the cut.

In the seven months ending with January the United States exported motor vehicles valued at \$10,989,442, which is an increase of 811 per cent over the value of those shipped for the corresponding period a year previous. Imports of these vehicles decreased 53 per cent during the same periods.

The United States submarine F-4 and her crew have apparently been lost just outside the harbor of Honolulu. So far efforts to rescue the craft from the sea have been unavailing.

Dr. Charles R. Henderson, a widely known sociologist, died at Charleston, S. C., Monday morning. He was instrumental in settling the street car strike in Detroit in 1892.

The steamship Heredia rammed the liner Parisian at the mouth of the Mississippi river, then swerved and struck a small coasting steamer which was sunk. The other two vessels were badly damaged, and the crew of the lost vessel was saved.

STATEMENT OF THE OWNER-SHIP, MANAGEMENT, ETC.

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EDGAR H. HOUGHTON, Secy. (Signature of editor, publisher, business manager, or owner).

Sworn to and subscribed before me this Twenty-sixth day of March, 1915.

CLARENCE E. HAMLIN,
Notary Public, Wayne County, Mich.
(My commission expires October 12, 1917.)
(Seal).

Magazine Section

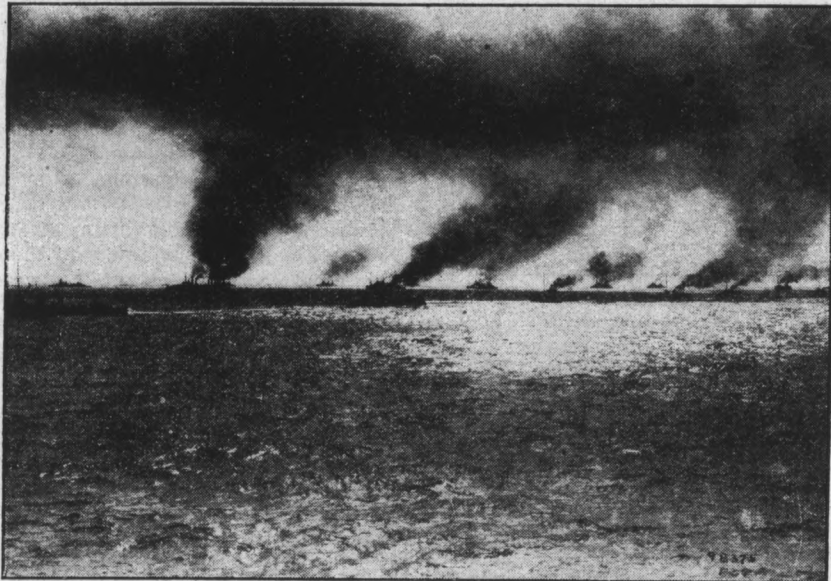
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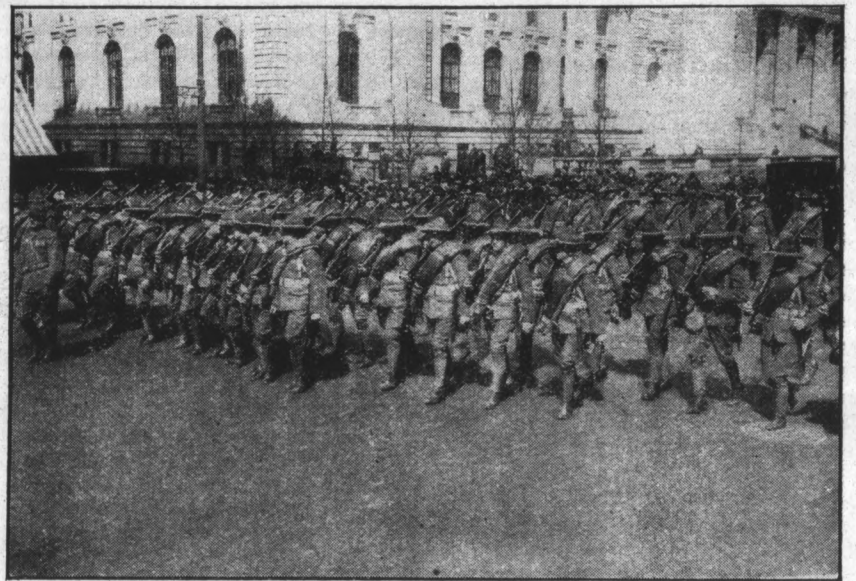
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This Magazine Section forms a part of our paper every week. Every article is written especially for it, and does not appear elsewhere.

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U. S. Troops Being Reviewed in New York City Preparatory to Embarking for Panama.



Ever Blooming Nypaea Named in Honor of Mrs. Woodrow Wilson, at International Show.



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German Military Dog Decorated with the Iron Cross for Saving Germans from Russians.



German School Children Bringing Copper Articles to Supply Government with the Metal.



General View of the City of Smyrna and Harbor which is Being Bombarded by Allied Fleets.



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Top—United States Infantry Camp on Banks of Rio Grande. Below—Machine Gun Platoon at Drill.

Easter-Day at Home and Abroad.

By CAROL C. CRAIN.

THE high queen of all the Christian festivals throughout the world is Easter. At this time joy rules triumphantly over all other emotions; the sadness of the crucifixion is lost in the resurrection and "Christ is risen indeed." Always the greatest joy is that which follows close upon grief.

"It is characteristic of human life," said Philip Brooks, "that its greatest day should be its saddest, full of suffering and sorrow. It (Easter) showed how life in its essential nature was sad, but it was a day of hope, its sorrow full of promise."

Years ago Easter was celebrated most seriously. The Puritans were prim and exacting and frowned upon the slightest desecration. They were zealous and sincere and they observed Easter with proper ceremony; but the modern method has made it a fashion show.

No one can deny that Easter is fashion's great show day. In fact, this period of twenty-four hours has three distinct aspects, religion, fashion and fun or frolic. The children enjoy the sport of hunting for the eggs that Br'er Bunny leaves, which, of course, is harmless fiction. They delight in the many-colored eggs, and the flowers and the general good cheer that marks Easter-day.

A quaint custom in egg-giving at this season is prevalent in Austria. It is a long way from America to Austria and therefore perfectly plausible that their diversions should differ from ours. The Emperor presents a great number of eggs annually to many people, but the eggs are of silver or gold or some other precious material and there is usually concealed within them some present or bauble that will delight the recipient.

In the Austrian province of Tyrol where the scenic wonders are second only to those of Switzerland, the celebration of Easter is an occasion of great joy. Musicians journey from town to town and from valley to valley. They sing as they play, while the citizens of the community assemble and hold high torches of flaming pine wood. They add to the merriment by joining with the musicians in the chorus of their beautiful hymns.

Easter in the Grecian land is sad and solemn. For fifty days the people live without meats but use, instead, bread, wine, olives and figs. A funeral

OUR EASTER PRAYER.

BY HENRY VAN DYKE.

These are the gifts I ask,
Of the Spirit serene.
Strength for the daily task,
Courage to face the road,
Good cheer to help me bear the traveler's load,
And, for the hours of rest that come between,
And inward joy in all things heard and seen.

These are the sins I fain
Would have thee take away;
Malice and cold disdain,
Hot anger, sullen hate,
Scorn of the lowly, envy of the great,
And discontent that casts a shadow gray,
On all the brightness of the day.



al service is held in each church and is followed by a burial procession to imitate the passing of Christ. Dirges are played and the marchers bear candles, crosses, and other emblems of deep mourning.

In various places of the Orient a queer custom is observed at the period of Easter. The ceremony is one of vengeance on the faithless follower, Judas, who betrayed Christ. An effigy of Judas is made and burned regularly each year. By the Greeks who reside in Oriental lands this strange custom of "burning at the stake" is rarely if ever omitted.

Flowers are seen almost everywhere in Holland when the great season of Easter arrives. Holland is a picturesque country, checkered with numerous canals and other waterways, and the barges that ply back and forth are laden with masses of tulips and other fragrant blossoms for many days preceding Easter.

Many of the quaint customs that formerly were so general in England have greatly diminished in number and almost disappeared. "Clipping the churches" once was very popular in Shakespeare's nativity. An English writer details the observance as follows:

"When I was a child, as sure as Easter Monday came, I was taken to see the children 'clip the churches.' The ceremony was performed amid crowds of people and shouts of joy by the children of the different charity schools, who at a certain hour flocked together for the purpose.

"The first comers placed themselves hand in hand with their backs against the church. They were joined by their companions, who gradually increased in number till at last the chain was of sufficient length to surround the edifice.

"As soon as the hand of the last of the train had grasped that of the first, the party broke up. They then walked in procession to the other church (for in those days Birmingham boasted of but two), where the ceremony was repeated."

In the northern section of England an odd bit of rhyme was often heard during the Easter season. The words sounded like a witches' spell or incantation and were as follows: "Tid, mid, and misers; carling, palm and Pasch egg day."

The meaning of the first line was, "Christmas, Epiphany and Lent." Carlings were fried peas to be eaten during midlent. "Palm" is a reference to Palm Sunday, so-called from the palm tree branches which were thrown before Jesus as he entered Jerusalem. Pasch eggs were those that had been boiled extremely hard and colored or etched with various designs or sketches.

In Florence and other parts of Italy pyrotechnical displays, or fireworks, are used extensively in the celebration of Easter-day. "Scoppio del Carro" is the term by which the natives designate the peculiar custom. Its translation is, "Explosion of the Car."

A spectacular vehicle is drawn to the public square, and while the crowd looks on in wonder, a small lamp is lighted. This releases a "dove," which slides on a wire from the cathedral top to the car. A fuse on the "dove" has been lighted, and when it comes in contact with the car, the latter becomes a panorama of blazing fire, and the great crowd shouts with marvelous delight at this strange process of announcing Easter's arrival.

There are many quaint legends concerning the action of certain birds which saw Christ nailed to the cross at the Crucifixion. The crossbill is said to have attempted to draw out the cruel nails but succeeded only in

twisting its beak and receiving splashes of the martyr's blood which changed the color of its plumage ever afterward.

There is a similar tradition concerning the robin and explaining the origin of the red feathers on its breast. The Spanish say that an owl, dazzled by the light of day, was not aware that it had perched upon the cross. When night arrived and it was enabled to see, the bird exclaimed, "Cross! Cross!" and disappeared.

According to a Danish legend, three birds came to the cross. The stork cried, "Strengthen him! Strengthen him!" The swallow importuned, "Refresh him! Refresh him!" The last bird was a tapwing and it urged "Torture him! Torture him!" A Swedish legend adds a fourth bird which said, "Lord! Lord!" This was the turtle-dove whose cry of lament was ascribed to this origin.

The name of Easter is from Ostera or Eastre, the Saxon goddess of spring. The heathen Saxons held a festival in her honor during Easter month. When the Christian missionaries came to England and began to convert the heathen Saxons, they changed the character of the celebration from pagan to Christian and changed the name of the month from Eastermonth to April, but permitted the people to designate the festival by the name of the heathen goddess. Thus it is that Easter is a heathen name but a Christian festival or celebration.

The typical flower of Easter is the lily. It is thus identified with the day because the whiteness of its bloom is the personification of purity. The natural home of the lily is France where it blooms annually about Easter time. The only place in America in which the plant blooms at the proper period, without forced cultivation, is a town at the extreme southern point of Texas.

Whittier, the great American poet, once described in rhyme the meaning of the lilies. The fragment of verse, sweet and filled with true sentiment, is as follows:

A thought of love immortal blends
With dear remembrance of friends,
And in these earth-born flowers,
With Eden's lingering fragrance sweet,
The heavenly and the human meet,
The heart of Christ and ours.

The lilies are an appropriate symbol of Easter, but the egg that every child delights to color and discover and use in many ways for merriment, is likewise wonderfully befitting for Easter celebration. It signifies the resurrection and is thus described by an ancient writer:

"As the bird imprisoned within the shell comes to life and liberty at the appointed time, so did our Savior on Easter morning burst the gates of the grave."

Paas, or Easter, was a famous festival among the Dutch, the early settlers of the state of New York. The good housewives spent many days in coloring eggs and in lettering on them the dainty mottoes of love and friendship. These eggs, so prettily adorned, were found on every table, together with "rabbits," cut out of pastry or skillfully fashioned from candy.

The celebration of Paas day in New York has become practically extinct and a more modern method has taken its place. A favorite song of the Dutch and other settlers of that time was the earliest Easter hymn, by St. Ambrose, the first verse of which was:

This is the very day of God.
Serene with Holy light it came,
In which the stream of sacred blood
Swept over the world's crime and shame.

The happiness that Easter inspires Moravian Cemetery at Bethlehem, Pa

in our boys and girls does not arise from the spiritual significance of the day. They are too young and too light-hearted for the serious aspect; but they are aware of nature's awakening and are imbued with the feeling that spring is coming. A little poem, "Easter Day," tells the source of the joy:

The brook has found its voice again,
The lark has found the blue,
The crocus bud has found the sun,
The sun has found the dew,
The butterfly has found the light,
The grass the green of May,
And Christians all find joyous life
On Holy Easter day.

EASTER MORNING IN BETHLEHEM.

BY E. S. CRAWFORD.

The Easter customs of the old Moravian church in Bethlehem, Pa., are quaint and very interesting. They do not vary from year to year, but every succeeding Easter brings many strangers to witness the scene new to them. Long before daylight on the Resurrection Morn, men go through the town with trombones, playing a sweet and solemn tune, to which are set the words:

"Christ is risen from the dead."

In response to this music the Moravians gather in their ancient church, now decorated with lilies and other flowers. A part of the Easter Litany is said, and at the passage, "Glory be to Him who is the resurrection and the life," the congregation rises and moves in procession to the cemetery. The little children go first, then the singers and the trombone players, next the clergymen, then the women, and lastly the men. Slowly singing hymns, they walk through the streets, and enter the quiet city of the dead, with a burst of music, just as the sun appears above the horizon. Taking their appointed places on the different paths, they sing, and chant the remainder of the Litany.

This "Moravian grave-yard" is one of the most attractive places in Bethlehem. It lies in the very heart of the town, looking toward the sunset—and we wonder why they did not choose a location looking to the east. It is simply a field of green turf, shaded by great trees, with wide, well-kept walks, and rows of green mounds. Here the rich and the poor lie together, without distinction except of sex—in the order of their dying. Instead of resting beside one's own kin, a man's worst enemy may be next him. Even if their banner is "Unitas Fratrum," no doubt these brethren, and sisters, too, have their likes and dislikes the same as other people. No stately monument anywhere obstructs the view proclaiming to the world that the dead could not take his money with him. On each mound lies a simple marble slab, bearing merely an inscription of a name, date of birth and of death; no eulogy of virtues, making us wonder, as a child once expressed it, "where the bad folks are buried." On these slabs the harsh word "died" is not seen, but the kinder word, used by St. Paul, "departed."



Land O' Nod Stories.

By HOWARD T. KNAPP.

Tinker Proves Himself a Real Scientist.

HIGH LE, high low, I'd like to know why in the Summer we never have snow," sang Billy Be By Bo Bum as he plowed through the deep snow drifts that hid the floor of the White Forest.

"We do have snow in the Summer, lots and lots of it," answered Tinker Teedle Tee, the merry little elf, who just at that minute came flying up and alighted on Billy's shoulder.

"Pretty soon you will be telling me the moon is made of green cheese," said Billy, who thought Tinker was making fun of him. "I'm going on eight years old, and I've never seen so much as a flake of snow in the Summer."

"Well, now, Billy Boy, I don't mean that we have blizzards right here on the Fourth of July, but remember, this is only one little corner of the world, and I could take you to dozens and dozens of places where you could go sleigh riding in the middle of August."

"Oh, you mean up at the North Pole," said Billy.

"No, sir, I mean right here in the United States," replied the elf, nodding his head until the weeny copper kettle he wore in place of a hat bounced up and down at a great rate. "You've heard of the Rocky Mountains haven't you?"

"Sure I have," replied Billy.

"Well, sir, if you took a trip out to California, you would see oranges and figs and lemons and all kinds of tropical fruits growing at the foot of the mountains, fruits that grow only in the warmest countries. Then when you had climbed up the side of the mountain a few thousand feet, you would come to big fields of wheat and other grain, for the climate would be too cold for tropical fruits. Farther on up would be the timber belt, where the grain would be replaced by big forests, and at last you would come to the snow line, and above that lies the land of perpetual snow, where it is so cold that nothing will grow."

"Yes, sir, Billy Boy, it is so cold on the tops of those mountains that the snow never melts from one year's end to the other, and blizzards sweep over the barren wastes almost every day. At the foot of the mountain, only a few miles away, it will be so hot people will be going around in their shirt sleeves, fanning themselves."

"But see here, Tinker, when you're on top of a mountain aren't you nearer the sun than when you're in the valleys a couple of miles below?" demanded Billy.

"Sure you are," replied Tinker Teedle Tee.

"Then I should think it would be warmer on top of a mountain than at the foot," said Billy, sure that he had the merry little elf up a stump this time.

"Anyone would naturally suppose it would become warmer as you get nearer the sun, but it's just the other way. You see Billy Boy, the air we breathe only extends a few miles above the surface of the earth, and as you climb the side of a mountain or go up in a balloon, the air becomes thinner and thinner, until at last there is not enough to breathe, and if you could keep on going up you would at last come to a point where there wasn't any air at all, only, of course, you could not go so far, because you couldn't live without plenty of air."

"But I don't see what the air has to do with it being cold on top of a mountain," protested Billy, who was more puzzled than ever.

"It is the air that carries the heat of the sun," replied Tinker, "just as a telephone wire carries the sound of your voice to the person at the other end. The sunbeams heat the air and the air brings the heat to us, but on top of a mountain there isn't much air to be heated, so, of course, it is cold, even if you are nearer the sun."

"Gee whiz, it makes me shiver just to think of such cold weather," said Billy. "I like the winter and snow and ice all right, but winter all the year round is too much of a good thing. Why, just think Tinker, you couldn't go fishing or swimming or go barefoot—or anything. No, sir, you don't catch me living on top of a mountain. I like the jolly, warm sunshine too well. And now I am going straight home and build a great, roaring fire in the fireplace so I will forget all about that horrid land of perpetual snow. Good night, Tinker Teedle Tee."

"Good night, Billy Be By Bo Bum, I'll be waiting for you at the pasture bars next Saturday afternoon," and the merry little elf spread his wings and flew off through the woods, while Billy scampered home as fast as his chubby little legs would carry him.

April Fooling Another Way.

By L. D. STEARNS.

BILLY and Tilly Jones were twins. Tilly's hair was long and brown, and crinkly, while Billy's was short and brown, and crinkly, for Billy was a boy and Tilly was a girl; but that seemed to be about the only difference between them.

Billy's eyes were hazel, and dancing with fun. Tilly's were just the same. What one did the other had always done; and their hands and feet were always busy. Sometimes, it was pretty hard to keep track of them both at once. But today they sat in a sunny corner of the yard, their usually dancing eyes sober, their red lips drawn into two small, determined knots; for Bill and Tilly were almost having a quarrel.

It was the First Day of April.

Billy dug the toes of his new shoes into the soft earth. "What's the use," he growled, "of getting girlish? We've always played tricks all day, and we're always going to. That's what the First of April's for. So there!"

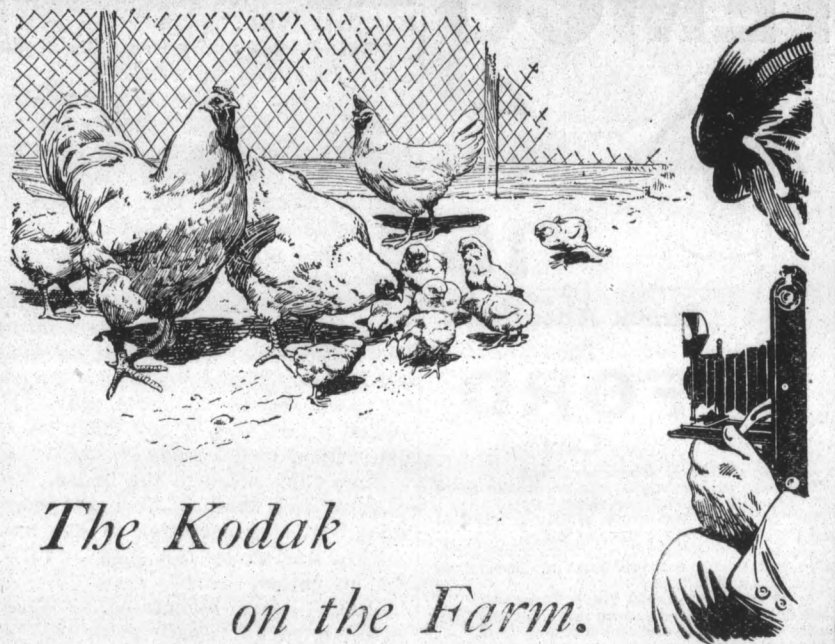
Tilly's brown locks bobbed this way, and that. "Tisn't girlish," she declared stoutly. "And anyhow, we've just as much right to be girlish as to be boyish."

"Like to know why."

"Cause!" Then the pink in her cheeks turned to a bright red. "Billy Jones," she cried tragically, "I heard Mamma say this morning that she dreaded the day, 'cause we'd be busy from morning till night doing everything we ought not to do. And Nora just rolled her eyes and said, 'The Saints preserve us!'" Tilly giggled, but something very like a tear glistened on her cheek. "I hate to have folks dread us!" she gulped.

Billy's eyes widened. "Shucks!" he said.

Then a small, soft hand touched his sleeve. Like a flash she remembered the story her mother had read the other night about the sun and the rain having a battle, and at the end, when the sun came out victor, he looked

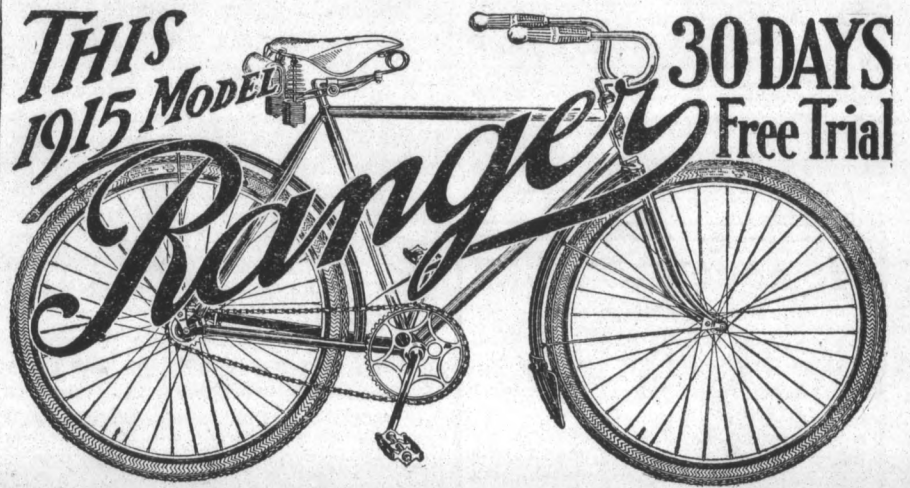


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down at a little girl who was watching and cried, "If you want to beat, little lass, just shine!"

"Twin," she whispered, "let's play April Fool another way."

For a few minutes the two brown heads drew close together, while the sparkles came back to their eyes and their lips curved once more into smiles. "You see," Tilly declared, giving his knee soft little pats, "it will be April Fool just the same, 'cause they expect to be bothered all day."

Jumping to his feet Billy held out his hand and Tilly slipped hers into it. "Twin to twin," he laughed, giving it a squeeze. Then, soberly: "I guess it's going to be a horrid play. But you're a girl, and a boy can't be selfish with a girl, I s'pose."

Then they raced to the house.

Nora was bending over the empty wood-box, the last stick in her hand.

Billy darted to the shed. "I'll fill it," he called.

"You!" Nora ejaculated. "What'll ye fill it with? Feathers?"

"Wait and see," he grinned, as Tilly crossed to the sink.

"I'll wipe 'em," she said, pointing to the dishes.

Nora drew a long breath. "If ye

will, darlin'," she smiled, "I'll bake ye a cake on Saturday. I'm up to my very ears with work today."

As the last dish was dried Mother Jones came into the kitchen. "I'm afraid I'll have to lie down," she said to Nora. "I've a headache. I'm sorry to leave you all the work to do."

Tilly hung up her towel. "I can help," she declared sturdily.

Billy put down his last armful of wood. "I'll sweep off the walk," he remarked, darting a roguish glance at Tilly. After all, it wasn't as bad as he had expected.

Mrs. Jones looked at Nora, and Nora rolled her eyes. "I wasn't lookin' for an April Fool like this, Marm," she said.

After supper the twins sat on the steps, watching the first stars come out. Their eyes were shining, and their voices were happy and glad.

"It's been a beautiful day," Tilly murmured sleepily. "Why, Billy, I never thought it made you feel so good to make folks glad!"

Billy ran one stubby finger along the edge of the step. "Does make you feel kinder fine," he agreed. "I heard Dad say he guessed I was getting to be a man!"

Winston of the Prairie

BY HAROLD BINDLOSS.

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"Well," said Dane, with a gesture of hopelessness, "I've done all I could and, since you are going on, I'll look at that trace clip while you tell Miss Barrington. I mean the younger one."

"The harness can wait," said Winston. "You are coming with me."

A little grim smile crept into Dane's eyes. "I am not. I wouldn't raise a finger to help you now," he said, and retreated hastily.

It was five minutes later when Winston walked quietly into Maud Barrington's presence and sat down when the girl signed to him. He wondered if she guessed how his heart was beating.

"It is very good of you to receive me, but I felt I could not slip away without acknowledging the kindness you and Miss Barrington have shown me," he said. "I did not know Colonel Barrington was away."

The girl smiled a little. "Or you would not have come? Then we should have had no opportunity of congratulating you on your triumphant acquittal. You see, it must be mentioned."

"I'm afraid there was a miscarriage of justice," said Winston. "Still, although it is a difficult subject, the deposition of the man I supplanted went a long way, and the police did not seem desirous of pressing the charge against me. Perhaps I should have insisted on implicating myself, but you would have scarcely looked for that after what you now know of me."

Maud Barrington braced herself for an effort, though she was outwardly very calm. "No," she said, "no one would have looked for it from a man placed as you were, and you are purposing to do more than is required of you. Why will you go away?"

"I am a poor man," said Winston. "One must have means to live at Silverdale."

"Then," said the girl with a soft laugh which cost her a good deal, "it is because you prefer poverty, and you have at least one opportunity at Silverdale. Courthorne's land was mine to all intents and purposes before it was his, and now it reverts to me. I owe him nothing, and he did not give it to me. Will you stay and farm it on whatever arrangement Dane and Macdonald may consider equitable? My uncle's hands are too full for him to attempt it."

"No," said Winston, and his voice

trembled a little. "Your friends would resent it."

"Then," said the girl, "why have they urged you to stay?"

"A generous impulse. They would repent of it by and by. I am not one of them, and they know it, now, as I did at the beginning. No doubt they would be courteous, but you see a half-contemptuous toleration would gall me."

There was a little smile on Maud Barrington's lips, but it was not in keeping with the tinge in her cheek and the flash in her eyes.

"I once told you that you were poor at subterfuge, and you know you are wronging them," she said. "I also know that even if they were hostile to you, you could stay and compel them to acknowledge you. I fancy you once admitted as much to me. What has become of the pride of the democracy you showed me?"

Winston made a deprecatory gesture. "You must have laughed at me, then," he said dryly. "I should feel very lonely now. One man against long generations. Wouldn't that be a trifle unequal?"

Maud Barrington smiled again. "I did not laugh and this is not England, though what you consider prejudices do not count for so much as they used to there, while there is, one is told frequently, no limit to what a man may attain to here, if he dares sufficiently."

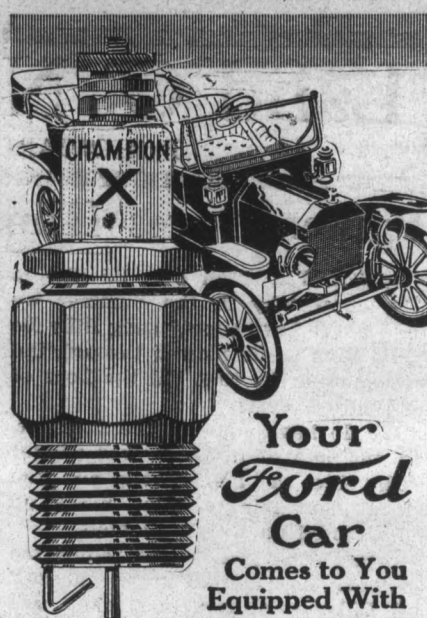
A little quiver ran through Winston, and he rose and stood looking down on her, with one brown hand clenched on the table and the veins showing on his forehead.

"You would have me stay?" he said.

Maud Barrington met his eyes, for the spirit that was in her was the equal of his. "I would have you be yourself—what you were when you came here in defiance of Colonel Barrington, and again when you sowed the last acre of Courthorne's land, while my friends, who are yours, too, looked on wondering. Then you would stay—if it pleased you. Where has your splendid audacity gone?"

Winston slowly straightened himself, and the girl noticed the damp the struggle had brought there on his forehead, for he understood that if he would stretch out his hand and take it what he longed might be his.

"I do not know, any more than I



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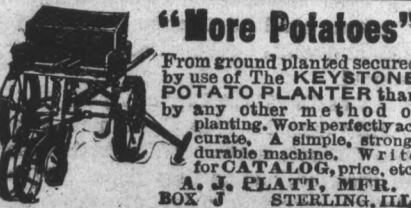
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know where it came from, for until I met Courthorne I had never made a big venture in my life," he said. "It seems it has served its turn and left me—for now there are things I am afraid to do."

"So you will go away and forget us?"

Winston stood very still a moment, and the girl, who felt her heart beating, noticed that his face was drawn. Still, she could go no further. Then he said very slowly, "I should be under the shadow always if I stay, and my friends would feel it even more deeply than I would do. I may win the right to come back again if I go away."

Maud Barrington made no answer, but both knew no further word could be spoken on that subject until, if fate ever willed it, the man returned again, and it was a relief when Miss Barrington came in with Dane. He glanced at his comrade keenly, and then seeing the grimness in his face, quietly declined the white-haired lady's offer of hospitality. Five minutes later the farewells were said, and Maud Barrington stood with the stinging flakes whirling about her in the doorway, while the sleigh slid out into the filmy whiteness that drove across the prairie. When it vanished, she turned back into the warmth and brightness with a little shiver and one hand tightly closed.

The great room seemed very lonely when, while the wind moaned outside, she and her aunt sat down to dinner. Neither of them appeared communicative, and both felt it a relief when the meal was over. Then Maud Barrington smiled curiously as she rose and stood with hands stretched out towards the stove.

"Aunt," she said, "Twoinette has twice asked me to go back to Montreal, and I think I will. The prairie is very dreary in the winter."

It was about this time when, as the whitened horses floundered through the lee of a bluff where there was shelter from the wind, the men in the sleigh found opportunity for speech.

"Now," said Dane quietly, "I know that we have lost you, for a while at least. Will you ever come back, Winston?"

Winston nodded. "Yes," he said. "When time has done its work and Colonel Barrington asks me, if I can buy land enough to give me a standing at Silverdale."

"That," said Dane, "will need a good many dollars, and you insist on flinging those you had away. How are you going to make them?"

"I don't know," said Winston simply. "Still, by some means it will be done."

It was next day when he walked into Graham's office at Winnipeg, and laughed when the broker shook hands and passed the cigar box across to him.

"We had better understand each other first," he said. "You have heard what has happened to me and will not find me a profitable customer today."

"These cigars are the best in the city, or I wouldn't ask you to have one," said Graham dryly. "You understand me, anyway. Wait until I tell my clerk that if anybody comes round I'm busy."

A bell rang, a little window opened and shut again, and Winston smiled over his cigar.

"I want to make thirty thousand dollars as soon as I can, and it seems to me there are going to be opportunities in this business. Do you know anybody who would take me as a clerk or salesman?"

Graham did not appear astonished. "You'll scarcely make them that way if I find you a berth at fifty a month," he said.

"No," said Winston. "Still, I would not purpose keeping it for more than six months or so. By that time I should know a little about the business."

"Got any money now?"

"One thousand dollars," said Winston quietly.

Graham nodded. "Smoke that cigar out, and don't worry me. I've got some thinking to do."

Winston took up a journal, and laid it down again twenty minutes later.

"Well," he said, "you think it's too big a thing?"

"No," said Graham. "It depends upon the man, and it might be done. Knowing the business goes a good way, and so does having dollars in hand, but there's something that's born in one man in a thousand that goes a long way further still. I can't tell what it is, but I know it when I see it."

"Then," said Winston, "you have seen this thing in me?"

Graham nodded gravely. "Yes, sir, but you don't want to get proud. You had nothing to do with the getting of it. It was given to you. Now, we're going to have a year that will not be forgotten by those who handle wheat and flour, and the men with the long heads will roll the money in. Well, I've no use for another clerk, and my salesman's good enough for me, but if we can agree on the items I'll take you for a partner."

The offer was made and accepted quietly, and when a rough draft of the arrangement had been agreed upon, Graham nodded as he lighted another cigar.

"You may as well take hold at once, and there's work ready now," he said. "You've heard of the old St. Louis mills back on the edge of the bush country. Never did any good. Folks who had them were short of money, and didn't know how they should be run. Well, I and two other men have bought them for a song, and, while the place is tumbling in, the plant seems good. Now, I can get hold of orders for flour when I want them, and everybody with dollars to spare will plank them right into any concern handling foodstuffs this year. You go down tomorrow with an engineer, and, when you've got the mills running and orders coming in we'll sell out to a company, if we don't want them."

Winston sat silent a space turning over a big bundle of plans and estimates. Then he said, "You'll have to lay out a pile of money."

Graham laughed. "That's going to be your affair. When you want them the dollars will be ready, and there's only one condition. Every dollar we put down has got to bring another in."

"But," said Winston, "I don't know anything about milling."

"Then," said Graham dryly, "You have got to learn. A good many men have got quite rich in this country running things they didn't know much about when they took hold of them."

"There's one more point," said Winston. "I must make those thirty thousand dollars soon or they'll be no great use to me, and when I have them I may want to leave you."

"That's all right," said Graham. "By the time you've done it, you'll have made sixty for me. We'll go out and have some lunch to clinch the deal if you're ready." (Concluded next week.)

THE CHEWINK.

BY CLARA J. DENTON.

Chewink, chewink,
What do you think?
The Spring is here
Though skies are drear,
Now list my call so loud and clear
Chewink, chewink!

The blue-bird's song
Must come ere long,
And chorus grand
Will wake the land
But little will you understand,
Chewink, chewink!

But you must think
It was Chewink,
Who first did bring
The news of Spring,
For far and wide his call did ring,
Chewink, chewink!

Ere Robin came
My merry name
Proclaimed to you
The message true,
Then treat me well the summer thru.
Chewink, chewink!



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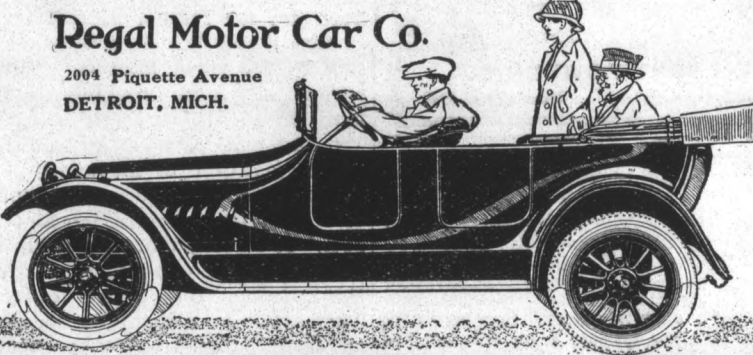
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Agricultural Organizations of Austria.

By Wm. B. Hatch, Michigan Member of American Commission.

THE car-window impression I received in riding up the valley of the Danube was that the practice of agriculture in Austria is less intensive than in Italy and much more so than in Russia. The Danube valley is a great grape country, the banks of the stream rise to a considerable height. In this valley, on the twenty-second of May, wheat, corn, barley, oats and sugar beets were just nicely up and looking well. There are no fences to obscure the view.

Vienna, four hours from Budapest, is larger than Chicago. Austria and all Europe are experiencing a drift of the country population to the cities. The city seems to outbid the country in the labor market and country life is thought to be, in other respects, less attractive. The city likewise outbids the country in the money market and thereby attracts the money of the country to further augment commercial development in the city. A part of Europe's answer is to encourage the organization of agriculture on a co-operative basis. This conserves the created wealth of agriculture at home for the further promotion of agriculture and brings greater satisfaction to the rural families by making agriculture more remunerative and more interesting.

In Austria, as elsewhere, the spirit of co-operation is frequently emphasized, in fact, I believe the inculcation of this spirit is one of the abiding assets. It means, team-work. It means a social and fraternal relationship that makes for better citizenship. This spirit is not simply recommended, it is "nominated in the bond," so to speak; in other words, when a co-operative organization is effected the members bind themselves to co-operate. For example, co-operative dairymen bind themselves to deliver all of their milk for a term of years to their own co-operative creamery. The spirit of co-operation furthermore, manifests itself in the free services in an official capacity of leading citizens, school teachers and the clergy. In this way the cost of administration is kept reduced to a minimum.

Co-operative Credit.

The Agricultural Co-operative Credit Societies in Austria are chiefly of the Raiffeisen type. The distinguishing characteristic of this type is the unlimited liability of its members, and the limiting of the activities of the association to the community in which it is organized. The loans are thus local, they are small and mainly represented by two or three name paper, that is, a note signed by the real borrower and by one or two of his neighbors. This is short time paper as distinguished from long time credit, provided by other organizations. The strength of the Raiffeisen type lies in the fact that the money borrowed by the members can only be borrowed and used in the local community for constructive purposes, on the farm. The result is that each member watches his neighbor to see first, that a good investment of the money borrowed is made, and second, that the earnings from the investment is used in liquidating the indebtedness. The community in which such an organization exists catches and invests the community spirit. The wealth of the members is deposited, kept and re-invested in the further promotion of the community. The rate of interest is steadied because the community can decide upon its own rate for the use of its own money in conducting its own business. The American Commission found that the farmers of Austria through their own co-operative credit organizations were getting money for four and a half per cent interest, when money was commanding seven and eight per cent in the general money market.

We could hardly call these little banks such, in America, because we have become accustomed to something larger. The membership varies from twenty members to one thousand. The average investment of each member amounts to only three dollars. Deposits are received from both members and non-members. These little credit societies, or rural banks, the public officials freely concede, have to a great extent, awakened among the rural population a sense of thrift. The farmer and his laborers, who in former days concealed their savings in stockings beneath their beds, in the hay or behind the stoves, deposit it today with these Raiffeisen societies. They have learned that it multiplies and grows, so every spare crown now finds its way there. In the autumn, when the farmer has sold his products, he repays the loan received, and leaves the balance for a saving investment. Day laborers, factory hands and children are numbered among the

erative grain storage or warehouse companies are common. These societies collect, sort, mix and clean the farmer's grain and then sell it to the best advantage. This gives the farmer, among others, the following advantages: (1) Improved methods in grading of qualities, drying, mixing and assorting to render readily salable. (2) Regulation of prices according to the requirements of the different markets. (3) Acquisition of easy credit for farmers on storage grain as collateral. (4) Economy in handling expenses and transportation rates.

There are also co-operative societies for the disposal of eggs, truck farm products and live stock. In the last named line of service a trustee is selected for a given district whose business consists in advising the farmers as to the actual market prices of live stock, in collecting the live stock of their district and shipping it in carloads to the best market. The proceeds are divided among the original owners of the stock. This is a line of service which is rather better performed through separate co-operative sales organization because such an or-



Co-operative Agricultural Supply Depot in Connection with the Co-operative Zemstov Bank and Store at Volschansk, Russia.

depositors. Out of one hundred and thirty thousand saving deposit accounts in Bohemia, over fifty thousand came from servants, workingmen and children. A government official stated that, "It can safely be asserted that, without the stimulus of the easy and convenient terms offered by the Raiffeisen societies a large number of these persons would have made no deposits, owing to the lack of time, the distance to be traveled to the nearest savings bank, and the small sums involved. In Galicia, these Raiffeisen societies have become the depositories for the savings sent home from America or brought back by returning immigrants. Even the harvest workers, who each year go to Germany, Denmark, and France, invest their savings in them, thus providing ample loans for their own people. There are over eight thousand of these societies in Austria with more than a million members. These are federated into Central Credit Organizations. These central organizations advise the local societies, in legal and commercial matters, and supply larger credit facilities, receiving the excess deposits of the local. The line of credit granted by the central to the local ranging from fifty to one hundred and twenty-five dollars per member.

Co-operative Production.

Among the most advantageous co-operative organizations in the development of agriculture have been those for co-operative production. These organizations cover the fields of dairying, wine making, the manufacture of olive oil and oil of rosemary, the drying of chicory, the distillation and drying of potatoes, the making of pickles and sauerkraut, cattle raising and pasturing.

Co-operative Distribution.

Co-operative distribution in Austria is not essentially different from the agricultural organization for this work in other European countries. Co-op-

ganization has also authority to furnish credit and lend money. In many instances also these live stock disposal societies slaughter their own stock and dispose of their own meat directly to the consumer.

An Austrian Meat Trust Remedy.

It was found in Austria, a good many years ago, that in the handling of live stock and dressed meats, that credit conditions had a paramount influence on market transactions. It was ascertained that there existed a concentration of the entire live stock trade on the Central Live Stock Market in Vienna, in the hands of a few cattle dealers established there. This trade was virtually monopolized by a few to the disadvantage of the producer and consumer alike. It was found further that this group of dealers had a credit monopoly for a basis since only members of this group enjoyed credit in live stock transactions. This was sixty years ago. To break this monopoly the government induced the city of Vienna to establish a credit scheme, since known as the "Municipal Meat Foundation," which was to make the extension of credit to purchasing butchers obligatory. This credit fund caused the disappearance of the privileged group and out of it gradually grew the live stock commission business. A commission of three per cent on the gross sale of the cattle is charged and five per cent on small live stock. Payment to the seller must be made in the course of the market day. Arrangement for personal credit to butchers and curers of meat, doing business in the market place, enable them to purchase stock for slaughter. Advanced loans on live stock under consignment are also granted.

The Vienna Dairy, a limited co-operative company, is claimed to be the largest co-operative dairy in existence. The dairy owns one hundred and fifty-nine depots for the sale of milk in

Vienna and adjoining towns. Two hundred and ten push-carts, and two hundred and twelve horses, suggest something of its activities. Stables for the accommodations for these two hundred and twelve horses are also supplied, also sleeping, smoking and dressing rooms for the unmarried employes, and a restaurant. Six hundred and sixty persons are regularly employed, and in the morning hours, during the delivery of milk, about twelve hundred persons in all. This dairy handled over twenty-nine million quarts of milk and cream the year the commission visited it. It netted the producing members about six cents per quart.

Department of Farm Management and Book-keeping.

An interesting feature of the Imperial and Royal Agricultural Society of Vienna, is a department of farm management and book-keeping. Through the activities of this department book-keeping offices have been organized throughout the various Austrian Provinces. Inasmuch as profits are found in net proceeds, if at all, it is necessary that some form of practicable book-keeping should be practiced by the farmer in order that he may know just what each department of his business produced and what it cost him to produce. So a comprehensive plan has been worked out by which, on blanks furnished by the society, the farmer makes weekly returns to the book-keeping department of the agricultural society. The society reports back to the farmer, offering suggestions for improvement and pointing out leaks, and in this way the agricultural society obtains reliable, economic, statistical data, so essential for guiding its work in the development of the economic resources of the nation. These book-keeping departments are looked upon as experiment stations for agricultural economics. They show whether the appropriations by the government for the support of this work are profitably invested and they play a most important role in determining the tariff policy of the agrarian party. This book-keeping department of the agricultural society is then an advisory board for the farmer, a statistical board for the economists, an advisory board for the statesman, and a guide as to the right economic policy for the nation to pursue in regard to its agriculture, by showing the exact cost of the production of each product.

THE SECRET OF A SUCCESSFUL FARM LIFE.

(Continued from page 410). account, for I am far from perfection in my arrangements. It is the idea I want others to see and understand. My first year proved to me the gain in time and money of letting wood, iron and steel, managed and directed by mind, do the hard work instead of using more muscle through longer time trying to save a few dollars.

There are few farms now producing to their full capacity, or anywhere near it. Yet their owners go on and on purchasing more land to be in turn half-cultivated, half-fertilized, raising half-crops, half-tended. They have much to learn and many will learn, as I did, the advantages of intensive, scientific farming by means of proper fertilizing, crop rotation, handling, everything possible by machinery instead of human muscle, and thus raising more, at less cost, realizing more clear money and being in fit condition mentally and physically to enjoy some of the pleasures of living that rightly belong to us.

The Most Important Result.

I came near omitting the most important result of all. In the high school Will attended there are three courses of study all alike for the first two years and with half the work the same in the remaining two years. But half the studies during the third and fourth years were chosen by the pupil

from different subjects leading to a college preparatory, a commercial or an agricultural diploma, respectively. Will had just begun on the commercial studies when I bought the wheel plow and announced a change in policy. This so aroused his interest in the farm that he changed over to the agricultural course and did double work for a time, making up after school the hours of work on the agricultural course that had been passed over while he was studying in the commercial classes. He said nothing to me about this change but almost two years later at commencement time he came to me with his agricultural diploma and somewhat timidly asked that he be permitted to participate actively in the work of the farm and to try poultry raising as a personal specialty. Maybe you can imagine how I felt to hear this after the years I had seen him getting away from the farm. That evening I heard the boy talking to his mother and learned the cause for the whole thing.

"I always knew what pa wanted," he was saying, "but I couldn't bear to think of settling down on a farm all my life. I couldn't see anything to it but hard work and making money that we never had time to enjoy. But when pa changed over I saw what farm life might be and when my studies began to show how people could use even the best education in planning and doing farm work, I was so anxious to begin to help plan and work that I could hardly wait to finish school."

Where Life is Worth Living.

Now my boy and I are really partners, although he is yet several years under twenty. He reads and studies and I recall past experiences and we combine our minds in planning and carrying out farm work. I still see ways of improving things and am trying them out as fast as I can conveniently. On less expense I am making more clear money than ever before. Every year I spend a fair sum for permanent improvements, buildings, live stock, indoors and out. Last spring I bought an auto, not an expensive car, but a light, substantial truck with which Will is carrying crates of eggs to our shipping point twice a week for direct shipment to high-class city consumers who pay him a neat increase over local rates. Will looks after the poultry himself, no one else has a word to say, only as occasional advice. He also has charge of several different features pertaining to the farm—thanks to his agricultural studies—and is planning several additional innovations before we shall have exhausted the resources of our 280 acres. One of these is the purchase of a gas tractor. That looked like a big stunt for a farm the size of ours, but as Will says, we now keep seven horses, the year around, three teams and a driver. Since we have the auto for rapid delivery and purchase trips, a tractor will allow us to dispense with several horses.

Last fall when my mill gave out, Will connected on the engine and pumped the tanks full each morning in about five minutes. But the wind looks like cheap power and we may repair the wind-wheel power. Will is planning a bath room, toilet, and all city advantages and filling the tanks and reservoirs with the engine, but I tell him we must go slow and have no debts hanging around. Thus far we have put in all our improvements without one cent of indebtedness and yet have spent more money outside than formerly. We are beginning to learn that a farmer's family may live decently, enjoy the legitimate pleasures of life and yet prosper in farming and make all desirable expenditures keeping things up to date. For we know now that such things are not expenses but profitable investments, that they add to, rather than detract from, our opportunities to enjoy life as we go along.



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METROPOLITAN MAGAZINE.

"The Livest Magazine in America," Colonel Roosevelt is now writing exclusively for Metropolitan on the big questions of the day—history—making articles that no American interested in the future of his country can afford to miss. Every issue contains timely articles and the best fiction of the biggest writers of the day. The cover designs are the best examples of art printing in America. They are produced in six and seven colors by the Rubber Offset Process. An every month feature of the Metropolitan is an art section printed in Rotary Gravure in color.

LITTLE FOLKS MAGAZINE.

Little Folks, the children's magazine, is issued monthly and is a playmate for every child who enjoys games, reading and listening to stories, looking at pictures and making things. It is a well rounded magazine for boys and girls, providing continuous amusement for every day of the week. It contains nothing that a child under ten could not enjoy.

Little Folks offers a number of things for children to do, new games to play, new toys to make of paper, simple things that can be made from wood.

Little Folks is printed on special paper so that all the pictures can be colored with crayon or water colors, rebuses of picture stories in each issue.

Little Folks has long since passed the experimental stage. It has been published for seventeen years and is read and enjoyed by hundreds of thousands of children, and its bedtime tales are read by the mothers of these children.

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Woman and Her Needs

At Home and Elsewhere



The Value of Keeping Young

WHERE are the grandmothers of yesterday?" wails a writer, who laments the passing of the white-haired, bespectacled grandmother who dozed by the fire-side, knitting in hand. If we are to pick out the grandmothers by their looks, there are none left. For these sprightly dames nowadays look as young as the daughters, and are in many cases intensely more interesting comrades than either daughter or grand-daughter.

And why not? Why should a woman who has just arrived at the time of life when she has leisure to enjoy and experience enough to be worth listening to, be shoved to one side to make room for unripe, characterless girls who can chatter about clothes and beaux, but have no conception of the real things of life? Why should not grandmother keep the center of the stage as long as she can? And if keeping young in looks will keep her there, she is perfectly justified in doing everything possible to preserve her youthful beauty.

As a matter of fact, the majority of women, and men, too, pay altogether too little attention to their personal appearance as they grow older. They grow careless and lazy, forgetting that the world takes us wholly by appearances, unjust as this estimate may be. The daily bath is too much trouble, though ten minutes would suffice for it and the gain in health would more than repay for the extra early rising and bit of trouble. It is easier to lounge in an easy chair, dozing over a book in the evening, than to take time to massage the scalp to preserve the hair, or to rub in cold cream to keep wrinkles away. Fingernails are neglected, when a minute or two a day after washing the hands would keep them in fairly good trim.

Not only is the person neglected, but the clothes are not kept up. Shoes are allowed to run down at the heel. The best suit is left unbrushed and hung up any old way, instead of being carefully put away on hangers, though skirt and coat hangers may be bought two for a nickel. Pins take the place of buttons and hooks and eyes, gloves are left with ripped fingers, hats covered with dust of the last drive are put upon heads not too carefully brushed and combed. The little things which make the difference between tidiness and untidiness are neglected, and as a result the woman looks ten years older than she need, probably that much older than she really is. In most cases this is the result of thoughtlessness and habit. In some it is really pride, a false pride which makes the person boast that she isn't "stuck up," and never bothers about how she looks so long as she is comfortable. Such women are not only proud of their untidiness, they are criminally selfish. For an untidy person is an offense to the eye of everyone she meets.

We owe it to ourselves and to our families to keep as trim and good to look upon as possible. Who has not felt rested and inspired by looking at a beautiful picture, a beautiful landscape or a gorgeous sunset? While correspondingly, the ugly and uncouth depresses us. Nature herself teaches us to contrive in every way for beauty.

She hides the stumps and rocks with a garment of vines, and covers the ugly brown earth with a carpet of flowered green.

A trim appearance has a money value, too. The business man will pick out every time, the employe with clean nails, white teeth, well brushed hair, and neat, carefully pressed garments. Many a man has been kept back, not for lack of mental qualifications, but because he was untidy. Perhaps because of a day's growth of beard, a soiled collar and unpressed garments.

It is as much a duty to keep clean and young in appearance as to give to the poor or to perform any of the other virtuous acts upon which we pride ourselves. By so doing we benefit not alone ourselves but everyone who looks upon us.

DEBORAH.

TUMBLER DOILY IN CROCHET.

The illustration shows a very dainty and attractive tumbler doily in the

catching in center of spaces in second row. Repeat around entire ring.

Make fourth row in same way, only chain ten in each loop, fasten and dc four times in first loop of fourth row. Ch. one dc. four times in same place. Repeat around ring.

Fifth row, dc. four times in space between dc, in 4th row. Ch. 2, dc. 4 times in next space, repeat, etc.

Sixth row, ch. ten, fasten with slip stitch (sl st), in space between dc, in fifth row. Ch. four, turn and triple crochet (tc), in half ring just made 19 times. Ch. four, turn, and tc. in each of the 19 tc. previously made in ring. This forms a shell. Ch. ten, catch in next space in fifth row. Ch. 10 and repeat as for first shell.

Seventh row, eighth row and ninth row, ch. 7, catch back three to form a picot, chain seven, catch back three, chain three, catch in first tc. in first shell formed. Repeat around ring until there are three picot scallops on edge of each shell. Eighth and ninth rows, catch in center loop of preceding rows.

Tenth row, ch. 20, catch in center of scallop between picots. Repeat around

cover thickly with granulated sugar and cinnamon mixed.

Steamed Brown Bread.—One cup of sour milk, one cup of sweet milk, one cup of molasses, one cup of graham flour, two cups corn meal, one teaspoon of soda, one-half teaspoon salt. Mix thoroughly, pour in well-buttered pan and steam for three hours. This should be served hot.

A much finer brown bread is made as follows: Two cups sour milk, one-half cup of brown sugar, one-half cup of molasses, three cups graham flour, one cup white flour, one teaspoon of soda, one heaping teaspoon baking-powder, half a teaspoon of salt and two rounding tablespoons of shortening. Stir up as a cake and bake one hour in a moderate oven. This is good warm and better cold.

Household Editor:—Will you please give me some good recipes for gravies?—Mrs. A. T.

Slice a small onion into hot drippings in the frying-pan and cook five minutes. Remove the onion and stir into the fat two tablespoonsful of flour, stirring quickly and constantly until the flour is evenly blended. Then stir in, a little at a time, two cups of boiling water, and salt and pepper to taste.

The above gravy can be varied by adding one cup of well cooked tomatoes.

A good gravy is made after frying salt pork and bacon by blending two tablespoonsful of flour with the fat and adding a pint of boiling milk.

Many like a gravy made by blending two tablespoonsful of flour with two of melted butter or drippings and cooking in it for five minutes two tablespoonsful each of chopped onion, carrot and parsley. Then remove the vegetables, add one cup each of stock and tomatoes and cook for a half hour on the back of the range.

Household Editor:—Will you please publish in your next issue a recipe for baking macaroni and cheese?—E. M. W.

Break up a half pound of macaroni into inch-long pieces and put in two quarts of boiling water with a level teaspoonful of salt, to boil until the macaroni is tender. Then drain it through a colander and rinse quickly with cold water. Place a layer of macaroni in a baking dish, sprinkle with salt, pepper and a little flour, dot with butter and cover with grated cheese. Repeat this until the dish is full, having the top covered with cheese. Pour on rich milk or cream and milk, until the liquid comes up to the top of the macaroni and bake until the cheese is thoroughly melted.

Household Editor:—Please state in the columns of your paper if the announcement of a wedding calls for a present.—Subscriber.

No.

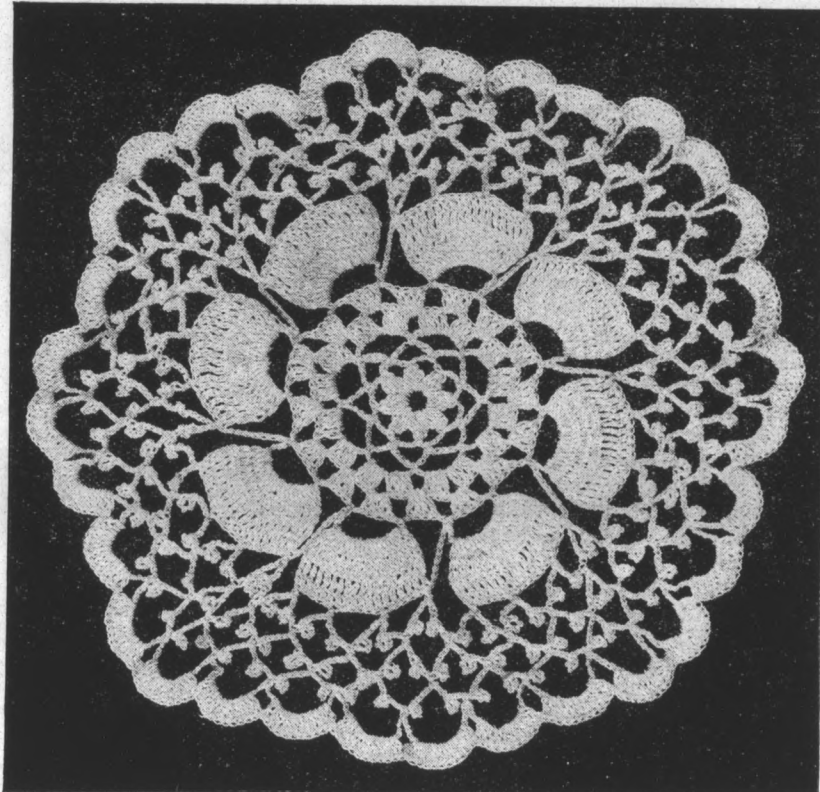
Household Editor:—I wish some of your readers would send recipes that are especially nice for reunions. Also some ways of decorating cakes, etc., to make them look pretty.—Mrs. L. L. G.

TOOLS FOR THE CHILDREN.

BY MRS. JEFF. DAVIS.

When mothers are investigating ways and means of keeping the children happy and busy, they should not forget that one of the best safeguards for a boy is tools. These will occupy his spare time, give him something he will enjoy doing and teach him innumerable useful lessons.

He is kept busy and happy, is great-



An Attractive Tumbler Doily.

popular "baby Irish" crochet. In No. 50 cordonnet crochet cotton, such as is illustrated, or in fine D. M. C., or ordinary machine thread, it works up beautifully. Attractive finger bowl, plate doilies or centerpieces may be worked by the same pattern by merely adding more rows of the picots. There are three rows in the tumbler doily. Hot plate mats made from the same pattern with heavy crochet cord or carpet warp are extremely handsome.

To make this doily chain eight stitches (st), and join to form a ring, chain 3 and double crochet (dc), three times in the ring, keeping two loops on the hook each time. Then draw the hook through all at the last dc. This will form a point. Chain (ch), six then dc 4 in ring and finish as first point. Repeat until eight points and eight spaces have been formed. Join last chain then ch. 8,

doily. The eleventh row is the border. Dc. 12 in ch. of 20, fasten with one sl st., dc. 20, fasten, etc., around entire edge.

GRACIA SHULL.

HOME QUERIES.

Household Editor:—Would someone send me a good recipe for a coffee cake and steamed corn bread?—Mrs. W. H., Bridgeport.

German Coffee Cake.—Make sponge as for bread with one pint of scalded milk, a yeast cake softened in a little warm water and flour. When it is light, add two-thirds cup of melted butter or lard, one-half cup of sugar, one teaspoonful of salt, and two eggs lightly beaten. Stir in flour until it is difficult to stir with a spoon and let rise again. When light again spread in a buttered dripping pan and let rise. Just before putting in the oven brush the top with beaten egg and

ly benefited by the muscular exercise, acquires needed dexterity, becomes familiar with the use of tools, the knowledge of material and what can be done with wood, steel, tin, etc. Thus he unconsciously becomes fitted to deal with often occurring emergencies in a home.

Of course, it will take a long time to learn to do anything really useful. He will have to begin on something very simple, any rough, small article will do, but let it be something that will serve a useful purpose so that he will not feel that his work is wasted.

As his knowledge increases let him advance to more pretentious building. Encourage him to do a little repairing around the house, and he will become helpful and reliable about such things.

Don't make the mistake of thinking any sort of tool will do for a boy, get the best quality, if you have to purchase only one tool at a time. Remember it is quality for which the extra price is paid, and we know that it is true economy, in the end to buy the best in any article from which good service is expected. This practice will also teach him a valuable lesson in making him realize the advantage of procuring good material, and then taking the greatest possible care of it. To impress this truth more emphatically, let him learn how to use and care for each tool before another is presented. Make this an incentive to become the owner of a complete set of tools of which any may might be proud.

Our boys and girls now have, in many cases, manual work to do in the schools and often they are taught the art of manufacturing fine, substantial, artistic articles of furniture. But if your child has not this advantage encourage him to read papers that give explicit directions for making really beautiful things such as boys and girls like to own and enjoy manufacturing.

If rightly directed in this line a boy can acquire knowledge which will some day be of great use to him. It will save many dollars and materially add to the comfort of his home.

Flowers a Feature of Spring Millinery.

THE early spring is being hailed with delight by milliners and dressmakers, and already these thrifty persons are gathering in the shekels. The Tipperary hats, which were so popular in February, are now passe, and something newer and more distinctive is being demanded.

Among the many shapes shown, none are more popular than the high-crowned, narrow-brimmed sailor. The brim droops slightly all the way round, and is sometimes faced underneath with silk, either plain or laid in narrow pleats. These are trimmed with flowers in clusters, or with bows of ribbon, or two long ends of ribbon wired to simulate wings. The hats come in all colors, black, blue in all its variations, green, brown, and, of course, the popular sand and putty shades.

There are many small straw hats shown, however, hats with a rather high round crown and narrow rolled brim, coming closely to the crown. These brims are usually covered with silk in a shade to match the hat, and the hat itself is generally a flower garden of pink or blue posies. It is a flower season so far, particularly small flowers. The gay little buds and blossoms are used in wreaths or in small clusters on the hat, and often a cluster like those on the hat is worn on the coat lapel.

It is still too early to say what the dress hat will be, but whatever the shape or style it will undoubtedly be trimmed with flowers in preference to feathers or ribbons. No matter what the most popular style the wise thing to do is to buy a becoming shape. The small woman should beware of the

large hat, just as her larger sister should shun the small hat.

The most noticeable things about the new dresses are the wider skirts, normal waist lines, set-in sleeves and semi-fitted waists. Skirts measure at least two and a half or three yards around, some of them more, and the flare is given by the circular two-piece cut, or five-gored model. After so many years of high waist lines, the waist has gone back once more to its normal position, though on youthful figures the raised effect is still given by the girdle or sash.

Sleeves are long and set in to regulation sized armholes. Some have caps over the shoulders and there is a tendency to fullness below the elbow, with a flare at the hand. High-back collars, with a low finish in front are still in favor, though the lingerie models show the low neck.

Serges and gabardines in cloths, taffetas and crepe de chins in silk are just now the favored materials for dresses. Chiffons, marquisette and nun's veiling over the flowered silks are good for dressy wear. Just now black and white combinations are very popular, but this by no means excludes other colors. Gray, taupe, green, rose with sand, wistaria and blue have many admirers. DEBORAH.

HOUSEHOLD HINTS.

If you need a reminder when the grocery man comes, cut tablet paper into convenient strips and tack a bunch of them upon the kitchen or pantry wall, keeping a pencil near by. Then when you find an article will be needed just jot it down. This will often save a trip to town.—Mrs. S. B.

When making biscuit never use a rolling pin. After dough is on board make flat by pressing with palm of hand. Then cut a biscuit, with left hand tuck corner against dough where it has been cut. This makes a place to cut next biscuit. Go all around the piece. Cut rest of biscuits in same manner. This leaves no scraps.—Mrs. C. C. L.

FASHIONS BY MAY MANTON.

Our latest Fashion Book, containing illustrations of over 700 of the season's latest styles, and devoting several pages to embroidery designs, will be sent to any address on receipt of fifteen cents.



8591 Gathered Blouse,
34 to 42 bust.

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4 to 10 years.



8584 Short Coat for
Misses and Small
Women,
16 and 18 years.



8541 Dress in Military
Style for Misses and
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16 and 18 years.
The above patterns will be mailed to any address by the fashion department of the Michigan Farmer on receipt of ten cents for each.

Your New Home! Build It Yourself—and Save a "Ton" of Money.

You don't half realize how easily and cheaply you can build yourself a handsome new Home. If you did, you would be at it right now.

Just think! All the lumber for a Sterling Home comes measured and cut-to-fit! No slow hand measuring, no hand sawing, no trial fitting. Each piece comes plainly marked and numbered. You merely nail each part to place. Most farmers can do it themselves; anybody can do it with the help of a "jack" carpenter, for two-thirds of the carpenter work is done in our factory. This one feature saves you HUNDREDS of dollars.

In addition to that, we sell you your lumber direct from the forest—no "in-between" profits. Another huge saving.

Remember, too, there's no waste when you buy your lumber cut-to-fit, whereas the average carpenter wastes 18% to 20% by hand sawing. All this is saved.

Your total saving is FORTY CENTS on every dollar.

A fourth advantage is the time you save in erection.

You can be living in your Sterling Home before the framework of the ordinary house would be up.

Two Years
To Pay For
Your
Sterling
Home



THE "MARTINDALE"
\$187 Brings It

This handsome 5-Room Cottage can be erected in 7 to 9 days. Price and terms: \$187 down and \$5.20 per month. Total cost, \$312.



THE "MANOR"
\$441 Brings It

Large, modern 7-room Home with Bath. Can be erected in 13 to 16 days. Selling for \$441 down and \$12.25 a month. Our total price \$735.

Our price includes all Lumber cut-to-fit, all plaster, hardware, paint, etc.—everything from the ground up. (See Sterling Book, page 14.)

Our quality is absolutely THE BEST THAT MONEY CAN BUY. (See page 10.)

And these are Homes, not mere houses—the most comfortable, up-to-date, conveniently arranged Homes in existence. Designed by expert men and women whose life work is drawing Home Plans.

Sterling Homes are permanent structures—not portable. We have mills and shipping stations in Michigan, Florida, Texas and Washington. Hence, you get the benefit of our Prices and Service no matter where you live. WE GUARANTEE safe, prompt delivery and permanent satisfaction.

Send for this most astonishing Book. Send letter today for latest Sterling Book—positively the most remarkable Home Builders Book ever published. Whether you want a modest cottage, a bungalow or a two-story dwelling—whether you choose to pay \$300 or \$3,000, we can supply you. We have built a thousand Homes in a single season. Let us build yours. Let us save you FORTY CENTS on the dollar. And remember on a Sterling Home you can pay part cash and get 2 years' monthly credit on balance. Send now—today—and we will forward the Sterling Book to you by return mail.

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25 lbs. best Granulated Cane Sugar for 98¢ when ordered with other money-saving Larkin Groceries, such as flour, coffee, tea, canned vegetables, dried vegetables, ham, bacon, fish, cereals, crackers, preserved fruits, relishes, confectionery; laundry and toilet supplies of all kinds.

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WANTED—A girl or middle aged woman for State Psychopathic Hospital, Ann Arbor, Michigan. Good wages and permanent position. Reference required. Address J. B. Draper, Secretary, Ann Arbor, Mich.

Special Trial Order.

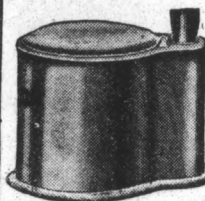
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Adrain, Mich.



Why Not have the comfort and convenience of an in door closet in your home. The Woverine Chemical Closet can be installed in any home at very small expense. No water or plumbing required. Can be set in most any room in the house. Gives you every convenience of the water closet enjoyed by city people. No need for you to endure the cold and exposure these winter days. Write at once for particulars. DAIL STEEL PRODUCTS CO., 709 Main St. Lansing, Michigan

100 Cents in Value FOR Every Dollar Spent Goes in the purchase of NEW CENTURY FLOUR

No one can ask more than that!

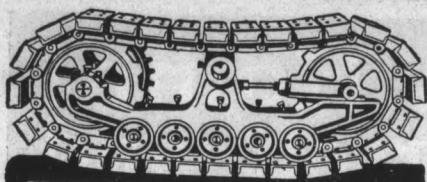
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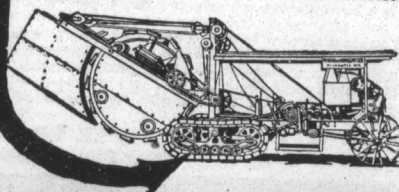


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fills these requirements exactly. The "P & H" Corduroy Grip Traction, illustrated above, gives it a secure footing. The self-cleaning excavating wheel cuts clean, smooth trenches true to line and grade, and cuts them fast and economically. All high speed gears are cut from solid steel blanks. All sprockets are steel. There is not a grey iron gear or sprocket on the machine.

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We pay all freight Don't fail to write. We have something mighty interesting to tell you.

The Ohio Galvanizing & Mfg. Co.
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Detroit Kerosene and Gasoline engines sent YOU on 30 days FREE TRIAL, guaranteed 10 years. Economical horse power, lowest prices; farmer agents wanted everywhere. Engine operates on gasoline, kerosene, alcohol, distillate or naphtha. Saws wood, grinds feed, churns, pumps, separates, makes light any job around the farm. Only 3 moving parts, no cams, gears, sprockets, etc. Send for "Common Sense Power Book." Detroit Engine Works, 149 Bellevue Ave., Detroit, Mich. 503



That's the verdict of hundreds who have used them and saved the middleman's profit. They wear well, look good and apply easily. Write to us for reasons, low prices, painting directions, and color-card. You will save money. SHEPARD PAINT CO. 23 E. Long St. Columbus, Ohio

DO YOU NEED FARM HELP? We always have able bodied young men, experienced and inexperienced, who want farm work. Our object is to encourage farming among Jews: no charges to employer or employee. If you need good, steady, sober men, write to Jewish Agricultural Society, 714 W. 12th Street, Chicago, Illinois.

Farm Commerce.

Bean Growers Form State Society.

MICHIGAN Bean Growers affected a state organization at Saginaw, Tuesday, March 23rd. Twelve of the important bean growing counties had representatives present to participate in the formation of the general society. Besides the regularly authorized delegates many others interested in the development and protection of the bean industry were there. Whatever the outcome of the effort may be it is certain that the charter members of the association were enthusiastic at this first session.

Earl Robinson, county agent of Saginaw county, called the meeting to order and explained the purpose of the gathering, after which Jas. N. McBride, special agent of the State Board of Agriculture for organizing the bean growers of the state and the several producing counties, set forth the conditions maintaining in the bean industry and presented the opportunities now in reach of the growers if they but organize and work together.

Temporary Constitution Adopted.

At the afternoon session a temporary constitution was adopted and provision made for a committee to revise same and present at the first regular meeting to be held at Flint some time between August 15 and September 15 next. The objects of the association as set forth in the constitution are:

- To secure better seed by selection, breeding, etc.
- To study and combat diseases.
- To arrange for the financing of the growers, so as to avoid the need of dumping their beans on the market faster than the demand will warrant.
- To carry on a campaign of education, by advertising, distribution of cook books, cooking demonstrations, etc.; to promote the more general use of beans as a human food; also to secure data upon consumption of beans.

(e) To secure and disseminate among the growers timely and reliable information as to bean crop and market conditions and to negotiate with selling agencies concerning compensatory prices; said prices to be based upon cost of production, size of available crop and general market conditions.

(f) To agree upon a standard of grades and to assist, by inspection, in protecting the reputation of these grades.

(g) To assist the growers in arranging for reliable selling agencies, so as to eliminate, as far as possible, the speculative feature from the market, to the advantage of both the grower and the consumer.

(h) To assist in securing a proper distribution of beans, so that all consuming centers be fairly supplied at

all times and that gluts be avoided.

(i) To assist in securing better transportation facilities, the settlement of claims, etc.

Under the head of the election of officers F. W. Swan, of Flint, was elected president and Jas. N. McBride, of Burton, was made secretary-treasurer to hold office until the fall meeting. A board of control is provided for to consist of a representative from each organized county. In the local organizations each member will be assessed a fee of fifty cents, one-half of which will be used to defray expenses of the local work and the other half to be paid into the treasury of the state society.

The extension of the work will be continued. In the counties already organized steps will be taken immediately to increase the membership and bean growing counties not now having associations will be visited by the secretary and the growers urged to co-operate in the work.

Jobbers Would Co-operate.

A feature which has been declared by the bureau of markets at Washington to be very unique is the willingness of the distributors or bean jobbers to co-operate with the growers in handling this crop. The great co-operative associations of the west were obliged to organize their selling agencies, but here the selling organization is complete and ready to do business at the outset.

In this connection the address of Mr. Welch, president of the Bean Jobbers' Association was interesting. He noted that last fall prices started low, then mounted to above the three dollar mark after which they declined to the present basis. He believes that through organization the growers can solve the problem of undue fluctuations

in prices during the marketing of a crop. This he maintained could be largely accomplished by lengthening out the marketing season. Now we sell in two months what it takes the country 12 months to consume. When the offerings of beans exceed the current demand there is opportunity for speculation. By delivering beans to the trade only as they are needed would eliminate the speculative feature and the only way this delivery can be successfully regulated is through the organization of the producers.

Some Advantages in Advertising.

Some of the results of advertising were discussed by Mr. Campbell, of Detroit. The first and greatest result of publicity work is letting the other fellow know what you have for sale. A second is the establishment of confidence in the article advertised. Again, advertising brings information to prospective users. It unfolds ways of using and tells of advantages so that people will be influenced to try the article, or if they have tried, to use it more. The world should know that well-cooked beans is the best all-around food we have. It should also know that Michigan and not Boston is the center of the bean industry.

How to provide a fund for carrying on an advertising campaign was the substance of an address by Mr. Hart, of Saginaw. Experience shows that it is necessary to a good market to have the demand a little better than the supply. So the problem in disposing of beans is to keep the demand up. This can be done through proper advertising but advertising costs money and since every grower and dealer will benefit by any increase in the demand the question of distributing the cost equitably is rather difficult of solution. Mr. Hart suggested that local elevator men be made the agents and that they solicit the farmers who deliver beans for funds, asking a half cent or so on every bushel delivered. The elevator men stand ready to contribute out of their own funds. In this manner he felt it would be possible to raise a neat sum for publicity work.

Will Advertise Holstein Milk.

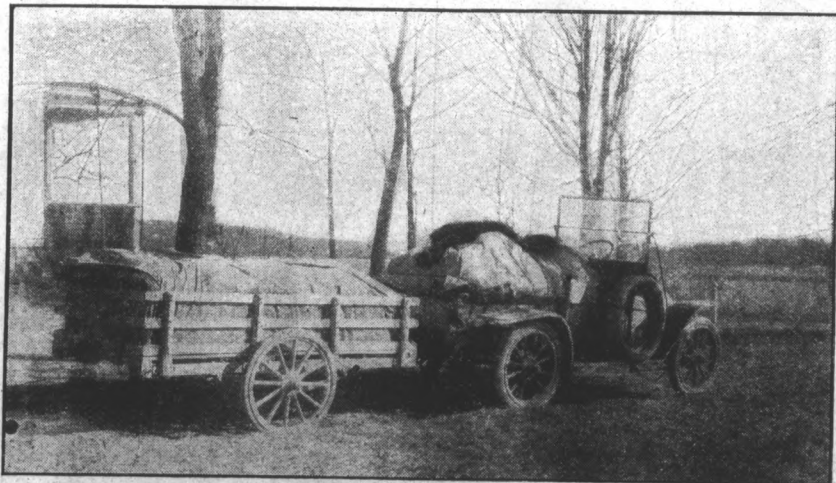
MEMBERS of the West Michigan Holstein Breeders' Association believe in advertising. At the spring meeting held March 20 in Grand Rapids, the society voted a publicity fund of \$50, to be expended soon in pushing the virtues of Holstein milk. An advertising committee was appointed, composed of M. W. Willard, C. Hunsberger and Peter Buth, to direct the campaign. Milk contracts for the season between producer and dealer for the Grand Rapids city trade will soon be made and on this account the regular spring meeting of the association, which is usually held in April, was set ahead a few weeks on request of some of the prominent members living near the city. The program of talks was also

arranged so as to correct any misapprehensions that may have arisen regarding the true value of the milk of the black and white cattle, and its good qualities were boosted without criticizing other breeds. Jersey, Guernsey and other cattle were well spoken of.

The City Milk Supply.

At the morning session C. Hunsberger, of Kent county, went somewhat into the milk situation in Grand Rapids. He showed that most of the milk being supplied the city trade at the present time is Holstein, even though a number of the men in the retail trade still have the name of other breeds on their wagons, in line with the old-time theory that rich milk must necessarily be yellow milk. It was stated that white milk can be richer in butter-fat than yellow milk, that the cream globules in Holstein milk are small, making this milk eminently well fitted for human consumption.

Secretary Harper stated that he had heard of some prejudice existing in Grand Rapids, with its origin traceable either to dealers who want to bear the market and buy cheaper of producers, or to dairymen opposed to this breed. He has communicated with Pres. Aitken and Secretary Houghton, of the National Holstein Breeders' Association, and finds that this body will co-operate in an educational campaign in western Michigan to the extent of furnishing literature and advice, but has no money for the purpose, the advertising fund for this year having been depleted. The foot-and-mouth



Auto-trailer Used by Don. Button, of Oakland Co., who Delivered the Forty Bushels of Apples, a Distance of 21 Miles, in One Hour Twenty Minutes.

disease has been costly to the national society.

Educating the Consumers.

In the afternoon M. W. Willard, of Kent county, spoke on ways and means of educating consumers in Grand Rapids to the true value of Holstein milk for family use. Highest authorities were given to show that Holstein approaches nearest to mother's milk and is an ideal food for infants, invalids and for humankind in general. Careful analyses have shown its superiority and it is being used exclusively in sanitariums, hospitals and state institutions. Experiments in feeding pigs and other animals were given to show that greater gains have been made in the use of Holstein milk. He alluded to what the Livingston county association has been doing in the way of advertising in the catalogs and he recommended newspaper, and possibly street car publicity in Grand Rapids. Just before adjournment Mr. Willard made the motion for an advertising fund already referred to, which was carried.

Elmer McCoy, of Jenison, said that getting people to use Holstein milk long enough to know its value would solve the problem. He cited several instances in his own family and elsewhere showing the excellence of this milk, and suggested a printed pamphlet or other literature, to be distributed among city consumers.

Overcoming Prejudice.

B. E. Hardy, of Owosso, told how he had successfully assisted a home dealer to overcome prejudice against Holstein milk and to establish a large local demand for it. Pamphlets issued by the national association of breeders giving a history of Holstein cattle were distributed in the city, particularly in homes where there were children, or where the stork was expected, physicians having been enlisted in the work, and the campaign proved successful.

Secretary Harper suggested that the birth columns in the city papers might assist in the proper distribution of literature.

A. R. Harrington, of Kent county, also made a plea for the proper education of city milk consumers to the fact that nearly all the milk sold in Grand Rapids is Holstein milk and he suggested that what ails this milk chiefly is the popular half-pint bottle of cream. Tests of market milk made by the city officials average three and one-half per cent.

Dudley E. Waters, a wealthy Grand Rapids banker, and breeder of Holstein cattle, urged advertising and creation of a big demand for this milk, clean barns and invitations to the public to visit the dairy farms.

Prof. Anderson, of the M. A. C., who was in the city on other business, entertained the members with a brief talk. "I believe in advertising, in direct and clean advertising," said he, "without speaking ill of other breeds. Emphasize the food value of your milk, its nitrogenous food value. I am surprised to learn of any prejudice existing in Grand Rapids regarding Holstein milk and didn't suppose its value as food was ever called in question. The laws of nutrition show that the food value of milk is not confined to the butter-fat and that pure cream is not the all in all. We feed our animals in the barns a balanced ration, then go in the house and eat what we like."

Kent Co. ALMOND GRIFFEN.

Crop and Market Notes.

Michigan.

Shiawassee Co., March 23.—Wheat and rye came through the winter in fine shape, but the freezing and thawing of late is injuring it somewhat. Roads are unusually good for the time of year. There is plenty of feed and live stock is in good shape. Farmers are making maple syrup and cutting wood. There is a considerable amount of wire fence being built, also a large

number of houses and barns under construction. There has been nothing made in feeding cattle this year. Wheat \$1.45; beans \$2.75; eggs 15c; butter 22c.

Eaton Co., March 24.—Wheat and meadows look good. Live stock is in good condition. There is not a large amount of feed in farmers' hands for home use. Not much marketing is being done. Wheat \$1.45; beans \$2.75; oats 52c; rye \$1; corn 70¢75c; potatoes 25c; butter 20¢25c; eggs 15c; steers \$5.50@7; calves \$8@9; hogs, live, \$6.25; lambs \$4@7.50; chickens 13c; butter-fat 27¢4c.

Lapeer Co., March 23.—Wheat and clover fields have been somewhat damaged by alternate thawing and freezing since the snow went off. Live stock of all kinds is looking fair. Plenty of roughage and grain to last through the feeding season. Horses are selling cheap at sales. Cattle prices not so high as a year ago. Hogs \$6.25; wheat \$1.46; corn 82c; chickens 11c. Farmers are hauling off their potatoes, which bring 22c per bu.

New York.

Genesee Co., March 23.—There is very little snow left, and roads are fair. Grain and meadows have been exposed and are rather brown looking. The amount and condition of live stock is about normal, and there is plenty of feed on hand for home use. Farms are changing hands at lower figures than usual, owing to scarcity of money. Some of the cold storage apples are being evaporated. Potatoes are being marketed, also some wheat and beans. Potatoes 22c; wheat \$1.40; beans \$2.70@3.10; oats 60c; hogs \$6.50; lambs 15c; butter 25¢35c; eggs 17c; chickens 14c; cabbage \$7 per ton; loose hay \$11@13 per ton.

New Jersey.

Monmouth Co., March 22.—Weather fine and spring plowing well under way. Wheat and rye not looking as well as they should. Meadows are poor on account of dry weather last fall. Roads are good. Live stock is looking well, and nearly all surplus stock marketed. Most farmers have enough feed on hand. Wheat and rye about all sold; some hay and corn still on hand. Wheat \$1.50; rye \$1.10; corn \$1; hay \$12@15.

Ohio.

Brown Co., March 22.—We have had no rain or snow for some time, and the roads are good. There has been more plowing this spring than usual. There is a large crop of spring pigs, and also spring lambs. Wheat and rye are looking well. Farmers will have plenty of feed for home use, and possibly some to sell. Butter 20c; eggs 15c; corn 75c; wheat \$1.50; hogs, choice \$6.75.

Indiana.

Daviess Co., March 22.—There has been very little rain or snow recently, and roads are fine. A great deal of spring plowing and spraying have been done. Wheat, rye and meadows are in excellent condition. There is more than the usual amount of live stock on hand, but in poor condition on account of scarcity of feeds, and most farmers are buying feed. Hogs \$6.50; cattle \$7.50; wheat \$1.40; oats 60c; corn 75c; hay \$18; butter 25c; eggs 16c; seed potatoes \$1.25.

Elkhart Co., March 22.—This month has been pleasant, with very little snow. Prospects are good for wheat and rye. There are very good clover meadows. Farmers are commencing to plow for oats. Live stock is doing well. Public sales are numerous and well attended. Wheat \$1.50; corn 80c; hay \$12; eggs 17c; butter 25c; potatoes are in poor demand, selling at 45¢50c.

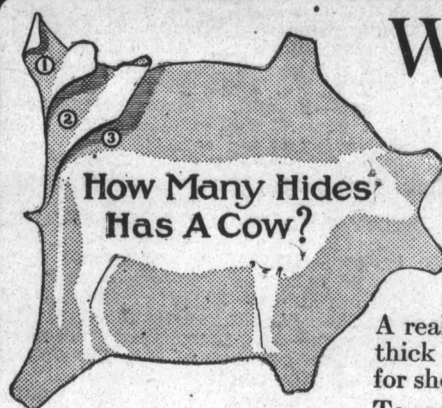
Illinois.

Marion Co., March 23.—We have had no snow this month, and very little rain. Roads are good. Wheat is damaged some by freezing and thawing but is now growing some. Rye and meadows are coming through the winter in good condition. Live stock has not wintered well on account of shortage of feed. There is no surplus of stock for sale except young horses and mules. Farmers are buying all their feed except silage. There is nothing marketed except dairy products and eggs. Butter 25¢30c; cream 29c; eggs 15c.

Missouri.

Vernon Co., March 22.—We have had considerable snow and rain this month and the roads are in bad shape. Small grains are looking well. Oat sowing is commencing. Live stock is coming through the winter in good shape, and there seems to be plenty of both roughage and grain feeds for the balance of the feeding season. (Continued on page 432).

"Try-a-bag" of fertilizer. Our brands are soluble and active, and not only increase yield, but improve quality and hasten maturity. Agents wanted. Address American Agricultural Chemical Co., Cleveland, Cincinnati, Detroit or Baltimore.—Adv.



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You, if you expect to buy an automobile,

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To save the by-product, some manufacturers split it into two or more thin sheets, coat and emboss it to make it look like grain leather. Hence $\frac{2}{3}$ to $\frac{3}{4}$ of all leather upholstery is coated splits.



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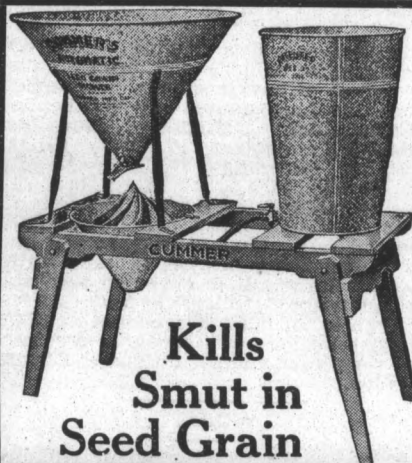
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It is on sale by John Wanamaker, Philadelphia; McCreery & Co., Pittsburgh; J. & H. Phillips, Pittsburgh; John Shillito Co., Cincinnati; Stix-Baer-Fuller Co., St. Louis; The Palais Royal, Washington, D. C.; Bedell & Co., Washington, D. C.; Stewart & Co., Baltimore, Md.; T. Eaton & Co., Ltd., Toronto and Winnipeg; Du Pont Fabrikoid Co., 90 West St., New York; Davison-Paxon-Stokes Co., Atlanta, Ga.; D. N. & E. Walter & Co., San Francisco, Los Angeles, Seattle and Portland; Henry P. Day Co., Los Angeles; and upholstery dealers generally.

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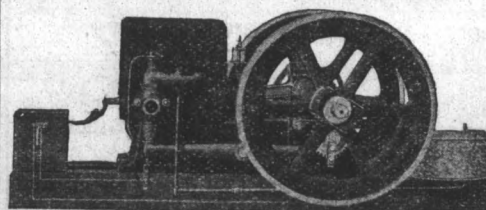
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Other sizes
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Machinery of all kinds for wood, iron and tin working. Belting, Pulleys, Shafting, Hangers, etc. Contractors Supplies, Builders Material, Rails, Beams, Angles, etc.

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Markets.

GRAINS AND SEEDS.

March 30, 1915.

Wheat.—The range of values during last week was lower than the week previous. The possibility of a break between Turkey and Germany and of a move for peace by the former seemed to have a depressing effect upon the market; not only this, but up until late last week crop conditions in this country appeared to be generally very satisfactory. On Monday, however, a recation seemed to have set in, and a large part of the loss was recovered by Tuesday. Not only did it appear that military operations abroad would likely continue for some time to come, but complaints began coming in from widely different sections that the wheat crop is suffering in this country. In some places there is a lack of moisture, Indiana farmers report that the plant is heaving, while in the southwest the Hessian fly appears to be getting in its work. The foreign demand was greatly improved Monday, the outsiders taking not only wheat but large blocks of flour. One year ago No. 2 red wheat was quoted at 98c per bushel. Quotations for the week are:

	No. 2	No. 1	May
Wednesday	1.55	1.51	1.55
Thursday	1.53 1/2	1.49 1/2	1.53 1/2
Friday	1.50	1.46	1.50
Saturday	1.48 1/2	1.44 1/2	1.48 1/2
Monday	1.50	1.46	1.50
Tuesday	1.53	1.49	1.53

Chicago, (March 30).—May wheat \$1.53; July \$1.23.

Corn.—Values here have followed closely the changes in wheat prices. Deliveries from farms have decreased, and the visible supply shows a substantial reduction. One year ago No. 3 corn was selling at 67c per bushel. Quotations are as follows:

	No. 3	No. 3
	Mixed.	Yellow.
Wednesday	74	75
Thursday	73 1/2	74 1/2
Friday	73	74
Saturday	72	73
Monday	73	74
Tuesday	74	75

Chicago, (March 30).—May corn 73 1/2c; July 76c.

Oats.—This cereal reflected the strength of the other grains on Monday and Tuesday. Reports on seeding in the southwest are somewhat conflicting; in some sections seeding has been completed under normal conditions, while in other places the cold weather has delayed operations considerably beyond the normal time for completing the work. The visible supply shows a small decrease. Primary receipts are of fair volume. One year ago standard oats were quoted at 42c per bushel. Quotations are as follows:

	No. 3
	Standard.
Wednesday	60 1/2
Thursday	60
Friday	58 1/2
Saturday	57 1/2
Monday	58
Tuesday	58 1/2

Chicago, (March 30).—May oats 57 1/2c; July 54 3/4c.

Rye.—This cereal has suffered a decline of a cent during the past week. The market is dull and steady with offerings small. No. 2 rye is quoted at \$1.16 per bushel.

Barley.—Quoted at 73@79c for malting at Milwaukee.

Beans.—A lifeless situation appears and prices are 10c lower. Detroit quotations are: Immediate, prompt and February shipment \$2.85; May \$3.10. Chicago trade is steady and featureless. Red kidneys are unchanged. Pea beans, hand-picked, choice, quoted at \$3.20@3.25; common \$3@3.15; red red kidneys, choice, at \$3.25@3.75. At Greenville beans are selling on a \$2.70 basis.

Clover Seed.—Market is firm and lower. Prime spot \$8.25 per bushel; March \$8.25; prime alsike \$8.40.

Timothy Seed.—Prime spot \$2.90. At Toledo prime cash \$2.70.

FLOUR AND FEEDS.

Flour.—Jobbing lots in one-eighth paper sacks are selling on the Detroit market per 196 lbs., as follows: Best patent \$7.50; seconds \$7.20; straight \$7.00; spring patent \$7.80; rye flour \$7.10 per barrel.

Feed.—In 100-lb. sacks, jobbing lots are: Bran \$28; standard middlings \$28; fine middlings \$32; coarse corn meal \$30; corn and oat chop \$29 per ton.

Hay.—Quotations are steady. Car lots on track at Detroit are: New, No. 1 timothy \$16@16.50; standard \$15@15.50; No. 2, \$14@14.50; light mixed \$15@15.50; No. 1 mixed \$14@14.50; No. 1 clover \$13@13.50.

Chicago.—Offerings are moderate and demand good. Prices are steady. Choice timothy \$16@16.50; No. 1, \$14.50@15.50; No. 2, \$13.50@14.

New York.—Steady. Prime \$22; No. 1, \$21.50; No. 2, \$20@20.50.

Straw.—Steady. Detroit prices are: Rye straw \$7.50@8; wheat and oat straw \$7@7.50 per ton.

Chicago.—Rye straw \$9.50@10; oat straw \$8@8.50; wheat straw \$7.50@8

DAIRY AND POULTRY PRODUCTS.

Butter.—Market is active and firm. Demand brisk. Prices one cent lower. Extra creamery 27 1/2c; firsts 25 1/2c; dairy 21c; packing stock 16c.

Chicago.—An increasing demand brought an advance of 1/2c. Market is in a healthy condition and plenty of good grade stock is moving. Quotations: Extra creamery 28 1/2@29c; extra firsts 27 1/2@28c; firsts 25@27c; seconds 20@24 1/2c; packing stock 18c.

Elgin.—A very slight improvement in the market brought an increase of 1/2c, the quotation for the week being 28 1/2c.

Poultry.—Market is easy and quiet. Fresh receipts are light but dealers have left-over stock to dispose of. Live.—Springers 17c; hens 13@18c; ducks 17@18c; geese 14@15c; turkeys 20c per lb.

Chicago.—No notable change in conditions. Market steady and buying is fairly active. Prices slightly higher. Turkeys 15c; fowls 11@16c; springs 13 1/2@17c; ducks 16c; geese 8@9c.

Eggs.—Market is easy with good consumptive demand. Fresh stock sells at 18 1/2c per dozen.

Chicago.—A firm feeling exists with prices slightly lower. Demand is good and supply liberal. Miscellaneous lots cases included 17@18c; ordinary firsts 17@17 1/2c; firsts 17 1/2@18 1/2c.

Veal.—Quoted steady at 12 1/2@13c for fancy, and 10@11c for common.

Pork.—Market is steady for dressed hogs, light weights selling at \$8 per cwt; heavy \$7@7.50.

FRUITS AND VEGETABLES.

Apples.—Demand is fair but is not active enough to please holders. Quotations: Baldwins \$2.25@2.75 per bbl; Greenings \$2.75@3; Spy \$3.25@3.50; Steele Red \$3.50@3.75; No. 2, 40@50c per bushel.

Chicago.—A firm feeling exists on the part of holders and prices have advanced although supply is ample. Prices as here quoted are for refrigerator stock: Michigan Baldwins \$2.50@2.75; eastern \$2.50@3; Kings \$3@3.25; Greenings \$2.75@3; Northern Spy \$3.50@4.50; Western box apples are selling for 75c@2.75 per box.

Potatoes.—Offerings are liberal and demand fair. Carlots 35@37c per bu. At Chicago the market is easy with receipts large. It is expected receipts will increase. Demand is fair. Michigan white, in bulk, are quoted at 37@43c per bushel; at Greenville receipts are very light and quotations are from 28@30c.

WOOL.

Transactions were of small volume largely because of a shortage in supplies. Prices are being well maintained with the tendency upward except for a few lines that have been held abnormally high. Interest in the fleece wool division is dull because the lines are practically depleted. Former values still rule and the probability is that no reductions will be made, at least until the new crop is coming forward. Michigan unwashed delaines are quoted at 33@34c; do. combing 34@37c; do. clothing 26@32c per pound at Boston.

GRAND RAPIDS.

The egg market opened firm this week at 17@17 1/2c and prices are expected to hold until after Easter. Dairy butter remains steady at 19c. Poultry is still hard to get, with live fowls readily bringing 15c. Quite a market is developing for day-old chicks, with prices ranging from a shilling apiece for Leghorns to 15c for Rhode Island Reds and other breeds. Grand Rapids was at one time quite a wool market but the amount sold here now is small, the market opening this season at a price around 25c for the best grades. No change is noted in potato and bean prices. Wheat is worth \$1.40; rye \$1; hay \$10@12.

LIVE STOCK MARKETS.

Buffalo.

March 29, 1915.
(Special Report of Dunning & Stevens, New York Central Stock Yards, Buffalo, N. Y.)

Receipts here today as follows: Cattle 100 cars; hogs 80 d. d.; sheep and lambs 40 d. d.; calves 2000 head.

With 100 cars of cattle on our market here today and Chicago reporting 16,000 and lower, our market on the best cattle was all of 15@20c per cwt.

lower than last week. There were three loads of Ohio cattle sold here today for \$8.80 that would have readily brought \$9 per cwt. last Monday. The fact of this decline is on account of the last week of Lent and Jewish holidays, and with the 100 loads of cattle they are not all sold, a few being left over in first hands. Plain weighty cattle not showing much fat nor quality were fully 25@35c per cwt. lower than last week, and light handy butcher cattle sold from steady with last week's prices to about 10c lower, excepting a few early sales that were made at strong to 10c higher than last week, but after the first round the market was easy and in many instances lower on all the light and butchering grades. Our advice to shippers would be to be careful in having cattle here next week, as the demand for Kosher beef will be seriously curtailed.

We had a moderate supply of hogs today, about 80 double decks, and an active and higher market on everything. Trading was brisk from start to finish, with everything outside of roughs selling at \$7.50 generally. A few heavy hogs sold around \$7.40; roughs \$6.25@6.50; stags \$5@5.50. Market closed full steady and everything sold.

The market was active today on lambs and sheep, with prices 15c higher than the close of last week; most of the choice handy lambs selling at 11c. Look for steady to lower prices balance of week with moderate receipts.

We quote: Handy lambs \$10.85@11; cull to fair \$8@10.75; yearlings \$9.50@10; bucks \$5.25@6.50; handy ewes \$8@8.25; heavy ewes \$8@8.25; wethers \$8.75@9; cull sheep \$5@6.50; veals, choice to extra \$11.75@12; fair to good \$8.50@11.50; heavy calves \$6@8.

Chicago.

March 29, 1915.

Cattle. Hogs. Sheep.
Receipts today..16,000 24,000 11,000
Same day 1914..20,391 35,170 23,245
Last week.....31,738 127,922 57,392
Same wk 1914..40,726 122,359 101,971
Shipments from here last week amounted to 7,175 cattle, 10,787 hogs and 5,977 sheep and lambs, comparing with 17,547 cattle, 39,434 hogs and 28,620 sheep and lambs a year ago. Hogs received last week averaged 237 pounds.

Holy Week opened with a moderate Monday cattle supply, but there were enough for the demand, and at a late hour it was thought that prices would be no better. Offerings were mostly in the free division. Hogs advanced 5@7 1/2c over Saturday's prices, with sales at \$6.45@6.90, the best pigs bringing \$6.45. Sheep and lambs were scarce and held more firmly.

Cattle prices took several upward turns last week because of continued small supplies, and while fat beefs showed the greater part of the advances, even the less attractive offerings were placed on a higher level.

Hogs suffered several declines in prices last week, following the recent firmness, killers asserting themselves and refusing to operate except on their own terms. Shippers usually operated sparingly, so that outside competition was lacking. The packers' policy seemed to be to let the market down by notches, and owners who had been waiting for a spring advance were considerably discouraged.

Sheep, yearlings and lambs have all sold at extraordinarily high prices recently, even after breaks in values,

receipts running far behind those of a year ago in numbers, while there was a good demand on local account, although the shipments from here made a poor showing as compared with those seen at the same time last year. Woolled flocks closed as follows: Lambs \$7@9.85; yearlings \$7.75@8.90; wethers \$7.25@8.15; ewes \$4.75@8; bucks and stags \$5.75@6.50. For lambs weighing from 90 to 100 lbs. buyers paid \$8.50@9.65, and shorn lambs brought \$7@8.25.

CROP AND MARKET NOTES.

(Continued from page 431).

Wheat \$1.40; corn 75c; oats 50c; butter 22c; eggs 16c; chickens 13c; ducks 14c.

Kansas.

Franklin Co., March 22.—We have had one heavy fall of snow and several flurries this month, and there is plenty of moisture. The ground is still too wet to permit work in the fields. No oats sown yet, though they are usually sown here in February or the first of March. Wheat on bottom lands looks fine and on uplands fair. Meadows are also in fair shape. Live stock is in good condition, though very little was kept for market purposes. There seems to be plenty of feed for home use, and quite a few have silage and hay to sell. Eggs 15c; cream 23c; silage \$4 per ton; alfalfa \$15; timothy \$15. There are already lots of young chicks hatched.

Iowa.

Osceola Co., March 22.—We have have had a few thawing days, but the snow is not all gone yet, and roads are bad. Farmers are busy grading grain, repairing equipment, hauling manure, and doing everything to hasten operations when weather permits active spring work. Not much grain being moved, and prices are: Oats 54c; corn 63c; barley 78c; wheat \$1.20; butter-fat 25c; eggs 14c.

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A Plastered Clay Block Silo—An Ideal Silo
Combines the Merits of All Other Silos. Hollow walls. No Freezing. Plastered walls, no air through mortar-joints. Permanent. No Up-keep. No Worries. Waterproof walls. Perfect Ensilage. Individual doors. Strongest possible door-line. Built by Experienced Masons. Guaranteed. The Only Perfect Silo. Address: PORTLAND SILO COMPANY, Silo Bldg., Portland, Indiana.
Distributors for Silberbach Ensilage Cutters.

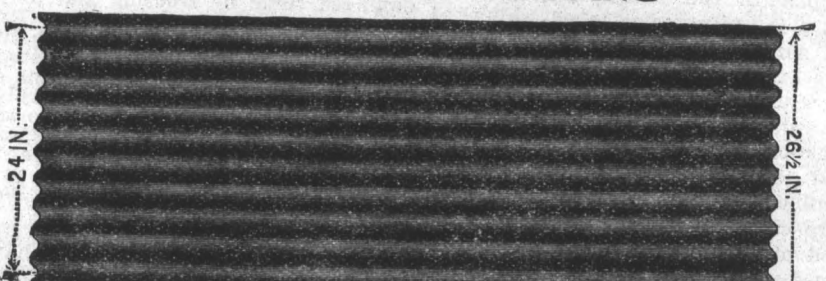
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SEND YOUR NAME and address, with names and addresses of 5 friends and receive FREE by return mail, RECEIPT BOOKLET showing how to save half the cost on many articles of food and have the best. Address: Mrs. W. T. Price, 1610 Penn Av. N., Minneapolis, Minn.

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that's the cost per year on basis of service. They last 20 to 25 years. Average cost \$13. Save labor, time, horses, roads, money. Put a set on your wagon at our risk. Write for catalog and prices.
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Because THIS TOOTH CUTS YOUR HARROWING TIME IN TWO. Once over the ground with this sharp cutting edge, it better, two times over with an ordinary harrow. SAVES YOUR HORSES. You can pull a knife through the ground better than you can pull a lead point through. This is why the Bokop Harrow pulls easier than any other. PULVERIZES PERFECTLY ANY SOIL. It cuts through it instead of pushing it. It does not pull the roots of the growing grain out for every bit of moisture in the soil. And because THIS CONSTRUCTION SAVES DELAYS AND REPAIR BILLS. It is a solid steel, tapered, strong and enduring. With only one part or broken, and there are no springs, no bolts, no moving parts of any kind to break. The double-toothed tooth makes and so it never wears out. It is a real money saver. You are getting an extra crop this year for the price of a single one. If you are a farmer, you will want a Bokop Harrow. Write to THE WELDING CO., Box 100, DEFAUNCE, OHIO.

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THE NILES IRON AND STEEL ROOFING COMPANY, Dept. 14, NILES, OHIO

THIS IS THE FIRST EDITION.

The first edition is sent to those who have not expressed a desire for the latest markets. The late market edition will be sent on request at any time.

DETROIT LIVE STOCK MARKETS.

Thursday's Market.

March 25, 1915.

The local stock yards opened again this week after having been closed nearly a month for disinfecting. No cattle can as yet be unloaded here but calves, sheep and lambs and hogs may come as usual and interstate shipments may be made for immediate slaughter to eastern and western points having government inspection. The run here was very small and no doubt will be until we are again open for cattle.

The few sheep and lambs on sale brought about the same at the yards that they have been bringing for the past week at the packing plants. The top grades bring \$9.50@10 per cwt., very few are coming here at present.

Veal calves are in active demand at the yards and sold well, with bulk of sales at \$10.50, with a few choice at \$11, and common and mediums at \$7@9.50. There will be a good active demand at the yards from now until Easter as they are wanted for this trade.

The hog trade was \$7 at packing plants off the cars without feed or water, for good grades, and packers were bidding \$6.85 at the yards on Wednesday.

The hog condition is in peculiar shape at present. Chicago, on account of not being able to ship out, is about \$6.70 for tops. Buffalo is \$7@7.70 and Detroit, on account of being able to get them from Chicago is \$6.85 at yards Thursday for good grades.

Cattle.

Receipts at yards none; all cattle must go direct to packing plants. Best heavy steers \$7.50@8; best handy weight butcher steers \$6.50@7.25; mixed steers and heifers \$5.50@6.25; handy light butchers \$5.50@6; light butchers \$5@5.50; best cows \$5.50@5.75; butcher cows \$5@5.25; common cows \$4.25@4.50; canners \$3@4; best heavy bulls \$5.25@5.50; bologna bulls \$4.50@5.

Veal Calves.

Receipts 134. Market steady. Best \$10.50@11; others \$7@10. Bishop, B. & H. sold Rattowsky 8 av 130 at \$9.75, 2 av 170 at \$11, 28 av 140 at \$8, 5 av 170 at \$10; to Mich. B. Co. 17 av 170 at \$10, 1 wgh 180 at \$9; to Sullivan P. Co. 8 av 150 at \$10.50, 12 av 170 at \$10.

Sheep and Lambs.

Receipts 214. Market steady. Best lambs \$9.50@10; fair do. \$8@9; light to common do. \$7@8; clip lambs \$7@8; fair to good sheep \$5.50@6; culls and common \$4@5.

Bishop, B. & H. sold Mich. B. Co. 22 lambs av 90 at \$10, 52 do av 80 at \$7.60, 10 do av 70 at \$10, 7 do av 70 at \$9; to Youngs 10 do av 91 at \$9.75, 29 do av 80 at \$9.50, 28 do av 60 at \$9.50, 3 sheep av 140 at \$5.50, 2 do av 120 at \$5.50.

Pearson & S. sold Mich. B. Co. 31 lambs av 65 at \$9.25, 12 mixed av 80 at \$6.50; to Rattowsky 4 sheep av 80 at \$6.

Hogs.

Receipts 2713. Market \$6.85 at the yards.

Bishop, B. & H. sold W. T. Church 500 av 190 at \$6.85. This purchase was made as a speculation, for reshipment under modified quarantine, packers not competing.

LIVE STOCK NEWS.

Hogs have kept coming to market freely, owners evidently being averse to holding after their swine reach a fairly large weight, although the average weight of the receipts in the Chicago market has increased within a month from 226 to 234 lbs. Prices are much lower than in recent years, but at the lowered prices of corn in feeding districts, there is a profit in making pork and lard.

Provisions have followed the downward course of hog prices, everything having sold down to a much lower basis, and recent sales of pork in the Chicago market were as much as \$4.35 per barrel lower than a year ago, with similar declines in prices for lard and short ribs. Hog receipts in western markets ever since the first of last November have been far larger than a year ago, and the production of cured meats has been much faster than domestic and export purchases warranted, the result being heavy accumulations.

D. D. Cutler, of the Northwestern Railroad says: "In Iowa, Minnesota and South Dakota hogs are plentiful. I never saw as much corn in that territory at this season. The advance guard of the spring pig crop is squealing lustily, and the farmers are staying with their hogs."

Studebaker

WAGONS BUGGIES HARNESS



A TEST THAT HAS LASTED 37 YEARS

I am the owner of a Studebaker wagon I bought in 1877 from a man by the name of Blauvelt, in Paterson, N. J. He bought it the year previous at the exposition in Philadelphia, 1876, making the wagon about 38 years old. It has been in use ever since and I am using it now.

Henry DeRonde,
Spring Valley, N. Y.

His Studebaker came from the "Centennial," at Philadelphia in 1876

AWAY back in 1876—the year of the "Centennial" in Philadelphia—Dealer Blauvelt of Paterson, N. J., bought a Studebaker Farm Wagon there and sold it, a year later, to Henry DeRonde of Spring Valley, N. Y.

The wagon has been in constant use ever since, and is in use now—a long term of service for a wagon.

But Mr. DeRonde's wagon is a Studebaker, and long-lived Studebaker Wagons are found all over the United States.

Built for lasting service

You see, it is the way the Studebaker is built that makes it last so long. Air-dried wood, tested iron and steel, good paint and varnish, all count.

But the main fact is that Studebaker has been building wagons for 63 years and knows how.

Studebaker could not afford to build a cheap wagon. The motto of the house for six decades has been: *build not the cheapest, but the best.*

Any wagon salesman will tell you that a Studebaker wagon is built to last. And long after an ordinary wagon has been sent to the scrap heap a Studebaker keeps right on doing its work and earning money for its owner.

Suppose it does cost a few dollars more, isn't the increased life of a Studebaker worth it?

Studebaker Buggies and Harness are also built to outlast others.

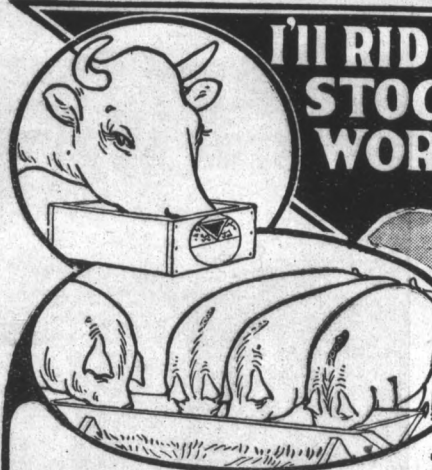
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I'LL PROVE IT BEFORE YOU PAY

I Want You To Know The Value of SAL-VET

I want you to feed it at my risk—I want to prove to you on your own farm that SAL-VET will rid your stock of worms—put them in healthy condition—easier to keep on no more feed—more profitable in every way, and less liable to disease. I don't

want you to send me a penny in advance—just mail the coupon. I'll ship the SAL-VET just as agreed—no money down—let you feed it 60 days—and if it does not do what I claim, then I'll cancel the charge. Is not this a fair, open offer?

The Great LIVE STOCK Conditioner

is the medicated salt which contains no anti-mony; is fed without trouble; no dosing or drenching. All animals need it—take it readily—and so do profitable, do better, act better, and are in better shape to resist disease.

SAL-VET

The Great WORM Destroyer

having worms, just full of them. Stock fed on SAL-VET grow thrifty and

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"SAL-VET is certainly a great medicine. I have been feeding it all winter so far; since I started my stock are better than ever before."—ALBERT MEANS, Waltham, Nohr.

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Fill out coupon, tell me how many head of stock you have, and I'll ship you a 60 day supply of SAL-VET. You simply pay the of SAL-VET. Feed it according to directions. If SAL-VET has not done all I claim, and you report results in 60 days then I'll cancel the charge, and you won't owe me a cent.

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We Are Commission Merchants—We can sell your Dressed Calves, Pork, Beef, Eggs, Potatoes, Apples, Onions always at top market prices. Write Us—Ship Us. Naumann Commission Co., Eastern Market, Detroit, Michigan. References, Peoples State Bank.

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GOOD FARMS around Lansing. East Lansing properties. California lands. J. D. TOWAR, East Lansing, Michigan.

FOR SALE—160 acres located in Antrim county on West Michigan pike, near school, good soil, buildings and orchard, well watered, easy terms for quick sale. WILL KNIGHT, Route 1, Central Lake, Mich.

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Near Saginaw and Bay City, in Gladwin and Midland Counties. Low prices. Easy terms. Clear title. Write for maps and particulars. STAFFEL BROTHERS, 15 Merrill Building, Saginaw, (W. S.), Michigan.

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Farm To Exchange—Want to exchange my farm in Portales, N. Mex., U. S., for a farm in Michigan. My farm has 160 acres, sandy loam, small orchard, shallow water, close to county seat. Have you a farm in Michigan to exchange for it? Give full description of yours and write me for details regarding mine. Geo. F. Williams, Box 154, Portales, N. Mex.

FOR SALE—160 acres, 25' plowed, 75' about ready, good soil, 5 acres young timber, well fenced, good roads, near schools, church, village and railroad station. Price \$6400. S. W. HOPKINS, Isabella County, Mt. Pleasant, Michigan.

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adjust for wide or narrow rows and spray as fast as you can drive. Power always strong, both wheels are driving wheels, automatic agitation of liquid and cleaning of strainers. We make Bucket, Barrel, Power Orchard Sprayers, etc.—the world's best line.

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Our All kinds trees & plants Grow Free catalogue. Special prices on apple or peach. No San Jose Scale Here. We pay freight. Salesmen wanted. Outfit free. Write at once. **MITCHELL'S NURSERY, BEVERLY, OHIO.**

BEARDLESS BARLEY—\$1.20 per bushel recleaned, bags inc. **H. L. COLE, Palmyra, Mich.**

A Successful Young Orchardist.

ONE of the chief objections to farming of any kind is the difficulty the young man experiences in getting started. This is becoming more difficult on account of the increasing value of land, the higher cost of labor, etc., all of which makes it necessary to have a good amount of capital to become established. If one endeavors to obtain this capital by hiring out and saving it from his wages, the process is so slow that it is discouraging, and if he borrows the capital necessary to establish himself, the payment of interest is often a serious handicap during the first few years. Because it is so difficult for a young man to get started in farming work, the experiences of one who has successfully done this is always interesting.

In Van Buren county, in one of the principal apple shipping towns of that

sisted of 1,400 barrels, which sold for \$3.60 per barrel, f. o. b. at the station, and that year he paid \$4,500 toward the purchase price of the place. The same year from the peach orchard on the other place he sold 2,000 bushels, for \$1.25 per bushel. In this orchard the year before he also had 2,500 bushels which sold for \$1.50 per bushel. In 1913 this peach orchard produced only 700 bushels, and as it was a year of a short peach crop, he received as high as \$2.50 per bushel.

Most people would call Mr. Low a lucky fellow and would say that circumstances which would allow for such a big start in orcharding would seldom present themselves to others. However, Mr. Low's experiences have not been all of the rosy and lucky kind. A few years ago a most promising young Keiffer pear orchard of 1,600 trees was struck with the blight

sandy loam soil and had been given extra good care and fertilization, so that the trees made a very vigorous growth. It was due to this vigorous growth that the blight made such rapid spread through the orchard. Many of the trees are now having new heads formed on them and care is being used to keep the growth in check so as to make the trees more immune to the blight.

Mr. Low has also had crop failures. The Duchess orchard two years ago did not have enough fruit in it to make it worth picking. The orchard blossomed quite well, but being on low land, the frost caught the blossoms. On account of the susceptibility to frost, orchard heaters will be used in this orchard hereafter when necessary.

Very Thorough in His Work.

In his orchard methods Mr. Low uses all the accepted ways of orchard care. He never takes a chance by neglecting anything which he thinks the orchards need, and if he errs at all it is in overdoing, the care of the pear orchard mentioned above being an indication of that. He is very thorough in spraying the four accepted times, and more if necessary. Included in the application at the pink of the blossom he uses arsenate of lead, not because it will especially control anything at that time, but as a possible protection against the attacks of the spring canker worm or other insects. In cultivation and pruning his methods are not different from those usually followed, unless it be that he follows them more thoroughly than others.

Studies Market Conditions.

A great factor in the success of this young man is his way of handling the harvesting and marketing of his fruit. He is very exact in the grading of his fruit, and will allow absolutely nothing but an honest barrel to be packed in his orchard. He has always stamped the barrels with his name and the grade because he knows that each barrel contains fruit which he can back up with his name. He also makes it a point to become thoroughly acquainted with the market conditions, so that when the buyers come he can easily judge whether the prices they offer are fair or not. With an honest pack and a thorough knowledge of the market he can be confident in his refusal or acceptance of the buyers' offers. When he disposed of his 1912 Duchess crop, he had repeated offers



Honest and Careful Packing Has Been Responsible for Premium Prices.

county, is a son of a doctor who, seeing the success of some of his father's patients had made out of the orcharding business, got the fruit-growing bee in his bonnet. This fruit-growing idea entered his mind when he was still working for credits in the local high school. This young man is George M. Low, who is considered by many as one of the few who really know how to grow apples.

Making the Start.

Mr. Low was graduated from high school in 1909; in 1908, a year before his graduation, his fruit growing ideas took practical form. That year he rented an orchard which he re-leased to another for the care of it, giving him one-half share of the crop. The 350 trees in the orchard cleared him enough to buy his spray rig. During the following year he stayed out of school when necessary to spray the orchard, and in August sold the crop on the trees for \$1,500. Following such a successful year, and in order to keep himself busy the next year, Mr. Low rented another orchard consisting of 1,600 Duchess apple trees and 600 pear trees. He rented this on shares, with the option of buying it after the first year. This he bought in 1912 for \$10,000. In 1911 he also bought an 80-acre farm on which there were 5,000 peach trees, 1,600 pears, 1,000 young apple trees, and four acres of grapes, for which he paid \$15,000. In order to accomplish these purchases he formed a company with his father, who acted somewhat as financier, and whose connections in this matter enabled Mr. Low to get better credit. Aside from this, his father was practically a silent partner, Mr. Low having practical charge of the entire business.

Some Good Prices.

With reference to results of this—what many might consider a case of high financing—it can be said that Mr. Low was fortunate as well as industrious, and a good manager. The 1912 crop of the Duchess orchard con-

and over 1,000 of them were almost entirely ruined. This orchard had been given very good care, but had not given any returns, as it was just about ready to come into bearing when the blight struck it. Mr. Low immediately called upon the station authorities and had a man there for a week who had considerable experience in the control of blight in the west. Radical measures for the checking of this trouble were undertaken; cultivation was stopped immediately and all of the blighted limbs were cut



The Duchess Apple is a Profit Producer for Mr. Low.

out, great care being used to disinfect for his fruit, but none of them, he the tools and the wounds after each thought, were high enough. He held cut was made. In many cases over off until the harvesting began and one half the tree was cut away, and the car was loaded when a buyer offered orchard which was once the pride of him five cents less per barrel than the Mr. Low's heart was a hard sight to price he held for.

Results of Proper Packing.

An instance of what honest packing and proper labeling with the grade and name and address of the grower may do, was shown when a buyer shipped a car of Mr. Low's Duchess to New York. Fourteen inquiries for more fruit were received because the

DEPUY'S SEEDS HI GRADE SEEDS

Are the top notch in Quality. They mean Better Crops, Bigger Profits. They represent the best efforts of some of the world's greatest experts.

Our beautifully illustrated FREE CATALOG will tell you all about them.

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Will stand a temperature of ten degrees above zero without injury and mature heads fifteen to thirty days earlier than hot-bed or frame-grown plants. They should be planted in the field a month or six weeks earlier than your home-grown plants. The land freezing or plants being covered with ice, sleet or snow will not injure them. We want to have the merits of our plants tested by every person growing cabbage for home use or market. We will give, free of charge, 25 plants, postage paid, to any person who will write a postal for same. If you want a larger quantity, our price by parcel post, postage paid, is 100 plants for \$5; 500 for \$1.25; 1,000 or more at \$2.20 per 1,000. Will have hardy, field-grown tomato and sweet potato plants later on.

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Clover, Timothy, Alsike, Alfalfa and all kinds of Pure Field Seeds direct from producer to consumer. Free from noxious weeds. ASK FOR SAMPLES. A. C. HOYT & CO., Box M, Fostoria, Ohio

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SWEET CLOVER SEED—White and large biennial yellow. Prices and circular on request. EVERETT BARTON.

SEED CORN—BEST VARIETIES Michigan Grown. YOUNG-RANDOLPH SEED CO., Owosso, Michigan.

Garden Seeds—Wholesale price to you 5c per oz. for vegetable seeds. Write for Catalog to day. ALLEN'S SEED HOUSE, Des. M. Geneva, Ohio

Choice SEED POTATOES Northern Grown CATALOGUE SENT ON REQUEST NORTHERN SEED COMPANY Box 26 Grand Rapids, Michigan.

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FOR SALE—Choice Dahlia Tubers, 75 varieties to select from. LUCY O'HARROW, Clarksville, Michigan.

Mr. Fruitman—Get your fall-bearing strawberry plants of the man getting berries. The Francis has no equal, 75c per doz., \$4 per 100, post paid. Tindall the Fall-bearing strawberry man, Boyne City, Mich.

NEW STRAWBERRIES CATALOG FREE to all Reliable, interesting and instructive—All about the New Strawberry varieties and other important varieties. Address C. N. FLANSBURGH & SON, JACKSON, MICH.

dealers were so pleased with this one car.

While luck may have been a factor in Mr. Low's success, the careful observer would find that thoroughness and confidence were the most important. Both of these are found to a great degree in all successes which did not "just happen." In fact, they are to an extent inseparable. Confidence is inspired by the results of thoroughness. The thoroughness with which he studied and practiced the fruit business gave him further confidence in himself and his work. While, on the other hand, his confidence in the results that doing things properly and thoroughly would bring, caused him to undertake what he did.

THE BEN DAVIS APPLE.

Probably we are all agreed that there are worse apples than the much criticized Ben Davis. Most of us can remember a time when this same apple was the cynosure of all horticultural eyes. Perhaps if the laudation had been more moderate, the reaction from practical experience with Ben Davis would not have hit us so hard. Certain it is that many a heavy investor in Ben Davis trees has wished many times that he had his money, time and labor back, or that he had invested in more well tried apples. I have a few Ben Davis trees, more than I wish, and shall try grafting some, but shall keep one or two trees as an emergency apple, that is, an apple which is quite liable to give fruit in the off season.

Passing from the opinions of growers, we notice what seems to have been in the minds of nurserymen with regard to the Ben Davis apple. It appears to the observer that nurserymen in their eagerness to meet a kind of "watered stock" demand for this apple, and which they anticipated, overstocked themselves, and as the demand for this kind of apple decreased there was no outlet for them, but to fabricate in orders for trees, by putting in liberally of Ben Davis stock, even where no Ben Davis trees were ordered. This was true in my own case, and in the case of a neighbor. Not a Northern Spy nor a Snow apple did I get, though I ordered both, but I got Ben Davis without ordering any.

My neighbor suffered more than I. Out of a small order for 24 trees, in variety, but no Ben Davis, seven turned out to be Ben Davis trees. I am reliably informed by a friend, of an instance in which a neighbor bought and planted 100 Spy trees from a Michigan nursery, and after waiting until the trees reported in fruitage, there were four Spy trees and 96 Ben Davis. Perhaps others have had similar experiences. No wonder we go slow on catalog statements, newspaper advertisements, and the picture books and blandishments of traveling salesmen! It is a burning shame to so impose on the helpless and unsuspecting grower.

Doubtless the Ben Davis apple has many praiseworthy characteristics, but most of us like variety, and so we entreat nurserymen not to spread Ben Davis on quite so thick when filling our orders for nursery stock. In these days growers are getting to know some things on their own account, and if they think they need more Ben Davis than anything else, why, let them say so in black and white on their contract, then no grouchy feeling will follow, after their trees have come into bearing.

Kent Co. H. A. DAY. The question of getting varieties true to name is the most important one involved in the relations between the nurseryman and the fruit grower. No nursery that is in the business to stay can afford to wilfully substitute other varieties for those ordered, as nothing reflects upon the reputation of a nursery more than to have varieties prove to be other than what they were

sold for. A reputable nursery will, therefore, use every means to check such occurrences.

On account of the nature of the work, mistakes are likely to occur, and do occasionally occur, even with the best of nurserymen. It is easy to get the cions or buds mixed at propagating time or to get the labels mixed at digging time, but when such things do occur, even after the greatest care has been used, reputable nursery concerns will do the right thing to rectify the error.

In all businesses there are both the honest and the dishonest kind. On account of the nature of the nursery business, it makes a fertile field for those of dishonest tendencies. Therefore it is important that one refrain from doing business with the fly-by-night nurseries and agents, but deal with those of established reputation. A nurseryman who advertises is a safe proposition because the fact that he is advertising regularly, is an indication that he is planning for future trade.—Eds.

TROUBLE DEPARTMENT.

Diseased Grapes.

I have a vineyard in which the grapes fall off if the vines are shook a little. Can you give me a remedy for the trouble or should I cut the whole thing down?

Ottawa Co. M. Van H. The cause of grapes rattling off the bunch when shook a little is either due to the attacks of some fungus disease or to faulty nutrition. In uncared for vineyards both of these causes may be factors in the trouble. Unpruned vines occasionally bear more fruit than they can properly mature, and to properly rectify this trouble one should prune the vines, if they are on trellises, back to four arms each, the arms consisting of last year's growth. These arms should be cut back to about ten buds each or, in other words, when the pruning is done there should be left on the whole vine about forty buds.

One cannot get satisfactory results in grape growing unless he sprays, as the grape is subject to the attacks of numerous insects and diseases. The following method of spraying is the accepted one, and one which gives good results when thorough work is done. The first application should be made when the new growths are about eight inches long, another just before the blossoms open, and the third application after the entire grape cluster has blossomed. The first application is the most important, and should not be skipped under any consideration. The other applications may be omitted with fairly good results. It would pay anyone, however, to put on the three applications suggested.

Bordeaux mixture and arsenate of lead make an idea combination for spraying grapes. The Bordeaux mixture for this purpose should consist of four pounds of copper sulphate and five pounds of lime to 50 gallons of water. The arsenate of lead should be used at the rate of three pounds to 50 gallons.

GARDEN POINTERS.

Rotate your garden crops. Plant radishes remote from the track infested by the wireworm last season.

Do not plant potatoes in the same old place and invite the scab.

Carrots grow well in soil enriched with the cleanings from the hennerly without any other fertilizer.

Lettuce must not be sown where the soil is too dry or light. Parsley will stand such soil much better and should be grown in every garden.

Cabbages do well after the beans but not after early potatoes.

Work a little slaked lime into the soil where your cabbages are to be grown, in order to prevent club root.

Penn. H. W. SWOPE.

"Two fairs for one fare"



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Official Denial

No War Tax on Homestead Land in Canada.

The report that a war tax is to be placed on Homestead lands in Western Canada having been given considerable circulation in the States, this is to advise all enquirers that no such tax has been placed, and there is no intention to place a war tax of any nature on such lands.

(Signed) W. D. SCOTT, Supt. of Immigration

Ottawa, Can., Mar. 15, 1915.

Mention the Michigan Farmer when writing to advertisers.

Practical Science.

THE FLY NUISANCE.

BY FLOYD W. ROBISON.

The fly nuisance goes directly hand in hand with the mosquito nuisance. Both are preventable and each has exercised a very great influence on man and domestic animals.

In the rural communities one is about as bad as the other except that there are periods during the year in some communities when mosquitoes are not very troublesome, but all during the summer months, in the cities as well as in the country, flies are a constant source of annoyance and at the same time a fruitful source of disease. Flies are, of course, very much less troublesome in the cities than in the country, although that is an expression which should be stated in a comparative sense only, for to secure immunity from the action of this pest requires extreme vigilance on the part of the home-keeper. Various methods have been proposed from time to time to combat the fly nuisance. Most of these methods have dealt with the screening of the home and the reduction of the number of flies through the killing of the adults.

Remove the Source.

Science has proposed a much more rational method of handling the fly nuisance and it is somewhat similar to the method proposed for the eradication of mosquitoes. This is a removal of the propagating or breeding opportunities for the fly. After the deposition of the eggs from the female fly, the early life of the insect is passed in what is known as the larvae stage. It is during this period that the destruction can be most easily accomplished. In fact, the most effective plan is to go a step farther back than this and remove the places where the eggs are deposited and in this way prevent any of them from incubating. Flies breed and lay their eggs in filth and particularly certain refuse food materials.

Meat scraps furnish an excellent place for the deposition of eggs because when the eggs have incubated the young maggot has readily at hand the food material which it most relishes. So it will be found that in the garbage removed from the table and left exposed to the air, where food products, and particularly meat products, are allowed to decay, generating in this way aromatic products which attract the flies, eggs are deposited in these places and in the course of a comparatively short time the tiny little maggots will have been developed and go on ravenously feeding upon this refuse material.

In the cities the abatement of the fly nuisance consists almost entirely in removing these opportunities for the depositing of the eggs. The covered garbage pails assist in the accomplishment of this end very admirably but a glance at the alleys of the cities during the summer will soon convince the inquirer that this is not sufficient, that some means must be devised to keep these pails covered, and to remove the other debris which accumulates as well.

The Fly is a Bigger Problem on the Farm.

On the farm the problem is not so simple for the barns and barnyards, which usually, and of necessity, cannot be a great way removed from the home, are very desirable feeding and breeding places for flies. The remedy, however, is exactly the same as that applied in the city, only it will require a little greater forethought and more care to insure its successful operation on the farm. We should like to see some system of co-operation among the boys on the farm looking toward

the removal of the mosquito nuisance and the fly nuisance insofar as they affect rural communities.

There is abundant reason why this should be done from the standpoint of annoyance alone, to say nothing of the other evils which result because flies and mosquitoes are tolerated. Some scientists have gone so far as to maintain that the total toll we pay to the scourge known as typhoid may be laid at the door of the fly. Certain it is that the fly is one of the most active and efficient agents in the distribution of this infectious disease.

The Fly and Typhoid Fever.

Typhoid fever is not classed as a contagious disease, by which we mean that individuals may contract this disease through exposure, the same as in the contraction of diphtheria, smallpox, and the like. Typhoid fever is an infectious disease, which means that an individual must become actually infected with the germ of typhoid fever before the disease may become contracted. This may take place in a variety of ways. It is very evident that one of the chief sources, if not the very chief source, of typhoid fever infection is the fly. A patient having typhoid fever becomes the center for the distribution of this infection through visitation by flies which subsequently transmit this disease by visiting well persons. In another way the infection is carried from individuals to food by flies. There are a great many diseases, particularly of infants, and diseases of digestion for the communication of which the fly must be held responsible, which are carried in exactly the same way typhoid fever is carried from one patient to another, through an individual or through the food supply.

It is pretty safe to assume that the eradication of the fly nuisance will very materially decrease the typhoid fever mortality so that there is sufficient reason why communities should band together to remove from their midst this dangerous but very common household insect.

As we have shown malaria to be very largely due to infection from mosquitoes in undrained localities, so it will be found that typhoid fever and many other summer diseases, particularly of children, can be attributed directly to the activities of the fly, an insect which should be looked upon with just as much suspicion and handled with just as much precaution as is the drug with the skull and cross bones on the label, and marked "Poison."

If there is any economic use to which the fly may be put it has not been thus far promulgated.

The Elimination of the Fly is a Distinct Gain for Public Health.

We have legislated quite effectively against certain decided types of nuisances. There has been an active crusade by boards of health against the common drinking cup, and we are glad to see that these ideas are gradually reaching home to the people, yet many persons who would go thirsty a long time before using a public drinking cup view with no concern whatsoever an abundance of flies in the home. We realize that it takes time for these ideals to become familiar to the people and generally it is to the oncoming generation that we must look, to secure the fulfillment of the ideals in these respects. We have had many examples, however, which show clearly enough that elimination and eradication of these nuisances tend very materially to the promotion of the public health.

The eradication of the fly nuisance requires a distinct step in rural hy-

giene and sanitation, one which is of equal importance with any problem which is met upon the farm. In just what way the tolerance of flies upon the farm affects the prevalence of certain contagious and infectious diseases among the stock on the farm is not known but reasoning from analogy, and surely this is a logical line of reasoning, it is safe to assume that much of the disease common among the domestic animals on the farm will be removed by the elimination of flies.

The time to begin is now, with a general cleaning up of the premises and the removal of all of the breeding, incubating and feeding places for flies, and their larvae. This will require, undoubtedly, quite effective screening and cleaning up of the barn and its surroundings, but once this is accomplished and a certain system developed, we think it will entail no unusual hardship. Let the boys on the farm see what they can do and let the boys of the community band themselves together to remove the fly nuisance from their section of the country. It can be done and surely the reward is very great.

Michigan Farmer's Club List.

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

EXPLANATION.—The first column gives the paper's regular subscription price. The second column price is for the Michigan Farmer and the other paper, both for one year. Add 50 cents when the Michigan Farmer is wanted three years, or \$1.00 if the Michigan Farmer is wanted five years. The third column price is for those who are paid ahead on the Michigan Farmer from one to five years and want the other paper only; such orders must be sent to us direct. All combination orders may be given to our agents or sent to us, as is most convenient.

Any number of other papers may be added at third column prices. Write for prices on publications not listed. We can save you money.

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Times, Detroit.....	2 00	2 00		
Herald, Grand Rapids, Mich.....	2 50	2 25		
News, Grand Rapids.....	2 50	2 00		
Press, Grand Rapids.....	2 00	2 25		
Courier-Herald, Saginaw, Mich.....	2 50	2 00		
News, Saginaw.....	2 00	2 00		
Tribune, Bay City, Mich.....	2 00	2 10		
Blade, Toledo, Ohio.....	2 00	2 05		
News-Bee, Toledo, Ohio.....	2 00	2 05		
State Journal, Lansing, Mich.....	2 00	2 00		
Chicago Herald.....	3 50	3 10		
Tri Weekly Newspapers				
World, N. Y., City.....	1 00	1 20		75
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Journal, Detroit, Mich.....	1 00	1 15		70
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Blade, Toledo, Ohio.....	1 00	1 00		55
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Produce News, Chicago.....	1 00	1 05		60
Cattle, Sheep, Swine, Poultry, etc.				
American Bee Journal, Hamilton, Ill. (w).....	1 00	1 50		60
American Poultry Journal, Chicago, (m).....	1 00	1 20		75
American Poultry Advocate, Syracuse.....	50	80		35
American Sheep Breeder, Chicago, (m).....	1 00	1 35		90
American Swineherd, Chicago, (m).....	50	75		35
Breeders Gazette, Chicago, (w).....	50	75		35
Poultry Weekly, Boston, Mass.....	1 00	1 30		85
Fruit Belt, Grand Rapids, Mich.....	1 00	70		25
Green's Fruit Grower, Rochester, (m).....	50	80		35
Hoard's Dairyman, Fort Atkinson, Wis.....	1 00	1 20		75
Jersey Bulletin, Indianapolis, Ind. (w).....	1 00	1 35		90
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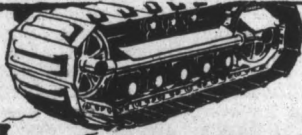


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Grange.

FARMERS AND BUSINESS MEN ORGANIZE.

A most successful farmers' rally was held in Battle Creek, Michigan, the last week in February, when 500 Grangers and members of Farmers' Clubs representing the various farm organizations of the county, assembled in the large Masonic Temple, the meeting place of the State Grange last December.

The affair was the result of a movement to bring the Chamber of Commerce of Battle Creek and the farmers' organizations together for mutual benefit in business life and social relations.

It was the first annual convention of the Central Farm Bureau, an organization comprised of a director elected by each Grange and Farmers' Club of the west half of the county.

This society is said by State Master J. C. Ketcham to be the only society of its kind in the state, so far as he knows, and he heartily endorsed and commended the movement.

The morning session opened at 10:30 with music by Stanley Grange Orchestra. Then came report of the nominating committee, and other business, which was followed by a talk on the county expert work and agricultural education by Dr. Eben Mumford, of the M. A. C.

Directly after the morning program, a banquet was served in the dining-room below. Each organization had a table which was furnished by its members with chicken pie and other delicacies. The center table was occupied by members of the Chamber of Commerce, this organization having served oyster stew to the whole number of guests. Coffee, sugar and cream were donated by grocers and dealers of the city.

The first speaker of the afternoon was Hon. Frank F. Rogers, state highway commissioner, who discussed the present status of road building in Michigan. He declared that a great improvement in county road conditions has been made since the state reward system was introduced nearly ten years ago, during which time 3,200 miles of road have been accepted by the state for awards.

At the rate the work is advancing, Mr. Rogers prophesied that 1,000 miles will be built each year.

Mr. Rogers made his talk more interesting by showing a series of stereopticon pictures—views taken in all parts of the state showing various methods of bridge and highway construction.

An illustrated talk on dairy topics was then given by J. W. Helme, state dairy and food commissioner, and a dairyman of 25 years' experience. "To be a successful dairyman," said Mr. Helme, "four things are necessary: the right kind of man, the right kind of cow, the right kind of feed, and the right kind of barns and utensils."

"The right kind of man is the kind who realizes that the cow is a bovine mother, and requires the same kind of tender care and attention the human mother does. Any disturbance of the nervous, milk-giving organs results in a depletion of the milk in quality and amount. The best kind of dairy cow puts her feed into her milk, although you can hang your hat on her hip bones," said Mr. Helme, "and I have found that corn ensilage and alfalfa hay make practically a perfect ration."

The evening session was the big event of the day, with State Master John C. Ketcham as state speaker. Mr. Ketcham's train was 45 minutes late, but the big audience waited patiently without a person's leaving.

Mr. Ketcham began his address by

Farmers' Clubs

saying, "I bear splendid tidings of good will toward Battle Creek for the hospitable entertainment of the State Grange here." And he spoke highly of the plan of the united city and farm organizations of the vicinity, which shows that interest in country life is now being felt by all kinds of people.

"The great problem of feeding the world is the responsibility of the farmer," said Mr. Ketcham, "and from the standpoint of numbers and wealth the people of the country today have the right to claim the attention of the whole world. The day is coming when the farmer is to be at the hearing of great public questions in the halls of legislation."

He discussed the problem of marketing, urging the elimination of waste and delay between consumer and farmer, and made a strong plea for the new system of rural credits.

In closing Mr. Ketcham declared that country life is responsible for the development of great leaders, that its splendid moral reserve force will do much to stamp out the saloon and legalized vice, and is a strong safety valve against militarism.

So closed the last session of a day to be remembered as the first of many of these splendid get-together meetings.—Mrs. Laura A. Minges.

CLUB DISCUSSIONS.

Discuss Prison Problem.—The Clover Leaf Farmers' Club held a most enjoyable meeting Tuesday evening, March 9, at the home of Mr. and Mrs. Eugene Springer. The principal feature of the evening was an address by George W. Hartt, secretary of the extension work department of the state prison. It was a very able address in which the following points were brought out: The home life, the social environment, corrupt public officials, all tending to the education and training of the state's criminals. Mr. Hartt told a great deal of life in Jackson prison, and of segregating the hardened criminals from the short term prisoners. He proved that the prison was self-supporting, and whatever surplus there was went to the families of the convicts. He made a strong plea for people to meet prisoners half way after they were paroled and give them a "square deal." He hit strongly at the drink evil, and gave statistics to show that a very great majority of the convicts came from the "wet" counties. Mr. Hartt talked on the censorship of moving picture shows, and opened the eyes of those present to their deplorable existing conditions. A warm discussion followed the address, after which refreshments were served, consisting of sandwiches, baked beans, pickles, pie and coffee. The remainder of the evening was pleasantly spent with games and in visiting. There were 90 present and all report a most enjoyable time.—Mrs. Starr Fenner, Cor. Sec.

A St. Patrick's Day Meeting.—The March meeting of the Indianfields Farmers' Club was held at the pleasant home of Mr. and Mrs. Frank Arnold. The house was beautifully and appropriately decorated, emblematic of St. Patrick's Day. Mrs. David Vanburen treated the crowd of members and invited guests to a fine St. Patrick's dinner. President James Arnold and several members of the Hickory Farmer's Club were present. After the usual social hour recitations were given by Mrs. James Paul and Amos Andrews, and two solos by Mrs. Roana Moore. Frank Arnold led the discussion, "Can our present system of road making be improved?" Several members took part in the discussion and all decided that the system could be improved. Discussion, "Resolved, that the law requiring school districts to pay the high school tuition of students passing the eighth grade is unjust and ought to be abolished." This subject was pretty well threshed out and all showed sympathy for the student wishing a good education. The question box, as usual, was full of timely questions. Club adjourned to meet at the home of Mr. and Mrs. Robt. Park, April 15.—Mrs. Margaret Arnold, Cor. Sec.



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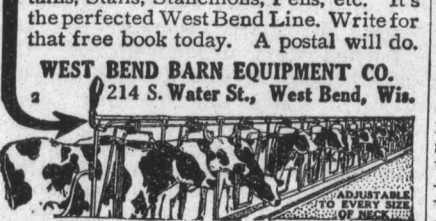
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Advice through this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also name and address of writer. Initials only will be published. Many queries are answered that apply to the same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

Indigestion.—I have a cow four years old that calved February 23, carrying calf 274 days; she cleaned four hours later, did well for a few days, but does not eat enough grain; however, she eats plenty of roughage and I would like to know what to do for her. R. W., Bravo, Mich.—Give her 1/2 oz. hyposulphite soda, 1/2 oz. of ground gentian, 1/2 oz. Fowler's solution at a dose three times a day. If her bowels do not act free enough, give her epsom salts. Feed her some roots.

Shoats Are Wormy.—Will you kindly publish a worm remedy for shoats? One in a bunch passed worms about six inches long and about the size of a slate pencil. J. H., Burt, Mich.—Mix one part powdered sulphate iron, one part ground wormseed, one part salt and three parts ground gentian, give each shoat a teaspoonful at a dose in feed twice a day. It is well to keep in mind that nearly all hogs have a few worms, but a limited number does not appear to interfere with the health of the hogs.

Indigestion—Thick Urine.—My 11-year-old horse keeps loose in bowels, urine is thick and ropy, and altogether too yellow. His skin is tight and he is fed alfalfa hay, which is all I have and I might add he is gaining in flesh. McC. B., Grass Range, Mont.—Mix together one part ground nux vomica, one part powdered sulphate iron, one part red cinchona, one part acetate of potash and four parts ground gentian; give him a tablespoonful at a dose in feed three times a day. If his water supply is not of good quality, boil it.

Loss of Appetite.—Have a cow that has been off her feed for some time and she is losing flesh. I gave her medicine prescribed for anemia and she improved, then I discontinued the treatment. W. M. A., Wexford, Mich.—Give your cow 1 dr. of ground nux vomica, 1 oz. ground gentian and 1/2 oz. of hyposulphite of soda at a dose three times a day for not less than 30 days. Better feed your calves a small quantity of thoroughly cooked flaxseed meal if you feed it at all.

Surfeit.—I have a four-year-old mare that has small bunches in the skin and she has been troubled with sore shoulders. J. G. L., Sherwood, Mich.—Give her 1/2 oz. hyposulphite of soda at a dose three times a day. Wet bunches with one part bichloride mercury and two thousand parts water twice a day and dissolve 1/4 lb. acetate of lead, 3 ozs. sulphate zinc, 2 drs. of tannic acid in a gallon of water and apply to shoulders three times a day.

Nail Puncture.—Four months ago my seven-year-old horse stepped on a nail puncturing foot, now when traveling on hard road he flinches. D. H., White Cloud, Mich.—Apply one part tincture iodine and three parts spirits of camphor to coronet three times a week.

Eye Polypus.—I have a mare that has a growth in eye situated between eyeball and lower lid; our local Vet. has cut it out three different times, but it always grows again. B. F. N., Ypsilanti, Mich.—The only remedy is a surgical operation, but it should be done very thorough or it is apt to grow again.

Indigestion—Impaction of Bowels.—For the past two years my horse has had attacks of either colic or impaction of bowels and our local Vet. has usually treated him, but horse grows worse. H. B. J., Camden, Mich.—Your horse should be fed the kind of food that does not ferment after he eats it; besides, it should be of a laxative nature; furthermore, he should be exercised every day. Giving him drugs is not the proper way to manage a case of this kind. Feed him clover and timothy that has been well cured. Also feed oats, dry bran and a few roots. Mix together equal parts bicarbonate soda, ginger and gentian; give him a tablespoonful at a dose in feed three times a day.

Partial Paralysis—Vertigo.—My seven-year-old mare on November 29, becoming frightened at an automobile, ran away, running one-half mile; since then she has had rather poor use of hind quarters, gets up and down fairly well, but is still lame in her hind

quarters. One of my hogs began to hold head tilted to one side and three days later began to stagger and fall; since then has not eaten well and does not move about much. A. A., West Olive, Mich.—Give your mare 1 dr. of fluid extract nux vomica, 1/2 oz. of Donovan's solution at a dose three times a day and if the kidneys do not act free enough, give 2 dr. doses of acetate of potash two or three times a day. Give your hogs 15 grs. of bromide of potash and a teaspoonful of sulphate of soda at a dose two or three times a day.

Wound on Face.—Our local Vet. some time ago trephined colt for nasal gleet; now we are unable to heal wound leading to nasal cavity. R. W., Reed City, Mich.—Better pack wound with iodoform gauze and prevent air from passing in and out from opening.

Light Milker.—I have a two-year-old heifer that came fresh March 17, but her bag seems perfectly empty. Have repeatedly tried to milk her, but am unable to get a drop. Can anything be done to make her give milk? M. K., Claire, Mich.—Feeding your heifer milk-producing food and gently hand-rubbing bag three times a day for 15 or 20 minutes might stimulate secretion of milk.

Hog Cholera.—When hog cholera has been on a farm, how much time should elapse before it would be safe to stock up again, and what should I do in line of sanitation? Also, do I run any risk in keeping horses, cattle and poultry at same time that cholera infection exists? G. H. T., Ada, Mich.—There is no danger of your horses, cattle and poultry becoming diseased; however, it is possible for them to spread the infection. You should thoroughly clean and disinfect your hog house and yard where they run, by using fresh whitewash and one part of carbolic acid to 30 parts of white-wash. There are many other commercial disinfectants recommended for this purpose which are perfectly reliable, especially those that are advertised in this paper. I do not believe it safe to place hogs on a farm of this kind for less than a year; besides, you might stock up now, but vaccinate them against cholera.

Bursal Enlargement.—My driving mare has a puff on hind leg above the ankle joint which I would like to have removed; she favors this leg when first starting, but lameness soon subsides. E. J., Dimondale, Mich.—Apply one part tincture iodine and three parts spirits of camphor once a day, and keep up this treatment for some time. Kindly understand, a bursal bunch of this kind is difficult to remove.

Elbow Tumor (Shoe Boil).—Ever since the early part of last winter my horse has been troubled with a shoe boil and I have been unable to heal wound. The shoes have been off all winter. R. D., Linden, Mich.—Apply equal parts powdered alum and oxide of zinc, also occasionally apply crude carbolic acid to raw parts of sore.

Weak Stifle Ligaments.—I have a colt seven months old that drags toe and stifle joint snaps, but so far as I can tell there is no soreness in joint nor fever. L. C., Coldwater, Mich.—Clip off hair and apply one part powdered cantharides and five parts fresh lard three times a month.

Chronic Cough.—My seven-year-old mare has been troubled with cough all winter and glands of throat are swollen. P. V. V., St. Louis, Mich.—Mix together one part ginger, one part of powdered lobelia and four parts powdered licorice and give her a tablespoonful at a dose in damp feed three times a day. Also give 1 oz. of the following mixture three times a day: Guaiacol, 1 oz. mixed with 15 ozs. of raw linseed oil. Also apply one part iodine and nine parts fresh lard to glands of throat every day or two.

Infected Udder.—I have a cow nine years old that freshened last August; she milked well, considering that her udder caked at this time, but she appears to get over it. Now, during the last two or three weeks she gave less milk than usual from one quarter and now a second quarter is affected. J. D. C., Levering, Mich.—Mix one part fluid extract of phytolacca and three parts olive oil and rub blocked part of udder every day or two. Give her a teaspoonful of powdered nitrate of potash at a dose in feed twice a day. The udder should be gently hand-rubbed for 15 minutes at a time twice a day.

Wounded Teat.—I have a cow that cut teat on barb wire and I am unable to stop milk leaking from wound and dry her. E. S., Sanford, Mich.—Feed her less milk-making food, milk her occasionally and apply equal parts of powdered alum and tannic acid to sore daily, covering wound with bandage.

Warbles.—My cattle are troubled with grubs in their back. E. M., Munith, Mich.—Open bunches with sharp, clean knife, squeeze out grubs, kill them and apply one part coal tar disinfectant and 19 parts water twice a day.

Duroc-Jersey Sale

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Thursday, April 8,
At 12:00 M.

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About 20 bred sows—bred to Fancy Top, 1st prize Senior Yearling Boar at Indiana State Fair, 1913. He weighed in at this fair at 750 lbs.

About 25 young Gilts, sired by Fancy Top, out of the above Colonel and Ohio Chief bred sows. Five splendid young boars ready for service, also some fall pigs.

Our usual outlet for surplus stock has been Ohio, Indiana and Illinois but owing to the continuation of the Federal Quarantine prohibiting shipments from the state we are offering this splendid lot of Registered Duroc-Jersey swine to the Michigan breeders and farmers at their own price.

Come and see these large, prolific, quick-feeding, early-developing type of Durocs. No catalogues.

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

Four Pure Bred Angus Bulls. Extra good ones. One show bull. Eight and nine months old. Priced reasonable. Inquire F. J. WILBER, Ohio, Mich.

Four Registered Aberdeen Angus Bulls, from ten to seventeen months old. Priced reasonable. **GEO. HATHAWAY & SON, Ovid, Michigan.**

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Twenty large faun and white 2-year-old heifers, will freshen this spring. \$75 per head, can spare a few young cows. **E. D. JESSOP, Lansing, Michigan.**

FOR SALE—A few reg. Guernsey Bulls at farmer's prices. **E. W. RUEHS, Caledonia, Mich.**

Thoroughbred Registered GUERNSEY and HOLSTEIN BULLS of serviceable age for sale. Also, BULL CALVES. Many from A. R. dams. Priced reasonable. **E. E. SWEET, Birmingham, Mich.**

For Sale, Reg. Guernsey Bulls, Berkshire hogs, sow and gilts bred for spring farrow. Write **JOHN EBELS, R. 16, Holland, Michigan.**

REGISTERED GUERNSEY BULL CALVES for sale cheap at R. Windermere Farm, Watervliet, Mich. May Rose breeding. Address, **J. K. BLANCHFORD, Auditorium Tower, Chicago, Ill.**

HEREFORD; Three bull calves and one two year old. **ALLEN BORS, Paw Paw, Michigan.**

Hereford Bulls for Sale—We offer a few yearling bulls and some Polled bull calves about seven months old. These are well bred, good animals and will be priced right. **BEAVER LAKE RANCH CO., Alpena, Mich.**

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Sire, a three-fourths brother to the
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Here is a good one.
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From a grand daughter of The King of the Pontiacs. Sired by a bull that is more than a half brother to the Champion Holstein Cow of the World, and whose dam is a 30 lb. 6% fat daughter of Pontiac Argie Korndyke who has more 30 lb. daughters than any other living bull. If you do write for pedigree.

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Registered Holstein Friesian Sires—Grandsons of the World's Greatest Dairy Sire. They are out of choice A. R. O. dams. Their sire is: Half brother to the World's record cow 44.15 pounds in 7 days. Average record of 50 dams in his pedigree 31.25 lbs. in 7 days. Average per cent of fat three nearest dams 4.37. Sires in first three generations already have over 600 A. R. O. daughters. Also a few females. Prices reasonable.

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HOLSTEIN BULL CALF, born Oct. 29. Sire's dam a 30-lb. cow with 8 30-lb. sisters. Dam a first calf heifer with record 14.65 lbs. as a two-year-old. Price \$75. **W. B. READER, Howell, Michigan.**

FOR SALE—Registered Holstein bulls ready for service. Heifers and cows due to freshen soon at reasonable prices. **CHARLES T. COOK, Box 438, Fowlerville, Mich.**

Registered Holstein Cattle—Bull Calves for sale, out of A. R. O. cows. Also 4-year-old herd bull, out of 27½ lbs. dam. **FLOYD F. JONES, R. No. 3, Oak Grove, Mich.**

Bull Calf, 3 sisters from 30.08 to 34.51 lbs. Sire's sire brother to Pontiac Korndyke. Dam 22.92 lb. her dam has 2 30-lb. sisters. **M. L. McLAULIN, Redford, Mich.**

Four Reg. Holstein Bulls—Ready for service. From advanced registry breeding. Prices \$100 and \$125. **DEWEY C. PIERSON, Hadley, Michigan.**

Reg. Holstein Bull calves and Herd Bull. Can supply all wants in Reg. Chester White swine. **Ray B. Parham, Bronson, Mich.**

A "BARGAIN" "ONLY" \$50 Registered Holstein Bull Calf. Best blood and best A. R. O. backing on both sides. ½ white. Perfect and handsome individual. **Rougemont Farms, Detroit, Mich.**

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

"Top-Notch" Holsteins. Extra large fine young bull, ¾ white, born Oct. 4, 1913. Dam has official record of 29.40 lbs. butter in 7 days, 117.50 lbs. in 30 days. Sire's dam is a 22.64 lb. 4 yr. old daughter of a 30.59 lb. cow. **McPHERSON FARMS CO., Howell, Michigan.**

HOLSTEINS FOR SALE

5 Good Bulls, ready for service.
10 Very Choice Bull Calves.
2 Two-year-old Heifers, bred.
1 Six-year-old grand-daughter of King Segis, due in December.

L. E. CONNELL, Fayette, Ohio.

Bigelow's Holstein Farms

Breedsville, Michigan.

Highest Class Registered Stock For Sale.

A BARGAIN—Registered Holstein Bull for sale, 15 mo. old. His sire's dam is a sister to Sarcastic's Lads dam, who was the world's Champion Bull, at the St. Louis Exposition and sold for ten thousand dollars. Dam is of the Colanthe strain. A. R. Chase, Clovercroft Farm, St. Johns, Mich.

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

Registered Holstein Bull Calf, whose sire is full R. brother to Lady Tobe DeKol, 34 yr. 36.59. G. D. 10 yr. 31.66. **ELMER E. SMITH, Redford, Michigan.**

HOLSTEIN BULL CALVES—Don't buy until you write us. No better breeding in Michigan. Long Beach Farm, Augusta, Kalamazoo Co., Mich.

I offer for sale three bull calves sired by Colanthe I Johanna Oreamelle Lad, extra fine ones, and will accept good notes due in one year in payment. Here is your opportunity. **Geo. D. Clarke, Vassar, Mich.**

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

HOBART W. FAY, Mason, Michigan.
Holstein Friesian cattle. Nothing for sale at present.

MICHIGAN HOME AND TRAINING SCHOOL
LAPEER, MICHIGAN
Breeder of High Grade Holstein Cattle. Lists and prices upon application.

Lillie Farmstead—Jersey Cattle, Yorkshire Hogs, Oxford Sheep. Write for what you want. **COLON C. LILLIE, Coopersville, Michigan.**

THE WILDWOOD JERSEY HERD
Registered Jersey Cattle, rich, Majestic Wonder No. 9077, one of the best sons of Royal Majesty is at the head of herd. His sons show type and class and his daughters are producing a large flow of high testing milk. Write your wants, **Alvin Balden, Capac, Mich.**

JERSEYS—For list of stock for sale and Jersey facts write **MRS. F. H. WALKER, R. No. 8, Kalamazoo, Mich.** If a breeder and a member of M. J. C. O. send list of stock for sale to the above.

FISHERTON FARM JERSEYS—Some fine grandsons of Hood Farm Pops' 9th. from Register of Merit dams. **FISHERTON FARM, Pontiac, Michigan.**

LINE BRED JERSEY COWS AND HEIFERS. Fresh for due soon. Male calves eligible to registration. **CHAS. B. COOK FARM, Owosso, Michigan.**

BUTTER BRED JERSEY BULLS FOR SALE
CRYSTAL SPRING STOCK FARM,
Silver Creek, Allegan County, Michigan.

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

Jerseys. Bulls ready for service, extra quality sired by Jacoba's Fairy Eganon No. 10711, from high producing dams. **SMITH & PARKER, Howell, Mich.**

JERSEYS—THE REGISTER OF MERIT KIND.
BROOKWATER FARM, R. No. 7, Ann Arbor, Mich.

Jersey Bulls for Sale from high-producing dams, with testing Assoc. records, also on semi-official test. **O. B. WEHNER, R. 6, Allegan, Mich.**

FOR SALE, Registered Jersey Cows—fresh or to freshen soon. **WATERMAN & WATERMAN,**
Meadowland Farm, 1-1 Ann Arbor, Michigan.

FOR SALE—Twelve high grade Jersey cows; all young, in first class condition. All giving milk, and bred to a son of Royal Majesty. **W. E. DAY, Armada, Michigan.**

MILKING SHORTHORNS—Young bulls sired by a Grand May & Otis bull for sale. **DAVIDSON & HALL, Tecumseh, Michigan.**

FOR SALE—High Grade and Pure Bred Shorthorn Heifers, 18 to 30 months old. **W. F. BARR, Aloha, Michigan.**

SHORTHORNS: 4 choice bulls, 2 yearlings, 2 calves 6 months old, for sale. **W. C. OSUS, Hillsdale, Michigan.**

Shorthorns for Sale—Young bulls sired by Bright Sultan. Also cows and heifers. **W. B. McQUILLAN, Howell or Chilson, Michigan.**

FOR SALE—Shorthorn Bulls, red and roans, by sons of Avondale and Victor Linwood, both international winners. **John Schmidt, R. 2, Reed City, Mich.**

Dairy Bred Shorthorns of Best Bates STRAIN. **J. B. HUMMEL, Mason, Michigan.**

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

FIVE SHORTHORN BULLS FOR SALE—Ages 10 to 12 months. Prices reasonable. **LEONARD HIBBARD, Cohoctah, Mich.**

SHORTHORNS: 6 CHOICE YOUNG BULLS FOR SALE
W. W. KNAPP, Howell, Michigan.

SHEEP.

IT PAYS TO BUY PURE BRED SHEEP OF PARSONS "The Sheepman of the East." I sell and ship everywhere and pay express charges. Write for club offer and price list. **PARSONS, Grand Ledge, Mich. R. 1.**

OXFORD-DOWN SHEEP, NO STOCK FOR SALE.
M. F. GANSLEY, Lennon, Michigan.

HOGS.

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

Boyalton Bred Berkshires. Large stock of finely bred animals, both sexes, various ages. Some young bred sows. Must reduce stock, and will quote low prices with registry papers for quick clean up. **D. F. Valentine, Supt., Temperance, Mich.**

BERKSHIRES Choice spring boars and gilts, stock. **ELMHURST STOCK FARM, Almont, Mich.**

Berkshire Hogs—Choice gilts bred to farrow in March and April. Also a number of Barred Plymouth Rock Cockerels. **Chase's Stock Farm, R. No. 1, Marietta, Mich.**

BERKSHIRES—Open or bred sows. Registered. \$30 for choice, all guaranteed. **G. H. RIDER, Almont, Mich.**

BERKSHIRES: Sows and Gilts Bred for April and May farrowing; of the best Breeding. **A. A. PATTULLO, Deckerville, Michigan.**

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

Hampshire swine, some good Boars for breeding and some fall pigs both sexes at right prices. **West Wind Farm, Pontiac, Mich. E. P. Hammond, owner, N. A. Wiser, manager.**

CHESTER WHITES. August and September pigs, from Ossires as Chickasaw Bud, Modeler, Bronson King. A certificate of registry with each pig. **John Gintling, Bronson, Michigan.**

O. I. C. Fall Pigs—Choice gilts bred to one of the best boars in the State. **C. J. THOMPSON, Rockford, Michigan.**

O. I. C.'s—STRICTLY BIG TYPE. For 12 yrs. I have been breeding for size and length with quality. Lengthy Prince one of the largest boars the breed ever produced, heads our herd, assisted by White Monarch and Frosts Choice, 2nd prize under six months boar at Mo. Inter State Fair 1914. Stock for sale at all times, prices reasonable. Address, **NEWMAN'S STOCK FARM, R. No. 1, Marietta, Mich.**

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

ROLLING VIEW STOCK FARM
Cass City, Michigan.

O. I. C.—Spring boars all sold. We have some fine fall pigs ready to ship. **JOHN BERNER & SON, Grand Ledge, Michigan.**

O. I. C.'s—I have extra fine lot of last spring boars and a lot of this fall pigs, either sex, not akin. ½ mile west of depot. **OTTO B. SCHULZE, Nashville, Michigan.**

O. I. C. Registered Pigs Write for photo and prices. **J. CARL JEWETT, Mason, Michigan.**

O. I. C.'s—Serviceable boars. Gilts bred for May and June farrow. I pay express. **G. P. ANDREWS, Dansville, Michigan.**

O. I. C.—Serviceable boars of Sept. farrow, also a few choice gilts bred for May farrow. **H. W. MANN, Dansville, Michigan.**

THIS O. I. C. SOW WEIGHED 932 LBS. AT 23 MONTHS OLD

IONIA GIRL

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

O. I. C. SWINE—Write for new price list, just out. Have on hand service boars, also other sex of Aug. farrow. I am also booking orders for March and April Pigs. **A. J. GORDEN, R. No. 2, Dorr, Michigan.**

O. I. C.'s, nothing for sale at present but will take orders for Mar. and Apr. pigs, pairs not akin. Reg. free and shipped on approval. **J. W. HOWELL, Ovid, Mich.**

O. I. C.'s—Spring pigs, pairs and trics, not akin, from state fair winners. **AVONDALE STOCK FARM, Wayne, Mich.**

O. I. C.—25 sows bred for spring farrow. 75 Fall pigs, large and growthy. Write your wants. **GLENWOOD STOCK FARM, Zeeland, Michigan.**

O. I. C. Choice gilts bred for spring farrow. Sept. pigs, serviceable boar weighing 330 lbs. price \$30. The long bodied and big boned kind. **Alvin V. Hart, Grass Lake, Mich.**

O. I. C.'s—Two serviceable boars, sow coming two-yr. old, bred for March farrow, fall pigs, all stock registered. **S. J. HOWELL, St. Johns, Mich.**

Duroc Jerseys—A few choice gilts bred for April and May farrow. Fall pigs either sex. **S. C. STAHLMAN, CHERRY LAWN FARM, Shepherd, Michigan.**

DUROC JERSEYS—A few fall boars and 12 bred gilts for sale. **CAREY U. EDMONDS, Hastings, Michigan.**

DUROC JERSEYS.

From Prize-Winning Stock.

Write, or better still, come.

Brookwater Farm, Ann Arbor, Mich., R. F. D. 7.

DUROC JERSEYS—Aug. boars ready for service. Also Aug. gilts bred for June farrow to prize-winning stock. Shipped O. O. D. for your inspection. **F. J. DRODT, Route No. 1, Monroe, Mich.**

DUROC JERSEYS—Some good fall boars and open gilts. **W. C. TAYLOR, Milan, Michigan.**

HAVE ONE GOOD GILT, weight 175 lbs., farrow April 10th, \$25. One 23 lb. gilt farrow last of April, price \$25. A few spring and fall boars, price \$20 to \$30. **H. G. KEESLER, Cassopolis, Michigan.**

Capitol Herd Duroc Jersey Swine. Established 1888. Young boars and bred sows for sale. I pay the express. **J. H. BANGHART, Lansing, Michigan.**

DUROC JERSEYS—A few bred gilts, fall males ready for service. **S. C. W. Leshorn and Buff Rock eggs for sale. J. McNICOLL, Station A, R. 4, Bay City, Michigan.**

STRICTLY B. T. Polands—Absolutely none larger or better. My herd represents best herds in U. S. Spring & fall farrow pigs at bargain prices. Satisfaction guaranteed. **F. D. Kruger, Haverina, Mich.**

Duroc Jersey—March gilts bred to son of Volunteer, Champion 1912 fairs. Orders booked for March pigs. **E. H. MORRIS, Monroe, Mich.**

Duroc Jerseys: A few choice boars ready for service, from prize winning stock. **Oliver Middleton, Idlewild Farm, R. F. D. No. 3, Clayton, Mich.**

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

POLAND CHINA BRED GILTS—Bargains in big, heavy bone fall boars. Satisfaction guaranteed. **G. W. HOLTON, R. No. 11, Kalamazoo, Michigan.**

POLAND CHINAS—Choice gilts bred to "Big Type," boars of great quality. **L. W. BARNES & SON, Byron, Michigan.**

BIG BONE POLAND CHINA GILTS—Extra choice, farrow. Special prices to close out quick. **MAPLEWOOD STOCK FARM, Allegan, Mich.**

LARGE TYPE P. C.—Either sex, pairs and trics, not bred gilts. **W. J. HAGESHAW, Augusta, Mich.**

Big Type Poland China Boars and Gilts plenty of size and great quality. I know I can please you. **ROBERT MARTIN, R. F. D. No. 7, Hastings, Mich.**

POLAND CHINAS—The type that wins, weighs, bred sows and pigs either sex. African genes. **SPRING BROOK FARM, Three Oaks, Michigan.**

Large Strain P. C.—Can spare one of my herd boars, sold for no fault, a few spring and fall boars, will be sold at bargain prices, a few choice bred gilts, no better breeding, to be had at any price. **H. O. SWARTZ, Schoolcraft, Michigan.**

HEAVY BONED POLAND CHINA SOWS. Bred fall pigs, both sexes, pairs not akin. Also older boars. Prices low. **Robert Neve, Pierson, Mich.**

Poland Chinas, either sex, all ages. Something good at a low price. Bargains in boars ready for service. **P. D. LONG, R. F. D. 8, Grand Rapids, Mich.**

THE FARMERS' HOG.—Butler's Big Boned Prolific Poland Chinas grow big, keep easy, mature early, ready for market at 6 months. Why? Because we're bred them that way for more than 20 years. 50 big boned, long bodied, sows, also 10 fall pigs at farmers' prices. Buy one and make more money on your hogs. **P. C. History Free, J. C. BUTLER, Portland, Mich.**

BIG Type boars by Big Smooth Jumbo. Greatest boar in State, 748 lbs. at 18 mo. These boars are long, tall, big bone, sold at farmers prices, shipped O. O. D. Call or write. **Wm. Waffle, Coldwater, Mich.**

LARGE TYPE P. C. Largest in Michigan. Bred gilts all



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SIMPLY mail me the coupon below and I'll send you this big can of **Corona Wool Fat**—the greatest preparation ever put on the market for Cracked and Split Hoofs, Contracted Feet, Corns, Grease Heel, Thrush, Barb Wire Cuts, Sore Shoulders, Sore Teats on Cows, etc. I want to prove to you **before you pay me a single cent**, that here

is a preparation you can't afford to be without. I want to send you, postpaid, this big can on

20 Days' Free Trial

I want to show you that you can keep your horse's hoofs in the finest condition—take out all foot soreness, cure all flesh wounds, etc. and do it quickly.

I want you to try this wonderful healing ointment at my risk—not yours. Try it on any case you have—apply part or all of it. At the end of 20 days if you are perfectly satisfied, send me only 50c for the big trial can. If you are not satisfied, tell me so and you won't owe me a penny.

CORONA WOOL FAT

The Wonderful Healing Ointment

is extracted from the skin and wool of the sheep and is the only remedy that will penetrate the shell of a horse's hoof—take out the soreness and grow new hoof. **Corona Wool Fat** does not burn, blister or cause suffering. It is a cooling, healing, penetrating ointment, quick in action, **heals without leaving a scar**. Read these letters—we have thousands more like them:

Corona Mfg. Co., Kenton, Ohio.

Gentlemen:—Corona Wool Fat is the best thing I have ever used for hard and contracted feet of horses. I have used about all kinds.

Yours truly,
P. D. Jamison,
Bridgewater, Maine.

Corona Mfg. Co., Kenton, Ohio.

Gentlemen:—I like Corona Wool Fat. I think it is fine to heal sores and cuts, and can truly recommend it to any one needing a good healing salve.

Yours truly,
Dewitt Conrad,
23 State St., Fort Plain, N. Y.

Send No Money—Simply Mail Coupon

Fill out the coupon and mail it today. When you receive the **Corona Wool Fat**—try it—watch results—then if satisfied send me only 50c—if not satisfied, just write and tell me so and I'll charge you nothing. Write for the big trial can **now**. Remember, I send it **postpaid**. You risk nothing in testing it. **Will keep your horses in working condition and put them in selling condition**. I take all the risk—send today.

Corona Mfg. Co., C. G. Phillips,
Manager

57 Corona Blk., Kenton, O.

IT WILL CURE

Hard and Contracted Feet, Mud Fever, Split Hoofs, Corns, Grease Heel, Thrush, Quarter Crack, Cuts, Barb Wire Wounds, Sore Teats of Cows, Ulcer, etc.

Our Guarantee is on the Lid of Every Can. I have sent out a million cans the past eight months, and now have more than that number of satisfied customers. You need it; I have it for you, and you can try it out on the "before you pay" plan. Now, all I ask is a fair, square trial on its merits. C. G. Phillips.

Proof!

Corona Mfg. Co., Kenton, Ohio.

Dear Sirs:—I received the Corona Wool Fat all right and have tried it and it works just as you recommend and even better. My horse was sore in the front feet and she could hardly get out of the barn, and in two weeks time she improved so much that she was as limber as ever, and our blacksmith stated that he never saw anything as good as Corona Wool Fat. Sincerely, T. J. Tishell, North Rush, N. Y.

Corona Mfg. Co., Kenton, Ohio.

Dear Sirs:—Having been in the dairy business all my life and as all dairymen will agree it is a hard matter to keep their horses going sound. I with the help of the shoeing smith were kept at our wits end until a friend of mine told me of Corona. It certainly does the work. Every horse is going sound and when it comes to sore teats on cows you have certainly solved the problem. In fact, my stable and barn boys all swear by Corona and the best part of it is, it is just as good for a man as for a horse or cow. Wishing you the success that is due you, I remain, Yours very truly, Robt. T. Arnell, Prop., Oakwood Dairy Farms, Davenport, Ia.

Corona Mfg. Co., Kenton, Ohio.

Dear Sirs:—I am very well pleased with Corona Wool Fat, and am enclosing you remittance for more of this wonderful product. It is great stuff. Yours truly, Louis J. Dumont, R. F. D. 1, Wolverine, Mich.

Corona Mfg. Co., Kenton, Ohio.

Gentlemen:—Corona Wool Fat is just the stuff for my bank mules feet as it keeps the bank water from cracking their feet and getting sore. Enclosed find remittance for \$3 for which send me a ten pound pail. Yours truly, W. F. Williams, New Sharon, Iowa.

20 Day's Free Trial COUPON

CORONA MFG. CO., 57 Corona Block, Kenton, O.

Gentlemen:—Please send me the trial can of your Corona Wool Fat. It is understood that I am to use this for 20 days in accordance with directions, and if I am satisfied with the results I will send you 50 cents to pay for it. If it does not do as you claim I will owe you nothing.

Mention ailment you intend to use it on.....

Name.....

Address.....

County.....

State.....



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1,000,000 Farmers, Stockmen and Blacksmiths are using **Corona Wool Fat**. Don't experiment—make sure of a quick cure by using **Corona Wool Fat**. There is no other remedy or healing ointment that will do the work as well.

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