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DETROIT, MAY 12, 1923

CURRENT COMMENT

Knowing how, makes the doing of hard jobs easier.

The more gossip one spreads, the less likely is one to spread facts.

It doesn't seem that this wireless age has had any effect on wire-pulling in politics.

It is a peculiar fact that we always cheer the loudest when the orator tells us we are a great people.

Those Patronage Dividends

A FEW days ago the announcement was made that the Michigan Live Stock Exchange is paying a \$7,000 patronage dividend. This dividend represents a refund to member patrons of ten per cent of all commissions paid to the exchange for sales service.

This is the second Michigan commodity marketing exchange to declare a patronage dividend within the past month. Last week the Michigan Elevator Exchange paid over to its member associations a dividend of \$8,000. For some time past, the Michigan Potato Growers' Exchange has been doing the same thing.

This adds further evidence to the conclusion that our leaders in recommending to Michigan producers that they organize their cooperative sales institutions along commodity lines, were sound in their judgment.

Curb the Sugar Profiteers

A REPETITION of the sugar fiasco of 1920, when prices for that necessity soared to a point entirely beyond reason, seems to be well started. Investigation of the present sugar situation reveals a number of apparent facts regarding which every thinking citizen should be informed, to the end that the profiteers may be curbed before the public is again milked as dry as they have apparently planned.

As a necessary premise to a correct understanding of the situation let us first consider the naturally controlling elements of supply and demand. Statisticians apparently agree that the world's sugar crop for the current year is fully up to or a little above normal. Production of beet sugar in Europe has increased sufficiently to make up for the shortened production in the United States.

Early estimates of the Cuban crop from which the bulk of the raw sug-

ars consumed in this country come, were for a production of 4,000,000 tons, which is somewhat above normal. The failure of the Cuban crop to come up to this estimate is the reason advanced in sugar circles for the sudden and sharp increase in the price of refined sugar, which has come home to every housewife in recent weeks. There is a difference in the recent estimates of sugar statisticians regarding the Cuban crop, but apparently reliable sources of information indicate that the Cuban run-out will be at least within eight to ten per cent of the original estimates, which would leave a normal crop.

Consumption statistics show a marked increase in sugar consumption in the United States, our per capita consumption in 1922 having been 103.14 pounds, as compared with 98.65 pounds in 1921, and an average of 83.56 pounds for the previous four years. But in spite of the fact that each man, woman and child in the United States now consumes practically his own weight of sugar in a year, dependable figures seem to indicate that there is sugar enough in sight for all and to still leave a small carry-over. Why, then, the present high price of this staple foodstuff? The apparent facts seem to indicate the correct answer to lie in unwarranted speculation if not in gross profiteering, with a preponderance of evidence indicating the latter.

As to the speculation, there can be no question. Operations on the New York raw sugar exchange during the month of February totaled something like 1,500,000 tons, with actual deliveries during the month of only about one-fifth of this volume. It is contended by the government that this is a fictitious market, and far more baneful in its effects than operations in grain futures, for the reason that the latter is a domestic product, subject to domestic laws and regulations, while sugar is a foreign product not subject to similar regulations, since only Cuban raw sugar is traded in on this exchange. For this reason the government proposes to undertake to put the sugar exchange out of business in the hope of stabilizing the sugar market on a more fair basis. With advances in the market and in remembrance of the 1920 market, there has also been much speculation in actual sugar stored away in the hope of a further advance, as well as advanced buying on the part of consumers through fear of further advances, all of which conditions have favored profiteering. By whom?

During the days of the food administration, the government fixed the spread in price between raw and refined sugar, first at \$1.35 per cwt. and later at about \$1.50 because of a higher raw sugar market, entailing greater costs. The latter figure is approximately the present spread, so on the surface of things the refiners are not the profiteers, since the Cuban growers are apparently getting the benefit of the rise. But inquiry as to Cuban growers brings alleged information that seven New York institutions control from seventy to seventy-five per cent of the Cuban crop and that three or four others control another five per cent. It is said that one of these institutions owns something like 500 square miles of sugar land in Cuba. If the raw sugar, which is the source of our main supply, is thus closely held and controlled, it is small wonder that the price goes soaring unexpectedly.

But what of the remedy? Government action will be slow, even if effective. The most effective remedy is in our own hands. Let us get back to normal in the matter of consumption at least until the profiteers are curbed. Already in the cities housewives are being rallied to a consumers' strike to relieve this situation, which seems to have been planned to cover

the fruit canning season of heaviest consumption. Can the fruit without Cuban sugar and sweeten it with our own beet product when used. That will lower present market prices and help support the market when our own crop is being marketed. Practice a little self-denial in daily sugar consumption, at least until assured that profiteering has been curbed.

Already the advance has been stopped and the market is breaking as a result of government pressure and consumers' protests. Private speculators are said to be unloading in fear of the result. Let's make a good job of it while we have the speculators going.

C. O. S. and F. O. B.

JUST who pays the freight? That is a question which can be easily answered. In manufactured articles, the consumer pays the freight; in agricultural articles, the producer does likewise.

The farther the farmer is from his market, the less he gets for his commodity. The farther the auto manufacturer, for instance, is from his market, the more the buyer pays for his auto. The auto manufacturer is working on the f. o. b. basis while the farmer is working on the mob basis—everybody for himself.

The manufacturer has his product centralized, organized and standardized (C. O. S.) while the farmer has his generalized, individualized and commissioned.

But, never mind, the f. o. b. basis works—with the raisin growers and fruit men of the west, for instance. Even here in Michigan, in the comparatively little industry of growing forced rhubarb f. o. b. is working much better than the ship-and-take-what-you-can-get basis. We tell you more about that in another column.

The idea is, that it is not because it is farming that we have to work on the give-me-what-you-want basis, but because we are not centralized, standardized and organized. Those are the essentials necessary to get on the you-buy-on-my-market basis. It needs C. O. S. to F. O. B.

It may seem a little far fetched to think that we can C. O. S. some of our farm products, like wheat and corn, but we are going to do it some time because old agriculture is fast taking on new business methods.

Along the Hedgerows

IF there is any one season of the year when the appeal of nature may be said to be strongest, that season is spring. The freedom of the great out-of-doors swells the soul of red-blooded persons at all seasons, but in the spring time when all nature comes to life, the sunshine, warmth and comfort draws one out to wander along the streams, over the meadows, and through the woods.

The fresh growth of all vegetation shows life renewed. The air itself seems alive. It is laden with the perfume of flowers, the aroma of rapidly growing verdure, the odors of the soil and of the forest mold.

To him who, in the love of nature, takes note of these things, life takes on new meaning. He learns to find "Tongues in Trees, Books in Running Brooks, Sermons in Stones, and Good in Everything."

In solitude he meditates upon the wonders of the forest; how, through the centuries, it has grown and withstood the ravages of the elements. Periods come each year when it must stand still and not grow; now and then storms shatter the growth of many years; yet the forest keeps on, it does not lose courage. It bides its time and each returning spring takes fresh hold upon the earth which all the years has nourished it.

He loiters by the water's edge and marvels. Just two simple elements properly combined; yet its power for good is such that all life would quickly become extinct without it; its destructive power is such that millions of lives succumb to it when in violent mood.

It meanders down the stream, following a rough pathway here, strewn with stones and jagged rocks; flowing smoothly there; making rapid progress now; and then coming to an eddy and going round and round. How like human life it is!

Wandering out across the pastures he notes the rapid growth of grass from day to day. There comes to him the thought expressed by John J. Ingalls in his "Ode to Grass." "It bears no blazonry of bloom to charm the senses with fragrance or splendor. It yields no fruit in earth or air, yet should its harvests fail for a single year famine would depopulate the earth."

Gradually he comes to realize that each particle of life so abundantly displayed along the hedgerows has its own particular place in nature's great scheme of things. Even his own life is but a part of it.

There is much joy and contentment and satisfaction and wisdom to be gleaned from the hedgerows in the spring for him who will but take the time and "list to nature's teachings."

About What's Comin'

I'VE been holding what you call my ink dispenser in my hand for a long time, waitin' for some ideas to come, but it looks like they's hard comin' this time. Seems like the only thing I kin think about is my sittin' on the ground in front of a table cloth and helpin' in the consumshun of farm products so the price will get higher.

For inst., I kin see myself eatin' profusely-like, of fried chicken, potato



salad, hard boiled eggs, dill pickles, cheese sandwiches, baked beans, pumpkin pie, apple pie, cake with white frostin' on it, and— Well, almost just from thinkin' about it, I kinda feel full-

like, just like I got enough to go and lay under a tree and go to sleep.

Then the next easiest thing I kin think about is fishin'. Just settin' there with a pole in your hand and the hook in the water, and not carin' whether there is bait on the hook or not, is my sentiments.

The best part of fishin' is just settin' in the sun and thinkin' about nothin' in perticular, with a fish bitin' once in a while to let you know you are on earth. You just don't care if Ezra Smith pays you what he owes you, or if the Handy Market down town gets paid or not. You don't even think if Sophie is cross or happy, or whether the cat is got the colic or not. Them is happy moments, I tell you, and some of them happy moments is comin' to me mighty soon.

Now, seein' I've got through with my fishin', I don't know what else to write about. Sophie says, "Tell them about how far behind you are in your work." That ain't a good suggeschun, 'cause them ain't pleasant thoughts. And all I believe in handin' out, just now, anyhow, is pleasant thoughts.

Sophie is just after me all the time now, about getting out and gettin' some of that work done. Likewise, I just got a bill from that Handy Market I was tellin' you about. So, I ain't got no more happy thoughts. So about all I kin do is to sit on that old cultivator seat and talk the matter over with the horses.

Maybe we kin really go afishin' some time.
HY SYCKLE.

Finding the Best Steer Rations

Another Year of Work at Ames Gives Interesting Data to Michigan's Cattle Feeders

By G. C. Terry

THAT the addition of a moderate amount of linseed oil meal to a ration, composed of shelled corn, corn silage and red clover hay with block salt, increases, perceptibly, the profits in fattening two-year-old steers at the present prices of protein supplements, is the most important announcement made at the Iowa Cat-

appraised at \$10 per hundred on the basis of yesterday's Chicago market by the Chicago packers. The feed cost per 100 pounds gain, crediting the feed saved by the hogs, was \$12.40, based on Ames prices. Had these feeds been

tonseed meal at its present price costs more than it is worth, apparently.

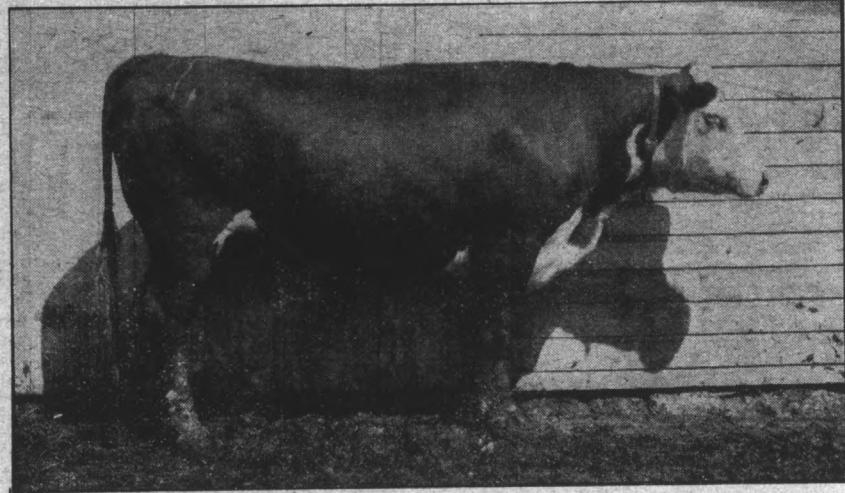
Results of this experiment indicate that with the price of the oil meals at the level they were during this test they can not be fed with profit except in small amounts. According to the results linseed oil meal seems to produce more economical gains than cottonseed oil meal, not only made the of the experiment is that the lot that received only shelled corn, corn silage, clover hay and block salt, made 100 pounds gain at a lower net cost than any of the others. This figure was \$11.96, crediting feed saved by the hogs.

Highest Daily Gain.

The group receiving corn and red clover hay, plus three pounds of cottonseed oil meal not only made the highest daily gain of 2.8 pounds, but also made this gain on the lowest amount of feed per 100 pounds of gain made. From the figures announced this may be interpreted to mean that

necessity of feeding the protein supplements in small quantities as a pound and a half of linseed oil meal in the same basal ration made a profit of \$1.56 per steer. The poorest showing of the entire experiment was made by a group of steers that were fed shelled corn, clover hay, block salt and one and one-half pounds of cottonseed oil meal. The steers in this group made the lowest daily gains of any, and required 945.5 pounds of feed to make 100 pounds of gain, which was the highest feed requirement of any group. This feed cost \$15.71, more than any of the other rations. Crediting the feed saved by the hogs, five of the ten lots returned a profit while the other five were marked up with a loss.

Ames prices for the feeds used were as follows: Shelled corn, sixty-three cents per bushel; linseed oil meal, \$51.90 per ton; cottonseed oil meal (treated), \$51.65 per ton; corn silage, \$6.25 per ton; clover hay, \$16 per ton; block salt, \$30 per ton. The estimated prices on the farm of the feeds used in this experiment were as follows: Shelled corn, sixty cents per bushel;



Home-grown Feeds Enabled this Steer to do Very Well. He Got Shelled Corn, Corn Silage and Clover Hay, with a Small Amount of Block Salt. The Cost of 100 Pounds Gain was \$11.96, Crediting Feed Used by Hogs.

the Feeders' Day held at Ames, on April 25.

The tests carried out this year were to determine the relative value of linseed oil meal and cottonseed oil meal, the place of silage in the steer ration, the value of a protein supplement in a corn-clover hay or corn-corn silage-clover hay ration, and the comparison of numerous other less promising beef cattle rations.

Ten lots of two-year-old Wyoming steers purchased on the Omaha market last fall were started in the test on December 22, 1922. Seven 1,050-pound steers were included in each lot. They were followed by three hogs. The cost of these steers at the time they entered the test, including the cost of feed while they were in the college lots before December 22, was \$7.59 per hundred.

The Best Returns.

The group that made the best showing from the dollars and cents point of view—and this is the practical point of view—received the standard corn belt ration of shelled corn, corn silage, red clover hay, and block salt, with one and one-half pounds of linseed oil meal. The hay and salt were self-fed, the shelled corn and silage handfed, and the linseed oil meal fed twice daily on the shelled corn. While the daily gain of 2.6 pounds made by these steers was not as high as that of the steers which received three pounds of cottonseed oil meal, they returned a profit of \$4.65 per animal. They were

grown on the farm the cost would have been less and the net profit slightly more.

The group that ranked second in amount of profit returned received shelled corn, medium red clover hay, block salt, and a pound and a half of linseed oil meal with no corn silage. Appraised at \$10, Chicago price, each of the steers in this group returned a net profit of \$4.25 above feed cost. This seems to indicate that the presence or absence of corn silage in the steer ration makes little difference in the cost of the gains. This group made its gains at a cost of \$13.44 while the group that received silage made its gains at \$13.45 per 100 pounds.

Linseed vs. Cottonseed Oil Meal.

In the tests linseed oil meal made a much better showing than cottonseed oil meal. A comparison of the two groups that received similar rations with the exception of the linseed oil meal and the cottonseed meal shows that the latter lost an average of \$2.18 per steer while the linseed meal group made a profit of \$4.25 per steer, crediting the feed saved by the hogs. Another comparison shows the spread between profit and loss was cut down by the addition of silage to the ration which contained either of these two protein supplements. With silage added, the linseed meal group made a profit of \$4.65 per steer, while the cottonseed meal group lost only fifty-seven cents per steer. This would seem to indicate that the use of cot-



These Steers Got a Full-feed Ration of Home-grown Feeds—Feeds which May be Found on Nearly Every Michigan Farm—Corn, Corn Silage and Clover Hay. They Gained Approximately 2.4 Pounds Per Head Each Day for 120 Days.

if the price of cottonseed oil meal was somewhat lower it would be the most profitable to feed as a supplement, as high daily gain at a low feed requirement is what is desired in fattening steers. This group of steers made 100 pounds gain on 783.8 pounds of feed, at a cost of \$14.05, excluding the feed saved by the hogs. This lot lost an average of \$3.05 per steer above the feed cost.

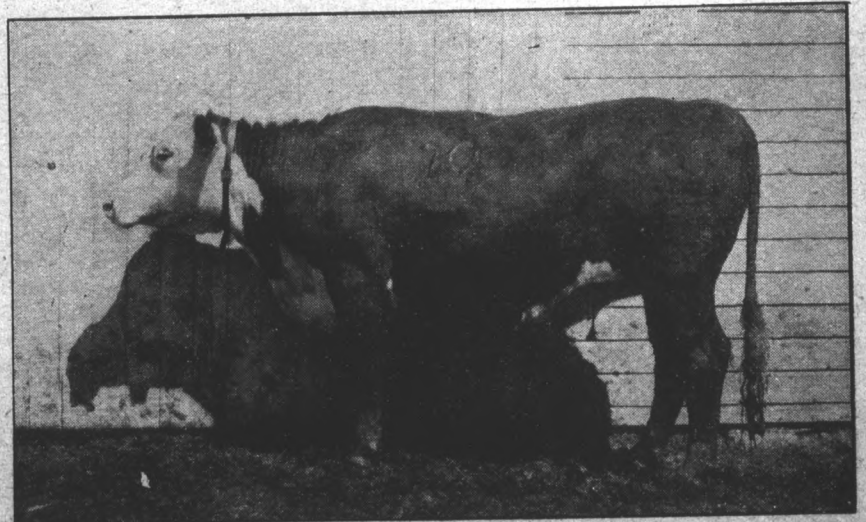
Three pounds of linseed oil meal added to the ration of corn, clover hay and block salt, returned the largest loss of the entire ten rations. Excluding the feed saved by the hogs this group of steers registered a loss of \$5.78 each. This result shows the

linseed oil meal, \$51.90 per ton; cottonseed meal (treated), \$51.65 per ton; corn silage, \$5.50 per ton; clover hay, \$13 per ton, and block salt \$30 per ton.

Dressing percentages of the various groups of steers were estimated by the representatives of a Chicago commission firm and ranged from sixty to sixty-two per cent. Appraisals ranged from \$9.75 for the group that received only shelled corn, clover hay and block salt with corn silage, to \$10 for each of the group that received one and one-half and three pounds of linseed oil meal in addition to shelled corn, and clover hay one and one-half pounds of linseed oil meal also was appraised at \$10 per hundred.



This Typical Average Steer was Fed a Full Ration of Shelled Corn, Three Pounds of Cottonseed Meal Per Day, Medium Red Clover and Block Salt. He Made the Highest Daily Gain, or 2.8 Pounds, and Required the Least Feed to Make 100 Pounds of Gain.



The Ration Fed this Animal for the 120 Days Consisted of Shelled Corn, Corn Silage, One and One-half Pounds of Linseed Oil Meal Per Day, Clover Hay and Block Salt. This was Considered to be the Best of the Ten Rations Used.

Comments from the State Capital

By Our Lansing Correspondent

THE bill to prevent unlawful discrimination in the purchase of potatoes was amended in the house, on motion of Representative David Butler, of Lapeer, to include grain and beans, and was passed by a vote of eighty-five to three. The purpose of this bill is to protect small local private and cooperative elevators and marketing associations from the unfair competition which has been practiced by some of the old-line potato and grain buying companies.

It is common knowledge that some unscrupulous dealers have paid far more than the market price in towns where a small elevator was trying to get a start, in order to freeze out competition. Then they would make good their loss by paying far less than the market price in localities where they had no competition. Passage of this bill will tend to stabilize prices and protect the cooperative marketing movement. The bill was drafted by the Michigan State Farm Bureau and supported also by the Michigan Potato Growers' Exchange and the Michigan Elevator Exchange.

Land Certification.

Restoration of the confidence of the investing public in Michigan lands is the object of the land certification bill drafted by the Development Bureau of the State Department of Agriculture and successfully piloted through the legislature by Representative Thomas Meggison, of Antrim county. In its final form the provisions of the bill are entirely optional, and no one need have his land certified unless he desires.

The certification will be done only upon request and will be carried out by thoroughly competent men under the direction of the state commissioner of agriculture. The certification will include a statement regarding the soil, crop adaptations, type of agriculture most successful in that immediate locality, marketing facilities, schools, and much other pertinent information which would be helpful to the buyer who was planning on investing in farm land.

The bill provides that the commissioner of agriculture may license real estate dealers who promise to sell only certified land. Such licenses could be revoked by the commissioner if the dealer failed to carry out the letter or spirit of the law. This measure has now passed both houses and been sent to the governor for his approval.

Reforestation Fostered.

Another bill sponsored by Representative Meggison which is of extreme importance to the northern part of the state has received final legislative approval. This bill, which provides a deferred tax on forest growth, passed the senate unanimously.

For years editorial writers and platform orators have vied with each other in advocating reforestation for large areas in northern Michigan, but until now it has been felt that no very logical scheme or system had been brought forward to carry out this idea. The state has spent thousands of dollars in developing forest reserves and planting young trees, but no great results have been achieved. The measure which has now received final legislative approval is intended to encourage private reforestation, and is similar in principle to measures which have proved very satisfactory in

Sweden and other European countries.

Under the terms of this bill, the owner of any timber lands, or lands chiefly valuable for the growth of timber within this state, may apply to the commissioner of agriculture to have such property set apart for the growth of timber. If, after investigation, the application is approved by the commissioner of agriculture, the land shall thereafter be taxed at the rate of five cents per acre annually.

After a twenty-five-year period the timber would be subject to cutting, under general control of the commissioner of agriculture, who would guard against wasteful methods. At this time the owner of the timber would be assessed at tax equal to twenty-five per cent of the stumpage value of the timber cut, to be paid into the state treasury.

There is a provision in the bill which would prevent it from working a hardship on any local taxing unit. Section six of the bill provides that, "The state administrative board may, in its discretion, advance to the townships in which any forest reserve lands lie, such sums each year out of the general fund of the state as will compensate them for the amount of taxes which would be collectible from such forest reserve lands had they not been registered."

There was a general feeling that the annual general property tax was not adopted for the production of long-time crops, such as forest products,

and that the passage of this bill would go a long way toward the most economical utilization of large areas in northern Michigan, and would do more to promote forest development than large sums invested in paternalistic tree planting by the state.

The Shepherd-Towner Bill.

Capital punishment, the gas tax and other big issues of the session have provoked fiery debates, but for pure eloquence and high idealism, no debate of the session could compare with that which occurred when the so-called Shepherd-Towner bill came up for final passage in the house, on the last night of the session.

The Shepherd-Towner act is a piece of federal legislation which offers government aid to the several states for the promotion of the welfare and hygiene of maternity and infancy. In order to avail itself of this federal aid, a state must provide an equal amount of money to carry on the work. The bill which has aroused so much comment in the Michigan legislature was the measure which provides for the acceptance by this state of this act of congress and which appropriates the necessary state funds, amounting to \$30,000 per year.

The bill was opposed by Representative Wardell, of Detroit, and Representative Denias Dawe, of Monroe, while the brunt of the argument in favor of the bill was carried by Representative Thomas D. Meggison, of An-

trim; Representative John Holland, of Bessemer; Representative Chester Howell, of Saginaw; Representative Aaron Miles, of Big Rapids, and Representative John Espie, of Eagle.

In the arguments in favor of this bill it was pointed out that while the United States is supposed to be an enlightened nation, we are seventeenth among the nations of the world in the percentage of infant mortality. The idea that this work was going to prove too expensive was scoffed at, and the fact was shown that it would cost but one per cent per capita in Michigan. Representative Howell pointed out that the legislature had already appropriated without a murmur vast sums for the criminals and the unfortunates of the state, for its educational institutions, for the eradication of bovine tuberculosis, and for armories, gymnasiums and athletic equipment, and it hardly seemed fitting to talk economy when the mothers and babies of Michigan were concerned.

This bill has been demanded by a multitude of women's organizations in Michigan and has probably been the most prolific source of petitions and telegrams which have been rolling in on the law-makers throughout the session. In response to this demand from their feminine constituents the representatives voted seventy-four to sixteen for the final passage of the bill.

Sterilization of Defectives.

Another bill, which produced some high-powered and sentimental eloquence was Senator Sligh's proposal to allow the sterilization of feeble minded and mentally defective persons. Those who advocated the bill declared that sterilization was the proper treatment for many cases and that it increased both the physical and mental welfare of the individual, and that, in many cases it would enable the individual to "make good" in the local community with the minimum amount of supervision.

Representative Baxter, of Grand Rapids, led the fight for this measure in the house, declared that the enactment of this bill would allow the state officials to release at least one hundred inmates from the institution for the feeble minded at Lapeer and that ten per cent of those now coming to this institution could be felt at large in their home communities if this bill were passed. The great financial saving to the state which would result from the adoption of such a policy was also pointed out by Representative Baxter. The bill finally passed with a bare margin of five votes to spare. Probably next session someone will be urging its repeal.

A Workable Drain Law.

Every time the legislature has met they have been passing more drainage laws until conditions were such that only an expert could be sure of the law in regard to any drainage problem. It has been twenty-six years since there was any general revision or codification of the drain laws of Michigan. So this session the drainage committees of the senate and house have been busily engaged in preparing a general codification of the drain laws of the state to repeal all of the previous laws on this subject and to make one general and unified act which would cover all drainage laws. The bill finally passed ninety-three to three.



Getting Rid of Sour Dock

By Samuel Hagerman

FOR the past two or three seasons the writer has employed a novel method of destroying the different members of the dock family. It has worked so efficiently and thoroughly that every farmer ought to know about it and employ the same treatment to this contrary weed. It is not a very desirable task to go into the fields on a scorching hot day to pull or cut these weeds, so I employ a much better plan to accomplish the desired results. During the spring of the year when using the spring-tooth harrow, preparing the seed-bed, all roots that are found of the dock family are carried to the fences and placed so that they will thoroughly dry out and die.

Not very much time is required to accomplish the gathering of the roots, it being done as you follow behind the harrow and it is not necessary to stop the team only in rare instances. To do this work efficiently it is necessary to have the reins long enough so that you can walk about three feet or more behind the harrow and keep a keen lookout for the roots to appear. Then as you come up alongside of them a quick grasp is necessary and the root is yours.

A small box or basket should be wired to the harrow so the roots can be dropped into it. When it has be-

come full it then can be emptied where desired.

This is a desirable plan from more than one point of view, for during the rush of spring work we are tempted to hurry the horses, but if the above plan is followed the tendency for this is slightly decreased. Also, the joy it brings from being free of this job when the sun is doing his darndest to melt a fellow, makes it worth the consideration of the busiest of farmers.

Says Sam: Buying jazz records for the graphophone is like buying anything else that's cheap.

Ground where last year's chicks died isn't good ground for this year's chicks. Move the coops and brooders.

The cur dog may be a firm friend, the mongrel cat a good mouser, but the scrub bull makes nothing but trouble, now and forever.

With things so high, the farmer who puts out a good garden for next summer is likely to be well repaid, even if not a thing is sold out of it.

Who wishes to see perfectly clearly before making a decision, never decides. Not to accept regrets is not to accept life.—Amiel.



Getting the Pie that's in Pieplant

The Growers Get Their Just Deserts Through Cooperative Marketing

By Frank A. Wilken

FOR the fastidious taste of those who wish to partake of a spring tonic throughout the entire winter, the vegetable growers around Detroit have been forcing rhubarb. They have been producing these splendid crimson colored stalks of refreshing acidity so well that Detroit is now recognized as the center for the best winter-forced rhubarb in the country. And the growers are profiting thereby.

But things have not always been so. Rhubarb has been forced by some of



Choice at the Left, and Extra Fancy at the Right. It's the Rhubarb we Mean.

these growers for twenty-five years but someone else, not the growers, were the ones to profit. It is just recently that the growers have been getting the pie out of their pieplant, and this is because of cooperative marketing.

In the old days the growers would pull the stalks in their manure-covered houses, tie them in bunches of three and put these small bunches up in bundles weighing about six to seven pounds. These they would take to what is known as the Eastern Market, a municipal farmers' market, where they would wait for trade.

Of local trade there was little, and the growers would wait until the morning was well along when one of the commission men would come over, and say, "Well, boys, just cart your rhubarb over to my place and I will take it off your hands." This the growers would be glad to do, as they were anxious to get home again. When the rhubarb was delivered, the commission man would write the growers out checks as small as he thought they would stand, and say, "Come again, boys." Because the "boys" came again and again, this commission man and several others waxed fat.

One time a grower noticed a big



Mitten Brand Means Quality in Farm Produce. It Also Means that Old Methods of Marketing Are Getting the Mitten.

dry-goods box filled with rhubarb with a shipping tag on it for some eastern house. He took the name thereon and started correspondence. In a short time this grower and others started to ship, and soon were getting considerably more for their rhubarb than the former average price of twenty-five

cents a bunch of six to seven pounds. As more farmers started to ship, the price on the local market became higher, but the real improvement in the rhubarb marketing business did not take place until Mr. Frank A. Bloom, manager of the Farm Bureau Produce Exchange, started working out some notions of his.

Two years ago, Mr. Bloom noticed that the strings which tied the bunches would cut in and bruise the stalks. Also, he found that the bunches often varied over a pound in weight, and besides, packed in these large dry-goods boxes, they had a tendency to heat and were susceptible to injury from freezing. Commission men at distant points would report damage from these various causes and would discount the price accordingly.

Mr. Bloom thought there was a chance for improvement. So he evolved a card-board box much in appearance like the box one sometimes gets flowers in from the florist. This box holds just five pounds of rhubarb, and ten of the boxes fit in a corrugated carton.

The boxes and carton, enough for fifty pounds of rhubarb, cost the growers fifty cents, or one cent per pound. However, regardless of any difference in the cost of this better package, and

been added, which marketed under the Mitten Brand name. This brand is in greater demand than they can supply, and has sold during the past year for \$1.40 to \$1.75 per five pounds. The Exchange's fancy grade has sold for \$1.25 to \$1.50 and the choice for sixty-five cents to \$1.25.

The extra fancy grade are of good-sized stalks, of the most beautiful crimson color you ever saw. The fancys are of the same size but have slight color blemishes. The choice are the smaller off-color stalks.

The Exchange has the markets so well in hand, that the commission men, who formerly had everything to themselves, now come to the Exchange to buy enough rhubarb to fill what few orders they now get.

One commission man who came to the Exchange for rhubarb was quoted a price of \$1.25 per five pounds. Naturally, he complained of the price but Mr. Bloom showed that as the actual price they were receiving. So he bought. Later he learned that he could have gone to the open market and bought from farmers still outside of the Exchange, bunches weighing six to seven pounds for eighty-five cents. Of course, the eighty-five-cent rhubarb was not packed in the boxes nor graded as nicely, but the commission man

Does It Pay?

HERE are the average reesults of two methods of marketing rhubarb—the old dry-goods box way and the new fifty-pound carton method. The figures are for 500 pounds of rhubarb.

The Old Way.		The New Method.	
67 6-lb. bunches at 50c....	\$33.50	40 5-lb. boxes at \$1.25....	\$50.00
17 6-lb. bunches at 25c....	4.25	40 5-lb. boxes at \$1.10....	44.00
		20 5-lb. boxes at 75c....	15.00
Total	\$37.75	Total	\$109.00
Cost of dry-goods boxes....	\$ 1.50	Cost of ten cartons.....	5.00
Net returns f. o. b. Detroit..	\$36.25	Net returns f. o. b. Det. .	\$104.00

Over \$67.00, or 187 per cent, more for the same amount and kind of rhubarb is the direct result of efficient cooperative marketing. Is it worth while?

the old wooden box, the growers saved money by the use of it. In the old method, bunches averaged six to seven pounds. Under the new method, they are exactly five pounds which, with the price the same, would mean a saving of from one to two pounds. At the very low average of fifteen cents a pound, the saving in rhubarb in three boxes would pay for the entire carton. Under the old method, the growers were giving away at least one-fifth of their rhubarb.

This, however, was only one of the advantages of the new package. The rhubarb shipped much better because it was not injured by being tied. Neither did it heat nor freeze as easily. The corrugated carton and the boxes furnished plenty of dead air space as an insulation against the cold. They also were much easier to handle and ship.

Last, but not least, the rhubarb brought more money in these packages than under the old method of packing. In other words, the growers who market through the Farm Bureau Exchange get more money for less rhubarb than before.

Under the old methods there were two grades, fancy and choice. The fancy has been selling during the past year for eighty-five cents to \$1.00, and the choice for forty to sixty-five cents. Under the new method, the grades are a little closer and an extra fancy has

ed over the whole eastern half of the county. Many of the buyers are commission and produce houses in other cities. In the beginning of the season, consignments were made to about fifteen different markets, but toward the



A Box of Mitten Brand (Extra Fancy), and the Picker and Packer Thereof.

end, as the trade became established, only three markets were consigned to. All the other markets bought on the f. o. b. basis. Next season practically all the markets will have to buy f. o. b. Detroit.

During the past year, about fifty per cent of the forced-rhubarb growers around Detroit come under the Exchange wing. The other fifty per cent still think they can sell better on their own hook, or are looking for a nigger in the wood pile. Having dealt so long with the get-as-much-out-of-the-farmer-as-you-can methods, it takes a little while for the fact to sink into their minds that this is a real service-to-the-farmer proposition. This season's demonstration of that fact makes it quite certain that about seventy-five per cent of the growers will market through the Exchange next season.

Mr. Bloom is very modest regarding the accomplishments of the Exchange in the winter rhubarb market. He says that they have just demonstrated the simple truths that it pays to cooperate, standardize, advertise and be honest. But someone else said that Mr. Bloom spent many a midnight hour, planning and working out ways to make these simple truths applicable, and many other hours showing the farmers how to pack under the new method. The big fact is that Mr. Bloom has put the marketing of winter rhubarb on a substantial, profitable business-like basis. Besides, he has shown that better business methods help to make better farming, for the rhubarb men now take a pride in their product never taken before.

Keeping good cows good is not a high-falutin' notion; it is plain common sense and good business.



This is a Rhubarb Forcing House—Not a Dug-out in Flanders.

OUR SERVICE DEPARTMENT

Always Give Name and Address When Sending Inquiries.
as Satisfactory Service Cannot be Given to Unsigned Letters

MORTGAGE OBLIGATION.

I bought a farm for \$8,000, giving \$3,000 down, leaving a mortgage for \$5,000. First party holds \$1,000 mortgage, second \$2,000, and the man we bought of, \$2,000. Now we let the place go. I own another place. Party holding first mortgage is going to foreclose on us. Place is going to be sold. If place does not bring enough to cover mortgage, have they the right to touch my other place or my stock or tools?—N. K.

A purchase of land subject to mortgage may or may not create a personal obligation to pay the existing mortgage given by the prior owner, depending on the wording of the assumption by the purchaser; but at all events the property is liable for the first mortgage, and the mortgagor who gave the mortgage is also personally liable on that debt, though another has promised to pay it. Also N. K. is liable personally to pay his obligation, though he has given a mortgage to secure it, and if the mortgagee prefers he may sue without foreclosing, or for the unpaid balance after foreclosure.—Rood.

MARRIED WOMAN AS GUARANTOR.

My son signed for a course with a correspondence school, and his mother signed as guarantor. The son decided not to finish the work. Having received payment for only the time used, the company wants to collect the balance. The mother has not the money. Can they hold me for her signature, I being the husband and father and did not sign the contract?—J. J.

A married woman's guaranty is void. She can make contracts only as to her property. The husband is not bound by it.—Rood.

FRAUD.

I bought a farm through a real estate man, and the farm was not as he represented it to me. The ground was covered with snow when I bought it. Neither the real estate man nor the owner told me the truth. Can I make them take it back, or what can I do? Which is responsible?—D. K.

D. K. may retain the land and sue for the damage he has suffered, or he may file a bill in chancery after he discovers the fraud and before doing any act to ratify the sale, and have the sale rescinded and a judgment for his money.—Rood.

BEET SEED FOR FEEDING.

Is beet seed as good as oats for feeding cows and horses? The man we rent from wants us to feed beet seed to the cows and stock. We did feed it for a while and it made them so loose that they started to lose flesh, so we quit feeding it until we found out if it was any good?—G. O.

So far as can be ascertained, beet seed has never been used as food for live stock. No food analysis can be found in any published feeding tables. We would naturally expect this, for it is not grown for that purpose and always is of such value for seed purposes that it would not even be considered as a stock food.

There are, so far as can be learned, no feeding tests of beet seed, hence it is safe to say that no one has ever fed it to amount to anything.

Of course, it must contain some food value, for it germinates and grows and therefore contains protein, carbohydrates and fat, but presumably in small quantities. But because it contains food nutrients is no reason why it might be a proper food. From the looks of it, one would seem to be warranted in saying that it contained

a very large percentage of indigestible fibre.

If you have fed it and it does not seem to agree with the animals, it would not seem advisable to feed it. Personally, it is a question we cannot answer, for we have had no experience and can find no evidence for or against it as a food. We don't believe it advisable to feed it.

GRUB IN HEAD.

Have lost nearly one-third of my flock with grub in the head. I have no shade in my sheep pasture, and allowed them to come up in the barnyard in the shade of the buildings during the summer months. The barnyard contained a little left-over manure. Would the flies causing the grubs be worse around such a place? My pasture field had a small piece of marshy land in it. Would that make any difference? Is there any remedy for a sheep with a grub in the head?—A. L. D.

There is no certain cure for grub in the head. The only measures which can be taken at this time of year is to give them good feed and care, with the hope that they will survive.

During the summer months they should have abundance of shade in the field and where shade cannot be provided, a few furrows should be plowed in the field where the sheep can gather and stir up some dust, which is one of the most effective ways of repelling the flies.

VALUE OF MARL.

I have about ten acres underlaid with marl. It runs from one to seven feet deep. I had a test taken by the state geologist and he pronounced it ninety per cent pure and ten per cent sand. I would like to know the value of it as cement or fertilizer.—P. F. C.

Marl testing ninety per cent is a very good grade material to apply to sour soils to correct the acidity. I would recommend about four to six cubic yards per acre, depending on the acidity of the soil. This can best be applied with the manure spreader by putting a small amount of manure or straw in the spreader and completing the load with marl. Set the apron to run as slowly as possible and you will find that the material is distributed quite evenly over the land. The value of marl depends considerably on the ease with which it may be removed from the pit. In some places it is quite deeply covered with soil and requires considerable labor to remove it from the bed. In other cases

it comes quite near the surface and may be removed quite easily.

Marl is often used in manufacturing cement but its value depends on the nearness to a deposit of clay or shale suitable for mixing with it to make a good cement. An inquiry to the state geologist would tell you whether such a deposit of clay or shale is in your neighborhood.

A CONTRACT.

An agent made this proposition to me: The company to give me a ten-volume set of encyclopedias if they could use my name as a reference, but they would expect me to give them an order for an educational course, which was \$49. I gave my contract to pay \$5 down and that amount per month. I cannot make payments. I have asked to be released, but they say it can't be. I have never paid one cent, so please advise me what to do.—C. A.

This looks like a contract, if there be such a thing, which means that both makers should perform. Payment is not necessary to a contract.—Rood.

PLANT LICE.

I have a red climbing honeysuckle vine on the east end of a porch where it gets sunshine until in the afternoon. It is in good soil and I water it when there is a drought. The blossoms will blast and seem to dry up about the time they are opening. The ends of the branches will seem to be sticky, and some look black. So many of the leaves will also dry and turn yellow. Have tried spraying with Paris green water and last summer used lime and sulphur water once, but it did not seem to do any good.—M. B.

The trouble is undoubtedly due to plant lice. I would spray with nicotine sulphate; using two tablespoonfuls to a pint of warm soapsuds, and I would say that each insect must be hit to be killed. The other alternative is the use of one of the regular nicotine dusts, not on the market for this purpose. I would use about a six per cent regular nicotine dust, made of six per cent nicotine sulphate and hydrated lime, or hydrated lime and kaolin. This works pretty well although, of course, the spray is really better and undoubtedly easier to get.

THE BEST BREED.

We would like your advice on how heavy the Guernsey cattle get. We have been told by some they don't get any larger than the Jerseys. Which breed of cattle would you consider the most profitable to keep, the Guernsey

or the Shorthorn or the Holsteins?—F. J. E.

It is for no man to say which is the best breed of cattle. Each breed has its own special merits, and then there is an old Roman proverb that fits in here nicely: "There is no use in disputing about tastes." A man can not always tell all the reasons why he prefers one breed over another. He covers the whole question when he says, "I like them best." And we can have our choice and make no mistake, for there is no best breed.

The average Guernseys are a little larger than Jerseys. However, many Jerseys are larger than many Guernseys; but they do not average that way.

Again, either Jerseys or Guernseys, when bred and reared in this country for some time, get larger on the average. The American type Jersey or Guernsey is larger than the Island types. This is true of Shetland ponies also.

JOINT TENANCY.

A man has been parted from his wife for seventeen years, but not divorced. After parting, one son took care of the mother and purchased a house and lot and has joint deed with the mother. Is it legal? Was it legal to give a life lease to the mother? If the son should die first does father (or husband) become an heir to the place? He never put anything in the place for expenses or for support for his wife. Can she sell the place for her support?—W. W.

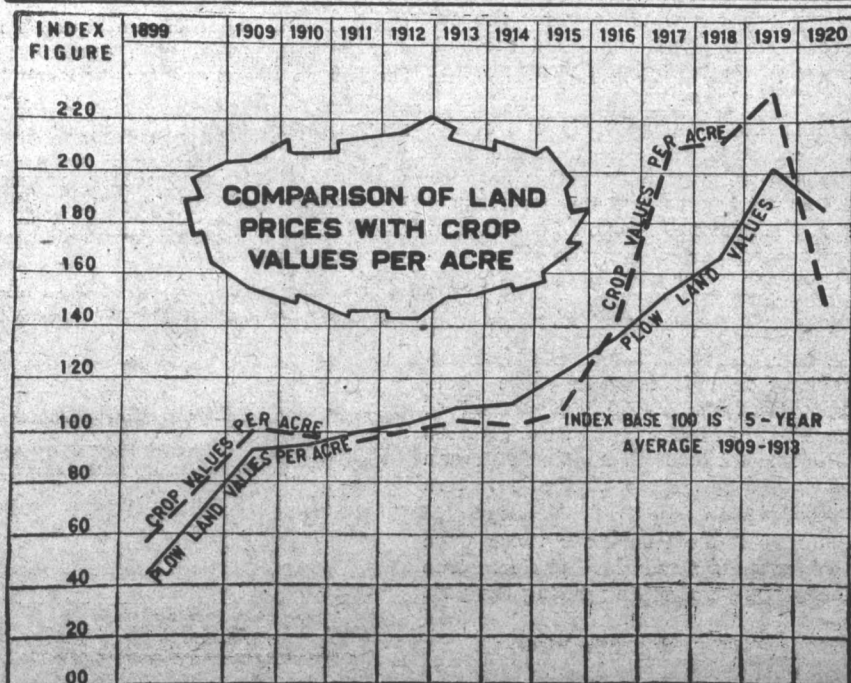
In the absence of words expressly creating joint tenancy, the mother and son hold, not by joint tenancy, but as tenants in common, in which case on the death of the son his undivided half would descend to his heirs; and if he had no descendants nor widow his father and mother would take his half in equal shares.—Rood.

SURFACE WATER.

Last season there was a road job sold to a certain construction company to build a gravel road past my farm. This road was let under the Covert Act, but not by fault of the builders but by fault of the county engineer drawing the blueprint of same, they changed the water course of three different drains and run them on my farm. This gives me so much extra water that the ditch I have will not take care of the water, therefore flooding my crops and causing damages to me. Now, I have offered to do the fair thing with our county road board. I ask them to either put culverts across the road and take water back the old natural water course, which would cost around \$125 to \$150, or to give me \$125 and I will take care of the water, but they refuse to do either one. Now, the point, can they run this water on my farm and make me stand for it without helping to get rid of said water?—W. G. S.

If the facts set forth are subject to proof you have an action for damages against the board of county road commissioners for draining surface water on to your premises without taking care of the same. Call the matter to their attention and insist on their providing the proper outlet for the surface water so that it does not damage property.

Road officers have no authority to drain surfaces onto any person's property without providing an outlet for the same. The board of county road commissioners have authority if they cannot obtain a right-of-way for surface water, to petition the drain commissioner to construct an outlet drain for them, hence, they have all the advantages of taking care of road drainage without doing damage to abutting property owners.—Partlow.



Shall I Grow Hubam?

What Michigan Farmers Have Learned About the Crop

By D. F. Rainey

IN cooperation with Michigan farmers and county agents, the Farm Crops Department of the Michigan Agricultural College put out a quantity of Hubam to observe the growth it would make under field conditions and see what Michigan farmers could do with it. The results are not conclusive and further work will be necessary if we are to make definite recommendations for the use of this crop based on successful field trials.

In a brief way we are presenting the results of these variety tests which, though they may not give much data, will to an extent summarize the re-

sults of the past two years. There were about sixty farms in 1921, and twenty-five in 1922 cooperating in these tests.

The year 1921, was very dry and unfavorable for Hubam seedings in general and especially was this found to be true along the western side of the state. And so the majority of experiences report "Failure," which was due to either "weeds" or "drouth." Yet there are a few who grew the crop successfully.

Mr. E. S. Brewer, of Millersburg, by weighing up a square rod, calculated that he secured two and one-half tons of Hubam hay at two cuttings. He seeded red clover in his Hubam and reported an excellent stand for the 1922 crop.



Hubam on Verne Moore's Farm Near Hartford.

Mr. Lakin Brown, of Schoolcraft, seeded Hubam with oats in May. He cut his oats, raked them into windrows and when the Hubam was about eight inches high he turned in two brood sows and twelve shotes. They ate the Hubam and seemed to be doing well on it.

The accompanying picture was taken on Vern Moore's farm near Hartford. He seeded Hubam and Biennial in oats in the spring of 1922. The camera is on the dividing line and the Hubam is next to the corn, with the Biennial on the camera's left.

A great deal of the Hubam was seeded this way and as shown in the picture, it makes but little growth above the stubble when it begins blossoming, which makes it show up so white in the picture. The Biennial is usually somewhat shorter. This picture shows an exceptionally good stand for both. So often the stands are very spotted and of very uneven growth. A growth of Hubam, as shown

in the picture, is not of much value for hay or pasture.

Mr. Carl Leidlein, near Saginaw, sowed Hubam and Biennial side by side in the spring of 1922 without a nurse crop.

The Hubam is on the right of the camera and the Biennial on the left. This is by far the best field of Hubam seeded broadcast I have seen. The Biennial was cut on August 13 and a big load of hay secured from half an acre. On August 19 the Hubam was sampled and the yield of green weight computed at 20,875 pounds per acre. A sample, when dried, showed a yield



Hubam on Verne Moore's Farm Near Hartford.

of over 10,000 pounds of air-dry hay. The Hubam, at this time, was too large, woody and coarse for hay. It should have been harvested for hay sometime earlier when smaller and when it would weigh much less. It was saved for seed as it looked as though it would give a very good crop. The field had practically no weeds at all.

E. C. McCarty estimated that he secured two and one-half tons of hay per acre from a self-seeded six-acre field of Hubam which produced a seed crop in 1921. He sowed eighteen pounds per acre alone, and estimated a yield of one and one-half tons per acre.

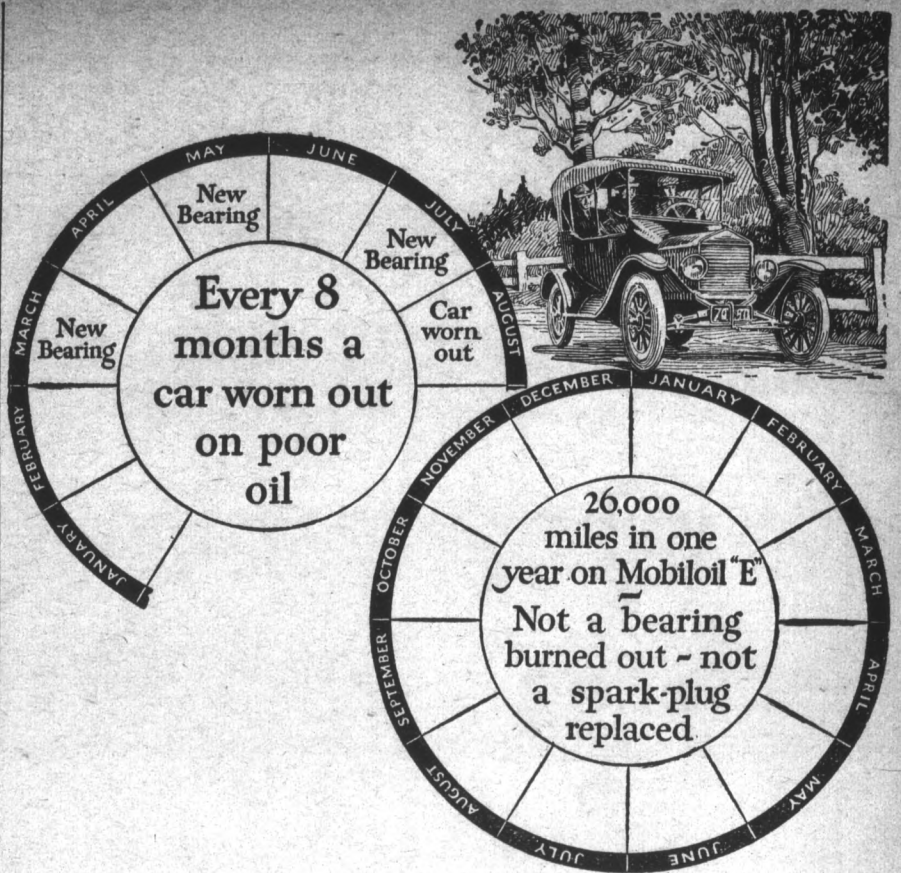
Mr. David Blush, of Kent City, sowed Hubam as a cover crop in his plum and peach orchards. He liked it especially well in the plum orchard. The peach trees were planted so close together that they did not give the Hubam much of a chance. Hubam seeded in oats was a failure for Mr. Blush. Farley Brothers, of Albion, tried Hubam as a cover crop in their orchard in 1921, and reported a failure due to drouth and weeds, although alfalfa had been grown there for the five preceding years.

In general, the Hubam seed plots of 1921, when allowed to self-seed, had a lot of weeds in them, making a very poor quality of hay and a poor pasture also.

When seeded with a nurse crop it made a small growth, rather spindling, with several branches but with very few leaves compared to the Biennial.

Usually the Hubam grows higher and has a trifle more weight to its tops than Biennial planted at the same time. The root growth of the Biennial

(Continued on page 676).



A Ford Story from Texas

What bad roads and low speed taught this hustling salesman

A SALESMAN in Greenville, Texas, travels for one of the big tire companies. In much of his territory the roads are unusually poor. Occasionally he must travel for miles in low speed. He used to burn out a bearing about every two months.

Every eight months his employers found it necessary to replace his used Ford with a new one.

In 1921 another new Ford roadster was given him. Then this salesman began to use Gargoyle Mobiloil "E."

"E" won—as usual.

After one year with "E," he reports: The car has run approximately 26,000 miles. Not a single bearing has been replaced. Not a single spark plug has been removed.

And the cost of lubrication has been cut to a third of what it was on his former car.

The unusual growth in the use of Gargoyle Mobiloil "E" throughout the whole country means only one thing: *The proof of the oil is the using!*

While your engine is warm, draw off your old oil and refill with the proper amount of Gargoyle Mobiloil "E."

Send today to our nearest branch—or ask your dealer—for the booklet, "Your Ford—Four Economies in its Operation."

For the differential of Ford cars use Gargoyle Mobiloil "CC" or Mobilubricant as specified by the Chart of Recommendations.

Tractor Lubrication

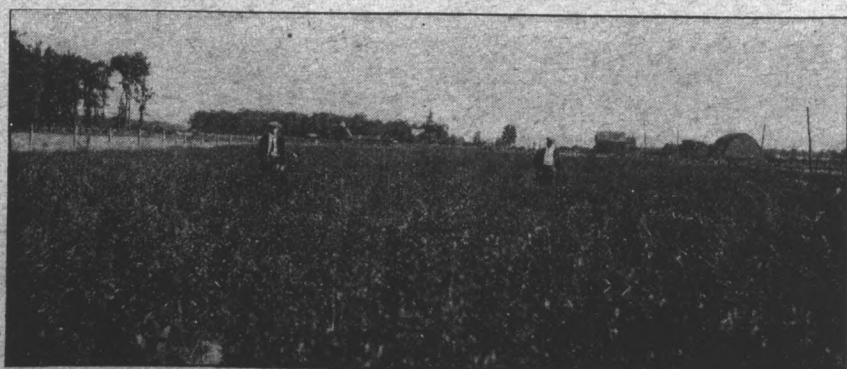
The correct engine lubricant for the FORDSON TRACTOR is Gargoyle Mobiloil "BB" in summer and Gargoyle Mobiloil "A" in winter. The correct oil for all other tractors is specified in our Chart. Ask for it at your dealer's.

Address our nearest branch:

New York (Main Office)	Boston	Chicago
Philadelphia	Detroit	Pittsburgh
Indianapolis	Minneapolis	Kansas City, Kan.
Milwaukee	Des Moines	Dallas
Buffalo	Rochester	Oklahoma City



VACUUM OIL COMPANY



Carl Leidlein, of Saginaw County, Grew a Splendid Crop.

How to Waterproof with Concrete

Suggestions for Constructing Waterproof Basements, Tanks, Etc.

By H. H. Mussleman

MAKING waterproof concrete is not a difficult task. To produce watertight concrete, it is not necessary to add artificial preparations to the concrete to secure good results. So much poor or make-shift work is done with this wonderful material, however, that the notion has developed that it has to be doctored in some way to render it impervious to the passage of moisture or water. Making water-proof concrete is a matter of knowing, first, what good concrete is, and, secondly, in combining and using the materials in such a way as to produce good concrete and secure the desired results.

It is not assumed that artificial means of water-proofing can be dispensed with in every case, for these methods may, in some cases, be cheaper and more applicable, and it is true that they may be used to make up for or correct shortcomings in the material or workmanship which, properly used, should produce satisfactory results.

The Materials Needed.

First, what is good concrete? It will be worth while to see what materials are used and how they are combined. Cement, the first ingredient, should, of course, meet standard requirements, which it generally will, unless kept in storage in a damp place for some time, in which case it may deteriorate. Cement which becomes loose and fluffy when rolled over once or twice on the floor, may be assumed to be in good condition.

The problem of sand and gravel is somewhat more difficult. They must be clean, and this can best be told by placing about four inches of the material in a glass jar with water added, and allowing it to stand after

when it is noted that material as it runs at the pit is usually more than twice as much sand as gravel instead of one-half as much as specified above. Here is the first place that the user is likely to err in selecting his material.

In choosing material a pail and a piece of quarter-inch screen is all that is required. Screen a pail of material and see whether the volume of sand is one-half the gravel. If not, very coarser material may be added from some other part of the pit, or it may be necessary to screen the materials and take the correct amounts of each.

Having decided that the gravel shall be one part sand to two of gravel we are ready to proportion with the cement. The following proportions have been worked out for various purposes, based on tests and practice so that they may be relied upon. The proportions are given as parts of cement, sand, or gravel, and also parts of cement and bank-run gravel. If bank-run gravel is to be used, however, it should be selected so that the volume of sand is one-half that of the gravel.

In the above table the parts, when

Filling the Forms.

In filling the forms the concrete should be well worked into place with a board about six inches wide, the end of this board may be trimmed to a chisel edge to assist in working the fine material to the surface. Do not neglect to see that the concrete is worked into every part of the form.

If possible, avoid joints as they are likely to cause seams in the concrete. If joints must be made, dovetail them by laying two-by-fours into the fresh concrete and remove the same before the fresh concrete is placed. Also, pour on the joint, before the new concrete is placed, a layer of cement and water, mixed to the consistency of a thick cream.

The above method of handling concrete, carried out carefully, will produce work which will be water-tight against ordinary heads of water up to five feet. In discussing the following ways of water-proofing concrete, both in making and in treating it, is to be understood that these means are not intended to supplant good material and work, but to serve as additional in-

arately, one-fourth pound of soap to three and one-half gallons of water. The two solutions are then mixed, being stirred frequently to prevent the compound from accumulating on the surface. This solution is used instead of water in mixing the concrete.

Other Methods.

Commercial products may also be had which depend upon the two principles mentioned—fineness and water repellent properties.

The surface-coating method of water-proofing will answer in many cases, and is especially valuable for tanks, cisterns and silos, where the concrete is not water-tight. Cement

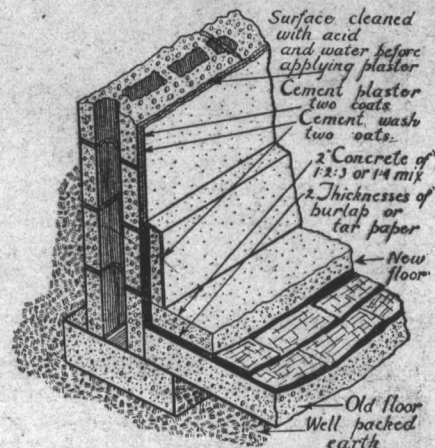


Fig. 3.—Water-proofing Old Floors is Best Done by Cleaning Old Floor and Mopping with Pitch, Laying Paper in Pitch, Lapping Joints and Mopping with Pitch in which Another Thickness of Paper or Burlap is Laid to be Covered with Pitch. On Top of this a Two-inch Concrete Floor is Laid and the Walls Plastered as Illustrated.

wash made by mixing cement and water to the consistency of cream, and painted on with an old broom or white-wash brush, is one of the most common.

Paraffin may also be brushed on hot or cold. If applied cold a solvent, such as naphtha or gasoline, must be used to reduce the paraffin to a liquid. The solvent will evaporate the paraffin in the outer pores.

Asphaltum paint is sometimes used in the same manner as paraffin. With both paraffin and asphaltum the surface must be dry when the application is made.

Water-proofing a Basement.

As illustrative of the methods of water-proofing, two sections of a house basement wall are shown. The first of these, Fig. 1, is typical of new wall construction, which should preferably be of monolithic or solid concrete construction for water-proofness.

It should be pointed out that where a head of water of more than twelve to sixteen inches is to be overcome by water-proofing, that special floor construction will be necessary to resist the pressure due to the water.

A basement surrounded by water to a depth of two and one-half feet would be a head of two and one-half feet, or pressure of one pound per square inch on each square inch of the floor, this would be 144 pounds per square foot, or a total pressure of 14,400 pounds, or seven tons on a floor ten feet square. This pressure would require reinforced construction to withstand this pressure. A basement surrounded to a depth of two and one-half feet would be much the same as building a float or barge of the size of the basement and loading it until sunk to a depth of two and one-half feet in the water.

In the accompanying sketches a
(Continued on page 652).

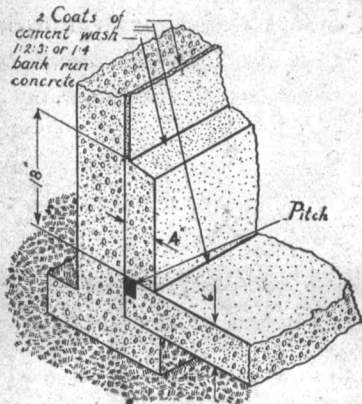


Fig. 1.—New Floor Construction where Water-head Does Not Exceed Eighteen Inches Above the Floor.

shaking for a minute or more. A muddy layer on top, of more than three-eighths of an inch, indicates clay or organic material which should disqualify it for concrete, where strength is essential.

Next comes fineness. The gravel should grade in size from fine to coarse and should have some of every size grains from one two hundredths of an inch in diameter up to one inch in diameter for most work. A method of analysis has been worked out by which the amount of each size of grains can be determined for the best material, which is the one having the greatest density or, in other words, the least void or pore space between the particles.

For practical purposes it is generally specified that the material shall contain half as much sand as gravel. Sand is understood to be the material which will go through a screen having a quarter-inch mesh, and gravel the size grains which will not go through the same screen. Put in another way, the gravel should be twice the volume of the sand. This is rather surprising

measured as cubic feet, are most convenient, since one bag of cement is counted as a cubic foot. It will be noted that, for water-tight work, a proportion of 1:2:3 or 1:4 to 1:2½:4 or 1:5 bank-run is required. With careful mixing and placing, the writer has secured water-tight work with a proportion of 1:2½:5 on a four-inch thick wall, but this is not advisable for general practice.

How to Mix.

Mixing is an important part of water-tight construction. A bottomless box holding two or four cubic feet is first constructed in which the materials may be conveniently and accurately measured. The materials are measured out and mixed dry, preferably with shovels on a flat board platform, if a mixer is not available. They should be shoveled over not less than three times, dry. Water is added and then the mixing continued, shoveling over from three to five times, or until the mass has a smooth, even color and appearance, with all the gravel particles coated with cement. The consistency should be such that when piled the mass will slump down till the height of the pile is about one-half its diameter. This is known as the "quaking" consistency, which can also be tested by patting with the back of the shovel, when the pile will slake or "quake." This consistency will run into the forms and may be easily worked into place.

surance, or serve in cases where failures occur in the making, or in special cases to which they are adaptable.

Hydrated Lime May Help.

Since water-proofing is done by producing a very dense concrete, through which water cannot pass, the use of hydrated lime which is extremely fine helps to fill the smaller pores into which the smaller particles of cement

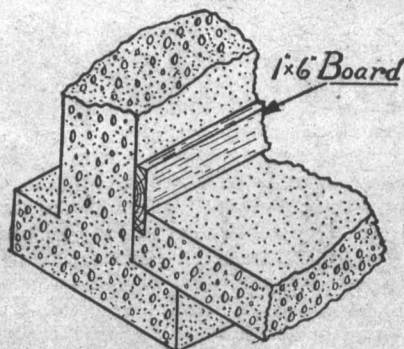


Fig. 2.—This Illustration Shows the Method of Placing Board for Forming Groove in Joining Floor to the Outer Wall.

do not readily fit. Lime may be added to the mix to the extent of not more than ten per cent of the weight of the cement.

Alum and Soap.

Alum and soap makes a water repellent, like a duck's back. To make this compound dissolve a pound of alum in two gallons of water and sep-

Producing Sugar Beets

An Account of the Experiences of Central Michigan Growers
By Our Field Editor

RECENTLY the sugar beet industry has had its troubles along with other lines of business. But out of the struggles and discouragements of the past few years there is coming a better understanding which promises to keep this worth while industry flourishing in Michigan.

Bankers and business men are looking forward with nothing but optimistic forecasts as to the outcome of this season's sugar beet ventures. They are especially anxious at the present time, for obvious reasons, to see the farmer get hold of some real cash, and the sugar beet promises this year to aid materially in bringing that about. It is estimated that upwards of half a million dollars of sugar beet money will flow through the farmer's pockets in the vicinity of the factory at Mt. Pleasant this year.

As with most other farm crops, the cost per acre of a poor crop is very nearly as great as the acre cost of a large crop, but because the cash out-

fertilizers, have prepared his fields for successful sugar beet growing. On a nearby farm, with a stand called perfect, and a spacing of twelve inches in the row, the yield was but ten tons per acre. The soil of this field was equally as good naturally, but not so well enriched. The same farm has since, under the management of Mr. Brown, whose main farm enterprise is dairying, produced an average of fourteen tons of beets per acre.

Given a rich, deep, dark loam soil, such as offers a congenial home for root crops, and the exact rate of planting seems less important. Many of the good farmers, in this country of rich soils and good live stock, prefer to plant the rows twenty-eight inches apart, blocking the beets twelve inches apart in the row. This enables the use of the regular riding corn or bean cultivator, which, when equipped with a pair of discs in place of shovels, does a wonderful job of tillage.

This arrangement offers a distinct



A Sixteen-ton Crop on the Hoyle Farm, Isabella County. This is a Part of the 70 Acres Blocked and Thinned by the Three Men with the Horse.

lay is greater with beets than with other crops, the effect of poor results in the yield is more keenly felt. Ordinarily it takes all the returns from a crop of around seven tons to pay all of the costs. Over and above this, practically all is profit, and as the yield increases the profits increase rapidly.

Where the Profits Lay.

Thus it is easy to see that the land to be planted to beets should be rich and well adapted to the crop. There are few crops that pay better for good care and a rich feeding ground than beets.

Henry McCormic, an Isabella county farmer, learned this fact from a demonstration in his own beet field. He liked to grow beets but was not satisfied with the average production of ten tons which his field produced. Down in one corner of the field was a piece of land that had been very thoroughly enriched and the beets were fine. He measured off just one-third of an acre and weighed the beets separately and to his surprise the yield of this plot of ground which had been properly enriched, was at the rate of twenty-one tons per acre.

The evidence was convincing enough to prove that it was in the loamy, well-enriched land that the sugar beet profits lay. The importance of a good stand should not be overlooked, it is not so necessary that the spacing be just so, as the beet will send its feeding rootlets through the soil for a considerable distance in search of plant food. But a liberal supply of plant food deserves first consideration.

Rate of Planting.

On the Vaniman farm, for instance, a yield of sixteen tons per acre was secured with beets blocked fourteen to eighteen inches apart and a good many skips. This farm has long been a heavy producer, not only of crops but of beef and dairy products.

Heavy coats of manure, combined with clover growing and commercial

advantage during seasons when the weather and the weeds conspire against one. The work goes slow but by setting the discs, first to throw the dirt away from the rows, and later to throw it back to them, it is possible to eliminate most everything in the way of weed growth between the rows.

On Trial.

An interesting and valuable experience is reported by W. R. Wicks, an aggressive beet grower of considerable experience, who, with the advice and assistance of "Steve" Fall, the veteran field superintendent of the Mt. Pleasant territory, rented a field of thirty-one and a half acres for beets. The entire operation was handled on a cash basis, all the work being hired and all the material being paid for in cash.

The plowing and fitting was done with a tractor, the wheels of the tractor acting as a heavy roller in firming the seed-bed. The beets were planted in twenty-four-inch rows and blocked as nearly as possible fourteen inches apart in the row. The field was five miles from the factory, necessitating a rather long haul, but the results have satisfied Mr. Wicks, as well as several other farmers who have followed this demonstration, that the beet crop intelligently handled will pay right good wages for the labor required, and at the same time leave a substantial share of the income it brings, down deep in the farmer's pocket where it feels good. The financial account of this operation reduced to an acre basis stands as follows:

Expenditures:—Rental, \$10; plowing, \$4; cultivating, \$5; fertilizer, \$1.50; seed, \$2; lifting, \$2.50; hand-labor, \$18; hauling, \$13. Total paid out, \$56.

Receipts:—Thirteen tons of beets delivered to the factory, at \$7.87 per ton, \$102.31. This leaves \$46.31 for each acre down in Mr. Wick's pocket. No wonder he is a booster for beets.

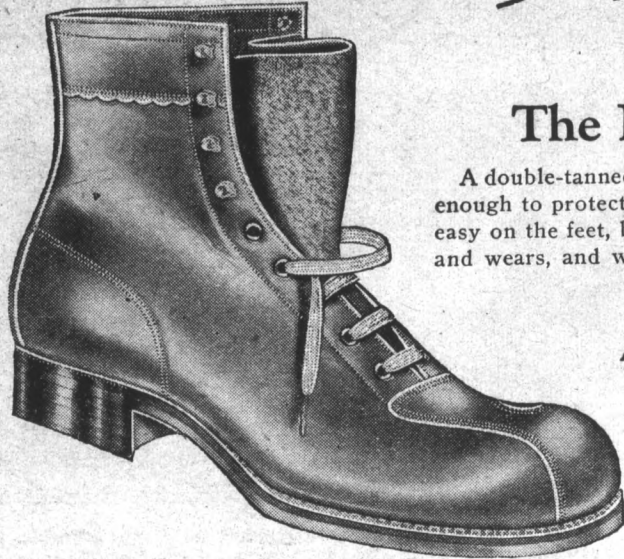
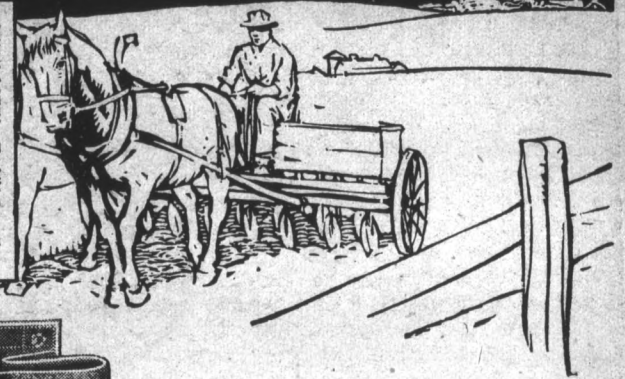
ROUGE REX

More Mileage Shoes
Double-Tanned—Double Wear

It will be three years this Fall since I bought your Rouge Rex shoes and after having put three pairs of new soles on them, they are good yet. I wore them most of the time. They are the best fitting and easiest walking shoes I have ever worn. They are certainly made to stand the wear and tear such as farmers give shoes, and are always soft and pliable summer and winter.

There are six of us and we are all going to buy your shoes. My neighbor asked me when I was going to wear this pair out and I told him that if I knew that I could get another pair, I would do so. He said he would too. Yours truly,

(Signed) WALTER HOFF,
West Saginaw, Mich., R. No. 1
Feb. 18, 1921.



The Planter

A double-tanned horsehide shoe, high enough to protect the ankles. Soft and easy on the feet, but a shoe that wears, and wears, and wears.

Ask for Stock Nos.
4127, 442, 4126

Horsehide—Double Tanned That Always Stays Soft

We make a specialty of work shoes, made exclusively of double-tanned horsehide. Our double tanning process is an exclusive method of tanning this most durable leather so it always stays soft and pliable as buckskin.

Horsehide is known as the toughest of all leathers. It is the only leather used to cover league baseballs, because it is the only leather tough enough to stand the pounding. We double-tan it, increasing its durability yet making it so flexible that you can wear it all day, day after day, and it never tires your feet.

And it stays soft. Wet it, soak it, wear it through mud and water, it will dry out just as soft as when new. It never grows hard like other leathers.

We use only the choicest horsehides, and we use only the best part of each hide in making the Rouge Rex — the butts, where

the fibre is closest and toughest. Men who have worn Rouge Rex shoes say they never thought leather could last so long, or keep its softness after wetting.

You'll note how thick the leather is in Rouge Rex shoes. Then you'll marvel at its velvet-like flexibility. We make a Rouge Rex 1000 Mile Shoe for every work purpose. For field and factory, for oil field, camp or lumbering. And every shoe is horsehide through and

through.

You'll say, after wearing a pair of Rouge Rex, that this is the most economical shoe you ever bought. For it outlasts all other shoes, and it gives the satisfaction of perpetual comfort and ease.

If your dealer hasn't the Rouge Rex we will see that you are supplied through our nearest dealer. Write us for his name.

Rouge Rex Comfort Shoe



This Rouge Rex is so pliable and soft you can double it up like a moccasin. It wears like iron but you'll hardly know you have a shoe on, it is so soft and easy.

For tender feet, or where you do not encounter wet weather, wear this Comfort Shoe. You'll find it a blessing to the feet.

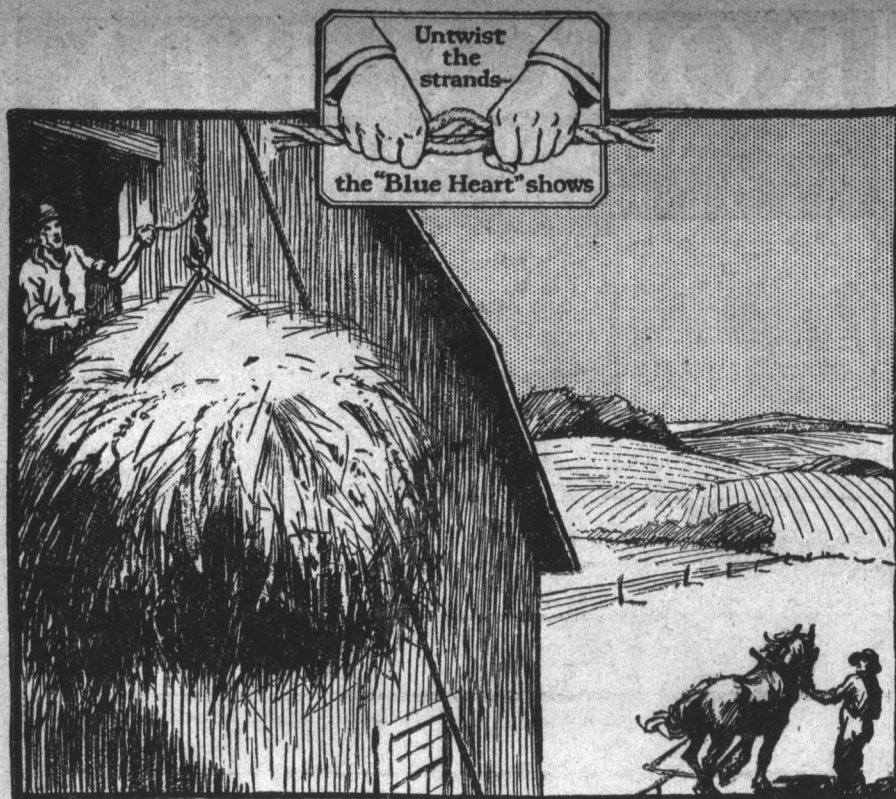
HIRTH KRAUSE CO.

From Hide to You

Shoe Manufacturers and Tanners

Dept. 247

Grand Rapids, Mich.



Rope that "stands the gaff" in haytime

The guaranteed strength of H. & A. "Blue Heart" Manila Rope makes it dependable under greatest stress

Threatening rain on Saturday morning—and all the hay in the field. "It must all be in by night," is the order. A big crop is at stake. The haying crew tightens up. Horses drawing the hayloads are forced to trot. Men work feverishly.

At such times rope must be able to "stand the gaff." It must match the tense, taut muscles of man and beast. Breakdown of equipment means a heavy loss—and perhaps injury.

H. & A. "Blue Heart" Manila Rope will stand by you in times of stress because it is the strongest rope made. Spun from the toughest rope fibre grown, it is guaranteed to exceed the strength of the U. S. Government standard. (See guarantee below.)

And yet H. & A. "Blue Heart" Manila costs no more than many inferior ropes.

Be sure you get this safe, extra-strength rope when you buy. You can tell the genuine, guaranteed H. & A. "Blue Heart" Manila Rope by grasping it in your hands and untwisting the strands. Running through the center of every foot of H. & A. "Blue Heart" Manila Rope is a small blue thread—the "Blue Heart"—our trade mark.

Before you buy rope, untwist the strands. If the blue thread is there you will have in your hands a genuine guaranteed H. & A. "Blue Heart" Manila Rope—the strongest rope made.

For other tasks, where a high grade sisal rope is wanted, use the best—H. & A. "Red Heart" Sisal Rope, carefully spun from selected sisal fibre by the same skilled rope makers.

Special Offer!

The coupon below with 40c will entitle you to our new style combination halter and tie rope made from H. & A. "Blue Heart" Manila Rope—weather resisting and much stronger than ordinary halter rope or leather. It is 1/2 inch in diameter and fitted with two snaps and two adjusters that cannot slip when in use. It is worth a great deal more than the low price charged for it and is offered at cost to introduce to you the great strength and wonderful wearing qualities of H. & A. "Blue Heart" Manila Rope.

If your dealer does not yet carry H. & A. "Blue Heart" Manila Rope and cannot supply you with this special halter, fill out the coupon below and mail it to us with 40c in stamps and your dealer's name, and one of these special halters will be sent you prepaid.

M.F.

Gentlemen: Enclosed is 40c in 2c stamps for which please send me one H. & A. "Blue Heart" Manila Rope special offer halter.

My name.....

Address.....

My dealer's name.....

Address.....

GUARANTEE!

H. & A. "Blue Heart" Manila Rope is guaranteed to equal the yardage and exceed the breaking strength and fibre requirements of the U. S. Government Bureau of Standards. Any H. & A. "Blue Heart" Manila Rope found to be not as represented will be replaced.

THE HOOVEN & ALLISON COMPANY, Xenia, Ohio
"Spinners of Fine Cordage Since 1869"

H. & A. Star Brand Binder Twine

Evenly spun from the best fibres, of full yardage, great strength, and used from coast to coast by farmers who claim it is never cut by insects.

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H&A "Blue Heart" Manila Rope

GLADIOLI 36 Named Bulbs, 6 color, \$1.00. 12 Different fancy colored catalog. **PIERCE BULB CO.** West Medway, Mass.

Choice Dahlia Tubers and Gladiolus bulbs for sale. **LUCY O'HARROW** Clarksville, Mich.

CABBAGE PLANTS 2,000,000 25th May & on. Early & late var. Prepaid, 100, 40c; 500, \$1.25; 1000, \$2.25. Express 5,000, \$7.50; 10,000, \$12.50. Cauliflower & Aster, 100, 60c. Sure to please. List free. **W. J. MYERS, R. 2, MASSILLON, OHIO.**

PURE BRED FOX HOUNDS all ages. Pups bred especially for Coon, Skunk and Rabbits. **W. E. LECKY** Holmesville, Ohio

How They Grow Corn

I FIND in raising corn, or beans, or any crop, the growers are concerned about the simplest matters relating to crop production. I have found, for instance, that one can do a host of corn cultivating before the corn is ever put into the ground. That is a simple, practical fact which real corn growers recognize as a most valuable one to them, but which the outside man is very likely to turn up his nose at.

So in these columns, brother farmers, we want to talk over from week to week some of those every-day matters, through which talk we may get some new angles on doing our work. This is corn week. Next Saturday I want to have a talk on beans. And the following Saturday, as announced below, we want your methods of saving minutes. **THE HANDY MAN.**

THE WAY I GET MY CORN.

I USUALLY plow about seven inches deep, letting the jointer turn a good "roll" under the main furrow, then I float or roll once and drag three times, using care not to tear up the sod by setting the drag too deep.

I test my seed for vitality and if the soil is in good condition, use three or four kernels to the hill, the hills being

manure the season before, as soon as possible after the hay is removed. This produces a heavy growth of clover, which I fall-plow. Three good draggings, in spring, a few days apart, produces a good seed-bed. Just before the last dragging, add 200 to 300 pounds of acid phosphate per acre. This helps to balance the manure as a fertilizer.

The first time I cultivate quite deeply with a shovel cultivator, and after that I use a surface cultivator two or three times. —Robert Brauhner, Ithaca,

CORN KINKS.

THE first thing I do is to select nice plump ears of corn. I don't shell these to the end of the ear, as I wish to get the kernels all about the same size. After the corn is shelled, I soak it in warm water over night and after draining off the water the next day, I sprinkle it with dry sand until it seems dry.

Next I pour coal tar over the corn and stir the whole thing thoroughly. This gives the corn about the same color as the soil, which makes it difficult for the crows to see.

As soon as the corn comes up, I start cultivating and I keep up the cultivation at frequent intervals as long as I can do so without injuring the corn. I cultivate both ways, as I always plant my corn that way instead of drilling it in.

I never plant my corn until the weather is warm, usually about the twenty-fourth of May.

Due to these methods, I very seldom have a failure in my corn crop. —Chas. Stevens, North Branch, Mich.

HOW HE GETS BEST RESULTS.

My experience shows that for best results in raising corn, plow under a good clover sod in the fall, if on heavy land. In the spring pulverize or drag the ground every week or ten days until time to plant. Check-row your corn to permit better cultivation. A good dragging just before the corn comes up is worth much in checking weed growth.

Test your seed corn and plant an average of two and a half kernels to each hill about three feet six inches apart each way.

Cultivate shallow after the first two workings. If you need some fodder cut the corn and stand in moderate-sized stacks until it is cured. Husk the ears with a team and wagon, after which let your stock run in the field and feed to their heart's content. —Isaac D. Ayres, Gobles, Mich.

MY METHOD OF GROWING CORN.

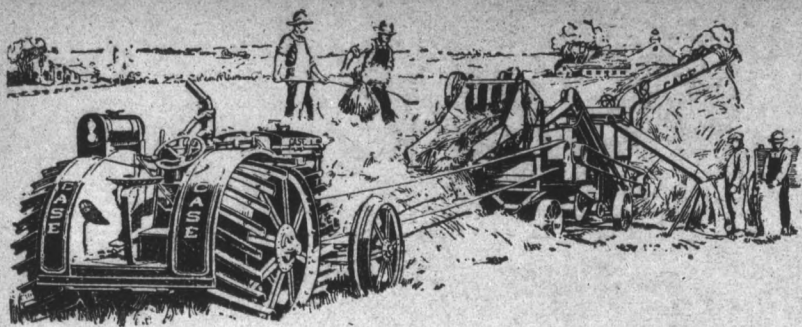
I USUALLY rotate my crops so that corn comes after beans, but I did not have real success with this rotation until I tried covering the ground with manure at the rate of about six loads to the acre.

Then instead of plowing, I just disc and spring-tooth the ground, thus working the manure into the soil. I find that this method saves many days of plowing at a time when one is busy. At harvest time I leave about five acres standing until ripe. Then I rig up a wagon, Illinois style, to husk into. After husking, I cut the corn with a corn binder and stack the fodder. In this way I get my corn cribbed and my fodder cut and stacked in about six days.

GROWING CORN ECONOMICALLY.

My first procedure in the growing of the season's corn crop is to select my seed ears from the standing stalks the fall before. I endeavor to select corn which is the same in size and which will mature evenly. This I consider one of the main points.

Next, whenever possible, I use a clover sod which I have covered with



More Than Pays for Itself

If you have threshing to do, there are many reasons why a Case Steel Thresher will prove a very profitable investment. Under ordinary conditions it increases your yearly profits enough to pay for itself in a short time, and it continues to earn these good profits for many years more.



These Case steel thresher advantages make your farming more profitable and the results more certain:

Low First Cost—Superior quality at low price is made possible by large volume production in a well equipped factory.

Great Durability—Steel construction, large bearings, ample provision for lubrication and well balanced parts make the Case durable and dependable. Most of the first steel machines sold in 1904 are still in use. The present machines are even more durable.

Big Capacity—Case machines do fast, clean threshing of all grains and seeds. They operate continuously from morning to night.

Easy Running—Simplicity of construction, rigidity of the steel frame and self aligning bearings contribute to easy running and power economy.

Service—Facilities for prompt service insure Case owners against possible delays at threshing time.

Properly handled, a Case machine lasts twenty years or more. Divide the first cost by twenty to get the cost per year. Then figure what you pay now for less satisfactory threshing. Can you afford not to own a Case thresher?

Write for "Profit By Better Threshing," and learn how the Case thresher makes your profits sure.

J. I. CASE THRESHING MACHINE COMPANY
(Established 1842)

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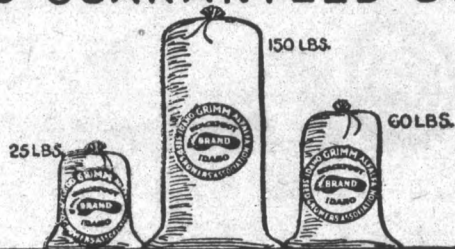
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NOTE: Our plows and harrows are NOT the Case plows and harrows made by the J. I. Case Plow Works Company.

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substitutes, remember uncertain seed may cost you a season's work or give but half a crop. Insist on **BLACKFOOT BRAND GENUINE GRIMM** for best results, if your local dealer cannot supply you in 25, 60 or 150 lb. sealed and labeled bags, write direct to

IDAHO GRIMM GROWERS
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ALFALFA SEED ASSOCIATION
IDAHO

IN SEALED AND LABELED BAGS

Another Bean, Please

This is What Bean Jobbers and Dealers are Anxious that Consumers Should do, But—

A NUMBER of years ago, Michigan jobbers, brokers and growers began talking of the advantages which might accrue to the bean industry through advertising the product to consumers. Nothing, however, was done. In the meantime, the citrus people began advertising and soon, instead of the orange going into consumption largely through the Christmas stocking, it was enjoyed by the American people every week in the year.

The following year the bean people did some more talking of publicity, but nothing was done. That year the cranberry growers began their modest advertising campaign, and the consumption of cranberries was practically doubled.

Still more talking was indulged in by the bean men the following year, but no action was taken, except to send a few well-packed bags about the country on a joy ride; after which it was concluded that nothing could be done. This was the same year that the leaders behind the prune industry started their campaign and put this fruit in the great majority of American homes.

The following year a few of the bean men had the temerity to raise once more the question of advertising, but again the bean was muffled. However, during the interim, the raisin growers went to bat with a real advertising campaign and scored, and scored, and scored.

But the most efficient way to do things never downs. It keeps coming up again and again until it is adopted. So at a specially called session of the Michigan bean jobbers at Saginaw last Thursday, the question of telling the American people the virtues of beans was broached again, and this time the bean growers listened to the wonderful story of sauerkraut.

Giving Kick to the Sauerkraut Market. Mr. Clendenan, the man who was largely responsible for putting kraut on the map, was present at the meeting and told the story of how the job had been so successfully done.

The very first thing that the pub-

licity experts did was to learn what kraut is good for, its value in the human diet. They gathered facts. Research was made into every possible channel. Many things were revealed. Chief among these was the fact that sauerkraut was a specific for digestive disorders. The juice of this product is also considered by high medical authorities as excellent for diabetes. Doctors, particularly in Europe, are recommending the use of sauerkraut to people who are seeking relief in this direction.

These and other facts regarding the food value of the product were placed before the consuming public through the medium of the advertising page. The results were far beyond the expectations of those who sponsored the campaign. A pack, larger than any that had ever before been placed upon the market, was moved into consuming channels three months earlier than had been the case with previous normal crops. One Chicago manufacturing concern which feeds its fifteen hundred employees never had used sauerkraut in its menus. Since these facts were published, however, they have served kraut three times each week to the delight and good health of their employees.

Tomatoes Also Get a Boost.

Tomatoes was another product which Mr. Clendenan had had occasion to do research on. The fact that doctors have recently begun prescribing tomato juice for babies troubled with digestive disorders, and that tomatoes have an unusually high vitamin content, has furnished the basis for encouraging the greater use of this garden fruit. As a consequence, the consumption of tomatoes has had a remarkable increase.

But Beans Furnish a Real Opportunity.

As to beans, the speaker declared that what research had been made went far to prove that no product had greater intrinsic food value. They should be served on every table. Beans and tomatoes combined give a food with complete vitamin content. This

(Continued on page 677).

Water-Proofing with Concrete

(Continued from page 648).

head of not over eighteen inches is calculated. The weight of the six-inch concrete floor is figured as enough to offset the pressure from this head of water.

The first of these sections, Fig. 1, is designed for new construction. The wall should be eight inches thick, of a rich concrete 1:2:3 cement, sand and gravel, or 1:4 bank-run material. The inner surface can be washed with two coats of cement wash or paint, made by mixing cement and water to the consistency of cream. An optional method of optional construction would be a concrete made with a leaner mix with the outside surface painted with two or three coats of asphalt paint, with the inner surface washed.

The floor of this construction is laid, of course, after the side walls are erected. It is somewhat difficult to get a good union of the floor to the wall. To do this well a groove is made in the top of the floor, using a board for a form, as shown in Fig. 3. This groove is then filled with hot pitch and covered with the inner side wall four inches thick, and twelve to eighteen inches high, which is built in as an additional measure of safety.

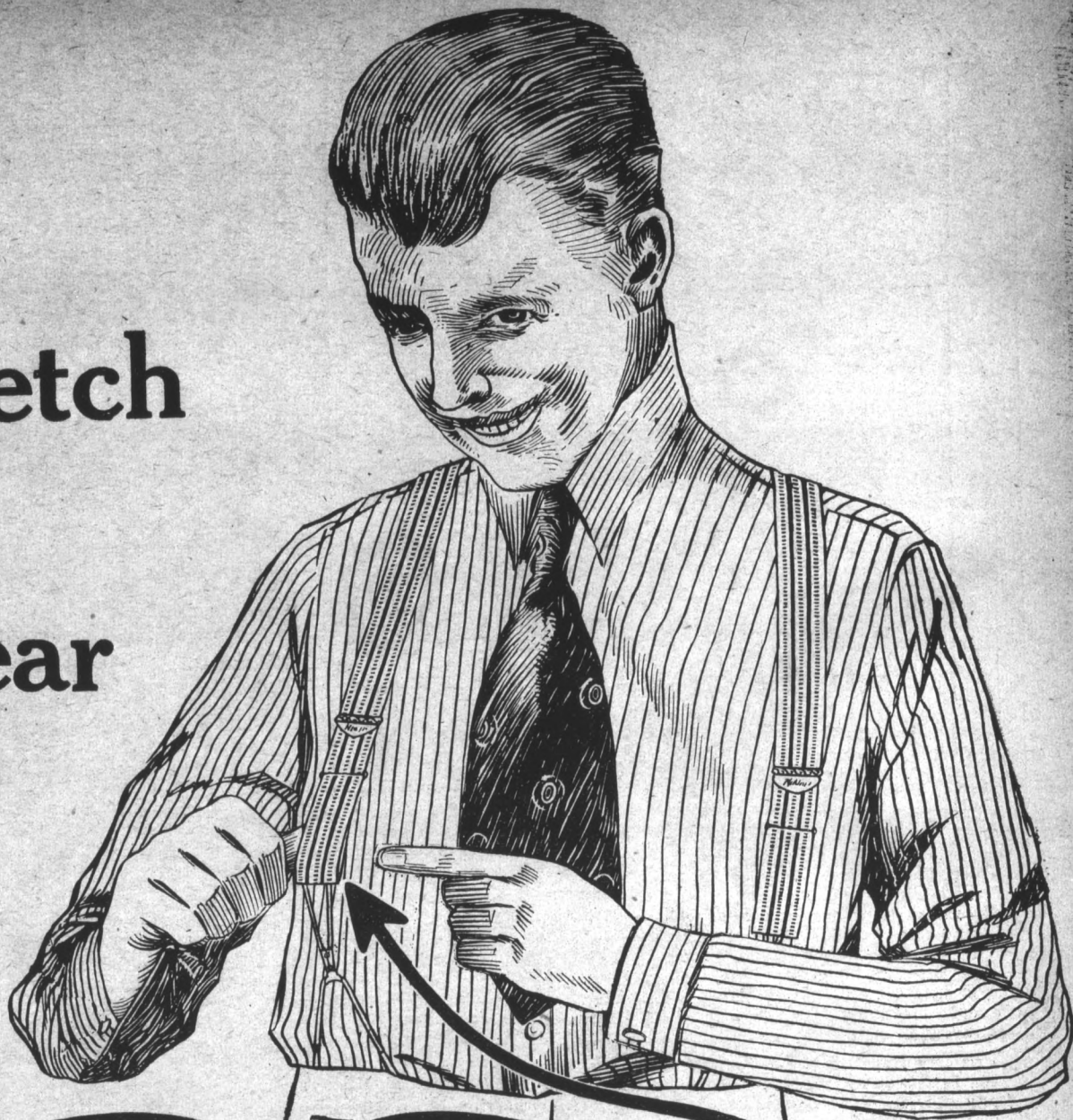
The second type of construction is designed for water-proofing an old basement floor. It consists, essentially, in laying on the floor a water-proof

membrane or layer and protecting it with an additional layer of concrete. The water-proof layer consists of two thicknesses of burlap, felt or tar paper laid on the floor, which has been painted with asphaltum. The material is lapped and has the joints asphalted as it is laid, and the surface is then painted with asphaltum and the second layer put on in the same way as the first. The surface coat of two inches of concrete is then placed over this to protect it. The layer may be extended eighteen inches up the side walls and a secondary wall four inches thick built up to protect this. The old surface of the basement wall, block or solid wall, above the base wall may then be cleaned with a solution of one part muriatic acid and ten parts water and then wash with water. Follow with plaster or plaster and cement paint.

It must be concluded that water-proofing is a job which can be carelessly done. Good materials and plenty of them, must be used. Painstaking attention to every detail is necessary to insure success. "A small leak will sink a great ship." It is one of the kind of jobs which is worth doing well if at all. A previous working knowledge of cement is valuable in carrying out the suggestions herein given.

He Likes the Easy Spring Stretch and Year's Wear Guarantee

—both exclusive
features with



Nu-Way
SPRING
STRETCH
Suspenders

No rubber to rot with heat and sweat. Phosphor Bronze rustless springs give easy and lasting stretch.

Slip-loop back keeps them adjusted to every movement of the body—no "pulling" across shoulders—no strain on garments. Just easy comfort all the time.

Nu-Ways are cheaper because they last longer. "A Full Year's Wear Guaranteed in Every Pair." Be sure you get Genuine Nu-Ways. Look for name on buckles. Guarantee Label attached to every pair. Price, 75c.



Nu-Way

Hose Supporter Harness for boys and girls. Wonderfully comfortable; surprisingly durable with lasting spring stretch. Fastens across front; can't slip off shoulders; easy on stockings. Sizes 6 to 14 years.

Price 50c.

Ask Your Dealer

Tell him you want to try Nu-Ways — the kind that gives your money's worth, and more. If your dealer can't supply you with Nu-Way Spring Stretch Suspenders, Garters and Hose Supporters, don't accept substitutes, but send direct, giving dealer's name.

Nu-Way

Hose Supporters and Corset Sew-Ons for Women and Children. Easy spring stretch makes them comfortable and durable. Will outwear any other kind. No rubber to rot. Six months' wear guaranteed.

Price 25c.



Nu-Way Wide Web Garters

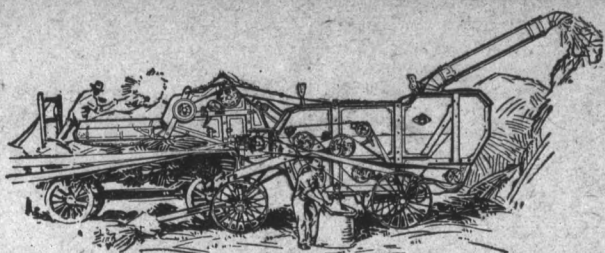
Most comfortable ever worn. Lots of easy spring stretch—six months' comfort and wear guaranteed. No metal touches the leg. Your first pair will convince you.

Price 50c. pair

Nu-Way Garters



Nu-Way Stretch Suspender Co.
THE STRETCH IS IN THE SPRING
Adrian, Michigan, U. S. A.



Get the Facts About This Outfit

Do your own threshing this year and make extra profit by handling threshing jobs in your neighborhood with an **E-B Geiser-Peerless Threshing Rig.**

Get all of the facts about the compact, light-weight, easy-running, large-capacity Geiser-Peerless Thresher. Let us tell you about its sieveless system of cleaning and its method of threshing which results in 90% grain separation at the cylinder. Learn all about the sturdy, economical E-B Kerosene Tractor which supplies ample, low-cost power for the Geiser-Peerless Thresher, and pays its way every day of the year on all kinds of belt and drawbar jobs. Moderate price; liberal terms.

Write for free pamphlets telling all about E-B Threshers and Tractors. No obligation.

Emerson-Brantingham Implement Co.

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Business Founded 1852 Rockford, Illinois

We also make the Reeves line of heavy-duty threshers.



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NEWS FROM CLOVERLAND

GIRLS WIN CHAMPIONSHIPS.

TWO Upper Peninsula girls were so successful in their club work as to be included among the state champions in canning for last year, reports Miss Ruth Cresswell, assistant state leader of home demonstration agents in the Upper Peninsula. Glendine Sampson, of McMillan, Luce county, ranked second in first-year canning for the state, while Evelyn Hansen, of Powers, Menominee county, was second in fourth-year work. Miss Hansen has also ranked high in garment and poultry club work. For two consecutive years she has been chosen from all the members in home-making and agricultural clubs as the best all-round club member in Menominee county and, in consequence, has received two short-course scholarships at the Michigan Agricultural College. There are 2,963 boys and girls in the various clubs of the Upper Peninsula.

WHEAT LOOKS GOOD.

THE April Crop Report of the State Department of Agriculture shows the condition of winter wheat in this territory to be ninety-four per cent as against a state average of eighty-three. This section did not suffer from the light snow-covering during the cold weather of March that affected the southern counties. The condition of rye is reported as ninety-five per cent. The number of breeding sows is 103 per cent of the number a year ago, it is stated. The number now is 102 per cent of the normal supply. The number of farm laborers employed is seventy-three per cent of last year, and this is seventy-four per cent of the normal supply.

MANY FARM MEETINGS SCHEDULED FOR CLOVERLAND.

THROUGH cooperation between the Upper Peninsula Development Bureau and the Extension Department of the Michigan Agricultural College, a very important series of meetings for farmers has been arranged for the remainder of the year.

Before August 1 there will be fifteen banker-farmer meetings held in as many small towns of the district in the interest of improved dairying. At a half-dozen points requests for such meetings have already been received. Dairy specialists from the college, county agents and club leaders will conduct these meetings.

Later in the season, over forty "barn" meetings will be held in Delta county, particularly with reference to the growing of alfalfa and other forage crops, and farmers' problems in regard to live stock, and the dairy cow in particular, will be discussed right in the presence of the animals themselves. Similar meetings were held in Marquette county last fall. It is likely that Schoolcraft county will have similar meetings following those in Delta.

In the meantime, the Upper Peninsula Development Bureau, using an appropriation of \$1,000 made at its annual meeting, will, it is planned, take three boys from each of the fif-

teen counties of the Upper Peninsula, dairy sections of the country outside through one of the best developed the district in order that the boys may see first-hand just what farmers are doing in the dairy business seen at its best. These boys will be selected with reference to their rating in each county as determined by the county agents and club leaders. It will be a great opportunity for the boys to get in touch with conditions elsewhere and it is believed that the trip will have a marked effect on their later careers. The boys will be accompanied by their county agents, it is planned.

While many lines of rural development have been tried out in this territory, it is now believed that dairying, conducted on progressive lines, has the best chances of success. This tour of the boys will take place probably during the third week of August. On their return will come fair time and the boys will have a prominent place at the county fairs with their high-grade stock on exhibition.

In October will come a demonstration train run over the lines of the railways serving the Upper Peninsula, if railway agricultural officials meeting in Marquette, May 15, formulate the plans that have already been sketched. This demonstration train will exhibit the advantages of pure-bred over scrub dairy animals, the value of good seeds, etc.

CLOVERLAND AGRICULTURE PROSPERS.

ADDRESSING the Marquette Lions' Club recently, Mr. E. G. Amos, assistant state leader of county agents in the Upper Peninsula, called attention to the large increase of agricultural wealth in the Upper Peninsula during the past twenty years. His figures showed that this wealth was rated twenty years ago at \$11,000,000, and is now \$69,000,000.

Mr. Amos attributes this advance in part to the work among farmers of the Extension Department of the Michigan Agricultural Department. There are ten Upper Peninsula counties having county agricultural agents. Printed bulletins do not interest the farmer very much, Mr. Amos said, but actual demonstrations in barn and field are convincing.

In this way Upper Peninsula farmers have become convinced of the superior quality of Rosen rye. This superiority was first demonstrated here at the Chatham Experiment Station and on several Upper Peninsula farms. In the same way farmers are learning the advantage of ridding their herds of the scrub cow. Cow-testing associations are showing the real situation.

Again, the land-clearing service which the college has under way has been undertaken because the average number of cleared acres on an Upper Peninsula farm is thirty acres and this is insufficient for the farmer and his family to live on.

KDKA, Pittsburgh, is broadcasting a full report of stockyard prices there at ten o'clock, eastern standard time, every morning.



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HAS GROWN SWEED BEANS FOR A DECADE.

RECENTLY I saw an article in the Michigan Farmer regarding Brown Sweed beans. I have grown this variety for the past ten years in small quantities.

At first we grew them on poor sandy land. Now we are raising the crop on rich sandy loam where the yields are larger. The Sweeds produce more heavily than do the navy beans.

On the vines of last year's crop we counted ten and more pods on each stalk. The pods carry from seven to nine beans. When full grown the stalks resemble those of the red kidney beans. We have never failed to grow a crop, even in dry summers. In nearly every instance they yield good, but like other crops, the better the ground and the season the heavier the output.

This variety grows tall enough to carry the pods well above the ground, much higher than the white beans. As a result they do not spoil during bad weather as do those of the navy type. With us they seem to be earlier than the white beans. One year we planted them on the first of August and the crop ripened. The season, of course, was unusually favorable.

The price received for this variety has been somewhere near that of white beans. One year the local prices were exactly the same. Because of the fact that the beans are carried so high above the ground, the pick is, usually very light.—Elmer Hevel, Gratiot Co.

NO CHERRY EXPERIMENTS THIS YEAR.

BECAUSE Grand Traverse county decided to dispense with their county agent, the Michigan Experiment Station will not carry on its usual cherry spraying experimental work there. This has been the decision of Prof. V. R. Gardner, who believes that these experiments cannot be satisfactorily developed without the cooperation of the county agents.

There is great need for work among cherries in demonstration of proper methods for the control of the diseases. Last year the damage from leaf spot was so severe that most of the crop was ruined. Proper spraying methods would have prevented most of this loss.

URGES SUPPORT OF BILL.

THE Michigan Potato Growers' Exchange is urging its 20,000 members to write their state senators and representatives in favor of the Case anti-discrimination marketing bill. This bill was drafted to prevent unlawful discrimination in the purchase of all agricultural products.

It has been found that many potato buyers are discriminating against potatoes in certain sections. For instance, it has been shown that a buyer made a difference of eighty cents per hundred in price between two towns whose freight differences were only six to eight cents.

This bill has the support of the Michigan Farm Bureau, Elevator Exchange, and practically all of the co-operative associations.

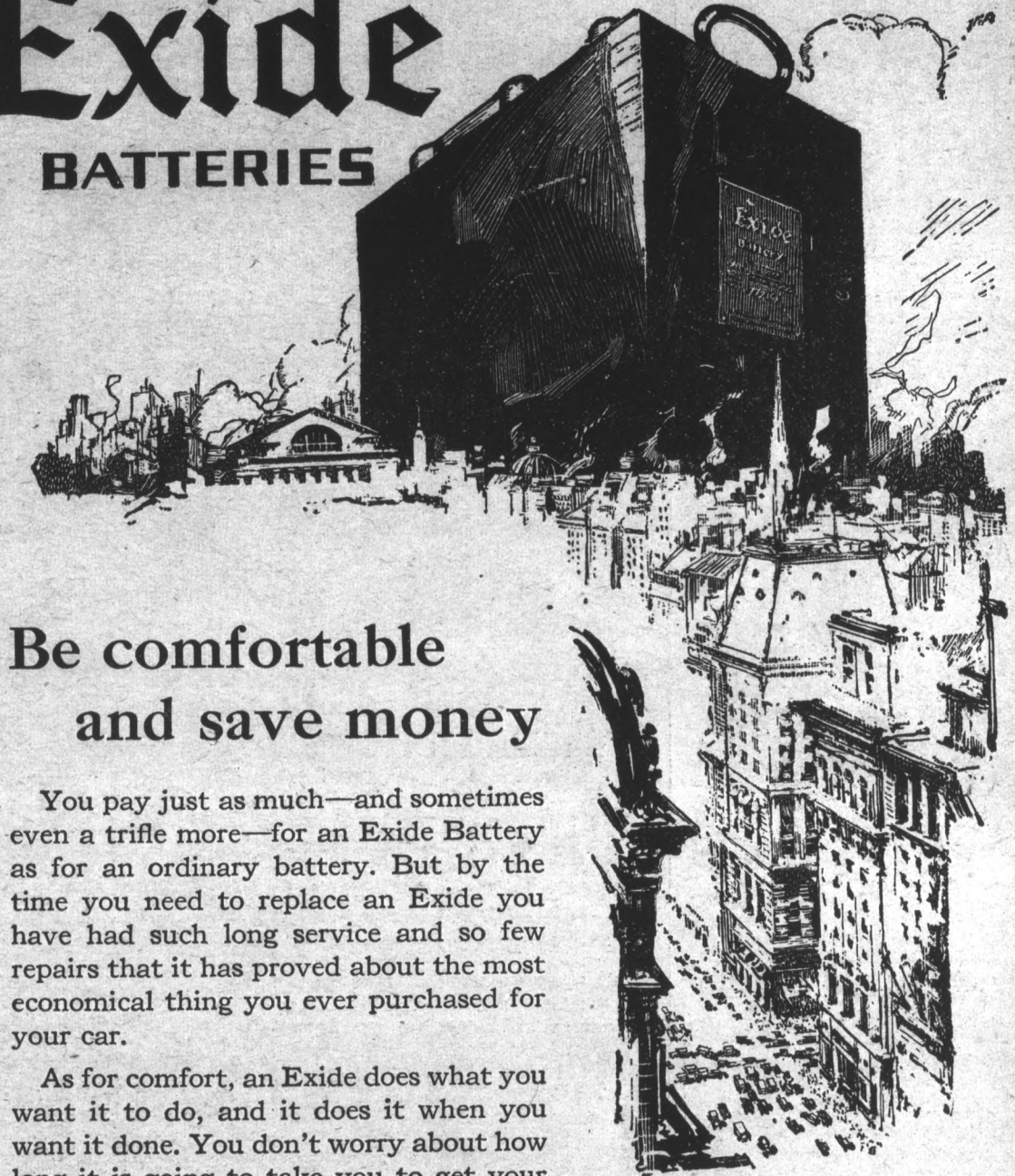
GROWS SILAGE IN SPITE OF ALTITUDE.

IN spite of the fact that Otsego county is often referred to as the "Top of Michigan," and in reality is the highest part of the Lower Peninsula, its farmers are having no difficulty in finding varieties of corn that will give them excellent yields of silage.

As a part in the great dairy development which is taking place in this county, we now find one hundred silos whereas a few years ago they could be counted on one's hands.

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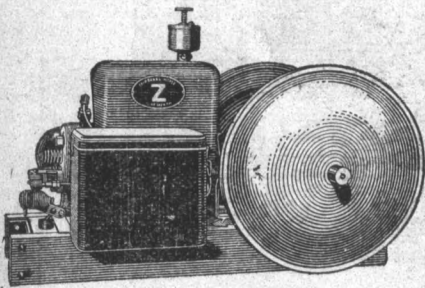
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Francisco Farm Notes

By P. P. Pope

These Are Busy Days

THE cold weather that has been carried over from the snows of winter, has at last recanted its frigid designs, and the spring is making up for lost time. Each day sees marked changes in the rapidly greening coat of Mother Earth. According to the eternal plan of the universe, nature is once more asserting her productive powers. The grass springs green on every hillside, the trees shoot out new buds, the warm sun and the gentle rains coax into action the germ of life that long has lain dormant within the hearts of tiny seeds, myriads of them.

Although she has been marked up late by several days more than is usual, the spring is now come, and in keeping with nature's laws of compensation is causing all sorts of vegetation to fairly bound in its efforts to catch up. Naturally, the weather and soil conditions that have delayed plant growth, have also delayed the work in the fields, and now the reverse of those conditions is keeping farmers bounding to catch up. This is the situation as it exists on Francisco Farm. Happily, we have been able to secure some very good help, for the time being, although at a cost that causes one to call upon his supply of faith in future prices for farm products, if he would expect a profit therefrom.

The Tractor Shines.

It is a season like this that we are glad we have a tractor. Not a traction engine, nor a toy, but a real, practical arm tractor. This is the fourth season for it on the farm, and we are learning how dependable it is. It takes the place of four to six good horses (notice I said "good" horses), and an extra man when you need them, and does not call for food or chores or money when not in action. True, if not provided with gas and oil and necessary repairs, it works not at all, but with these things, and intelligent attention, it makes short work of the plowing, the fitting and the cultivating of the corn. It never objects to long hours, gets tired, sweaty or sore shoulders. Neither does it mind the work. It has no brains at all. It has to be driven or it won't work. But we like it, Bob and I. We hitch it to the plows once and it stays in the furrow until the field is plowed. When chore time comes we turn the switch and give our attention to the pigs and the cattle.

Forage Crops.

The question of forage crops is calling for considerable attention this spring. More so with us than is usual. As a general thing, we have at least one lot near the buildings where clover or alfalfa is growing, and which can be utilized as forage for the hogs. This year we are not so fortunate. The lot, about four acres, that we used last year, we are planting to corn to be hogged off later in the season. We expect to put a liberal proportion of soy-beans in the planter box with the corn, and in addition sow rape broadcast at the last cultivation. This lot should make an ideal foraging ground for the hogs late in the season. In the meantime, we must have some early forage.

We have a couple of lots of about an acre each that we are planting partly to oats, barley and field peas (if we can find the seed peas), and partly to rape of the dwarf essex variety. Our success with rape has quite largely depended upon the soil. It needs a rich, well-prepared soil in order to grow tender and sweet and

be relished by the hogs. Rape that grows vigorously on rich, sweet, well-drained soil gives excellent results, but the puny, off-colored, tough little plants that grow on sour or poor soils are not readily eaten by hogs.

Our faith in forage is great and we like to have plenty of it and get the hogs out as early and keep them out as late as possible. While we are waiting for this spring-sown forage to grow, we are going out into the clover field where the stand is thick and heavy, but where the soil can stand the enriching influence inseparable from hog association, and cutting out of whole cloth, so to speak, a block of this choice young clover for the pigs. A hundred rods of woven wire will enclose three or four acres of this choicest of forage crops on clean ground, and with liberal feeding of grains, and water, and shade, ad libitum, our fifty odd head of spring pigs should get a good start toward making hogs of themselves.

OILING FARM MACHINERY.

FARM machinery in general is poorly devised for proper lubrication. The bearings are usually open and will hold out only for a short time. Dirt and dust readily work into the bear-

ings, cutting them out and increasing draft and wear upon the machine.

To keep farm machinery, such as binders, mowers, side-rakes and cultivators well oiled, the bearings should be cleaned frequently so that the oil can properly work into and lubricate them. Oil holes leading to the bearings easily fill up with dirt and unless kept open the oil cannot perform its purpose.

Oiling should be done frequently. Where the load is heavy and speed high, it should be done at least every hour. Where it is possible to use grease and hard oil, better results can be secured with this kind of lubricant.

A high-grade standard lubricant is best for farm machinery. Low-grade lubricants are expensive. I prefer to use on my farm tools a heavy grade of standard oil, as it gives better service and prevents cutting out of the bearings.—Leo C. Reynolds.

MARRIED WOMEN TEACHING.

Is there a law in Michigan preventing a married woman from teaching in the public schools, provided she is qualified?—K. L. No.—Rood.

SOME FAVORITE VEGETABLES.

To my notion, there is no better home garden tomato than the old massive "Ponderosa," but it is no good as a shipping variety. The "Quality" winter squash is very superior in texture and flavor, but it is not the largest sized, and most buyers from a grocery and a city market would pass it by for the larger, though really inferior, "Hubbards."—A Gardener.

A Page from Long Ago

1848.

MICHIGAN FARMER.

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GENERAL INTELLIGENCE.

Great Slave Case.—A slave case of exciting interest came off on Tuesday last in the United States Court now sitting in this city. The case originated in Marshall, and was instituted to recover the value of certain slaves, fugitives from justice!! The plaintiffs claimed, that an attempt had been made by the defendants, (who are among the most respectable citizens of Marshall) to resist the constituted authorities in the seizure of the slaves, in violation of the provisions of the constitution of the United States, by which means the said slaves had made good their escape. The plaintiffs proved the fact of ownership according to the laws of Kentucky, and also that they were proceeding, in the seizure, in accordance with the constitution and laws of the United States, and that they were frustrated in the act by a collection of people, whose appearance was such as to frighten them out of their purpose.

The defendants relied for their defence upon the fact proved, that they did not say to the plaintiffs, that they should not take the slaves, but simply, that they could not do it.

Judge Mc. Lain, in charging the jury, said that if it appeared from the evidence, that the intention of the defendants was to counteract and defeat the seizure of the slaves, and such was the tendency of what they said and did, then, whatever might have been the form of expression they used, they were to be found guilty. He further charged, that in order to make it out an act of resistance on the part of the defendants, the plaintiffs must have publicly made known their purposes, (which they did) and that though they had made but a single announcement of it, that was sufficient, though two-thirds, or three-fourths of the crowd, had come together, after the announcement was made, and were totally ignorant of it.

The jury, after being out sixteen hours, were unable to agree, and were discharged. They stood eleven for the plaintiffs, and one for the defendants. The costs, which must be very large, are thus shouldered upon the plaintiffs. The case will not come up again this term, and probably it may never be revived. The defendants were Dr. Comstock, Messrs. Gorham, Hurd and Easterly, and two colored men.

It is said that the suit was instituted and carried on at the expense of the State of Kentucky, the commonwealth having furnished two thousand dollars for the purpose.

Arrival of The Caledonia.—Paris is still agitated. The resignation of Louis Napoleon postpones trouble for the present. Six candidates in the field for President—M. De Lamartine, M. Thiers, Prince Louis Napoleon Bonaparte, M. Murat, Gen. Cavaignac and M. Caudrier, ex-Prefect of Police. The Orleans party will support M. Thiers, and Berrier has de-

clared in his favor. The legitimatists are divided by Thiers and Lamartine, if the elections were soon to take place. Little doubt exists that Louis Napoleon Bonaparte would be the successful candidate. The feeling exhibited by the French people in his favor, leave no doubt of that in the event of a presidential election in almost every electoral college in France. Accordingly the constitution has already been altered to meet the first difficulty in the making, and the President instead of being elected director by the people, unless he has an absolute majority of votes given, is to be selected by the National Assembly from five persons returned by the people: the election of Prince Louis Napoleon, as Col. of the 4th Legion of the National Guards. DENMARK.—The war in Denmark continues unabated, and a conference of the Kings of Sweden and Denmark, and the Grand Duke Constantine of Copenhagen and was attended by the British Minister. The Russians, in behalf of Denmark, demand that the Germans shall evacuate the Duchies before negotiations are entered into, and that if Schlesing was given up, Russia would sustain Holsten according to the treaty with the Danes and Paul. BERLIN.—On the 13th inst., a collision with the Burger guards, arising out of an attempt to disperse some workmen who had gone to the Minister to demand work or money, and being refused, the guard attempted to disperse them, and five men were murdered. The news spread like lightning, barricades were formed, and the people, having discovered that the Assembly left unprotected at 11 o'clock at night, made an attack upon this building, and plundered it of about 2000 stand of arms and also the trophies of war it contained. The crowd took possession of the building, and then retired. The next day was quiet, but one of the deputies moved that the assembly should send away all the troops, and put themselves under protection of the people, this was carried and the government resigned. PRAGUE.—At Prague the King having refused to confirm the provisional government and Prince Werdischutz, have erected batteries around the town. The mob and the students arose en masse and demanded arms.

Presidential Candidates.—Martin Van Buren of N. York, has accepted the nomination at the hands of the Barnburner Convention. John P. Hale, of N. Hampshire is the Anti-Slavery candidate—four in all.

Postscript.

By the arrival of the Niagara we have news of awful scenes in Paris. An insurrection broke out on the 22d of June, and a most sanguinary conflict followed which continued four days and nights, without intermission, during which the streets of Paris were rivers of blood. At last, however, the government forces under Calignao stormed the entrenchments of the insurrectionists, when the greater part of them were taken and the rest fled. Thus the Republican arms were triumphant. Ten thousand men were killed and seventy-five thousand wounded. Among the killed are 14 generals, fifty members of the Assembly, and the Archbishop of Paris.

FIGHTING FIRE BLIGHT.

(Continued from page 651).

cankers. To cut them out would be to cut out most of the limbs of the trees. Some quit at once, believing the job impossible. Others go ahead and simply ruin the trees in their attempts. But note this, there are many kinds of cankers on apple and pear trees. Some are harmful, some are harmless. Only the bad cankers should be cut out. The safe rule about cankers is this—only those cankers which show dead bark down to the wood are harmful.

There is only one safe way for the fruit man to use until he has had long experience with fire blight. The hold-over canker can be located by the blighted twig through which the germs worked their way into the branch. This twig holds its dried withered leaves all winter. At the base of this tree there will not be a great many cankers, only a few minutes work will locate and remove them. This is quite a different thing from mutilating a whole tree.

The next step in fire blight control consists of a fight on the germ in the summer stage of the disease. It consists simply of a complete removal of every case of twig blight which develops.

We may now see where some of the divergence of opinion of plant pathologists and fruit men arises. The fruit man thinks of going in to cut out blight after the damage is done, whereas the plant pathologist who knows the seriousness of blight is urging that it be cut out before loss has been incurred. This difference of opinion will remain so long as fruit men do not fear fire blight. When they come to realize that fire blight can ruin the results of years of patient toil in a single season, they will see the correctness of the technical man's position.

Another factor comes in to confuse growers in fighting fire blight. Not all trees blight to the same extent. As every grower knows, the Transcendent Crab and the Tolman Sweet apple are very subject to fire blight. Bartlett and other varieties of pear blight much more severely than the Kieffer.

In every community there are men who have been lucky in escaping blight loss. These men rather are inclined to attribute their escaping loss to their own shrewdness. But escape of fire blight loss when analyzed usually resolves itself into isolated location, poor soil and consequent slow growth due to heavy sod or some similar factor which has made the trees less subject to blight, but at the sacrifice of production.

But the experience of such lucky men is of little use to the owner of an orchard from seven to twenty years who is working to get a good set of branches developed, each one to bear its load of apples or pears. Such a grower must fear blight. For such a grower the following simple rules will save his orchard:

1. Locate in early spring, by means of blighted twigs, the hold-over cankers. Cut these out, following the rules of good pruning. Paint over the larger wounds, using white lead paste.
2. With the first development of twig blight, be on the job. Cut out every bit of twig blight at least a foot

below the blighted portion. Take all cuttings out of the orchard. This means a sharp lookout in June.

3. Any control measures which reduce plant lice damage aids in checking fire blight spread.

4. Make frequent inspections in July. Blight will show up here and there. Cut these cases of twig blight out as soon as they appear.

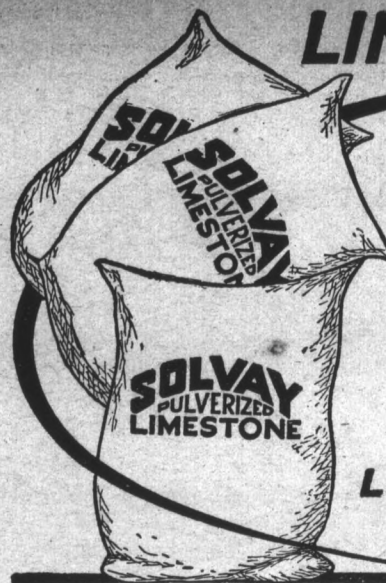
5. Use nitrogenous and other fertilizers judiciously. A steady growth which comes from proper soil conditions and moisture well distributed throughout the season is to be sought.

6. See that all water sprouts either from branches or from roots, are removed.

7. Should any cankered limbs develop, cut out radically and disinfect the cut surfaces with some good disinfectant, such as five per cent carbolic acid or lysol, formaldehyde (one to ten), or corrosive sublimate.

8. Vigilance, especially early in the season, is the price of safety.

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You didn't buy Royal Cords merely because they are the product of the largest rubber organization in the world.

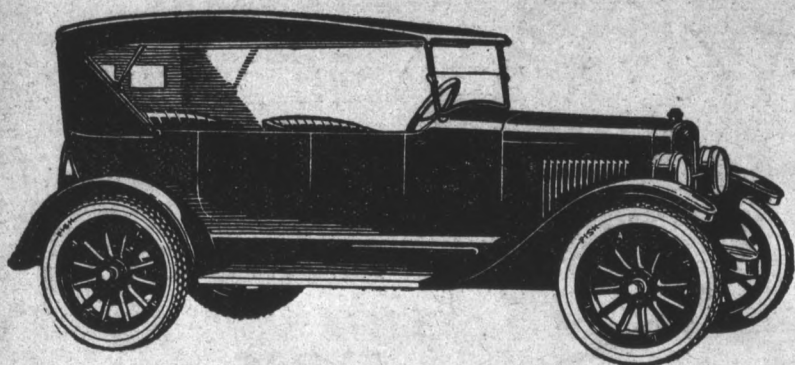
More than anything else, it has been the simple, understandable policies of the Royal Cord people that have made the Royal Cord seem a tire of personal responsibility.

* * *

It has been the growing understanding among men that Royal Cord value conscientiously outtops all other tire values today.

United States Tires are Good Tires





Greatness Won By Bigger Value

Overland leadership is firmly established in public confidence. Whenever automobiles are compared and discussed, the new Overland is called the outshining value in its field.

No other car near Overland price has an all-steel body, with a lustrous baked-enamel finish. No other car has Triplex Springs (*patented*), which yield remarkable riding ease. No other light car duplicates its liberal use of Timken and New Departure bearings in its axle construction.

The new Overland is better looking. The hood is higher. Body lines are longer. Seats are lower. And the sturdy Overland engine is faithful and economical—giving 25 miles and more to the gallon of gasoline. Drive an Overland and realize the difference.

WILLYS-OVERLAND, Inc., Toledo, Ohio
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The New
Overland
TRADE MARK REG
Touring \$525

SEDAN, \$860

ROADSTER, \$525

COUPE, \$795

All prices f. o. b. Toledo



WHAT ARE CERTIFIED POTATOES?

Will you please explain to me what certified potatoes are? I have asked several different men, all farmers, but none of them could tell me. They all said they thought potatoes that had been treated before planting and then thoroughly sprayed, was about all that there was about it. I told them I thought that there was more to it than that. Have you got them to sell and how much are they a bushel for five or ten bushels, or can you tell me of anyone nearer Ionia that has them for sale?—W. T. Remington.

Certified seed potatoes are potatoes that have been grown under careful inspection and have been found to be free from serious diseases and from varietal mixtures.

Certified seed potatoes are produced by members of the Michigan Potato Producers' Association. This organization, in cooperation with the Michigan Agricultural College, conducts the potato inspection and certification work in Michigan.

All growers who apply for the inspection service are required to practice the very best cultural methods, including seed treatment, spraying with high pressure outfits, hill selecting seed stock, etc., and fields are inspected at least twice during the growing season by men who are trained in potato diseases. All fields that show a higher percentage of diseases than are allowed in the rules governing the inspection work are rejected.

Those fields that pass inspection are carefully rogued, that is, the field is gone over, row by row, and all plants showing diseases, all plants that are off-type are removed from the field. The stock from fields that pass the inspections is inspected in the bin. In order to pass the bin inspection the potatoes must be true to type, practically free from serious mechanical injury, and comparatively free from scab, scurf, etc. There is another inspection made at the time the potatoes are loaded on the cars for shipment.

The certified seed potatoes are shipped in new sacks which contain 150 pounds and each sack is sealed with a lead and wire seal which bears the official green tag of the Michigan Potato Producers' Association.

Not only does the certified seed have to undergo rigid inspections, but it is also tested for yielding qualities. Samples of each lot of potatoes planted for inspection are grown in large test plots so that accurate records can be kept on the comparative vigor and yielding qualities of the various strains.

The planting of certified seed potatoes is a form of potato crop insurance. Each year potato growers in Michigan suffer enormous losses caused by planting inferior seed potatoes. The most serious potato diseases that reduce the yields and lower the quality of the potato crop are diseases that live inside of the seed potatoes and that cannot generally be recognized in the tubers. These diseases are known as leaf roll and mosaic and are only detected on the plant during the growing season.

Last year the certified seed gave increased yields over ordinary seed of approximately fifty bushels per acre in Michigan. Three years' tests and demonstrations have been conducted with Michigan certified seed in sixteen states and results of these tests have been highly satisfactory. In practically every case the Michigan certified

seed has out-yielded the stock with which it was compared. Furthermore, the quality of the crop grown from certified seed is vastly superior to that grown from ordinary seed.

One of the most economical ways of bettering the quality of the Michigan potato crop as well as increasing the yield per acre is to plant certified seed potatoes.

The Michigan certified seed potatoes are sold through the official selling organizations, the Michigan State Farm Bureau, Lansing, Michigan, and the Michigan Potato Growers' Exchange, Cadillac, Michigan. I would recommend that you communicate as soon as possible with one or both of these agencies on price, time of shipment, etc. In many counties growers are pooling their orders for certified seed and are buying in carload lots, thus making a big saving on the potatoes and the freight rates.—H. C. Moore.

POTATO ACREAGE TO BE CUT.

A REPORT of special interest to commercial growers has just been made by the statisticians of the United States Bureau of Agricultural Economics in the leading potato states. By an exchange of this information, L. Whitney Watkins, commissioner of agriculture, and Verne H. Church, agricultural statistician for Michigan, have been able to make a report on the intentions of potato growers with respect to their operations in 1923, in Michigan and competing potato states.

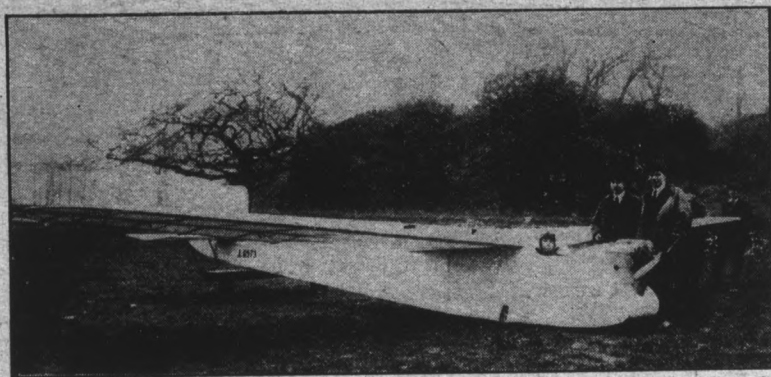
There is to be a decreased acreage in all principal potato states, but the marked decrease will occur in the western states where acute car shortage prevented early moving of the crop, and where the low prevailing prices and high freight rates have made it unprofitable to market at all in many sections. Colorado expects to reduce its acreage twenty per cent; Idaho, twenty-two per cent; North Dakota, twenty-five per cent, and South Dakota, Nebraska and New Jersey, fifteen per cent. These are the states that showed the greatest increases in acreage last year, and this report shows the general tendency to return to normal.

Minnesota's statistician estimates a ten per cent decrease, Wisconsin and New York will decrease their plantings to the extent of six per cent, Michigan eight per cent, Maine seven per cent and Virginia nine per cent.

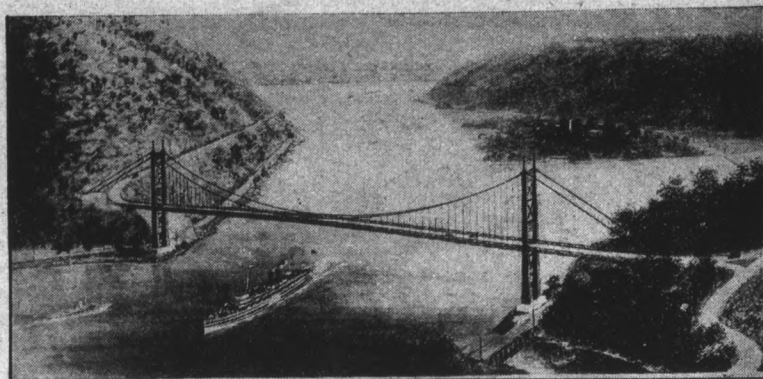
The eastern states were able to clean up their last year's crop fairly well and if they can finance their fertilizer purchases satisfactorily will decrease their acreages only a few per cent. In the central states, like Michigan, the increased acreage last year was principally in the counties bordering on the main commercial districts rather than on the farms of the large growers. The discouraging prices at which many new growers sold will cause some to drop out this year entirely or to reduce their acreage.

The reductions indicated will bring the acreage close to, or slightly below that of two years ago. With a normal yield, a crop sufficient for the needs of the country should be produced from that area. Such a crop would not leave a large surplus to force the price down below the cost of production, as was the case in 1922. With the tendency toward the increased use of certified seed and suitable commercial fertilizers, better average yields per acre should be obtained.

WORLD EVENTS IN PICTURES



This new British auxiliary engined glider of unique design has a span of thirty-seven feet and a maximum speed of forty-eight miles per hour.



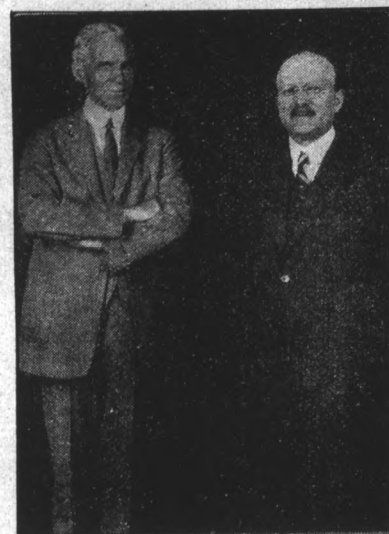
Plans are completed for a \$6,000,000 suspension bridge to span the Hudson river at Bear Mountain. It will have a central span of 1,632 feet and accommodate four lines of vehicles.



\$250,000 worth of ball players in three parcels made a "curtain raiser" for opening game at N. Y.



Miss Ann Morgan, with these Good Will delegates have sailed for France and will tour that country to study the conditions in its devastated parts.



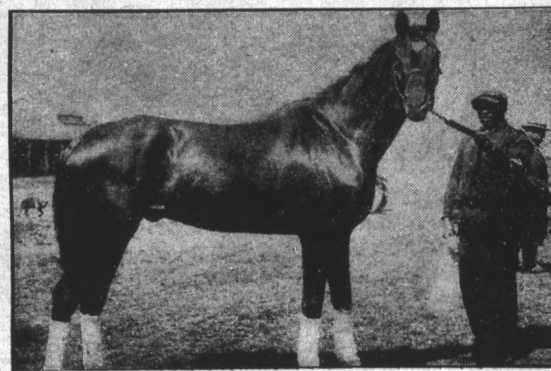
Andre Citroen, "Ford of France," met our own Henry to discuss the future of automobiles.



Farmers in several parts of Norfolk have appealed for protection against bands of strikers, and several girls have volunteered.



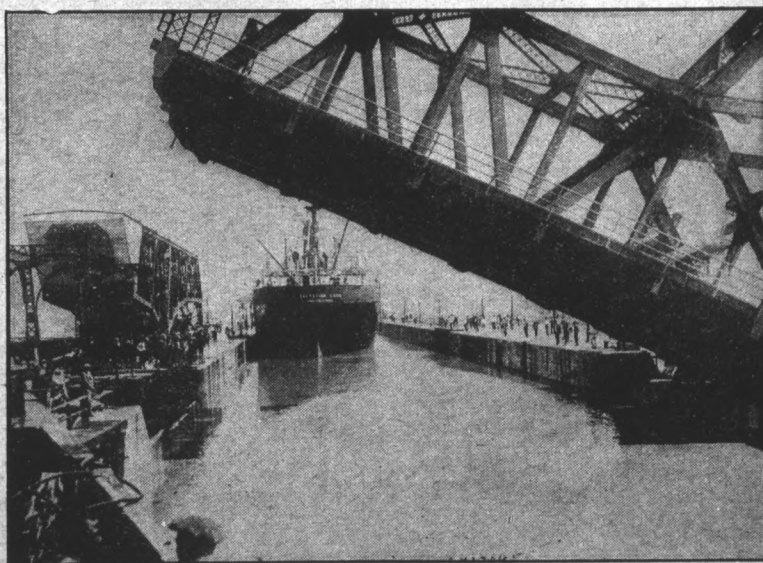
Admiral Coontz has been appointed by Secretary Denby to command of entire U. S. fleet.



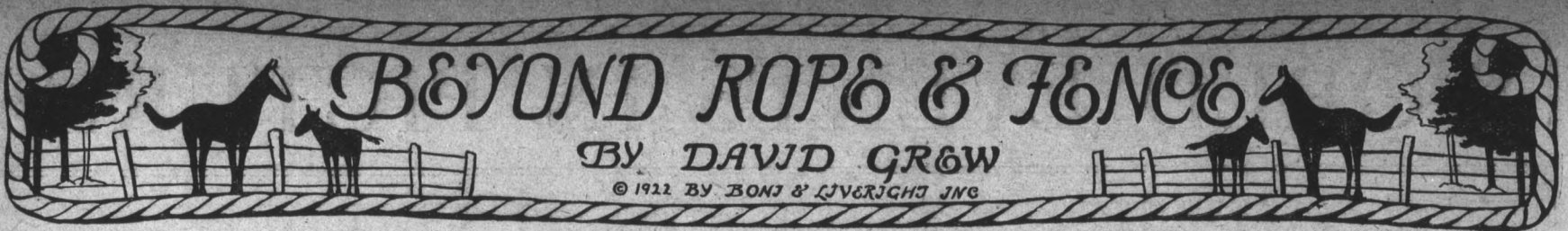
"Sally's Alley" made an impressive score at the races in Maryland, and it is planned to enter her in the Kentucky Derby.



Thousands watched as the smoke of battle of the opening game arose on the Yanks' new \$2,500,000 home, with the Boston Reds as their rivals.



"Salvation Lass" was the first ship to pass through the recently constructed locks and canal at New Orleans, which gives that city the finest water front of any southern United States port.



HER eyes fairly bulging out of her head, lips frothing, Queen leaped back after him, calling frantically to him as she ran. As soon as the little thing heard her, he turned to run back, but instantly the man threw a rope and caught him round the neck, hurling him to the ground. The two horses ran toward the mounds, but the man stopped, dismounted and battled with her frightened, crying baby.

The desire to hurt was foreign to her nature, but when she saw her foal on the ground struggling with the man who was apparently getting the better of it, she ran toward the monster with murder in her heart. The man saw her coming and with the other end of his long rope he struck her head a terrible blow. She jumped back in terror. Before she had aroused enough courage to make another attack, the man had completely tied the little thing so that it could not move a limb, and, mounting his horse again, he rode away.

Queen rushed to her little son with a sense of relief but that feeling soon gave way to one of painful solicitude. She had her baby and the man had left, but the baby was helplessly tied. It was changed with a change like death. The monstrous two-legged creature had cast a spell upon it. She ran around it frantically, called to it encouragingly, licked it tenderly, then ran off a few paces, urging it to exert itself and follow her.

Then to her horror, she saw the man coming back. This time he had the sorrel and his companion with him. She grew desperate. She bit at the rope with nervous haste, trying to drag her colt away with her, but her efforts resulted only in hurting it and at the first cry of pain, she stopped. Until the man was so near that he struck her with the long binder whip which he had brought with him, she would not leave her baby and then she only kept out of reach of the whip. Finally, in desperation, unable to decide upon anything that she might try to do, she stood and watched; while the man was busy, preparing the ropes on the stone boat which the two horses had been dragging after them.

One thing at once hurt and puzzled her, and that was the nonresistance of the old sorrel. There he stood covered with the bewildering straps with their glittering buckles, making no attempt to run from the man nor to help her. He did not even call to her.

She tried to make out how the man succeeded in holding the two horses though he was not even looking at them. Her deliberations, however, were suddenly interrupted by the man's leaving the stone boat and go-

ing to her little one. Then she saw him drag the colt to the stone boat, and went mad again and rushed at him with bared teeth; but as soon as he straightened himself and turned to her, she fled.

Her hatred included the old sorrel when she saw him start away dragging her baby off. She sprang at him from the side and nipped him savagely. The old fellow got frightened and backed up almost stepping upon the helpless little colt on the stone boat. The man got angry. He jumped from

replied with all her strength and ran toward the barn, stopping a hundred feet away and watching the man, as he fastened the barn-door securely.

She saw him unhook the horses from the stone boat and then drive them over to a queer looking instrument that lay near the house. Then she saw him start away with the plow dragging behind the horses. They were coming toward her so she loped away to the right. When she stopped she saw that they were not following her but were going off toward the

her head through the window. Yet she realized that that was not giving her back her baby. At the same time the touch of his beloved head intensified the fire in her heart and she began desperately to seek some way of getting him out.

There was a pile of manure back of the barn which sloped upward till it almost reached the flat straw roof. She ran around the barn in an attempt to find some opening and every time she came to the heap of manure she was forced to enlarge the circle she was making. With a look in every direction, to make sure the man was not returning, she suddenly started up the pile of manure and carefully stepped upon the roof of the barn.

She had only taken a step forward, though, when she felt the roof giving way under her feet. This frightened her and she attempted to turn back much too hastily. Before she could get back to the pile of dirt, half the roof together with a part of the wall caved in, dropping her down into the barn on top of the debris. She was very badly frightened. Without stopping even to look for her colt, she leaped over the remaining portion of the wall, taking half of it with her.

SHE did not turn to see what she had accomplished but fled in terror over the fields. When her courage returned, she looked back and happily discovered that still the man had not returned, nor was there any other sign of danger. On the other hand her little colt was now standing near the broken wall, his head and shoulder sticking up above it, calling frantically. She then hurried back with all her speed, caressing him as if she hadn't seen him for weeks, and urging him, in her dumb way, to come out.

He tried very hard to get over the barrier, but could not make it. To show him how to do it, she jumped in again and as she jumped she knocked another layer of sod into the barn. Then as she was about to leap out a second time she heard a familiar whinny behind her. Turning nervously, she made out in the gloom of the other end of the barn, two horses, one of them her mate. Poor White-black was standing listlessly in a cage-like stall, securely tied to the manger. His voice was weaker than it had ever been, and his calling seemed strangely half-hearted. A great desire to touch his nose came over her, though the fear of the barn, the frightfully nauseating odors and the slippery, dirty floor, all urged her to fly before some mysterious force should seize her and hold her there. All she was able to do was

CAKCLING

By Al Rice

Not all the birds that cackle
Can be rated with the best;
The gift of speech is open
To the loafers, with the rest.
Talking loud is just as easy
For the rooster as the hen.
Often those that do the bragging
Are the poorest in the pen.

Not ev'ry bird that cackles
Has a nest upon the hay—
Some birds are known to cackle
Just to fool around and play.
Often those that talk the loudest
Are the ones that did, and do,
Quite the least of all the cacklers;
For the rooster cackles, too.

Sometimes a bird that cackles,
Sounds a blatant, false alarm;
And often cackle loudest
When they, simply, fancy harm.
But the worst of all the cacklers—
For it seems that way to us—
Are the ones that, like the rooster,
Cackle just to make a fuss.

Not ev'ry bird that cackles
Lays an egg, or ever will;
For birds can make a racket
When they open up the bill.
Birds are like a lot of people—
Bragging what they used to do,
And among the loudest cacklers
Are the old, he roosters, too.

the stone boat and with his long whip struck her with all his strength squarely upon her tender nose. The pain took her breath away. She reared on her hind legs in a fit of agony, then dashed out of reach, and the man drove off with her colt.

Bewildered by her anguish, she ran after him, rending the air with her cries, zigzagging from one side to the other. When the man reached one of the black mounds, his sod barn, Queen remained at a distance, running around the place in a wide circle and running steadily as if she found relief in her activity.

THE man disappeared in the black mound, but when Queen ventured nearer, for fear that she would again attack the old sorrel, the man poked his head out of a hole in the wall and yelled at her; and she turned and ran. When she started for the barn again, the man came out altogether. She was fifty rods away when she turned and as she did so she heard the strong, healthy call from her colt, muffled by the confinement of the barn; but apparently free as if he were untied. She

south. Considerably relieved she watched them go till they were lost from view behind a hill.

She trotted up to the first of the two mounds, the man's small, sod house and cautiously sniffed about for a few minutes to make sure that there was no other man about. The odors there were unendurable, but every thing was motionless, and at a call from her little one, she ran to the barn. For a while she ran round and round it as she called, then suddenly she spied his little head through a hole in the wall. She attempted to thrust her head in. She just managed to touch him with her hot lips, but the fear of the evil-smelling barn forced her to withdraw her head, in spite of her desire to keep touching him. She had the feeling of being trapped herself and immediately loped away again. A thorough examination of the house and the plains, however, assured her that she was still free and that the man was not returning.

Again and again she thrust her head into the hole, and despite the nauseating odors she prolonged her caresses every succeeding time that she put

AL ACRES—Mr. Newcomer's Idea of a Farm is a Place to Raise Golf Balls

—By Frank R. Lee.





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OF

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Transportation is the big problem of today in manufacturing, merchandising and farming.

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Modern, progressive farmers, being also business men, now depend on fast cheap motor transportation to save time, save products and get the money.

Chevrolet Superior Light Delivery, with four post body was built especially for farm needs. Although not a heavy-duty truck, it has the space and power for a big load, which it moves fast at a very low cost per mile. Its engineering features are modern and complete: powerful 4-cylinder valve-in-head motor, circulating water cooling system, electric starter and drum-type headlights, standard trans-

mission—3 speeds forward and one reverse, strong spiral bevel gear rear axle, demountable rims and extra rim, curtains all around and entrance to the seat from both sides.

For heavy work, Chevrolet Utility Express Truck at only \$575, chassis only, offers remarkable value. Fits any standard truck body.

Prices f. o. b. Flint, Mich.

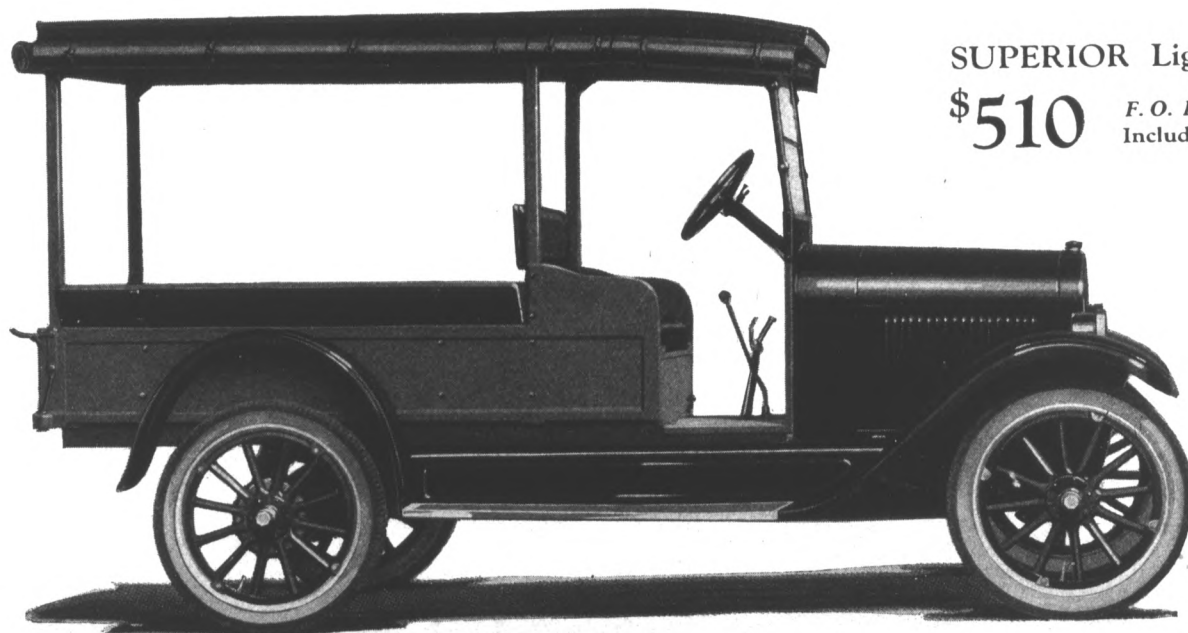
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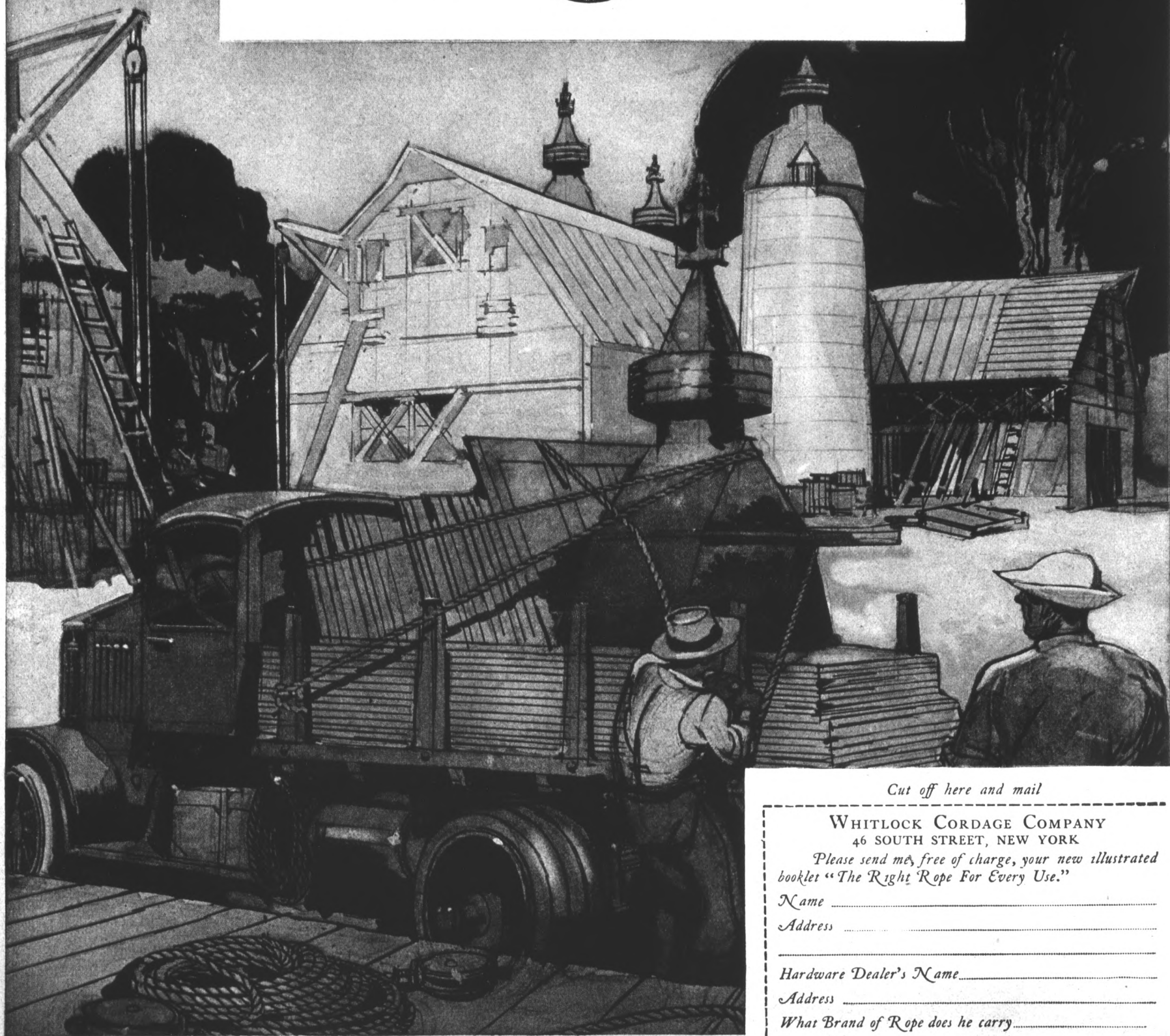
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to call to him from where she stood trembling near the opening in the wall, ready to jump at the first sign of danger. The sound of her own voice in the confines of the gloomy barn terrified her. With a single bound she leaped over the broken wall, taking so much more of it with her, lowering it so decidedly that the little fellow was able to climb over it.

With a last heartfelt call to White-Black, appealing to him to follow her as he used to follow her in the days that had gone, Queen raced once more toward the haven of the north, ran against all feeble protest of her little son, ran till the loathsome mounds vanished from the undulating plains.

In a hollow where a spring slough had turned much of the earth into mud and then had partially dried up, Queen drank, fed her baby; and, because he would go no further, she grazed while he rested. She felt very unsafe and gazed incessantly and fearfully toward the hilltop behind her. Two images she expected to see coming over the brow every time she looked up. She expected and feared to see the man coming after her and she expected and hoped to see White-black. Neither came, but both haunted her stormy mind and allowed it no peace.

Fear urged her to be off and away but every time she started, her little fellow refused to go with her. He would raise his head painfully from the grass and call to her but he would not get up. He had not taken all the milk there was for him, and he acted very peculiarly, but Queen's fear was implacable. She pretended to leave him and ran all the way up the other slope of the hollow. He called to her in a frenzy of fear, but though her heart beat fast for him, she did not reply and when she began to disappear over the summit of the hill he got up in haste and ran with all his strength till he found her but a few feet from the summit.

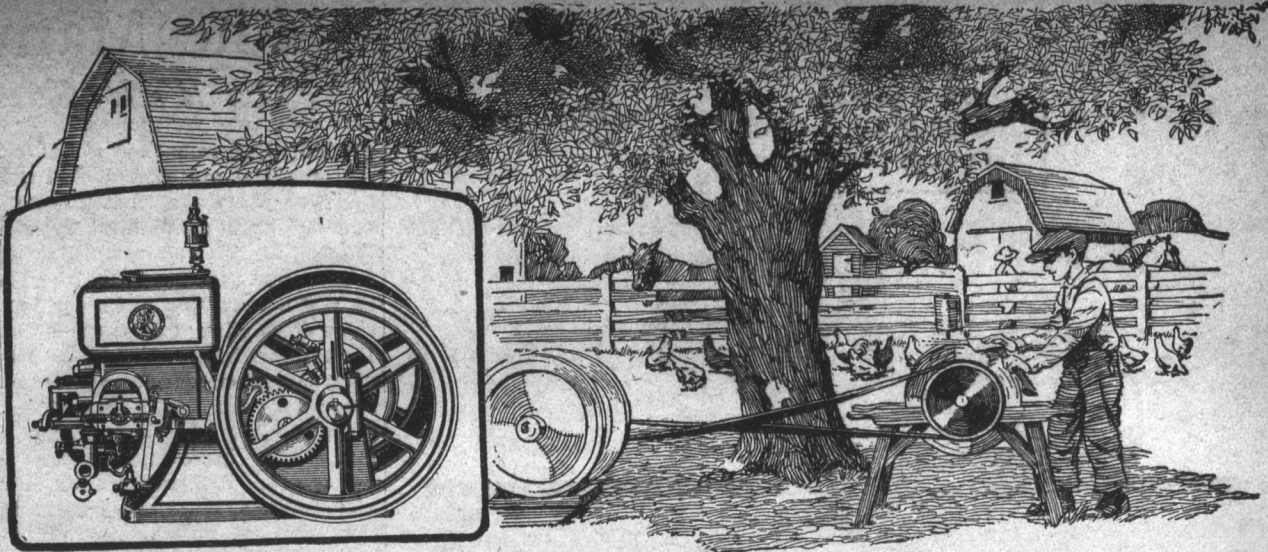
A peculiar note in his cry, some distance farther on, made her turn round to look at him. She saw him touch his shoulder with his little nose and as he touched it she saw a swarm of insects fly off from the spot. She walked back to him and discovered a deep gash that ran across his breast and up his other shoulder. The hideous cut was covered by lumps of coagulated blood and the insects settled back on it as soon as he withdrew his nose.

She proceeded at once to lick the wound till she found it was bleeding again and stopped, bewildered by the dripping blood. But the bigger problem presented itself anew. She looked up suddenly and spied, on the horizon in the direction from which she had come, a black moving object. She was certain that it was the man coming after her and springing forward a few paces stopped suddenly when she found that her colt was not following her. She stamped her foot frantically, calling to him.

He started bravely after her, but the more he ran, the more his wound opened, and the coagulation that had taken place and was trying to take place failed to save him. Queen, who loved him with magnificent passion, did not know that her running was killing him. What could she have done if she had known? The man was fast gaining in the chase. Man always gained, save where death entered the race and death was slowly defeating this man.

(Continued next week).

The thing the farmer is most concerned about is that this large amount of money shall not too completely "flow through" his pockets. He would like to see a reasonable per cent of it stop over enroute. The real answer to that requirement lies largely in his own hands. The secret, if it be a secret, is in a high acre production.



"The best hired help I ever had"

WATSON RISELEY, of Wittenberg, N. Y., is one of many farmers who are making a Hercules pay for itself over and over again in wages saved and in fuel. A year ago he bought his Hercules, expecting to use it only for sawing and threshing.

"However," he writes, "I have found that it does my work so easily and relieves me of so many chores that I had to do before, that I have time to help my neighbors with their work. This engine is the best hired help I ever had. Uncomplaining, economical, it gives me time to use it to my profit."

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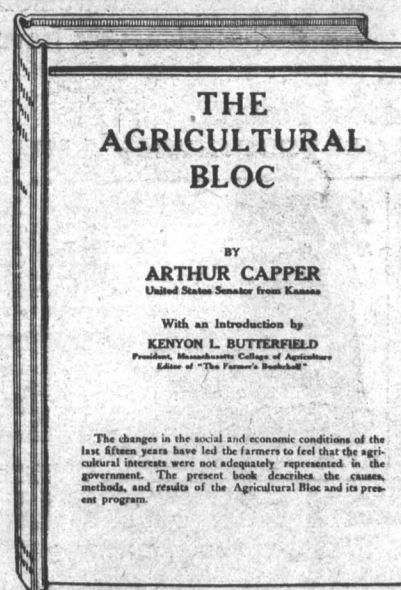
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An inventor who could develop an automobile, a railroad car or any other conveyance on wheels which would perform such a feat would be considered a wonder. But such is the record of regular accomplishment by the Auto-oiled Aermotor during the past eight years in pumping water.

Did you ever stop to think how many revolutions the wheel of a windmill makes? If the wheel of an Aermotor should roll along the surface of the ground at the same speed that it makes when pumping water it would encircle the world in 90 days, or would go four times around in a year. It would travel on an average 275 miles per day or about 30 miles per hour for 9 hours each day. An automobile which keeps up that pace day after day needs a thorough oiling at least once a week. Isn't it marvelous, then, that a windmill has been made which will go 50 times as long as the best automobile with one oiling?

The Auto-oiled Aermotor after 8 full years of service in every part of the world has proven its ability to run and give the most reliable service with one oiling a year. The double gears, and all moving parts, are entirely enclosed and flooded with oil all the time. It gives more service with less attention than any other piece of machinery on the farm. To get everlasting wind-mill satisfaction buy the Auto-oiled Aermotor, the most efficient windmill that has ever been made.

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The Many Sided David

Our Weekly Sermon—By N. A. McCune

SOMEONE remarked of Daniel Webster, the orator and statesman of fifty years ago, that no one could know as much as Webster appeared to know. There was something in his appearance that gave one the impression of a vast fund of knowledge. The same in another way could be said of David, the king of Israel. He was poet, musician, warrior, statesman and monarch. He had many sides. He could always keep the people guessing, a very useful quality in a ruler.

The story of David's choice for the kingship is strange and beautiful. Yet it is not more strange than other facts of history. The prophet was directed to the house of Jesse to find a future



king of the nation. Jesse was worth several million dollars, all invested in sons. They were big strapping fellows, any one of whom looked as though he could wear

royal robes with grace. These all passed before the aged man of God, but none of them seemed to satisfy him. Then was brought in the youngest, right from the fields where he had been doing his work as shepherd. In the Bible's expressive phrase, "now he was ruddy, and withal of a beautiful countenance, and goodly to look upon. And Jehovah said, 'Arise, anoint him; for this is he.'" It was another instance of the farm boy beginning a long and spectacular rise to power. The men of influence of the present attest that the same law is operating. The country feeds the city. The farm boy and the preacher's boy rule the world, or pretty nearly.

THAT being so, we should stop at nothing that will continue to bring forth a large crop of sinewy lads from the country. There are no kings in America that wear crowns, but kingly men do not need crowns. We are evermore crying for men, we are not particular as to their headgear.

David had all the qualities that make up a hero. In a short time he was known in all the tribes. His exploits were more loudly acclaimed than those of the king himself, which got him into endless trouble. Any one who could stand up to the giant of the day, and slay him, would not want for advertising, though billboards, movies and wireless were unknown. He became the hero of the hour, and when we recollect how wisely he behaved, it is easy to see how extraordinary were his qualities. Being a hero tends to make a fool out of a man, if one is to judge by modern samples. When Mr. Lloyd George became a member of the House of Commons, his first skirmish was with Joseph Chamberlain, the boss of the house, and the man feared even by his friends. Chamberlain's acid wit could not silence the young Welshman, it only brought out his abilities the more. Saul determined to have David's head. As a sequel to this resolution on the king's part are some of the most vivid scenes of the Old Testament.

FOR instance, there is the friendship scene between David and Jonathan. Damon and Pythias have nothing to equal it. The two big brawny men shed the manly tear at parting, and the fugitive goes his way, while Jonathan resolves to abide faithful to his friend, though it may cost himself the throne. Then there is the scene where Saul camps for the night, not knowing that David is hiding nearby. In the middle of the night, the hero steals down into the very center of

the camp, to where the sleeping monarch lies, takes the spear that stands by, and stealthily leaves. He could have killed the king with one blow, but he will not think of it. It would be a sin against Jehovah, he says to himself. He will bide his time. He will wait. If God wants him to be king, he will bring it about. But his love of a joke will not let the incident pass without having some fun. He clambers up the rocks to a point of safety and calls out to the sleeping men below that they are a band of brave ones indeed. They certainly do guard their beloved king. Here an intruder has actually entered the camp and walked around at his leisure, while the guards were enjoying their sleep. They surely are a brave regiment of soldiers! They keep such a strict guard over their monarch!

Saul is so impressed by David's magnanimity that he resolves that he will return home and pursue him no more, while Abner, Saul's general, is greatly humiliated. The king keeps his resolution for a little while, and then resumes his persecution. It requires many experiences to make a great man. He must be pounded by hard events, resisted by enemies, disappointed by unexpected turns of circumstances, cuffed and beaten, and lo! there comes forth a man for the ages! All this bitter experience had its fruitage when David came to the throne, and was Israel's greatest king. His son, Solomon, never passing through the furnace of opposition, never going to school in the university of persecution and hatred, was a disappointment as king, and brought the nation to weakness and revolt:

"Then welcome each rebuff
That turns earth's smoothness rough,
Each sting that bids nor sit nor stand
but go!

Be our joys three parts pain!
Strive and hold cheap the strain;
Learn, nor account the pang; dare,

THE road turned at last, and wound past the house where David was living. Saul and his valiant son were neever grudge the throe."

killed in battle, and the people said, "We want David for king." The world owes much to the forty years that he sat on the throne. We care not so much now for the fact that he made his nation prosperous, and its influence felt throughout the east. David did two things for the modern man. He left the record of his own life, and he left many songs or psalms, which are cherished wherever Christianity is known. As to his life: He was not perfect. Angels exist only in the other world. He committed at least one black crime, and the record makes no excuses for him. His only escape was the escape of the modern man, by repentance and contrition. He led his people in the way of the worship of God, not toying with the thin claims of heathen gods. He established justice for all classes of people throughout his empire. Disaster well nigh overthrew him once, when his son sought to steal the kingdom from him, and his agonizing cry over the death of this son will never die: "Would God I had died for thee, Absalom, my son, my son." As to his poetry: It is read, repeated, sung all over the world. "It follows the missionary as singing birds follow the dawn." "The Lord is my shepherd." "How amiable are thy tabernacles, O Lord of hosts," and many more.

**SUNDAY SCHOOL LESSON FOR
MAY 13.**

SUBJECT:—David, the Poet-King. 1st Sam. 16:1-31. II Sam. 1:1-24.
GOLDEN TEXT:—Surely goodness and mercy shall follow me all the days of my life. Ps. 23:6.

Rural Health

By Dr. C. H. Lerrigo

HYDROPHOBIA.

MANY wrong ideas are entertained by the public about hydrophobia, the medical name for which is rabies. In the dog we picture a furious animal, frothing at the mouth; in the human being, a wild person "barking like a dog." Neither picture is correct. Instead of the raving dog with frothing mouth we are more likely to have a slinking, uneasy animal who hides in corners. The human victim is simply a very sick, convulsed patient, who is hoarse from constricted throat. Dogs do not develop the disease from lack of water, and there is nothing to show that rabies is any more prevalent in the "dog days" than at other times. There is no "mad stone" that is of the slightest value in the treatment of rabies.

Rabies is transmitted by a virus that is more commonly communicated by the bite of a dog than in any other way. But it may also be spread by cattle, wolves and even cats. None of these animals can spread rabies unless themselves victims of it. Even when a bite from a rabid animal is received it does not always give the disease. It depends upon the virulence of the virus and upon the intensity and site of the bites. Wounds on the covered parts of the body are less virulent, because the protection of the clothing reduces the virulence of the virus.

Rabies is such a terrible disease that one cannot afford to take the slightest chance of allowing it to develop. Early treatment must be taken in every case at all suspicious. Although bitten persons may sometimes escape, it is likewise true that in some cases such slight contact as the lick of the tongue of a rabid dog has been sufficient to produce the disease, the virus no doubt finding some abraded surface.

The first item of importance is to determine whether the suspected animal is really rabid. Killing the dog and sending the head to a pathologist is one way; a poor one. The better plan is to catch the animal and tie him up for observation. If he is rabid he will show definite symptoms as quickly as any report could be received from a laboratory.

Treatment for rabies must be begun without delay. Your home doctor can get the vaccine, fresh from the laboratory, and administer it at your home. This is the only cure. There is no virtue in "madstones."

ITCHY FEELING.

My age is sixty-six, weight 189, a farmer, work every day and never sick in bed, so I have much to be thankful for. Have a crawling, itching sensation at back of my neck as soon as I relax in my chair in the evening; stops when I lie down. Kindly advise, if you can.—G. C. G.

Symptoms of this indefinite class are often annoying, but very hard to treat unless the exact cause can be located. Quite frequently they are due to a deficiency of circulation in some local spot. Such a condition might be

caused by wearing suspenders in such a way as to make undue pressure, or some other like trifle. I think you are to be congratulated on your general good health. Look for some reason for this annoyance. If you don't find any, make up your mind to pay it no attention.

SICK HEADACHE.

My husband, who is twenty-six years old, is troubled with severe headaches. When he has them he cannot eat, though he feels hungry. At night he may feel like vomiting. He has taken physic for indigestion but that does not seem to help.—Mrs. J. B.

Such headaches as you describe are apt to be of the migraine order and are due to some physical defect, or to irregular habits. Indigestion is not the cause, but a symptom. The first thing is to examine into his habits and see if there are things that he does that are especially likely to result in headaches. Having found this out you will know what to correct. Eyestrain is a frequent cause of headaches of this variety and should be carefully considered.

RELIEF FOR BUNIONS.

What can be done for a bunion so that a lady can wear a shoe without having to cut a hole in it?—B. B. L.

I judge that the bunion is of good size and well established. For such a case the best thing is to buy a bunion reducer such as may be obtained at most large shoe stores. It acts by keeping pressure off the inflamed joint and although it does not cure the bunion it does reduce it somewhat by taking out the inflammation.

REMEDY FOR POISON IVY.

Please say what is good for poison ivy. I have it on my hands.—Reader.

We ran a piece about poison ivy in a recent issue. The very best thing is to avoid it. Scrub the oily poison away with hot soapsuds before it gets into the tissues. For those who have it the best treatment is the application of a solution of potassium permanganate.

MARRIAGE AT MIDDLE AGE.

A single woman, aged forty-two, who is contemplating matrimony, would be glad to be told whether the dangers of child birth at her age are so great that she should refuse.—Nemo.

I once attended a woman forty-four years old who had been a school teacher in single blessedness until one year before that time, and whose life for several months was made very miserable because of her dread of the coming of her child. She got through with remarkably little trouble, all over in about two hours. This does not prove anything for any other woman, but my experience in general is that if a woman is of right physique she does not have a great deal more trouble in childbirth because she is past her first youth. Any good doctor can take the measurements of the pelvis and tell what you have to expect.



Why divide the family at breakfast?

WHY take coffee for yourself, while saying "No" to the children? It is true, as most parents are careful to explain, that little folks should not endanger health and growth through the drug element in coffee and tea, but—

Your health is valuable, too—and their desire for a hot drink with breakfast may be as great as yours.

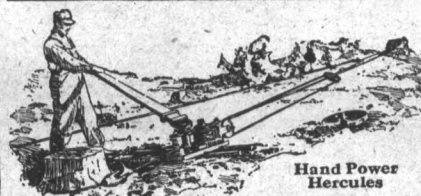
There's complete satisfaction in Postum, and safety alike for young and old. Postum is a pure cereal beverage. It is coffee-like in color and flavor but free from any element that can harm. Thousands who are now saying "No" to themselves as well as to the children, as a safeguard against coffee-ills, have found better comfort and better health, in Postum.

Your grocer sells Postum in two forms: Instant Postum (in tins) prepared instantly in the cup by the addition of boiling water. Postum Cereal (in packages) for those who prefer the flavor brought out by boiling fully 20 minutes. The cost of either is about one-half cent a cup.

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Woman's Interests



Change Diet and Cure Spring Fever

Spring Vegetables Add Vitamines to the Diet and Have Stimulating Effect Upon the Appetite and Ambition

ONCE again the season has come, when greens, water cress and dandelions are needed to stimulate tired nerves and act as a tonic for that particular brand of listlessness usually known as "spring fever." To many people the lagging appetite is a symptom of some organic trouble, but the truth of the matter is that the necessity for so much food is over. During the winter, heavy heating foods were required, and now the digestive organs are in need of a relief from their strenuous work. Therefore, don't think that a prescription from the doctor is necessary just because the appetite is lagging.

But at the same time, the liver usually needs a little livening up after the winter's work. One of the best spurs for this is spinach. If desired, this may be raised for nearly all seasons of the year, but if this is not practical, it may be procured in all markets. Spinach contains a little niter, which is fine for the blood. It also contains more iron than any other succulent vegetable. It is nine-tenths water.

Rhubarb is recognized as one of the best spring tonics and its low price puts it within the reach of all, even though your garden doesn't boast a few plants, as it certainly should. It is the only existing vegetable that is used strictly as a fruit. Unless the skin on the stalks get tough, do not strip them, as the skin has a high medicinal value.

Celery is a favorite vegetable during the spring months, and is one of the best tonics of the vegetable family.

Proteids must be supplied in some forms, and for this we must rely mostly on fish and eggs. The eggs are at their cheapest now and are very valuable as muscle-building food. The necessary vitamins should be furnished in the form of milk. While the vegetables contain some vitamins, the per cent is comparatively small, and no one would care to eat enough of them to provide the required amount of vitamins, without using milk.

Rhubarb.

Though everyone realizes that rhubarb is a very beneficial plant, many do not care for it in its plain stewed form, or even in pie. We have learned a way that it surpasses either, by far. We cut it in inch pieces and peel it if necessary. Then it is sweetened to taste and put in an earthenware crock, with just enough water to cover it. It is then put in a hot oven and baked without stirring until it is very soft and tender.

Jelled rhubarb is another delicious way of fixing this wholesome vegetable. A quart of rhubarb, cut in thin pieces, is put to cook with just enough water to cover it. When boiled till tender, it is poured into a bowl containing the desired amount of sugar, a tablespoon of gelatin and half a cup of orange juice. Stir well and allow to set till well-jelled. Serve cold with whipped cream.

Spinach.

Though there are various souffles

and salads made with spinach, the favorite way of preparing it seems to be just as "boiled greens." But unlike most greens, spinach is fine cooked without meat. To do this, boil the

leaves in salted water till tender and pour into a colander. When well-drained, turn on a platter and after cutting cross-ways with a sharp knife, garnish with dots of butter.—Nell Portrey.



Dainty Crocheted Edging

By Gracia Shull

THE edge illustrated is made of No. 40 hard twist crochet cotton. Use a steel hook of a size to carry the thread easily. The edge is suitable to use on pillow slips, runners, scrim or other loose-weave curtain materials, sheets, etc.

It shows up very beautiful on curtains and lays flat, which is a distinct advantage.

To make: Chain 42 stitches. Turn.

First Row.—Double crochet (dc) 1 in seventh stitch (sc) from hook, chain (ch) 2, dc 1 in same place, 1 lacet, 1 dc, ch 5, 1 lacet, 3 dc, ch 5, 3 dc, ch 4, turn.

Second Row.—6 dc over first 5 ch in previous row, ch 12, 3 dc over next 5 chain, ch 2, dc 1 over dc in previous row, ch 5, 1 dc over dc, 1 lacet, ch 5, 1 open shell in open shell of first row, 1 space (sp), ch 5 turn.

Third Row.—1 sp, 1 open shell, 1 lacet, ch 5, dc 1, 1 lacet, 3 dc over 2 chain in previous row; ch 5, 3 single crochet (sc) over center of 12 ch, ch 5, 3 dc over 4 ch at end of second row, ch 8, turn.

Fourth Row.—Sc 1 over 4 ch at end of second row, ch 3; dc 3 over 8 ch, ch 3, sc 1 over 8 ch, ch 3, dc 4 over 8 ch, ch 5, sc 3, ch 2, skip 3 sc in previous row, sc 3, ch 5, 3 dc, ch 2, 1 lacet, ch 5, 1 open shell, 1 sp, ch 5, turn.

Fifth Row.—1 sp, 1 open shell, 1 lacet, ch 5, 3 dc, ch 5, 3 sc, * ch 2, skip 3 sc, sc 3, over next 2 ch, repeat

from * once, ch 5, 3 dc, ch 8, sc 1 in lower edge of previous row, turn.

Sixth Row.—Ch 3, dc 3 over 8 ch, ch 3, sc 1 over 8 ch, ch 3, dc 6 over 8 ch, ch 5, * sc 3, ch 2, repeat from * 3 times; ch 5, 3 dc, 1 sp, ch 5, 1 open shell, 1 space, ch 5, turn.

Seventh Row.—1 sp, 1 open shell, 1 lacet, 3 dc, ch 5, * sc 3, ch 2, repeat from * 4 times; ch 5, 3 dc, ch 8, sc 1 in 3 ch point of previous row, turn.

Eighth Row.—Work 2 sc then 5 picots separated by 2 sc between picots over the 8 ch at end of seventh row, 2 sc. Reverse pattern and repeat to length desired.

POINTS FOR THE NEEDLE AND THREAD.

WHEN God placed Adam and Eve in the garden of Eden, dress-making was unknown, but after they had eaten of the forbidden fruit their eyes were opened and they made clothing for themselves of fig leaves. From that time on dressmaking has been an established fact.

For centuries dress making was done by hand with needle and thread. And finally, in 1845, a man by the name of Howe invented the first sewing machine. In 1846 it was put on the market, and not until ten years later did he realize the large fortune received from his invention.

It was not a complete success as it had a chain stitch, the ends of all seams had to be fastened by hand.

This machine has been improved with the lock stitch, also many attachments, such as the hemmer, ruffler, quilter and tucker have been added to it until we now have on our market a great many different kinds and all of them good. Today there is hardly a home but what has a sewing machine.

We also have on the market patterns of every size and style, which are indispensable in home dress making.

Garments that are outgrown and others that are out of style, can be made over for children very successfully. First, all seams should be carefully taken apart and the goods washed. They should be well rinsed and hung out of doors to dry, where the wind will whip all lint and small pieces of thread out of them, then press and you are ready to make them. Great care should be taken in laying the pattern on the material and cutting them.

A few yards of braid or a little embroidery, short and long stitch, or some beads or fancy buttons add to the beauty of these made-over garments and help to take out of the child's mind, the fact that the dress used to belong to sister. In making dresses for children, of new goods, such as gingham, the material should always be shrunk and large hems or tucks placed in the bottom to let down as they are outgrown.

Always buy several spools of thread at a time so you won't have to unthread the machine when winding a bobbin, and when it is convenient wind two at a time.

Always keep on hand bias fold tape, rick rack, hooks and eyes, snaps and buttons.

Learn to make the children's everyday garments without basting.

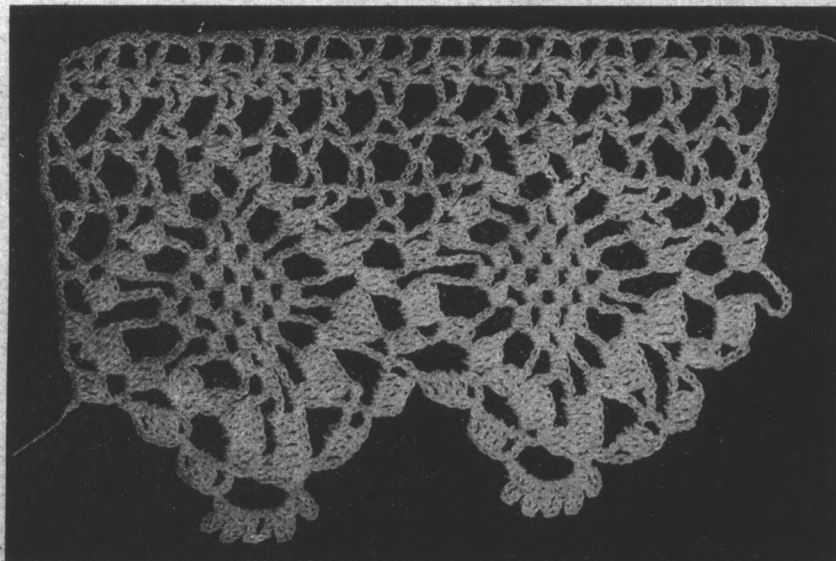
Always cut out several garments at a time and you will be surprised to see how soon they will be finished.

A hot flat iron is a great help on sewing day to press in hems and flatten seams.

And keep your sewing machine well oiled, and never put coarse thread on the machine, as it weakens the tension. Now is a good time to make the house dresses and aprons, also underwear and the children's summer clothing.—Mrs. C. L.

EGG RELISH.

Cut a pound of pork in small pieces. This may be any part of the pork that is at least partly lean. I usually use what I cut off around the ham or shoulder bones. Fry, stirring frequently, until the meat is well browned. Then add a small onion, sliced very thin, and salt and pepper to taste. Over this mixture pour eight eggs that have been well beaten. Leave over the fire but do not cook too fast. Stir only when necessary to prevent burning. Cook until the eggs become set, and serve hot. This will serve about eight people, and makes a hearty dinner dish.



This Edging will Make an Attractive Finish for Your New Curtains.

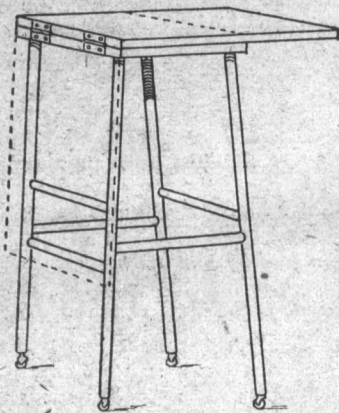
Handy Things for the Home

By The Prize Winners

Third Prize.

Mrs. R. M. C., Big Rapids, Michigan.

Friend Husband made a very handy convenience for my kitchen by sawing off two inches of the legs of an old high chair. Castors were placed on the legs, and the back and arms removed. A wide board was hinged to the back of the seat. When the board is lying flat on the seat, it makes a very useful wheeled tray. I use it to carry dishes and food from the dining-room to the kitchen and it is very convenient when cleaning house to carry all the needed cleaning utensils. Then I swing the board so that it hangs down the back of the chair, and I have a handy kitchen stool.



A Made-over High Chair.

When enameled white, or of a color to match the kitchen furniture, it is really not bad looking.

Fourth Prize.

Mrs. L. G., Monroe, Michigan.

The handiest thing in my home is the built-in cupboard, or cabinet, in my kitchen. The cupboard occupies one side of the room, and reaches to the ceiling, with an open space at the correct height, making a table top the entire length. In the center of the cabinet is a porcelain sink. About one foot above the sink are two good-sized windows, admitting plenty of light and air, and, best of all, giving a pleasant view outdoors.

The table top is approximately two feet wide and sixteen feet long, and is covered with zinc. The special features about my cabinet are that there is a long closet space at the left suitable for ironing board, brooms, mops, etc.; a dish cupboard; one for groceries, one for kitchen utensils, one for dishpan and larger kitchen utensils; a flour chest, eight draws for cutlery, small kitchen utensils, aprons and towels, with a draw specially lined with tin to contain bread and cake. At the right is a dumb waiter going to the cellar.

There are hard and soft-water faucets at the sink. The outside is finished in silver-gray enamel, making it easy to keep clean. I can prepare an entire meal with taking only a few steps, and everything needed to work with is close at hand. When the cleaning work is to be done, there is plenty of table room and hot water to make the task easy.

Fifth Prize.

Mrs. M. J. D., Ann Arbor, Michigan.

I believe the handiest thing in my home to be my clothes chute. It is located almost in the center of the house and extends from the basement to the third floor. It has a little door that opens from the kitchen, one from the hall on the second floor and two that open from closets on the third floor. It is made of galvanized iron, and is a little more than eight inches square.

Another very convenient thing I have is a set of wide-mouthed glass stopper bottles. These are commonly

used for holding dry chemicals. I use them for spices, tea, coffee, soda, etc. They have the advantage of keeping the contents in their original condition and a glance is sufficient to show how much you have on hand.

OTTAWA WOMEN HOLD COUNTY CLOTHING MEETING.

ARE women in Ottawa county interested in the home demonstration work? Ask any of the sixty-five women who attended the first county-wide clothing meeting in Grand Haven on April 3. In spite of a constant down-pour of rain all but two of the fourteen groups who had completed the clothing project under the direction of Miss Eunice Ryan, Clothing Specialist, M. A. C., and Miss Eva K. Schurr, home demonstration agent, were represented.

The morning session was held in the Court House, Miss Schurr presiding. Reports from twelve communities were given by the community chairman. Each group also chose projects for their next year's program, advanced clothing, interior decoration and household management proving the most popular. A county home economics executive committee was elected to advise with the agent on matters of strengthening and extending the work.

These women were Mrs. C. C. Lillie, of Coopersville; Mrs. Wm. Gleason, of Nunica; Mrs. John Kieft, of Grand Haven; Mrs. Henry Lubben, of Coopersville, and Mrs. Earl Lowing, of Jenison.

Picture Contest

WARM weather has come at last, with the "balmy breezes" blowing summer ever nearer. Housecleaning has been completed to a grand finish. We are turning our attention and tasks to the beautiful green outdoors. And just what are you doing out in the sunshine? Send us your picture and let's see.

For the best picture we will give an aluminum preserving kettle. The second prize will be an aluminum serving tray; while the third, fourth and fifth prizes will be aluminum sauce pans.

Address your pictures to Martha Cole, Michigan Farmer, Detroit, Michigan, before May 25.

After a cafeteria dinner served by the Peach Plains and Neighborhood Clubs, the afternoon session was held in the Methodist Church. Mrs. Lillie acted as chairman. The following women gave demonstrations of phases of clothing work: Mrs. Noble and Mrs. Bargwell, of Coopersville; Mrs. Bethke, of Robinson, and Mrs. Campbell, of Spring Lake. Miss Adele Koch, specialist from M. A. C., spoke on the place of a clothing project in a home demonstration program, and Miss Muriel Dundas, home demonstration agent of Allegan county, gave a survey of work being done there.

Each group exhibited finished garments showing processes learned during the project. A distinctive feature of the exhibit was a series of scrap books with samples made by the women showing steps in the process of making bound buttonholes, set in pockets, plackets, etc., besides decorative stitches and machine finishes. Everyone voted the day a success and all the fourteen communities are continuing the work with other projects.

Michigan Farmer Pattern Service

Dainty Frocks for Summer Wear that are Both Stylish and Simple

No. 4309—Ladies' Undergarment. Cut in four sizes: Small 34-36; medium 38-40; large 42-44; extra large 46-48 inches bust measure. A medium size requires 2½ yards of 36-inch material. Price 12c.



No. 4313—A Popular style. Cut in seven sizes, 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 3½ yards of 40-inch material. Price 12c.

No. 4324—Girls' Under Waist and Bloomers. Cut in six sizes, 2, 4, 6, 8, 10 and 12 years. A 10-year size requires ¾ yard for the waist, and 1½ yards for the bloomers, of 36-inch material. Price 12c.



No. 4160—Ladies' Dress. Cut in seven sizes, 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires 4¾ yards of 40-inch material. The width of the skirt with plaits extended is 2½ yards. Price 12c.

No. 4312-4225—Ladies' Costume. The blouse 4312 cut in six sizes, 34, 36, 38, 40, 42 and 44 inches bust measure. Skirt 4225 cut in six sizes, 25, 27, 29, 31, 33 and 35 inches waist measure. A medium size requires 6¾ yards of 36-inch material. The width of the skirt at the foot is two yards. Two separate patterns, 12c for each pattern.

No. 4317—Girls' Dress with Guimpe. Cut in four sizes, 6, 8, 10 and 12 years. A 10-year size requires 3½ yards of 36-inch material for the dress, and 1½ yards for the guimpe. Price 12c.

No. 4118—Girls' Dress. Cut in four sizes, 6, 8, 10 and 12 years. A 10-year size requires 3½ yards of 32-inch material. Price 12c.



No. 4321—Girls' Dress. Cut in four sizes, 8, 10, 12 and 14 years. A ten-year size requires four yards of 36-inch material. Price 12c.

No. 4318—Child's Dress. Cut in four sizes, 4, 6, 8 and 10 years. An eight-year size requires 3½ yards of 27-inch material. Price 12c.

No. 4307—Ladies' Dress. Cut in seven sizes, 34, 36, 38, 40, 42, 44 and 46 inches bust measure. A 38-inch size requires 4¾ yards of 40-inch material. The width of the skirt at the foot is 2¾ yards. Price 12c.

No. 4311-4265—Ladies' Costume. Blouse 4311 cut in six sizes, 34, 36, 38, 40, 42 and 44 inches bust measure. Skirt 4265 cut in seven sizes, 25, 27, 29, 31, 33, 35 and 37 inches waist measure. The width at the foot is three yards. To make this dress for a 38-inch size requires 4¾ yards of 40-inch figured material. Two separate patterns, 12c for each pattern.



No. 4301—Ladies' Work Dress. Cut in seven sizes, 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires 5¾ yards of 36-inch material. The width of the skirt at the foot is 2½ yards. Price 12c.

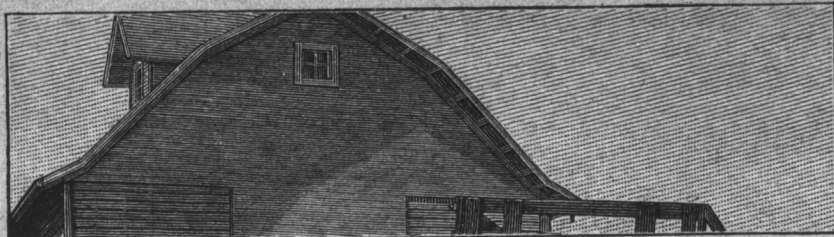
No. 4308—Ladies' Apron. Cut in four sizes: Small 34-36; medium 38-40; large 42-44; extra large 46-48 inches bust measure. A medium size requires 3½ yards of 36-inch material. Price 12c.

No. 4162—Ladies' House Dress. Cut in seven sizes, 36, 38, 40, 42, 44, 46 and 48 inches bust measure. A 38-inch size requires 6¾ yards of 32-inch material. The width at the foot is 2¾ yards. Price 12c.

CATALOG NOTICE.

Send fifteen cents either in silver or stamps for our up-to-date spring and summer catalog, showing color plates, and containing 500 designs of ladies', misses' and childrens' patterns, a concise and comprehensive article on dressmaking, also some points for the needle (illustrating thirty of the various, simple stitches), all valuable hints to the home dressmaker.

All orders for patterns and catalogs should be addressed to Pattern Department, Michigan Farmer, Detroit, Mich., and be sure to state the size wanted.



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"Two hours after I leave my farm, my livestock is in the Omaha yards, 35 miles away—thanks to Goodyear Cord Truck Tires. What I save on shrinkage is profit to me."—J. B. BENTLEY, Neola, Iowa

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FOR FALLEN ARCHES Combination Arch & Ankle Supporter

Weak, swollen ankles, tired feet. Dancing and athletic wear. Made of light durable elastic, can be worn inside shoe or pump. Order by size and width of shoe. \$1.50 per pair post paid anywhere. \$1.00 per pair for arch support only, post paid anywhere.

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Strong's Strawberry Plants

Dark red canners \$3.50—1,000
FRANK N. STRONG IONIA, MICH.

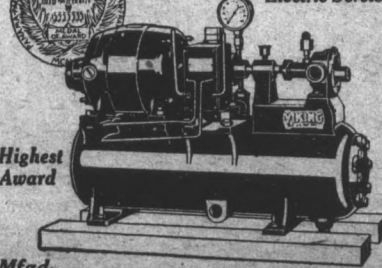
Fresh Running Water Without a Storage Tank

All you can use at the turn of a faucet—240 gallons per hour.

VIKING WATER SYSTEM

A durable, economical, automatic system. Compact, direct-connected motor with wear-proof, rust-proof, positive action rotary pump. Operates at trifling cost from 32 or 110 volt circuits. Install anywhere in small space. Suitable for any water supply where suction lift is not more than 22 feet. Free descriptive folder. Address

THE ELECTRIC AUTO-LITE COMPANY
Willis Light Div., Toledo, O.
Makers of Willis Light Certified Electric Service



Highest Award

Mfgd. by The Viking Pump Co., Cedar Falls, Iowa



(Use this department to help solve your Household Problems. Address your letters to Martha Cole, Michigan Farmer, Detroit, Michigan).

TO REPAIR THE OIL STOVE.

I was interested in the letter about cleaning the oil stove. I wonder if there is any way to fix a stove when the wicks won't turn up? Have painted stove, etc., and put in new wicks, but cannot make them turn. Is there any where I could get new parts?—Mrs. H.

You do not mention the kind of oil stove you are using, but I believe, if you will get new burners for your stove you are using, but I believe, if in turning up the wicks. The part turning the wick sometimes becomes worn and must be replaced. The dealer from which you purchased your stove should be able to furnish you with repairs.

FOR POISONING ANTS.

I was bothered a great deal with those little red ants getting into my cupboard last summer. Can you tell me how to prevent their coming this year?—Mrs. D. R.

One of the most reliable ways of poisoning ants is to use equal parts of tartar emetic and sugar. Moisten this with enough water to make into a syrup and pour into shallow dishes and set them in runways of the ants. They will eat very freely of this and as the poison does not act quickly, it will be carried to the burrows and fed to the larvae. In this way the old and the young die together, and a large colony is soon disposed of. In case the water dries out of the dish, more may be added, as this mixture does not spoil.

IRISH STEW.

Can you give me a recipe for making Irish stew in which the proportions of the vegetables are such as not to give too strong a flavor of any vegetable?—Mrs. R. G.

The following is a recipe for Irish stew sent in by our subscriber, Mrs. N. S. W., which she likes very well.

Into a six-quart stew kettle, put two cups of meat (left-over) diced into one-half-inch cubes, with any gravy or broth which may be on hand. Add two cups of boiling water and let simmer while the vegetables are being prepared. I use one cup of chopped on-

ion, four cups of diced potato, two cups of diced carrot, one cup chopped cabbage, two cups tomato, either canned or fresh, and add one heaping tablespoon of salt, a dash of pepper, and butter or meat drippings to suit the taste. Some dried celery leaves rubbed between the hands improves the flavor. Add two quarts of boiling water and after boiling one-half hour, add one-half cup of macaroni, one-half cup of rice, and one cup of rolled oats. Stir well and boil one-half hour longer. Serve piping hot with crackers or toast. This is sufficient for a family of six.

RICE STARCH.

I have been told to starch my little girl's fine dresses with rice starch. Can you tell me how to make it?—Mrs. O'C.

Wash thoroughly one-quarter cup of rice, and cook in one quart of boiling water until very soft. As the water evaporates add more to keep quantity up to one quart. When cooked, add another quart of boiling water and strain, without squeezing, through a double thickness of cheese cloth or through flannel. Use while hot and it will be found the most satisfactory starch for delicate fabrics.

TO CLEAN WALL PAPER.

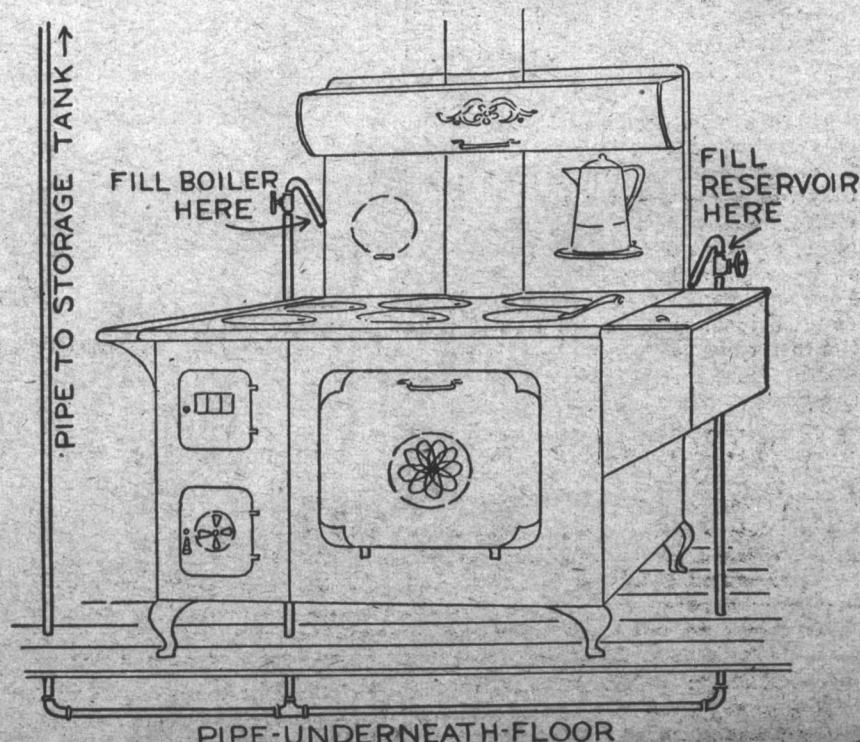
Can you tell me how to clean wall paper?—Mrs. F. A.

There are several commercial cleaners on the market with complete directions for use; but a cleaner may be made at home by mixing one-half cup of water, three teaspoonfuls of vinegar, three teaspoonfuls ammonia, one teaspoonful carbon oil, and one cup flour. Boil these together until thick, stirring constantly. Work the dough into small balls and rub the paper with downward strokes so as not to streak or spot it.

HOME-MADE GLUE.

Can you tell me how to make home-made glue?—Mrs. G. P.

Very good home-made glue is made by dissolving half a pound of good glue in three-quarters of a pint of water and adding one-half pint of vinegar. This glue is always ready for use without warming if kept covered.



Mrs. M. A. M., of Morley, Mich., Had Added Attachments Greatly Lessened Running Water in Her Home but these the Labor on Wash Day.

Opinions & Comments

From
Michigan Farmer Readers

Consolidated School and Taxes

By E. V. Root

THE consolidation movement has been slow in Michigan, the oldest successful school of this type, located at Mattawan, Van Buren county, being now in its twelfth year. An agitation of the question running back to the days of Delos Fall as state superintendent had, prior to 1917, a mere handful of this type of schools as its net results. In 1917, however, a law known as the Rural Agricultural School Act passed the state legislature without effort being expended in its behalf and with very little opposition being manifested. It took, however, another session of the legislature to make the act workable and in the years which have followed the 1919 session interest and progress in consolidation have been features in educational progress.

Now, the big question in school matters as in other affairs, is that of money and an economic condition discriminating against the rural communities has placed undue stress upon the matter of taxes. General farm conditions have certainly been bad during the past two years. When statisticians who know whereof they speak, state that not ten per cent of the farms in Michigan paid expenses last year, it is unnecessary to expand upon this topic. This condition has brought a reaction against good roads, good schools and, in fact, all improvements.

Such a reaction is reflected in the attitude of the present legislature and is, of course, to be expected. Rural communities demand lower taxes and they are looking to their representatives to bring it about. Of course, it is not likely that taxes will be any lower and if rural conditions change so that the farmer has ready money, the tax question will lose its significance. People always have, and always will, kick on taxes, but the only time they really mean it is when they do not have the money to pay.

Along with other progressive legislation that has been assailed, the rural agricultural school act has come in for its share, and believers in the present law have exerted themselves to the utmost to save a splendid act from amendments intended to render it inoperative.

Proposed changes in the present law received the approval of the house last week and will undoubtedly be incorporated in the act. The most important of these provides that the territory organized into a district must contain at least twenty-four sections of land or have a valuation of \$1,000,000. Such an amendment will restrict organization somewhat but friends of consolidation do not think will weaken the law, for it will tend to larger and better financed districts.

Another change requires the petitions initiating the movement to form a consolidated district to be signed by at least fifty per cent of the school electors of each district to be included. The present law requires twenty-five per cent to sign. This amendment gives to every district an absolute veto on consolidation and renders it impossible to bring a community into a unit without the consent of a majority.

The third clause of the proposed amendment makes it possible to submit the question of the return to the district system after the consolidated district has been formed. The present law permits this, but specifies that the

consolidated district must have operated as such for five years. The amendment will permit districts which have voted in favor of consolidation, but have never perfected their organization, to go back to the district unit.

These proposed changes will undoubtedly become a part of the law, and while the movement is reactionary, friends of consolidation do not see in the proposed changes anything to weaken the system. The provision for larger and financially stronger districts is in the interest of better schools and the number of names required on the petition will mean that when the system is adopted public sentiment will be behind it and this is really necessary to the success of a school of any type.

Consolidation will presently be with us. Local and economic conditions may delay it for a time, but it is the solution of the rural school problem and eventually will come into its own.

STATE FRUIT EXCHANGE FORMED.

PROMINENT fruit growers in the western fruit belt of this state organized the Michigan Fruit Growers' Incorporated, at Benton Harbor, April 13. This new organization will be affiliated with the American Federated Fruit Growers, Incorporated, and will have an authorized capitalization of \$100,000 with \$25,000 paid in at the start.

The list of officers are headed by James Nichols as temporary president and includes many men who have been prominent in the fruit marketing circles of Michigan. The headquarters of the exchange will be located at Benton Harbor, but if its volume of business develops north of Grand Rapids, a branch will be located there. Between twenty and thirty local cooperative associations will probably be included in the membership of this organization. Each association which joins will be required to take out five shares of stock at \$100 each. But after a permanent organization is affected, representation in the exchange will be on the tonnage basis, one share to every fifty cars of fruit shipped.

THE GAS TAX.

TALK about the gas tax makes me write. One senator says the weight tax is good for the farmer. He is wrong. Here is how it is. Farmers do not drive as others do. The average farmer drives about 2,500 miles a year. Many others drive 25,000 miles in the same time. Would the weight tax be fair in this case? I would say "No." Let the man pay who uses the road. Many from cities and villages who use their cars but little, favor the gas tax.—M. F. R.

COUNTRY GOOD PLACE TO RAISE CHILDREN.

I NOTE what is being said about our children in the sugar beet fields. The country has always been an ideal place to raise children. There is good food, plenty of fresh air and sunshine, and real opportunities for the children to learn to do some useful work. They can also be taught habits of thrift and industry under the supervision of their parents.—A. E. P., Isabella County.



Like water off a duck's back, rain runs off the steel case of the Columbia Hot Shot Battery. Waterproof, storm-proof, rust-proof. Simple—Can't get out of order. Can't be bumped out of commission. Always a prompt, hot spark. Power in it for a good long time. Yet, the steel case Columbia Hot Shot costs no more than a fibre case battery. It's worth demanding.

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Columbia Dry Batteries for every kind of service are sold at electrical, hardware and auto accessory shops, garages, general stores. Insist upon Columbia.



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White Diarrhea

Remarkable Experience of Mrs. C.M. Bradshaw in Preventing White Diarrhea

The following letter will no doubt be of utmost interest to poultry raisers who have had serious losses from White Diarrhea. We will let Mrs. Bradshaw tell of her experience in her own words:

"Gentlemen: I see reports of so many losing their little chicks with White Diarrhea, so thought I would tell my experience. I used to lose a great many from this cause, tried many remedies and was about discouraged. As a last resort I sent to the Walker Remedy Co., Dept. 507, Waterloo, Iowa, for their Walko White Diarrhea Remedy. I used two 50c packages, raised 300 White Wyandottes and never lost one or had one sick after giving the medicine, and my chickens are larger and healthier than ever before. I have found this company thoroughly reliable and always get the remedy by return mail.—Mrs. C. M. Bradshaw, Beaconsfield, Iowa."

Cause of White Diarrhea

White Diarrhea is caused by the Bacillus Bacterium Pullorum. This germ is transmitted to the baby chick through the yolk of the newly hatched egg. Readers are warned to beware of White Diarrhea. Don't wait until it kills half your chicks. Take the "stitch in time that saves nine." Remember, there is scarcely a hatch without some infected chicks. Don't let these few infect your entire flock. Prevent it. Give Walko in all drinking water for the first two weeks and you won't lose one chick where you lost hundreds before. These letters prove it:

Never Lost a Single Chick

Mrs. L. L. Tam, Burnetts Creek, Ind., writes: "I have lost my share of chicks from White Diarrhea. Finally I sent for two packages of Walko. I raised over 500 chicks and I never lost a single chick from White Diarrhea. Walko not only prevents White Diarrhea, but it gives the chicks strength and vigor; they develop quicker and feather earlier."

Never Lost One After First Dose

Mrs. Ethel Rhoades, Shenandoah, Iowa, writes: "My first incubator chicks, when but a few days old, began to die by the dozens with White Diarrhea. I tried different remedies and was about discouraged with the chicken business. Finally I sent to the Walker Remedy Co., Waterloo, Iowa, for a box of their Walko White Diarrhea Remedy. It's just the only thing for this terrible disease. We raised 700 thrifty, healthy chicks and never lost a single chick after the first dose."

You Run No Risk

We will send Walko White Diarrhea Remedy entirely at our risk—postage prepaid—so you can see for yourself what a wonder-working remedy it is for White Diarrhea in baby chicks. So you can prove—as thousands have proven—that it will stop your losses and double, treble, even quadruple your profits. Send 50c for package of Walko—give it in all drinking water for the first two weeks and watch results. You'll find you won't lose one chick where you lost hundreds before. It's a positive fact. We guarantee it. The Leavitt & Johnson National Bank, the oldest and strongest bank in Waterloo, Iowa, stands back of this guarantee. You run no risk. If you don't find it the greatest little chick saver you ever used, your money will be instantly refunded.

WALKER REMEDY CO., Dept. 507, Waterloo, Iowa.

Send me the [] 50c regular size (or [] \$1 economical large size) package of Walko White Diarrhea Remedy to try at your risk. Send it on your positive guarantee to instantly refund my money if not satisfied in every way. I am enclosing 50c (or \$1.00). (P. O. money order, check or currency acceptable.)

Name

Town

State R. F. D.

Mark (X) in square indicating size package wanted. Large package contains nearly three times as much as small. No war tax.



Hatching Egg Shipments

By R. G. Kirby

THE three main requirements of a hatching egg package are safety to the shipment, time required to pack, and cost of the package. Hatching eggs must travel with a minimum of jar and be protected as much as possible from sudden changes in temperature. The package must be one that can be quickly packed and ready for the mail or express. The cost of the package must be rather small if it is used for hatching eggs selling at a low price.

We have found the corrugated cardboard hatching egg boxes very satisfactory for shipping hatching eggs by

a large number of orders can be handled rapidly.

The strings for tying the different sizes of boxes can be cut the right size. Packed boxes can be weighed and the amount of postage required for different zones noted on a card. Then it only takes a short time to address, tie and stamp a box and it is ready for the rural carrier. It saves time to buy stamps of the right denominations and keep enough on hand for several days' business. This makes it easier for the rural delivery carrier and saves watching for him whenever shipments are made. For the



Some Pure-bred Bronze Turkeys Belonging to Grover C. Johnson, of Six Lakes. Mr. Johnson Sells for Breeding Purposes Only. He Says he Markets All His Birds Through the Pulling Power of Michigan Farmer "Ads."

parcel post. They come in sizes holding fifteen, thirty or fifty eggs each. Parcel post boxes cannot be sealed but can be tied with strong string. We wrap each egg in two sheets of paper and use the pages of old magazines which we save up during the year preceding hatching egg season. The egg wrapped in two sheets completely fills one of the compartments in the box. There is no room for jostling and we cannot see how eggs can be injured in such a carrier unless they are accidentally dropped on the floor.

Some poultrymen ship eggs for hatching in satchel baskets. The handles are drawn together and tied over the top of the basket and this prevents other packages from being placed on the eggs. Market baskets can be used in the same way. A layer of excelsior is placed in the bottom of the basket. Then each egg is wrapped in a wad of excelsior. Enough space is left between the eggs so they are not crowded and cannot strike together. When all the eggs are placed another layer of the excelsior is laid on top and a piece of burlap sewed over the basket to keep the contents firmly in place.

We have received eggs packed in wooden candy pails. The pails had a padding of hay several inches deep in the bottom. Then each egg was wrapped in several sheets of paper and more hay was placed between each layer of eggs. They came through without breakage, but I believe there is more jar to eggs in wooden receptacles than in baskets. The baskets have a spring to them that helps to take up any jars during transit.

I think it is most economical to use the cardboard containers. They can be bought in knockdown form early in the season and a large number of boxes completely assembled before the rush of the hatching egg business. Then as the orders arrive it is only necessary to open the box and fill it with well-wrapped eggs. In that way

first zone it costs eight cents to mail our fifteen-egg boxes. The thirty-egg size costs ten cents, and the fifty-egg size costs fourteen cents.

We have found the parcel post method of shipping hatching eggs to be very satisfactory and it helps to make the poultry business more profitable on the farm. It saves many trips to the city express office that might be necessary if it were not for the help of the parcel post.

SILAGE NOT GOOD FOR POULTRY.

THE Iowa State College has carried on extensive experiments in the use of silage for poultry feeding. These tests have shown that it is dangerous to feed silage to poultry. The reason for this, they claim, is that silage often contains a slight mould not visible to the naked eye, which makes it undesirable as a poultry feed. The Iowa authorities recommend the elimination of silage from the ration and the use of sprouted oats instead.

HATCHING EGG TROUBLES.

Please tell me why my chicken eggs do not hatch. They look good until the fourteenth day of the hatch. When I break the eggs they look wet inside. Can I hatch goose eggs in an incubator? How much heat and moisture is necessary?—A. M.

If the germ of life in an egg is not strong it may die at any time during the period of incubation, even though the incubator is given the best of attention. There will always be some chicks die in the shell when all conditions are about ideal. Many of the successful hatcheries do not average much over fifty chicks from one hundred eggs throughout the season, even though the fertility of the eggs runs eighty or ninety per cent. There would naturally be considerable moisture in the egg. When the breeding stock are on range and have plenty of exercise and green feed there is gen-

CHICKS

For June nineteenth delivery. Improved S. C. English type White & Brown Leghorns. \$10.00 per 100; \$30.00 per 500; extra selected \$12.00 per 100 or \$37.50 per 500. From all good profitable layers, and our selected are from our very best layers. This is our 12th year breeding, hatching and shipping chicks, and we are offering you chicks from the very best layers at a very reasonable price. We pay the postage up to your door and guarantee you 100% safe arrival. Order direct from this adv. to save time, for it pays to be a little ahead of time, or write for our 32 page catalogue.

WOLVERINE HATCHERY
Zeeland, Mich. R. No. 2

BABY CHICKS

Of quality from real winter layers, mated by pedigreed males from Michigan Agricultural College. All our matings are inspected and accredited by our state Dept. Agri. as to their laying ability and health. By close culling year after year we can say we have a real improved egg machine in S. C. American and English strain. White Leghorns and S. C. Sheppard strain. Anconas. Write for our 1923 catalogue and price list, it's free. Chicks 10 cents and up. Reliable Poultry Farm & Hatchery, Zeeland, R. 1. Mich.

Pedigreed
State Approved **S. C. W. Leghorn CHIX**
American-English Strain

Are you going to buy them from a hatchery or from a BREEDER? Buy from Michigan's Largest Leghorn Farm and insure success. We hatch our own eggs only. Supply limited. Prices reasonable. Satisfaction guaranteed. Descriptive circular tells all about them. It's free.
Simon Harkema & Son, R. 1, Holland, Mich.

DUNDEE CHICKS

Barred Rocks, R. C. Rhode Island Reds, Anconas and White Leghorns
One grade "The Best." Write for catalogue and price list.

THE DUNDEE HATCHERY
Box A. DUNDEE, MICHIGAN

B-A-B-Y C-H-I-X

Order Now For 1923

WHITE LEGHORNS AND MOTTLED ANCONAS Also Black Leghorns, Brown Leghorns, Buff Leghorns, Black Minorcas, R. C. Rhode Island Reds, Barred Plymouth Rocks, White Plymouth strain, Silver Wyandottes, White Wyandottes. WE HATCH eggs from Hogenized flocks on free range on separate farms. Send for Price List.

CRESCENT EGG COMPANY
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Hardy Northern Bred CHICKS

Barron S. O. White Leghorns. Parks' Strain Barred Rocks. The greatest egg producers known. Heavy winter layers. See record of our pen 16 now at the Michigan International Egg Laying Contest. Get Quality Chicks at Reasonable Prices from HOLLAND'S PIONEER POULTRY FARM. Catalog free. PINE BAY POULTRY FARM R 4 Holland, Mich.

JUST-RITE LOOK! Baby Chicks

POSTAGE PAID. 95¢ live arrival guaranteed. MONTH'S FEED FREE with each order 40 Breeds chicks, 4 breeds ducklings, select and exhibition grades. Catalog free, stamps appreciated.
NABOB HATCHERY, Dept. 15, Gambler, O.

LOOK, CHICKS \$10.50 and up. From highest quality, proven layers. Can ship immediately. W. H. Br. Leghorns \$12.50 per 100. Anconas Buff Leg. \$13.50 per 100. Bar Rocks or Reds \$14.75 per 100. Wh. Rocks, Wh. Wyandottes, Buff Orpingtons, \$16.75 per 100. Bl. Minorcas \$18.00. B. Brahmas Bl. Langshans \$22.00 per 100. Add 35c extra if less than 100 ordered. Hatching eggs. Catalog. Good Bank reference. Box 9, Beckman Hatchery, 26 E. Lyon, Grand Rapids, Mich.

Baby Chicks \$12.00 per 100 and up
Hatching eggs. \$1.50 per setting to \$15.00 per 100. We are listing 17 varieties of pure bred fowls; Chickens, Geese, Ducks & Guineaas, also breeding stock. Send for prices and circular. Booking now for early delivery. CLINTON HATCHERY & POULTRY FARMS, Wilmington, Ohio.

Standard Chicks Satisfy!
S. C. English White and S. C. Brown Leghorn Chicks. Vigorous, Healthy, Early Maturing Chicks at wholesale prices. We satisfy our customers, 100 per cent live delivery. Postpaid. Catalog free.
Standard Hatchery, Box B. Zeeland, Michigan

WHITE LEGHORNS
Lay 245 to 301 eggs per year. Wings at 50 above. Chicks, eggs, pullets, hens and males shipped C.O.D. at low prices. Write today for catalog and complete information to the World's Largest Leghorn Farms.
GEO. B. FERRIS, 834 OLIVE, GRAND RAPIDS, MICH.

SUPERIOR CHICKS

We hatch Leading Varieties Standard Bred, vigorous, heavy laying stock. Postage paid. Live arrival guaranteed. Lowest prices. Best quality. Prompt deliveries. Send for our large, illustrated catalog. Superior Poultry Co., Box 5-39 Windsor, Mo.

RHODE ISLAND WHITES
win over all breeds at the egg laying contest. 30 eggs \$5.50 \$8.15 order from this ad. Some chicks H. H. JUMP, 175 Prospect Blvd., Jackson, Mich

CHICKS THAT MAKE PROFITS
Strong, vigorous, well hatched from leading breeds of heavy layers. Moderate prices, 100% live delivery guaranteed. Postpaid. Catalog giving full particulars free. Bank reference. BLUFFTON HATCHERY, Box M, Bluffton, Ohio.

CHICKS
from good selected heavy laying flocks of S. C. Buff Leghorns. We keep just the one breed. Write for circular. Willard Webster, Bath, Mich.

BARRED PLYMOUTH ROCK Hatching Eggs fullblood \$2.00 per 13. Post paid J. A. BARNUM, Union City, Mich.

ATTENTION--GUARANTEED BABY CHICKS

WORLD'S GREATEST EGG PRODUCERS.

Tom
Barron
Imported
White
Leghorns



Sheppard
Famous
Anconas
Direct

From grand selected flocks on free range, built direct from laying contest winners. Strong, vigorous chicks that will prove great layers. Flock culled by poultry experts and headed with vigorous pedigreed males from the best laying strain in the country, postpaid. Full live delivery guaranteed. Fine instructive catalog free. Reference two banks.
Silver Ward Hatchery, Box 30, Zeeland, Mich.

Stark's "Prize Size" Baby Chicks

Buy your Baby Chicks from this concern, ESTABLISHED 107 YEARS. Get just the breeds you want--WHEN you want them--at NEW LOWER PRICES--and be ABSOLUTELY PROTECTED by our 100 Per Cent ALIVE ON DELIVERY Guarantee. Get chicks that have Hogan-Tested Parents--that make quick growth, lay young and assure profit-making egg yields for you. Write for prices and full information. Address Box C9, 100percent LIVE Delivery Guaranteed. **NEW Lower Prices** **STARK BRO'S** **At Louisiana, Mo.** **For over 107 Years**

HIGHEST QUALITY CHICKS

Michigan's Old Reliable Hatchery

(The most modern and best equipped Hatchery in the state)

Pure Bred English and American S. C. W. Leghorns; S. C. Anconas; Barred Plymouth Rocks and R. I. Reds. Strong, well hatched chicks from tested Hoganized free range stock that make wonderful winter layers. Chicks sent by Insured Parcel Post Prepaid to your door. 100% live delivery guaranteed. Fifteen years of experience in producing and shipping chicks has given absolute satisfaction to thousands. Write for illustrated free catalog and price list. Get lowest price on best quality chicks before you buy.
W. VAN APPELDORN, R. 7, Holland, Mich.

Selected Purebred Day Old Chicks, Pullets and Matured Stock. Now at new low prices

Hatched from high producing two year hens that guarantee you big, strong, healthy, vigorous chicks from Aristocrat Barred Rocks, Tom Barron Eng. White and Brown Leghorns and Sheppards Strain Anconas. Get our prices before you buy as we guarantee to save you money. As thousands of satisfied customers report big profits. Live delivery guaranteed postpaid. Ref. Two Banks. Members of M. B. C. Ass'n. Big Catalogue free.

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BABY CHICKS



Hatching every day in the week and every hour in the day. We are the World's largest producers.

THREE MILLION FOR 1923

Twelve popular breeds of best thorobred stock obtainable, moderately priced; also QUALITY chicks from heavy laying stock at small additional cost. We deliver by parcel post anywhere East of the Rockies and guarantee 95 per cent safe arrival. Write nearest address, to-day for catalog--FREE.

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Try some of our guaranteed Hogan Tested, Dont-Stop-Laying kind of chicks. They will pay you big-Rocks, Reds, Wyandottes, Leghorns, Minorcas, Anconas, Orpingtons. Catalog Free. Postpaid Safe Delivery.

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From pure bred stock, English Strain White Leghorns \$12.00 per 100, \$37.50 per 1,000. Anconas \$12.00 per 100, \$37.50 per 1,000. Rhode Island Reds and Barred Rocks \$8.00 for 50, \$15.00 per 100, \$72.50 per 1,000. Order from this adv. and save time or send for catalog and price list.

PETERSBURG HATCHERY
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BABY CHICKS

From select stock of heaviest laying strains of English White Leghorns. \$12.00 per 100 Postpaid. 100% live arrival guaranteed. Bank Ref. Catalog. Order from this ad.

HIGHLAND HATCHERY, R. No. 9, Holland, Mich.

5 to 6 lb. White Leghorns

Largest hens, better winter layers. Send for free catalog full of information.
A. W. WAUGH, Gobleville, Mich.

erally an improvement in the hatchability of the eggs.

Goose eggs can be hatched in an incubator by running the temperature from 101½ to 102½. The thermometer should be adjusted so the bulb will be level with the top of the goose eggs. moisture can be added by sprinkling the eggs with water at about 100 degrees. Add moisture once at the end of the first week and twice during the second week. From the beginning of the third week the eggs can be soaked about every other day in warm water for about half a minute. This can be done every day for the last three days before the eggs pip. Most goose breeders seem to prefer hatching with hens or the mother goose, but it is occasionally done artificially.

IDLE HENS BREAK EGGS.

Please tell me what to do for hens that break and eat their eggs. We are losing a lot of eggs that way--C. G. B.

Hens break and eat eggs because they see the eggs in the nests and are idle, and possibly crave something they do not get in their ration. The best remedy is to use slightly darkened nests which the hens enter at the rear. The eggs are removed by dropping the hinged cover in front. Then turn the hens on the range as soon as possible so they will become interested in other things and forget the eggs. Gather the eggs often.

Sometimes an egg filled with mustard or red pepper will give them all the egg eating they desire for a long time. But it is not a sure cure. Most of the egg-eating complaints come after a long winter when the birds have been idle a large part of the time and the best remedy is to keep them busy in deep scratching litter or on range.

SICK COCKERELS.

My cockerels breathe with mouth slightly open, and with a rattling in throat. Later the bird sits down most of the time, refuses to eat or drink, and eyes swell up. One died after a week of ailing. Have two more real valuable cockerels coming down. Am worried about the cause and what trouble is and how to treat them. One bird has a bad canker in mouth but seems to be all O. K. otherwise--S. R. B.

The cockerels with the rattling in the throat probably have bronchitis. When the eyes swell shut it is usually due to a cold. Ten drops of turpentine in a tablespoonful of castor oil may be useful in treating bronchitis. Such respiratory infections are generally caused by dampness and exposure. Lack of vigor due to confinement in the winter might be a cause.

The cockerel with canker can be treated by removing as much as possible of the canker and dropping some strong disinfectant on the wound with a medicine dropper.

HENS EATING FEATHERS.

My chickens are eating the feathers off the neck of each other. They do not lose in weight, but soon become helpless and die. What can I do?--H. P.

I do not think the feather eating has any relation to the death of the birds unless the feathers cause them to become crop-bound or cause clogging in some other part of the digestive tract.

Feather eating is usually due to idleness and lack of exercise when the birds are confined during a long winter. If they are given a balanced ration and allowed to range they will usually forget the feather-eating habit. Perform a postmortem on the hens that die and note the condition of the internal organs, especially the liver. This may give a clue to the cause of the loss and aid in preventing it.

HOFSTRA

Kills chicken mites and lice

Just spray it in nests, roosts and through feathers. It floats and travels; these pests can't escape it. So simple and effective. Loaded metal guns 15c, Bulk powder in 30c, 60c, and \$1.20 packages for refilling Gun cheaply. At Grocers and Druggists.

ALSO

—Flies, Ants
—Roaches
—Mosquitoes
—Fleas, Bed-bugs
—Potato bugs
—Cabbage worms
—and many others.



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412 N. Cheyenne
TULSA, OKLA.

NOT A POISON

Dickinson's Globe Chick Mash

Last year in the Globe Experimental Plant we raised 647 chicks out of 650.

Mrs. Strand, of Berwyn, Ill., wrote us: "We hatched 82 chicks last March and raised them all on *Globe Feeds*"--you, too, can be just as successful. The only secret is to use *Globe Chick Feeds* and feed according to the *Globe Feeding System*.

Whether you raise chicks on a farm, or in town, you should start them on *Globe Chick Mash with Dried Buttermilk*—it is easily digested and assimilated by the chicks delicate organs and makes bone, flesh, blood, muscles and feathers. At eight weeks change to *Globe Growing Mash* to make them grow rapidly.

Write today for free folder, "How to Raise 95 chicks out of every 100. Ask for Dickinson's Globe Chick Mash."

THE ALBERT DICKINSON CO.

Globe Feeds,
Fine Tree Brand
Farm Seeds

Chicago -- Minneapolis



High Producing Vigorous Baby Chicks

Capacity 150,000 healthy chicks at a setting

Fully guaranteed, direct from Trapnested, Pedigreed Tom Barron and Hollywood Imported White Leghorns. World's champion layers. Not just a few 300-egg birds, but a high flock average egg production—that's where you make your profit. Hatched in the largest and finest Hatchery in Michigan, by those who know how. **Bargain prices if you order now.** We can also save you money on Brown Leghorns, Anconas, Barred Rocks, Rhode Island Reds and White Wyandottes. Satisfaction guaranteed or your money back.

Handsome, complete catalog free for the asking. Write for it today.

SUPERIOR POULTRY FARMS, Dept. 101 Zeeland, Mich., U.S.A.



EGG BRED BABY CHICKS GUARANTEED TO SATISFY

ENGLISH TYPE WHITE LEG., BROWN LEG.

Selected breeders, inspected and approved and headed by large vigorous males from high record hens. 11 years of breeding and hatching experience assures you of good strong chicks that are hatched right, shipped right, and will grow up into real money-makers. Our prices are the lowest, quality considered. 100 per cent live arrival guaranteed. Parcel post paid. Write today for free catalog and Prices.

ROYAL HATCHERY & FARMS

S. P. WIERSMA, Prop.

R. 2. Zeeland, Mich.

Buy "Better Quality" CHICKS

We are in a position to furnish chicks from some of the best flocks of ENGLISH WHITE LEGHORNS and ANCONAS to be had, regardless of price. We will be pleased to show any prospective customer the flocks from which we hatch our chicks and have them inspect our modern equipped hatchery. Chicks sent postpaid. 100% good live chicks and your absolute satisfaction guaranteed. Instructive catalogues and prices free on request.

QUALITY HATCHERY, Lock Box 42, Zeeland, Mich.

White Diarrhea In Baby Chicks

Put this in the drinking water and stop it in 48 hours.

White diarrhea kills half of nearly every hatch of chicks. The strange thing is that so many people think this loss can't be stopped. But it can be stopped, without extra work, without troublesome dosing, and at almost no cost. For years, thousands have saved their sick chicks and raised nearly every chick in every hatch, by merely putting an Avicol tablet in the drinking water. These successful poultry raisers will



tell you there is nothing else like Avicol for quick, positive results. Chas. N. Kittinger, Willows, Calif., writes:

"Twelve of my chicks had diarrhea when the Avicol came. I immediately gave them some, and by the second day, the trouble disappeared and now they are all as lively as crickets. If I had only known of Avicol sooner, I would have saved lots of chicks." Your sick, droopy chicks—within 48 hours after they get Avicol—will be just as lively as Mr. Kittinger's were. No matter how fast you are losing them, you can stop them dying the very day you get Avicol in their drinking water.

"Last spring I bought 25 baby chicks," writes Mrs. John Shaffer, Owen, Wis. "When about a week old, they began dying, would get droopy and in a few hours would die. When I had 15 left, I began giving Avicol and they stopped dying at once. I did not lose another one, but raised the 15 to maturity. I give Avicol all the credit."

Why sit back and let your baby chicks die? It costs nothing to try Avicol. Here's our offer: Send 50 cents to the Burrell-Dugger Co., 52 Columbia Bldg., Indianapolis, Ind., for a package by mail prepaid (or pin a dollar bill to your letter for the extra large size holding nearly 3 times as much). If it doesn't stop your chick losses immediately, if it isn't superior to anything else you ever heard of or tried, if it doesn't satisfy you in every way, your money will be promptly refunded. You don't risk a cent. Try Avicol and judge results for yourself.

BURRELL-DUGGER CO.,
52 Columbia Bldg. Indianapolis, Ind.

POULTRY

BABY CHICKS

BEST LAYING, HEAVY LAYING, PUREBRED Tom Barron English White Leghorns, S. C. Rhode Island Reds, Park's Barred Rocks, **STRONG HEALTHY CHICKS** hatched from greatest and best incubator known. Chicks are given full twenty-one days and hatched under proper temperature.

Mr. Frank Fulkerson, Niles, Mich., writes as follows: "From the 66 pullets we raised from your stock last year along with the thirty which we had, we got 1610 eggs in December. Can you beat it?" We are the first and oldest importers of White Leghorns in this state. Watch our pen number 17 in the Michigan Egg Laying Contest. It's Coming Strong!

All flocks thoroughly culled and properly mated to pure bred cockerels. Try Some Real Chicks This Year. Order Now at New Low Prices.

Instructive Catalogue Free

Brumer-Fredrickson, Poultry Farm
Box 20 Holland, Mich.

Whittaker's R.I. Reds

Michigan's greatest color and egg strain. Bred from winter layers for thirteen years. Customers report flock average of 24 eggs per hen for January, 2 pound broilers at 7 weeks, 2½ pound broilers at 9 weeks. Write for free catalog quoting prices on eggs and chicks. Rose and Single Combs.

INTERLAKES FARMS

Box 39, Lawrence, Mich.

GREEN LAWN CHICKS SENT INSURED parcel post prepaid. Barred Rox, White Rox, Rhode Island Reds and Black Minorcas, \$16.00 per 100. Brown Leghorns, English White Leghorns or Anconas, \$14.00 per 100. Extra Select \$2.00 per 100 extra. Heavy Broilers, \$14.00 per 100. Odds and Ends, \$13.00 per 100. 5% discount in 500 or 1000 lots. All varieties 1½¢ each in less than 100 lots. Our 13th year producing high grade chicks that please. Our method of shipping positively prevents chilling or crowding and we guarantee 100% live delivery. May, June, July 10¢ per chick less. Order now and state when you wish chick sent. A saving to cash customers. Deduct 5% if full cash is sent with order. Reference, Fenton State Bank. Green Lawn Poultry Farm, Route 3, Fenton, Mich. Gus Hecht, Prop.

CHICKS

You can now send your order for Chicks in 11 breeds of the Pure Breed Practical Poultry that is making egg records in the hands of our customers on their own farms. If you own stock that is guaranteed, stock that will make you real money, send for our description and price list. All stock guaranteed 100%: post paid. We want you to try our stock this year. It is of the best practical stock you can buy.

STATE FARMS ASSOCIATION
201 Chase Block, Kalamazoo, Michigan.

CHICKS \$10.50 AND UP From Hogan tested hens. Wh. Br. & Buff Leghorns, 50, \$7; 100, \$13; 500, \$62.50. Bar. Rocks, Anconas, 50, \$7.50; 100, \$14; 500, \$67.50. Reds, Wh. Rocks, Minorcas, 50, \$8; 100, \$15; 500, \$72.50. Buff Orpingtons, Wh. Wyandottes, 50, \$9; 100, \$17; 500, \$82.50. Mixed, 100, \$11; 500, \$52.50. Order now. Catalog Free. Eggs for Hatching. Ref. 4 Banks. Tri-State Hatcheries Box 512 Archbold, Ohio



Found In Our Letter Box

Letters from Pals for Our Correspondence Corner

Dear Uncle Frank:

As I wrote a year ago this spring, I thought I would write again. My sister and I are attending high school in South Haven. We stay with my aunt and uncle.

We have about 350 scholars in our school, of which 125 are Freshies, which includes we two, and the rest are Sophomores, Juniors, and Seniors. The girls from the "Junior High" and high school gave a gymnasium exhibition about three weeks ago. Everything, most, was done to music. The boys also gave one. Not the same evening. The Girls' Glee Club gave an operatta cast which was very nice.

As my letter is getting too long, I must ring off or I may never write again.—Sincerely, Jessie Knapp, South Haven, Michigan.

Like spring, you come once a year. I hope you will get the habit and write more often. Your letter was long and newsy. In fact, I haven't room to print it all. Glad you like school.

Dear Uncle Frank:

I don't agree with Clara McDonald on bobbed hair. I think the hair that is thin, scraggly and split should be bobbed. It gives the hair a better chance to grow even, and makes it heavier. My hair is bobbed and it's a good deal better now. I do not curl it with the curling iron so I don't spoil it as some girls do.

I received the lovely pin and was ever so much pleased to get it.—Good-bye, Dorothy Smith, Laingsburg, Mich.

I am glad to pass on your experience with bobbed hair to other girls. Of course, boys have had their hair bobbed for some time.

Dear Uncle Frank:

I received my pin and Merry Circle membership card. Gee! but wasn't I tickled?

I am very lucky. I had two sheep and Dad sold one with the rest of the sheep and it brought \$15. The other one had a pair of twins, both ewe sheep. Dad said that I could keep them.

My dog's name is Jack and he will pull me down hill in the snow. I am going to have a harness for him.

Well, I will close my chatter-box for this time.—Your nephew, Charles W. Shipman, Corunna, Mich.

You are lucky. Fifteen dollars and your lambs and sheep makes a fair start in the sheep business. Nothing like having a useful dog, is there?

Dear Uncle Frank:

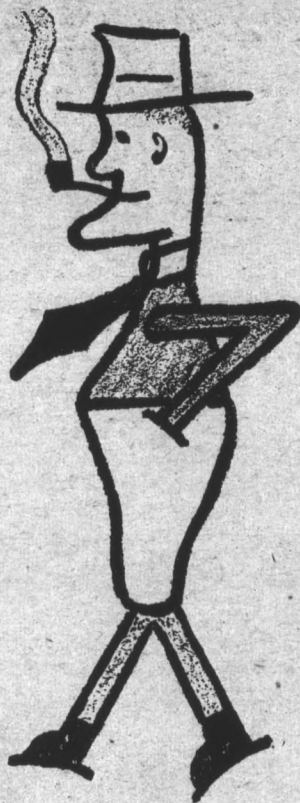
How do you do, my Dear Old Uncle? Say, will you allow me to look through that Grizzly Brown waste paper basket of yours? I would probably find my last letter there, because I didn't see it in the paper, but I won't sob very bitterly about that, as I suppose that bushels of letters that are far better than mine, get the same treatment.

Say, Uncle Frank, I bet you can't

guess what I did Friday p. m. Well, I will tell you. I went back in the field and burned brush and when I got that done I went over where Dad had left the team and plow stand while he picked stones. I put the lines around my waist and plowed until I had got to the opposite side of the field. I saw a big stone which I thought I would plow into it and loosen it. But when the plow hit the stone, the plow bounded and I fell down; so did the plow. Dad saw me and, Oh! how he laughed.

I must stop this as it is already too long.—With Love, Lola Court, Allen, Mich.

It isn't necessary for you to look



"Strolling," by Leo Heiler, Bath, Mich.

into the old brown waste basket—your letter was there. Doesn't plowing stones jar you, though?

Dear Uncle Frank:

I am a city girl but I spend my summers on a twenty-five acre island, which is not so large as your country friends' farms. However, we keep chickens, pheasants, peacocks, swans, ducks and geese, also pigeons and dogs.

I belong to the Campfire Girls, which is a wonderful organization. In place of knickers I wear khaki bloomers and middy blouse.—Mary Blain, 230 Pingree Avenue, Detroit, Mich.

You are a real outdoor girl, even though you live in the city. Your island must be interesting. Tell us more about it.

Dear Uncle Frank:

I am twelve years old and when I start to school again I'll be in the seventh grade. I attended school until January but I had to stop as I am not very strong, and show symptoms of tuberculosis. However, I hope to be allowed to call myself your niece, and a cousin to the other interesting Merry Circle. By the way, my button is wonderful.

Jean Evans, I'd like to pat you on the back. Gladys Clark is right, too.—Your loving niece, Helen Sage, So. Bend, Indiana.

As you have a button and card, you are a full-fledged Merry Circle. I hope you will live the outdoor life as much as possible in order to get back robust health.

Dear Uncle Frank:

I am a farmer girl and am twelve years old and in the seventh grade, and my height is about five feet three

inches, and weight about 160 pounds. My father calls me "Slim." Can you beat that? If anybody can, let's hear from them.—Mildred Fairbanks, Williamston, Mich.

Let's start a "slim" contest. Who can beat Mildred's height and weight? Maybe some of Doug Fairbank's stunts would take a few pounds off of Mildred Fairbanks.

Dear Uncle Frank:

I have written twice before, but they say the third is a charm, so here goes.

I don't like the idea of debating about knickers and bobbed hair on the Boys' and Girls' page. Everyone has a right to his own belief and it may cause hard feelings if they keep on telling them.

Let's have contests every week. I received a pin for a Read-and-Win Contest and think it is very nice.

Well, I'll close, hoping to hear from some of the other boys and girls.—Your loving niece, Eva Floria, Remus, Mich.

I don't believe we will have any hard feelings resulting from our discussion. In fact, a friendly expression of opinion is a good thing once in a while. Your charm worked all right, didn't it?

Dear Uncle Frank:

It is just impossible for me to keep silent any longer during a time of debating like the knickers and bobbed hair question.

I think that it would be all right for girls to wear knickers if they had to work out in the fields on a hot summer day. No one could work and feel comfortable in flowing skirts. Yet, I don't like the idea of girls wearing them "just for show," as some do. It would be all right if a bunch of girls go camping. No one can romp around with dresses on, because they would soon tear them.

Now, for the bobbed hair. I think it is all right for girls whose hair is short and thin. Some girls look all right, while others don't. My hair is not cut and I have always said that I would not have it cut if there was only one hair left on my head.

This makes my ninth or tenth letter and none in print yet.—Your niece, Nelta Brown, North Star, Mich.

You have a sensible view of the knicker-bobbed hair subject. Perhaps we have discussed this enough now. Who can suggest some other subject?

TO STAY ON FARM.

THE 604 boys and girls who attended the National Live Stock Show last winter from all parts of the country made out questionnaires which gave some interesting information. These boys and girls were prize-winners in their respective states. A summary of these records follow:

The average size of bank accounts was \$111.10.

The average value of property owned by those listing it, \$318.40.

Percentage of those in school, 75.9.

The average school grade was the ninth grade.

The average age, fifteen years, eight and one-half months.

Sixty-five per cent stated that they expected to go to college, while 13.7 per cent were definite in their decision not to go to college. The others were undecided.

Over ninety per cent said that they were going to stay on the farm, and only 2.5 per cent announced their decision to take up some other occupation.

These figures show conclusively that it pays to get the young folks interested in farm activities, especially such activities from which they themselves get the results of their own endeavors. Undoubtedly most of these boys and girls are well started in the building of the foundation of their future agricultural activities.



Picture of Hans Christian Anderson. Florence Smigelski's, (Cathro, Mich.).

About Mottoes

THE motto contest brought in a great variety of replies. Some were poetic, some short and expressive, some too long for practical use, and others showed that the writers did not have clearly in their minds what a motto was.

The dictionary says that a motto is "a short sentence or phrase, or a single word, adopted as expressive of one's guiding idea or principle, appended to a coat-of-arms, or otherwise prominently put forward."

We, of course, have no coat-of-arms, as they are things of the past, but I think we want to adopt some expression which will act as a guide in our lives' activities as well as those of our Merry Circle. For that reason we had the motto contest.

For the prize winners, I picked the ten which appealed to me the most. The ten are given below, but not in the order of winnings. This is done because I would like you boys and girls to pick out the one we should finally adopt. Here they are:

Keep working, it's better than sitting aside.

Today decides tomorrow.

Work to win.

Brighten the corner where you are.

Be as good as your word. Say "yes" to all good, and "no" to all wrong.

Step up the stairs, don't stare up the steps.

It's the songs you sing, and the smiles you wear that makes the sun shine everywhere.

Be faithful in little things.

To the highest.

Perseverance wins.

Others besides the prize winners sent good mottoes. Many sent in the one we find so often in these columns, "If at first you do not succeed, try, try again." It's good, but it seems to me that it is too common for our use.

One boy sent, "live and learn and do your best." This is good, but perhaps it would have been better if worded, "live to learn and do your best," or better still, "learn to live and do your best."

Quite a few sent in, "be square." Some chose, "early to bed and early to rise"—you know the rest. One said, "if you want a thing done well, do it yourself." Another said, "we will." She must have come from Chicago, for that city has "I Will" for its motto.

One Merry Circler quoted from poetry in giving, "act, act in the living present." "Politeness is to do and say the kindest things in the kindest way," has a good thought in it but we do not want to confine ourselves to politeness alone.

One chose, "what is home without a mother." Now, a home without a mother lacks one of the great home essentials, mother love, but that expression would hardly do as a Merry Circle motto.

"Where there is a will there is a way," and "honesty is the best policy" had their due share of advocates. Both contain very good thoughts, but are used so often because of their popularity that we can not use them to advantage.

One girl sent in, "no work—no eat." That's what it should be, all right. Another girl gave a very good suggestion when she said, "be workers of our club and not readers only."

Some had a religious tone, as, "With God for right and honor," and, "follow in Christ's footsteps." "A merry heart doeth good like medicine," is also biblical. Another had an entirely different tune. It said, "mind your own business."

One boy, Arthur Uecker, wrote the following couplet:

"Knowledge, Wisdom, Hope and Love
Make up our Merry Circle."

This is a dandy but it can hardly be classed as a motto. If it could be, it

would have been a prize winner. One suggested that we should "be merry, helpful and honest." That's a very good suggestion, by the way, because it mentions three things which are very important in gaining success in life.

There were many other mottoes which can not be given for lack of

Ad. Reading Contest

THIS is the same as the Read-and-Win Contests, except that you will find the answers in the advertising columns. Please give your answers as short as possible, and give the page on which you find them. Remember, neatness counts. Here are the questions:

1. How many cows are necessary to make a DeLaval milk-er pay?
2. What is the best and cheapest means of identifying your stock?
3. What car has an all-steel body with a lustrous baked enamel finish?
4. What engine was the best hired help Watson Riseley ever had?
5. Who advertises "Loaded Metal Guns 15c?"
6. What pulled stumps faster than any other method?
7. Who is making a special offer on twelve bulls from twelve to twenty-four months old?
8. What is the safety razor of the fields?
9. What company says, "The proof of the oil is the using?"
10. What per cent of lead is used in making rubber foot-wear?

The two best papers will win pencil boxes; the next three, nickled pocket pencils, and the next five Michigan Farmer maps of the world and New Europe.

The contest closes on May 17. Address Uncle Frank, Michigan Farmer, Detroit, Michigan.

space. The object in giving such variety is that we would like to have you help pick out one which we can use for the Merry Circle. When you pick out your favorite please consider the thought behind it and how that thought will apply in Merry Circle activities.

Perhaps you will answer the Ad. Contest this week. If so, mention your favorite motto on a separate sheet at the same time. This motto may not necessarily be one of the prize winners, for we may find something better.

The motto which the greatest number of boys and girls select will become the Merry Circle motto. Don't forget, you should do your share in picking this motto by telling us your favorite.

The Prize Winners.

I suppose you are anxious to learn who the motto contest winners are. Well, here they are; way at the end of this article.

Winners of pencil boxes are:
Thelma Skelton, Auburn Mich., R. 2.
Muriel Cook, Owosso, Mich., R. 2.
Those who get pencils are:
Hazel Crowell, 202 Ottawa Street, St. Johns, Mich.
Elsie Mae Farmer, Durand, Mich.
Roberta Brace, Grand Ledge, Mich., R. 4.

And here are the map winners:
Viola Peterson, Skandia, Mich., R. 4.
Blanche Smith, Mulliken, Mich.
Cassie Polaskey, Dafer, Mich., R. 1.
Kenneth Dean, Ada, Mich., R. 1.
Olive Kushmaul, Coleman, Mich., R. 4.

It looks as if the girls were the best motto pickers, doesn't it? For that reason Kenneth Dean is to be congratulated. Here, also, is a suggestion for the boys, "Get a hustle on you."



Egg Bred BABY CHICKS

The Best Laying Strains on Earth

Barron English White Leghorns, Brown Leghorns, and Anconas. During 1923 we will sell 30,000 strong, healthy, super-hatched chicks weekly, bred from strains backed by 18 years of actual egg breeding on our Farms. The enormous output of these quality chicks enables us to sell these money-makers at a price unequalled. Our flocks are culled out annually by poultry experts and are mated to large, vigorous 260-288 egg Pedigreed Males from Funk Farm direct.

Hundreds of Customers Report Big Profits

E. J. Beebe, St. Charles, Mich. writes: My 100 hens laid 183 eggs each and I made over \$300.00 clear profit last year.
Wm. Vivant, Harbor Spring, Mich. writes: We got 528 eggs in January from 180 pullets.

A. Dall, Port Huron, Mich. The pullets began to lay at 4 1/2 months old and averaged 23 1/2 eggs each for one month.
F. L. Hess, Chicago, Ill. writes: I averaged 112 eggs a day from 140 hens and sold \$168.00 of eggs in February.

Raise Good Stock and Reap a Golden Harvest
We don't boast on a few high record birds but our extraordinary flock's average has attained our present high standard. Intelligent chick buyers look for these qualities and we assure you we have them. Get our 1923 large catalog now, it's free.

Wyangarden Hatchery, Box M, Zeeland, Michigan

WOLF'S PURE BRED CHICKS Now Selling

SPECIAL REDUCED PRICES FOR BALANCE OF SEASON
MAY 15 to JULY 15th

S.C. White, S.C. Brown and S.C. Buff Leghorns	10c each
Barred Rocks, R. and S.C.R.I. Reds, Anconas	15c each
W. Rocks, W. Wyandottes, B. Minorcas	14c each
White and Buff Orpingtons	14c each
Broiler Chicks all Breeds	10c each

We do not ship less than 25 Chicks. We guarantee 97% live delivery. Send all orders direct to us and save delay in delivery. Catalog free if desired.

Wolf Hatching & Breeding Co. Dept. 10, Gibsonburg, Ohio

BUY HUBER'S RELIABLE CHICKS

Our 14th Year --- 1,000,000 for 1923

By Parcel Post Prepaid—100% LIVE DELIVERY. Give us your order for some of our RELIABLE CHICKS and we will prove that we give you better chicks for the money than you can get elsewhere. COMBINATION OFFER and SPECIALS OFFERED. Order early. Write for prices and Free Illustrated Catalog.

Huber's Reliable Hatchery, East High St., Fostoria, Ohio

BABY CHICKS Postpaid to your Door, \$11 per 100 Up

FROM HOGAN TESTED, FREE RANGE HEAVY LAYING FLOCKS. ALL VARIETIES.	
WHITE, BROWN and BUFF LEGHORNS and ANCONAS	\$12.00
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BLACK MINORCAS, BUFF ORPINGTONS	\$16.00
EXTRA SELECTED FLOCKS	\$2.00 per 100 higher

Postpaid full live delivery guaranteed. Hatched by the most modern method of incubation from good, vigorous, pure-bred varieties, carefully selected and safely packed. No catalogue. Order right from this ad and save time and disappointment. Reference, Chesaning State Bank or any business in Chesaning.

Address BABION'S FRUIT AND POULTRY FARM, Guy L. Babion, Prop., Chesaning, Mich.

Egg Bred White Leghorn Chicks

From our famous winterlaying English White Leghorns. Large, vigorous birds of fine utility type. Wonderful layers—the result of many years of breeding for increased production of large, white eggs. Our grade A chicks are from these selected females mated with pedigreed sires bred from 200 to 300 egg dams, descendants from Penna. Poultry Farm's egg laying contest winners, notably Lady Victory, 304 eggs and Keystone Maid, 306 eggs. Prices: 25, \$3.50; 50, \$7; 100, \$12; 500, \$57.50; 1,000, \$110.00. Full count and live arrival guaranteed by prepaid parcel post. Order direct from ad. You can do so with absolute safety, as you are fully protected by our guarantee of perfect satisfaction. Reference, Zeeland State Bank. Catalog free.

PATER'S POULTRY FARM, R. 4 Hudsonville, Mich.

GUARANTEED RURAL CHICKS

Postpaid, 100% live arrival guaranteed. Scientifically hatched by most modern methods. From free range HIGH AVERAGE PRODUCING flocks, culled and approved by experts. Pullets reported laying at 4 months of age. BIG, HUSKY, PURE BRED, S. C. English White Leghorns, S. C. Brown Leghorns 100: \$13.00; 500: \$62.50; S. C. Anconas 100: \$14.00; 500: \$67.50. Special prices on larger lots. A very limited amount of Extra Selected Special Matings at \$2.00 per hundred higher. Order right from this ad. A deposit of 10% books your order. We can ship whenever desired. Beautiful catalog free. Ref. Zeeland State Bank.

RURAL POULTRY FARM, Dept. M. R. 1, Zeeland, Mich.

300,000 CHICKS

Guaranteed Michigan Bred and Hatched

ENGLISH WHITE & BROWN LEGHORNS, SHEPARD'S Famous Strain ANCONAS 50, \$7; 100, \$13; 500, \$60. BARRED ROCKS, R. & S. C. REDS, 50, \$8.50; 100, \$16; 500, \$75. 1,000 orders at 500 rate. RHODE ISLAND WHITES, 100, \$8; 200, \$35. Postpaid, full live delivery guaranteed. Strong, vigorous Chicks from heavy laying flocks. Order right from this ad. WE SATISFY OUR CUSTOMERS. Catalog free. Reference Holland City State Bank.

KNOLL'S HATCHERY, Box H, Holland, Mich.

EARLY MATURING BABY CHIX CHICKS

from heavy egg type birds. A continued cold spring has caused many delays in the purchase of baby chicks. Our early maturing chix from culled flocks which have been carefully mated will make you profitable winter layers. Even tho the season is rather late we can supply you with June chix which will mature rapidly and make you profitable winter layers.

JUNE PRICES SHIPPED P. P. PREPAID
Select B. P. Rocks and R. I. Reds, 50, \$7.00; 100, \$13.00; 500, \$62.50. Buff Orpingtons, W. P. Rocks and White Wyandottes 50, \$8.00; 100, \$15.00; 500, \$72.50.
EXTRA SELECT high grade B. P. Rocks and R. I. Reds, 50, \$8.50; 100, \$16.00; 500, \$77.50. Our large capacity will enable us to fill your order on the date we promise you. 100% live delivery guaranteed.

THE MILAN HATCHERY QUALITY CHICKS

Select Barron Eng. S. C. W. Leg. Br. Leg. and Shepard's S. C. Anconas. Strong, sturdy superhatched chicks from thoroughly culled pure-bred flocks. Heavy layers, winners at leading shows. May 15 to June 1, delivery, 50, \$6.00; 100, \$11.50; 500, \$55.00. After June 1st, \$1.00 per 100 lower. Extra Select chicks \$1.50 per 100 higher than above prices. Shipped Postpaid, 100% live delivery Guaranteed. Get your order in at once or write for catalog. Townline Poultry Farm, Dept. M. Zeeland, Mich. Route 1

Guaranteed to Satisfy
Chicks after May 15th
\$9.00 per 100 Postpaid
Extra selected stock \$11.00 per 100.
S.C. White and Brown Leghorns.
Our chicks are hatched right and will live. Safe arrival guaranteed. Order direct or send for our catalogue.

OTTAWA HATCHERY & POULTRY FARM

Holland R-10 Michigan

Baby Chicks

There is no guess-work about ordering "CLOVERLEAF" chicks; you KNOW they will satisfy. Big husky chicks from closely culled flocks. Just the kind you have been looking for. Send for catalog.

Cloverleaf Poultry Yards Route 2, Zeeland, Mich.

CHICKS Reduced Prices. Leghorns, White or Brown, Anconas, \$11. per 100, Rocks, Reds, Orpingtons, \$13. per 100, Live Delivery guaranteed. Eggs \$1.50 per 15. Circular free. **BANKER & BANKER, Box H, Knoxville, Tenn.**

Additional Poultry Ads. on Page 677



BLUE VALLEY BULLETIN



FOR BETTER
CREAM MARKETING

Circulation 2,095,434
May 1923—Published Monthly

CORRESPONDENCE
INVITED

Ship Cream Direct

It is just as easy to take the cream to the railroad agent, ship it direct and get all the money the creamery can pay, as it is to take it to the cream agent and let him get part of the money for shipping it. The transportation charges are the same and must be paid anyway.

Blue Valley Boosters

The manufacture and sale of Blue Valley package butter would never have increased from 48,272,986 packages in 1921 to 58,729,777 packages in 1922, had it not been for the good word passed along to their neighbors by farmers who already had the experience and knew that shipping cream direct to Blue Valley meant getting full value for it.

Every good farmer wants to see his neighborhood prosper. That's not only human kindness but good business. It makes the land worth more. So all these Blue Valley Boosters co-operated in making this full-value cream market still greater and more profitable to all farmers. In turn, Blue Valley is bending every effort to make every Blue Valley cream check back up the good words they have spoken for us.

Every Man to His Trade

Blue Valley uses an enormous quantity of paper packages, parchment paper and boxes for Blue Valley package butter every year. We have sometimes been asked why we buy these great quantities of supplies from manufacturers instead of running a factory of our own and get the manufacturers' profit ourselves.

This is an age of specializing. We are manufacturers of creamery butter—buyers of cream and sellers of butter. That's the business we know. We don't know carton or box making. That's another business. If we took it on, we would have to take capital from the creamery business, scatter our energies and trust to hired help. The paper and the box men are experts in their business. For that reason they can supply us cheaper than we could do it ourselves, and make their legitimate profit besides.

Blue Valley cream shippers all through the Middle West find the same principle holding true of business farming and cream marketing. Every man to his trade. Farming is one business. Making Blue Valley butter is another. Competition protects both.

Many Profits from Cows

Dairying yields a profit in many different forms. Sometimes actual cash profits may seem small. Indirect profits may at times be obscure, but are present and far reaching nevertheless. In addition to the cash income, the dairy cow is utilizing cheap feeds, grazing on rough land, and saving the by-products of the grain fields. Skim milk is a very valuable feed for the growing pig and calf. In addition to this, the dairy cow returns directly to the soil much of the fertility which is removed by the crops. Under such circumstances it would be a very poor cow indeed, which would not return value received in one form or another.—H. M. JONES, South Dakota Extension Dairy Specialist.

Use Your County Agent

Use your county agent. He is always glad to help you make more money from your cows. He knows what pays under your condition of farming. If you are in doubt how to feed or breed for largest profits, ask him. He gets around all over your county, is in touch with a great many farmers, knows what is going on and he is only too glad to help you in a practical way, if he can. Use him.

Most Cream from Cleanest Separator

Wash and clean the separator after each skimming. If not, a sediment will be left in it. This will throw the bowl slightly out of balance next time the separator is used, the machine will run harder, butterfat will be lost and the cream will test lower.

The separator that is washed clean after every skimming gets most butterfat out of the milk and, of course, a much better quality of cream.

Skim the milk as soon as it is drawn from the cows. The separator skims best when the milk is warm, or about 80 degrees Fahrenheit. If you have to wait, be sure to heat the milk to that temperature before skimming. Never skim cold milk. You will lose butterfat in the skim milk.

Always turn the separator at the speed marked on the crank. It skims closest at that speed. It pays to have the same person run the separator every day. He or she gets used to the correct speed.

Be sure the separator is well oiled and stands on a solid, level foundation.

All the Money For Your Cream

30 DAYS Free Trial Can Offer

Send no money. We ship a can by parcel post prepaid to your door. Ship us cream for 30 days. If at the end of that time you are fully satisfied with our cream prices and quality of cans, pay from cream checks: 5 gallon can \$2.25, 8 gallon can \$3.00, 10 gallon can \$3.35. If not pleased, return can at our expense and our charge will be cancelled. You are the only judge.

Ship Direct to Blue Valley

Blue Valley Creameries situated in best butter markets buy cream direct and make Blue Valley Butter. Blue Valley Butter brings better price. It's sold direct. No commission men or speculators make anything. Blue Valley pays full value for cream and you get it ALL—every cent. Just take your can of cream to nearest railroad station, addressed to nearest Blue Valley Creamery. That's all. We send check day your can of cream is received. You take no chances—we pledge ourselves to please. You'll be satisfied with check same as thousands of Blue Valley shippers. Ship one can and prove it.

We Guarantee

That our check in payment for each and every can of cream you send us will satisfy you.

We guarantee the safe return of your empty cans.

If for any reason whatever you are not satisfied we expect to hear from you.

We guarantee to satisfy you perfectly.

BLUE VALLEY CREAMERY CO.

(Below is the list of Blue Valley Creameries. Ship or write the nearest one.)

Detroit, Mich.	Grand Rapids, Mich.	Indianapolis, Ind.	Cleveland, Ohio
Columbus, Ohio	Kansas City, Mo.	Parsons, Kansas	St. Joseph, Mo.
Sioux City, Ia.	Milwaukee, Wis.	St. Louis, Mo.	Hastings, Neb.
Cedar Rapids, Ia.	Louisville, Ky.	Clinton, Ill.	Springfield, Ill.
	Chicago, Ill.	Duluth, Minn.	

Which one is nearest to you?

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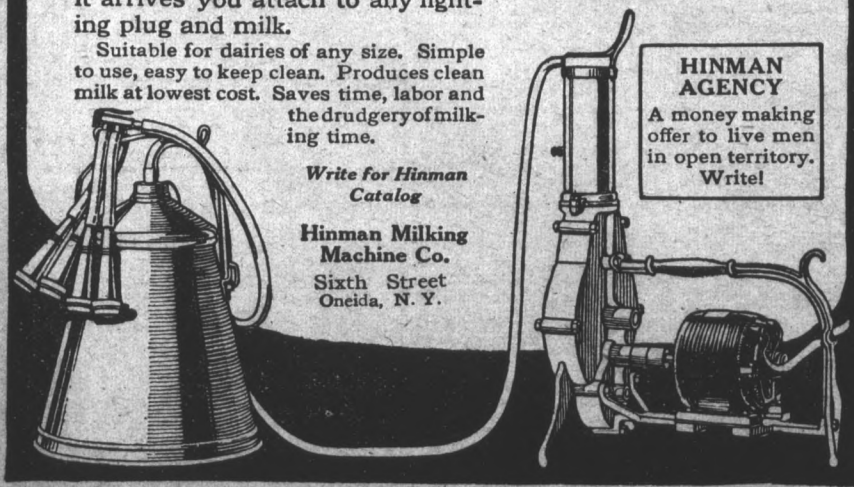
FOR those with electric power of any current, this is the outfit without an equal.

Every principle of the reliable Hinman Standard Milker, that has had fifteen years' success, is embodied here. The power unit and pump come in a neat, compact, light outfit easily carried in one hand. No installation necessary. When it arrives you attach to any light-plug and milk.

Suitable for dairies of any size. Simple to use, easy to keep clean. Produces clean milk at lowest cost. Saves time, labor and the drudgery of milking time.

Write for Hinman Catalog

Hinman Milking Machine Co.
Sixth Street
Oneida, N. Y.



HINMAN AGENCY
A money making offer to live men in open territory. Write!



Cow-Testing Activities

THE NEW ASSOCIATIONS.

THERE were six new associations started between March 10 and April 10, as follows: Hillsdale No. 1, Carl Mathiesen, tester; Arenac county, J. W. Hoffman, tester; Muskegon, Ravenna, J. F. Bennett, tester; Oscola, Ewart, M. N. Roab, tester; Allegan, Dorr, Howard Busfield, tester; and Ingham, Leslie, L. E. Foster, tester.

GROWING RAPIDLY.

THIRTY-EIGHT cow-testing associations are operating in Michigan today. In April, 1922, thirteen cow-testing associations were running. Above ten thousand cows are now regularly under monthly test in the thirty-eight associations. During March, seventy unprofitable cows were sold to the butcher out of the thirty-eight associations.

Indications are that by May 15 at least forty-five associations will be in active operation; and if the testers can be found, there will perhaps be above fifty cow-testing associations running. The tester supply is quite acute. One of the cow-testers was taken on as county agent during the past week, Mr. J. C. Carter, of the Battle Creek, Calhoun County, Association, was advanced to county agent in Arenac county at Standish, Michigan.

FORMS TWO ASSOCIATIONS.

COUNTY Agent S. S. Smith has thoroughly followed up the dairy-alfalfa campaign in Genesee county. Two cow-testing associations were operating in Genesee county since last October. One hundred twenty-nine men responded during the dairy and alfalfa campaign in February, 1923, as wanting cow-testing association work. Mr. Smith got out to see these men and has now three more associations organized in that county. This puts Genesee county in the lead with five associations. Kent, Allegan, Jackson and Ingham counties each have three.

LEADERS FOR MARCH.

THE Livingston County Cow-testing Association, Carl Horwing, tester, had the ten high fat-producing cows for March, with 80.94 pounds of butterfat, while Macomb County Cow-testing Association, E. Johnson, tester, had the banner ten high cows on milk production, averaging 1,970 pounds of milk. The best average butterfat production for the entire cow-testing association goes to the West Allegan Cow-testing Association, Leslie Wilcox, tester. Two hundred fifty-one cows, including fifteen dry cows, averaged for March 33.4 pounds of butterfat—better than a pound of fat a day—and 710 pounds of milk, or about twenty-three pounds of milk per cow. The Lapeer County Association, with R. F. Peabody testing, has the largest number of cows, a total of 472 under test.

THE LEADING HERD FOR MARCH.

MR. T. C. TEIDEBOL, of the North Van Buren County Cow-testing Association, Mr. M. S. Thomas, tester, had the high herd production. Nineteen pure-bred Holsteins averaged 1,024 pounds of milk and 53.8 pounds of butterfat. Three other herds made an average better than fifty pounds of butterfat on the herd for the month

of March: Mr. J. B. Tooley, of Livingston county, on pure-bred Holsteins; Rousch & Price, of Newaygo County Cow-testing Association, on grade Guernseys; Fred Holbeck, of Ogemaw county, on grade and pure-bred Guernseys. Dr. Tiedebohl's record as a herd is quite remarkable in that it leads the list and totals nineteen cows, the greatest number for any herd averages in the totals for all associations.

THE BEST INDIVIDUAL COWS.

THE honor of having the high cow for all Michigan cow-testing associations during March goes to Macomb county, E. Johnson, tester. Mr. Ernest Hordy is the owner of the cow, which was high cow in butterfat production. She was milked four times daily, freshened March 2, 1923, at five years of age, and made 1,984 pounds of milk and 97.2 pounds of butterfat.

Second honors, and very distinguished, go to Smith & Parker, of the Livingston County Association, Carl Horn- ing, tester. This pure-bred Jersey eight-year-old freshened January 4, 1923, under twice-a-day milking, made 97.11 pounds of butterfat and 1,407.4 pounds of milk.

The high cow in milk production belonged to Dr. T. C. Tiedebohl, of the North Van Buren Cow-testing Association. This pure-bred Holstein cow made 2,427 pounds of milk under three times-a-day milking. Two other cows made better than ninety pounds of butterfat. Mr. H. Hough, of the Lapeer Cow-testing Association, Mr. P. F. Peabody, tester, had a grade Durham which made 96.97 pounds of fat during March. This cow was re-tested and found to be correct. Mr. Glen Pickett, of the South Kent Cow-testing Association, Harold Schoner, tester, with a pure-bred Guernsey five years old, made 91.84 pounds of butterfat and 1,224.5 pounds of milk.

KALAMAZOO FINISHES THIRD YEAR.

THE Kalamazoo Cow-testing Association, with Mr. S. P. Sexton, tester, has finished its third year and has re-organized for the fourth year. Mr. Sexton continues to do the testing work. Mr. S. J. Stondley had the high herd average for butterfat. His nine purebred Jerseys averaged 343.5 pounds of butterfat and 7,507 pounds of milk. Mr. George O. Drake, with twelve grade Holsteins, averaged 9,487 pounds of milk, the highest in milk production. The high cow in butterfat was a grade Holstein, "Rosa," owned by Mr. Drake, which made 549.9 pounds of butterfat, a pound of fat a day for ten months in the year. Profitable production? Yes, they made an average return of \$2.88 for every dollar expended for feed.

GRAIN TO FEED WITH CORN.

We have five cows and they are all fresh. We have a silo and plenty of alfalfa hay. What would be a good dairy ration, feeding the silage, alfalfa, and some ground corn?—C. M.

Mix wheat bran, ground oats, and cornmeal together, equal parts, for the basic grain ration. Feed each cow two pounds of oil meal per day and enough more of the basic grain ration to make one pound of grain for every four pounds of milk produced in a day.

You can well afford to feed all the silage and alfalfa hay they will eat up clean.

VITAMINES IN CORN SILAGE.

WE have often marveled at the wonderful feeding value of corn silage. However, Dr. McCollum, of Johns Hopkins University, has made this clear. His recent experiments in nutrition have resulted in some very important findings, especially the value of so-called vitamins contained in the oil and fats of certain food products. We find in corn much of this vitamin and it is one of the elements which makes the corn plant such a wonderful producer of valuable food.

The chemist can determine the amount of protein, carbohydrates and ether extracts in any food, but there are other valuable elements which he cannot determine. The digestibility of these foods is another matter which is hard to determine, but feeding tests give reliable and dependable results.

Corn silage is not only rich in carbohydrates but also contains much of this so-called vitamin which is the true life and strength-giving quality of a food.

The wise feeder will hold in mind two important matters when he makes up his ration:

First, it must be a ration which will supply the necessary nutrition for growth or production.

Second, it must be a cheap ration and, if possible, produced on the farm.

Corn silage meets both of these demands, and to feed well and cheaply corn silage should be used to make up the base of the ration.

In corn silage we have a feed which is grass-like, palatable and relished by the stock. It represents the largest amount of good feed that can be grown on an acre. It represents the largest amount of digestible carbohydrates that can be produced on an acre, and it also represents sufficient amount of this most valuable vitamin material which is necessary for growth, vigor and life in the animal. This explains why we find the silo towering high where intelligent farming is practiced and where it is necessary to gain the greatest possible wealth from the acres. We shall see more of these in the future because we must now make our acres earn more money and we must feed with greater economy.—A. L. Haecker.

NEW MICHIGAN HOLSTEIN CHAMPION.

TRAVERSE Echo Sylvia Walker, a Holstein cow owned by the State Hospital at Traverse City is declared new state champion producer in the junior two-year class for production of butter-fat in thirty days. This cow produced 2,300.0 pounds of milk and 80.453 pounds of butter-fat, according to official announcement from the advanced registry office. This butter-fat production equals 100.56 pounds of butter. The new champion takes the place of Eden Hope, owned by G. W. Ridgeman, at Vassar.

MILK COST HIGH.

RECENTLY the United States Department of Agriculture made a survey of the cost of producing milk in Wisconsin. Records of forty-eight representative farmers showed that the cost of producing the milk was twenty-five per cent higher than the average selling price.

Since the department has issued these figures, many Michigan dairymen are wondering what the dairy production costs in this state are, and are looking to the college authorities

for help. Michigan dairymen could, in their demands for a fair price, use to advantage such figures as were compiled by the government for Wisconsin. The Badger state survey showed that the average production per cow per year was 7,320 pounds. The lowest was 2,830 pounds, and the highest 13,000 pounds.

This survey showed that only the very best herds were able to produce at a profit, and that but few farmers were receiving forty cents per hour for their labor, and the market price for their feed.

BE PREPARED FOR THE HOT DAYS.

THE time is near at hand when dairy products of the farm will be purchased on a grading market. It is not fair play for the dairyman who appreciates the importance of proper handling of his milk and cream to sell it upon the same market with the man who pays little or no attention as to the quality of his product. The careless, shiftless so-called dairyman should be forced out of the business.



His product is hurting the dairy interests by dumping upon the market an inferior product.

Every successful dairyman knows that the hot summer months is a tedious time for handling milk and cream on the farm. It demands extra time and labor to keep it in the best condition for the market. But it will pay. There is a strong demand today for good butter in every market of this country, and the supply is insufficient. Let us, brother dairymen, cooperate in a country-wide campaign to raise the standard of our dairy products by taking better care of the raw material on our farms. We must begin at the foundation to achieve this great end, and that is at the farm.—Leo C. Reynolds.

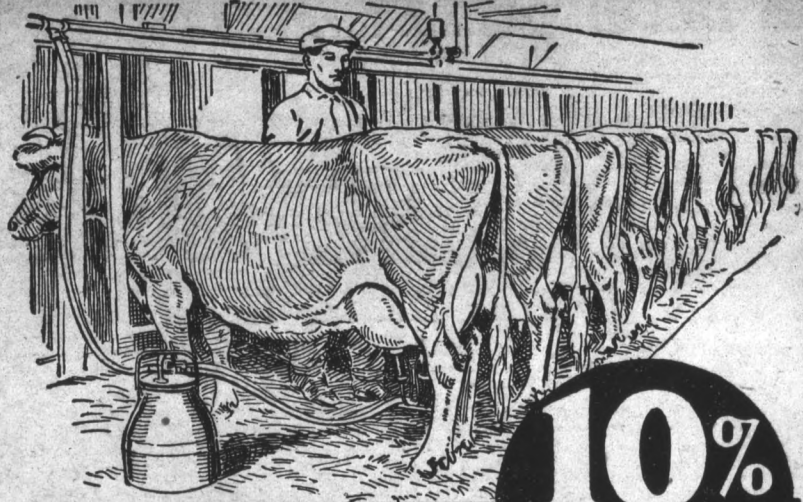
PASTURE IS CHEAP FEED.

IF one hasn't sufficient pasture to give a full feed all summer, it would be a good plan to sow one field this spring with a view of pasturing it. Pasture is conceded by all to be the cheapest food to be had, and especially is this true this year when labor cannot be procured at any price.

If a mixture of oats, Canada field peas, red clover, sweet clover and dwarf essex rape is sown this spring, the stock can be turned in when the oats are six to eight inches high and kept pastured down it will furnish a good amount of feed all summer. If you have trouble in getting the Canada field peas you can leave them out and still have pretty good pasture.

This may possibly assure a full ration for the cows and will cost nothing for labor to harvest. It can be put in after the regular crop of oats is planted. It will be well to roll the ground after planting to firm the seed-bed as much as possible.

Where a large pasture is available, the problem is partially solved; but where the pasturing area is limited, other provision must be made. Fortunately, I have a large, low pasture upon which I can depend to carry my herd through the summer. Others are not so fortunately situated.



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There are now more than 10,000 De Laval Milkers in use, and their owners are almost unanimous in their agreement that the De Laval is better, faster, cleaner and cheaper than any other method of milking. With a herd of 10 or more cows a De Laval Milker will soon pay for itself in the saving of time and labor, increased milk production which its uniform and stimulating action usually brings, and through the cleaner and improved quality of the milk.

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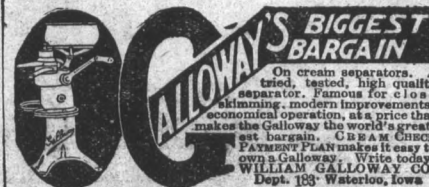


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"The World's Standard"

Center-shear cut means better ensilage, smoother running, less power, no clogging of blower. One lever starts, stops and reverses. Big capacity. Perfectly balanced. Malleable, unbreakable knife wheel insures absolute safety and makes fast cutting practical. Three sizes to meet every farmer's need. Special Terms to Early buyers. KALAMAZOO TANK & SILO CO. Dept. 123 Kalamazoo, Michigan



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Own your own cutter this year—don't depend upon somebody else to cut your ensilage. Every cutter will work overtime this year. Play safe—order yours now. Write today for catalog.

The Safety Razor of the Fields!

These are the wide awake implement men who have "joined-up" as "A-M-F" Dealers—ready for the early mowing season. Ask them to show you the

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PATENTED

It has blades that can be replaced with the knife right in the machine—wedge locked blades that are held in a bull-dog grip until you yourself remove them. It's the biggest improvement in 20 years.



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Union Steel Products Co. Ltd.
Dept. 44, Albion, Michigan, U.S.A.

1923 Tour to Washington

By J. H. Brown

THE writer has been so busy that he has not had time to write a story about the "Michigan Automobile Tours" 1923 trip to Washington, even in response to many letters of inquiry from Michigan Farmer readers. So many have asked to have their cars registered for that tour, that we have had to refuse many applications from city clubs and others who wished to go on the tour, but wanted to keep by themselves in camp and on the road.

There will be room for 210 cars, and two-thirds that number are already registered. Ohio State Grange has twenty-five cars reserved and nearly all are registered. Indiana has a score of cars reserved. We have held up a number of reservations for awhile for those who are already members of the tour association and have participated in one or more tours, but have not yet registered their cars for the

bring their badges with them to the Horton camp.

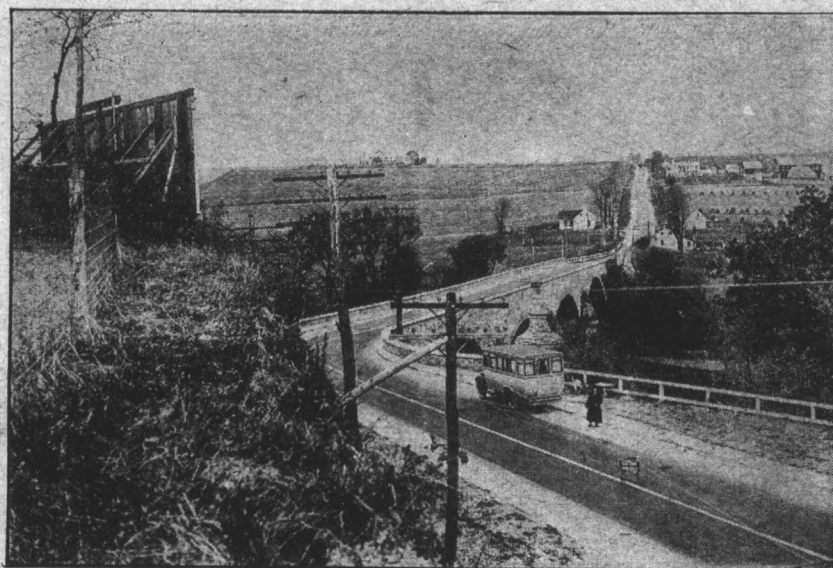
Any reader of this paper who wishes to apply and register his car for the Washington tour should do so quickly in order to make sure of getting in before it is too late.

The picture on this page was one we took last August during our drive over the route to Washington to lay out the tour and program.

WEANS PIGS AT AROUND TEN WEEKS.

IT is impossible for us farmers to agree on the best age to wean pigs. Some, I know, do it at the very early age of six weeks, and others even at five. I have a neighbor who often permits the pigs to stay with the mother as long as three months.

I have found that about ten weeks seems to suit the most carefully ob-



Brown's "Touring Home" on the Road to Washington.

Washington tour. If not called for soon these reservations will be given to others on the waiting list who have applied for membership.

The tour to Washington starts August 5, with the gathering camp in the Horton meadow at Fruit Ridge for the third year in succession. The immense camp will be a sight as a semi-military organization, with federal and state police protection, and a big crowd will be present on Sunday and Monday to take part in the fine program under the auspices of Lenawee Pomona and Fruit Ridge Granges.

A fine boulder and bronze tablet will be unveiled in the roadside near the grange hall in honor of George B. Horton. The writer planned for this boulder and tablet and outlined the program to the audience gathered around Mr. Horton's home last August during the camp assembly. Lenawee Pomona will provide the immense boulder; Fruit Ridge Grange will lay the foundation, and the writer will provide the bronze tablet. A picture of Mr. Horton standing at the foot of his big oak tree will be cast on the tablet.

Readers of the Michigan Farmer will be pleased to know that the editors have worked with the writer in the building up and handling of these popular automobile tours. The paper will be officially represented on the Washington tour. The expensive solid bronze and enamel badge, which we designed for the tourists last year, is the permanent official badge of the organization, and was made possible through the generosity of the Michigan Farmer. Several hundred of the tourists who went on the tours last August, and who have registered for the 1923 tour, should remember to

serving farmers in this section. That is the time we figure on allowing the little fellows to stay with the dam.

When we have a sow that dries up before this many weeks have elapsed, we figure that she is not the kind of animal we want for breeding purposes, and so send her to the butcher.—B. Wiseman.

SHALL I GROW HUBAM?

(Continued from page 647).

is much larger, however, and for green manuring would seem to be decidedly superior to Hubam.

Lime may be a very important factor in the successful seeding of Hubam. The seed-bed should be as free from weeds as possible as they often seem to be able to grow faster than the Hubam and, though they may not choke out the Hubam, its growth must be lessened, due to weeds taking so much plant food and moisture; and if cut for hay, the quality is, of course, lowered if weeds are present.

As previously stated, the results are not conclusive, and since some men are well pleased with the showing made by the Hubam, it seems that we may by further experiments and field trials determine just what conditions are the controlling factors. It seems significant that many men who were unsuccessful say that they want to try it out again, believing that when they find out how it should be handled it will be a profitable crop to grow.

Since the majority of farmers co-operating with the college have reported their seedings a failure, the use of Hubam in Michigan is to be recommended only in an experimental way. The college will again this year distribute several bushels of Hubam to farmers who will report on the results next fall.

They Hear Well

Hundreds of thousands of men who began smoking CHAMPIONS ten, fifteen, twenty years ago are smoking Champions today. And the reason is, not hard to find. CHAMPIONS are loyal, true—unvarying.

The same honest quality and painstaking workmanship for 28 years.

HEMMETER'S CHAMPION CIGARS

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No blends or artificial flavoring—just good old ripe tobacco

28 Years of constant flavor. Still hand-made, still the same tobacco.

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Desk 114 Springfield, Ohio

Please send full details regarding Ross Silos at once.

Name _____

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HERE is a high-grade, medium-priced silo which can easily be erected, by one man, in spare time. It is **acid-proof, rust-proof, fire-proof.** It is air-tight and practically freeze-proof. And it is the silo for lifetime service!

The ROSS IN-DE-STR-UCT-O Galvanized Metal SILO

Ross quality has meant dependable quality—for more than 70 years. Ross Silos—and Ross Ensilage Cutters—are giving 100% satisfaction in every corn-growing

section of the United States. With the "In-de-str-uct-o" Silo, made of Special "In-de-str-uct-o" Metal, heavily galvanized, you can positively depend upon perfect silage always—bright, sweet, and clean, and 99% Food Value. There's no spoilage with a Ross—and no necessity for repairs of any kind.

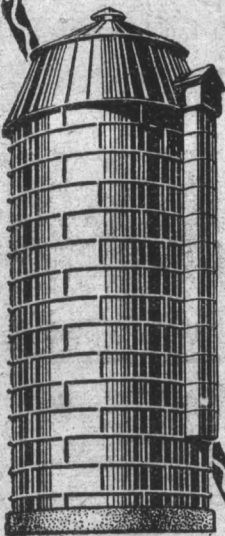
Get the complete story of this tried and tested silo. Send letter, post card or coupon—today.

Agents and Dealers: Write for proposition.

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Write for our Free Silo Book. Tells how we build them for you from the ground up. Our perfectly processed concrete staves give you construction that lasts forever, yet costs no more than wood stave silos. Fire and wind resisting. No painting, no guy wires. No tightening of hoops. Keeps silage fresh and sweet. Unequaled for cold climates. Write for illustrated fact-proving catalog. MICHIGAN SILO CO., General Offices, Kalamazoo, Mich. Factories at Kalamazoo, Mich., Peoria, Ill., Bloomfield, Ind.

HEAVES Is your own horse afflicted? Use 2 large cans. Cost \$2.50.

Money back if not satisfactory. ONE can at \$1.25 often sufficient. In powder form. Most for cost.

NEWTON'S

A veterinary compound for Horses, Cattle and Hogs. Heaves, Coughs, Distemper, Indigestion, Worm expeller, Conditioner. At dealers or by parcel post. 30 years' sale.

THE NEWTON REMEDY CO., Toledo, Ohio

ANOTHER BEAN, PLEASE!

(Continued from page 652).

product heads the list of all vegetables in the amount of energy which they contain. Contrary to the general opinion, beans are readily absorbed into the system, and are ninety per cent digestible. The wonderful physique of the Chinese is due largely to their menu of rice and beans.

With these and other facts to work upon, Mr. Klendenan was thoroughly sold upon the possibilities in advertising beans. The story should be told honestly, simply and persistently.

The Bean Marketing Situation.

Benjamin Gerks, of New York, really spoke first on the program, telling the two hundred jobbers present what appeared to be wrong with the present bean market. One of the difficulties has been the appearance of Roumanian beans in American trade channels. These beans are not uniform, consisting of crops of different years mixed together, and, also, of crops grown under widely different conditions. The result is that they do not cook evenly, and once the housewife has tried them, she issues a decree that no more beans will be served. There were about 550,000 bushels of these beans imported the past year.

It has further been observed that the recent high prices has tempted certain dealers to become lax in the handling of the product. Beans which should have been picked out were allowed to go into trade channels as choice. Occasionally old beans were mixed with the last crop with the same detrimental results. All in all, the market has gotten into a bad way, and the good beans of Michigan and other states have suffered a heavy marketing handicap.

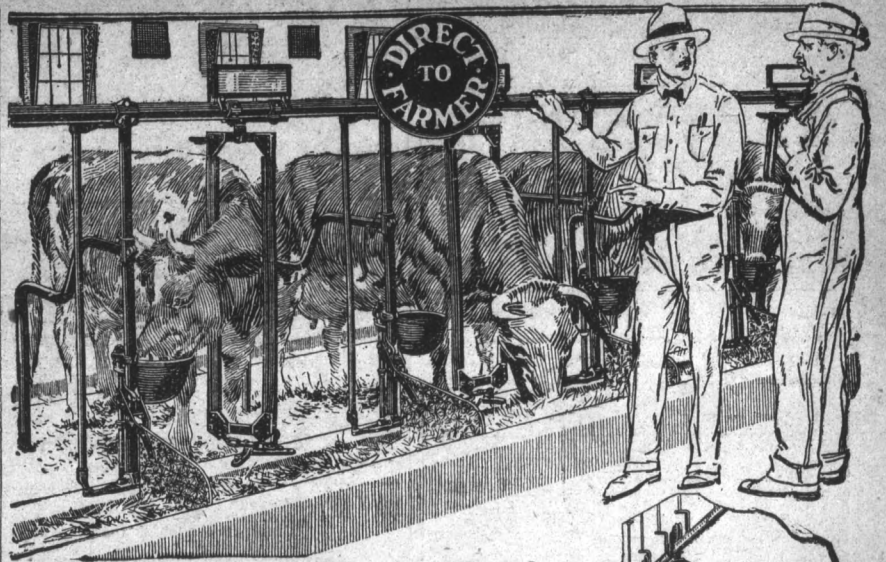
Mr. Gerks stated that he believed the surest and most economical way to recover this lost market and to place beans where they had not formerly been used, was to advertise the cooking and health qualities of the product. By telling the American people of these qualities, he felt certain that it would have a tendency to stabilize the market and to avoid the speculative features which have been so apparent in recent years in this trade.

Mr. Gerks stated that if each jobber would contribute one cent per bag to an advertising fund that the amount would be sufficient to undertake a reasonable publicity campaign. It is possible for the American public to consume our present production within a period of three months. If the people could be prevailed upon to use a reasonable portion of beans in their diet, the present production could be doubled and the crop marketed at a price which would give both the producers and the distributors a reasonable profit.

New York Jobbers Initiate Present Movement.

The New York Shippers' Association have voted to stand back of an advertising campaign. This recent movement has been inaugurated by the New York people. Every jobber in that state is lending his support. They feel that Michigan had really started the idea of advertising and they wished to join in and cooperate to the end that beans will be placed on a substantial marketing basis.

Following the program, the Michigan bean jobbers elected Christian Breisch, of Lansing, and Frank Merrick, of Saginaw, to represent the Michigan jobbers at a conference to be held in St. Louis on May 15-16. Following this conference, it is probable that Secretary Drees will call another session of the Michigan jobbers to act upon the proposition of advertising American beans. Much credit is due Secretary Drees for the large representation present at the Saginaw meeting.



Make One Hour Do What Two Did Before

One of your first results with Jamesway Equipment is the noticeable saving in labor. Some owners estimate that Jamesway Equipment cut their barn work practically one-half. Needless steps, needless jobs and needless expenses are eliminated. Work in the barn was made more pleasant and more profitable.

JAMESWAY EQUIPMENT IS SOLD DIRECT TO USERS

Jamesway direct service and direct to you selling brings you the finest quality barn equipment at lowest cost—backed with an engineering service as only the Jamesway Engineers can give you.

If planning to build a new barn, or remodel your old one, write for our special service offer.

Write for this new Jamesway Book—Sent FREE

Every farmer should have our new book "What We Should Know About Each Other." This book will also tell you about other interesting and helpful Jamesway books, gladly sent upon request. Ask for Book No. 75

Jamesway Farm Engineers
JAMES MANUFACTURING COMPANY
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Address Nearest Office



"Our Jamesway Big Boy Carrier has been on the job for 7 years and runs like a clock."
John R. Evans Sons,
Waukegan, Wis.



The first step toward a better barn is send for Jamesway books. This book will tell you about them. Ask for a copy.

Cut the high cost of farm implements

by buying yours where extravagant sales methods have been cut out

under the Moline Plan

The most direct and cheapest marketing route from our factory to your farm is blazed by the new Moline Plan.

The nearest Moline Dealer will show you why your money buys more from him than anywhere else. If there is no Moline Dealer near, write for all the facts.

The farmer must pay less for what he buys—and get more for what he sells

MOLINE PLOW COMPANY, Inc.
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W. E. SCRIPPS, Prop. SIDNEY SMITH, Supt.

Registered Aberdeen-Angus 10 heifers, 6 bulls from eight to fourteen months. Best of breedings. The growthy kind that make good. Reasonable. Inquire of F. J. Wilber, Chlo, Mich.

Registered Guernseys

A fine Bull ready for light service, special terms if you wish. J. M. Williams, No. Adams, Mich.

GUERNSEYS - REGISTERED BULL CALVES. Containing blood of world champions. A. R. cows. Federal inspected. HICKS' GUERNSEY FARM, Saginaw, W.S. Mich.

For Sale Guernsey bull calves, 2 and 12 months old, from A. R. Dam and one on test. Best breeding. M. HOMPE, R. R. 5, Grand Rapids Mich.

For sale Registered Guernsey cows, May Rose Breed. ing also bull calves \$50 each. Registered A. R. dams. JOHN EBELS, R. 2 Holland, Mich.

WINNWOOD HERD

Registered Holsteins

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Ask us about a Real Bull a
Maple Crest or an Ormsby.

JOHN H. WINN, Inc., Rochester, Mich.

The Traverse Herd

We have what you want in BULL CALVES, the large, fine growthy-type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dam's records up to 30 lbs. Write for pedigrees and quotations, stating about age desired.

TRAVERSE CITY STATE HOSPITAL
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READY FOR SERVICE

No. 1 30 lb. Grandson King of the Pontiacs' one year old $\frac{3}{4}$ white, second dam 29.9 lbs.

No. 2 Grandson of 37th 'One of the strongest Ormsby bred bulls, dam 28 lbs. as Junior 4 year old.

Send for Pedigree Federal Tested
JAMES B. JONES FARMS ROMEO, MICH

Holstein Friesian heifer and bull calves, purebred registered and high-grade. Price \$20 up. Splendid individuals and breeding. Write us your requirements. Browncroft Farms, McGraw, N. Y.

37.45 lbs. BUTTER 7 days just made by a sister of his from 1 to 4 yrs. old for sale. Federal tested. M. L. McLAULIN Redford, Mich.

If you want practically pure HOLSTEIN or GUERNSEY calves, write Edgewood Farms, Whitewater, Wis., before ordering anywhere.

FOR SALE KING SEGIS BREEDING

Born Sept. 26, 1922. His dam recently completed semi-official test giving 12,475.3 pounds of milk and 449.4 pounds of butter. Average figures recently given show 3800 pounds of milk in a year for Michigan cows. You will notice that this cow shows an increase of 400%. This milk production combined with show type is a decided asset as a future herd sire.

GRAND RIVER STOCK FARMS Jackson, Mich.
Corey J. Spencer, 111 E. Main St.

A Good Note accepted in payment of finely bred registered Holstein bull calves. Quality of the best, and at prices within reach. Write GEO. D. OLARKE, Vassar, Mich.

HEREFORDS

10 extra nice Repeater and Fairfax heifers from 14 to 20 months old for sale, also 10 cows.

ALLEN BROS.

616 So. West St., Kalamazoo, Mich.

HEREFORDS

Young Cows with calves by side consisting of blood from America's foremost herds at prices that enable them under Earle's Hereford Beef Plan to pay for themselves within a year to 18 months. Bulls including prize winners at the largest shows at practical prices. Herd headed by Straight Edge 1189798, one of two sons of perfection Fairfax out of a daughter of the Famous Disturber. T. F. B. Sotham & Sons, (Herefords since 1839), St. Clair, Mich.

Meadow Brook Herefords Fairfax and Disturber breeding stock for sale, both sexes, any age. Call, phone or write. Earl C. McCarty, Bad Axe, Haron Co.

Maple Hill Farm, Herefords and Polland Chinas, one choice gilt bred for May farrow left for sale. Two pleasing yearling heifers for sale. George R. Wheeler Mt. Pleasant, Michigan

Registered Herefords FOR SALE, BULLS COWS and HIEFERS
RALPH CALHOON Bronson, Mich.

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BULL CALVES FOR SALE

From Register of Merit dams and sired by Majesty's Intense 127191 and Brookwater Veda's King 169515. Write for Prices and description. Herd is on federal accredited tuberculosis free list.

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

FOR SALE: Jersey bulls ready for service. All cows Register of Merit. Accredited herd.
SMITH AND PARKER, R. 4, Howell, Mich.

Registered Jersey cattle, young bulls, for sale. Tuberculin tested.
J. L. CARTER, Lake Odessa, Mich.

30 Head of Jersey cows and heifers for sale. Chance to select from herd of 70. Some fresh, others bred for fall freshening. Colon C. Lillie, Coopersville, Mich.

Shorthorns Bidwell Revolution Jr. heads herd. 3d, 2d Dam, Imp. Rosewood 86th. Now offering one good roan two year old bull out of a Marr Marigold dam, also a few cows and heifers safe in calf. Prompt attention to correspondence-visitors welcome. State Accredited herd. One hr. from Toledo, O. N.Y.C. Ry. BIDWELL STOCK FARM, Tecumseh, Mich., Box D

Richland Shorthorns

Special offer: Twelve Bulls from twelve to twenty four months old. Red, White, Roan. Good size, best of breeding-from good milking dams. Priced for quick sale. Write for particulars.

C. H. Prescott & Sons,

Office at Tawas City, Mich. Herd at Prescott, Mich

Francisco Farm Shorthorns

and Big Type Poland Chinas. One 2 yr. old bred Heifer, \$200. Two choice yearlings, \$150. each. Three bulls, \$100. up. 3 boys, \$25 each. Lots of spring pigs of March farrow. P. P. Pope, Mt. Pleasant, Mich.

Milking Shorthorns priced reasonably. An accredited herd selected for beef and milk. Beland and Beland, Tecumseh, Michigan

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Woodlawn Farm Duroc Hogs meet requirements, length, size and quality. Young stock for sale at reasonable prices and fully guaranteed. Write your wants. W. E. BARTLEY, Alma, Mich.

I AM OFFERING BRED SOWS

fall yearling and spring gilts, bred for March and April farrow, that are tops. Mated to O. C. K. Col. 2nd and Orion Giant Col. Write for price list.
W. C. TAYLOR, Milan, Mich.

DUROC Fall Boars Ready for service sired by Pathfinder Orion. \$30 each, registered and crated. one sow bred for June farrow at \$40. RUSH BROS., Romeo, Mich.

Duroc Jerseys 12 bred gilts, also 50 registered black top ewes.
CAREY U. EDMOND, Hastings, Mich

Duroc-Jerseys A few Pathfinder Gilts Bred to a good son of Foust's Top Col., E. D. Heydenberk, Wayland, Mich.

Is It Worth While?

A real boar pig sired by Woodford Sensation, Dams of Defender or Pathfinder breeding.

If so, We have them of Sept. farrow, not only showing extreme quality, but greater size than you will expect to find. Follow M 29 to

Kope-Kon Farms, Coldwater, Mich.



THE MICHIGAN LIVE STOCK EXCHANGE HAS BIG YEAR.

FOR several years the live stock farmers and feeders of Michigan have been desirous of marketing their live stock at the terminal markets, through their own selling agency.

This sentiment became so pronounced that on May 1, 1922, The Michigan Live Stock Exchange, a state organization composed of live stock shipping associations, opened a live stock commission house on the Detroit live stock market.

The operations for the first year are very gratifying, they having handled 4,129 carloads of live stock out of 12,616, the total receipts at the market, or 30.5 per cent of the total volume of business.

The business also showed a net profit of \$17,500, which amounts to about twenty-five per cent of commissions paid. At a meeting of the executive committee of The Michigan

ver seed and oats could be sown. The stalk fields were double disced, the oats and clover seed broadcasted together, and then harrowed in well. The season being late there were a good many weeds which had started that could not be entirely eradicated by the disks, and these began to show up a few days after seeding. We put about fifty head of ewes and lambs into one thirty-five-acre field immediately. They combed this field pretty thoroughly, picking the weeds in every part; they seemed to tramp every foot of it, though being light, they did not pack the soil hard.

We took them out of the field when the oats got about two inches high. We had a splendid stand of clover in this field when the oats were cut off, while in the field where we had no sheep there was just about half a stand. It continued good all through the dry weather that followed, while the other suffered somewhat and had to be broken up the following spring



This Kind of Stock Makes a Good Foundation for a Herd.

Live Stock Exchange held in Lansing, Friday, April 27, it was voted to refund to member patrons ten per cent of all commissions paid, which will amount to approximately \$7,000, or forty per cent of net profits.

This refund will be made during the month of May, and any cooperative shipping association who has been patronizing the cooperative commission house the past year, who are not members of the Michigan Live Stock Exchange, by taking out a membership at once will be entitled to their share of the patronage refund.

The success of this Detroit house is right in line with cooperative live stock selling agencies on other large markets, as last year St. Paul made a profit of \$86,000; Sioux City, \$40,000; Omaha, \$85,000; St. Joseph, \$86,000.

SHEEP AFTER CLOVER SEEDING.

IN reading Wing's "Meadows and Pastures," several years ago I was struck by a novel method he used to insure a good stand of clover or grasses, especially where the seed was not well covered or was sown on loose soil. He suggested turning a flock of sheep into the newly seeded field; the light tramping of their small feet would both tamp the tiny seeds into the soil and firm the soil about the seeds and roots of the young plants. This idea so appealed to me at the time that I only waited the opportunity to try it out, and soon found the opportunity in a dry spring that followed.

We seeded two fields to oats, but the spring had been wet and it was the latter part of April before the clo-

because of an insufficient stand. The chief mistake we made in handling the successful field was that we did not leave the sheep on it quite long enough. I believe if they had been left on the field another week or ten days longer they would have cleaned out every weed, but it was our first experience of the sort and were afraid they might injure the oats. I believe this plan to be an excellent one when there is very little rainfall after seeding, as the pattering of the sheep's small feet will do all that Mr. Wing claimed in the way of establishing a better crop of clover.—J. L. Justice.

SOLD ON PASTURING HOGS.

THE farmer who has not practiced pasturing his hogs does not realize the amount he can save by substituting pasture for dry feeds.

The hog raiser should, ere this, have planned for a pasture lot for the hogs. Many crops are relished by them. Red clover, alfalfa, alsike, white clover, blue grass, rye, oats, soy-beans, rape, and timothy are all good, some seemingly a little better than others.

We usually like to have some legume, generally red clover or alfalfa, to turn the porkers into. The hogs thrive on these. We always plan to have an abundance of growth so that the animals will not have to graze the field closely. On our land, which is in fairly good shape, we find that an acre of good clover or alfalfa will take care of about ten hogs. If the hogs are plentiful and the pasturage short we then have two plots and alternate the hogs between them.—R. Washington.

HOW TO DRENCH SHEEP FOR WORMS.

ALMOST every sheep has stomach worms, and should be treated before being turned out to pasture. Following is the copper sulphate treatment, described by Paul Gerlaugh, animal husbandry extension man at the Ohio State University:

In an earthen crop, never a metal bucket or pan, dissolve two ounces of freshly pulverized copper sulphate in a gallon of water.

Dosage is according to age and size. Two-months-old lambs get three-quarters of a fluid ounce; mature ewes, two fluid ounces; very heavy ewes or lambs, two and one-half or three fluid ounces.

In drenching, do not tug the animal's mouth up out of the horizontal, natural position. A rubber tube and a funnel, or a regular dosage syringe may be used.

It is well to feed light in the evening, not to feed the next morning, to drench in the early forenoon, and to withhold feed for at least two hours after drenching.

ROTTED MANURE.

ROTTED manure is apt to be a substance of rather uncertain composition so far as fertility elements are concerned. Theoretically, rotted manure should be more valuable, pound for pound, for plant uses than fresh manure in that the plant food it contains is more available for assimilation. It should contain, as a rule, a larger percentage of fertility elements than waste which is newly produced. Both of these statements, however, are apt to be misleading in that neither of them takes any account of the losses involved in the rotting of the manure in question. The gain, so far as fertility elements is concerned, is apt to be more apparent than real.

The conditions prevailing during the rotting process have much to do with the real value of the resulting product. If the decomposition has gone on in the open where the waste has been freely exposed both to sun and rain, no man can say—short of actual analysis—how much plant food remains after leaching and bacterial fermentation have demanded their toll. It may be fairly considerable or it may be little enough! If, on the other hand, the manure has been stored in a pit of tight construction and has remained there long enough for disintegration to take place the loss will be limited in all probability to the escape of a portion of the nitrogen in the form of ammonia, due to bacterial action or heating. However, manure rarely stays in a pit long enough to undergo decomposition as it does in a neglected pile or underground.

The physical results which accrue from rotting are likely to be more uniform than are those that are purely chemical. The manure becomes of similar character throughout. The coarse litter is disintegrated and more intimate mixing with the soil is possible when the waste is applied. And furthermore, there is less actual material to be handled because, in the process of rotting, manure naturally loses weight. However, the best place for manure to rot is underground. In this case nothing can be lost. Mother Earth takes care of all the products of decay and transforms them into plant food best of all in her own matchless laboratory.—Orin Crooker.

Surfeit Buds.—I have a horse covered with pimples, but he is not sick. I have noticed few worms in the dung he passes. R. S., Tawas City, Mich.—Mix equal parts of bicarbonate of soda, powdered sulphate of iron, flowers of sulphur, powdered gentian, salt, together. Give him a tablespoonful at a dose in soft feed two or three times a day. Groom him twice daily.

Veterinary.

CONDUCTED BY DR. W. C. FAIR.

Advice through this column is given free to our subscribers. Letters should state fully the history and symptoms of each case and give name and address of the writer. Initials only are published. When a reply by mail is requested the service becomes private practice and \$1 must be enclosed.

Chronic Cough.—We have a cow that has been troubled with cough for a few months, besides she has occasionally given stringy milk and is not thrifty. Mrs. B. L., Monroe, Mich.—Have your veterinarian apply the tuberculin test. Her symptoms are suspicious. Don't use her milk until she has been tested.

Loss of Appetite—Vaginitis.—Have a horse that quit eating some two months ago. Now he is thin, formerly robust and strong. Cow came fresh last October; since then she had had bloody vaginal discharge, and fails to come in heat. C. H. F., Marion, Mich. Offer him some clover and roots, give sixty drops of fluid extract of nuxvomica, three drams of Fowler's solution at a dose in feed or in drinking water three times a day. Flush cow with one part lysol and fifty parts of tepid water daily.

Contagious Abortion.—I think we have contagious abortion infection in our herd. C. L., Flat Rock, Mich.—Segregate aborters, burp dead calf and afterbirth, clean and disinfect stable. Ask your veterinarian to administer auto-abortion bacterin (Bovine).

Abortion.—I have a cow that lost her calf. I have sold two other cows on account of the same thing. Now tell me what to do. W. H., Farmington, Mich.—Don't dispose of aborters, but keep them, and breed the cow again. Read the advice given to other subscribers on this subject.

Obstructed Teat.—My cow has small bunch in lower part of teat which obstructs milk flow. Mrs. W. N., Skanee, Mich.—If you owned a teat reamer you could perhaps remove this teat polypus through teat canal.

Blind-quarter.—I have cow that lost one-quarter of udder by neglect when the bag was caked; if bred again, shall I look for her milking all right from this quarter again? A. D., Edmore, Mich.—No, her blind quarter will remain blocked.

Crippled Pigs.—We have six pigs born dead or nearly dead; they seem to cross legs while walking; back is arched, have not fed much corn. Some of them can hardly get up. H. F. A., Bad Axe, Mich.—Let them have access to ground limestone and ground rock phosphate, also salt them three times a week.

Nodular Disease.—Lately I have lost some sheep; cut one open and found a lot of hard bunches on the bowels. Whatever it is that ails them, it seems to attack the sheep in the spring. H. F. M., Vicksburg, Mich.—This parasitic bowel ailment is incurable, but if you supply your sheep with plenty of nourishing food few of them will die.

Brain Trouble.—I have a ewe which has periodical sick spells; occasionally she seems to be almost blind, but recovers; has had second attack. W. G. S., Prescott, Mich.—Her bowels should be kept open; feed less grain, more roots and clover. Give her half dram of bromide of lithium at a dose three times a day.

Navicular Disease.—Have horse that is sore and lame in front feet, caused, I believe, from coffin joint trouble. Would it be policy for me to blister his coronet? O. R. S., Marshall, Mich.—Apply equal parts of turpentine, aqua ammonia, and raw linseed oil to coronet every evening.

Mange.—I have a dog eight years old which is troubled with mange; he has bad odor. If treated he seems to improve, but if left alone goes back to old notch. Have given him sulphur and Fowler's solution. What shall I apply?—J. H. L., Honor, Mich.—Apply one part lysol and fifty parts water twice a day; continue giving sulphur and Fowler's solution.

Chronic Indigestion.—For the past three years my eight-year-old horse has had periodical sic spells which seldom have lasted more than three days. We have a good veterinary, he treated him for calculi or sand in the stomach or bowels, but this medication had only temporary effect. When an attack comes on he points to his side, is down and up, but is not in agony. His kidneys and bowels act fine. R. E. R., Orion, Mich.—Careful feeding, regular exercise and keeping his bowels open is all you can do, and when sick, call your veterinarian.

HOLSTEINS ::: DUROCS BELGIANS

At Auction

LOEB FARMS, CHARLEVOIX, MICH.

Thursday, May 24

Beginning 9:30 A. M., Rain or Shine

19 PURE-BRED HOLSTEIN FEMALES

Three in calf to Sir Pietertje Ormsby Mercedes 40th, our great senior herd sire.

Four in calf to Charlevoix Marbury, the first prize winner in his class at the National Dairy Show in 1920. The dam of Marbury carries 75% the same breeding as Kolrain Marion Finderne, our world's record cow.

Two in calf to Sir Ormsby Karen, our great line-bred Ormsby bull.

Five in calf to Sir Charlevoix Ormsby Finderne, the only living offspring of his famous dam, Kolrain Marion Finderne.

One in calf to a 33 lb. bull.

Four heifers not bred yet.

DUROC-JERSEY HOGS

17 bred sows, and 3 good, young serviceable boars. Six of these sow are bred to Topmast Sensation for late summer and early fall farrow. Nine of these sows are bred for late May and early June farrow. Two of these sows will farrow before sale.

BELGIAN HORSES

One pure-bred stallion a little over 2 years old, son of Russel. Two grade mares and two grade geldings.

The terms of the sale are cash, but notes will be taken on good reference.

LOEB FARMS, Charlevoix, Mich.

Auctioneer, Andy Adams

Ring men P. P. Pope and W. E. Byers

HOGS

DUROC BOARS: Do you want a good growthy heavy boned fall boar to head your herd. One with size, type and quality, if so write us as we have them. Sired by outstanding herd boars. F. J. Drott Monroe, Mich. R.F.D. No.

DUROCS Fall boars and gilts of quality; prices low. Booking orders Mar. pigs, May Del. \$10. reg. Satisfaction or money back. B. E. KIES, Hillsdale, Mich.

Benjamin's BIG TYPE CHESTER WHITE'S Early maturing, prolific, heavy weight, prize winner kind from bloodlines of Champions and Grand Champions, now making big money for thousands. I have started more breeders on road to success than any living man. Let me help you. Easy to start. Costs little. G. S. Benjamin R. F. D. 10, Portland, Mich.

Chester Whites Herd headed by The Monster and Iowan's Jumbo. Two great Big Type boars of the breed. FRED L. BODIMER, Reese, Mich.

For Sale O.I.C. and Chester White Swine, Sept. sows bred for July farrowing, early March pigs sired by a son of "The Monster." Satisfaction guaranteed. Papers free. Bruce W. Brown, Mayville, Mich.

Chester Whites Choice March Pigs either Sex. G. W. PORRETT also fall gilts. Lenox, Mich.

CHESTER WHITES WATCH our ad for fall bred sows and gilts. WEBER BROS. 10 Mile Rd. West Royal Oak, Mich.

O. I. C's and Chester Whites

Gilts sired by Mich. State Fair Gr. Champion 1921, and bred for March and April farrow to Mich. State Fair Jr. Champion 1922, the common sense type and price.

ANDY ADAMS, Litchfield, Mich.

21 Reg. O.I.C. SOWS bred August farrow. 2 yearling Boars, 2 Boar Pigs, 10 weeks old. All stock shipped on approval. FRED W. KENNEDY Plymouth, R. No. 2

O. I. C. 20 large growthy gilts farrow in March also fall boar pigs. CLOVER LEAF STOCK FARM, Monroe, Mich.

O.I.C's March boars, bred gilts, July and Aug. gilts. Young Brown Swiss Bulls. Milo H. Peterson, Elmhurst Farm, R-2 Ionia, Mich.

O.I.C. fall boars and gilts sired by Grand Champion Boar at W. Mich. State Fair. We ship C.O.D. reg. free. Geo. M. Welton & Son, Alto, Mich.

O. I. C's Orders booked for late farrowed spring pigs at \$10 to \$12 each. Registered free. O. J. THOMPSON, Rockford, Mich.

O. I. C's 1 gilt 12 mo. old, weight 360; due to farrow June 3rd. 10 last fall gilts to farrow next fall. 120 spring pigs. Recorded free. 3/4 mile west of Depot. City's phone. O. B. Schulze & Sons, Nashville, Mich.

O.I.C. & Chester White Swine. March boars will be bred for July farrowing, ready for shipment June 1st. Good individuals for less money. Write, OLARE V. DORMAN Snover, Mich.

Reg. O.I.C. Bred Gilts for sale, Bred from Long King No. 25188, Due for May and June, also two boars. J. B. VAN ETEN, Clifford, Mich.

RADIO GIANT

Represents the worlds largest strain of Poland China Hogs. Boars, Sows, Pigs at bargain prices from Mich. pioneer herd. We have bred them big for 30 years. We can furnish what you want. JNO. C. BUTLER, Portland, Mich.

Big Type P. C. some very choice boars double in Bama, out 1100 lb. sire and mammoth sows from Iowa's greatest herds, E. J. Mathewson, Burr Oak, Mich.

L. T. P. C.

Choice Gilts \$25 to \$40. Boars \$30. Fall Pigs \$15. HART and CLINE, Address F. T. HART, St. Louis, Mo.

Large Type P. C. Largest in Mich.

A few fall pigs for sale. Sired by "The Wolverine" a grandson of "The Rainbow and Big Bob" the greatest yearling boar I ever owned has size combined with quality. Come and see the real kind. W. E. LIVINGSTON, Parma, Mich.

Large Type P. C.

The Real Kind. A few of those big, smooth, stretchy, bred gilts for sale. Bred for March, April and May farrow. Priced right. N. F. BORNOR, Parma, Mich.

Large Type Poland Chinas

For sale Fall Boars, Gilts bred or open. Herd headed by two Grand Champion boars.

A. A. FELDKAMP, Manchester, Mich.

BOARS READY for service, Spring boars at weaning time and gilts bred to (Ambition Again) for Sept. farrow. They are priced to sell, and shipped on approval. Dorus Hoyer, Akron, Mich.

Lone Maple Farm Big Type Poland Chinas. Nothing for sale at present. F. R. DAVIS & SON, Belding, Mich.

Large Strain P. C. a few choice gilts left. Bred for April farrow. You can't beat the breed ing nor price. H. O. SWARTZ, Schoolcraft, Mich.

Choice gilts sired by a son World Champion Big P. C. Bob and 1075 Peter Pan. Bred to Model Glamour, also fall pigs, C. E. Garnant, Eaton Rapids, Mich.

L. T. P. C. Two fall boars left, am now booking orders for Spring Pigs delivered in May at bargain prices. Write for price and plan of selling. They have made good and will again. M. M. Patrick, Gd. Lodge Mich.

Walnut Alley Big Type P. C. Gilts all sold. Thanks to my customers for their patronage of the past, and all that I acquired. A. D. Gregory, R. 3, Ionia, Mich.

Hampshires spring boars and bred gilts from 25 sows to select from. Place your order now or you may be too late. 10th year. JOHN W. SNYDER, R. 4, St. Johns, Mich.

HORSES

Percheron and Belgian Stallions

of size and quality, including first prize winners. If your locality is in need of a good draft stallion, write me for my breeding plan, which will interest you. Fred G. Stevens, Breckenridge, Mich.

For Sale The Black Percheron mare Nora 15291. Foaled March 27, 1918, now weighing 2000 lb. The proper Type for a brood mare. Price \$250. B. G. PALMER, Belding, Mich.



THE LATEST MARKET REPORTS



GRAIN QUOTATIONS

Tuesday, May 8.

Wheat.

Detroit.—No. 2 red \$1.33; No. 2 mixed \$1.33; No. 2 white \$1.33.
Chicago.—No. 2 red \$1.27½; No. 2 hard \$1.19½@1.20; May \$1.17½.
Toledo.—Cash \$1.33@1.34.

Corn.

Detroit.—Cash No. 2 yellow 87½c; Chicago.—No. 2 mixed 80½@81c; No. 2 yellow 81½c.
Toledo.—87@89c.

Oats.

Detroit.—Cash No. 2 white at 51c; No. 3, 49½c.
Chicago.—No. 2 white at 46@46½c; No. 3 white 45@46½c.

Beans.

Detroit.—Immediate and prompt shipment \$6.75.

Rye.

Detroit.—Cash 81½c.
Chicago.—78c.
Toledo.—78½c.

Seeds.

Detroit.—Prime red clover cash at \$11.50; alsike \$10.25; timothy \$3.30.
Toledo.—Prime red clover cash at \$11.45; alsike \$10.50; timothy cash at \$3.35.

Barley.

Detroit.—Malting 75c; feeding 72c.
Chicago.—63@70c.

Hay.

Detroit.—No. 1 timothy \$17.50@18; standard \$16.50@17; light mixed at \$16.50@17; No. 2 timothy at \$15.50@16.50; No. 1 clover \$13@14; rye straw \$11.50@12; wheat and oat straw at \$11.50@12 per ton in carlots.

Feeds.

Bran \$38; standard middlings \$38; fine do at \$38.50; cracked corn \$39.50; coarse cornmeal \$38; chop \$34 a ton in 100-pound sacks.

WHEAT

The rise in the wheat market received a decided check last week and a large fraction of recent gains was obliterated. Unexpectedly heavy deliveries of wheat on May contracts at markets in this country and Canada, more favorable new crop prospects, a decided lull in what promised to be a rather large export buying movement, and pronounced weakness in other speculative markets made up the array of bearish forces. Daily reports on crop conditions in the winter wheat belt are more favorable. Unofficial estimates upon the abandoned acreage run about 40 per cent above the average, with the condition of the remaining area averaging about 79, on May 1, which is considerably less than usual.

RYE

Corn prices on the Chicago market are higher than rye at the present time. Such a relationship is rare and reflects the disappearance of the corn surplus on the one hand and the extreme discount of rye below wheat on the other. The visible supply of rye at terminals is nearly as large as that of corn, with a much smaller demand. Rye prices probably are adjusted to this unfavorable position, however, and are not likely to work lower until the new crop comes on the market.

CORN

Although corn prices declined with wheat, the cash demand for the yellow cereal is strong. Primary receipts are of only average size while industries, feeders, domestic distributors and exporters are absorbing cash corn at an unusual rate. Stocks at Chicago, where most of the visible supply is located, are expected to diminish rapidly with the opening of lake navigation.

OATS

The oats market shows less strength than corn. Demand is less broad and the new crop is much closer at hand, with a supply at terminals which will outlast the old crop year. However, primary receipts are not enough to supply current demand and the visible supply has declined over 30 per cent since January 1.

SEEDS

The seed market remained easy last week. Spring demand is practically over. Quotations upon both red clover and timothy for delivery from the new crop are higher than on old crop seed so that the market is unlikely to weaken materially during the summer

months unless new crop conditions are unusually favorable.

FEEDS

Bran and middlings have advanced in the last two weeks to the highest point of the season. Demand for prompt shipment is fairly active while mills have only limited unsold stocks although production is heavier than usual at this season. Prices for June and July shipment when the new wheat crop will be available are at discounts of \$3 to \$7. Oil meals have declined as offerings are rather heavy, demand is light, with export buying negligible. The advance in corn and oats during the spring has been of material help to feed prices.

HAY

High-grade timothy hay remains firm at most markets as a result of light receipts. Demand is only moderate but country shipments are diminishing. Low-grade timothy and clover and clover mixtures remain dull at most markets.

POULTRY AND EGGS

The course of egg prices in the next few weeks will be influenced by the report on storage holdings on May 1. Receipts at the four leading markets during April and storage holdings at those points on May 1 were the smallest with one exception, in five years. Total holdings in the United States are believed to be considerably smaller than last year, but if the report on total holdings shows a "shortage" of less than 1,000,000 cases, the market may weaken, as storage buyers, who are now an important factor in the market, will proceed with more caution. That part of the delayed production in April may be made up during May is indicated by reports of the extremely heavy collections in the last few days and receipts at the leading cities show a further increase, though they usually begin to decline by this time.

Chicago.—Eggs, miscellaneous 25@25½c; dirties at 22½c; checks 22@22½c; fresh firsts 23½@26½c; ordinary firsts 23½@24c. Live poultry, hens 24c; broilers 48@50c; springers

30c; roosters 13c; turkeys 25c.

Detroit.—Eggs, fresh candled and graded at 25¼@26¼c. Live poultry, broilers 60@63c; heavy hens 28@29c; roosters 17c; geese 17c; ducks 28@30c per pound.

BUTTER

Butter prices advanced slightly last week. Receipts at the leading cities declined slightly and buyers had permitted their stocks to become unduly small, necessitating replacement. Production reports show that the make is increasing steadily and the flush period will be here in two or three weeks so that there is no confidence that values will hold. Buyers are only taking enough to supply their needs from day to day. Receipts of butter at the four markets during April were slightly smaller than in March, but were the largest on record for the month. Consumption likewise was at a record level.

Prices were as follows: Chicago 92-score creamery 41½c; New York 43c. In Detroit fresh creamery in tubs sells for 41@42c.

POTATOES

Shipments of old potatoes from producing sections have declined around 40 per cent in the last two weeks, but the movement of new potatoes is increasing rapidly and the total supply is considerably above the average for this time of year. Prices declined again last week, with northern sacked round whites quoted at \$1@1.10 per 100 pounds in Chicago, and \$1.25@1.75 elsewhere.

APPLES

Barreled apple prices advanced last week, with New York A-2½ Baldwins the year's high point at \$6@7.50 per barrel in consuming markets. Storage holdings of apples are large, especially near the eastern consuming centers. Total carlot shipments for the season are already about 22 per cent greater than in the entire season last year and practically equal to the total for the 1920-1921 season. New York and Washington are now furnishing about 85 per cent of the supply. Exports have been heavy during the season

but have dwindled to small volume at present.

WOOL

The western wool clip is rapidly changing ownership, although less excitement is apparent than in previous years of high prices. The range of values runs from 45 to 55 cents, depending upon quality, staple and shrinkage. But little wool has been sold in the middlewest with the exception of the clips of lamb feeders. A Michigan sale of medium wools at 51 cents has been reported. It is probable that wool prices will not work much higher in the next few months as mills will have filled their requirements by the purchase of a new clip and the rate of consumption is likely to sag in the next twelve or eighteen months. World production of wools is not keeping pace with consumption, however, even over a series of years so that eventual scarcity is certain. Drought in Australia appears likely to reduce the next clip.

DETROIT CITY MARKET

Of the real farm products, apples and veal were in the most active demand in this farmers' market. Radishes, leaf lettuce and pansies were also selling well. Onions were draggy and so were beets, carrots and hogs. The supply of produce is not very great at this time of the year. Apples are bringing \$1@3.25; cabbage sells moderately for 75c@1.75 per bu; carrots bring 50@90c; eggs sell for 28@35c; horseradish \$1.25@4 per bu; dry onions \$1.25@1.50; potatoes at 50c@1; live poultry 29@35c; radishes 25@60c per bunch; veal 15@16c.

GRAND RAPIDS

The approach of wheat harvest is reflected in the Grand Rapids market by bids at the mills gradually working lower. Prices early this week were \$1.16@1.18 per bushel as compared a month ago with \$1.24. The market on white beans continues dull with rumors circulating that the bean jobbers would like to keep the price of seed beans low this spring to encourage a larger acreage planted. Old potatoes are draggy at 50c per bushel. Michigan spinach and asparagus are in moderate supply with the grass selling well at \$2 a dozen bunches, and spinach at \$2 a bushel. The sugar boycott and heavier offerings weakened the rhubarb market and prices fell from \$3 a bushel to \$2. The leaf lettuce market was stronger at 10c per pound and hot-house radishes were firm at 90c@1 per dozen bunches. Cold nights have retarded the outdoor crop. In live stock, hogs continue weak at 10c per pound, dressed, but cattle are 50c per cwt, higher, with prime steers and heifers bringing 5@7c a pound, live weight. Eggs were steady to firm at 22@23c per dozen.

CROP REPORTS.

Shiawassee County, May 4.—Sprig work is fairly in good shape, but nothing has made growth to speak of, on account of the last spring. No pastures yet, but winter grains are coming good. Farmers are buying very little seed or tools. There is very little farm labor to be had and quite a little farm land is lying idle. Most of the laborers or renters have moved to the city.—B. E. C.

Kalamazoo County, May 1.—Wheat in timber sections is good, but that is the open prairie regions as hurt by winter. Many oats are yet to be sown. Farmers are very short of help. Very little grain left in the farmers' hands. Wheat is worth \$1.23; corn 70c; oats 45¢. Farmers are not buying anything but the necessities of life.—L. F. H.

COMING LIVE STOCK SALES.

Holsteins.

May 15—C. E. Bone, Walled Lake, Mich.

May 16—George D. Clark farm two miles from Vassar, Mich.

June 24—Wm. F. Shehan, Howell, Mich.

May 24—Loeb Farms, Charlevoix, Mich.

Jerseys.

May 31—Simon G. Maichele, Middleville, Mich.

Durocs.

May 24—Loeb Farms, Charlevoix, Mich.

Live Stock Market Service

Wednesday, May 9.

DETROIT

Cattle.

Receipts 510. Market strong.
Best steers \$ 7.50 @ 8.50
Handyweight butchers .. 8.00 @ 8.50
Mixed steers and heifers 7.00 @ 7.75
Handy light butchers.... 6.25 @ 7.00
Light butchers 5.00 @ 5.50
Best cows 5.50 @ 6.25
Butcher cows 4.75 @ 5.00
Common cows 3.25 @ 3.50
Canners 2.50 @ 3.00
Choice bulls 5.50 @ 6.00
Bologna bulls 4.00 @ 5.75
Stock bulls 4.00 @ 5.00
Feeders 6.75 @ 7.50
Stockers 4.75 @ 6.75
Milkers and springers.... 40.00 @ 80.00

Veal Calves.

Receipts 640. Market strong.
Best \$10.50 @ 11.00
Others 5.00 @ 9.50

Sheep and Lambs.

Receipts 800. Good lambs 25c higher; sheep slow.
Best lambs \$12.75 @ 13.25
Fair lambs 11.00 @ 12.00
Light to common 6.00 @ 8.75
Fair to good sheep 6.50 @ 7.50
Culls and common 1.50 @ 3.00

Hogs.

Receipts 3,800. Market is 10@15c lower.
Mixed hogs \$ 7.85 @ 7.90
Pigs 7.15

CHICAGO

Hogs.

Receipts 27,000. Market steady to 10c lower. Roughs \$7.80; hogs 160-210-lb average \$7.75@7.80; 225-325-lb butchers \$7.30@7.70; packing sows at \$6.15@6.40; bulk of desirable 110-130-lb pigs \$6.25@6.50.

Cattle.

Receipts 9,000. Beef steers and butcher she stock strong to 15c higher. Up and spot on beef heifers. Early tops, steers \$10.35; best yearlings \$10; bulk of beef steers and yearlings \$8.50

@9.85; other classes steady.

Sheep and Lambs.

Receipts 10,000. Market active. Fat lambs strong to 25c higher; sheep are steady. Best wool lambs \$16.65; best clipped lambs \$13.75; bulk of clipped lambs \$13.50@13.75; good and choice ewes \$7.

BUFFALO

Cattle.

Receipts two cars. The market is steady. Choice shipping steers 1,400 lbs and up \$8.50@9.50; butcher grades at \$7@8.25; good to choice shipping steers \$8.25@8.50; heavy, fat, medium quality \$8@8.25; medium to good at \$7.75@8; light native yearlings fancy quality \$9@9.50; medium to good \$8.50@8.75; best handy steers at \$7.75@8; plain at \$7.25@7.50; handy steers and heifers \$7.50@8; western heifers \$8@8.25; light butchering heifers \$8@8.25; light Michigan butchering heifers at \$7.75@8; best fat cows at \$2.25@6.75; medium to good \$5@5.50; grassers at \$3.75@4.25; cutters \$3.75@4; canners good weight at 12.25@2.50; light fat bulls \$6.50@7; best heavy bulls \$5.25@5.50; heavy bologna bulls \$4.50@5; common bulls \$3.50; best feeders 700 to 800 lbs \$7@7.75; medium feeders \$6.25@6.50; stockers, good \$6@6.50; light common \$5@5.50; best milkers and springers \$6@80; common and medium \$37.50@45.

Calves.—Market active and steady. Cull and choice \$3@10.50.

Hogs.

Receipts 30 cars. Market is lower. Heavy \$8.25@8.40; yorkers and mixed \$8.50@8.60; light yorkers \$8.50@9.25; pigs \$8.50; mixed \$8.50@8.60; roughs \$6@6.50; stags \$4@5.

Sheep and Lambs

Receipts five cars. Market strong. Top lambs \$13.50; cull to choice \$9@14.50; yearlings \$10@11; wethers \$9@9.25; ewes \$7.50@8.25; clipped lambs \$7.50@13.25.

THE EGG-LAYING CONTEST.

THE week ending May 1 completed the first six months of the contest. The total production to date is 71,954.

During the week all breeds registered an increase. The White Leghorns were leading with sixty-one per cent production, the Anconas coming second with fifty-four per cent, and the Barred Rocks third with forty-six per cent.

The high producers among the individual pens were those of J. H. Vandenberg, with fifty-six eggs for the week; Louis N. Clark, with fifty-five, and Alex. Clooster, with fifty-two.

The record has been compiled of the individual birds which made high records during the six months. The highest producer was a White Leghorn belonging to E. E. Shaw. This bird laid 142 eggs. Next came a Barred Rock belonging to L. W. Dunn, with a production of 140 eggs. Third in rank was a White Leghorn belonging to G. Gommers, producing 129 eggs. The fourth highest producer is a Barred Rock from H. E. Dennison's pen. This bird and a White Wyandotte on the Evergreen Poultry Farm produced 128 eggs each. In the total production the leading pens in the contest rank as follows:

E. E. Shaw, South Haven, Mich., (Leghorns)	1,120
Northland Farms, Grand Rapids, Mich., (Leghorns)	993
O. S. Thompson, Allen, Mich., (Leghorns)	996
Brummers' Poultry Farm, Holland, Mich., (Rocks)	957
Evergreen Poultry Farm, Greenville, Mich., (Wyandottes)	941
W. C. Eckard, Paw Paw, Mich., (Leghorns)	910
E. D. Taylor, Kalamazoo, Mich., (Leghorns)	905

Antrim County, May 3.—Rye and speltz look fairly good, but the new seeding is somewhat damaged. So far there has been little spring work done, because the snow has been so late in going off.—C. W.



PERMANENT

For All Your PERMANENT FARM BUILDING

Hoosier Building Tile

Best material obtainable for silos, barns, dwellings, hog barns, poultry houses, etc. Increases farm value, saves painting and repairing, fireproof, frostproof, windproof. Economical—Plain or beautiful mat-finish. Used extensively for city bldgs. Write for free literature. Special low prices now. HOOSIER TILE COMPANY, Dept. M, 99 Albany, Ind.

The Real Estate Market Place

Special discount given when used in combination with 7 other Capper Publications. Write for special real estate advertising rates on these papers which reach over a million and a half families

PAY NO ADVANCE FEE; don't give option or tie up real estate for any kind of contract without first knowing those you are dealing with are absolutely honorable, responsible and reliable.

\$1500 Gets So. Michigan Farm 80 Acres Fully Equipped

110 bu. corn, 26 bu. beans, 60 bu. oats, 18 T. sugar beets grown to acre; schools, stores, churches; convenient R. R. town; city markets; 70 acres tillable, wire-fenced pasture; apples, pears, plums, cherries, peaches, berries; comfortable 2-story 8-room house; 70 ft. basement barn, granary. Owner unable to operate. \$6800 gets it, 3 horses, 100 hens, vehicles, tools, implements, hay, straw, corn, oats, rye, wheat included if settled soon. Details this and 126 acres overlooking lake, full equipment only \$3400 seen same trip, page 19 Illus. Catalog Bargains—many states. Copy fee. STROUT FARM AGENCY, 427KH Marquette Bldg., Chicago, Ill.

\$1000 Secures Fully Equipped 120 Acre Southern Michigan Farm.

2 horses, 8 cattle, 30 ewes, brood sow, 25 chickens, farming implements, 3½ miles to town with all advantages, mail and telephone, products sold at door; 70 acres level lumpy tillage, 50 acres spring watered wire fenced pasture and woodland, fruit home use, 2 story 10 room house, painted, good cellar, well water, pleasant shade; barns 30x90 and 30x60, other bldgs, sacrifice price for all \$7000 with only \$1000 cash down. Write or see George Wickwire, 24 Sun Bldg., Jackson, Mich., or MICHIGAN FARM AGENCY, 628 Ford Bldg., Detroit.

Own a Farm

In Minnesota, Dakota, Montana, Idaho, Washington or Oregon. Crop payment or easy terms. Free literature. Mention state. H. W. Byerly, 11 Northern Pacific Bldg., St. Paul, Minn.

FOR SALE Southeastern Colorado—irrigated and non-irrigated farms and ranches. Write for free information. Greer Realty Company, Lamar, Colorado.

Wall Paper

PAINTS VARNISHES

Our latest catalog of beautiful designs at amazingly low prices sent to you FREE on request

BUY DIRECT SAVE MONEY

Liberty Wall Paper and Paint Co., Dept. M. 3127 Clark Ave., Cleveland, Ohio.

KEEP BEES

Complete Beginner's Outfits with or without bees. Full line of Beehives, Sections, Comb Foundation, Smokers, etc. General Agents in Michigan for the A. I. Root Co. Send for 1923 catalog. Beeswax Wanted.

M. H. HUNT & SON,

Box 525, Lansing, Mich.

Fordson Tractors Used

We have 5 used Fordson Tractors for sale. All late models that have been overhauled and will be guaranteed by us. Prices will run from \$150 to \$200 each and may be purchased on the installment plan. If you want a good Fordson Tractor write us at once

DETROIT MOTOR SALES
Authorized Ford Dealers
3433 Michigan Ave. Detroit, Michigan

ATTENTION POULTRY RAISERS

Why sell your nice fresh eggs to carlot shippers, instead of getting full value by shipping direct to Boston market and netting 5 to 7 cents a dozen more? Have your name put on our quotation list, and see the difference in price. We send checks immediately on receipt of goods, and charge no commission. Refer to: National Shawmut Bank, Boston, Dun or Bradstreet's Commercial Agencies.

McArdle Live Poultry & Egg Co., Boston, 16, Mass.

Holmes, Stowe Co., 2429 Riopelle St.

Commission Merchants. Dressed Beef, Hogs, calves, Poultry, Live & Dressed, Provisions, etc. Correspondence Solicited. Ref. Wayne County & Home Savings Bank. Bradstreet. Detroit, Mich. Cherry 7654

POULTRY

BARRED ROCK CHICKS

We hatch only Barred Rock Chicks from selected stock, shipped by insured Parcel Post prepaid direct to your door at \$15.00 per hundred. We guarantee 100% live delivery.

CIRCULAR and PRICE LIST on REQUEST
THE KAZOO HATCHERY CO. R. 3 Kalamazoo, Mich.

CHICKS

Day-old baby chicks—seven varieties all from pure-bred flocks. Better-bred better hatched stock. We guarantee satisfaction. Write for free catalog. Airdales.

Lee's Poultry Farm and Hatchery
Edison, Ohio

GUARANTEED CHICKS. Prices low when considered. S. C. Barton Eng. Whites, Browns, Anconas 12c. We have Class A flocks. We sell no class B but class A chicks. 100% live. 10% down Postpaid. Bank Ref. Catalog free. Order now. R. 2M. Zeeland, Mich.

500 8 Wk. Old Barron Eng. S.C.W. Pullets
Ready for shipment May 21. All raised from our own stock. Price very reasonable. First order gets them. TOWNLINE POULTRY FARM, Zeeland, R. 1, Mich.

Single Comb Black Minorcas. Pen headed by 11 lb. cock. Hens standard weight. After May 1st \$2.50 per setting. R. W. MILLS, Saline, Mich.

RATES

For Real Estate Advertising
On This Page

35c a line per issue on 4 time orders
40c a line per issue on 1 time orders

Special discount given when used in combination with 7 other Capper Publications. Write for special real estate advertising rates on these papers which reach over a million and a half families

FARMS WANTED

List your farm with the oldest established real estate agency between Detroit and Lansing. Fair dealing; quick results; no contract required

Farm Dept.

R. A. WINGARD

746 Starkweather Ave. Plymouth, Mich.

Sell your property quickly

for cash, no matter where located. Particulars free. Real Estate-Salesman Co., 515 Brownell, Lincoln, Neb.

Poor Man's Chance \$5 down, \$5 monthly buys 40 acres productive land near town. Some timber. Price \$225. Other bargains. Box 425-Z, Carthage, Mo.

80 Acres Improved \$65 per acre \$1000 cash. 160 acres improved \$67.50 per acre \$1000 cash. THE ALLEN COUNTY INVESTMENT CO., Iola, Kansas.

WANT TO HEAR from owner having farm for sale. Must be a bargain for cash. ALBERT J. SHIRLEY, 703 South Rose St. Kalamazoo, Mich.

We Have Cash Buyers for farms at real bar gain prices. Describe fully. Central Land Bureau, New Franklin, Mo.

CASH YOUR PROPERTY QUICKLY. location immaterial. Give best price. Universal Sales Agency, Box 43, N. Topeka, Kans.

Want to hear from party having farm for sale. Give particulars and lowest price. JOHN J. BLAOK, Copper St., Chippawa Falls, Wis.

FARMS: If interested in an Ohio paying poultry farm fully equipped, write. Farms all sizes and prices. H. H. WEBBER, Agency, Atwater, Ohio

WANTED to hear from owner improved or unimproved farm. Description. Price. JOHN LEADERBRAND B-45 Olmaron, Kansas

CLASSIFIED ADVERTISING

This classified advertising department is established for the convenience of Michigan farmers. Small advertisements bring best results under classified headings. Try it for want ads and for advertising miscellaneous articles for sale or exchange. Poultry advertising will be run in this department at classified rates, or in display columns at commercial rates. Rates 8 cents a word, each insertion, on orders for less than four insertions; for four or more consecutive insertions 5 cents a word. Count as a word each abbreviation, initial or number. No display type or illustrations admitted. Remittances must accompany order. Real estate and live stock advertising have separate departments and are not accepted as classified. Minimum charge, 10 words.

Rates in Effect October 7, 1922

Words	One time	Four times	Words	One time	Four times
10.....	\$0.80	\$2.40	26.....	\$2.08	\$6.24
11.....	.88	2.64	27.....	2.16	6.48
12.....	.96	2.88	28.....	2.24	6.72
13.....	1.04	3.12	29.....	2.32	6.96
14.....	1.12	3.36	30.....	2.40	7.20
15.....	1.20	3.60	31.....	2.48	7.44
16.....	1.28	3.84	32.....	2.56	7.68
17.....	1.36	4.08	33.....	2.64	7.92
18.....	1.44	4.32	34.....	2.72	8.16
19.....	1.52	4.56	35.....	2.80	8.40
20.....	1.60	4.80	36.....	2.88	8.64
21.....	1.68	5.04	37.....	2.96	8.88
22.....	1.76	5.28	38.....	3.04	9.12
23.....	1.84	5.52	39.....	3.12	9.36
24.....	1.92	5.76	40.....	3.20	9.60
25.....	2.00	6.00	41.....	3.28	9.84

Special Notice
All advertising copy discontinuance orders or change of copy intended for the Classified Department must reach this office ten days in advance of publication date.

MISCELLANEOUS

MILLIONS "Frostproof" Cabbage Plants. Copenhagen, Walsfield, Succession, etc. 300, \$1.00; 500, \$1.25; 1,000, \$2.25, mailed prepaid. Express 10,000, \$15.00. Tomato and Sweet Potato Plants 300, \$1.50; 500, \$1.75; 1,000, \$3.00 prepaid. Express 10,000, \$20.00 cash. Guaranteed Safe arrival anywhere or money refunded. Don't take chances. Order from largest growers in Virginia. J. P. Council Company, Franklin, Virginia.

LEAF TOBACCO—3 years old. Extra fine quality. None better. Pay for tobacco and postage when received. Chewing, 5 lbs. \$1.75; 10 lbs. \$3.00. Smoking, 5 lbs. \$1.50; 10 lbs. \$2.50. Farmers' Union, Hawesville, Ky.

HOME GOODS, NOVELTIES, ETC., YOU NEED, retailed at jobbing prices. A general store at your door—we pay postage. Postcard brings Catalog. Agents invited. Aney Smith, Lighter Building, Detroit, Mich.

TOBACCO—Extra Smoking, 5 lbs., \$1.00; 10 lbs., \$1.50; 20 lbs., \$2.75. Chewing, 5 lbs., \$1.50; 10 lbs., \$2.75. Quality guaranteed. O'Connor Smokehouse, S 183, Mayfield, Ky.

SAVE GASOLINE BY USING ELECTRO OIL; removes carbon; saves oil; fully guaranteed. Sample by mail \$1. Agents Wanted. ELECTRO OIL COMPANY, HASTINGS, NEBR.

WANTED—Freak animals or poultry. Submit price and photographs. Charles Browning, Riverview Park, Chicago, Ill.

MONEY TO LOAN ON FARMS, 6% interest. No commission. No mortgage tax. Security Mortgage Corporation, 540 Majestic Building, Detroit.

FOR SALE—Minnetonka Home Creamery churn and worker combined, does fine work. Mrs. Jessie B. Dean, Mason, Mich., R. No. 1.

FOR SALE—Detroit Tractor Plow \$50; Bull Tread Power \$40; Tractor Tire Ditcher \$70. All excellent condition. Jobse, Mt. Clemens, Mich.

MONEY to loan on first class central Michigan farms. 5 per cent net to Co. amounts of \$5,000 and up. Convis & Smith, Ithaca, Mich.

DOGS

FREE to Dog Owners—Polk Miller's famous dog book, 64 pages on care, feeding, training, with allment chart and Sen. Vest's celebrated "Tribute to a Dog," etc. Also full list Sergeant's Dog Medicines, the standard for 44 years. Just send your name and address. Our free advice department will answer any question about your dog's health free. Polk Miller Drug Co., Inc., 119 Governor St., Richmond, Va.

HOUNDS, HOUNDS, HOUNDS. Fox, Coon, and Rabbit Hounds, broke to gun and field, started hounds and puppies all ages. Beagles and choice puppies, 10 cents for photos of hounds. H. O. Lytle, Fredericksburg, Ohio. Dept. Z.

GERMAN Shepherd, Airedales, Collies; Old English Shepherd dogs; Puppies; 10c illustrated instructive list. W. R. Watson, Box 35, Macon, Mo.

POULTRY

PULLETS. Barron English White Leghorns, eight weeks to maturity. May to October breeding flocks repeatedly culled by experts. Extra large and vigorous, wedge shaped bodies, big lopped combs. Lay well in every way. Also breeding cockerels. Satisfaction and money back. Morse White Leghorn Farm, Belding, Mich.

CABALLS BARRED ROCKS—Lead them all. Leading hen Natl. laying contest, over all breeders laying 293 eggs. Official records 207 to 293. Leading pen over all breeds for winter months, Indiana Laying contest this year. Bargain prices May, June and July. Order real money makers. Chick and eggs catalogue free. G. Caball, Hudsonville, Mich.

Evergreen Poultry Farm won the silver cup at the M. A. C. Laying contest for highest winter production with their (Bred to Lay) White Wyandottes. Put the lay in your flock with some of this blood. It will pay. Eggs \$3 for 15; \$5 for 30; \$15 for 100. ¼ off after June 1st. Blanding & Sons, Dept. B, Greenville, Mich.

RHODE ISLAND REDS—Rose Comb Cockerels, hatched, farm raised. Big, thrifty dark colored birds from prize winning strains, \$4 to \$7.50. Two specials at \$10 each. Careful attention to mail orders. Bidwell Stock Farm, Tecumseh, Michigan.

RHODE ISLAND REDS—Rose comb, prize-winning strain. Mating List free. Ira J. Hiller, Bay City, Mich.

TEN PURE TOULOUSE GOOSE EGGS, \$4.75. Insurance and Parcel Post paid. Choice White Leghorn baby chicks, \$12.00 per 100. Amy Southworth, Allen, Mich.

EGGS—Mammoth Bronze Turkeys, \$4.50 for 10 or 50c each less than 10. Mrs. Walter Dillman, Dowagiac, Mich.

WONDERFUL Bargains in Michigan Farms. Four rail road fare paid. Free list. ALBERT J. SHIRLEY, Rose St., Kalamazoo, Mich.

WANTED to hear from owner of land for sale. O. K. HAWLEY BALDWIN, Wis.

Farm Wanted Near school; at spot cash price. Mean business. Fuller, Wichita, Ka.

THE BEST farms in Kansas. Easy terms. KANSAS COLORADO LAND CO., Winfield, Kans.

S. C. BLACK MINORCAS, Northrup Strain, Heavy Stock Eggs, \$1.50 for 15; \$8 per hundred. Baby Chicks \$20.00 per hundred. C. J. Deedrick, Vassar, Mich.

RHODE ISLAND REDS—Single comb, 200 egg strain, rich, dark red, 20 years a breeder. Eggs \$2 per 15; \$5 per 50; \$10 per 100; prepaid. H. W. Schultz, Route 1, East Lansing, Mich.

SNOWY WHITE ROCKS. Fisher strain. Eggs \$1.50—15; \$3.75—50; \$7.00—100. Prepaid. Mrs. Earl Dehnhoff, Vanburen, Ohio.

ROSE COMB Rhode Island Reds. Hatching egg \$1.25 per setting. Postpaid, Mrs. Albert Harwood, R. 4, Charlevoix, Mich.

SICILIAN BUTTERCUPS—Excellent layers, good table fowl. Eggs \$1.50 per fifteen. Ida Prause, Maple City, Mich.

50 Giant Black Minorca Cockerels \$2.25. Eggs \$8.00 per 100. Mike Schaefer, Essexville, Michigan.

BABY CHICKS

CHICKS GUARANTEED—Healthy, sturdy thriving chicks. Flocks that are mated with Michigan Agricultural College cockerels, Barred Rocks, S. C. Anconas, White and Brown Leghorns, pullets and breeding cockerels. Safe arrival, postage paid, catalog free. Fairview Hatchery and Poultry Farms, Route 2, Zeeland, Mich.

CHICKS—White Wyandottes and White Rock, \$18 per 100; \$9.50 for 50 and \$4.75 for 25. R. I. Reds and Barred Rocks, \$17 per 100; \$8.75 for 50, and \$4.50 for 25. White Leghorns \$12 per 100; \$6.50 for 50 and \$3.25 for 25. Order from this ad. Terms cash, with order. Reference, Bank of Mt. Morris, Mt. Morris, Mich. 100% live delivery guaranteed. Meadow Brook Hatchery, Mt. Morris, Mich.

PROFITABLE CHICKS—Reduced prices, high quality. Selected heavy laying strains—Leghorns, Rocks, Reds, Minorcas, Wyandottes, Orpingtons, Sheppard's Anconas. 100% delivery. Catalog free. Bank reference. Geneva Hatchery, Box 604, Geneva, Indiana.

BABY CHICKS—Prices on our very best A-1 English White Leg and Anconas, Chix reduced to \$11.50 per 100—\$55.00 per 500—\$105.00 per 1000. Get our descriptive catalog or order direct from ad. Model Poultry Farm, Zeeland, Mich., Route 4.

BABY CHICKS—White Wyandottes, White Plymouth Rocks, Barred Rocks, Buff Rocks, Buff Orpingtons, R. I. Reds, White Leghorns. Durand Hatchery, Fenton, Mich., Box 404.

BABY CHICKS bargain prices. Barred Rocks, White and Brown Leghorns. Guarantee full 100% alive, free delivery. Hillview Poultry Farm Hatchery, R. 12, Holland, Mich.

QUALITY CHICKS, eggs. Sixteen standard bred varieties. Best winter laying strains. Free delivery. Reasonable prices. Catalog free. Missouri Poultry Farms, Columbia, Missouri.

BABY CHICKS from heavy egg producing strain. English and American S. C. W. Leghorns closely culled. 100% alive. Circular free. Montella Hatchery, Route 1, Holland, Mich.

BABY CHICKS. 15 Leading varieties. 2½ Million for 1923. The kind that lay early. Large, vigorous, fluffy kind. Lowest prices. Send for large catalog. D. T. Farrow Chickeries, Peoria, Ill.

BABY CHICKS—Remarkable for size and strength. Reasonable prices. Leghorns, Anconas, Rocks, Reds, Wyandottes, Orpingtons, Minorcas, Spanish, Brahmas. Tyrone Poultry Farm, Fenton, Mich.

BABY CHICKS—Six leading varieties. Write your wants. Special prices on large, advance orders. Free catalog. H. H. Pierce, Jerome, Mich.

QUALITY CHIX: White, Barred Rocks, Reds, \$14. White Leghorns, Anconas, \$12. Order direct. Bank reference. Silver Spring Hatchery, Box 97, Abingdon, Ill.

EGGS THAT HATCH; Chicks that live. Low prices. Won over 5,000 prizes. Furnished Government and schools. Catalog free. Sterling Poultry Farms, Box 300, Sterling, Ill.

STURDY CHICKS—Pure bred-to-lay flocks single comb White Leghorns, Anconas, Reds, White Wyandottes, Pekin Ducks; catalog. Sunnybrook Poultry Farm, Hillsdale, Mich.

BARRED ROCKS—Eggs and baby chicks from Silver cup winners. Eggs \$2.00 per 15 delivered by P. P. Circular free. Fred Astling, Constantine, Mich.

STERLING QUALITY CHICKS—14 varieties. Strong liveable chicks. Catalog free. P. F. Clardy, Box 6, Ethel, Mo.

BABY CHICKS—S. C. White Leghorns, carefully selected, heavy producers, \$12. Live delivery guaranteed. Ralph Wenig, Hudson, Michigan.

RICHARDSON'S ROCKY RIDGE pure Park strain Barred Rock Baby Chicks, \$16 per 100. Hatching eggs \$2.00 per setting. Hanover, Mich.

HELP WANTED

WANTED—Cow testers for Michigan Cow Testing Association. Man with short course training, dairy experience and fundamental feeding knowledge, desiring to become Association Testers for the year, need only apply. Give full particulars, age, references, training, experience in first letter. Write or confer at your own expense with A. C. BALTZER, Dairy Department, Michigan Agricultural College, East Lansing, Michigan.

FREE AUTOMOBILE, IF ELECTRO OIL HARMS your motor; Electro removes carbon; saves 30% gasoline; fully guaranteed. Sample by mail \$1. ELECTRO OIL CO., HASTINGS, NEBR.

WANTED—Man to milk Test Cows, yearly and 7-day work. Also a few good milkers. Basley Stock Farm, Ypsilanti, Mich.

MICHIGAN FARMER
Classified Liners bring results. They cost little. Try one.

"Smash the Prices" Says Sharood And Here They Are-

Biggest Bargains in U. S. A.

Absolutely the greatest bargains in America today! Sharood makes it possible for you to do your Spring buying at the most remarkable savings you ever dreamed of. Every item on this page is a bargain such as even Sharood can seldom offer. Don't wait a day. Order now for the whole family. The more you buy, the more you'll save.

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Don't Send One Cent. Just Letter or Post-card brings any of these smashed price bargains. Absolutely no obligation or risk. Merely give name and number of each article you want. Also state size and write your full name and address plainly to avoid delay. Pay nothing till goods arrive--then only the amazing bargain price and postage. Then if you are not delighted with your bargain, your money will be cheerfully refunded. ORDER NOW.

Women's Pretty Voile Dress

\$1.98

Very attractive, dainty voile dress with organdy trimming. Beautiful figured voile with new side panels. Youthful organdy collars and cuffs. Also pretty vestee insert of organdy and neat organdy sash. This model has all the lines of fashions selling at much more than Sharood's sale price. Misses' sizes 14 to 20 years, 32 to 38 bust. Women's sizes 34 to 48. Be sure to state size wanted. Choice of colors. 18E6712, Navy. 18E6713, Copenhagen. 18E6714, Rose. 18E6715, Lavender. Send no money. Pay \$1.98 and postage on arrival.



STATE
SIZE

Greatest TIRE Bargains

30x3 Fabric

Guaranteed
6000 Miles **\$4.98**
Pay on Arrival

30x3 1/2 Cord

Guaranteed **\$7.98**
8000 Miles
Pay on Arrival

Auto owners--your opportunity to buy a fabric tire GUARANTEED FOR 6,000 MILES for only \$4.98. Positively the Biggest Bargain in America. But only 100,000 to be sold at this matchless price. Better not delay ordering. Send quick white stock lists. No money now. Pay only our smashed bargain price and postage on arrival.

No. 18D11040, 30 x 3, Non-Skid or Rib Tread \$4.98
No. 18D11041, 30 x 3 1/2, Non-Skid Tread only \$5.98

8,000 Mile Guaranteed Sharood's Standard Cords for Fords and all cars using 30 x 3 1/2 tire sizes. Built like the regular Cords, but not oversize. Order by No. 18D11090. Send no money. Pay only \$7.98 and postage on arrival. **\$7.98**

GUARANTEED INNER TUBES

Sharood offers you extra thick, live rubber inner tubes at a big saving. Buy at these Lowest-in-America Prices. How many shall we send? Pay only bargain price and postage on arrival.

Greatly Reduced Tube Prices

18D4020, 30 x 3	\$0.99
18D4021, 30 x 3 1/2	1.19
18D4022, 32 x 3 1/2	1.39
18D4023, 31 x 4	1.59
18D4024, 32 x 4	1.75
18D4025, 33 x 4	1.79
18D4026, 34 x 4	1.79

Women's Patent Leather or Brown Calf Finished Pumps

\$1.98

In black patent leather--a stunning one-strap model with ornament on strap, imitation shield tip medallion. Effectively perforated. Has medium rubber heel. Sizes 2 1/2 to 8, wide widths. Order Patent by No. 18A72, \$1.98. Order Brown by No. 18A73. Send no money. Pay \$1.98 and postage on arrival.

Men's, Boys' & Little Boys' Scout Shoes

Fine scout shoe of soft, pliable brown leather. Absolutely guaranteed barnyard proof; reliable, sturdy soles; low, broad leather heels; leather insoles; reinforced leather back stay. Guaranteed to stand hardest wear. Wide widths.

Be sure
to give
size
\$1.59
UP

Order Men's sizes, 6 to 12, No. 18A733. Send no money. Pay \$1.99 and postage on arrival. Order little boys' sizes, 9 to 13 1/2, by No. 18A555. Price \$1.59. Order big boys' sizes, 1 to 6, by No. 18A564. Price \$1.79. Pay bargain price and postage on arrival. State size.

Women's Stitchdown Patent Leather or Brown Calf Oxfords

Classy stitch-down Oxford for women. Wonderfully comfortable and stylish. Smooth leather insoles. Flexible Up-pers of dark Brown or Patent leather stitched-down oak outsoles. Low rubber heels. Size 2 1/2 to 8. Wide widths.

\$1.98
UP

Order Brown by No. 18A268. Send no money. Pay only \$1.98 and postage on arrival. Order similar style Patent leather by No. 18A264. Price \$2.48. Pay \$2.48 and postage on arrival.

Women's Dressy Black Satin Strap Pump

\$1.98

strap. Plain vamp with medium toe and close edge trim sole with low rubber heels. Genuine oak soles. A dressy stylish new spring fashion that will be all the rage among the best dressed women. Sizes, 2 1/2 to 8, wide widths. Order by No. 18A56. Send no money. Pay only \$1.98 and postage on arrival.

MEN'S DRESS SHOES

\$2.98

Men's French-toe dress shoes or oxfords, in Brown calf-finished leather. Have medium toes; perforated, oak soles and rubber heels. Perforated on vamp and eyelet stay. Sensational values. Sizes 6 to 11, wide widths. Order Oxfords by No. 18A58. Order Shoe by No. 18A60. Send no money. Pay \$2.98 and postage on arrival for either style. State size.

Men's Hip and Knee Boot Bargain

\$2.98

Men's pure gum hip and knee boots; friction lined; heavy corrugated sole and heel. Order Hip Boot by No. 18A949. Sizes 8 to 15 only. Wide widths. No half sizes. Send no money. Pay \$2.98 and postage on arrival. State size wanted.

Pretty Sateen Dress Apron

\$1.69
Send no
money

Splendid quality black twill sateen which wears wonderfully. Graceful V-neck, sleeves and belt trimmed with colored cretonne. Pockets and cuffs edged with contrasting piping. Pockets finished with craps applique edged with piping. Sizes, small, medium or large. Order No. 18E6001. Send no money. Pay \$1.69 and postage on arrival. Money back if not satisfied. State size.

Girls' Dainty Frock of Sheerest Organdy in Popular Color

\$1.98

It's seldom that even Sharood finds it possible to offer such an unequalled bargain as this fetchingly beautiful organdy party dress. Trimmed throughout with lace edging with latest large collar coming over the shoulders, two panels at side and rosette on sash, it represents value that means money saved to you. The panel idea is entirely new and is a style that will dominate many of the season's smartest creations for women. Sizes 8 to 14 years for girls. State size. Order No. 18E6331 for white, No. 18E6332 for blue, No. 18E6333 for rose. Send no money. Pay \$1.98 and postage on arrival for either of the three charming colors.

MEN'S AND BOYS Brown Leather Heavy Work Shoes

\$1.98

State Size
Splendid Brown leather work shoes. Heavy durable uppers; extra strong



"Stylish Stout" Voile Dress

\$2.98

A very beautiful tunic model in "stout" voile dress of graceful, slenderizing lines, for stout women. Made of good quality polka dot voile with tunic overskirt, attractively trimmed with pretty organdy collar and cuffs. You will pay much more for a dress of equal value elsewhere. Better get your order in early. Sizes 39 to 53 bust. State size wanted. Choice of colors. No. 18E6811, Black. No. 18E6812, Navy. No. 18E6813, Brown. Send no money. Pay only \$2.98 and postage on arrival.

Women's Soft Kid Strap Slippers

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Always Mention Size

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