

MICHIGAN FARMER

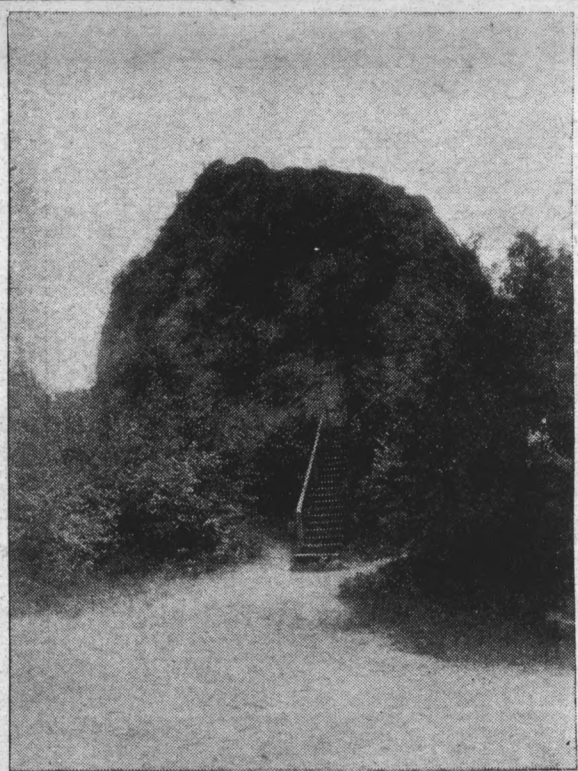
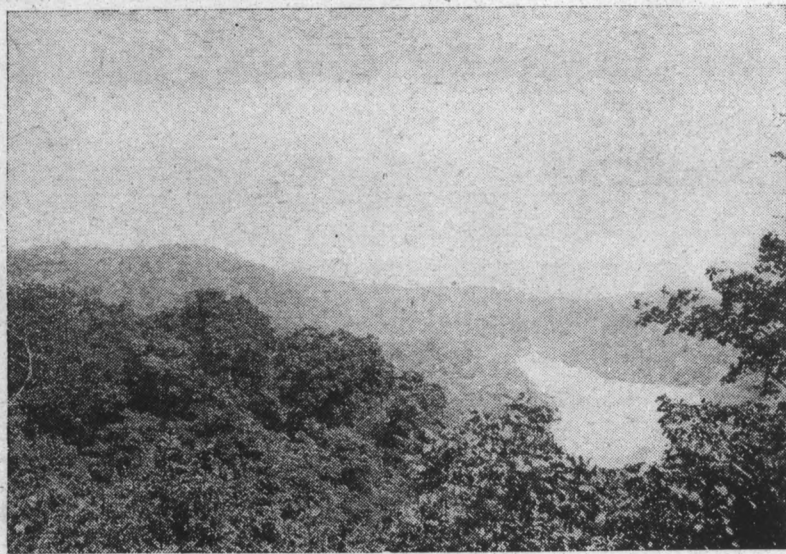
AND *LIVE STOCK*
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DETROIT, MICH., SATURDAY, FEBRUARY 18, 1928

Whole No. 4800



THE upper picture is from the top of Bald Knob, a famous sand dune near Saugatuck and Douglas. A fine view of the twin towns and of the Kalamazoo River is the reward of a rather strenuous climb. Near trunk line U. S. 31.

Sugar Loaf, on Mackinaw Island, is said to be a large meteor and is, therefore, of scientific as well as scenic interest. It rises ninety feet in the very heart of the forest in the center of the Island.

News of the Week

At the opening of Parliament in London, February 7th, the militant suffragettes attracted more attention than the King or the royal pageantry attending the opening.

At Calexico a man one hundred and four years old was haled into court for driving an auto while drunk.

Six of the privately owned air mail lines are paying a profit, says W. I. Glover, second assistant postmaster general.

Two of the houses of the Church of England, the house of bishops, and the house of the clergy have approved the revised new prayer book, but the house of the laity still has it under consideration.

The Retail Clothiers and Furnishers of Illinois in a meeting at Chicago agreed that college boys set the styles for men and therefore garters are passe but suspenders are coming back in style.

The shortage of fish in Lake Erie is alarming the U. S. Bureau of Fisheries. An investigation of the cause of small catches is being started.

Col. Wm. Mitchell, Eddie Rickenbacker, and other nationally known people in aviation have started a campaign for the opening of a national school of aeronautics.

It is reported that rebel activities in Mexico are spreading and that there is considerable looting of villages.

Gov. Fred. Green at an Owosso banquet said that tourists spend \$70,000,000 annually and that 5,000,000 tourists register each year at state parks.

The Mexican federal troops are bombing rebels from airplanes. A blockade has been formed around the states of Jalisco, Michoacan, Aguascalientes, and Colima.

The United States and France signed a new peace treaty on the 150th anniversary of the first treaty of alliance signed by two countries.

Major crimes, including murder, in Detroit declined 27.82% in 1927 as compared to the average of the four preceding years.

Over seventeen hundred freshmen in the Wisconsin University are prohibited from returning to school because they lack the ability to maintain the standard of scholarship necessary to a good student.

Eighteen beautiful boat models were found in the famous tomb of Tutankhamen. According to an ancient Egyptian belief the boats were to take the deceased to the sun.

Gov. Green proposed that the State University and College ban students that are lax in their studies, in order to make more efficient use of public funds provided these institutions.

A recent television experiment enabled watchers in America to see a man and a woman move about in London, England.

Detroit's auto death rate is 29.1 per 100,000. Camden, N. J., has the highest rate, 46 per 100,000.

The lifting of the embargo on American loans to France and investment in her securities has made a great rush for American money by French business men. It is said that France can absorb \$100,000,000 of American money.

Radiophone linked the meetings of the American Institute of Electrical Engineers and the British Institution of Electrical Engineers which met at the same time. Speeches at both meetings were heard at both places.

The attempt of the federal labor department to bar foreigners, other than Canadians, from coming across the border to work here has been unsuccessful.

A regular passenger and mail air line will be established between England and the United States in spring, according to Secretary Hoover. It will be a line of dirigible planes.

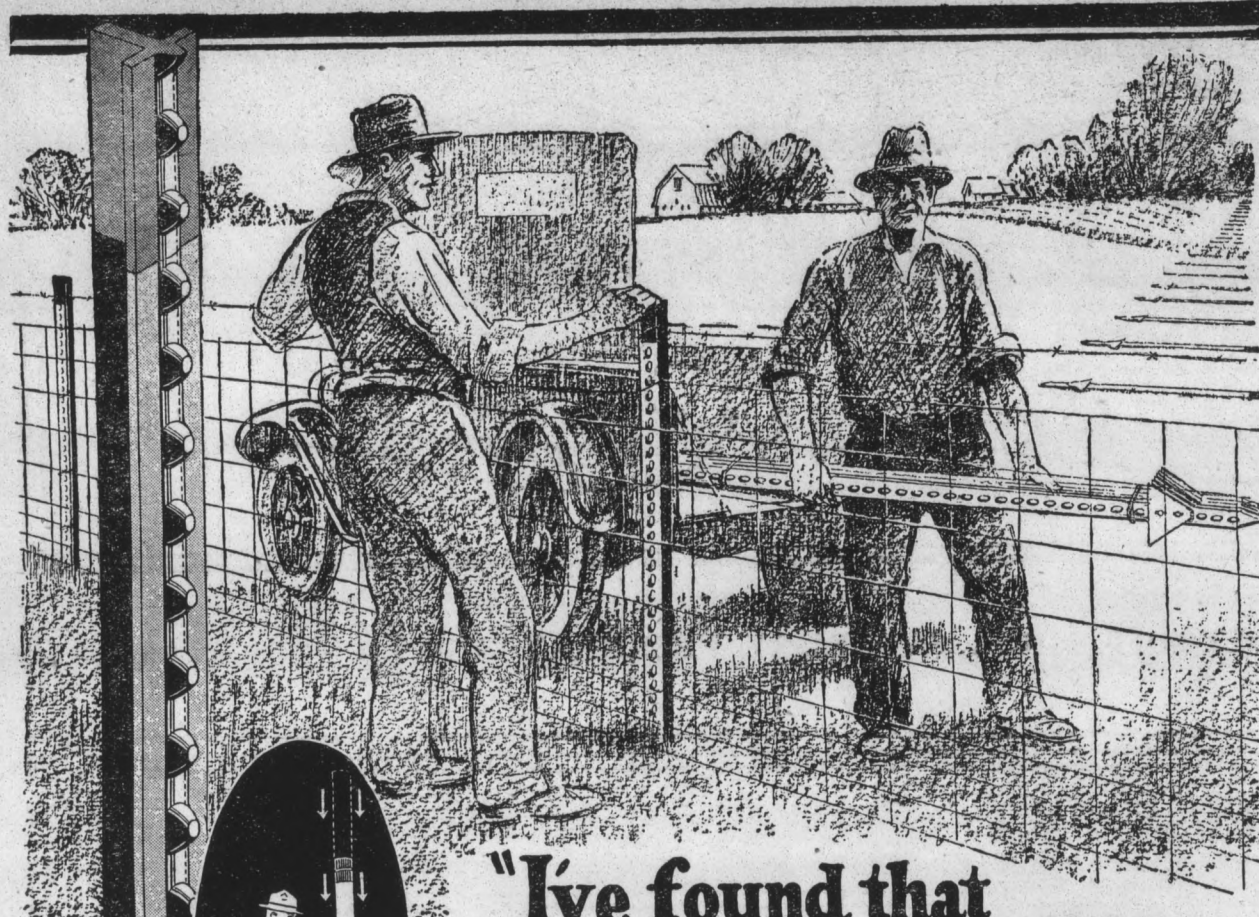
The churches have recommended that the Anti-Saloon League keep the money S. S. Kresge gave to fight the wets even though he has been found guilty of moral indiscretion by the courts.

Sandino, the Nicaraguan rebel, has been located by the U. S. Marines in the Matagalpa district.

Col. Lindbergh was wildly received at Havana where he arrived ahead of time. He made a five minute speech, one of unusual length for him.

Fires are raging in the forests of California in the vicinity of Glendale. Falling high power lines are said to be the cause of the fires.

The Alpha Gamma Sorority House at Michigan State College, which recently burned, will be rebuilt for occupancy in four months.



"I've found that fenced into small fields—my farm will make more money"

FOLLOWING the new profitable system of farming means banking money which was formerly lost because it was a hidden waste. Profitable farming is diversified farming—crop and stock rotation. It builds up soil fertility, cuts the fertilizer bill, produces bigger and better crops and increases the sale value of the farm.

The properly fenced farm requires less labor to operate and invariably makes more profit. The grain always wasted, due to the lack of fences, will pay for a good fence in a couple of years and add to the profits every year thereafter.

The key to successful crop and stock rotation is fences—line fences, cross fences, temporary—good fencing erected on RED TOP posts because RED TOPS will insure more years of sturdy service from the fence.

RED TOPS are made of tough, springy long-lived steel—a quality that makes them drive so easily through hardest soil—a

quality that makes them last so many years in the fence line.

One man with a RED TOP Driver can drive more RED TOPS in one day than he can set wood posts in a week. RED TOPS combine permanence with economy in boundary and cross fences, give the farm that well kept look, brand its owner as progressive and successful. They permit closer cultivation to the fence line, harbor no destructive insects and afford live stock protection from lightning. RED TOPS can be so driven as to be easily withdrawn and redriven, making them particularly adapted for temporary fence support.

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GUARANTEED
Steel Fence Posts

Go Now and see your RED TOP Dealer

Let him explain how good fences save enough waste on the farm to pay for themselves, also how a well planned fence system will increase yearly profits. He knows. That's why he is a RED TOP distributor. Ask his advice.

RED TOP STEEL POST COMPANY

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WRITE FOR FREE CATALOG
Better work—better service direct to you at agents' prices. Tanning horse and cow hides, \$3.50 to \$5.50. Ship where thousands of others are shipping and save 25%. Write for prices. Badger Robe and Tanning Co., Stevens Point, Wis.

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Write for catalog and learn about the many exclusive features of this fine sprayer.
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DEVOTED
TO
MICHIGAN
VOLUME CLXX

MICHIGAN FARMER

AND LIVE STOCK JOURNAL
PUBLISHED WEEKLY. ESTABLISHED 1843.

A Practical Journal for the Rural Family
MICHIGAN SECTION THE CAPPER FARM PRESS

QUALITY
RELIABILITY
SERVICE
NUMBER VII

The Value of Club Work

To the Individual and to the Community

By Willis Campbell

THE object of club work should be to help make rural life more attractive and prosperous by encouraging the young people to work out practical problems. If club work continues for several years, its effects will be to enlarge the outlook of the club member, improve the quality of animals and develop leadership among the younger boys and girls of the community. This is a big program for a leader who, to a large extent, determines the success or failure of an undertaking of this kind. The project year will be divided into three separate divisions, namely: financing and obtaining stock, growing period, and exhibiting.

Usually the banks of a community are glad to help in the financing. Our plan in Tuscola County is to have the boy or girl sign a note, the length of time depending on whether he gets a pig or a calf. Our aim is to have the note run until the animal is in a position to return something on the investment. The boys and girls in the pig club usually sell a pig or two from the first litter and the boys and girls with calves usually sell the milk from their heifers until the note is paid.

No amount of care in the selection of feeds fed and no amount of skill in fitting and showing can successfully overcome the handicap of having an ordinary or inferior pig or calf to start with. Since each animal entered in the first year project will be a candidate for second year work, there is a double reason why this selection must be given much care. Our plan is to select animals from a production and type standpoint, and an animal not showing some of both of these qualities is not considered for club work.

Production is very important especially with calves, for in most cases

these animals are foundation builders. Most of the animals in our section have gone into herds where they were the only pure-breds. Here was a splendid chance for a comparison and a very critical one in some cases, with the pure-bred usually winning out.

Mr. Eldon Bruce, cow tester for Tuscola No. 1 has this to say about club work, "I have found that club heifers have left a lasting impression

a beef animal in mind in placing the blue ribbon where he did. The animal in question was a little coarse over the shoulder but otherwise was a splendid type of dairy animal with a straight rump and plenty of middle for a heifer. Since freshening, she has given as high at fifty-one pounds of 3.5 milk in a day. From the local fair, she went to Caro and then to Bay City the following week where



A Calf Club Drawing at Cass City

in localities where they have been placed. In every case, they are among the leaders of the herds they go into."

An incident worth relating happened at the Cass City Fair in 1924. The club heifers were about to be judged and a large group of farmers were on hand to witness it. Mr. Pearson, the assistant state club leader, placed the awards and did a splendid job of it. After the judging, someone in the crowd spoke up and said that he thought the judge must have had

different judges placed her first and Junior Champion. At Detroit in club work she was grand champion female, and in the open class fourth in competition with the leading herds of the country. In 1925 she again was grand champion female in club work and placed fifth as a two-year-old in milk at Detroit. The heifer that was too beefy to be a good dairy cow had done the unexpected and has made to date about one hundred dollars for her proud owner besides giving a good

quantity of milk for a two year old.

As a general rule, pigs are overfed and cattle underfed. Our best gilt at Detroit last fall gained at the rate of one and thirty-two hundredths pounds per day for ninety days while a litter mate starting at the same weight but fed a heavier ration was not good enough to take farther than the local fair. She was in the last five pigs in a class of twelve and had gained at the rate of one and seven-tenths pounds per day. One of the noted Chester White breeders of the present day had this to say about gains, "Tell me what the pig weighs at three months old and I will tell you whether she has a chance in the show ring." Judges last fall were very partial to gilts that were in just good growing condition. There is less danger of the hog going off its feet and a much better chance to develop a good framework in gilts of this type.

I have found it hard to convince the boys and girls starting out in club work with a calf, that they must feed a variety of feeds. After they have been in competition with animals that have had the feeds necessary to get a maximum growth, little trouble from this source is noticeable. And right here is one of the big benefits of the club work project. Club members know what the prize winning calf was fed on and how it was handled. They know what constitutes good conformation and where their calf is lacking. This was very evident at our drawing for calves last spring when most of the second year boys picked a straight thin heifer as their choice of the ten heifers that were distributed. The average boy or girl would have easily placed her last in the class for she was anything but attractive in her thin condition.

We find that best results come from
(Continued on page 241)

America's First Master Farmer

Washington Undoubtedly Would Qualify For That Distinction

By I. J. Mathews

GEORGE WASHINGTON was a great president, but only a few of our citizens have been thus distinguished, hence the worship of Washington as a great statesman has a very limited application. Washington was a great general, but only war or saber clank gives occasion for the worship of his great military genius and Washington himself counselled always against any but defensive war.

Washington was a master farmer—and in all his greatness, his excellence as a farmer gave a dignified background to his other sterling qualities. The hero worship of such a farmer as Washington was, can become a guide and inspiration to hundreds of thousands of farm folks in this great country. So we farmers may point with justifiable pride to George Washington, the farmer, the one who exemplified the fact that a good farmer can also be a keen scholar and a polished gentleman.

Modern biographers have tried to

"humanize" Washington, by smearing slime on his character and attributing ulterior motives to some of his deeds. To my mind, they are as far from the truth as his earlier biographers whose pages were filled with adulation and the superlatives of praise. So even for the purposes of this brief sketch, I did not content myself with the works of his biographers, but went back to copies of many original manuscripts and waded through some volumes of his diaries, rather marked for their Saharaness.

What a man writes in his diary may be depended upon to represent him as he really is. What he puts into a public document may be him, but more often his soul is strait-jacketed for the occasion. Almost to a man, Washington's biographers have played up his military and administrative genius and repressed his most absorbing interest—farming.

One cannot read Washington's diaries without knowing that he lived on a high plane of lofty thought and ideals. And his biographers who attempt to make him appear any less do so to gratify a popular to familiarly slap a great man on the back and call him by his given name, rather than to faithfully portray Washington as he was.

Washington, at the time of his death, owned about 60,000 acres of land and was worth approximately three-fourths of a million dollars. With respect to many aspects of farming, Washington was at least 120 years ahead of his time. Spread-eagle orators like to flourish "If George Washington could come back to America now, he wouldn't know where he was." and they proceed to recount the many inventions now commonplace, which were unknown in Washington's day. But should Washington come

back to earth now, he would say, with respect to much of agricultural methods, "I told you so 120 years ago." The facts are that he had on his farms a threshing machine, a grain drill and several other forms of modern machinery, perhaps the one development that has most affected hours of farm labor and farm living standards.

Washington knew that commercial fertilization was destined to become a basic agricultural practice and he furnished the foundation for mule production in this country. He was also something of a sheep man and his work with the improvement of grain was somewhat spectacular although it must be admitted that the soil at Mount Vernon lacks a great deal of being at all comparable to the good black soil of the corn belt.

His interest in national developments as they effect agriculture are almost prophetic. Cabinet members, mayors, governors, and others with
(Continued on page 231)

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home problems.

VOLUME CLXX

NUMBER SEVEN

DETROIT, FEB. 18, 1928

CURRENT COMMENT

Protective
Service
Extended

THE reader will observe elsewhere in this issue that the Michigan Farmer is extending its Protective Service. This is being done in the interest of Michigan farm people and the agriculture of the state.

We have faith in our farm folks and the business that claims their attention. That faith has led to what we believe is the most comprehensive service that any farm publication has attempted. This added service is offered on its own merit. We commend it to the thoughtful consideration of readers and friends.

What the Michigan Farmer has done for Michigan farm people during the past eighty-five years, is, we believe, sufficient guarantee that every effort will be made by those in charge to fulfill obligations incurred through the announcement of this Protective Service.

Rural-
Urban Re-
lationships

UNDOUBTEDLY many of our readers have noticed the advertisements of Farm Service Hardware which are appearing in our columns. This is a co-operative effort on the part of a large number of hardware dealers in Michigan who want to acquaint the farmers with the fact that they are especially equipped to give good farm hardware service and that they are aware of their responsibility to their rural neighbors in this regard. The names of these dealers appear in a full page advertisement elsewhere in this issue.

The mere fact that these hardware dealers have united in putting across such a campaign shows that they are public spirited and are alive to the fact that service is the basis of good will. They know that modern merchandizing is built on that foundation

and not on "trade and barter" or the dog-eat-dog methods of olden times.

Since starting this campaign, several hardware dealers have indicated to the Michigan Farmer that they have become interested in movements for rural progress, such as boys' and girls' club work, and similar activities. Such things will result in the development of common meeting grounds where the urbanites and ruralites will get to understand each other better.

True cooperation between various classes of people, as well as between persons in a class, will break down antagonisms and develop a feeling of friendship and understanding which will surely result in mutual benefit.

"Face
the
Music"

THE other day we had occasion to discuss poultry diseases with Dr. Stafseth, bacteriologist of M. S. C., and he mentioned the common tendency of farmers with reference to disease conditions in their poultry flocks.

For some reason, Dr. Stafseth said, the farmer finds it very unpleasant to be convinced that he has tuberculosis, coccidiosis, bacillary diarrhea, or any other contagious disease in his flock. Such diseases are not due to his carelessness but to infection. However, it appears that he would much rather have the disease diagnosed as something due to his negligence or carelessness, than to something beyond his control.

Another common fault is to kill a diseased chicken without determining the cause of its death. Killing sick chickens and disposing of them is a good sanitary practice, but to do so without knowing the cause of the death may probably keep the flock exposed to the continuous infection of some serious disease. A postmortem examination of chicks that die from unknown causes, by some capable person, should frequently be made.

It pays to be frank even with oneself, for one gets nowhere by trying to "kid" the first person. The information that there is an infectious disease in the flock is not pleasant, but remaining ignorant of the situation does not help matters any. It is economy to know the true status of affairs and then use such measures as are necessary to remedy them. The human weakness to shun "facing the music" is a costly one when it involves disease conditions.

Follows
Mechanical
Agriculture

AMONG those selected as Master Farmers in Illinois this year is Wayne McClure who farms 280 acres with one helper. His rare accomplishment in the application of mechanical helps to farm work is what singled him out for the Master Farmer honor.

Mr. McClure feeds and waters his stock automatically. Nine horses and a tractor make the cultivation of his acreage possible with minimum time and labor. Automatic corn pickers help at harvest time, as do also a maze of other machinery throughout the entire growing year. One almost wonders if he hasn't Al Acres mechanical man helping in the multitude of duties necessary on such a farm.

Much of the work on this farm is being done by brainless nonentities—modern machinery. They do what they are set to do without judgment or thought. But there are thousands of tasks on the farm which do not need thought and can best be performed by machinery.

However, mechanical farming does not mean brainless farming. In fact, thought of high order is necessary to efficiently adapt machinery to farm operations. The use of machinery also releases thought and energy for more worthy and profitable purposes.

"Mechanical farmers," such as Mr. McClure, have libraries replete with agricultural literature which they use. And they keep records which enable them to know the financial outcome of their various farm activities. Mechanical farming is brain farming, and is the farming of the future.

Changing
Family
Life

IF we are to develop a more satisfying and wholesome family life, we must change from the external to the internal control of our children, was the opinion expressed by Professor H. C. Coffman of Michigan State College before the largest group of farm women ever assembled for Farmers' Week.

The bonds of fellowship, protection, religion, and economy have held the family together as a unit down through the ages but the changes that have taken place in family life during the last two decades have tended partially to sever these bonds. Professor Coffman believes that our one hope for the future lies in strengthening the bonds of fellowship between parents and their children.

Through the right kind of education and the right kind of religious training, we must develop a strength of personality and character that will control them from within. To accomplish this for the future generation, every community needs to give attention to its three institutions—the home, the church, and the school. The rural home must be thoughtfully managed and equipped to raise the standard of home life, the rural church made to thrive and grow, and our rural schools directed by teachers who sympathize with and have a clear conception of child problems.

More on
Farmers'
Week

IT does not take a philosopher to conclude, viewing Farmers' Week as a whole, that the corner has been turned after seven lean years in the field of agriculture. One can generally get a fair notion of what lines are paying by noting the attendance at the various sectional meetings. When cattle are down at the heel—not profitable—no one cares to know how to feed them. This year practically all the sectional meetings were well attended. The only sections where there were any inverted-moon mouths were some of the pork producer meetings; but even here, they were assured by market experts, that the next few months would see a sharp upturn in the price of hogs. The hog is such an efficient animal that he may be down but he is never out for keeps.

It is a tribute both to the quality of the scientific work which the agricultural departments of the College is doing and to the growing interest of Michigan farmers in scientific farming to find the attendance continually on the increase. The best estimate this year is that there were about 10,000 farmers and farm women in attendance and at one time, there were about 6,000 people in the New Demonstration Hall across the Red Cedar, in which various and sundry freshies and sophs have carried on purification rites.

There were two features that struck one as being particularly enjoyable: One was the splendid music rendered by different student organizations of the College and especially the College Military Band whose members gave unstintingly of their time and at no place did the music descend to the commonplace. One event not before enjoyed was the stunt night, on Thursday, which gave farmer visitors during this week a chance to see the best specimens of live stock, most of them reared at the College, and what was even more enjoyed, a brief explanation of the excellencies of each one.

Heretofore, it has not been possible to put on such a parade as this through lack of space. Farmers have always wanted to get a glimpse of college activities and live stock and here was a glorious chance.

Various and sundry men, most of them big and apparently corn fed, were brought in to make their contribution to a better understanding of conditions "as is." Most of them felt called upon to make a pronouncement as to the ills of agriculture and what could be expected from current political remedies being projected. At least three of them thought no political plan that Congress could devise would prove of any lasting benefit. We opine that if they had had the experience of borrowing money to pay their taxes or interest during the last six or seven years, they might have been willing to give almost any feasible plan a trial, at least.

Then came John Kitcham, orator superb, settled the McNary-Haugen bill into a back seat with the Thermopolitan statement that "it cannot pass" (prexy, of course) and proposed in its stead the Grange debenture plan which was carefully explained as a method of working the tariff back end
(Continued on page 241)

Valentines

I GOT a nice cute little valentine from a nice cute little girl about ten years old, and I got a comic one from somecomibody what is quite a little older. And I don't know just how to feel about them.

I know the older one is tryin' to rub it in, and, of course, the little girl ain't. Now if I think the little girl is right, I must think the old crab is just what I called him. But maybe he is right and the little girl thinks I'm O. K. 'cause she ain't old enough to know differunt. But anyhow, I just kinda think the girl is a bright little girl.

You know I'm old enough to be a crab myself, and there's some kinda folkses I'd like to send some comic valentines. Fer inst., there's the fellow what comes up to you, pats you on the back, and sticks his face right into yours like he's goin' ta kiss you,



and tells you what a nice guy you are until you get tired listening. I always put my hands in my pockets to keep from hittin' such a fellow and to protect what I got in my pockets.

And there's the fellow what's tellin' you your missin' the greatest opportunity on earth in not buyin' what he's got to sell, when he's really tryin' to develop a opportunity fer himself by gettin' you to bite.

I'd send two comics to the fellow what preaches and don't practice, and one to the fellow what don't practice or preach, and a nice valentine to the one what practices and don't preach.

I'd send a comic to the one what thinks this world is going to the dogs 'cause receivin' this comic would make him feel sure there ain't nobody of no account left in this world but him. Or, by accident, it might get him to crack his face by laughin'.

Yes, there's some women I'd send comics to, too. I'd send one to Sofie about a poor married man what's got to work and obey. But if I did I'd have to stay away from home for a few days. I'd like to send some to a few other married ladies what think the foreign missionary society should spend its time talkin' about neighborhood scandal, and etc., and etc.

Sofie just says to me, "If you want to send any comics to anybody just go yourself and they'd see the greatest comic valentine a goin'." What you think o' that?
HY SYCKLE.

Suiting Fertilizers to Soils

Requires the Same Discretion as in Choosing a Necktie

By C. E. Millar

DICK, the county agent, and myself were studying soil conditions on Chris Hansen's farm. We were in the back field about sixty rods from the barn.

"This soil in your wheat field seems a bit sandy and rather low in organic matter, Chris. How often do you manure this field?"

"I try to cover these light sandy loam soils about every three years but this field is so far from the barn that I don't get the manure drawn out here nearly so often, Dick. I'm too busy."

"Well, the reason your wheat looks so sickly in the spring is because it is in need of available nitrogen. I would suggest that you feed the crop early next spring by broadcasting fifty to seventy-five pounds per acre of some readily available nitrogen fertilizer, such as nitrate of soda or sulphate of ammonia."

"If the wheat needs nitrogen in the spring, why doesn't it show signs of nitrogen hunger in the fall too?"

"In some cases it does, but usually quite a little available nitrogen is stored in the soil before the crop is planted, which supplies the needs during the fall. In the spring, though, the wheat grows rapidly and the soil is so cold that the bacteria do not change the nitrogen into a soluble condition fast enough to feed the crop."

"If that is the case why doesn't the wheat on my heavy soil need nitrogen in the spring?" was the farmer's rejoinder.

"The heavy soils generally contain much more organic matter than the sandy soils, and even though the bacteria works slowly, there are so many more of them and they have so much more to work on that they are able to produce enough soluble nitrogen for the crop."

"Then, if I used manure frequently or grew clover every three years to increase the supply of nitrogen in the sandy soil, it would not be necessary to apply nitrogen fertilizer in the spring?"

"That's it exactly. But tell me how your wheat does later in the season."

"Well, it makes a fairly good growth, not so high and thick as I

would like to have it, and the heads are not as heavy as they should be."

"Yes. Well this soil needs phosphoric acid! That makes for ranker growth and plumper kernels. Did you notice that strip across Art Kiesler's field last summer where the wheat was short and ripened about ten days later than the rest of the field? His fertilizer ran out and he drilled around before he noticed it."

"Did a lack of phosphate make that? You could see it for half a mile."

"Yes, and the unfertilized wheat

cropping. On a soil which is somewhat run down, like this one, a complete fertilizer is generally advisable. I would suggest one containing around two per cent of ammonia, sixteen per cent of phosphoric acid and two per cent of potash, a 2-16-2 it is called. Any similar analysis is O. K. What do you think about it, professor?"

"Judging from the results of hundreds of experiments made by the Soils Department your recommendations are correct," I said. "Soils which are manured rather frequently,



This entire field was treated to acid phosphate, but the good growth on the right is where wood ashes had been applied quite liberally, suggesting other elements than phosphate are here needed.

yielded ten bushels less than the rest of the field."

"Is that so! Do you suppose I ought to use phosphate on my heavy ground too?"

"Undoubtedly. Practically all our soils are naturally low in phosphoric acid. In fact, some of the most profitable returns from the use of phosphate fertilizer are obtained on heavy soils that are considered in a good state of fertility."

"What about potash? Whenever I talk to our dealer about fertilizers, he wants to sell me one containing these plant foods, ammonia, phosphoric acid, and potash, a 'complete fertilizer' I think he calls it."

"Complete fertilizers are coming into use more generally as our soils become depleted through years of

or which produce good sods of clover or alfalfa to be plowed under have showed little response to any plant food other than phosphoric acid for grain and hay crops. On the other hand, soils which have been mistreated, especially those of a sandy nature, frequently need nitrogen, and require rather liberal amounts of potash, if they are to grow good crops of alfalfa, sweet clover, potatoes, or root crops."

"As I get it, you advise a complete fertilizer containing rather low percentages of ammonia and potash and a high percentage of phosphoric acid for wheat on this sandier soil where little manure is used, and a straight acid phosphate on my heavier soil which is in a pretty good state of fertility."

"You have the idea, Chris."

"Well, Dick, when ought this fertilizer to be put on?"

"The complete fertilizer or the acid phosphate, whichever you use, ought to be drilled at the time of seeding. If your drill doesn't have a fertilizer attachment the fertilizer may be broadcasted and dragged in before seeding, but it is a little better to drill it in with the seed; and don't forget that early spring top dressing of available nitrogen on this sandy soil."

"That's all right for wheat, but what about rye, oats, and barley?"

"The fertilizer requirements of rye are very similar to those of wheat, but in a well organized soil management program, oats and barley usually follow a crop which has been well fertilized and so obtains sufficient nourishment from the fertilizer left in the soil. In case the preceding crop is not heavily fertilized, these spring grains should receive about the same fertilization that one would use for wheat on the same soil."

"Suppose I want to seed clover or alfalfa in my small grain, would you use the same fertilizer?"

"Not exactly. The legumes, such as clover, alfalfa, and sweet clover, require large amounts of potash as well as of phosphoric acid and lime. The heavier soils, as silt loams and clay loams, usually supply an abundance of potash for these crops, but the lighter sandy loams require potash fertilization. If you manured this field every three years, it would not need any commercial potash since the manure is rich in this plant food. As it is, I would suggest that a fertilizer high in potash be used in the fall. A 2-12-6 or 4-16-8, or fertilizer of similar analysis would be satisfactory."

"Then you recommend both potash and phosphoric acid for alfalfa and the clover on sandy soils unless they are well manured, but phosphoric acid only on the heavy soils."

"You have the idea exactly."

"Now tell me something about potatoes. I have a few acres of land just like this that is in sod, mostly timothy, that I want to plant to potatoes this spring."

(Continued on page 227)

War Talk and More Taxes

TO prove to the world that Uncle Sam is for peace first, last, and all the time, the big-navy advocates seem to have set out to give him the largest navy in the world, or approximately that.

Expenditures of two and one-half billions of dollars on a navy-building program, spread over a number of years, are being advocated. An appropriation of 740 million dollars, as a starter, will be recommended by the House Naval Affairs Committee. The larger program is being urged by the Secretary of the Navy.

Admiral Hughes tells the House committee that a billion of dollars will be needed for a starter.

It seems to be a time for all good taxpayers to come to the rescue of the country. I am wondering who is going to come to the rescue of the taxpayers should this program go through, for many additional millions will have to be supplied to man and maintain this greater navy.

If we enter upon this program we must give up all hope of tax reduction, for taxes will have to be increased thirty-two dollars for every family of five, nor will this cover all increased expenditures.

We are now living in a war-bankrupted world. Europe is bankrupt and over-burdened with taxes. Even the people of so-called prosperous America are being taxed nearly nine million dollars a day as a result of that war, which increased their public debt twenty-eight millions of dollars, if we add the present cost of our military establishment.

It is hard to believe that this world has not had its bellyful of war, but instead wants more! Also it is difficult to see how another big war is to be financed with every great power except the United States in straitened circumstances and in some instances the existence of their very governments imperiled.

Our own business men tell Congress that taxes take all their profits. We know that taxes, direct and indirect, take more than one-third of the farmer's income. And there is a big difference between profits and income.

At the present time we are taxed, in one form or another, more than four billions of dollars a year to operate the National Government. About eighty-two per cent of this enormous sum is expended yearly for the up-

keep of our army and navy and to pay for past wars and military preparedness. All other functions of the Government combined take only a little more than seventeen per cent of the Federal taxpayer's dollar.

Our military expenditures alone now absorb nearly thirty-two per cent of all Federal revenues, without any big-navy program added.

Admiral Plunkett quotes that hoary and hackneyed phrase, "In time of peace prepare for war."

Europe did just that preceding 1914. Europe entered the World War armed to the teeth, and so was enabled to slaughter almost ten million young men while going financially bankrupt. If anything else was accomplished by that war I do not know what it was.

If war threatens the United States, it must be from England or Japan. For a long time, and at the present moment, the English government is facing such domestic difficulties that its very existence is threatened. I cannot believe it is hunting for more trouble. And Japan is by no means on Easy Street. Certainly it is in no condition to wage war on its best cus-

tomers, the United States, and I very much doubt that it desires to.

It seems to me we need not go further than the President's recommendation for the upkeep of the American navy, to be as well prepared as we need be. Every year since 1922, our appropriations for the navy have been double those of Japan. For the last five years our naval appropriations have considerably exceeded those of Great Britain.

I favor an adequate navy. The country is for an adequate defense program. But I can see no necessity in time of peace for expending nearly seven-eighths of all its energies to lead the world in naval preparedness.

It is folly to think about tax reduction if we embark on a two and one-half-billion-dollar navy-building policy, or for this nation to talk about world peace to anybody while promoting a big naval program in time of peace.

The real enemy we shall have to fight for some years to come is a national debt of eighteen billions of dollars. That will be enough to keep us busy for awhile.

Arthur Capper

Washington, D. C.

Complete Farm Property Protection

Michigan Farmer Extends Service to Protect all Farm Property --- Posts \$3,000.00

THE farmers of Michigan lost nearly two million dollars last year to thieves. That is a big sum to lose. It would buy a herd of ten thousand excellent dairy cows, or a thousand large tractors, or purchase and equip one hundred average Michigan farms. Every dollar of that sum increased the cost of farming in Michigan, and it was squandered by a bunch of sneaking crooks too lazy to work!

Farm property, being private property, should be protected. Fruits, vegetables, grains, live stock, poultry, and the like, of late years, have been especially attractive to thieves. The situation is deplorable. The loss subtracts materially from the farmer's income.

Because of this state of affairs, the Michigan Farmer is posting Three Thousand Dollars to be paid in cash rewards for catching and convicting thieves who steal from Michigan farms. After much careful study it was decided to launch this service. It is comprehensive, and fits all classes of farmers. It serves a real need in a thorough going manner.

Most thieves are downright cowards. Usually they steal from unprotected farms or helpless people. They are no respectors of persons. They take from widows and orphans without compunction. The Michigan Farmer Protective Service is aimed at this and all other classes of farm thieves.

This Protective Service is an expansion of other services we have been rendering. For instance, our Federal Travel Accident Insurance Service has proven one of the finest projects ever put on by a farm publication. In the past year, it has paid to Michigan Farmer readers under this service over twenty thousand dollars. Farmers appreciate the benefits of insurance, but generally they have been under-protected. This is true largely because there was no agency to render the service, until the Michigan Farmer demonstrated that this work could be done.

But having succeeded, the Michigan Farmer is not going to rest its case. There is the greatest need of further insurance protection in the farm field. So a broader program is being launched to further protect farm people against sudden losses. That, however, is a story that we will tell later.

Our wish now is to give the readers our plans to protect farm property. We do not want to compare human life and property. That is impossible. Property can be replaced, but human lives cannot. However, property is important in providing life with necessities and comforts. That is why we have property, and why the owner should be protected in the enjoyment of its benefits.

But protection must be given legally. Otherwise, there is trouble. Our lawmakers, in the past, have not provided the best safe-guards with respect to farm property. That, in part, may account for some of the excess farm thieving of today. To aid in remedying this situation, additional legislation was needed. The Michigan Farmer drafted and promoted the Horton anti-trespass bill. In spite of strong opposition, the bill became a law. Under it, a man must secure the permission of a farmer before legally going upon the farmer's land to hunt. The law went into effect last fall. The results have far exceeded expectations.

It is mentioned here, however, because it has a bearing upon the protection of farm property from others than hunters. Thieves adopt many schemes

to learn what a farmer has about his premises. One scheme very commonly used was to take a gun and, under the guise of hunting, travel over a farm and about the buildings to learn the location of property and the general lay of the land. This trespass law gives the farmer something to say about who will be his guests and have the privilege of his acres, and is bound to have an influence upon farm thievery.

Improved roads and modern vehi-

county into the other does not solve the problem nor get rid of the pilfering pests.

Right here and now we are serving notice on the sticky fingered gentry who are stealing from Michigan farm people that they can take their choice of one of three things. (1). They can quit stealing, go to work, and earn an honest living. (2). Or get out of the state and stay out. (3). Or do a term in jail or the penitentiary.

Our part in this program will be

sponsible, the reward will be divided.

Any person primarily responsible for the capture and conviction of the thief or thieves stealing from a member of the Protective Service is eligible to share in the reward whether he is a member of the Protective Service or not.

In case of a dispute as to the person or persons entitled to the reward, or a dispute as to the division of the reward among two or more persons, the Michigan Farmer Protective Service reserves the right to be the sole judge in deciding such disputes or differences of opinion.

Rewards of \$50.00 each will be paid in each case where a thief or thieves are captured and convicted for stealing from farms of members of the Protective Service where the Protective Service Sign is posted. Like rewards will also be paid for the capture and conviction of violators of the Horton Trespass Act, where warning sign is posted, when sentence to penal servitude follows such conviction.

These regulations govern the payment of awards not only for the theft of poultry, but for stealing any class of farm property (except automobiles, trucks, and their accessories), and, in addition, for arrests and convictions under the provisions of the Horton Trespass Law.

The Whole Protective Scheme

What then does the whole scheme of the Michigan Farmer Property Protection Mean?

It means, first, the protection of the farmer and his family. Health service provides this in a large measure. Then, too, the payment during the past year of twenty thousand dollars to subscribers on account of travel accident insurance, augurs for generous protection of dependents in Michigan Farmer families. The registered key tag further aids in personal identification in time of accident.

Live stock is also protected. Our veterinary columns have contributed in a large way during the past fifty years to a better understanding of disease control among domestic animals by the average farmer. Further, the Horton trespass measure protects farm animals to a high degree against danger of shooting by ruthless hunters. And on top of this is our broad program of anti-theft work. Every kind of domestic animal not excepting the farm dog and cat is included under the provisions of our Farm Property Protective Service.

General farm property is also covered in our Protective Service. Our legal adviser looks out for the farmer's rights in respect to all property. The farmer also receives aid in protecting this property from the elements, and we have arranged to extend further this type of service. The Horton Trespass Law goes far in protecting fences, buildings, woodlots, as well as live stock, against physical destruction and farm burning. Also, the thief and the crook will have a hard time when confronted by our comprehensive Farm Property Protective Service. The registered tag which holds the keys that locks the farmer's car, his granary, chicken coop, his stable, and other buildings where valuable property is stored, is also protected. It bears the replica of the Michigan Farmer Protective Service Sign which is bound to impress the finder not to use the keys for thieving but to restore them promptly to the owner. This is easily done by following the directions given on the tag and through the registered number kept on file in the Michigan Farmer offices. By the same token this registered key becomes a valuable means of identifying the owner in case of accident.

Then again, the Michigan Farmer (Continued on page 224)



THIS SIGN WILL PROTECT YOU AND YOUR PROPERTY

Post this Michigan Farmer Protective Service Sign near the entrance to your farm. It will be a warning to crooks of every stripe of the danger in attempting to steal from you, or trespassing upon your property without your consent.

The Michigan Farmer has posted \$3,000 to be paid in cash rewards of \$50 for each case to any person furnishing local peace officers with information leading to the capture and penal conviction of thieves who steal from members of Michigan Farmer Protective Service, or information leading to the capture and penal conviction of trespassers who violate the Horton Trespass Law upon the premises of such members.

This article tells how you can become a member of the Michigan Farmer Protective Service and protect yourself and your family, live stock, and other property against thieves and crooks.

cles make it possible and extremely easy for thieves to raid a farm and get away with a whole flock of poultry, a truck load of fat hogs, or other live stock; loads of fruit, grain, and even clothing and valuable personal property. These raids on farm property usually are made in trucks or passenger automobiles, which enable the thieves to carry their loot to some of our large cities within the state, or the large cities in adjoining states and dispose of their stolen loot the next day.

Thievery of farm property in Michigan has reached such a wholesale stage that action must be taken. Farm folks earn every dollar they get. It takes hard work to produce a crop, or build up a flock of nice poultry, or raise a bunch of fat hogs or steers, and when all the hard work is done, there is little enough profit in it without having some lazy thieving scoundrel slip in and steal the whole lot. This thieving business can be checked and the Michigan Farmer is happy to lend its cooperation to the citizens of Michigan and to the law enforcement agencies to see that this is done.

The peace officers of Michigan are doing a mighty good work—but they cannot do it all themselves. They need and should have the full cooperation of every law abiding citizen of the state and every agency in the state that stands for law and order. We are going to see that Michigan farm people and their peace officers get the kind of help they are in need of in their fight on bands of thieves and trespassers who make their living by annoying farm folks. The Michigan Farmer has enlisted in this fight to stay in it to the finish. There will be no let-up until the job is well done. Chasing thieves out of one

carried on through the newly organized Michigan Farmer Protection Service. We are going to pay cash rewards to those furnishing information that leads to the capture and conviction resulting in penal servitude of thieves stealing property from the premises of Michigan Farmer Protective Service members where the service sign is posted. In like manner we will pay rewards for the capture and conviction resulting in penal servitude of anyone apprehended trespassing as provided in the Horton Trespass Act on the premises of a member of Michigan Farmer Protective Service, where warning sign is posted. We have posted three thousand dollars in rewards to be paid to persons responsible for the capture and conviction of thieves as above stated, when the stealing is done from the farms of members of the Michigan Farmer Protective Service where the service sign is posted. Here are the conditions governing payments of rewards:

Thefts must be from farm property where Protective Service Sign is posted.

Application for reward must be attested by county sheriff and made within two weeks after the thief or thieves are captured.

Rewards will be paid after thief is convicted and is serving sentence.

In case thief is paroled without serving an actual prison or other penal institution sentence, no reward will be paid.

Only one reward will be paid in each case of theft, even though more than one thief is captured and convicted for the same crime.

Rewards will be paid to the person or persons primarily responsible for furnishing evidence leading to the capture and conviction of the thief or thieves; in case two or more persons are equally re-



THE HANDY MAN'S CORNER

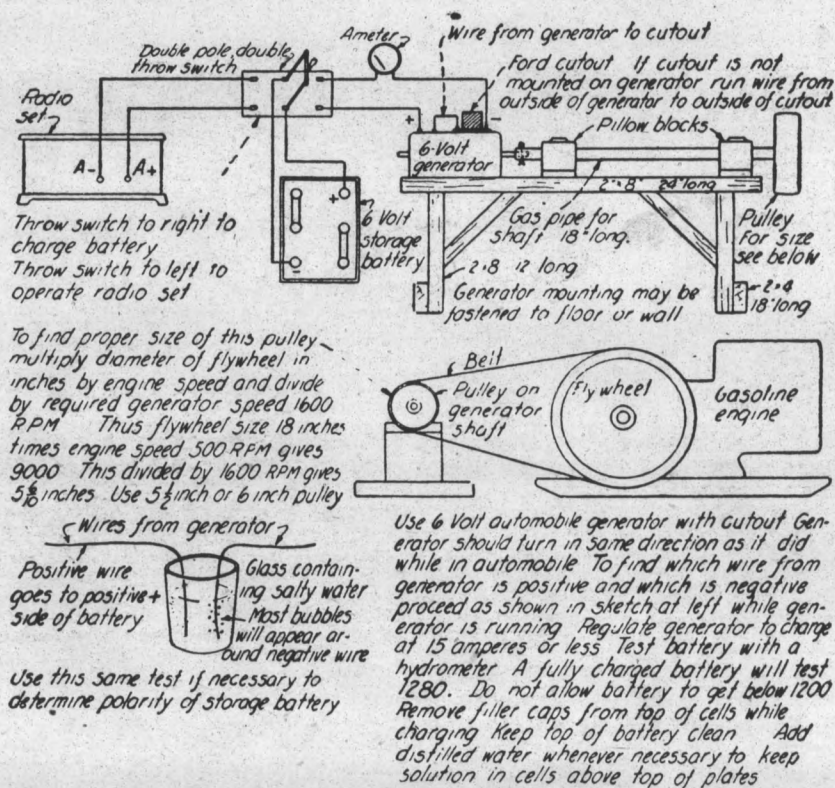
Charging Batteries

Methods of Farm Charging

ANY farmer with a gas engine will find it a very simple matter to charge his six-volt radio or auto battery by using a small six-volt generator from a discarded automobile; and if done when the engine is used for pumping, operating the washing machine, running the cream separator or milking machine, and so on the small extra load the generator makes will not make any noticeable difference in the fuel used. If the engine must be run for the charging work alone, the fuel and oil used will probably cost as much as it will to have the charging done at the battery station. Thousands of farmers are

a good many of them cut in at about 600 R. P. M. and give their maximum charging current about 1,600 to 1,800 R. P. M. About 1,500 to 1,600 R. P. M. will usually give the proper charging rate.

The rule for finding the size of generator pulley required is to multiply the diameter in inches of the engine flywheel (or pulley, if belt goes on pulley) by the engine R. P. M. and divide this by 1,600 (or whatever the generator speed is), the quotient being the diameter in inches of the required pulley on the generator. Thus, if the belt is driven from an engine flywheel eighteen inches in dia-



doing this every day, and no trouble should be experienced if the following simple suggestions are followed.

The Generator

These six-volt generators usually can be secured through any junk dealer at a very small price, including the ammeter and cut-out. If possible, have them tested by a battery service man to see that the generator is alright and generates properly, that commutator is smooth and the brushes bear on properly, and that the cut-out closes and opens as it should. Also the ammeter should be checked to see that it registers something near correct.

The usual method of driving the generator is by a belt running from the engine fly wheel to a pulley on the generator shaft, as shown in the first figure in the attached diagram. Another satisfactory method is by means of a pulley on an extension to the generator shaft, also shown in the same diagram. In some ways this may be the most easily fixed up, since it takes all of the belt pull off the generator bearings. Since the generator must rotate at "comparatively high speed," the generator and shaft and pulley must be securely fastened and must have fairly good bearings and be reasonably well balanced.

The speed of these generators will vary somewhat with the make and model, and the generator manufacturer should be consulted as to the exact speed which should be used; but

meter and running 500 R. P. M., these multiplied together give 9,000; and 9,000 divided by 1,600 gives 5.6 inches as the diameter of the required pulley on the generator.

The generator should be driven in the same direction as it was on the car. This can be determined by slipping a piece of paper under the third brush, then touching the wires from a six-volt storage battery to the generator terminals and seeing which way it turns as a motor. It should be driven in this same direction as a generator.

Connecting Up the Generator

The proper way of connecting the generator, ammeter, and cut-out to the storage battery and to the radio set is shown in above diagram, so arranged that by closing the two-pole double-throw switch one way the battery is connected to the generator for charging, and when closed the other way is ready to operate the radio set. The convenience of such a switch is well worth its small cost, since once the connections are properly made the outfit can be worked for months without disturbing them.

The positive terminal of the generator must be connected to the positive terminal of the battery as shown. However, if the generator is connected up either way and the switch from the battery closed and then the cut-out closed by hand for an instant so the battery current will go through the generator, it will be magnetized in such a way that the positive and ne-



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makes QUALITY CROPS

FOR forty years "The Fertilizer Leaders of America" have been making High Grade Fertilizer to meet the soil conditions and crop requirements of your farm. They have followed the advice of the foremost agricultural authorities of your State in blending the best and richest plant food materials into satisfying, crop-making fertilizers.

There is an agency near you for one of the leading brands of fertilizer shown below. See this dealer about your fertilizer needs. The best farmers in your State use them and recommend them to you.

There is always a good market for the crop of quality. Low yields and low quality go hand in hand and hardly pay cost of cultivation. The big crops are the quality crops and are the only ones that pay their way.

The money-making farmer knows the plant food value of the goods made by "The Fertilizer Leaders of America." He knows their reputation for crop results and he knows their factories have developed the art of being certain on every bag of fertilizer bearing their trade-mark of quality.

Step out in front this year. Farm for better quality and bigger profits instead of for the fun of it. Use the fertilizer made by "The Fertilizer Leaders of America" and get ready to top the market at harvest time.



Federal Chemical Co., Inc.
LOUISVILLE KY. NASHVILLE TENN. COLUMBUS O.



Look for Both Insist on Them

Always look before you buy. This year, look twice when buying Grimm Alfalfa Seed.

LOOK for the Blackfoot Brand Trade mark. LOOK for the Pedigreed Grimm Certification tag as shown above. Here is double protection. State Certification plus the backing of the largest and most reliable Grimm Alfalfa Seed Growers' Association in the world. Don't be misled. Genuine Grimm Alfalfa Seed has proved its unquestioned merit and complete dependability. Insist on Blackfoot Brand Grimm Alfalfa Seed.

If your local dealer cannot supply you, write direct to

IDAHO GRIMM ALFALFA SEED GROWERS' ASSOCIATION
BLACKFOOT, IDAHO

GRIMM ALFALFA SEED

gative poles will come right when it is started up as a generator.

The generator will, of course, have to be fastened solidly to the engine frame or very near it, and the closer the battery is to the generator the better. When the engine and generator are outside or where the temperature gets quite low, the battery will be better in the basement or near the set, to avoid damage from freezing when the battery is not fully charged. Since the wires from generator to battery may at times carry 15 amperes or more, not less than No. 10 rubber covered copper wires should be used where the battery is within 10 feet of the generator; within 50 feet No. 7 wire or two No. 10's on each side; and from 50 to 150 feet No. 3 copper wire. Since about 2 amperes is the most that the wire from battery to set will have to carry, a No. 14 copper wire will usually be large enough even for a considerable distance.

While a cut-out between generator and battery is not absolutely necessary, it is a very decided advantage, since it opens in case the belt runs off or the engine stops and prevents the battery using up its power to drive the generator as a motor. If one is not used, the charging switch cannot be closed until the generator gets up to speed, and will have to be opened before the generator stops. One thing to be very careful of is that the generator should not be run more than a very few moments without being connected to the battery, as otherwise the field coils may be burned out. Hence the belt should be removed when the battery is not charging.

Care of the Battery

Put nothing into the battery except distilled water, or rain water caught in the open in a clean glass or earthenware vessel. A gallon can be bought for a few cents from a battery station and will last a long time.

Be sure the solution always covers the tops of the plates one-half inch. Test the specific gravity every few days. Begin charging as soon as the reading falls to 1.175, as standing discharged will quickly ruin the battery. The battery is fully charged when the specific gravity reaches 1.285 to 1.300 or when the cells bubble freely and the gravity no longer increases.

Keep the top of the cells clean and dry and cover terminals and connections with vaseline or cup grease.

TOOLS FOR THE FARM SHOP

ACCORDING to Arkansas College of Agriculture authorities, the farm shop will pay for itself many times in money and time saved. Care, however, should be exercised in choosing the equipment for the shop.

Woodworking tools should be chosen first. The following will make the basis of a good kit: A medium weight claw hammer, a 24-inch framing square, a 26-inch, 8-point crosscut saw; a 14-inch jack plane, a brace and bits of 1/4, 1/2, 3/4, and 1 inch in diameter. The above list of good quality can be bought for from \$10 to \$15. As needs demand the following tools may be added: 25 1/2-point rip saw, a 24-inch wrecking bar, a 24-inch level, a 1/2 and 3/4 inch wood chisel, and an 8-inch draw knife.

For sharpening the field and shop tools an emery wheel which can be operated by foot power will prove well worth its cost.

A very satisfactory wood for bench vise can be made by using a 1-inch by 16-inch screw and using a well seasoned piece of hard wood for the vise face. For metal and pipe work a bench or leg type vise which has a removable set of pipe jaws will come in very handy.

Other miscellaneous tools are: a 14-inch pipe wrench, a 12-inch adjustable wrench, a 10-inch hack saw and a

dozen extra blades, two cold chisels, a machine punch, a 2 1/2 pound ball peen hammer, a pair of tin snips, and a 1/4-inch, 3/8-inch, and 1/2-inch drill bits with square shanks.

FIREPROOF MORTAR FOR FIRE BRICK

How can I make a fire-proof cement or mortar to use with fire brick in a sugar arch?—J. S.

For brick work to withstand very high temperatures and requiring very little masonry strength, as where firepots, ovens, and chimneys are to stand coke, gas, or oil, the usual construction is to use nothing but fire-clay mortar, driving the bricks close together and leaving a very thin joint. The thin joints of pure fire-clay follows the same slight expansion and contraction as the fire bricks themselves and this does away with the likelihood of cracking. Cement or lime mortar cannot be used for such places, because it crumbles and also its high expansion causes cracks.

Fire brick arches must have considerable strength to hold their shape. The common method of building these is to lay them up on a supporting form, using fireclay mortar at the face of the arch and extending back about three-fourths of the way on the brick, driving the fire bricks closely together so that only a very thin joint is left on the inside face of the arch. Then the rest of the open part of the joint is filled with a mortar made of equal parts of cement and sand, and this is also plastered heavily on the outside of the arch. This cement gives the necessary strength and still does not have to stand the intense heat, and its expansion just about meets the normal expansion of the arch.—I. D.

REMOVING HARD WATER DEPOSITS FROM WATER CLOSET

What can be done to remove a caked or cement formation which has gradually formed in the inaccessible curve of our toilet seat; caused, according to our local plumber, by a combination of lime and iron in our water supply? He knows of no solvent for this and says he has had a man work two days removing similar obstruction.—F. S.

Full strength commercial hydrochloric acid (also known as muriatic acid) is the standard solvent for these lime and iron deposits. Force all water out of the closet trap and then fill the trap with full strength commercial hydrochloric acid, usually requiring about half a gallon. Allow this to stand in the trap over night, then flush it out thoroughly. Usually this will soften up the deposit so it can be pried loose with a piece of hardwood or a blunt screw driver. If the deposit is due to a leaky closet tank and extends on down beyond the reach of the acid in the trap, the only thing which can be done is to take up the seat and turn it up on the side so the hydrochloric acid can cover the deposits completely.—I. W.

RADIO BRIEFS

PRACTICAL methods of soil improvement and maintenance of soil fertility will be discussed by a group of successful farmers from Michigan, Ohio, and Indiana from February 20 to 25 over station WLS. E. A. Lundberg, a Michigan Master Farmer from Dimondale, will tell how he maintains his soil fertility to produce fifty-four bushels of wheat per acre.

In the opinion of Morse Salisbury who has just assumed the duties of chief of radio service for the United States Department of Agriculture, "there is no doubt that radio is a most effective means of education. Just how best to use it has to be found by experiment." On February 22 the service will begin a new series of talks on cooperative marketing which will cover a period of ten weeks.

A TIMELY MESSAGE ABOUT FERTILIZERS

to the progressive farmers of America

Too much "filler" is used in making fertilizer. This is only another way of saying the farmer is using a large tonnage of *needlessly* low analysis goods.

The extensive use of filler or of low-grade, low analysis fertilizer materials used in the place of filler increases the cost of plant food on the farm.

The farmer pays for excess filler in higher crop-growing cost. He pays for the filler, for the labor of handling it, for the sacks it is shipped in, for freight on non-plant-food material, for unnecessary hauling and distributing. *Good plant food should replace filler in fertilizer. Filler grows no crop. Available plant food grows the crop.*

Small amounts of filler have a proper place in fertilizer manufacture. By their use higher grade materials can be used. More kinds of materials of varying analysis can be used.

Alabama has a law prohibiting the sale of complete fertilizers containing less than a total of sixteen per cent available plant food. This legislation has given the Alabama farmer better fertilizers. It automatically cuts out some fillers, but still leaves too much room for filler and for low-grade materials.

The State of Tennessee is putting a similar law into effect this year.

In making low analysis fertilizers there is a temptation to use some low-grade plant food carriers to give greater bulk and darker color to the finished fertilizer. These inferior materials, such as dried peat, muck, or untreated garbage tankage, contain nitrogen in a largely unavailable form. They have low crop-growing power. Nitrogen is the most expensive plant food the farmer buys.

The trend in manufacturing fertilizer ingredients is toward greater concentration of plant food. The development of air nitrogen fixation is speeding up this tendency.

For some time the Armour Fertilizer Works have been making certain high analysis grades based on late developments in fertilizer and soil science. These goods have been used for several years on standard crops in different soil types north and south, and have uniformly given better results than the older types. We have become

enthusiastic about them. We consider them a decided advance in fertilizer manufacturing. We have retained the bulk of the naturally contained lime sulphate found in superphosphate (acid phosphate), as lime and sulphur are necessary elements in plant life.

Let's see how these higher grades work out in increasing the plant food content in the ton, in the same ratio as lower grades.

2000 pounds of 4-16-4 contains as much plant food as 4000 pounds of 2-8-2, and it doesn't cost twice as much.

2000 pounds of 2-16-8 contains as much plant food as 4000 pounds of 1-8-4.

2000 pounds of 7-11-10 contains as much plant food as 2800 pounds of 5-8-7, a deservedly popular truck grower.

These higher grades can only be made of the best materials—there is no room for "nonsense." *They lower the cost of plant food on the farm.*

They grow larger, better and cheaper crops than the older types. They have, one might say, more horse-power—more pep. They get the crop away quicker; they arrive sooner, and mature a big crop earlier. Early markets are generally good markets.

We make these and other high analysis goods and urge their use.

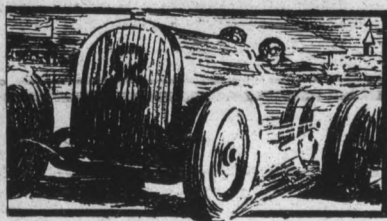
To supply our trade with their requirements, we manufacture present-day standards as well.

These standard grades are made *right*, and from only best crop-growing materials. They contain no inferior low-grade sources of plant food.

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FERTILIZER WORKS
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QUICK GETAWAY with PICKERING Governors

There's no hesitation—not the slightest—when the load goes on—if your tractor is equipped with a Pickering Governor.

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Prices below for all chicks to be shipped March 1st to May 7th, 1928. Every Eagle Nest Chick Ohio Accredited.

VARIETIES	PRICES ON	25	50	100	300	500	1000
White, Brown and Buff Leghorns	\$3.75	7.00	13.00	38.00	62.00	120.00	120.00
Barred, White and Buff Rocks	4.25	8.00	15.00	43.50	72.00	140.00	140.00
Black Minorcas S.C. & R.C. Reds	4.25	8.00	15.00	43.50	72.00	140.00	140.00
White Wyandottes	4.50	8.50	16.00	47.00	75.00	145.00	145.00
Mixed Chicks (no. accredited)—Light 9c, Heavy 12c.							
Future orders 10% down. Balance 10 days before shipment. Postage paid. 100% live delivery guaranteed. Catalog free. Order from this advertisement.							

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Contest Record
303 Eggs

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It will pay you to investigate one of Michigan's oldest and best hatcheries. Twenty years' experience. Every chick hatched from rugged free range breeders officially accredited by inspectors supervised by Michigan State Poultry Improvement Association. Large percentage of business to satisfied old customers. White Leghorns (English type and American). Barred Rocks, Anconas.

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See your chicks before you pay for them. We know you will be pleased and we are willing to take all the risk. This assures you of 100% live delivery and shipment exactly when you specify.

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Your DILIGENT CHICKS became DILIGENT LAYERS and beat them all in our neighborhood, enter order for 500 March delivery, a customer just wrote us. Do not hesitate to send your order. You will be satisfied. Thirteen years of honest dealing behind us. Pullets after May first. Please note our NEW LOW postpaid prices:

	50	100	200	500
Single Comb White Leghorns	\$5.75	\$11.00	\$21.50	\$52.50
Barred Plymouth Rocks	7.25	14.00	27.50	67.50
S. C. Rhode Island Reds	7.25	14.00	27.50	67.50
Mixed (Heavies Only)	6.25	12.00	23.50	57.50

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Harm J. Knoll, R. R. No. 4
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7 Varieties of Male Matings Up to 314 Egg Record.

Also 15 varieties of purebred chicks from selected flocks, including direct Long-Tancred 313-egg-record, blood-tested, trap-nested White Leghorns. Chicks by Mr. Breeding Cockerels. FREE catalog gives big discounts on chicks, hatching eggs, brooders. Don't fail to try our high production quality chicks! We guarantee them to satisfy! ORDER NOW! LAWRENCE HATCHERY Grand Rapids, Mich.

WOLF SELECTED CHICKS

CHICKS C. O. D. SEND ONLY \$1.00

Our chicks are from top-hand stock selected by expert poultryman. You can feel safe for you know every chick is up to highest standard for egg production and breed type. Get our special wholesale price on brooder stoves when bought with chicks. SEND FOR OUR BIG CATALOG. It tells all about our pedigree males and special pen matings. Also gives details about our high producing utility birds. Valuable book free with each order. Prices reasonable. Write today.

WOLF HATCHING & BREEDING CO.

BOX 42

GIBBSBURG, OHIO

Practical Poultry Housing

Essentials of a Good Coop

DURING Farmers' Week, J. M. Moore discussed the Michigan farm poultry house as recommended by the State College poultrymen. He advises an insulated and ventilated house because we must face the fact that production must be spread over the entire year if the flock is to be very profitable.

Housing in Michigan is very important because the hens are usually inside most of the time from October first until April first. A practical poultry house must be dry, well ventilated, easily cleaned and economical to build. The house should be insulated to help make it warm in winter and cool in summer. A few sudden drops in production due to severe winter weather will cost as much as the insulation of the poultry house.

Poultry houses need ventilation because the hens consume much water which is breathed out into the air and tends to make the air moist. Moist air is heavier than dry air and settles to the floor. The damp air must be taken out and dry air permitted to enter without allowing the birds to be in a draught.

The ventilator shaft should be eighteen by eighteen inches with no leaks along the sides. Even if it is left open at the top, very little snow will enter but most poultrymen place metal ventilator caps over the outlet. It is the custom to use one outlet to each twenty feet, and two inlets. The flow of air from the inlet can be controlled with a small board. It is not advisable to build a poultry house in the shadow of a large barn as it may cause a back draught. Even if a poultry house is not insulated all over, it pays to insulate over the roosts. On very cold nights the breath of the birds in a house without insulation will condense on the ceiling and freeze. This will melt when the weather becomes warmer and help to make the house damp.

In placing the insulating material, it is found that an air space makes a place for rats and mice and carelessness of a caretaker may poke a hole through the commercial board used in insulation. The best method is to place the insulators tight against the siding.

The glass windows should be placed to allow sunshine to reach all of the floor space. The common rule is to allow one square foot of glass to ten square feet of floor space. If a cellar sash is placed every eight or ten feet in the north wall of a poultry house, it helps to make the hens use all of the floor space. Hens naturally face the light when scratching and throw the litter backwards. The rear windows help to prevent the litter from stacking up under the dropping boards.

Dirt floors are the poorest kind for the poultry house because of the great amount of labor required to keep them clean through the removal of large quantities of dirt each year. Board floors are better than dirt but are hard to clean thoroughly. Concrete floors are the most sanitary and economical. It pays to put in concrete floors in the spring or early summer so they will have time to dry out before the hens are housed for winter. The concrete floor should be six or eight inches above the outside soil.

Dropping boards should be placed ten inches below the perches and made of matched material. Run them in the direction in which they are cleaned. Paint the boards with waterproof or asphalt paint and the boards will last longer and the droppings will not stick to them as easily as to bare boards. Nailing two inch poultry netting beneath the perches will keep the hens out of the droppings and help to keep the eggs clean. Most diseases

are spread through the droppings, and if they drop through the wire mesh wire out of range of the hens there will be less danger of one sick bird infecting healthy members of the flock.—R. G. Kirby.

GET READY FOR CHICKS

LITERALLY and figuratively, the world will seem a cold and cruel one to baby chicks which emerge from their shells during the earliest weeks of spring. Perhaps the cruelty can't be helped, but at least a little of the chill can be taken off, if the poultry grower has seen to it that the brooder house equipment is in good order when the chicks are ready for it.

February is designated as a good month to: Examine and overhaul the brooder stove, replacing any broken or worn out parts; test the thermostat with heat to see that it operates the air intakes and checks; replace any broken or rusted sections of stove pipe; secure plenty of good grade coal, such as was very hard to get last year when it was wanted; start the stove a couple of days before the chicks are put in the brooder house; test fuel pipes and wicks of oil stoves.

Comfortable quarters in the very earliest days means much in the future development of the chicks and the profit which they will return to their owners.

EGG SHOW WINNERS

A VISITOR to the egg show at East Lansing might easily have believed that all of the hen houses in Michigan had been robbed to get the number of eggs in sight, but a casual examination of the exhibits soon convinced any visitor that the exhibitors had performed some intensive culling of their supply of eggs in order to obtain the quality on display.

The number of eggs shipped for exhibition enabled the managers of the show determine what method of packing best protected the eggs shipped. Eggs packed in wooden containers with wood fiber fillers withstood shipment the best, according to a statement by managers of the show and eggs packed rigidly in a rigid container suffered the most damage.

The list of prize winners shows that poultry enthusiasts live in all sections of Michigan. In the list of winners given below, the awards made in College, college student, and college employee classes are omitted; these classes were 1, 2, 3 and 11. Prize winners in the other classes were:

Class Four—Smith-Hughes Sweepstakes—P. Letts, brown eggs, Eaton Rapids High School, Michigan. Reserve Sweepstakes—K. Rokey, brown eggs, Eaton Rapids High School, Michigan.

White Eggs First—Harold Warren, Breckenridge High School, Michigan. Second—N. Mendell, Eaton Rapids High School, Michigan. Third—A. Covey, Eaton Rapids High School, Michigan. Fourth—Howard Musloff, South Lyon, Michigan. Fifth—C. DeCamp, Eaton Rapids High School, Michigan.

Brown Eggs First—P. Letts. Second—K. Rokey. Third—G. Hawley, Eaton Rapids High School, Michigan. Fourth—L. Clark, Eaton Rapids High School, Michigan. Fifth—H. Buckles, Eaton Rapids High School, Michigan.

Class No. 5—Commercial Class Sweepstakes—John Arnold, brown, Lansing, Michigan. Reserve Sweepstakes—W. A. Downs, white, Romeo, Michigan.

White Eggs First—W. A. Downs. Second—Hugh Green, Charlotte. Third—T. E. Heasley, Grand Rapids. Fourth—D. B. Dargitz, Montpelier, Ohio.

(Continued on page 239)

Just the Things Baby Chicks Need

Oatmeal!

...Cod Liver Oil and Meal!

...Molasses!

QUAKER Ful-O-Pep Chick Starter "does the work" because it's just the right combination of the things baby chicks should have—and *nothing else!*

A base of pure, soft oatmeal . . . vitamin-laden cod liver oil . . . fresh cod liver meal . . . valuable minerals . . . and now, *molasses!* These are ingredients every poultry owner should know about.

* * *

Think of this: *oatmeal is more digestible (96% available) than any other grain product.* It is soft and non-irritating. It just fits a baby chick's tender digestive tract.

The cod liver oil in Quaker Ful-O-Pep Chick Starter is the finest oil to be had. It works like sunshine, helps prevent rickets, leg weakness, toe-picking, and kindred ailments. It helps to build large, strong bones.

Cod Liver Meal, in just the right proportion, adds to the efficiency of every other ingredient in Ful-O-Pep Chick Starter. It sends nourishment "right to the spot."

And now The Quaker Oats Company announces another important ingredient for this exceptionally good feed—*molasses!*

Tests over a period of years have proved the value of molasses in poultry feeding. It is rich in vitamin B. It contains potash. Being slightly laxative it relieves constipation. In Quaker Ful-O-Pep Chick Starter, it is of exceptional value in preventing coccidiosis.

* * *

Quaker Ful-O-Pep Chick Starter remains a dry mash, pleasant to handle and easy to feed. By an exclusive process the molasses is combined with the other ingredients so that the texture of the feed remains fine and dry.

* * *

Use this good ration this year. You'll get early birds for market. The pullets you keep will be the finest you've ever had.

It's easy and economical to feed Quaker Ful-O-Pep Chick Starter. You can raise more birds with no more labor.

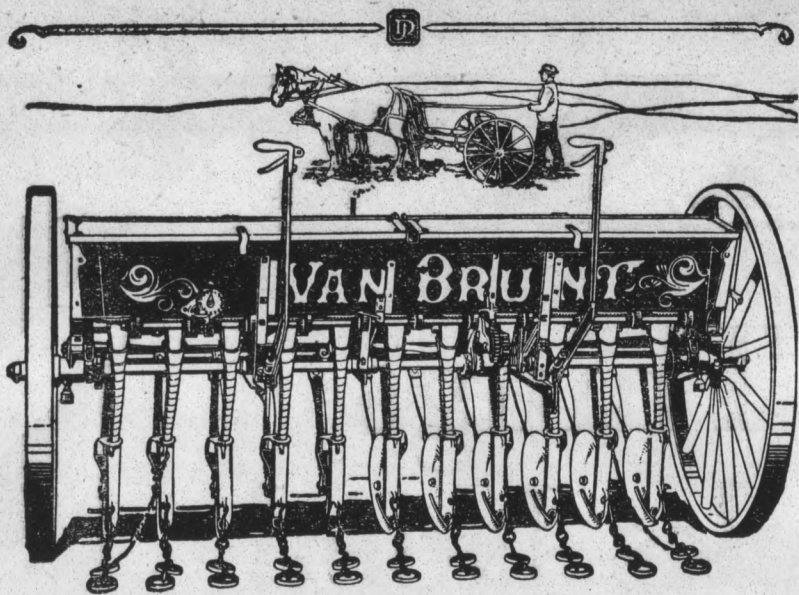
Send for your free copy of the 1928 Ful-O-Pep Poultry Book. Your name and address on a card will do.

The Quaker Oats Company

CHICAGO, U. S. A.

Manufacturers of a complete line of live stock and poultry feeds—buy the feeds in striped sacks

**Quaker
FUL-O-PEP
CHICK STARTER**



Save Time— Increase Your Yields

ONCE over the field to sow fertilizer and plant your grain—that's how you can save time and insure the big yields you want with the

John Deere-Van Brunt Fertilizer Grain Drill

The accuracy of this drill insures uniform planting and fertilization the field over.

The Van Brunt Adjustable Gate Force-Feeds handle all kinds of seed, any quantity per acre. They compel an even, steady flow of seed into the open furrows.

The fertilizer feeds distribute any fertilizer evenly in quantities from 65 to 1250 pounds per acre without clogging.

Your crops will get a better start, grow rapidly and mature earlier if you drill fertilizer when the seed is planted with the John Deere-Van Brunt.

See this money-making drill at your John Deere dealer's store. Write to us for free folder describing it. Address John Deere, Moline, Illinois and ask for Folder VA-722

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A Practical, Proven Power Cultivator for Gardeners, Suburbanites, Truckers, Florists, Nurserymen, Fruit Growers.
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A Powerful Tractor for Small Farms, Gardeners, Florists, Nurserymen, Fruit Growers and Poultrymen.
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Cultivates, Mows Hay, Walks and Riding Equipment
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That's what you get when you use Kalamazoo Glazed Tile in building your house, barn, silo or any building. KALAMAZOO Glazed Tile costs no more than good frame construction and is fire-safe. Lasts longer—looks better. Warmer in winter and cooler in summer. Valuable building book, with floor plan ideas. FREE! Write Kalamazoo Tank & Silo Co., Dept. Q, Kalamazoo, Mich.
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Destroy fungi and worms; insure larger yields of perfect fruit. 35th successful year.
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SPRAYING OUTFIT
PREPARED MIXTURES**
20 models. Catalog containing full treatise on spraying FREE. Reduced prices.
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Box 828 QUINCY, ILL.

NOW is the time to order
Nursery Stock
**SELECTED TREES AND
PLANTS**
A complete assortment—hardy and northern-grown
Write for 1928 Catalog
"West has the Best" Lock Box 142
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PERRY - LAKE COUNTY - OHIO

WIN \$2150.00!
or this Master Six Buick Sedan
Plus \$1000 Extra

I Will Give 5 New Sedans
a \$1750.00 Master Six Buick; \$995.00 Nash; \$835.00 Essex; \$535.00 New Chevrolet; \$495.00 New Ford and many other big cash prizes. \$6000.00 in all; winners have choice of cash or cars. Solve this puzzle!

Find the Duplicate Key
At left is key to Buick; find the same key, an exact duplicate in the bunch of keys at the right. Mark it, send it in with your name and address NOW and I will give you 5,000 points toward first prize and tell you how to get additional 500 easy points that wins. Only 10,000 points wins the Buick. No risk—no obligation—no cost to you.

\$1000.00 Cash—Extra for Promptness!
Yes, \$1000.00 Extra to the first prize winner in addition to Buick Sedan or \$1750.00 cash, just for promptness. You can win \$2750. Duplicate prizes in case of tie. Write quick. Promptness counts. **SEND NO MONEY**—Just mail your answer, name and address.
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SOLVE THE KEY PUZZLE

5 SEDANS GIVEN

NASH 4-DOOR SEDAN
ESSEX 4-DOOR SEDAN
NEW CHEVROLET SEDAN
NEW FORD SEDAN

News and Views

From INGLESIDE FARM—By Stanley Powell

YOU will be interested to know that the shorn sheep are coming along nicely. The thermometer in the sheep barn has been hovering around forty degrees and although the fleeces have been off for about ten days now, we haven't noticed any ill effects. Of course, as is almost always the case, the sheep have a considerably more hearty appetite than before.

A surprise which shearing brought us was the discovery of how plump our sheep are this year. I had broken all Ingleside precedents and witheld



grain entirely from our pure-bred Shropshire breeding ewes until January 29, but even though they had been subsisting on a diet of alfalfa and clover hay, they came out of their overcoats plump as part-ridges. In fact some of them are carrying too much weight for breeding stock. Since January 29 I have been giving them a moderate allowance of oats twice a day. After the lambs are born and the ewes are suckling them, we shall be a little more generous with the grain and shall feed some extra choice second cutting alfalfa which we are saving for that period.

It is always interesting to study the sheep after they have just been sheared because then their conformation is so evident. Some show up surprisingly near perfection in build and proportion, which in others hitherto hidden faults are revealed. Several years ago we purchased an imported ram of which we thought a great deal until he was sheared. When his cleverly trimmed fleece had been removed he came forth with a poor back, peaked at the rump, pot-bellied, and ewe-necked. Probably the wool on the weak parts of his anatomy had been allowed to accumulate for two or three years, while that over his paunch had been clipped fairly short.

Hard to Identify

After shearing it is usually baffling to identify many of the sheep that were easily recognized before the wool was removed. There is an old saying that "The clothes make the man." To a considerable extent the appearance of a sheep is determined by the fleece. When the wool is removed there aren't so many distinguishing characteristics left. I suppose that if all the feathers were to be plucked from our poultry we couldn't tell one bird from another. In like manner if a few dozen of my good friends were to appear divested of their apparel, I might find difficulty in recognizing some of them immediately.

It is just four weeks now since we purchased those fall lambs and they are growing like weeds. We weighed them this afternoon and found that they have been gaining a half a pound a day each. This we think is pretty good considering the fact that during this period they were docked, castrated, and have been weaned.

We weighed our horses this afternoon for the first time in two months and were pleased to find that each of them has made a good gain in weight during the past sixty days. The gain varied from forty pounds to 110 pounds. The horse that made the smallest gain during this period was in the best flesh at the beginning and the one that took on 110 pounds was

our thinnest horse. We have now brought our horses to the point that there is only eighteen pounds difference between the lightest and heaviest horse in the barn. These gains have been made on mixed hay, containing considerable alfalfa, and an average of only two quarts of oats per feed for each horse. The horse that was the thinnest has also received two or three ears of corn extra per feed. They are watered three times a day, kept well bedded and carefully groomed at least once a day.

Several people who have examined the stalls since we have widened them have remarked about the fact that I keep a chain hooked across behind each horse. This may or may not be a good practice. However, we find this arrangement quite satisfactory. It makes the horse barn look neater, keeps the horses from getting their bedding out from under them and pretty effectively prevents them kicking one another.

Sold Last Grade Cow

We expected before this to be able to report the arrival of another pure-bred Milking Shorthorn calf, but there seems to have been a little delay somewhere along the line. Welfare Marie 3rd presented her addition to our herd eleven days ago. Lady Eleanor 3rd was supposed to freshen a day ahead of Marie, but she is still keeping us in the dark as to her plans.

We sold our last grade cow a week ago and now have the satisfaction, after long years of struggle, of having nothing but pure-bred Milking Shorthorns in our dairy herd. We started with this breed several years ago by purchasing quite an expensive pair of females. Shortly after that we bought a bunch of young cattle from Chicago and they brought along the shipping fever. The younger of our new pure-breds took the disease and despite all that our veterinarian could do, it proved fatal.

The other cow lived long and milked generously, but she had one very discouraging habit to us who wanted to build up a herd—she exhibited a strong favoritism for bull calves! Eight times we lived in hopes and expectation. Seven times we were doomed to dismal disappointment when her progeny turned out to be of the masculine gender. Once not long after we had purchased her she did raise us a heifer calf which is still in our herd.

The last time the old cow was bred, the owner of the bull offered father a good price, I believe it was \$65.00, for the calf to be delivered as soon as born. Father was so sure that it would be another bull calf that he accepted the offer. Be it said to his credit that he didn't back out of the bargain when the old cow brought forth a splendid roan heifer calf!

Thanks for Your Letters

We can see how it is that those in charge of radio programs like to hear from their audience. It is somewhat unnerving to talk or write and not know how your ideas and efforts are being received. Recently we have had quite a large number of letters from readers of these articles. They have been very kind letters, full of appreciation or personal experiences suggested by things which I had written.

Mr. Albert Brender of Mt. Clemens, Route 7, was very much pleased with my letter to the young man who inquired about farming as a life work. He said, "You told him right from the shoulder what farming is without leaving out one thing."

In another portion of his letter Mr. Brender wrote, "I want to tell you (Continued on page 237)"

Service Department

LIABILITY ON NOTE

In 1922 I backed a note which became due in 1923. I did not hear anything about the note and thought it had been paid long ago until yesterday when I received a letter from an attorney in whose hands the note had been placed for collection by the holder. This letter stated that if I did not settle for note in a few days I would have to stand suit. What can I do in this case? Can I be held liable for payment of this note?—H. M.

A note due in 1923 would not be outlawed yet. Unless the note contained waiver of presentation, protest, and notice, or the note was presented, protested, and notice given at the time default was made, the liability of the endorser would be discharged. If these things were done at that time or the note contained a waiver the endorser is still liable.—Rood.

A ONE-THIRD PLAN

Is it customary to feed your third of the hay or grain when the owner furnishes everything and you get one-third for your share? Do I have to pay one-third of the threshing bill?—W. M.

There are two general plans used for dividing crops. The first is by dividing feeds and grain crops in the mow or stack and each party doing as he sees fit with his share. The second plan is to feed the undivided crops to the stock on the farm and divide the proceeds from sale of live stock and stock products. The grain crops, potatoes, etc., are sold and the proceeds divided in this case. The latter plan is the one that is most commonly used.

On the share basis the tenant and landlord bears such expenses as threshing in the same proportion as the income is received.—F. T. Riddell.

OWNER'S SHARE

We are about to rent a farm, the owner furnishing half the cows and we, the renters, furnishing everything else and receiving two-thirds of all but the cows. What shares from the cream should the land-owner receive?

Your question relative to income from cows is a difficult one to answer. This is an unusual method of renting and also difficult to answer in that I do not know what portion of the farm income is to be expected from the cows.

I believe that as you are approaching the 50-50 lease plan of rental, you would find it a more satisfactory method of rental.

A TIMBER DEAL

I sold seven acres of timber to a company in Indiana. The memorandum agreement reads as follows: "The following timber—all saw timber 12 inches from the ground and 12 inches across the stump, all tips to be left on the farm." I supposed that the saw timber meant logs to be made into lumber but instead they are taking everything but tops and cutting it into stove wood shipping a few logs to Indiana. Please advise.—R. S. R.

The words are not technical. It is a question of intention of the parties, to be gathered from the whole instrument. The statement "all saw timber" would indicate that nothing but the logs would pass. It would appear to be confined to what could be sawed into lumber. A different construction might be inferred from other parts of the instrument, from prior experience in the same community known to both parties or probably in their contemplation in making the contract. In *Balderson v. Seely*, 160 Mich. 186, it is held that a sale of timber entitled the purchaser to all tops from which saw logs had been cut. The construction of the word "timber" in various connections has been before the court in numerous other cases referred to in this case.

THE GREAT ESSEX

Received like this...
↓
... because of this
↓

An instant winner everywhere—a buying wave that sweeps away all records—a public ovation of greater success to the most successful "Six" in history. That is the reception to the New Essex Super-Six.

Boston and territory with 800 sales in 10 days; and Detroit and Wayne County, with 659 Essex retail sales in 15 days—an unapproached record—merely reflect the countrywide triumph. Everywhere dealers are reporting more than 100% greater sales for the first 15 days of January than for the whole of last January, which was the previous record.

Coast to Coast and Lakes to Gulf, the story is the same—enthusiastic showing, impulsive applause, intense and unparalleled buying.

It is easily the greatest Essex Super-Six in history. It offers \$200 to \$300 more visible value than its great predecessor which outsold any other "Six" at or near the price by overwhelming margins.

Come with the crowds who acclaim it the "World's Greatest Value". You will say the same the moment you see it. And place your order now to insure early delivery.

Bendix 4-Wheel Brakes

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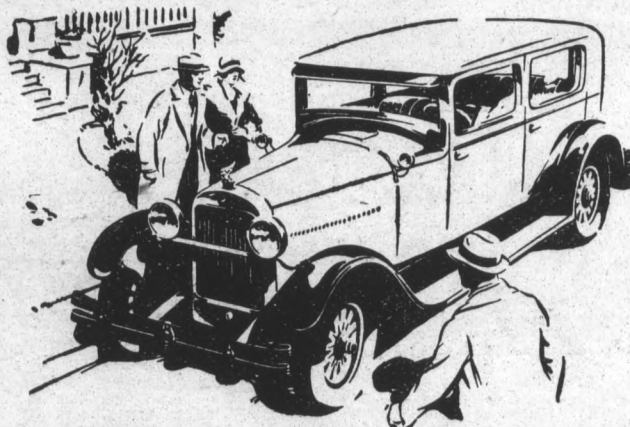
5-Dial Instrument Board

Slender Steel Core Wheel

Famous Super-Six High Compression Motor

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Many Other Features



SEDAN (4-door)
\$795

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All prices f. o. b. Detroit
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ESSEX Super-6

Buyers can pay for cars out of income at lowest available charge for interest, handling and insurance.

HUDSON MOTOR CAR COMPANY . . . DETROIT

Larger Yields Per Acre Mean MORE MONEY for YOU! Fertilizer Makes Earlier—Bigger Crops

Your cost per acre for land, taxes, seed and even labor is about the same for growing a twenty bushel crop as for forty, but the cost of growing per bushel is less for the big crop and as a result you make extra profit.

In Darling's Animal Base Fertilizers part of the nitrogen is available at once and feeds the plant during early growth. The remainder of the nitrogen is supplied gradually and feeds the plant throughout the season. This gives the plant a quick start and

**steady,
sturdy
growth**

DARLING'S FERTILIZERS
For Every Crop

Our Superphosphate
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is made by special process. Superphosphate made this way is better because it contains less free acid and less moisture.

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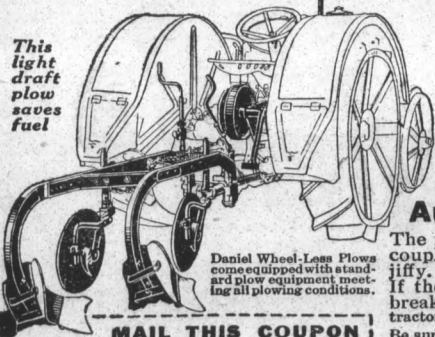
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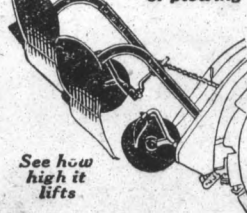
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Pull one lever on the new Daniel Wheel-Less Plow and the power of the tractor lifts the plow out of the ground immediately. Think how much easier this makes the job of plowing. The Daniel is the only wheel-less plow with such simplified easy operation.



Saves 5 minutes on each round of plowing



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ORCHARD AND GARDEN

PEAR PRUNING

THE merits of high- and low-headed trees have been compared, and a study made of the effect upon tree growth and fruit production of much and little pruning. Low-headed trees receiving little pruning have been proved most satisfactory in all respects.

Such well-known varieties as Anjou, Bartlett, Kieffer, Sheldon, Seckel, and Lawrence were used in the Geneva Experiment Station tests to study the relative value of high and low heading. Certain of these varieties have also been used in tests of much and little pruning for pears. From the results secured it would seem that low heads were best for all varieties of pears, especially for the tall, upright-growing types.

Low-headed trees produced larger, broader, and rather more symmetrical tops than did the high-headed ones, it is said. This proved particularly advantageous for unwieldy varieties like Kieffer. Careful heading and early training are always desirable.

It can be safely recommended that all varieties of pears will respond better to little pruning than to severe pruning and thinning. Little pruning seems to produce rather more symmetrical tops as well as larger bearing areas. Heavy pruning appears to stimulate a greater wood growth which results in rather bushy growth or sometimes rangy and unwieldy branches and relatively smaller bearing areas.

SPRING FRUIT MEETING

THE Michigan State Horticultural Society will hold its spring meeting at Pontiac, February 28-29 in the ball room of the Roosevelt Hotel. The following program reveals many subjects which are of practical interest to fruit-growers.

Orchard Soil Management—John Sims.

The Geology of Eastern Michigan Fruit Soils—W. S. Toothacker.

The Backyard Fruit Garden—R. J. Coryell.

The Farmers Retail Market—Isaac Band.

Peach Cultural Practices in Ontario—E. F. Palmer, Vineland Station, Ontario, Canada.

Address—Judge Arthur J. Tuttle, Detroit, Michigan.

Using Dust to Aid Application Timing—H. A. Cardinell.

The Selection of Spray Materials—W. C. Dutton.

The Importance of Cross-pollination and the Honey-bee in Fruit Yields (Illustrated)—H. D. Hootman.

The Management of Production Problems on a Fruit Farm—Frank Farnsworth, Waterville, Ohio.

The Demands of the Consumer—G. V. Branch, Director of Detroit Municipal Markets.

FEBRUARY FLOWER NOTES

WHILE our flower gardens are resting under their winter covering and we are marking time waiting for spring activities to start, we can make the selection of new varieties of flowers for our gardens an easier matter by a little thought and planning now. With this in mind, I should like to direct your attention to a few of the newer things which I have found desirable for Michigan conditions. The very latest introductions have not been included as they are so difficult for the average gardener to locate in the market nor has an attempt been made to furnish a complete list of all the worthwhile things. Rather have I tried to show some of the best new subjects that will do well under average garden conditions in our state. Among the new perennials of merit, may be mentioned that new Gaillardia

"Portola." It is a strong grower, two and one-half to three feet high, producing three and four inch flowers on long, stiff stems that are ideal for cutting. Bright scarlet petals heavily tipped with yellow makes it a very desirable cut flower. The new Aquilegias are truly revelations of the plant breeder's art and in this class I know of nothing that will surpass Mrs. Scott Elliott's Long-Spurred Hybrids. The colors of this strain run from red through pink, mauve, lavender, blue, purple, cream, and yellow to white and the individual flowers are so large and the spurs so long they scarcely look like our old Columbines.

Those of you who know the old Ireland Poppy will welcome the news of a new type, a cross between the Iceland and the annual Shirley. This strain is known as Sunbeams and includes quite a range of colors such as orange, salmon, and apricot. They make delightful cut flowers and, like the perennial half of their parentage, are perfectly hardy under Michigan conditions. A new hardy lily, easily raised from seed, is the Regal. It is white, outside of petals suffused with pink and throat light yellow. Sow the seeds in a cold frame or other protected place in early spring, cultivate and weed as you would in the case of other seedlings and transplant the small bulbs in the fall to their permanent home. With good culture, this lily should bloom the second year.

I can not close this short list without mentioning the new Lupines. I saw a garden this past summer when these stately flowers were at their best and I assure you it was a sight long to be remembered. For the amateur grower, a strain of the new hybrids such as the Harkness or Downer with their wide range of colors would probably be the most satisfactory. However, if a particular color is wanted, one of the named varieties would be the thing. They grow from two to three feet high and produce long spikes of flowers from June until September.

This does not by any means exhaust the list of really worthwhile new perennials but these few will add much of interest and pleasure to the hardy border.—C. W. Wood.

CABBAGE

I wish to plant about five acres of cabbage. What variety is best for my locality? Should I use seed or buy plants?—E. L. S.

The variety of cabbage and method of culture depends on whether it is an early or late crop. Copenhagen Market or Early Jersey Wakefield are the best early varieties, while a good strain of Danish Ball Head is best for late crop. For the early crop it is essential to start plants under glass in order to have well grown plants for transplanting by April 15. Seed for this crop would be sown Feb. 1-10.

Seed for the late crop is sown May 15 and the plants set July 1. There are arguments on both sides of planting the seed directly in the field. By the use of seed bed methods, it is possible to utilize land for some other crop there, less intensive cultivation required, and more seed is necessary. However, planting the seed directly does away with any check in the development of the plant due to transplanting and requires less labor. In most cases, however, the seed is sown in a seed bed and transplanted.

Egyptian mummies are being studied through their wrapping by X-rays.

The United States imported sixty-one million pounds of tomatoes from Mexico last year.

FARMERS ENTHUSE OVER SOILS COURSE

THAT Washtenaw County farmers are enthusiastic over the systematic soils course which is being put on in this county by John W. Sims, soils extension man of the Michigan State College is evident from a hit and miss interview of prominent farmers.

"The first lesson has already been given," said H. S. Osler, county agricultural agent, "and the leaders and folks back home in the communities are looking forward to the next one. The real substantial farmers of the county tell me that they believe this work is fundamental and they are eager for it. It has attracted those farmers who are interested in stability and progress rather than the fly-by-the-creeks and ne'er-do-wells."

Osler reports that there are eighteen local leaders who have faithfully gone back to their home communities with the idea of spreading the information learned to those of their friends and associates who care for it. The average attendance at such meetings has been fifteen which means that this work is reaching around 275 farmers in Washtenaw County.

Jay A. Smith, a 400-acre farmer, keeping Shorthorn cattle and feeding sheep, whose son, H. C. Smith, is one of the local leaders, says that he believes this work is of a basic nature. "The fertility of a man's farm is the capital of his business," said Smith, "and naturally he should take good care of this capital."

"This is perhaps the most fundamental extension project that the Michigan State College has undertaken," said George McCalla, president of the Washtenaw County Farm Bureau and the operator of two dairy farms. "I am glad this work has been started and especially glad that it came to Washtenaw County this year."

WASHTENAW COUNTY FARM BUREAU HOLDS ANNUAL MEETING

ABOUT 160 farm men and women sat down to the banquet which featured the annual meeting of the Washtenaw County Farm Bureau, in Ann Arbor, Friday, January 27th. Headliners on the program were Doctor Eben Mumford of the Michigan State College and C. L. Nash, director of organization for the Michigan State Farm Bureau. Delightful numbers were rendered by the Ann Arbor High School Orchestra and of more than passing interest were the quartette numbers put on by the Korreck Kare Kalf Klub, of Washtenaw County. Members of this quartette were Fred Rathfon, Max Ross, Carl DeNight, and Edmund Schuart.

The climax of Dr. Mumford's talk which consisted of piling up evidence to show that farm organizations are doing a piece of work so valuable that it is impossible of calculation, came when he said, "All that we have outside of our heredity is due to our association with and suggestions from others."

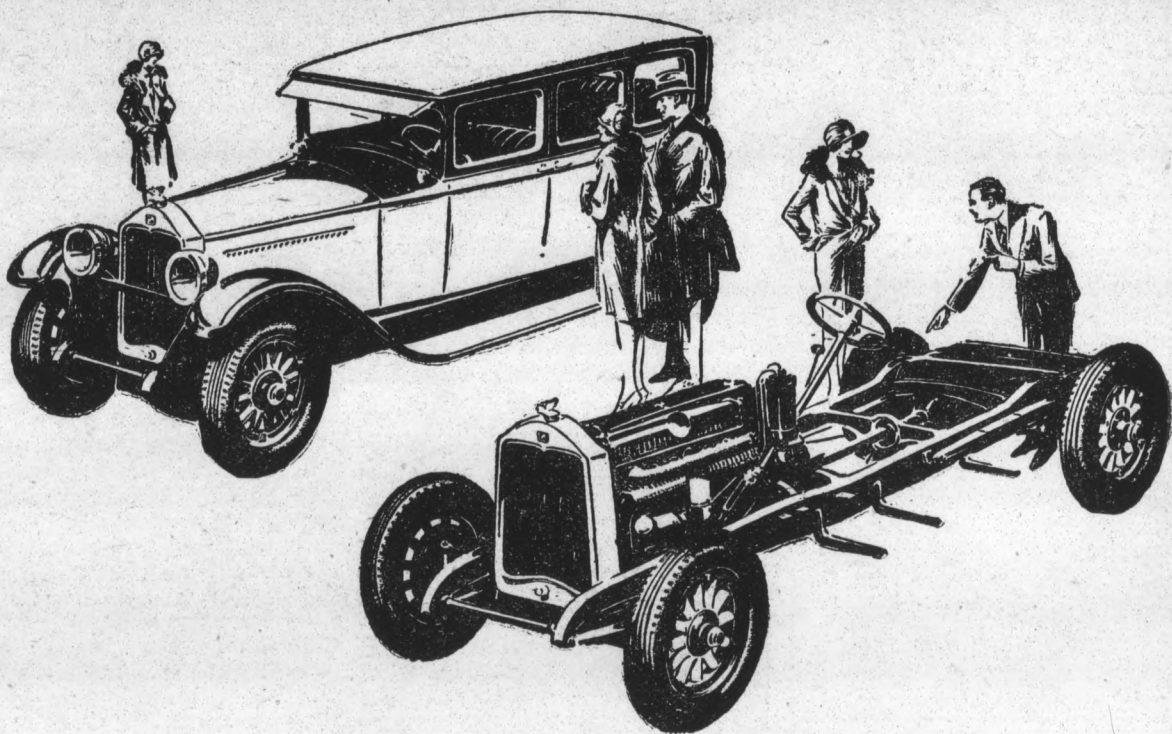
According to this authority, a study of the methods and policies pursued by eighty master farmers in this and other states shows that they belong to six or seven organizations and even so, have double the leisure of the lowest paid laborers in their community. "It isn't the number of hours a farmer works that counts," said Mumford, "but rather how he works with what is above his shoulders."

It was pointed out that city businessmen prescribing for the ills of agriculture often say, "If farmers would quit spending money on and in their automobiles, and stay at home more, they would get along better." The fallacy of this reasoning was pointed out by stating that the automobile is no longer a luxury but a necessity, a time saver, and a means

by which the farm family can enjoy the leisure that has been earned. That much progress has been made in Michigan in fifteen years, despite oft repeated statements of knockers to the contrary, lies in the fact that fifteen years ago, there was only one cooperative in the state—over in the fruit territory. In fact, the first cooperative shipping association and creamery was organized in Litchfield in 1913.

C. L. Nash pointed out that the farm bureau program stands for (1) Efficient program of production on the farm, (2) Cooperative marketing, and (3) the welding together of an organization so that the voice of agriculture could be heard in legislative halls and in the marts of trade.

Among instances cited showing that the farm bureau has justified its existence in a business way, Nash referred to the Zone Rate Case which saves Montcalm County alone the little matter of \$15,000 a year on freights in and out of the county.



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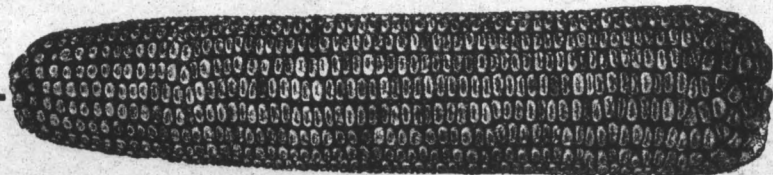
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Why take a chance on common seed when our scientific method of drying and preparing our corn insures germination and vigor. Write for Circular and Sample.

PAUL C. CLEMENT, - Britton, Mich., Dept. B

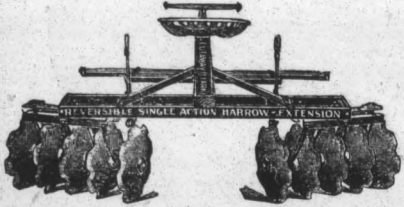
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Carleton W. Benton, Lawton, Mich., has something to say about disk harrows which will interest you. He recently wrote us as follows:

"Thank you for your letter in answer to mine with reference to the weeder you manufacture."

"I have one of your 'Cutaway' harrows which was made before you made dust-proof boxes and the frame and disks are in excellent condition. I purchased the harrow second-hand and it had been given very poor care, yet not a disk was even cracked or notched and while they are thin and sharp as a razor blade, yet they are tough and substantial and are good for many years of service. It is the best material I ever saw in any disk."



Clark Single Action Harrow fitted with cutout or solid disks of cutlery steel, heat treated and forged sharp for better work and longer wear. Reversible gangs. Light draft. Disks carry weight of machine. Made with extension heads for orchard work. Mail coupon for free catalog and book, "The Soil and Its Tillage."

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Master of Nature and Men

Our Weekly Sermon—By N. A. McCune

WHEN we talk about the method Christ used in quieting the storm on the lake, we might as well admit right off that we do not understand it. There are oceans of facts that elude us and this is one of them.

But having said that, let us hasten to add, that there are miracles and miracles. Things which seem miraculous in one age are not so in the next. Events which seem miraculous to a savage tribe are matters of every day with civilized man. Facts which are miraculous to an animal are common enough to its master. When the wood chopper in the Old Testament lost his axe-head, and the prophet caused it to float,



that was looked upon as pure miracle. Who had ever heard of iron floating? But now a days iron ships sail all the oceans of the world, and no one gives it second thought.

More than that, airplanes made of wood and steel, and propelled by heavy engines, travel at high speed through the air, against winds, and rising to great heights. Is that a miracle? It would have been thought so, at one time. The other night I listened in, while some one was sending a message to a party of men and women in the far north, where a supply ship comes with mail and provisions but once a year. The operator named the people at the sub-arctic station, telling them good night, and promising to send another message to them in a month. Was that miracle? Think of it!

No, it was not, as we look at it. But that does not mean that we understand it. It only means that it has become common, and we are accustomed to hearing about it.

Now, we do not understand how Jesus calmed the storm that night.

But that does not mean that it may not have been done in accordance with the simplest laws, which we do not understand, but which he did. You play the piano, and bring out of the instrument some harmony. That would be amazing to an Esquimaux. To you it is simple. So the mastery which Jesus at times evinced over nature was undoubtedly in accord with what he considered to be the most every day facts of His Father's world. Nothing miraculous about it, at all. Will we ever get to know how he did these things? Perhaps. Perhaps not. Selfish and greedy men will not, in all probability, as Jesus looked out on the world with eyes wholly unselfish and completely friendly. To him, it would seem it was a matter of faith in God, and he was surprised that any one should be afraid in this most kind and friendly world. "Why are ye fearful?" he asked. "Have ye not yet faith?"

But miracle has symbolic meaning, as well as practical meaning. The fact that we do not understand how this and that was done, by the Master, does not mean that we do not believe it. That attitude is too silly for words. We are surrounded by mystery on every hand. This is a world of mysteries. I hope my readers are familiar with Doctor L. H. Bailey's little volume of verse, "Wind and Weather." The poems are all on country life.

The shortest poem of all is "Miracle," where the author says that, talking of miracles, is there anything more miraculous than the burst of green in the spring, when the bare limbs are suddenly clothed in beautiful garments?

"Yesterday the twig was brown and bare;

Today the glint of green is there; Tomorrow will be leaflets spare; I know no thing so wondrous fair No miracle so strangely rare.

I wonder what will next be there!"

No one needs to be afraid to believe in the miracles of Christ, or to admit that he cannot explain them. And they are symbolic, as said above. In the case of the cure of disease, we note that disease is cured only when faith is present, either in the case of the patient, or of interested persons. In the instance of the palsied man, four persons believed hard enough to break up the roof, to get him into the presence of the Physician. In this week's lesson, the demoniac apparently had no one to bring him before Jesus, yet no doubt many people there had some faith, whereon the healing power could travel. The whole range of Jesus's healing is only another way of showing how able he is to help poor, suffering humanity.

SUNDAY SCHOOL LESSON FOR FEBRUARY 19th

SUBJECT:—Jesus' Power Over Nature and Human Life. Mark 4:35 to 5:20.

GOLDEN TEXT:—Mark 4:41.

Complete Farm Property Protection

(Continued from page 214)

Protective Service protects the farmer outside his own premises. Our legal adviser and investment counselor aid in the investment of surplus funds and in its protection. Claims are handled against advertisers, transportation companies, commission houses, and other concerns with whom there are misunderstandings or who attempt to take advantage of the farmer. Swindlers and crooks who try to work rural districts of the state will be summarily dealt with by every agency that can be brought against them.

Who Can Be Members

This then gives the reader an idea of the broad plan of Michigan Farmer Protective Service now established. New features will be added as they prove themselves useful.

All this service is available to subscribers of the Michigan Farmer who have their subscriptions paid in advance. When a farmer becomes a member of the Michigan Farmer Protective Service, he will receive a neat, weather-proof, three-colored, steel Protective Service sign, a Warning Poster informing trespassers against the danger of invading the member's premises without permit, a signed Membership Certificate, and a Registered Tag and Key Chain for the protection of locked-up property and for identification purposes. Twenty-five cents in stamps or coin from a paid-

in-advance subscriber will bring the above mentioned items, make the sender a member of the Michigan Farmer Protective Service and register his name and key chain number in the Michigan Farmer offices.

Additional Property Protection Warning Signs can be had for posting all outbuildings where valuable live stock, poultry, grain, and other farm products are stored. These warning signs carry announcements of the Fifty Dollar Rewards offered for theft of farm property and of the Fifty Dollar Reward for trespassing in violation of the Horton Trespass Law.

This is another of the carefully thought out Michigan Farmer projects. It was only after long study of conditions in Michigan and of the protective work done in other states, that this move was undertaken. The success with Travel Accident Insurance Protection, the Master and Champion Farmer movements, together with the long line of successes that mark Michigan Farmer History throughout its eighty-five years, guarantees to the subscriber the successful consummation of the Michigan Farmer Protective Service. We anticipate in carrying out this program the same whole-hearted cooperation from our readers and friends that we have enjoyed in putting on other projects for the benefit and improvement of Michigan Agriculture.

E. A. Shearer,
Manager, Michigan Farmer Protective Service,
1632 Lafayette Blvd., Detroit.

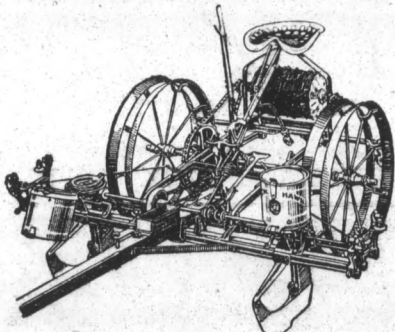
Dear Mr. Shearer:

Enclosed find twenty-five cents for which enroll me as a member of the Michigan Farmer Protective Service and send me the weather-proof, steel Protective Service Sign, the Registered Tag and Key Chain with proper registration in your Detroit offices, a signed Membership Certificate, and a Warning Sign carrying the announcement of awards for capturing thieves and trespassers. I am enclosing the stencil of my address from the Michigan Farmer showing that I am a boni fida subscriber to that publication.

Name R. D.

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Perhaps you have never figured just how much a perfect stand of corn is worth in dollars and cents. But we know that men who grow a hundred bushels to the acre use tested seed and a planter that doesn't miss a hill.

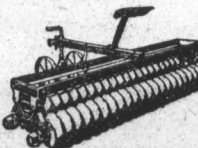
That's how the Black Hawk made its reputation. It was the first planter with positive action—the first that planted exactly the right number of kernels and never missed a hill.

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Your Spring Needs

Check over the things you will need to fix up the barn, your home and your farm equipment for spring. Make out your list and take it to YOUR NEAREST FARM SERVICE HARDWARE STORE. These merchants study farmers' needs. Their goods are selected from the quality standpoint and their prices are the lowest that quality backed with service will permit. Look through this suggestion list then go to your nearest TAG STORE. Your visit will convince you that the many things you need when you need them will be there for you to inspect before you buy.

Check this list before you go to town

Garden Seeds	Fencing
Window Glass	Tools
Chicken Fence	Chains
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Door Hooks	Lawn Mowers
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Whisk Brooms	Brooms
Clothes Pins	Refrigerators
Gasoline Lanterns	Rope
Flashlights	Axes
Chicken Feed	Rakes
Stock Food	Stepladder
Curtain Poles	Screen Doors
Screen Door Springs	Forks
Porch Floor Paint	Mops
Cupboard Latches	Hammers
Furniture Polish	Tacks
Oil and Gas Stoves	Sandpaper
Floor Varnish	Hatchets
Kitchen Enamel	Wrenches
Wall Paint	Window Locks
Steel Wool	Pipe Fittings
Tractor Oil	Spark Plugs
Water Faucets	Repair Parts
Milk Cans	Washers
Electric Wire	Belting
Electric Plugs	Coat Hooks
Bathroom Fixtures	Pails
Stove Blacking	Hose

Look in this list for your nearest tag store

ADRIAN...Wilcox Hardware Co.
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 ANN ARBOR...Ann Arbor Implement Co.
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 ASHLEY...Geo. Reeb
 BAY CITY...Rechlin Hdwe. Co.
 BAY CITY...John W. Putz Hdwe.
 BANNISTER...Wm. G. Ferris
 BELDING...Belding Hdwe. Co.
 BELLAIRE...Fred D. Flye
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 CALUMET...Keckonen Hdwe. Co.
 CAMDEN...Camden Hdwe. Co.
 CARO...F. A. Riley
 CARO...Caro Hardware Co.
 CARSON CITY...J. W. Hallett & Son
 CEDAR SPRINGS...John Bencus
 CENTERVILLE...Truckenmiller Bros.
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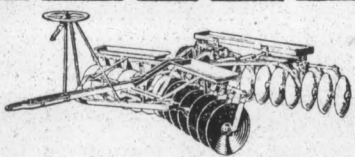
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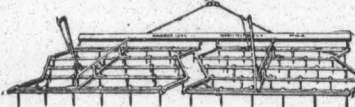
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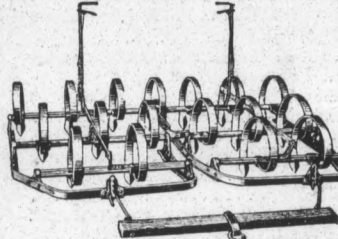
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Our Readers' Corner

Facts and Opinions by Michigan Farm Folks

POST THE FARM

I WAS reading a piece in the Michigan Farmer entitled "Let us all be Good Sportsmen." I would like to know how a farmer can be a good sportsman when the city sportsmen come out on the farm and shoot everything they see running. When a farmer allows them to hunt on his farm, they will not look before they shoot, but will kill anything that comes before them. Can a farmer afford to have his cattle shot and wounded or killed or have his turkey hens, out in the field with their little ones, killed and the little ones left alone to die? I suppose the hunters think it is perfectly all right for the farmer to stand for such hunting as I suppose they think it doesn't cost the farmers to replace anything they kill.

If the farmers would get together and post their farms at the beginning of the hunting season, the farmer would have all his stock and his eye sight, anyway. One farmer up this way had his farm posted and a bunch of sportsmen came to him and asked if they could hunt on his farm if they were careful. The farmer let them. He took his team of horses and went to the field to plow, and all of a sudden a shot came along and took his eye out of his head. If he wouldn't have allowed the sportsmen on his farm, he would have had his eye. My advice is to post all farms and stop this hunting.—C. R.

CURE FOR INSOMNIA

I WAS very much interested in the letter in a recent issue of the M. F. signed by Subscriber, who asks for advice to make him sleep all night. I was also amused by the way you side-stepped the question in the answer you gave him. Now as I have also suffered the same as Subscriber has, please allow me to offer some of the suggestions that helped me.

These are all tested recipes, not copyrighted, and guaranteed to produce results of some kind and a cure in every case, if tried long enough.

Number one. I assume that Subscriber is a farmer and as such he probably is not getting exercise enough, so instead of only walking about twenty miles per day to do his chores, etc., I would suggest that he take a stroll of five or six miles after supper, just to quiet his nerves and work off any surplus energy that he may have hanging around.

Number two. Just about dark, tell the red cow and the gray cow that you want them to change stalls for a few days. Then start in and try to have them do it. If you have succeeded by 11:00 P. M. just go to bed at once and sleep till 6:00.

Number three. Have your mother-in-law come down to stay for a week. After she has been there two days you will be glad to crawl off any old place and sleep like a kitten.

Number four. Tune in your radio on WWJ some Friday night at 7:00 P. M. when the male quartet from the U. of M. at Ann Arbor are trying to sing. If after you have listened to two of their efforts you are still conscious, just try the next suggestion after this, number five.

Number five. Ask your wife why she cannot bake as good biscuits and pie as your mother used to. If you don't go to sleep at once, it won't be her fault.

Number six. If you wake up before 1:00 A. M., just try and work this one: If the cost of all the cars that Ford has built plus the cost of all that he will build in the next ten years equal

one-half of one per cent of the cost of all the free garden seeds Congress has sent out since 1870, how old is Ann? (Let x equal age of Ann).

Number seven. If any one of the above fails to put you to sleep try number three and five on the same evening, but be sure to wind the alarm clock first or you won't wake up in time to get the milk out for the truck.

Number eight. In case you don't get help from any of these suggestions, I have one more that will do the job, but I advise it only as a last resort.—E. A. T.

THE RURAL CHURCH

IN the January 28 issue of the Michigan Farmer, in an editorial on Co-operative Rural Churches, Professor R. A. Felton, of Cornell University, is quoted as saying, "More than one church in a small rural community is a mortgage on the farm life of that community. That may be true, and it may be absolutely false. Everything depends on the type of life dominant in the church, or churches, as to worthwhile results. True spiritual assets are not determined by numbers, nor by the money saved or expended in church activities."

The problem of the rural church is not one of finance, but our advisers would have us think so. They continually ring the changes on finance, because it smacks of big business. The real difficulty of the rural church is found in its modern innovations converting the church into a playhouse and causing its pulpit to give place to the common stage or platform. When one admits into the rural church all that is demanded by the promoters of community life, there is no room for regenerating power and, in fact, none is wanted.

Today, the gospel of Jesus Christ is winning its way in many parts of the land, even in darkest Russia, not by modernized churches of any sort but by the faithful preaching of the gospel. There is no financial or young people's problems when the gospel is preached by those who actually know its power to save, keep and satisfy. But the folks who think they have the solution of the rural church problem do love to display their skill in "daubing with untempered mortar."

The real difficulty with our rural churches is:

1. The gospel of Jesus Christ is not being preached by those who have a real vision of lost souls. The preachers are cold, unsympathetic, formal, dead.

2. There is no intercessory prayer in these churches, and, of course, they cannot do the Lord's work in seeking the lost.

3. There is no sacrificial life in evidence, and consequently no conviction of a divine commission to evangelize the world.

4. These churches have despised their separateness from the world and consequently do not have the true Christian spirit. There is no difference between the man in the church and the man in the street in spirit, temper, tone, and disposition. All bear the same "trade mark" of the world. All such churches are a financial burden to any community, and infinitely more.—S. A. Walton.

Adversity is a medicine which people are rather fond of recommending indiscriminately as a panacea for their neighbors. Like other medicines, it only agrees with certain constitutions. There are nerves which it braces, and nerves which it utterly shatters.—Justin McCarthy.

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SUITING FERTILIZERS TO SOILS

(Continued from page 213)

"Well, the best growers are plowing heavily manured clover or alfalfa sod for their potatoes and then using commercial fertilizer high in phosphoric acid to balance the plant food condition. I would suggest that you manure your sod, using manure which is not too coarse, and then plow early this spring. Work the ground down carefully being sure to get it well packed to the bottom of the furrow slice. Then when you plant put in about 500 pounds of either acid phosphate or a fertilizer high in phosphoric acid and containing small amounts of ammonia and potash."

"I am afraid I'll not have enough manure to give the field a very heavy application and I want to use some on my corn ground."

"Then it would be well to increase the amount of potash in the fertilizer and use a 2-12-6 or 4-16-8 or similar analysis."

"Would you put this fertilizer on and drag it in before planting?"

"That can be done but you will get better results if the fertilizer is dropped several inches on either side of the seed piece. In that location the roots will find it early and there is no danger of damaging the seed or sprouts."

"I guess I got that straight. Now let's go over and look at some heavy soil that I want to put to corn and beans and see what you can tell me about it. And by the way, Dick, you have been talking fertilizers, fertilizers, fertilizers, as though a farmer couldn't get along without them. My father never used any of the stuff and he got fine crops and I don't see why the soil should need them now. What are they made out of anyway and how does a fellow know he is getting what he pays for? I can grow pretty good crops, but we don't get enough for them, what we want is a better marketing system."

"Maybe you're right, but let's talk over the situation a bit."

TREATMENT FOR RUBBER BELTING

Is there any way I can preserve a rubber drive belt to keep it from being weather worn? Could I paint it? What kind of paint could I use?—H. J.

About the only thing that should ever be used on rubber belting is either castor oil or linseed oil, then only a few drops at a time, and the excess wiped off. No paint of any kind, and only a very few belt dressings are fit to be used on rubber belts, and before using a belt dressing the belt manufacturer's advice should be secured, giving the name and manufacturer of the belt dressing in question.—D.

HALF-BROTHER'S SHARE

My brother died in Canada without a will. I am the only brother but there are four half brothers and two half sisters. Do they come in for the same share of the property as I do? He had quite a lot of property.—E. G.

The rights of brothers of the half blood to inherit depends entirely upon the law of the place where the land is situated. In Michigan brothers of the half blood inherit equally with those of the whole blood.—Rood.

The Michigan wheat crop is substantially established in our system of rotation on most clay loams, silt loams, and fertile loam soils. Profitable yields are secured from good varieties given the right cultural attention. The crop is an ideal one with which to secure seeding of clover, sweet clover, and alfalfa. By growing pure seed of high yielding varieties, treating the seed with copper carbonate or formaldehyde to prevent stinking smut, planting on a firmly prepared seed bed during the fly free date, increased profits can be secured from this crop.

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cord fabric plant in the world where cotton—also purchased in the primary markets—is made into the highest quality cords for tires.

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WELL," said Burton, "you may get your chance. Brown County 4-H members will have a fine chance to win trips to the International Stock and Grain Show. Remember that, Bob. I'm expecting each of you boys to come out for the stock judging team." Here was another possibility of reward, and Bob marveled anew at the opportunities provided by club work. "Now it's up to you, Bob," was Burton's farewell admonition. "When you see Lady Mary 'making her nest' camp in the stall with her whether it's day or night." Bob promised that he would be on the job.

Some country doctor who was philosopher as well as physician once asserted that "it's strange but true that the stork usually chooses a dark and stormy night when she makes a flight." Veteran stockmen can sympathize with the physician. The novice must learn through experience. Loose shingles on the old barn rattled and a freezing wind made Bob's teeth chatter as he crouched in Lady Mary's stall. Outside the night was dark as pitch. Strange sounds of the night made Bob, big lad that he was, put out a hand to feel the comforting presence of Jock, the Airedale, who slept in the straw beside him. The dim light of a lantern showed Lady Mary Third and snuggled beside her ten tiny replicas. Cold, indeed, it was, and Bob longed for the comfort of warm blankets, but his heart was singing with the joy of ownership. There had been several trips to the kitchen, where babies had been deposited in a blanket-lined box. Now it was breakfast time for the new arrivals and the porcine mother lay with closed eyes while her lusty family tugged as if long training, not instinct, told them from whence came sustenance. With not a "runt" in the lot, one pig stood out from his fellows. As Bob watched, this new-born specimen, rooting his brothers right and left, seized hold and settled back.

"The little rascal," chuckled Bob Barton. "He knows what he wants and goes after it. I'll bet he'll be a winner. Wonder, Jock," Bob pulled the Airedale's ears, "if Squire Jones ever sat up nights here with pigs when he was a boy. Great old Southern fire-eater. By George," announced Bob aloud, "I'm going to call that pig Stonewall Jackson. He'll never know when he's whipped."

"Golly," soliloquized Bob as he prepared to return the pigs to their warm nest inside. "Never thought I'd stay up all night with a hog. But I promised Burton, and here I am." So, under such humble circumstances was being implanted the lesson of loyalty. When morning came and the whole Barton family exclaimed in delight and appreciation over Bob's fine prospect he felt well repaid. A phone message brought a "Bully for you, old man," from Burton. "Can't keep you from winning with a litter like that," the agent had added. But Bob, knowing little of the value of ten pig aristocrats eligible for registry, appreciated most the warm words of com-

mendation because he had played his part.

"Beauties," was the verdict of Katie O'Neal as she watched the piglets playing outside on the first warm day. "Now, Bob, it's up to you to grow corn for 'em. You've been slowing up," and she shook a reproving finger. "Went off to town yesterday when you should have been in the field. Every day counts now, and I'll bet the loss of that half day cost you twenty dollars or more."

"Some little joy-killer you are," mocked Bob, but he had an uncomfortable feeling that Katie was right. "I don't aim to work myself to death,"



he went on. "Dad always says, 'Save yourself for a good old man.'"

"That may be all right for your dad," replied Katie, "but he doesn't pretend to be much of a farmer. He's a musician. I know enough about farming to know that when work is to be done it must be done. But it's all right with me," and Katie's gesture was more eloquent than her words. "Play if you like and buy feed like some of the shiftless farmers around here do."

In silence Bob saw Katie set out for home. A spark of resentment glowed in his heart. Try to tell him how to run his business, would she? No girl could do that. And then Bob's common sense, inherited from his mother's farming forebears rebuked the thought of interference. Katie O'Neal was thinking of his own good. "Thank you, Kate," he called after her. "I'll try to remember what you said." But the seal of habit long practised is hard to break. Ever the Barton motto had been, "Why buffet the storm. Lie quiet and it will pass." A smile and the wave of a hand was Bob's reward, and in the field he drove hard at accumulated work. Father Barton, true to his inclinations, "chored 'round." It was up to Bob almost alone to win in the hard game played against all the forces which beset agriculture.

CHAPTER VIII A Place of Mystery

NEVER had there been power other than horseflesh upon the Barton farm. It was a new experience to Bob Barton when he trundled the O'Neal tractor into a field and left a long black furrow upturned to the sun. As he thrilled to the throb of unleashed power Bob sensed the possibilities of farming with proper equipment. Back and forth traveled

the tireless horse of steel while the rich loam, emblem of promise, seemed to smile. John O'Neal, with a nod of satisfaction, stopped the driver at a furrow's end. "Good work," he commended. "You handle her like a veteran. Sock her down deep, son, and bring up the dirt that hasn't been working for years. I'll warrant you are going to surprise the old Squire when you gather your corn crop this fall. Probably will want to change to share rent. But not on live stock," and O'Neal grinned; "there's still an element of risk in that."

Bob frowned as O'Neal started off for home. The weeks were slipping

by and nothing had happened. Yet ever recurrent came the thought of possible disaster. Off in the distance he could see Lady Mary and her children, the pigs romping in porcine playfulness. Must get some fencing fixed so the club entry could have pasture. Gee, it kept a fellow digging. Wonder when time could be spared to cut some posts. Wonder if he could beat that fellow Carson out of a place on the team. Thus Bob's thoughts raced as he held the tractor in line and the loam rolled from plowshare. As if in answer to his last soliloquy, came the honk of a motor, and Bob saw Hal Carson spring from a trim runabout, race up the walk to the O'Neal home and, with hat in hand, meet Mrs. O'Neal and Katie at the door. A moment later, with Katie beside him, Young Carson was speeding down the road. As they passed the slow-moving tractor Katie's cheery "Hello Bob" brought only the wave of a hand in response. Hal Carson's smile had been mocking as they flashed by.

"Some boat," reflected Bob, chewing the cud of bitterness. "A second-hand flivver would look fine put up against that. That's me. A used flivver against a big six just out of the factory." Savagely Bob drove the tractor, so that O'Neal exclaimed over the work done when the big machine rolled home that night.

"Did a good day's work myself," remarked O'Neal casually. "Expected to have to take the folks to Warford for some trading. When mother 'phoned Carson's store, Hal offered to come after Kate. Accommodating of him, wasn't it?"

Bob's muttered reply was lost in the throb of the tractor. Oh, yes, Hal Carson was accommodating! Mother O'Neal was too old-fashioned to allow her sophomore high school daughter

to "Keep company" with any lad, but the ingenious Hal was prolific in excuses to call, and his speedy car often was found parked near the front gate. On the rare occasions when farm lad and town lad met, young Carson treated Bob with supercilious coolness. Bob, biding his time, longed for the day when they would fight it out on the ball diamond. There it would be man against man. But as the days passed the friendship of the Barton and O'Neal families became more closely knit. Katie, playing the part of a big sister, alternately teased and scolded Bob whenever work lagged. It was grind, grind, grind. Sometimes Bob felt that he hated the farm, the endless and monotonous round. April had merged into May, and the seed corn had been entrusted to warm soil before the young worker found time to cut posts for his needed fence. In all the weeks he had not penetrated the fastnesses of the backwoods lot.

Ted Baldwin had exhibited keen interest in his friend's club entry. An excellent judge of pure-bred swine, young Baldwin realized the potential possibilities of ten lusty pigs. "Wonderful quality," he told Bob, "but you've gotta grow 'em out. Gotta get a fence around the pasture field. May mean more to you than a month's work." Yielding to Ted's importunities and accompanied by his friend, Bob set off early one morning to cut posts. Jock, the Airedale, raced ahead barking at imaginary enemies.

Meandering down the valley wherein lay the fertile acres of the Jones farm ran Cold Creek. Peaceful enough in season, it could become a raging torrent with heavy rains, swelling into a river which emptied into the mighty Missouri a few miles away. The timber was upon a wooded hill, approach to a towering bluff. "T'other side of the bluff," informed Ted, "is a road and not far away the old Missouri River. Boy, she's some creek! We must go over there some day."

Axes rang and trees began to fall. When noon came the boys unpacked their lunch-kits and with Jock watchfully waiting for tossed bits, sat down to eat. Leaning back against a stump, Bob studied the uncleared thicket beyond the wood lot. At the base of the bluff it became so dense as to appear impenetrable. "Good wood in there," observed Bob, "if a fellow could get it out. But, whew, how thick that brush is! Ever been up in there, Ted?"

"Never," answered Ted, "and I'm not keen on going, either. The dogs followed Bud Perkins' trail to that bluff and lost it there."

"The dickens they did!" exclaimed Bob. "Well, we'll just have a look and see what we can find. Old Jock's got a keen nose."

"Don't think he can follow a trail three years old," said Ted, dryly, "but I'm game. Let's see what we can find out." Together the boys, with Jock in the lead, entered the thicket, stumbling over entangling vines, finding as they progressed that so dense were

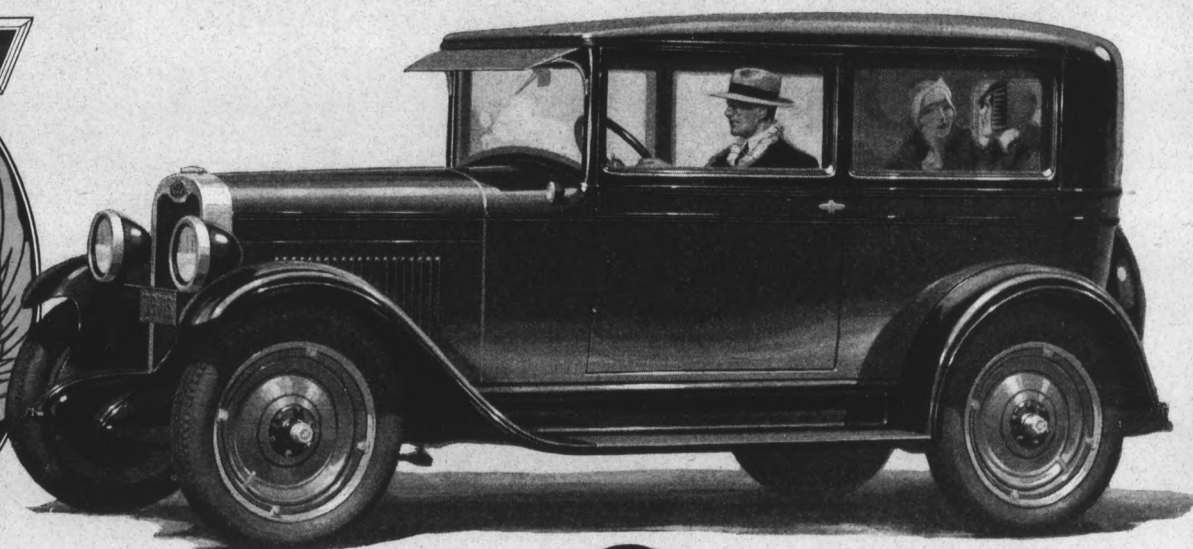
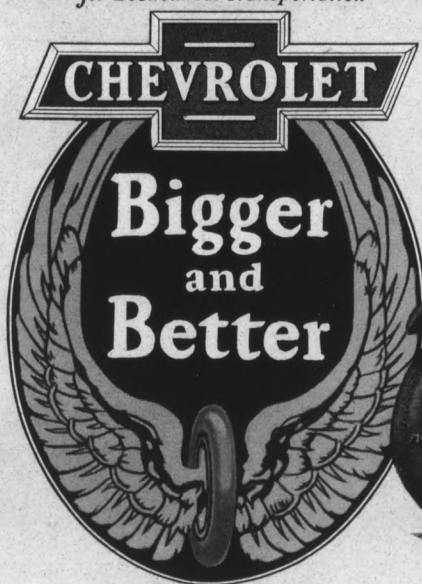
(Continued on page 231)

Activities of Al Acres—Slim Gets a Hot Idea

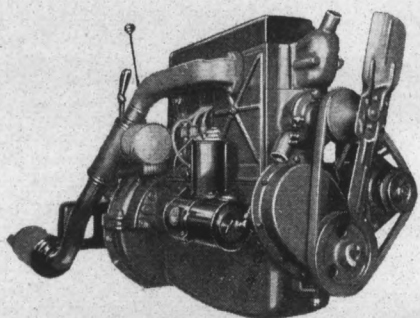
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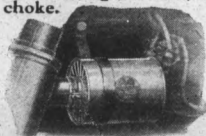
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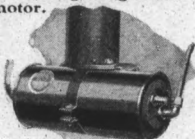
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Built on a 107-inch wheelbase, 4 inches longer than before, and offering marvelous new bodies by Fisher, this great new car is everywhere hailed as an amazing revelation in automobile value!

Among the vital engineering advancements it incorporates, are new alloy "invar strut" constant clearance pistons . . . new mushroom type valve tappets . . . new non-locking four-wheel brakes . . . new semi-

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Alemite pressure lubrication.

Vacuum tank fuel supply.
Improved Delco-Remy distributor ignition.
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CHEVROLET MOTOR COMPANY, DETROIT, MICH.
Division of General Motors Corporation

Q U A L I T Y A T L O W C O S T



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The First Master Farmer

(Continued on page 211)

tinkling political cymbals, have recently been making the welkin ring urging the Great Lakes-St. Lawrence waterway, but Washington was much interested in the western country, that being what is now the corn belt. He predicted that it would be populated much more quickly than anyone could believe then and quicker than any similar region had been populated before. In 1783 he made a trip up the Mohawk River to view the possibilities of a future water course which is the present site of the Erie Canal. Upon this subject he wrote to his friend, Chevalier de Chastellux: "I shall not rest contented until I have explored the Western country, and traversed those lines or a great part of them, which have given bounds to a new empire."

Washington's attitude toward tobacco is curious, to say the least. One studying this should remember that in Washington's day, tobacco was legal tender and very often it took the place of money. With tobacco, the planters paid their debts and their taxes. Then too, rather often the preacher had to take what pay he got in tobacco. It was also the main article of export—frequently a pound of tobacco brought more in England than a bushel of wheat and the freight was only about one-sixteenth as much.

There was so much cheap land that the planters would put tobacco continuously on a piece of new ground until it was worn out, then clear up another piece and let the old patch go back to trees and brush.

This process was described by Washington in a very lucid paragraph: "A piece of land is cut down, and left under constant cultivation, first in tobacco, and then in Indian corn (two very exhausting plants), until it will yield scarcely anything; a second piece is cleared, and treated in the same manner; then a third and so on, until probably there is but little more to clear. When this happens, the owner finds himself reduced to the choice of one of three things—either to recover the land which he has ruined, to accomplish which has perhaps neither the skill or industry, nor the means; or to retire beyond the mountains; or to substitute quantity for quality in order to raise something. The latter has been generally adopted, and with the assistance of horses, he scratches over much ground, and seeds it, to very little purpose."

In 1791, Washington estimated that the average crop of wheat in the colonies was eight or ten bushels per acre and the yield of corn was very low. So much stress was laid on tobacco growing that many planters failed to produce food enough for their families, just as many growers now suffer from a one crop system.

Washington early saw the devastating effects of prolonged tobacco growing on his soil and tried to get away from it by producing wheat and flour to be shipped to the West Indies. Later, he became prejudiced against tobacco that he stipulated that his tenants should not grow any more than enough for their own use.

Some years ago, I saw a crop rotation plan that had been worked out by an "agriculturist" for a certain rich man's farm. It outlined specifically the crops that should be grown on each field during the next thirty years. I thought it was a most unusual plan and yet this is almost the identical thing that Washington did when in 1785 he worked out a very regular and systematic course of cropping for his farms in order to save his soil fertility. This was done in collaboration with Arthur Young.

About this time he also wanted to get a plan for a very complete and useful farmyard for a farm of about

500 acres which was to include the plans for a barn and all that should go with it. The result of this was the round barn which Washington put up, the first one in this country, and it had a very interesting treading floor in the center of it. From the description, I would judge that there were boards with inch and a half cracks between them. The sheaves of grain were thrown in and then the horses were run into the enclosure. After a period of driving, the wheat and chaff would rattle through, while the straw remained on top.

Dense Weary Willies who cannot follow orders and who think they know more than the boss must have been as common then as they are now. On one occasion, Washington went away, leaving grain sheaves stored in the barn and left instructions for his foreman and help to tramp out this grain on this fine tramping floor. Imagine his feelings when he returned and found that the help had constructed a tramping floor outside and had taken the bundles out there to tramp the grain out. Much of the grain had been lost on account of rain. While nothing specific is quoted that he said upon his return, the way the entry is made indicates that he may have used some language that would have been considered something less than a model of diction, had it been put in print. Since his first biographer was a minister, it was probably considered a minor point. These days, it, no doubt, would have been entered in its entirety—and some besides.

Washington was an experimenter. In March, 1760, he tried out alfalfa—called lucerne then. Several other times he tried it and had a big field of it in 1798. Of course, he did not know about its lime requirement and added to this, Mount Vernon soil is such that alfalfa did not feel at home there then—nor would it now.

Washington had the vision of fine country homes well landscaped and modernized and he worked for the best in country life.

Perhaps the most notable thing about his mental processes was his eagerness to learn. Imagine a past president, a commander-in-chief of the armies who had humbled the great Cornwallis, going back to his farm and counting representative samples of clover seed to determine the number in a pound!

Farm boys and girls may well worship the genius of Washington as a farmer for rooted in the soil was his greatest interest and this interest constitutes one of his far reaching contributions to American history.

UNDER THE 4-H FLAG

(Continued from page 228)

the trees and brush it was almost dark. Slowly they fought their way toward the base of the bluff, where matted vines and foliage menaced further progress. Suddenly they heard Jock's deep growl, then a volley of barking, which denoted game found.

The boys had pressed on in silence. Sombre and dark, the wind chill and penetrating, it had seemed as if the spirit of the great bluff itself resented the presence of intruders. Suddenly and without warning there was the crash of gunfire. A bullet sang perilously close to Bob's head, burying itself in a tree. Down dropped the explorers, to lie for a moment breathlessly listening, while Jock's savage barking rang in their ears.

"By George, that was close," whispered Bob. Then with a relieved laugh he arose. "Just some hunter," Bob reasoned, "who didn't know anyone was near. Probably shot at whatever Jock's after. Come on, Ted."

(Continued next week)

Michigan Farmer Club List

These Prices Subject To Change Without Notice

EXPLANATION:—The figures in the First column represent the regular price of the other publications.

The figures in the Second column give our price for subscription to The Michigan Farmer and the other publication for one year.

The figures in the Third column give the price at which other publications can be added if more than one is wanted in combination with The Michigan Farmer.

EXAMPLE:—We will send The Michigan Farmer and the Detroit Free Press one year for only \$4.25. If same party wishes Household it costs 15 cents extra.

Any number of papers can be added at the Third column price, if for the same family, and ordered at the same time.

ABOUT DAILY PAPERS:—Rates with papers are made only for subscribers living on R. F. D. routes or in towns where the daily paper does not maintain regular carrier service.

DAILIES—(6 a Week)

On R. F. D. Routes Only

Adrian Telegram	4.00	4.25	4.00
Ann Arbor Times News	3.00	3.25	2.75
Albion Evening Record	3.00	3.25	2.75
Battle Creek Enquirer News	4.00	4.25	3.75
Big Rapids Pioneer	3.00	3.25	2.75
Bay City Times Tribune	4.00	4.25	3.75
Coldwater Reporter	4.00	4.25	3.75
Detroit Free Press	4.00	4.25	3.75
Detroit News	4.00	4.25	3.75
Elkhart Truth (Indiana)	4.00	4.25	3.75
Flint Journal	4.00	4.25	3.75
Grand Rapids Press	4.00	4.25	3.75
Grand Rapids Herald	4.00	4.25	3.75
Jackson Citizens' Patriot	4.00	4.25	3.75
Kalamazoo Gazette	4.00	4.25	3.75
Lansing State Journal	4.00	4.25	3.75
Lansing Capitol News	4.00	4.25	3.75
Monroe News	3.00	3.25	2.75
Manistee News Advocate	5.00	5.00	4.75
Niles Daily Star	4.00	4.25	3.75
Owosso Argus Press	4.00	4.25	3.75
Port Huron Times Herald	4.00	4.25	3.75
Sault Ste. Marie Evening News	4.00	4.25	3.75
Saginaw News Courier	4.00	4.25	3.75
Traverse City Record Eagle	4.00	4.25	3.75
Toledo Daily Blade	2.50	2.75	2.25
Toledo News-Bee	2.50	2.75	2.25
Toledo Times	2.50	2.75	2.25
Fort Wayne News Sentinel	4.00	4.50	3.75
Fort Wayne Gazette	4.00	4.50	3.75
South Bend Tribune	5.00	5.25	4.75
Chicago Herald Examiner	5.00	5.25	4.75
Chicago Daily Drivers' Journal	5.00	5.50	5.00
Chicago Tribune	5.00	5.25	4.75

SEMI-WEEKLY—(2 a Week)

Chelsea Tribune	2.00	2.25	1.75
Mason County Enterprise	2.00	2.25	1.75

CATTLE, SHEEP, SWINE, POULTRY, ETC.

American Poultry Advocate	.50	.75	.30
American Sheep Breeder	1.50	1.60	1.25
American Thresherman	1.00	1.25	.50
Ancona World	.50	.75	.35
Bee Keeper's Review	1.00	1.25	.75
Better Homes & Gardens	.60	.80	.40
Breeder's Gazette	.50	.75	.35
Duroc Swine Breeder's Journal	.50	.75	.25
Everybody's Poultry Magazine	.75	1.00	.50
Farm & Dairy	1.00	1.25	.75
Farm Mechanics	.50	.75	.25

Fruits & Gardens	.50	.60	.25
Fruit Belt	.50	.75	.35
Gleanings in Bee Culture	1.00	1.35	.90
Guernsey Breeder's Journal	2.00	2.10	1.70
Hoard's Dairyman	.35	.85	.35
Holstein-Friesian Register	1.00	1.25	.75
Illustrated Mechanics	.25	.60	.15
Jersey Bulletin & Dairy World	2.00	2.10	1.75
Market Growers Journal	1.00	1.10	.60
National Poland China Journal	.50	.75	.35
Pet Stock Journal & Hares & Rabbits	1.00	1.15	.65
Poultry Farmer	.50	.75	.25
Poultry Item	1.00	1.25	.65
Poultry Success	.50	.65	.25
Poultry Tribune	.50	.75	.25
Power Farming	.50	.75	.30
Reliable Poultry Journal	.50	.75	.30
Standard Poultry Journal	.25	.55	.15
Swine Breeder's Journal	.50	.75	.25

MAGAZINES

American Boy	2.00	2.25	2.00
American Magazine	2.50	2.75	2.50
Boys' Life	2.00	2.10	1.75
Christian Herald	2.00	2.10	1.25
Colliers Weekly	2.00	2.25	1.50
Cosmopolitan	3.00	3.10	2.75
Delineator	2.50	2.60	2.25
Etude	2.00	2.10	1.75
Every Child's Magazine	2.00	2.10	1.75
Gentleman	2.00	2.10	1.75
Good Stories	.25	.65	.15
Good Housekeeping	3.00	3.25	2.75
Guide to Nature	1.50	1.70	1.50
Hearth & Home	.25	.65	.15
Home Friend	.20	.60	.10
Household	.25	.65	.15
Household Guest	.25	.65	.15
Hunter-Trapper	2.00	2.10	2.00
Hunting and Fishing	.50	.85	.35
Junior Home Little Folks	2.50	2.60	2.25
Literary Digest	4.00	4.35	4.00
McCall's	1.00	1.10	.75
McClure's	3.00	3.10	2.75
Modern Home Making	.25	.65	.15
Modern Priscilla	2.00	2.10	1.60
Mother's Home Life	.25	.65	.15
National Sportsman Magazine	1.00	1.10	.75
Ohio Teacher	1.25	1.50	1.25
Open Road	1.00	1.10	.75
Pathfinder	1.00	1.10	.50
People's Home Journal	.50	.65	.35
People's Popular Monthly	.25	.65	.15
Pictorial Review	1.50	1.60	1.00
Radio News	2.50	2.60	2.50
Science & Invention	2.50	2.70	2.50
Scientific American	4.00	4.25	4.00
Sportsman Digest	.50	.75	.35
Sunday School Times	2.00	2.10	2.00
Today's Housewife	.50	.60	.25
True Story	2.50	2.60	2.00
United Presbyterian	2.50	2.75	2.25
Violinist	2.00	2.10	1.35
Woman's Home Companion	1.00	1.10	.65
Woman's World	.50	.75	.30
Youth's Companion	2.00	2.10	1.50

Add \$1.00 to any second column price and The Michigan Farmer will be sent for five years. Add 50 cents and The Michigan Farmer will be sent for three years.

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Detroit, Mich.

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Gentlemen: Inclosed find \$..... for which send
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WORLD EVENTS IN PICTURES



A new German life-saving device is for those who are caught in sunken submarines.



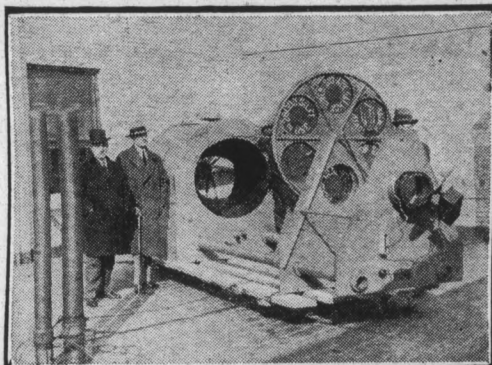
Last month seventy Canadian farmers started on a trip for Great Britain and Denmark under the auspices of the Canadian National Railways to study agricultural conditions on the other side.



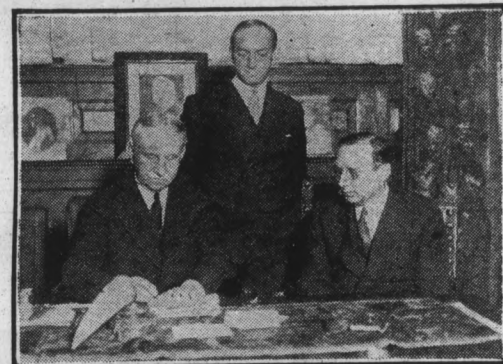
Here is evidence of the Americanization of Japan, showing the first Japanese subway.



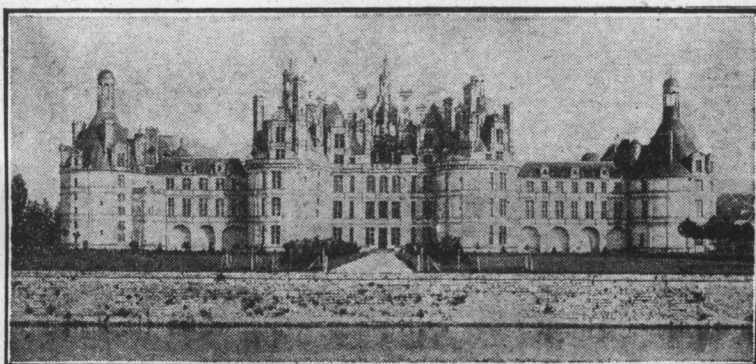
Gene Tunney, the heavyweight boxing champion of the world, keeps himself in trim by playing golf at Miami Beach, Florida.



A new machine has been devised to project advertising matter into the sky. It is called a cloud writer.



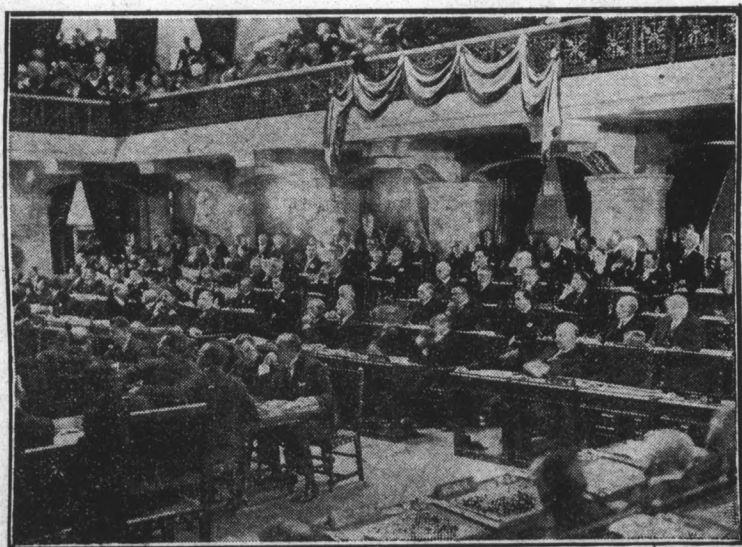
Mr. E. F. Albee signing contract which unites the Orpheum and Keith-Albee circuits, the largest theatrical merger of its kind.



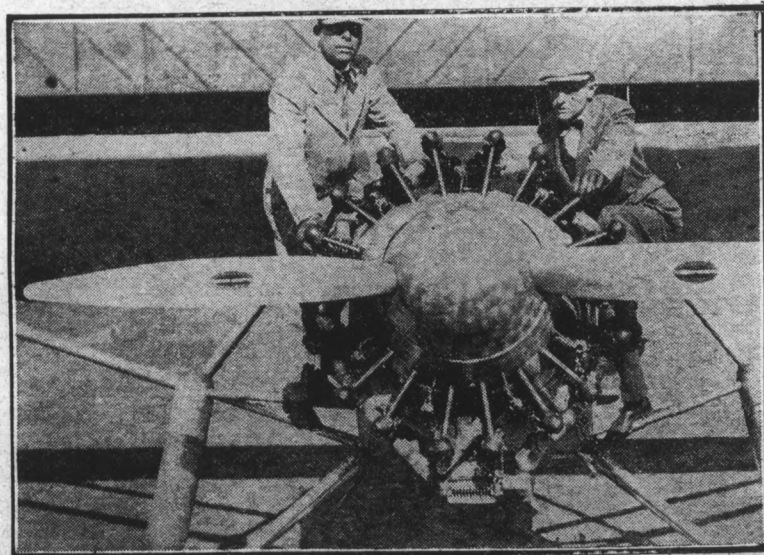
There is a dispute as to the ownership of the magnificent Chateau de Chambord near Paris. Among the claimants are the former Empress Zita of Austria, King Boris, and Prince Cyrille.



This shows the unloading from a special car of \$10,000,000 worth of gold shipped from New York on the S. S. Rochambeau for the Bank of France. It is one of the largest shipments on record.

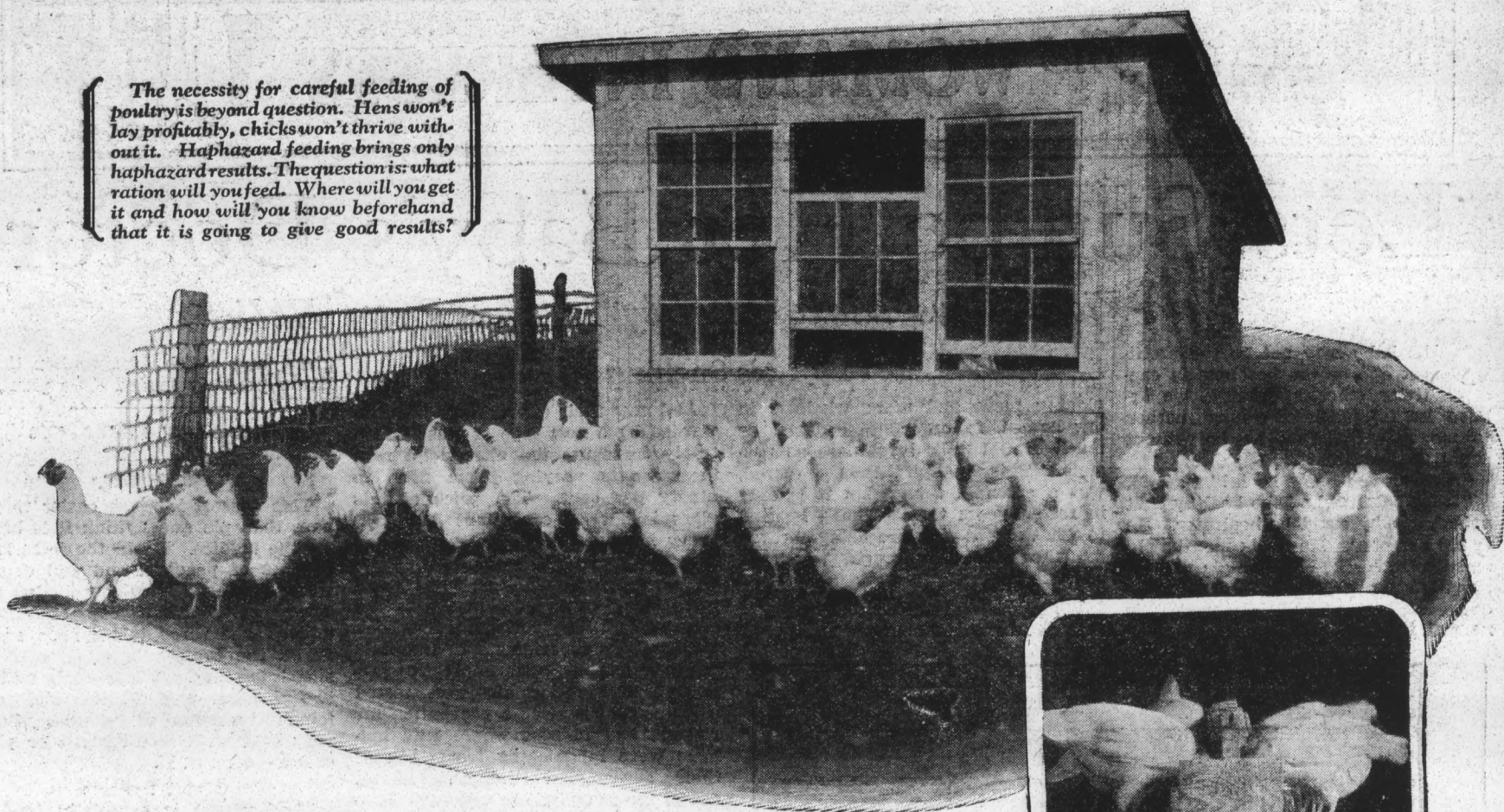


Delegates from twenty-one countries attended the Pan-American Congress at Havana, Cuba. The crowded galleries showed the interest that the people had in this Congress.



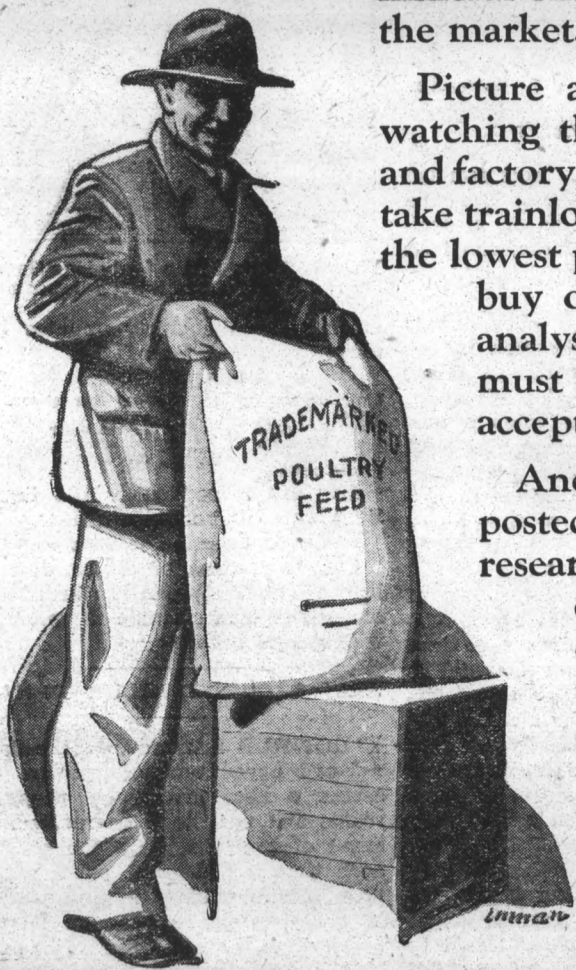
Lieutenant Joe Hart and Lieutenant L. Henley are shown looking over their plane which is an exact duplicate of Lindbergh's, in which they will endeavor to capture the flight endurance record.

The necessity for careful feeding of poultry is beyond question. Hens won't lay profitably, chicks won't thrive without it. Haphazard feeding brings only haphazard results. The question is: what ration will you feed. Where will you get it and how will you know beforehand that it is going to give good results?



Let Experts Mix Your Poultry Feed

The Trade-mark is the manufacturer's signature, your safe guide to reliable products.



IN THE composition of an ideal poultry feed there are many ingredients not grown on your own farm. Animal protein, dry buttermilk, mill by-products, organic mineral extracts, you must buy in the market.

Picture a crew of keen buyers, watching the output of every mill and factory, ready to pay cash. They take trainloads at a time; command the lowest possible price, but they buy only on rigid chemical analysis. Every ingredient must be choice or they don't accept it.

Another crew of experts, posted up to the minute on researches, combines these choice ingredients into a complete commercial feed. With modern power machinery they

mix a carload as cheaply as you could mix a few hundred pounds. The result is a mixed feed of *known* value. Every sack is the same. Good because it is *made* that way. Economical because of mass buying and mass production. *Trade-marked* to show who stands back of it.

If you should go into the market as an individual purchaser to buy a few hundred pounds of any of these ingredients, you could not secure either quality or price to compare with the purchases of these experts,

When you buy a high grade commercial mixed feed, it means that you have the most skilled buyers and the most expert students of feeding problems to mix your feed for you. By the economies of modern business they are able to furnish it at a lower cost than a feed of similar quality which you can mix yourself.

You Can Depend on Feeds You Buy from Advertisers in Michigan Farmer

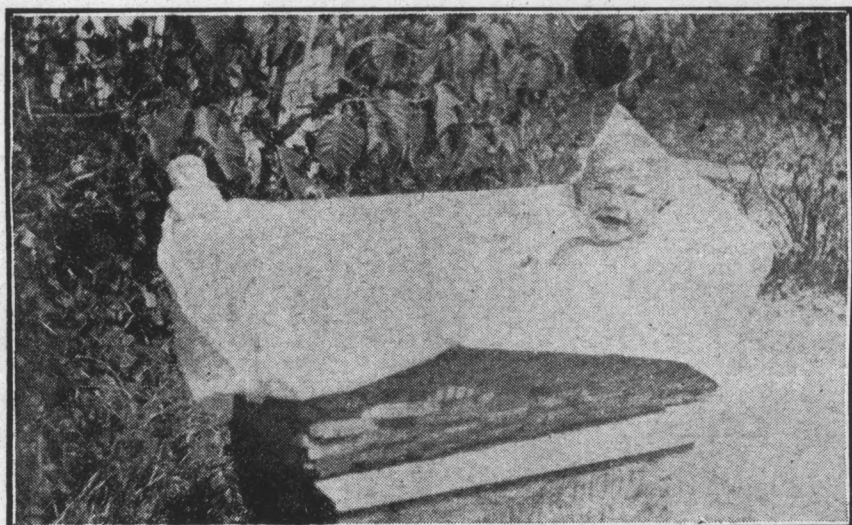
The WOMAN'S INTERESTS

Lets Sun be Her Baby's Doctor

Ultra-Violet Rays Make Healthy If Not Pretty Babies

OUR baby may not be the prettiest one or the best one in captivity (though, frankly, we believe he is)," said a young mother to me recently, "but he is without doubt the healthiest."

"How do you know he is?" I asked. "Why, because he is so healthy that nobody's baby could be healthier. He is 100 per cent. He is six months old and has never had one single pain of any kind in all his life. He has never once cried at night. His weight is normal. He and his food get along."



Sunshine Babies Are Usually Happy Babies

To be sure, he looked the healthiest baby in captivity, all right.

"But what makes his skin so dark?" I asked, in the fashion of Little Red Riding Hood. The mother had that pink-and-white school-girl complexion. "I suppose his father is a brunette?"

"Oh, no, indeed, my husband is fairer than I am." Then she added proudly, "And so would this mite be if he had a chance."

She confided to me then the secret of her child's complexion—and his health. It was the sun! That natural tonic of the ages and the universe. Every morning, since his advent from the hospital when he was two weeks old, the baby has had a sun-bath. On the back lawn he has his special bassinets, every bit as essential (if less elaborate) as the one where he spends his nights in the nursery, though it was formerly a laundry basket. In this basket, unsheltered and completely naked, he spends one hour out of twenty-four. This sunny hour is usually the one immediately following his morning bath. He has his bottle here, and afterwards surveys the broad open spaces of the world from this vantage point.

This baby has never had even a slight cold or, as his mother said, a "pain of any kind." His skin is as brown as a little Mexican, though he has never been blistered or suffered from too much heat from the sun's rays. His parents live in California, where the "sun forever shines" and where there are few months of the year when it is too cold to be outside, unclothed.

However, the time has come when practically every child can have his "place in the sun," regardless of the frigidity of the climate in which he dwells. For years past we have been

placing more and more windows in our homes, in order to capture as much of Old Sol's brightness as possible. This sunlight, thus captured, was a splendid thing; but it is only in recent years that we have learned to what extent we were being cheated by the glass through which it streamed.

When scientists discovered the fact that the invisible ultra-violet rays of

By Lois Snelling

And now their efforts have been rewarded by a new type of glass which freely transmits the ultra-violet rays in amounts varying from fifty to ninety per cent. The price of this glass is not so exorbitant but that every home of moderate means may contain at least one window. Certainly, the years would soon pay its full price many times over in the saving of doctor's bills. This glass has been tried out by experiments in hospitals and schoolrooms with most satisfactory results. It has also been tested in chicken-houses, as a prevention for rickets, and in zoos where wild animals were languishing from lack of their accustomed sunlight. In all cases, the recipients of the rays have taken on new life and prospered.

Recognizing the curative and preventive value of sunlight, even in a "denatured" state, we can readily understand its increased power when the ultra-violet rays are also present, if we know that these rays (which are only about one per cent of the whole) are more necessary to bodily growth and health than all the visible rays of the sun put together.

The child must be accustomed to his sun-bath by gradation. The "healthiest baby in captivity," referred to above, received his first bath, of only a few minutes duration, when he was two weeks old. These minutes were added to each day, until now, at six months, he spends an hour each day absorbing into his little growing muscles and bones, the health-giving ultra-violet rays.

Give your child a sun-bath each day, either outdoors or behind penetrable

glass, and watch him or her thrive like a properly tended little plant.

READERS' FAVORITES

Peach Whip

This dessert is much easier to prepare than pie and I think it is better for the kiddies. Drain the juice from a quart of peaches, and add enough water to make two cups. In this syrup cook one-half cup of minute tapioca and three tablespoons sugar. When the tapioca is clear, add the sliced peaches. When cool, fold in two beaten egg whites and one-fourth teaspoon of vanilla. Serve very cold with soft custard or plain cream.—Mrs. G. H.

Kraut Peppers

My husband is especially fond of peppers fixed this way. First I remove the seed and partitions and par-boil for five minutes. Fill each with a dressing made from one cup soft bread crumbs, one cup sauerkraut, two tablespoons of minced onions, and a sprinkling of paprika. Cover the tops with bread crumbs, place in a baking dish with one cup of meat



This Anaemic Little Lady Has Decided to Take Old Doctor Sol's Treatment

stock and bake thirty minutes in a moderate oven.—Mrs. L. I.

Buttermilk Cake

1 cup sugar	1 1/2 cup flour or corn
1 cup cream	1 cup flour
1 cup buttermilk	1 tb. hot water
1 tsp. cinnamon	1 tsp. nutmeg
1 tsp. cloves	1/2 cup raisins
3/4 cup butter	

Mix dry ingredients. Add liquids. Beat well. Bake one-half hour.

Cheese-Marmalade Sandwich

Cut thin slices of either white or brown bread. Spread the bread with marmalade and sprinkle it generously with grated cheese.

KEEP BROWNED FLOUR ON HAND

BROWNED flour adds to the flavor and appearance of gravies and seems a necessity when preparing roasts and poultry to be roasted. Instead of browning only enough flour each time it is needed, put a pint of flour into a baking tin and place it in a hot oven. When the flour is browned to the color you want, put it into an empty baking powder can. You'll find it a time saver to have browned flour on hand.—C. H. F.

Echoes From Farmers' Week

Women Show Great Interest in Child Problems

DURING Farmer's Week, several hundred wide-awake farm women hopped into cars along beside friend husband and motored down to Michigan State College to spend a day or two or three, gathering information, inspiration, and enthusiasm for their job of home-making. The final enrollment will indicate that there were more in attendance than ever before.

Well rounded programs on the various subjects for home-making occupied the attention of these home makers in the morning and they met in general session in the afternoon. Those women who were mothers of children were particularly interested in Dr. Ada Arlitt, child specialist of the University of Cincinnati. According to Dr. Arlitt, there are reasons back of all kinds of child behavior. It is the parents' problems to search-out these reasons if they are to intelligently train their children. Many times they can trace these reasons to their own lack of understanding of the child.

Too Many Don'ts

Don'ts, contended Dr. Arlitt, call attention to trying something the child may not have thought of before. After he has done something, a "don't" calls attention to the bad characteristics and often fixes it as a habit. In

such cases, Dr. Arlitt recommended that something interesting for the child to do be substituted or, in dealing with stubborn children, the idea be sold to them to do what the parent wants them to do.

After a certain age, a child enjoys being the center of attention in the family and often resorts to doing wrong things to hold this attention. Especially is this true when a new baby comes into the home. At such times, Dr. Arlitt advised, permitting the child to do simple things in caring for the new baby so that he or she would feel that the baby belonged in part to them.

Dr. Arlitt spoke of the value of praise in establishing the right relationship with the child, but advised that the deed rather than the child be praised. Punishment, the specialists contended, should be administered like medicine, only occasionally and in small doses. It should fit the crime and not be merely a series of slaps for everything. Particularly with very young children, it should follow on the heels of the wrong doing for children's memories are not long. To punish without an explanation is apt to result in the child being afraid to do a thing when it is perfectly right, for he is not able to differentiate.

(Continued on page 236)

They Profit by Mistakes

By Our Readers

THE greatest mistake I made in the beginning of my housekeeping career, was the over-emphasizing of economy and self denial. Being a farmer's wife with a desire to aid my husband in his enterprise, I began going without the many little things every woman wants, in order that there might be more money for the purchase of fertilizer, machinery, and better stock. In fact I went so far as to allow my personal appearance to become shabby and I used many makeshifts which perhaps were money savers but not usually labor savers.

As I look back, I do not consider that these sacrifices assisted as much as I thought because, in time, they made me feel that I was living the life of a martyr to such an extent that I could not be a true pal and helpmate to my husband.

Now that these makeshifts are being replaced by real conveniences and my wardrobe supplied with a few suitable dresses, I find I have more time for outside interests and have a new outlook on life. Although these changes cost a few extra dollars each year, I am certain my husband feels doubly repaid by possessing a happy and contented partner who can rejoice in his gains and sympathize in times of failure.—Mrs. E. T., Van Buren County.

Planted Too Much Garden

Although I am not a young, inexperienced housekeeper, I still make many mistakes. After keeping house in the city for more than twenty years, we moved to a farm in Macomb County and during my first year there, it seemed like I spent most of my time making and correcting mistakes. It took me a year to learn that gardening on paper is a very different proposition than the reality. The first spring I bought a great many seeds and really enjoyed helping in the planting. But in the summer I tried

to attend all of the committee meetings and bridge parties that I formally did when I lived in town. I only gave my flowers and garden my spare time which was very little. My flower garden was a miserable failure due to neglect. If I had only planted a small bed, it would have been more worth while.—Mrs. L. H. B., Macomb County.

Trick in Rendering Lard

I have never been successful in rendering lard. It always had a queer taste and, if there was any quantity of it, it did not keep long without becoming rancid.

Last week, mother happened to be with me when I put the big kettles of fat off the stove to heat. I was quite surprised after finishing up some other work to come back to the stove and find the covers I had so carefully placed on each kettle, removed.

"Always leave the kettle uncovered when trying out lard," was mother's advice. The result was that this batch is much superior to any that I had ever tried out before. In covering the kettles, the steam had no chance to escape thus keeping a certain amount of water in the lard.—Mrs. S. M., Jackson County.

Saves on Wash Day

I used to make, wash, and iron bloomers for my three little girls, but now I have learned that crepe cloth is cheaper, requires no ironing and is as durable as any other material. If I use white crepe, I always dry in the sun to keep them white.

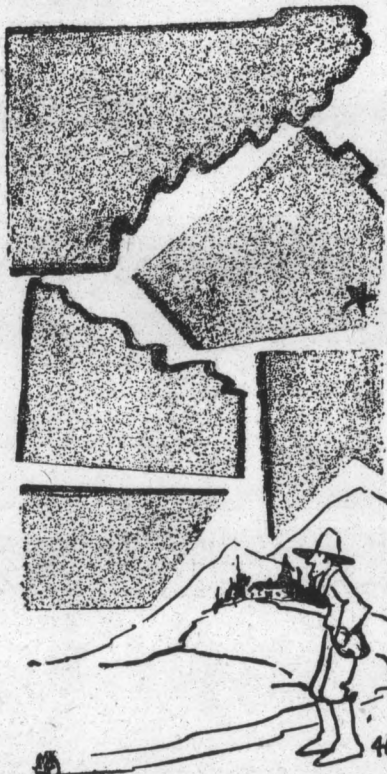
Like many young housewives I bought cotton and woolen blankets because they were cheaper than all wool. But I have found that woolen blankets last twice as long as the cotton ones and thus are more economical. Even when worn, the woolen ones can be made over into warm blankets for children or covered with silkoline for soft bed covers, that are

light in weight and easily washed.—Mrs. C. E. D., Calhoun County.

For Our Little Folks

STATE SECRETS

This state has lots of mountaineers. That just stay put for years and years; It has a city, Chatanooga—! Whoa! That's 'most naming it for you!



The pieces of this puzzle when correctly put together, make a map of the state which this verse describes. The star indicates the capitol. When you have solved the secret of which state this is, write me all you can about the state and its capitol.—Aunt Martha.

The answer to last week's secret was North Carolina and its capitol is Raleigh.

WHO AM I?

No. 1. My coat is glossy, black. My body is about seventeen inches long, and when I extend my wings they measure two feet from tip to tip. I eat worms, insects, shellfish, fruits, seeds, and the eggs and nestlings of other birds. I build my bulky nest with small sticks and twigs lined with grass, bark, and leaves. The kingbirds do not like me and often chase me high into the air, pecking at me if I cannot keep out of their way. Can you guess who I am?

Study over all your feathered acquaintances and guess which one answers to this description. Next week watch for the answer.

JOHNNY'S OPINION OF WASHINGTON

I like to read of Washington And all the things he did, About the cherry tree he cut When he was just a kid. Too bad the critics all agree That there is nothing to it, That someone just invented it, He didn't really do it. But then we know the other tale We've often read about him, Of how he tried to break the colt That tried in vain to rout him. The colt that was his mother's pride, Unused to rein or rider, He thought she would be very glad When he rode up beside her. How neither boy nor colt gave in, Refusing to be humbled, Till lifeless dropped the panting steed And rider headlong tumbled. Gone all his dreams of conquering power, His dreams of pride and glory, Poor George was just a naughty boy Who had to say, "I'm sorry." It's comforting to boys like us, It helps us to be strong To know that even Washington Did sometimes get in wrong. —Mildred M. North.



Use this department to help solve your household problems. Address your letters to Martha Cole, Michigan Farmer, Detroit, Michigan.

AU GRATIN POTATOES

I would very much like to know how to make au gratin potatoes. My family gets tired of potatoes served the same way.—Mrs. G. Y.

There are so many ways to serve potatoes that you should not permit your family to become tired of this healthy vegetable. For au gratin potatoes use:

2½ cups diced cooked potatoes	¾ cup dry bread crumbs
1½ tbs. flour	¾ cup grated American cheese
3 tbs. butter	1½ cups milk
1 tsp. minced green pepper	1 tsp. salt

Make a cream sauce of the flour, butter, milk, and seasonings, add the green peppers and cheese. Cook until the cheese is melted, then pour over the potatoes. Put in buttered baking dish, cover with bread crumbs, dot with butter and bits of cheese, and brown in oven.

If you will send five cents in stamps or coin, I will be glad to send you our bulletin which gives fifty different ways of serving potatoes.

RUST ON TABLE LINEN

When washing, I left my table cloth stand in the tub over night and now it is covered with rust spots. What can I do to remove them?—Mrs. L. M. There is a number of things that

will remove rust stains, the most common one being lemon juice or lemon juice and salt.

First, spread the stained piece over a vessel of boiling water. Then squeeze the lemon juice on the stain. After a few minutes rinse the stain and repeat the process. This method is rather slow but does not injure delicate white cotton or linen fabrics.

For lemon juice and salt, first sprinkle the stain with salt, moisten with lemon juice and place in the sun. Add more lemon juice if necessary.

Cream of tartar will also remove rust stains. Boil the stained spots in a solution of four teaspoonsful to one pint of water until the stains disappear.

RUG BASE STICKS TO FLOOR

Before we moved into the house where we now live someone glued a rug to the floor. It was glued only around the edges but a part of the felt base still sticks to the floor. What can I do to remove it?—Mrs. A. R.

If this felt base does not yield to an application of warm soap and water, you might sponge it over with vinegar, letting it soak for a minute or two. The vinegar would undoubtedly spot the varnish finish but I note that you intend to re-varnish your floor. Gasoline is also good for cutting glue but be sure to use it under proper precautions for fire.

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FOUR-H CLUB LUNCHES MAKE BIG HIT WITH PUPILS

NOT enough parents or teachers realize that good hot lunches can be served with meagre equipment and low cost at most any school. At the John A. Doelle Agricultural School, one hundred and fifty pupils are served to one lunch each day at an actual cost of ten cents for an eight weeks' period.

Miss Helen Peterson, the domestic science teacher has a systematic co-operative program which represents the best ideas of the state club program and the accumulation of four years of experience in our local situation. In the program, days are assigned when certain girls prepare the

the hands until dry. The specialist also demonstrated how water spots could be removed from silk by gently stroking with a nickel.

In explaining the changing family life, Professor H. C. Coffman, of the College, assigned the reason to the severing of the economic, protective, religious, and fellowship bonds of the family. He expressed the belief that the one hope of holding the family as a unit in the future lay in strengthening the family bonds of fellowship. The right kind of education and religion, he said, must develop personality and character in our boys and girls from within and not from without.

Jealousy, guilt, and fear of sex and poverty are the principal factors that



Hot School Lunches Help to Grow Healthy Minds and Bodies

food while others serve. Still others keep the records and wash the dishes. Some bring milk, others bring bone meat for stews, others bring potatoes, and miscellaneous vegetables. To add variety in supplementing the home supplies, canned tomatoes, canned corn, and cocoa are purchased in bulk lots.

In the matter of equipment the following is about all that is necessary: kerosene or wood stove, large kettles, ladle, mixing dishes, spoons, and a large spoon or a dipper for serving. The pupils can bring their own bowls, cups, and spoons. One good play or social will raise enough money to purchase the necessary equipment. The dividends on this money invested and energy expended will be richly rewarded in better health of the children.

Information regarding hot lunch club work may be had free of charge by writing to Emma DuBord, Assistant State Club Leader, Court House, Marquette, Mich. Or if you are in the lower peninsula, write to A. G. Ketunen, State Club Leader, Michigan State College,—P. P. Banker.

ECHOES FROM FARMERS' WEEK

(Continued from page 234)

When it comes to the adolescent child, there should be few punishments but rather an attempt made at cooperation. A child at thirteen is usually ready to assume the entire responsibility for his actions and should be put upon his own responsibility where it is possible.

Some do's and don'ts in washing the new silks and rayons which are made in so many shades and colors were discussed by Mrs. Louise Huston. In using the specially prepared soaps and soap flakes that are on the market, she recommended carefully following the printed directions. To remove grease spots, she suggested applying dry suds as gently as cold cream is applied to the face and then squeezing and rinsing carefully. All delicate silks and georgettes should be squeezed to eliminate as much water as possible and kneaded in a turkish towel. The material should then be shaken in

hinder wholesome family living.

Every woman that crowded the little theatre was interested in Emma Garrison's discussion of art needle work in the home. She attributed the revival of interest in the old crafts to our reaction to things made by machinery and our revival of interest in colonial things. With our complex lives, she recommended keeping our home simple and selecting only a few really fine pieces of artistic needle work.

There was a reward for the early comers to each of these sessions of a half hour of excellent music. The music department of the college is to be complimented on the very fine programs arranged for each session.

FERN LIKES SHADE, NOT DARK CORNERS

BECAUSE a fern is able to grow in the shade, is no alibi for sticking it away in a dark corner of a room and expecting it to grow as well as it would in a window with some sunlight. But that ability of the fern to get on with less sunlight than some other plants need, adapts it for use as a house plant.

Best of all the varieties is the old fashioned Boston fern with its long, graceful fronds. But it is often too large for the average house, where the dwarf Boston or "Teddy Junior" will suit. These are all the simpler leaved Boston ferns. There are many, however, which have the finely and delicately divided leaves, such as Whitman's fern. They are not, as a rule, as satisfactory as the Boston ferns.

All ferns prefer a sandy, coarse, well-drained soil, so we can make up an excellent fern soil by mixing leaf mold and a light, sandy loam. To this, for fertilizer, we may add a little well-rotted manure or a small amount of bone meal. Drainage may be secured by putting in an abundant quantity of broken pot in the bottom of each pot.

Freddy: There's more unnatural things at our house than there is at yours, Mary, because my father's got a wooden leg.

Mary: Pshaw, that's nothing, my sister's got a cedar chest.



FOR COLDS **BAYER** **ASPIRIN**

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POULTRY NOTES

POULTRY does not receive the attention on Wexford County Farms that it deserves," stated Mr. Hannah at the two day poultry school conducted at Cadillac last Tuesday and Wednesday. "Your census figures show that you have about 60,000 birds in the county. This divided equally among your 1,200 farms gives an average of fifty per farm. It is very difficult to make a flock of fifty birds pay. It is not an economical flock to handle, it is a flock expensive to house, difficult to properly house, and not large enough to warrant much consideration. With properly designed houses and fixtures it is as easy to care for 200 or more as for forty or fifty."

The poultry business is the third largest agricultural business in the United States. In 1927 the sale of poultry products amounted to \$1,319,000,000. Michigan produced six per cent of this grand total. There is money in the poultry business if you go at it in the right way. If you have a flock of 100 birds and they do not return you an average of \$2.50 per bird over and above the market value of the cost of all feeds consumed, whether raised or purchased there is something wrong with your birds, your house, your feeding, or yourself. Many poultrymen secure returns of \$3.00 and \$4.00 over cost of feed per bird under average marketing conditions.

The poultry business is dependent on four very important factors. The success one has with poultry is very largely dependent on the considerations each of these factors receives:

1. Well bred birds.
2. Well Housed for Winter Laying.
3. Well Fed.
4. Kept free from diseases.

At the present time and during the past few years little if any money has been made in the production of meat. The profit in poultry must be made in the sale of eggs. The sale of meat is of secondary consideration.

In order to make a reasonable profit on eggs, the flock must come into and maintain a satisfactory production about October 15th for the rest of the winter.

A satisfactory poultry house is one that is comfortable for the birds and is sanitary. The above conditions can be met if the house is tight on three sides so as to eliminate drafts, is well lighted, well ventilated, and easily kept clean.

In housing birds one should consider the number of birds the building will house comfortably. In general, for the heavy birds four square feet of floor space should be provided while for the lighter breeds three square feet is sufficient.—K. O.

HEAD WOUNDS BLEED

My hens pick each other's heads and make them bleed. Please give cause and remedy, if any. Am feeding egg mash of 100 lbs. each of corn meal, ground oats, bran, and middlings, also 100 lbs. meat scrap, 5 lbs. salt. Oats in the morning and wheat, barley, and buckwheat at night, made of ½ wheat and ½ each of barley and buckwheat.—W. N. C.

The ration you are using would not be responsible for the hens pecking each other's heads. Even with the best of balanced rations the hens will occasionally fight and draw blood and then other members of the flock will peck at the wounds and keep them bleeding until they dry down and gradually heal. In our experience this has occurred more often with White Leghorns than with Barred Rocks. Sometimes rubbing the combs with camphorated vaseline will aid in heal-

ing the wounds and prevent the pecking. Often they heal up and return to normal condition without any treatment. If a comb continues to bleed it pays to place adrenalin chloride on the wound or the bird may be bled white and die from weakness. Dry mash, green feed, clean scratching litter and everything that keeps the hens from centering their attention on each other is a help in preventing fighting and the resulting head wounds.

PROBABLY CHICKENPOX

Our hens have become infected with a yellow scale on their combs and wattles. When we first noticed one in this condition we isolated her at once. Today we find another in the same shape and another just beginning. These hens are alert and eat well. Do not droop. We are giving cod liver oil in mash, potassium permanganate in drinking water and cleaning combs and wattles with lysol solution. What is the trouble? Is there a cure?—M. G.

The sores on the combs and wattles are probably due to chickenpox. Touch the sores with iodine to destroy the infection and the birds may soon recover. As the birds are alert and appear perfectly healthy, they probably have a mild form of chickenpox and will soon return to normal.

SURGERY FOR ROUP

Can you tell me what is wrong with my hens? Just one side of their heads swell, till the eyes close and then the other side does the same.—D. C. W.

The swelling on the side of the head is probably caused by roup. When the face swells until the eye is closed it means that a large amount of thick matter has backed up and it can only be removed by surgery. This means cutting the lump with a sharp instrument like a safety razor blade. Then pick out the matter with the point of an old penknife. Inject one of the soothing commercial roup cures into the wound and pack it with a bit of cotton to keep the cut open so it will heal from the inside. Commercial disinfectants or iodine can be used but cause the bird more pain than the commercial roup cures which contain healing oils as well as disinfectants.

Treatment of this kind is hard on the bird and takes time. The wound may need to be cleansed and dressed several times. Roup should be controlled by preventing the colds which clog the nostrils and cause accumulation of matter in the side of the face. The word "roup" seems to describe a great variety of troubles more or less severe. The hatchet is probably the best remedy for the serious cases and the advisability of treating other cases depends on the poultryman's time and the condition and value of the birds to be treated.

NEWS AND VIEWS

(Continued from page 220)

that you have got the world with a fence around it by being so content with your occupation and living on the homestead." He explains that his farm is located just eleven miles from the Detroit City Hall and that his is the only family from his old silo filling gang that is still farming. He writes, "The rest have all sold their farms for lots and moved into swell city homes, so swell that we just can't have our old house dances and parties any more and that means that we don't see our old neighbors much."

Well, that's one thing that we don't need to worry about here at Ingle-side. We aren't in danger of being swallowed up by any omniverous metropolis.

The American death rate has been decreasing more rapidly in the cities than in rural districts.

Twenty million pounds of explosives are used yearly on farms in this country.

THE MINUS AND PLUS OF POULTRY PROFITS



FOR POULTRY

OF

Hens minus Oyster Shell are hens minus eggs.

* * * *

To put the plus into poultry raising, keep Pilot Brand Oyster Shell-Flake before your flock all the time. A more than 98% pure Calcium Carbonate content makes it rich in eggshell material. With more eggshell material your hens can produce more eggs, and make themselves meatier, stronger-boned fowl.

The majority of the successful poultry men in the country have realized the "plusage" of Pilot Brand for years. They always say "Pilot Brand," because it is a sure way to get purified, triple-screened, odorless, wasteless Oyster Shell always. One bag of Pilot Brand is just as good as another.

OYSTER SHELL PRODUCTS CORPORATION

Shell Building

St. Louis, Mo.



HUNDERMAN CHICKS

Our Chicks are Hatched from Free Farm Range Breeders

Every chick is Michigan Accredited which means it is from breeders that have passed the official inspection of poultry specialists under the supervision of Michigan State Poultry Improvement associations. Refer you to State Commercial Saving Bank. Order from this ad.

	25	50	100	500	1,000
S. C. White & S. C. Brown Leghorns	\$3.25	\$6.25	\$12.00	\$57.00	\$110
Barred Rocks	5.00	9.50	16.00	77.50	150
S. C. Reds	4.00	7.75	15.00	72.50	140
Light Mixed	3.00	4.50	8.00		
Heavy Mixed	3.75	6.50	12.00		

10% down books your order—100% live delivery prepaid. Get our free catalog. It tells all about our special mated grades. Write for it.

HUNDERMAN BROTHERS

R. R. 3, Box 50

ZEELAND, MICH.



Increase Your Profits With Arrowhead Poultry Farm Chicks

S. C. Wh. and Br. Leghorns, Br. and Wh. Rocks, R. C. and S. C. Rd. I. Reds, Wh. Wyandottes and Buff Orpingtons. Our Br. Rocks leading the heavy breeds at the Chicago Int. laying contest (last report). Folders and prices on request.

Arrowhead Poultry Farm Hatcheries at Montrose, Birch Run and Lapeer, Mich.

CARLETON MICHIGAN ACCREDITED CHICKS

Rugged, vigorous chicks that will live and grow. All flocks and hatchery Michigan Accredited. Send for our free catalog, it tells all about our stock and prices. We hatch B. P. Rocks, R. I. Reds and S. C. White Leghorns.

CARLETON HATCHERY, Carleton, Mich.

HOLSTEINS - Dependable

Superior in production, regular in calving, noted for size and vigor, consistent in profits returned—Holsteins are known as the most dependable of all dairy cows.

Write for literature Extension Service. The HOLSTEIN FRIESIAN ASSOCIATION of AMERICA 230 East Ohio Street Chicago, Illinois

BEEES PAY BIG—EASY TO KEEP

We will tell you how. Write today for handsome free booklet. Tell us if you keep bees now. Here is a bargain: Gleanings in Bee Culture, monthly magazine, 2 years, \$1.00. "Starting Right with Bees," a book with 128 pages, 124 illustrations, and Gleanings in Bee Culture, 2 years, both \$1.50. These will absolutely teach you beekeeping. The A. I. Root Co., 603 Liberty St., Medina, O

FISH FOR LENT

100 lbs. net weight of fish—Choice frozen dressed Herring \$5.75; skinned dressed headless Herring \$10.00; Halibut dressed headless \$15.00; new winter caught Yellow Pike \$12.00; round Pickerel \$6.75; dressed headless Pickerel \$9.00; Salmon dressed headless \$14.50; Lake Trout dressed \$22.00; Haddock Fillets parchment wrapped, all meat, no bones, 15 lb. boxes \$2.25; Steak Cod dressed headless \$11.00; Mackerel \$10.00. Remit with order. Package charge 30c per hundred pounds additional. Orders for less than 100 lb. lots ½c per pound more. Order direct from this ad and save time, or send for complete list. Address: WISCONSIN FISHING COMPANY, Green Bay, Wis., Dept. 1. Over 25 years honest dealing insures you complete satisfaction.



100 Lbs. Net—Frozen large dressed Herring, \$6.00; round Pickerel, \$7.00; headless Pickerel, \$9.00; yellow Pike \$12.00; Salmon \$12.50; Tullibee Whitefish \$9.50. Remit with order. Package charge 30c per 100 lbs. We charge ½c per lb. more in less than 100-lb. lots. Send for price list of all varieties fish.

Consumers Fish Co., Green Bay, Wis.

FISH New Winter Caught, Zero Frozen, Guaranteed to reach you in good condition by Express. Packed in boxes 125 lb. shipping weight, 100 lbs. net weight of fish. Immediate shipment. Mullet, Large \$5.50; Pickerel, Round \$7.00; Headless, Dressed \$8.50; Wall-Eyed Yellow Pike \$12.00; Tullibee Whitefish \$8.00; Small Dressed Whitefish \$11.00; Large dressed Whitefish \$14.00; New Coast Frozen Salmon, Headless, Dressed \$13.00; Halibut, Headless, Dressed \$16.50. Package charge 30c per 100 lbs. or less extra. Prices ½c per lb. more on less than 100-lb. Write for Complete Price List of all varieties.

JOHNSON FISH CO., Green Bay, Wis.

WOLVERINE S.C. WHITE LEGHORN
BLOOD 100% SAFE ARRIVAL
WILL GUARANTEED
TELL

BABY CHICKS
MICHIGAN ACCREDITED

FOR WINTER EGG PRODUCERS
 Get our Large Leghorns, the birds with large combs that produce the Large Chalk White Eggs

Send for Our 1928 Catalog
 Tells all about our chicks and breeding stock
 EGG BRED SINCE 1910

For 18 years we have specialized in the production of S. C. White Leghorns, and breed no other variety. All our time, thought, and energy in selecting and mating has been devoted to our Leghorns. You are assured of very desirable stock.

100% LIVE ARRIVAL GUARANTEED
WOLVERINE HATCHERY AND FARMS
 H. P. WIERSMA, Owner and Breeder, Dept. 3, Zeeland, Mich.

Pioneer Leghorns

Have been bred for high egg production for many generations. They are particularly well adapted to Commercial egg farms. Their large size and rugged constitution enable them to stand up under extreme conditions. Every male and female inspected by authorized state inspectors supervised by Michigan State College. The free catalog tells all about them.

MICHIGAN ACCREDITED—PURE BARRON STRAIN

Our catalog shows pedigrees and gives a full description of the pen we imported direct from Tom Barron, England. The males in this pen were out of a 298 egg hen that laid eggs weighing 30 ounces to the dozen and were sired by a 301 egg male. The females records range from 259 to 271. This is the foundation you get in Pioneer Leghorns. Many males direct from this pen now head our matings. We are Breeders and have spent many years with this one strain.

Write for Special Discount Now
PIONEER POULTRY FARM R. No. 10, Box 10 Holland, Michigan

MICHIGAN ACCREDITED CHICKS

Buy your chicks from heavy laying flocks that are officially accredited by inspectors supervised by Michigan State College and of prize winners at the Holland Poultry Show, having the best display on Barred Rocks in the production class. White and Brown Leghorns, Anconas, Barred Rocks, S. C. R. I. Reds. 100% live delivery. Postpaid. Send at once for free catalogue. Full particulars and detailed prices.

HILLVIEW HATCHERY, C. BOVEN, Prop., HOLLAND, Mich., R. 8, Box M

SILER'S STANDARD-BRED CHICKS
BLOOD-TESTED

Buy STANDARD-BRED BLOOD-TESTED chicks from ACCREDITED flocks, headed by imported PEDIGREED males, with HIGH egg records. Each chick SELECTED for strength and vitality. We SPECIALIZE in the two most PROFITABLE breeds known.

Barred Plymouth Rocks and S. C. White Leghorns
 Our prices are right, our catalog is FREE

SILER HATCHERY, Box A, DUNDEE, MICHIGAN

SUPERIOR BRED CHICKS

Superior Leghorns are those Michigan Accredited Leghorns that for years have demonstrated their ability to make good under actual farm conditions. Careful breeding on our modern breeding plant has resulted in remarkable egg production of this strain. Special Discount now.

GET OUR BIG 64 PAGE CATALOG—IT'S FREE

See in pictures our modern breeding and trapping plant 600 pullets in R. O. P. Record of 285 in R. O. P. last year. Every breeder inspected and passed by authorized state inspectors. Hanson, Tancered, and Barron bloodlines carefully blended in Superior Strains.

SUPERIOR POULTRY FARMS, INC. Box 360, Zeeland, Michigan

DUNDEE MICHIGAN ACCREDITED CHICKS

STOCK ALL BLOOD-TESTED FOR WHITE DIARRHEA FOR THE PAST FOUR YEARS. You can save money by ordering Dundee Pure-Bred, Mich. Accredited and Blood-Tested Chicks. We hatch B. P. Rocks, R. I. Reds, and S. C. White Leghorns. Write for 1928 Catalog giving all details of our matings and full directions on how to raise baby chicks for greater profits. We guarantee 100% live delivery.

DUNDEE HATCHERY & POULTRY FARMS — DUNDEE, MICHIGAN

PROFIT PRODUCING CHICKS

Michigan Accredited Chicks that are bred from proven blood lines. Every breeder wears a sealed leg band indicating official approval by authorized state inspectors. Immediate shipment.

BIG DISCOUNT NOW! PAY \$1.00 DOWN—BALANCE C. O. D.
 Pay for your chicks when you get them. Send \$1.00 and we will ship C. O. D. Get our big new catalog. It is free. It will help you. Your choice of three profitable breeds. 100% live delivery guaranteed.

BRUMMER FREDRICKSON POULTRY FARM, Box 20, Holland, Mich.

R. 8 Varieties
O. P. CHICKS

Our Pure Blood —SELECTED CHICKS —BIG EARLY ORDER —DISCOUNTS—15 VARIETIES

This year we introduce to you our Record of performance pedigree male matings up to 316 egg records direct from British Columbia and Ontario, Canada, including bloodtested, trapnested pedigree White Leghorn matings, 220 to 313 egg records. Winners of many prizes. Every bird standard culled. Get FREE circular of chicks, hatching eggs, and brooders before buying elsewhere. Broiler chicks 9c up.

Beckman Hatchery, Box 57, Grand Rapids, Mich.

VILLAGE VIEW Chicks direct from farm to YOU

Write today for complete information about our large English type S. C. White Leghorns and Barred Rocks. Carefully bred strains that are produced to make good winter layers on your farm. Every breeder carefully selected for size and egg production.

FULLY 80% OF OUR CHICKS IN PREVIOUS YEARS HAVE BEEN SOLD WITHIN 20 MILES FROM OUR HATCHERY

Free catalog gives low prices. Before you order your Chicks get this free catalog that tells all about these money makers. We guarantee 100% live delivery.

ONE CENT A CHICK WILL BOOK YOUR ORDER. BAL. C. O. D. WRITE TODAY
VILLAGE VIEW POULTRY FARM, R. 3, Box 2 Zeeland, Mich.

SERVICE PURE BRED BABY CHICKS QUALITY

100% Live Delivery Guaranteed.

Send for Free Catalog and Price List

Prepaid Prices for	25	50	100	200	500	1000
White Leghorns, Black Minorcas	\$3.50	\$6.50	\$12.00	\$23.50	\$57.50	\$110.00
White, Barred and Buff Rocks						
Single and Rose Comb Reds	3.75	7.25	14.00	27.50	67.50	130.00
White Wyandottes, Buff Orpingtons						
S. S. Hamburgs, 16c. Assorted Breeds, 10c.						

THE LANTZ HATCHERY Member A. B. C. P. A. Our 22nd Year BOX D TIFFIN, OHIO

Poultry Improvement

Is the Purpose of the Michigan Poultry Improvement Association

THE Michigan State Poultry Improvement Association was organized in June, 1925, for the purpose of undertaking a general program to include educational work in cooperation with the Poultry Department of the Michigan State College and any other agencies that may cooperate for the advancement of the poultry industry; to develop and maintain in cooperation with the Poultry Department of the Michigan State College an inspection service to inspect the hatcheries, flocks, and premises of its members who make application for such inspection; to establish rules and regulations for various grades in connection with the accredited hatchery group; and to accredit or certify such hatcheries and flocks as shall satisfactorily pass inspection.

Large Membership

This Association has a membership of approximately two thousand. This Association can accomplish more in a few years than any individual or individuals can in a lifetime for the advancement of poultry in general. The Record of Performance Home Trapping Project was started by the Poultry Improvement Association. This project is carried on by the Record of Performance Association as an affiliated association. The Association has assisted in securing legislative action for the benefit of the poultry business in cooperation with other agencies. This Association furthers any work of any nature that will have any bearing upon the welfare of the poultry industry in Michigan as a whole. The Association is also interested in any national program that has any connection with the poultry industry, particularly insofar as it affects Michigan and various officers of the Association have spent considerable time in connection with the establishment of a standard national breeding plan so that the grades throughout the country would be uniform.

An Important Function

The Association has retained the inspection of flocks and hatcheries as its main function in accreditation and certification of poultry. This in itself is a sufficient and important project to warrant the expenditure of time and money. This work is carried on entirely under the Accredited Hatchery group. The Board of Directors that direct this work through the Field Manager of the Association is made up of nine men from the membership and the Poultry Department of Michigan State College. This board handles all the details pertaining to accredited and certified flocks and hatcheries.

Reason for Inspection

Perhaps it would be well to explain the reason for having this inspection program before explaining in detail how it is done. In the past there has been a tendency, as in any other business, for many individuals to make claims and statements absolutely unfounded in the furtherance of their own financial gain or to place themselves upon the same plane as some competitor. The actual quality was present only on paper. A great many flocks were used for breeding purposes that were not good representatives of the breed or variety that they were supposed to represent. Many flocks were not systematically culled and satisfactory breeding males were not always used. Incubators were not satisfactorily cleaned and disinfected after each hatch and conditions were not ideal for the production of good chicks. Chicks were not properly culled in some cases. Complaints against losses did not receive the attention that they rightly deserved. The establishment of this inspection service was instituted for the purpose

of instilling confidence in the buying public, and protection against individuals operating hatcheries with no consideration of their buyers. Furthermore, the establishment of such a service gave the reliable and honest breeder and hatcheryman recognition of his efforts both physical and financial in the improvement of the quality of his product.

Inspection Cost

The cost of this inspection is carried by the members of the Association. Each Accredited Hatchery operator signs a legal contract binding him to the observance of all rules and regulations, and provides for a fine of three cents per chick for every chick produced and removal from the Association in case of violation of any part of the contract. As soon as this contract is signed and the association proceeds with the actual work of accrediting the flocks from which that hatchery purchases eggs.

Before a flock can be accredited, all the birds must be handled and banded with a permanently sealed legband furnished by the Association. These birds must be banded in the presence of someone authorized by the Association and holding a certificate for proficiency in culling for standard and production qualities from the Poultry Department of the Michigan State College. The birds that are left must be good specimens of the breed, free from standard disqualifications, well matured, and show satisfactory qualifications for good egg production according to the standards set forth by the Poultry Department of the Michigan State College. In addition, no flock is accredited which shows symptoms of any serious disease. The flock must be well cared for and well managed. All rejected birds must be removed from the breeding flock and sold. A certificate is furnished to the owner after the inspection of the flock by the Association inspectors and the approval of the Accrediting Board.

Accredited Flocks

Before a hatchery may become accredited all flocks furnishing eggs to that hatchery must be accredited. The purchase of eggs from unknown sources of unaccredited flocks is prohibited. The hatchery is inspected from time to time, for cleanliness and sanitation. Accurate records must be kept of the purchase of eggs, number of chicks hatched, and to whom the chicks were sent. All eggs used must average twenty-three ounces to the dozen and be uniform in quality. All chicks must be carefully sorted and culled and properly packed for shipment. Mixed chicks or cull chicks cannot be sold under the Association trade mark. An accredited hatchery cannot purchase chicks from an unaccredited hatchery for sale. The inspection of hatcheries is just as important as that of the breeding stock to see that it is properly operated and that the business methods are entirely ethical.

The advertising copy and catalogs must be approved before being used. This insures the statement of facts and the absence of misleading statements. The Association in the past has prevented several concerns from using fraudulent advertising.

Welcomes Information

The Association welcomes any information concerning poor quality stock or chicks or complaints that are not satisfactorily or promptly handled. The Association maintains an office at East Lansing in connection with the Poultry Department and any trouble with Association members may be reported there.

Accreditation is the first step in the improvement program. Certification is the second step differing only in the use of approved Record of Per-

formance male birds. All other inspection is carried on in the same manner as in accreditation. The approval of all R. O. P. male birds and the supervision of trapnesting and pedigree work is handled by the Record of Performance Association. No hatchery is permitted to produce both accredited and certified chicks.

The Association has accomplished a great deal of good so far. It will accomplish more, if it receives the support from the public which it is striving to serve. It has been accused of being a selling organization with the coinage of new terms for the purpose of advertising. The Association conducts no business other than inspection and the promotion of a high quality product. It is interested in seeing the purchaser receive what he buys and the production of a good product truthfully advertised.

THE RABBIT BUSINESS

I wish to raise rabbits in the spring. When would be the proper time to start? Also, please tell me the kind of feed and buildings necessary and the most profitable breed to raise in this part of Michigan.

Hay, oats, and carrots are among the most substantial feeds for hutch rabbits. Hutches can be 6 feet long, 2 feet deep, and 2 feet high. One-third of the space is enclosed for a nest with a wire covered door over the remainder of the front. The hutches should be placed in a building or shed where they are protected from the wind and snow and yet receive as much sunshine as possible. The regular cleaning of the hutches is an important factor in keeping rabbits healthy.

The Flemish Giants are about the most popular market rabbit at the present time. Raising rabbits for a company that agrees to buy all you raise has seldom been found profitable by practical rabbit breeders. Usually the company must sell you the original breeding stock for more than it is worth and then they will buy back your surplus for less than it is worth. They make their requirements for acceptance high enough so there is no danger that you will overstock them with rabbits.

I would advise you to start on a small scale and learn the business before risking much money on rabbits. Last summer the price for rabbit meat was very low and they were often difficult to sell at any price. At present the price is not high enough to warrant risking much capital in the business. As a sideline or hobby it may be very interesting and also produce good meat for the home table with an occasional surplus for sale.

EGG SHOW WINNERS

(Continued from page 218)

- Fifth—Harry Brink, Grant, Mich.
Brown Eggs
First—John Arnold.
Second—John Arnold.
Third—Layher Bros., Jackson, Mich.
Fourth—Elmer Haynes, Vassar.
Fifth—Pinecroft Poultry Farm, Owosso, Michigan.
Class No. 6
Sweepstakes—L. E. Heasley, white eggs, Grand Rapids.
Reserve Sweepstakes, white eggs—H. B. Dargitz, Montpelier, Ohio.
White Eggs
First—L. E. Heasley.
Second—H. B. Dargitz.
Third—W. S. Hannah & Son, Grand Rapids, Michigan.
Fourth—Paw Paw High School, Paw Paw, Michigan.
Fifth—W. S. Hannah & Son.
Brown Eggs
First—Wm. Brott, Charlotte, Mich.
Second—Pinecroft Poultry Farm, Owosso, Michigan.
Third—Pinecroft Poultry Farm.
Fourth—H. B. Pelton & Son, East Tawas, Michigan.
Fifth—C. N. Whittaker, Lawrence.
Class No. 7
Sweepstakes—Elmer Haines, Vassar, Brown Eggs.
Reserve Sweepstakes—H. B. Dargitz, Montpelier, Ohio, White Eggs.
White Eggs
First—H. B. Dargitz.
Second—H. B. Dargitz.
Third—Otto Saariko, Rock, Mich.

- Fourth—Daniel Holm, Ishpeming.
Fifth—James Meeks, Hillsdale.
Brown Eggs
First—Elmer Haines.
Second—Howard Riley, Charlotte.
Third—Elmer Haines, Vassar.
Fourth—Tim Poll, Hamilton, Mich.
Class No. 8
Sweepstakes—Edwin Sawyer, Olivet, Michigan, Brown Eggs.
Reserve Sweepstakes—Pinecroft Poultry Farm, Owosso, Mich., Brown.
White Eggs
First—H. B. Dargitz, Montpelier, Ohio.
Second—Mrs. Harvey Steffens, Manton, Michigan.
Third—W. S. Hannah & Son, Grand Rapids, Michigan.
Fourth—L. E. Heasley, Grand Rapids, Michigan.
Fifth—H. B. Dargitz, Montpelier, Ohio.

- Brown Eggs
First—Edwin Sawyer.
Second—Pinecroft Poultry Farm.
Third—Edwin Sawyer.
Fourth—J. R. Worthington, Lansing.
Fifth—W. R. Brott, Charlotte, Mich.
Class No. 9
Sweepstakes—L. E. Heasley, Grand Rapids, Mich., White Eggs.
Reserve Sweepstakes—W. A. Downs, Romeo, Mich.
White Eggs
First—L. W. Heasley.
Second—W. A. Downs.
Third—L. E. Heasley.
Fourth—W. S. Hannah & Son, Grand Rapids, Michigan.
Fifth—L. E. Heasley.
Brown Eggs
First—Pinecroft Poultry Farm, Owosso, Mich.
Second—W. R. Brott, Charlotte.
Third—W. R. Brott, Charlotte, Mich.
Fourth—C. N. Whittaker, Lawrence.
Fifth—Pinecroft Poultry Farm, Owosso, Michigan.

- Class No. 10
Sweepstakes of Class—A. Covey, Eaton Rapids High School, Michigan.
Reserve Sweepstakes of Class—C. Van Aken, Eaton Rapids High School.
White Eggs
First—A. Covey.
Second—C. Van Aken.
Third—Ice Lake Poultry Club, Iron River, Michigan.
Fourth—Harry Schramke, Saginaw.
Brown Eggs
First—Thomas Dittwiler, Saginaw.
Second—F. Naylor, Eaton Rapids High School.
Third—Harry Schramke, Saginaw.
Fourth—Elder Van Wormer, Saginaw, Michigan.
Fifth—Harold Blackman, Saginaw.
Class No. 11
Sweepstakes Class 11—D. Finch, Eaton Rapids High School, Michigan, White Eggs.
Reserve Sweepstakes—A. Covey, Eaton Rapids High School, Michigan, White Eggs.

- White Eggs
First—D. Finch, Eaton Rapids High School, Michigan.
Second—A. Covey, Eaton Rapids High School, Michigan.
Third—F. Naylor, Eaton Rapids High School, Michigan.
Brown Eggs
First—L. Williams, Eaton Rapids High School, Michigan.
Second—R. Hattie, Eaton Rapids High School, Michigan.

OILING BROODER HOUSE FLOORS

IN a recent visit with Roy Waite, in charge of poultry work at the Maryland Experiment Station, he advised using the old engine oil from the crank case as a paint for colony brooder house floors. Whenever this old oil is available it can be applied to the floor quickly with a wide brush or swept around with a broom.

The oil gives the board floors a smooth finish which is easier to sweep clean when the colony houses are filled with dusty litter. The cracks become sealed with the thick oil and this helps in keeping down red mites and disease. If the roofing paper nails work loose during the winter and a leak goes without attention for several days, there is less danger of the water rotting the floor boards if they are protected with oil.

We always add a little commercial coal tar disinfectant to the old engine oil and believe that it gives the oil more value as a destroyer of disease germs and mites. A poultryman with many colony houses and one engine will not have enough old engine oil for painting the floors and it can often be obtained at filling stations which usually have a supply of old oil they are glad to have carried away.—R. G.

Chicks THRIVE Under GLASS CLOTH

Admits Ultra-Violet Rays
Prevents Rickets
Leg Weakness and
Death Loss



Fred Turner
Originator
of Glass Cloth

If you want unusual success with your chicks this year, raise them under GLASS CLOTH. This wonder material admits the life giving ultra-violet energy rays of the sun. (Plain glass stops them.) Science has discovered these rays prevent rickets, softness, leg weakness and many other chick troubles. Death loss from these causes is stopped. Ultra-violet rays enter the body, supplying Vitamin D and speeding up the building of bone and tissue. Chicks thrive amazingly and grow very fast. If you want to raise every chick, if you want early broilers and layers, put GLASS CLOTH in your brooder house windows and build a GLASS CLOTH scratch shed where the chicks can run and exercise in real sunlight. It's nature's health remedy. All you need is a roll of GLASS CLOTH and a few scraps of lumber. Millions of yards in use today. Success everywhere. Experts recommend it. Repays its cost many times a season.



Ideal for HOT BEDS

Much Cheaper Than Glass

GLASS CLOTH is the cheapest and best covering for hot beds. Costs a fraction as much as glass and gives far better results. Vegetables and flowers mature weeks earlier and produce bigger yields because GLASS CLOTH admits the life giving ultra-violet rays of the sun. (Plain glass stops them.) Plants grow stronger and harder and transplant better. GLASS CLOTH holds the heat of the sun plant better. It's nature's health remedy. All you need is a roll of GLASS CLOTH and a few scraps of lumber. Millions of yards in use today. Success everywhere. Experts recommend it. Repays its cost many times a season.

Turner Bros.

Dept. 4215
Bladen, Nebr. Wellington, Ohio



CHICKS from Michigan Accredited Flocks

FREE! Get our big catalog before you buy! It tells why Knoll's Michigan Accredited poultry pay you better. Large, heavy, carefully selected birds. Good winter layers.

BARGAINS in White Leghorns, Heavy Type Brown Leghorns, Barred Rock Chicks. 100% Live delivery guaranteed. Strong, healthy chicks that live and grow.

BIG CASH DISCOUNT if you order this month—10% deposit books you order—For delivery when wanted. Shipped C. O. D. Pay balance on arrival. See chicks before you pay. Write today. 10% discount on all orders received before March 1. Get ready now for bigger profits next season.

Knoll's Hatchery and Poultry Farm
R. R. 12, Box M.F., Holland, Mich.

New Cut Prices

Send for this 1928 Incubator and Brooder Book—see the dollars you save. Two big well-known firms—Wisconsin and Ironclad—have consolidated to cut costs and sell at lower prices. Don't buy until you get this money saving book. 17 incubators—14 brooders to select from. WRITE FOR CATALOG TODAY. Tell how to get eggs in winter; how to stop chick losses. 30 day trial offer. WISCONSIN-IRONCLAD COMPANY Box 239 Racine, Wis.



EGG a DAY MAKES HENS LAY
Keeps hens laying 3 and 4 times normal all winter. Guaranteed to make you a profit. Thousands of users praise it. Get a 65¢ pkg. Supplies 250 hens a month. Your dealer has it. Look for the sign on his window. Or order direct from us, TODAY.
STANDARD CHEMICAL MFG. CO.
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Quality Breeding Counts

FAIRVIEW Day-Old Chicks. 3 Weeks Chicks, Pullets, Hens, and Pedigreed Cockerels have paved the way to bigger Poultry Profits for hundreds. Send today for Big New 1928 Catalog that tells you all about how to raise poultry for profit, and get our Live and Let Live Prices FREE Brooder with every order for 1,000 or more Baby Chicks, Michigan Accredited.

FAIRVIEW HATCHERY AND FARMS,
Box M, Zeeland, Mich.



Great Success with GLASS CLOTH

Half a million poultry raisers use GLASS CLOTH. In our mail come hundreds of letters praising it. Above is Will Owen. He says: "We are certainly well pleased with Glass Cloth. We used it as a front for the brooder house this spring. The chicks were warmer than those brooded by hens. In severest weather they were cozy and fine. Lost only a very few out of 300 white rocks. They have grown faster and are more vigorous than any we ever raised before." Glass Cloth pays big returns. If you want to cut down death losses, use it this spring.

Patented—Accept No Imitations

Genuine GLASS CLOTH is made only by Turner Bros., by patented formula. New, super-strength material. No increase in price. Big value. Avoid imitations. Name marked on every yard. Look for it. Flexible, transparent, waterproof, weatherproof. Originated in 1916. Proven by 12 years spectacular success.

SPECIAL TRIAL OFFER

\$5.00 buys a big roll of our super-strength material, 45 ft. long and 36 in. wide. Only 3-3¢ per sq. ft. If, after ten days' use, you do not find it better than glass or any substitute, return it and we will refund your money. Common sense instructions, "Success with Baby Chicks" with each order. Samples and catalog illustrating uses free on request. This is a special price. Act now. If your dealer does not have GLASS CLOTH, order from us direct on coupon.

Mail the COUPON!

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Bladen, Nebr., Wellington, Ohio

I enclose \$..... for which send me postpaid..... rolls of GLASS CLOTH at the advertised trial offer price. If not satisfied after 10 days use I may return it and you will refund my money.

Name.....
Address.....
Town..... State.....



BE SURE

To get our free Catalogue and prices on DEAN QUALITY CHICKS, White Leghorns, Barred and White Rocks, R. I. Reds, White Wyandottes. All Michigan Accredited. Some Certified. Established 1911—Better this year than ever. DEAN EGG FARM & HATCHERY, Box 8, Birmingham, Mich.

S. C. W. Leghorn Baby Chicks

Buy Mich. Accredited Baby Chicks from Michigan's largest poultry farm. We buy no eggs to put in our incubators but produce them on our own farm from selected hens mated with 50% 200 to 330 egg Tanned males, pedigreed. All breeders have been bloodtested for BACILLARY WHITE DIARRHEA for the past 4 years which insures you chicks practically free from this dread disease. No better chicks at any price. Only one grade.

S. HARKEMA SONS, R. 1, Holland, Mich.

HILLSIDE HATCHERY

Chicks. Genuine Tom Barren English White Leghorns, large type, overlying combs, with egg laying qualities. Non-setters Barred Rocks from M. S. C. stock, 1928 flocks, headed with cockerel whose dams have official trapnested records 203-233 M. S. C. egg-laying contest. Free circular explaining our 1928 special, surprising you, low price.

HILLSIDE HATCHERY, HOLLAND, MICH., R. 3

BOS QUALITY CLASS A CHICKS

From healthy heavy layers of large eggs. S. C. English White Leghorns, Brown Leghorns, Anconas, R. I. Reds and Assorted chicks at reasonable prices. No money down. Pay full amount 10 days before chicks are shipped or C. O. D. Special discounts. 100% live delivery postpaid. Catalogue free.

BOS HATCHERY R. 2 M Zeeland, Mich.

BABY CHICKS WHITE LEGHORNS ONLY

SHIPPED C.O.D. ANYWHERE
LOW PREPAID PRICES
Egg contest winners for years. Guaranteed and insured. Also cockerels, pullets, hens. Catalog and special price bulletin free.
GEORGE B. FERRIS, 934 UNION, GRAND RAPIDS, MICH.

Accredited Chicks C.O.D.

See your chicks before you pay for them. Especially selected, accredited stock. BEAUTIFUL CATALOG FREE. Send for details, prices and catalog. Write today. Our chicks are highest quality.
South Kenton Poultry Farm, Box 11-A, Kenton, Ohio.

BABY CHICKS

From Michigan Accredited flocks. Three leading breeds, B. P. Rocks, R. I. Reds, and S. C. White Leghorns. Write for 1928 catalog, it tells all about our chicks. Place your orders early. 100% live delivery guaranteed.
CARLETON HATCHERY, Carleton, Michigan

CHICKS AND DUX C. O. D. Fine pure-bred chicks and baby ducks at prices to fit your pocketbook. Pedigreed males and selected females make chicks of finest quality. Free poultry book and catalog. Get details of our liberal C. O. D. offer.
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64 BREEDS Most Profitable pure bred Northern raised chickens, ducks, geese, turkeys, Fowls, eggs, chicks, incubators at low prices. 35th year. Largest plant. Valuable 100-page book and catalog free.
R. F. Neubert Co., Box 814 Mankato, Minn.

OUR PAGE

More Mature Musings

Other Interesting Parents' Parley Letters

EACH week I read the letters and discussions on your page of the Michigan Farmer, oftentimes before I do the interesting page for us mothers. Why? Because I have five children myself and I am most interested in just how other boys and girls are spending their time and directing their thoughts, realizing that the family of cousins is a very large and



Gertrude Derks Says "Just Me"

growing one in a large and progressive state represented by our own Michigan Farmer. So now, when by special invitation, we are allowed to comment on "Our Boy's and Girl's Page," I cannot refrain from adding my bit of appreciation and encouragement to Uncle Frank, our young correspondents, and our state paper.

Many have written of White Amaranth. I, too, wish to say I am one of her admirers. However, we are not all gifted with power to express ourselves so beautifully and forcefully. Our greatness lies elsewhere, perhaps, so no one need be discouraged.

I enjoy the letters of those who have achieved honors in club work. There are hundreds of these boys and girls who will be well fitted to guide our great Ship of State in the future if they follow the 4-H work faithfully.

The variety of letters make the page interesting. I liked the parable on education in a late issue and I think a letter adverse to my conception of good morals occasionally adds spice for the deluge of whole-hearted comebacks and does one good to know that this old world is still full of clean-minded, sound-bodied, young folks who are ready to uphold the principles of righteous living.

I smile over the digs the "flappers" receive from Harold and others for well we know it is characteristic of this sort of chap to find just this kind of girl his companion for life for better, for worse, etc.

I have even noticed how your Merry Circle Fund is carrying sunshine here and there. May this world of cheer from one mother help a little to make this your most successful year in every way.—Mrs. Alice Christiansen.

I would like to write a few words on the subject of ambition. Most of us have an ambition for one or more things. My parents and grandparents were pioneers in this place and were all poor folks. What troubled me most was to have to borrow dishes whenever the threshers came. I used to

say I will have enough dishes so I will not need to borrow. I have them. I also wanted a home of my own even though humble, and have it paid for. I have that. I also wanted to write something for a newspaper worthy of print. I have done that. I wanted to bring my children up to be trusted, respected citizens and I am happy to say I have no fault to find.

The boys and girls of "Our Page" seem to be holding their own and more too, so I will say "Live up to your name" and strive to win whatever is the depth of your heart's desire.

Gather the roses while we may,
Of righteousness, truth, and love.
Gather sweet roses every day,
For our crowning up above.—Aunt Julia.

My, how time does fly! Another year has passed into eternity. I read

your request for the opinions of grown-ups on the M. C. page so will try and express a few thoughts. I have read several other pages devoted to the boys' and girls' letter writing and will say the M. C.'s have them all beat for I find that their discussions are of a much higher order. It may be those who write in other papers are not so old.

The contents of a great many letters which have appeared, show the earmarks of much thought and study well into the senior year of schooling. I was much pleased to see Dorothy Shoemaker's picture in print as I admire her talent, and would enjoy seeing some of the others who have submitted letters worthy of comment.

I am glad so many of the boys and girls who have reached the age limit have not forsaken the M. C. page as they can derive much good through reading the lively discussions. All in all, I think the M. C. page very fine as it creates a desire to compete with one another and competition is one of the big factors in today's problems.—An Interested Reader.

OUR LETTER BOX

Dear Uncle Frank and Cousins:

Cousins, don't you ever rebel against the criticism we youths of today receive? Are we any worse than our grandparents of fifty years ago; would they own up to it? Of course, our precise ancestors never side-stepped the rigid rules of propriety.

Aren't the bobbed heads and short skirts of our flapper sisters more sanitary than the fanciful hair dressings and dirt-catching dresses of grandmother's youth? Are the sleek combed heads of our lads less manly than the flowing curls of our Pilgrim fathers?

Didn't the youth of a half century ago ever go out riding, the same as our modern lads and lassies do? It's true old Dobbin could be trusted to follow the crooked trails of yesterday better than Lizzie can the smooth pavements of today.

In spite of the paints and powders of our modern girl, you'll find the same dauntless courage and bravery that carried our great grandmothers across the continent in the covered wagon.

In these days of science and inventions, doesn't the modern girl make just as happy a home for her husband and babes as did our grandmothers in their cabin homes? Didn't a per-

son of great renown say that "The hand that rocked the cradle was the hand that ruled the world?"

So I say, hurrah! for the youth of today with their clear minds and bright ideas. Have I worn out my welcome, Uncle Frank? If not, I'll come again. Your dutiful niece and cousin.—Sammy.

You make a good defense for modern youth. Youth has always needed its defenders, but today's youth is no worse than yesterday's it seems to me. And I am one of yesterday's. Come again sometime.

Dear Uncle Frank:

I hope you and the cousins are all well. The last Michigan Farmer that came I just started right in and found "Our Page," which always is the first page I look at. When I read the letter signed by "Cooney" I just laughed. He said he wanted to write something to make the M. C.'s laugh; well, I surely laughed. I think he had the next to the best letter and I think Christine Zeck had the most interesting of all. Don't you think so, Uncle Frank?

Say, Uncle Frank, if we send in some kind of a picture of ourselves, will they be on "Our Page?" If they will I might send in a few (some good ones, too). I mean some funny ones. How old must we be when our time is up for the Merry Circle?

I think I must sign off now.—Susie.

I'm glad you got a laugh out of "Cooney's" letter, and found something interesting in Christine's. I can't promise to use all pictures sent in, but usually use the good ones, although I have to keep them for quite a while. Eighteen is the age limit for M. C.'s.

Dear Uncle Frank:

I, for one, certainly admire Gullford for his sensible letters and good looks, but I don't agree with Bubs for saying that farm work is fun. She should cook, bake, churn, wash, scrub, keep the house clean, milk, and during haying time, help with the hay and grain, also lots of other things that I have to do and I'm quite sure she wouldn't call it fun.

You see, my mother is dead; that's why I have all the work to do. But then, of course, I have my pleasures too, after work is done. The greatest of the pleasures is playing the banjo. I can play on that banjo for hours and hours and never tire of it. Every spare moment is spent on the banjo. My sister plays the piano very well. Every winter she goes to Chicago and while there, she plays in an orchestra, so during the summer when she's home, she plays the piano, my brother

the violin, and myself the banjo and we entertain ourselves as we have no radio.

My greatest ambition is to some day become a real good banjo player so I can broadcast over the radio. I love music of all kinds. As to dancing, I like to dance very much and I go to dances every once in a while but I neither smoke nor drink and I despise anyone that drinks.—"Boots."

I am glad you like music for it affords real enjoyment in life. Most every activity in life has some drudgery to it and farming is no exception. One can even find fun in doing farm work.

Dear Uncle Frank:

I notice that there is some dispute regarding the city and country. I certainly am head, feet, and everything for the country. I have lived in a few of the large cities but have found nothing like the great open spaces. With Lake Michigan but a mile or so from our house, it certainly is refreshing to awake on a burning hot day, put on your bathing suit and take a dip in the lake before breakfast. How fortunate we are to be able to go forth upon the street or road without a policeman or traffic cop to halt us. Who can imagine going for a walk in the city, not a tree in sight, with the blistering sun shining upon us and our feet burning from the scorching side walks. One might say, "Oh, yes! but we have our swimming pools." No doubt, but what they have, but who could enjoy themselves with a crowd of about five hundred people. Oh, yes, you have room for your feet (maybe). Nothing like taking your lunch with a crowd and making a day of it, climbing the sand dunes, some of which are near five hundred feet in height. "Great!" Why, it's wonderful. Who can be so conceited as to say the city life is the life for me? With my point of view it is not the real, clean-spirited life of the country. "Not much."

It is real fun and some work to climb some of those sand dunes. A dip in the big bath tub, Lake Michigan, is a real pleasure.

Dear Uncle Frank:

My folks take the Michigan Farmer as well as several other farm papers and I always get the Michigan Farmer first if I can.

Elizabeth Rowley, I agree with you. Of course, Jesus Christ did more for the world than anyone ever did before His time or since. How anyone can think any different is more than I can see.

I do not use tobacco or drink anything stronger than milk or water.

Best wishes to all, your M. C. nephew and cousin.—Everett A. Field.

You write a sensible letter and you have sensible habits. Just keep doing those things which are beneficial for you and you will not regret it.

FIRST FLOWER OF SPRING

THE skunk cabbage may be a humble plant whose blossoms are not in great demand by the wild flower gatherers, but at least it can claim one distinction. In the northern



Skunk Cabbage

states where it is found it is the first plant to bloom in spring.

The strange cowl of the skunk cabbage sometimes push up through the half frozen soil before the last blackened snowdrifts have melted from the northern hillsides. The plant is a lowland dweller, growing only in the



Robert Nothdurft, twelve-year-old Potato Club Member of Dowagiac, won the sweepstakes prize on the Potato Show Train operated over the New York Central Lines in Southwestern Michigan in December, in cooperation with the Michigan State College. Robert won over 228 other exhibitors representing most of the best growers of Southwestern Michigan. He is shown here standing beside a basket of the high quality potatoes he grew.

black, mucky soil of swamps or marshes.

The spathe or cowl of the skunk cabbage is green, striped or mottled with reddish purple. Hidden within, and well protected from the chill of early spring winds, is the fleshy spadix, bearing the true flowers which are tiny and inconspicuous.

The big glossy leaves follow the flowers. If crushed or broken they exude a strong fetid odor from which the plant takes its name.

Despite the fact that the flowers share to some degree in this odor, they are a favorite early spring food of bears and other wilderness animals. Bruin particularly considers them a succulent morsel and ranges the marshes constantly in search of them, during the weeks while winter is retreating.

ADD-A-LETTER CONTEST

I WONDER if most of the contestants can get the right idea of this type contest this time. Many failed to before. Start with the Letter T and add a letter each time you make a word. For instance, with the letter A, it would work out somewhat as follows: A, at, ate, seat, etc. See how many words you can make starting with the letter T. Ten prizes will be given: two fountain pens, three loose leaf note books, and ten Michigan Farmer pencils, (two to each). Write neatly, put your name and address in the upper left hand corner of the paper, put M. C. after your name if a Merry Circler, write letters on separate sheets, and send your papers to Uncle Frank, Michigan Farmer, Detroit, Mich., before February 24th, the closing date. All, not now members, who send in good papers will be given M. C. membership cards and pins.

THE AD CONTEST WINNERS

WE got a nice lot of replies to this contest but there was an unusual number that had some of the questions wrongly answered. In most contests of this sort some one question is usually the stumbling block but this time no certain one seemed to be the trouble maker.

Following are the names of the prize winners and the correct answers:

Fountain Pens

Wallace W. White, Garnet, Mich.
Walter Buffenbarger, R. 1, Custer, Michigan.

Loose Leaf Note Books

Mary K. Bender, Martin, Mich.
Reino Tuuri, Kiva, Michigan.
Pearl La Chapelle, R. 2, Box 185, Chassel, Michigan.

Candy

Lilly Tervo, Chassel, Mich.
Mabel Grainger, R. 1, Mt. Morris, Mich.
Gordon Ecker, Clarion, Michigan.
Theodine Andres, R. 5, Mt. Pleasant, Michigan.

Terne Cradit, R. 5, Clare, Mich.

Correct Answers

1. Three hundred.
2. Pig incubator.
3. Chrysler cars.
4. Roderick Lean Co.
5. Eighty-nine cents.
6. Standard Chemical Co.
7. Goodyear.
8. Nopco cod liver oil.

FARMERS' WEEK

(Continued from page 212)

to. To a humble Jake who had found all of the proposals everything else but after-dinner reading, it looks like this might work about as well as any of them.

Governor Green stated that the general property tax is an unfair tax. Let thanks be given that the men in authority are realizing that there can be no lasting remedy for agricultural high-costs so long as tangible property must bear an undue proportion of the costs of state, county, and local government.

Of the big men who spoke on the program, none were heard with more sincerity than Doctor W. O. Thompson, for twenty-six years president of Ohio State University, and the dean of land grant college presidents in America. He showed how the land grant colleges have not only had a measure of liberty in working out new

courses but how they have been forced to do this because of the conservatism of the older institutions. Perhaps his statement, coming from a man of such imposing eminence, will still some of that small talk coming from elsewhere that at Michigan State College little else should be taught except how to milk the cows, how to keep the gas engine running, the art of boiling water without burning it and a few pointers about woodlot thinning.

Michigan has made a niche for herself in potato production, all of which the Potato Commodity Exhibit portrayed. The number of entries as well as the number of exhibitors was more than double those of last year. Alfonso Verschure, of the Upper Peninsula (Manistique), was declared the champion potato grower with 338 bushels per acre on five acres. Mr. Verschure is still a bachelor and since 1928 is divisible by four, we judge that the girls of the U. P. might be more aggressive. By the way, it would have been well worth any potato grower's time to make the trip to the Farmers' Week just to study these exhibits of everything connected with potatoes—even to the consumption thereof.

Soils are such inanimate things, devoid of sentiment or romance—it is small wonder that the usual tendency is to take them for granted. But I noticed that the soils conferences and meetings were well attended. It is apparent that many producers are coming to view their soils as the most fundamental part of their business. Interest was about evenly divided between the upland and the muck soil sections, with the edge slightly in favor of the latter. This may be construed as a growing realization on the part of Michigan farmers of the importance of these muck soils as well as to the very embracing and comprehensive experimental work on muck soil crops and problems which have been conducted during the past six years by the M. S. C. Soils Department.

THE VALUE OF CLUB WORK

(Continued from page 211)

getting yearling heifers rather than something smaller. At about this age the animal is taking on the form that we expect to find in the mature animal. Then too, the feeding of the older animal is not as difficult as with a younger calf.

Exhibition Period

The exhibiting period is, of course, an exciting time. Previous to this event at intervals during the summer the club members have met to discuss such matters as feeding, care, and showing of animals. The club leader can direct feeding when visiting the different projects, but the training the animal gets is left to the boy and girl. It is a very important consideration if the animal is to go to some of the larger fairs. I usually tell my club members that there are just three individuals in the ring—the judge, the animal he is showing, and himself. Never is he allowed to talk to any one and his personal appearance should be for the occasion.

An incident happened at the 1925 State Fair illustrates the value of showmanship. One of my boys, Raymond Wallace, was showing a Duroc gilt that previous to this time had not been defeated in three shows. She carried a fine back, had plenty of length and good feet but showed some weakness over the shoulder, especially while standing. The pig club pigs were placed, with Raymond's gilt placing fifth in a class of sixteen gilts. The pigs that placed ahead of her displayed splendid type and I think were litter mates. The next day the open class Durocs were to be judged and Raymond insisted on showing his pig. She was well trained and his plan was to keep her moving while in the ring and if possible cover up some of her prominent shoulder. He was suc-

cessful for he left the ring with the blue ribbon safely clutched in one hand and his lead stick in the other. In that ring were twenty-seven gilts from four states. Showmanship had won.

In 1926 the Grand Champion Holstein female was a splendid calf raised by Clarence Merchant of Cass City. She was beautifully fitted and well shown by a typical farm boy. In 1927 in our banner year, for the fourth consecutive time, the Grand Champion Holstein female came from this club. Jim Milligan for the second consecutive year copped the Grand Champion steer prize. Our prize money distributed at a big banquet given by the community club amounted to \$1,750 clear of expenses. It was held in the high school auditorium where we surprised the club by displaying on our fine new stage, the Grand Champion steer at the Michigan State Fair. This was a splendid climax to a most successful year in club work and a real job ahead if we expect to better it in 1928.

The student that completes a project of this type learns more about the business of farming because it is his problem and not dad's. He feeds, cares for, and exhibits his animal and everyone of these operations present some difficulties to be worked out in a practical way by himself.

The successful farmer of tomorrow must know how to keep records, use best cultural methods, weigh values, and last but not least come to realize that farming is a business requiring a scientifically trained man.



Cultivate with Kovar

It costs just as much in time, labor, and seed to get poor crops as it does to get good ones. It's entirely a matter of proper cultivation.

STUDY KOVAR CONSTRUCTION

Look at the high arched tooth which the center hitch buries into the ground at exactly the right draft. Complete flexibility of frame causes a hinging action on the teeth protecting them against breakage and preventing accumulating of rubbish from the field. Chrome vanadium steel in teeth and high carbon steel in body make an implement without an equal.

Big Success in Michigan

Every year sees more of these sturdy general cultivators and quack grass diggers in use in this state. They are proving to be exactly suited for soil conditions of this state.

Get Full Information

Learn all about this cultivator for your crops' sake. Write distributor or direct to factory now.

W. J. HARDY, Deckerville, Mich.

Distributor

Jos. J. Kovar Co., Owatonna, Minn.
"The Original Quack Grass Digger"

Please send me information of the KOVAR Cultivator.

Name

Address..... State.....

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Pride in Accomplishment Prompts

MICHIGAN BELL TELEPHONE CO.

To Call Attention to the
Bell System's

*Far - Reaching Developments in
Communication During 1927*

These Include:

Television, by means of which it is possible to see a person as well as to hear the voice over the telephone, and which was given its first public demonstration during 1927.

Trans-Atlantic telephone service, making it possible to talk from any telephone in the United States to any telephone in England or Scotland.

Direct telephone service to Mexico.

All of these developments help toward the realization of that principle of the Bell System—

A communication service by which anyone, anywhere, may talk with anyone else, anywhere, at any time of the day or night.



Corn Borer Has Invaded Africa

Along with the Baboon It Threatens Corn Production in the Dark Continent

By Rush F. Wagner

Agricultural Missionary to South Africa, from Methodist Episcopal Church

THE baboon sat back on his haunches with a disgusted look on his dog-nosed face. In his hands was an ear of green corn which had been ripped open by one vicious swipe of those great fangs of teeth. He was eyeing it with some misgivings.

"You think you're tough," said the larva of the European corn borer as he shuddered at his narrow escape

The baboon has ever been a problem with the blacks, who almost invariably locate their villages and gardens in the sandy soil of the valleys up among the granite mountains. Defense against raiding parties of other tribes was easier among the rocks. Furthermore, the light soil there re-

thousands of small farmers with an ignorance of pest control as profound as is their contentment with the nubbin ears they ordinarily harvest.

To get a comprehensive picture of this nest-bed of all sorts of crops' pests and diseases one must consider some of the cropping practices of these native people. The primitive nature of many of the operations can scarcely be credited by one who has not dwelt among these people long enough to see the crop season come and go.

The usual sandy soil is quite productive when properly handled. It turns up quite easily even when there has been no rain for three or four or even five months during the winter. In choosing a site for a new garden, a native will pick one that has a good growth of trees on it in preference to one where the rank growth of tall grass indicates a fertile spot. The tree stumps are no obstacle to the native cropping system. In fact they are an asset. They afford support for the long strings of knotted bark strips that are hung up with the ends converging at a central elevated, lookout point, to be jerked to frighten away birds at the time when grain is ripening.

On the day when work is to begin in the field, the wife (or wives) and the girls will be seen with hoes, attacking the ground around the base of the trees, and turning it up in ridges about ten inches high and three feet apart from crown to crown. On level ground these parallel ridges may run in any direction, the course usually being determined by the meanderings of a footpath or by following the first ridge no matter what curves and convolutions it marked out. On hilly land the ridges run up and down the slope, thus giving the excess water

Meanwhile the men and boys will be seen lopping off the smaller branches of the trees with small axes or hatchets and piling these on top of the prepared ridges around the tree trunks. When dry, these will be burned, as it has been noted from long experience that the wood ash "makes the ground strong to grow grain." (But tell them that manure will do the same thing and you will be laughed at. Great mounds of accumulated fertility are going to waste in every village because of some taboo on the use of manure to grow human food.) Some of these branches are trimmed up and used to make a crude brush fence to keep cattle and wild deer from straying into the field.

In an old garden the old stalks and vines and stubble are collected and burned just before the rains are expected in the spring. Rain usually commences in October or November and corn planting may continue as late as the first of February. On a moonlight night in early October one may look to see or may listen and hear the usual "digging bee" in progress. These people delight in congregating into crowds where there is plenty to talk about while the work is going on.

The field has been cleared of rubbish by the farmer while the women folk were busy for days preparing the refreshments for this digging and social bout. The big black pots are now brimming full of home-brewed grain beer, which has plenty of kick. Drummers and dancers have come in at the call of the drums, which have been sounding out signals all through the day. These merry-makers will rate a share in the convivial liquid without any turn at the hoes, but all others, though they may dance and play at intervals, will be expected to shed a lot of good perspiration in laying old Mother Earth up into new ridges and furrows. The staccato drum beats, to which the dancers are timing their wierd contortions and girations, together with the yodels and shoutings that accompany the oft-times lewdly suggestive dances, may be heard for miles around. These affairs are an integral part of the soil preparation program. They will continue at different garden sites right up to planting time.

The one outstanding characteristic that marks a native garden is the fact that every kind of crop is mixed in, hit or miss, right through the field. Some spots may be almost bare while others are jumbled up with a mass of vines of the pumpkin, the soy bean, the peanut, and the sweet potato, all trying to overgrow the corn, millet, and Kafir corn that are struggling for standing room.

This state of affairs is due to the absolute lack of system in planting. The two kinds of millet that are grown extensively as staple food crops, shatter very badly and consequently seed themselves. Corn is



Two Blind Men Helping to Husk and Shell the Corn Crop from a Native Rhodesian Garden

from those wicked teeth and blinked at the sudden light which had revealed the devastating work he was doing to the growing ear under the protection of the husks.

"You sneak out from your hiding place high up in the rocks of the hills when you think the farmer is not looking," he continued, "and go through his fields breaking off the ears. You have no sense about it either. If you only took what you wanted to eat and went away the farmer would not miss it, but you make him your mortal enemy by destroying ten times what you eat."

"Gr-r-raawk," said the baboon, which being interpreted is,—"Where did you come from, you little sass-box? I've found some of your brothers in nearly half the ears I've bit into this morning. You must have come in with these white farmers. I never used to see the likes of you when we had only black people here in Rhodesia."

So they spat, back and forth, these two destroyers of the corn growing industry that the hardy pioneer farmers are trying to build up way down there in the interior of South Africa. Not only do they menace the success of white settlement in the British Crown Colony of Southern Rhodesia, but they also threaten the food supply of the hundreds of thousands of native black people.

"Ar-r-w-f-f—" sounded a deep bass voice from farther up the field where the bulk of the drove of forty or fifty baboons, young and old, was busily ripping down ears of corn. This meant danger, so our friend, who had been pausing too long already in pondering over the presence of this offensive worm, dropped the ear he was holding and made haste to join the exodus that began at once. A small black boy, perhaps twelve years of age, came bounding along with many whoops and yells, sending the baboon tribe the faster on its way. These were already well out of sight beyond the brush and pole fence that bordered this native farmer's field or "garden"—as any cultivated area is termed. The boy carried only a crude wooden gun for a weapon, yet the baboons are so timid that a whole drove of them led by a great hairy monster weighing 300 pounds or more fled at the first glimpse of a human that appeared to have a gun.

sponded to their short-handled hoes with a much lighter application of back power than did some of the heavier soils out in the more open country. The baboons live up among the rocks and caves of the higher mountains so that a watch must always be set for them during the ear-forming stage of the corn season. The corn borer has come in more recently but with the slack methods of culture, which will be discussed further on in this article, the pest has made a rapid spread throughout the entire corn growing area of South Africa.

The corn borer, depending on his

Travel Stories Delayed

WE regret that the next in the series of travel articles by Francis Flood, who with his traveling companion, Jim Wilson, are on a trip around the world, was not received this week. The article is undoubtedly delayed in the mail somewhere between here and Central Africa.

The last message received from the world-hikers indicated that they were crossing the Sahara Desert via motorcycle, a stunt that never has been attempted. Mail transportation from this region is not rapid but we trust that the articles will be on hand to resume the series in a week or so.

unobtrusive size as a protection, went on with his eating. He seemed smugly content with his lot as he tunnelled away under the husks again. And why not? There was no price on his head as had been rumored on his cousins that were invading the United States. From all accounts they were in for a tough time of it, with stubble and stalk chopping machines and fire in the hands of men who were determined to make things unpleasant for them. Their one hope of holding their own lay in the advantage they had gained by getting well established before these cut-throat humans were aware of their presence. Here in Africa there was no such trouble in rearing a family.

So thought the little larva. And he was very nearly right.

His African tribe has the advantage of a favorable climate where two generations may come to maturity in one season. There is a long season in which corn is being planted so that young tender host plants are available for the hatching broods for several months. Furthermore, no systematic practice of destroying the left-over stalks and stubble can be practiced in a land where there are hundreds of

from the heavy deluges of rain a chance to get away without washing out the seed. No thought is given to the loss by this practice of the already scant humus supply. This digging of the ground is a half-way process for only half the ground is turned. A little soil is dug up from one side and a little from the other but that under the ridge is not touched. That will be turned the next year when the ridges are dug down from both sides to make a new ridge where the furrow had been.



Native Grain Huts Are Built on Bare Rocks for Protection Against Destructive White Ants

growing in popularity due to its heavier yields and the presence in some localities of grinding mills to supplant the hand grinding on rocks. It is planted after the first soaking rain. A girl may often be seen planting with a hoe to open up a hole for the seed from one of the twisted nubbins she carries. No effort at seed selection is made. Often the poorest, left-over specimens furnish seed for the next crop. The person doing the planting does not follow down the ridge rows, planting at regular intervals, but wanders at will, pausing now and again to put in two or three kernels. A glance around to see if any others have been planted near, suffices to locate a hill. Next day some beans will be put in in a like manner, some effort being made not to crowd the corn hills if they can be seen. However, in case of a heavy rain before subsequent planting of the various other crops, such as peanuts, Kaffir corn, pumpkins, ground beans, or pig melons, the planter can only guess where to put in the seed.

Cultivation is practically impossible under these circumstances even with so simple a tool as a hoe, the only native farming implement. Consequently, the land soon gets infested with weeds that choke out the planted crops to such an extent that yields are very meager. Then a new piece of ground is prepared and the old one abandoned except as a part of the general grazing area for cattle, sheep, and goats.

Harvesting is a cumbersome and wasteful process. The entire field must be tramped over to garner in the increase of each crop. Any given crop matures very unevenly too, because of the scattered dates at which planting was done and the unequal conditions under which it grows. Much grain is thus shattered from the continued battering it gets. Everything is picked

into light, woven baskets and carried on the heads of the workers to the grain huts. These are built of the common building materials of Africa, namely—poles, mud, and grass, and are located on a bare flat rock to give a good threshing floor as well as to keep out the destructive "white ants" or termites.

When harvest is over the live stock is turned in to clean up any grass or edible forage it can find. This is the fat season for the cattle. It is a great relief for the animals to be in an enclosure where they may eat or lie down at their own inclination instead of being forced to keep along with the bunch as the boys are herding them out to graze.

Abandoned fields are a prolific source of infestation of new fields by all kinds of insect pests that have a flying stage in their life cycle. The great number of these fields can be judged by the fact that fields are abandoned after four years of cropping.

The amount of European corn borer damage varies within extremely wide limits from year to year. The late planted crop usually suffers less than that put in early. Especially is the damage light in years when rains come late so that the moths have nearly all emerged and been destroyed before host plants are available. "Late" and "early" plantings of course mean different things in Africa than they do in America.

Corn-belt farmers of the United States have a good chance of keeping this extremely dangerous pest in check by using intelligent control measures and by pulling together. But never will the so-called "African corn-belt" come into the world markets with anything like the supply of corn that would be possible under intelligent management, until an entire revolution is effected in the native cropping system.

Rural Health

By Dr. C. H. Lerrigo

HODGKIN'S DISEASE

Will you please advise whether Hodgkin's disease is very dangerous? Is it something like cancer? A relative of ours has had the second operation on his neck for what the doctors call Hodgkin's disease. Will you please tell what you can about it? They say it is a new disease.—M. H.

Hodgkin's disease is not new but a very old and very serious disease. It is not related to cancer but is just about as fatal. There is progressive anemia with serious enlargement of the glands. While I hesitate to say that it is incurable, I know of no cures in my own experience.

NOSE BLEEDING

A woman of sixty years of age is troubled with nose bleeding. Blood is clear, dark red. The bridge of nose and forehead feel so full before bleeding starts. Has a headache at times. At times back of head aches and has shooting pains at times.—Mrs. A. C.

The character of the blood indicates a congestion. In view of the age and other symptoms this patient should at once have a careful physical examination with especial reference to heart action and blood pressure. If high blood pressure is a factor, it can only be relieved by finding and removing the cause.

CONSTIPATION

I am now thirty-seven. At sixteen I had gallstones and jaundice. My liver does not work and so I am constipated. A friend suggests "blue mass." What do you think?—E. C.

When a liver trouble in early life has left that organ deficient in its

secretions one of the greatest mistakes possible is to be constantly "whipping it up" with medicines. That is what "blue mass" and kindred drugs do. They "whip up" the liver. It responds to the whip and then collapses.

It is proper for you to give the liver only light work and therefore to abstain from eating fats, sweets, and indigestible foods. You may help it further by eating food that will urge the bowels to work. This calls for vegetables, especially those that are bulky, for whole wheat bread, for fruit, and for plenty of cold water.

You will find body exercises that cause you to bend at the waist and to make the abdominal muscles work will help you. Do not disregard this suggestion. It is quite practicable and may be the very thing you need.

As a temporary aid to the bowels you will find mineral oil, "Liquid Petrolatum," helpful and harmless.

TREATMENT OF GOITER

Can one do anything for goiters with iodine after they are once started? If so, is there such a thing as colorless iodine, which a girl going to school would be more inclined to use, if external applications would do any good.—Mrs. O.

After a goiter is large enough to be conspicuous there is not much to be gained by external applications of iodine. A doctor who is skilled in treatment may inject a preparation into the substance of the gland and thus help some cases. But any developed case needs the personal attention of the physician.



An Account with your soil bank

YOU would not try to overdraw your bank account. You should be equally sure that you do not overdraw your soil fertility account. The point frequently is reached where the soil becomes so depleted that profitable crop production becomes impossible.

Farmers of foresight anticipate such conditions before they occur. They follow a carefully planned rotation involving the regular and plentiful use of commercial fertilizers for each crop grown.

Just as the New York Central Railroad must provide a reserve fund for future transportation needs, so must the thoughtful farmer make provision for a surplus of plant food in his soils to take care of future crop production.



Ordering your fertilizers early is a good business practice and protects you if the spring is early.

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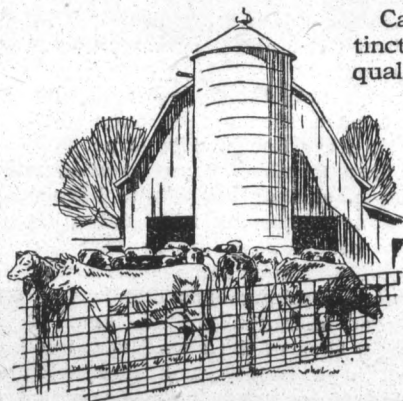
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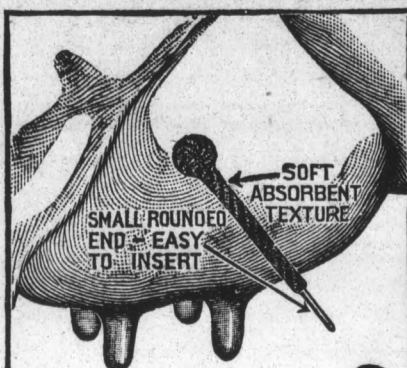
Cambria Fence sells because it has distinctive features. Besides possessing every quality of a good standard field fence, it is made of selected steel wire, thickly coated with zinc by Bethlehem's own process.

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LIVE STOCK AND DAIRYING

One Cow Tester's Work

By Ralph Moorhead

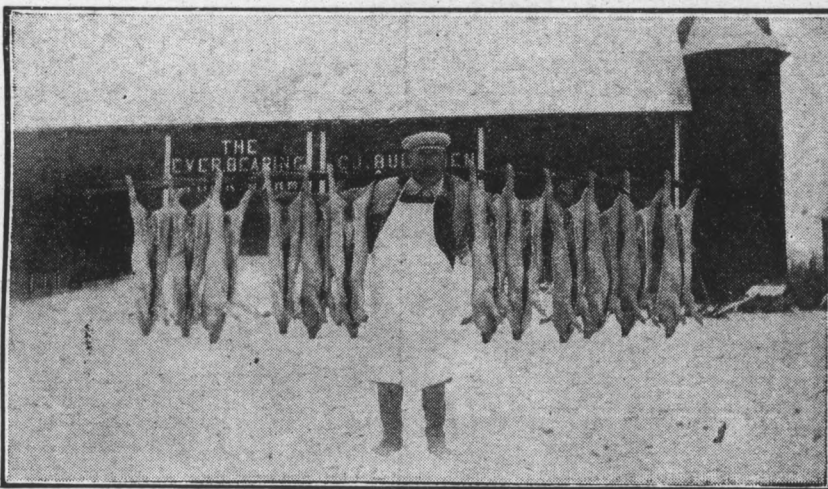
I STARTED with a new organization and found my members very interested in the cow testing association work. Most of them thought that all it consisted of was the testing and weighing of the milk and the keeping of the records of the cows.

The first thing to be done was the figuring of balanced rations suitable for the roughage fed to each herd. I explained to each member why a ration must be balanced to enable the cow to use the feed with the greatest efficiency. As a result, one member's cream check from seven cows was forty-two dollars more and his feed cost was less the month he fed the balanced ration than it was the month before. Many other members cut down cost of production. Twenty-five

registered Holstein bull have been purchased since last spring. All five bulls have good records. The grandmother of the Holstein is De Kol Plus Segis Dixie and is world's champion. One member will build a safety

THIS is the first prize story of accomplishment written for the annual contest of the Michigan cow testers. The story gives an idea of the broad line of work coming to the attention of the progressive cow testers.

keeper bull pen next year and two others are quite interested. Two bulls can be proven next year.



C. L. Bulgrien of Sanilac County Having Read About Ton Litters Gives a little demonstration

of my twenty-seven members are now using the rations that I figure for them.

It was explained why rations fed with alfalfa hay are the least expensive when compared with those fed with any other roughage. Other benefits to be had by growing alfalfa were pointed out also. As a result practically every member will be growing alfalfa next year. Members are convinced that all alfalfa seed should be inoculated before it is planted in soil that has never grown alfalfa. Because the soil in this vicinity needs liming, ten cars of lime were unloaded in one community last fall and ten thousand yards of marl have been contracted from a nearby bed for next spring.

Some of the other results of other discussions along various lines were as follows:

Five out of nine members who did not have silos put up silos last fall. The other four will build soon.

Two members have installed milking machines; two others have completely remodeled their dairy barns; two others have put in new cement floors and stanchions (they expect to install drinking cups later); two different members put in new plank floors back of the stanchions; another put in a supply tank and drinking cups alone; and another installed a litter carrier in his almost modern dairy barn.

Sixty-four of the least profitable cows have been sold by twenty-three of the twenty-seven members.

Better bulls are being used by the members. One registered Jersey, three registered Guernseys and one

Members are learning how to care for their manure and how to make it more efficient through discussions that we have had concerning Soils Schools that were directed by Mr. Sims of M. S. C. These methods are being adopted.

Besides keeping up my association work, I have taught members how to pick and care for seed corn, have culled eleven flocks of chickens and given suggestions on construction and ventilation of coops and so forth.

I have figured balanced rations for sixteen dairymen who were not members of cow testing associations.

During the summer months I used my spare time in soliciting for new members and obtained twenty-one. These with five others were organized into a new association last October and this association is now being operated successfully. I have a waiting list of six other new members who wish to join the association for which I work as soon as the year is ended in March.

Members have been brought into closer contact with the county agent and with the Michigan State College. A much greater interest in the dairy cow and in their individual herds has been shown by all members.

As a result of my first year's work most of my old members express their desire to keep on with the association with me as leader. All of my members emphasize the fact that they were very well pleased with the work accomplished this year.

Some folks' idea of contentment is being too lazy to complain.

HOW ONE MAN CONTROLS TICKS

I THINK I have heard more than the usual complaint about sheep ticks this winter. The animal that goes into winter ticky is sure to grow more ticky and conditions are decidedly unfavorable for dipping. When lambs on feed become quite ticky the unrest caused by the ticks is sure to cut deeply into thrift and gains.

Few farms are equipped for dipping. The season is right ahead when the most efficient knockout blow can be given to the next year's tick crop. We always kept ticks off our sheep by two means, the thoroughness dependent upon our doing those two things. We have never had a dipping tank on the farm.

After an aged sheep has been shorn the wool is too short for the ticks, they have to drop off. Of course, the man who has sheep with wooly faces would have to clip there too to prevent the ticks from going to the face for cover. In a week after shearing the ticks that escaped will be on the young lambs running in the flock. At that time we always dipped the lambs in a barrel. Instead of throwing the dip away when through with the lambs we confined the ewes to small space and dashed the remaining dip solution over them. After that there are few ticks left for breeding purposes.

When only a boy I saw old sheep men feeding sulphur in the salt to the sheep—they said it kept the ticks off. I am not saying that it did or that it does not, but I like to have sulphur in the salt for sheep. Now and then we find a tick in shearing, but one now and then is not to be bothered about. One season a fast hand with the shears put out fifty-two head for us in one day and said at night that he had not seen a tick that day.—G. P. Williams.

LAMBS ACT HUMAN

A COUPLE of weeks ago we mentioned the fact that we had speculated by purchasing some sheep. Among them were six little fall lambs. The first thing that we did was to dock and castrate them. Next we arranged a creep so that they could get through into a separate compartment and eat grain at will. I mix equal parts (by volume) of cracked corn, oats, and bran, and keep it before them at all times.

There is one thing that I cannot understand. These lambs can get this special grain mixture any time they want to. They nibble away at it quite daintily and moderately, but when I give the old ewes their oats, the lambs line right up to the rack and eat frantically. I wonder if it isn't the influence of example or the natural thrill which comes from doing things in unison. I told my wife how they act and she said, "That's the kid of it." "Yes," I said, "They act almost human."—S. P.

MICHIGAN COW WINS SILVER MEDAL

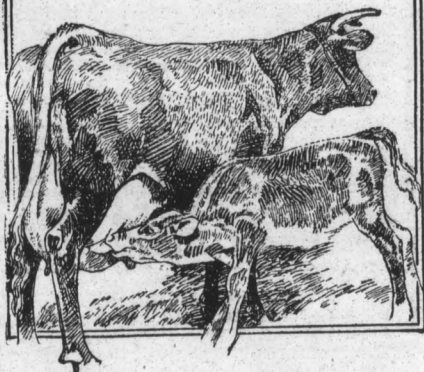
SAMUEL ODELL of Shelby, Mich., is the owner of Fauvic's Fern Princess, a young pure-bred Jersey cow which has been awarded a silver medal by The American Jersey Cattle Club, New York. Princess produced 438.31 pounds of butter-fat and 9,790 pounds of milk in a 305-day official production test. She carried calf for 181 days while making this record and in her best month her yield reached 5,259 pounds of butter-fat.

The sire of Princess is Fauvic Noble, a son of the great medal of merit bull, Fauvic's Prince. Her dam is Will Do's Fern Princess, which has a junior two-year-old record of 407.30 pounds of butter-fat and 8,184 pounds of milk.

We give advice by the bucket, but take it by the grain.—W. R. Alger.

Condition Your Cows before Calving

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Between periods of freshening a cow has little chance to build up a reserve vigor to carry her through the terrific strain of producing a vigorous offspring. All her energy is directed to milk production.

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Elements that are lacking in the ration—no matter how well balanced—are needed to safely approach calving. Kow-Kare supplies these elements. It builds up the digestive and reproductive organs—makes them function naturally and without

drain on bodily vigor.

Feed a tablespoonful of Kow-Kare with the grain for three weeks before and after freshening. Note the absence of serious troubles, the strength of the calf, the vigor of the cow. You'll never fail to give Kow-Kare to freshening cows once you've tried it.

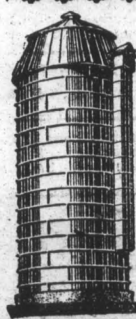
Feed dealers, general stores, druggists have Kow-Kare. Large size \$1.25—6 cans for \$6.25. Small can 65c. Full directions on each can for treating such cow ills as Barrenness, Retained Afterbirth, Abortion, Bunches, Scours, Lost Appetite, etc. If your dealer is not supplied, we will send Kow-Kare postpaid.

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The Sheep Outlook

SHEEP continue to increase in numbers and prospects indicate a lamb crop for 1928 somewhat larger than a year ago. Consumer demand for lamb is not likely to improve sufficiently to offset the prospective increase in production. With wool stocks in this country light and with a strong foreign market the outlook for wool appears favorable.

The number of sheep and lambs in the United States continued to increase during 1927, and on January 1, 1928, the number was estimated at 44,545,000 head. This number was 2,699,000 head or 6.5 per cent larger than the revised estimate of numbers January 1, 1927, and the largest number in sixteen years.

The lamb crop of 1927 was estimated as about the same size as that of 1926, with a considerable decrease in western lambs, offset largely by an increase in natives. The slaughter of lambs from last year's crop to the end of December was about the same as the slaughter of 1926 lambs up to the end of December, 1926. The death loss of sheep in 1927 was larger than in 1926 because of severe spring storms in the northern Rocky Mountain States and unfavorable spring weather in the far Northwestern States. Despite the heavy slaughter of lambs in 1926 and 1927 there was a material increase in flocks both years.

The upward tendency in sheep numbers in 1927 was evident in all the principal sheep producing areas but it was most prominent in the Southwestern States, with Texas showing the largest increase of all states.

The number of sheep and lambs on feed for market January 1 was estimated at about 450,000 head or 10 per cent greater this year than on January 1, 1927, and 100,000 head greater than on January 1, 1926. The increase this year was due mostly to increases in Northern Colorado and Western Nebraska, where numbers fed last year were much below normal. All of the Corn Belt States east of the Missouri River had fewer lambs on feed this year than last with the largest decrease in the states east of the Mississippi.

The Lamb Market

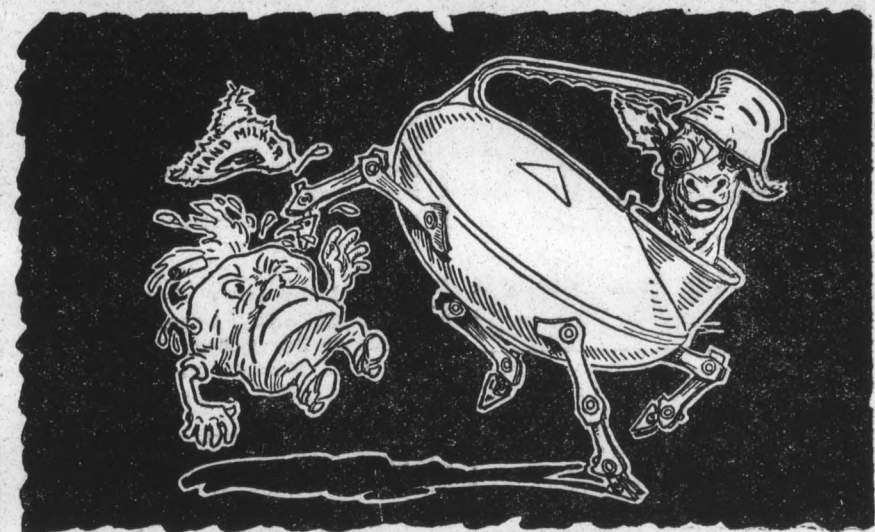
The market supply of fed lambs during the first five months of 1928 will be greater than during the same period last year, and about the same as in 1926. Average weights, because of a greater proportion of heavy lambs, will be larger than last year. A larger proportion of the Colorado and Western Nebraska fed lambs will be marketed in January and February this year than is normally true in these months, with a smaller proportion during March and April.

Present indications are that the 1928 crop of early California lambs is larger than last year's, and the largest on record for the state. Weather and feed conditions have been very favorable for the growth of these lambs and a heavy movement to eastern markets in April and May is expected. A spring movement of grass wethers and yearlings from Texas, as large, or larger, than the heavy spring movement in 1927, also is indicated. Apparently the supply of all sheep and lambs for slaughter during the first five months of 1928 will be considerably larger than last year and the largest for these months since 1914.

The supply of lambs during the last seven months of 1928 will depend largely upon the size of the lamb crop, but if weather conditions are not unfavorable over the Western States and the Corn Belt, it seems probable that the 1928 lamb crop will be larger than that of 1927 and that the slaughter of sheep and lambs during these months of 1928 will exceed 1927.

During the last half of 1927 prices (Continued to page 247)

The Mechanical Calf



Written by Myself



I'm a queer looking specimen that, I'll admit I don't look like a calf but really I'm "it". Born of the best brains—a product of man Conceived to milk quickly and gosh! How I can! Not a cow can complain (for I cause her no strain) I'm the milker that follows Dame Nature's wise plan.



Now I'm mighty considerate—ask any cow That's felt my Surge motion, and she'll tell you how I give a quick tug—then a suck—then release . . . She says when I milk it's Contentment and Peace. Yes, I'm fast as can be and just take it from me I never "say die" till she's dry . . . then I cease.



I'll acknowledge I'm homely but honest-to-Pete I can do two men's work and still keep my feet! I'm a glutton for labor—I'll work while you rest, (If you happen to doubt me . . . just give me a test!) Say! I won't mind the flies or a tail in my eyes, I'll surge 'em and urge 'em to give down their best.



I'm preferred by the women-folks (that's not a boast) For the facts of the case are—they like me the most! I'm so easy to clean and what's more—this is true—I don't claim all these virtues—I prove them to you! You can learn from your wife how I'll brighten her life By easing and pleasing with less work to do!



I'm a bear for simplicity! Milk claws? Not one! No long four foot milk tubes with dirt by the ton. Just a teat cup of two parts! From teat-to-the-pail The milk travels four inches . . . short and sweet tale! No "ring-marks" on udder. (I massage with my rubber), So try me . . . then buy me—you'll find I won't fail.



When it comes to Bacteria, bugs and the like— They quake in their boots when they see me—and hike! Yes, I'm built for sure cleanliness—sturdy—compact, (Bugs all hate my short tubes . . . in long tubes they're packed,) Oh, my milk is so clean! There's no other machine That can claim this high fame—that's a fact!



Here's a little experience which surely will show How perfect my action when I start to go: Small Red-Head (the calf) watched me milk Mother Cow . . . When I finished he tried the same thing, but somehow He got 'nary a drop so he made a quick stop And then cried, "I've got pride—but you're good I'll allow!"



So I'm asking you this—Mail the Coupon below For my Free Trial Offer, and then you will know That tho I look different (and may make you laugh) My actions will show you I'll stand all the gaff! Your doubts I'll submerge with my wonderful Surge— Goodbye . . . and please try . . . the Mechanical Calf!

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Galvanized

Always look for the Red Brand (top wire)

Worth \$1 More per Acre Rent!

"I am a renter. I worked a farm for three years that was all fenced and crossfenced. Now I am on a farm that has very little fence. A well fenced farm is worth at least \$1 per acre more rent and is worth \$15 to \$20 per acre more in a poorly fenced farm." L. L. Nali, Canby, Minn.

E. W. Loy, Waynesville, Ohio, says: "Don't expect your tenants to do justice to their crops while being aggravated by poorly fenced farms."

No man can chase stock and plow corn at the same time. Fence and cross fence hog-tight. RED BRAND FENCE, "Galvanized," copper bearing will pay for itself in increased earnings in 1 to 3 years.

Thousands have used Square Deal fence for many years. Now, with copper in the steel and more zinc "Galvanized" on to keep rust out, RED BRAND FENCE is better than ever—and costs less because it lasts longer. One-piece stays, wavy line wires, can't-slip knots keep it trim, true, hog-tight and bull-proof.

What has been your experience with or without good fence? We will pay \$5 or more for each letter that we use. Write for details, catalog and 3 interesting booklets that tell how others have made more money with hog-tight fences.

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You know what you'll pay when you decide on Fords Milker. Complete, ready for milking. Finest construction throughout. Guaranteed to milk as well as any power milker regardless of price. Thousands giving great satisfaction. Sales doubling every year. Cows like it. Delivers clean, premium-priced milk. Easy to operate and clean. Many styles and sizes.

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has a cough or cold or has been exposed to disease give it Spohn's. Use Spohn's to keep your horses working full time. For distemper, influenza, colds, coughs, pink eye, catarrhal fever and all diseases affecting the nose, throat and lungs give—

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American Field Seed Co., Dept. 531, Chicago, Ill.

COW TESTERS GET TOGETHER

ABOUT seventy-five cow testers assembled at Michigan State College for their annual conference during Farmers' Week. Mr. George Taylor, of the Dairy Department, superintendent of official testing at M. S. C. explained in greater detail the rules for the Holstein Friesian herd improvement registry test. Reports from Michigan cow testers show more than 115 herds entered in this new Holstein Friesian test for the month of January.

Other speakers were Professor O. E. Reed of the Dairy Department and W. E. McCarthy, County Agricultural Agent of Bay County, Michigan, also Mr. J. H. McClain and W. E. Wintermeyer of the U. S. Bureau of Dairying,



Few groups are doing more for dairying and farming than the cow testers of Michigan. This picture was taken at their recent annual meeting during Farmers' Week at East Lansing.

Washington, D. C., commented very interestingly about the proving of bulls through the dairy herd improvement associations. Mr. McClain urged the keeping of pure-bred sires until the daughters have proven themselves in a testing association and showed by charts that not every pure-bred bull is capable of producing a big increase in butter-fat production in the daughters of the dams.

Herd owners that have herds averaging about 350 and 400 pounds or more of butter-fat have a more difficult problem to solve in the selection of sires that can bring improvement. Mr. Wintermeyer referred to the fifty proven sires found to date in Michigan testing associations. Only four of the fifty are known to be alive.

Outlines for the testing association program during 1928 were suggested by A. C. Baltzer, in charge of the dairy herd improvement association in Michigan. Need for filling the membership of each association was pointed out since the average Michigan association contains but twenty-three members. Emphasizing the losses that have occurred in the testing associations over a period of years, the statement was made that more than fifty associations had failed to continue the work in the last five years. Testers can assist materially in keeping the organizations alive by rendering services that mean improved production for their members.

Each testing association was urged to make further effort to have at least two more safety keeper bull pens built during 1928 in order to assist in the program of proving out dairy sires in Michigan.

Enlargement in the acreage of sweet clover and alfalfa seedings was also encouraged and feeding of grain with pasture was emphasized.

SEPARATORS GO WRONG

EDWARD MORTIMORE, cow tester for dairy production at Trufant, Michigan, Montcalm County, reports finding two separators that were skimming poorly. One separator was losing butter-fat at the rate of one dollar a day. Another separator tested two per cent butter-fat in the skim milk.

Such findings by the 104 Michigan cow testers are instances of locating losses that are stopped for the better-

ment of dairymen's profits. Needless to say proper repairs have been made or adjustment to stop the losses incurred by these separators.

WHAT TESTING MEANS TO A COMMUNITY

RECENTLY the manager of a big dairy concern in Michigan explained his view of dairy herd improvement associations. Dairy farmers will appreciate to know how whole heartedly business desires to cooperate with those who desire to cooperate with them. This manager stated that the testing association records in 1927 in his neighborhood showed the average D. H. I. A. cow produced 8,700 pounds milk per year. A census of the patrons of his plant

made in 1926 showed the average milk production shipped to the plant per cow was 5,700 pounds.

This is a difference of three thousand pounds milk per cow per year. There were 3,000 cows in the area, so the estimated difference would total nine million pounds milk per year. Using \$2.00 per hundredweight as the average yearly price (it actually was \$2.05), the estimated money difference would total \$180,000. The estimated money difference per patron for nearly 400 patrons would amount to \$280 per year.

These figures show what might have happened if all of the patrons' cows had produced as well as the D. H. I. A. cows produced. Profitable dairying and good farming speak in a language understood by all. The fact that the D. H. I. A. cows did produce so efficiently is proof enough that other cows in that section and in Michigan, similarly fed, bred, and managed, should do about as well. Enlarged net return per cow and herd during the year is desired by Michigan dairymen.

This case is average and it can be duplicated in other Michigan communities. Michigan dairymen and farmers can obtain the largest return for their effort whenever the most efficient methods are adopted to produce quality dairy products. Seriously the investment on the part of a dairyman of forty dollars or even fifty dollars per year to test out his herd of cows in a D. H. I. A. is one of the best paying investments possible for a dairyman. Not alone are money returns made for this investment but also satisfaction is given the dairyman that his efforts, his labor, his equipment and crops grown are being marketed through efficient live stock on his farm. Information of this kind will help bring about a better dairy farming business.—A. C. Baltzer.

THE FEEDER STEER I LIKE

HAVING had a good deal of experience feeding cattle, I am naturally inclined to favor a certain type of feeder steer. I am prejudiced in favor of the red steer with a white face. To me he shows up better than any other. When fat he is attractive. This type is kindly disposed, fattens quickly, and is easy, and profitable for the farmer to handle.

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I have for sale at reasonable prices a number of young bulls, the use of which should improve the type and production of your herd. Also a few heifer calves. John Endicott, Birmingham, Michigan.

GUERNSEYS either sex, whose sires' dams have official records of 15-209.10 milk, 778.80 fat, 15.00 milk, 909.05 fat. T. V. HICKS, Battle Creek, Mich., R. 1.

Guernsey Dairy Heifer Calves, practically pure bred \$25.00 each. We ship C. O. D. Write L. Terwilliger, Wauwatosa, Wis.

For Sale—Reg. Guernsey cows and a few bull calves, sire by Imp. Coro Honor. JOHN EBELS, Holland, Mich., R. 2.

FOR practically pure-bred GUERNSEY or HOLSTEIN calves, from heavy, rich milkers, write EDGEWOOD DAIRY FARMS, Whitewater, Wis.

FOR SALE—Registered Guernseys fresh and springers. Rollin Anderson, Holtan, Mich.

FOR SALE Ten high grade Holstein cows, tuberculin tested for several years. Never any reactors. GEORGE HEIDENFELDT, St. Clair, Mich., R. 3.

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REGISTERED HOLSTEIN

Bull Calves at prices the owner of a small herd can afford to pay. The sire of many of these calves is a Son of the highest record (30 lb.) two-year-old daughter of Creator. His sire is King Segis Alcartra Prilly, an undefeated Show bull with 70 A. R. daughters. Others sired by a 5 times 1200 lb. Champion Bull, the famous K. P. O. P. breeding.

Bred cows and heifers served by these sires are available for foundation stock.

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Northville, Michigan

Telephone: 344

Reference: Northville State Savings Bank

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MONDAY, FEB. 27th, at Farm, six miles southwest of Goshen, Ind., beginning at 10 A. M. Household goods, farm implements, 18 head of horses, sixteen Registered Belgians sired by Rubis 8004, Lourdean 8072, William De Bols 1333 to Bay Mares 8 years. Two sorrel mares 4, 2 sorrel mares 3, one bay mare 3, one bay mare 2. One filly 9 months, one stud colt 8. These mares are bred. Six stallions, roan, bay and sorrel coming 4 and 5. ERIAS SNIDER & SONS, R. 6, Goshen, Indiana.

FOR SALE Dual purpose Red Polled Bulls from 10 to 12 mos. old. BAT-TENFIELD BROS., Fife Lake, Mich.

For Sale—Polled Shorthorn Calves

Either sex, milk and beef, Federal tested. PAUL QUACK, Sault Ste. Marie, R. 2, Mich.

Milking Shorthorns Bulls and females for sale, all ages. Some extra fine bred heifers. Best Clay breeding. IRVIN DOAN & SONS, Crosswell, Mich.

Registered Brown Swiss for sale, cows 10 and 11 yrs. old due in Feb. 2 bred heifers. Also bulls of serviceable age. A. A. FELDKAMP, Manchester, Mich.

88 Hereford Cows

Big wide back kind, dark reds, dehorned. Bred to extra good Hereford bulls to calve about April 1st. Will sell you choice car load. Also 22 Hereford cows and calves and 24 heavy springers. Also other bunches. All T. B. tested. Also yearling and 2 yr. old stockers and feeding steers sorted even in size and quality.

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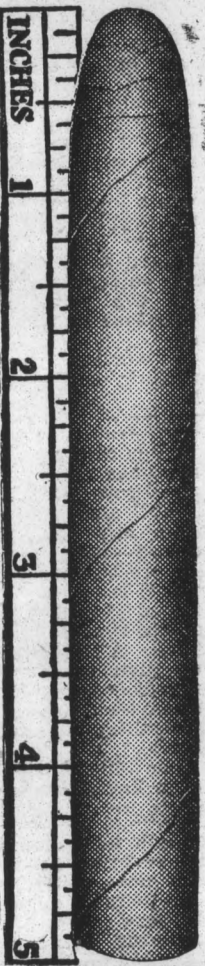
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NOTE—If you will send check or M. O. it will save delays and 12c C.O.D. charges. If you are east of Pittsburgh send \$2.20 (\$1.95 plus 25c postage). If west of Pittsburgh, send \$2.35.

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All of the stock of the Bidwell Stock Farm. New owner going into dairy cows. 1 herd bull, 3 yrs., 1 15 mo. bull, 7 yearling bulls, 8 heifers and 6 cows. These are the best of the Bidwell breeding; are all T. B. tested and have been selected. Price to close. Will be less than the adults will bring, and must be all or none at these prices. A chance of a lifetime for a young breeder, or will trade for a registered herd of Holsteins, Jerseys, or Guernseys. Get busy.

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For Sale Reg. Holstein Bull age 2 yrs. 2 mos. Sire a 30 lb. Colantha bull. Dam has 27.70 7 days, 558 lbs. in yr. C. T. A. Good individual. JAY B. TOOLEY, Howell, Michigan.

FOR SALE Six high grade and registered Jersey cows, 3 heifer calves 6 mo., 1 yearling heifer, 1 yearling bull whose dam made 402 lbs. butter-fat in 300 days, 2 bull calves. C. H. FREEMAN, Alto, Mich.

In selecting a bunch of steers for feeding, I choose those with short, compact, and deep bodies. I want them to have well sprung ribs, deep lung capacity and wide heart girth.

I cut out all crippled, deformed, or diseased steers. A steer with the lump jaw, bent, or crippled limb does not feed well and sure spoils the looks of the herd. A bunch of uniform steers will command a better price when sold.—W. D.

THE SHEEP OUTLOOK

(Continued from page 245)

of dressed lamb averaged about 7 per cent lower than in 1926 with only about 4 per cent increase in consumption, indicating a slackening in demand. This was further borne out by the fact that choice, light, and handyweight lamb carcasses at New York averaged \$1.37 or 5 per cent lower than for this period in 1926. Slaughter lambs this winter are heavier in weight than a year earlier, and medium and heavy weight carcasses at New York in December sold \$2.50 or more under light and handyweights as compared with a differential of \$1.25 a year earlier. This also partly accounts for the lower average price of dressed lamb this winter.

Part of the slackening in demand and the lower dressed lamb prices, especially during the past few months may have been due to the dullness in business activity and the reduced purchasing power of consumers. The effect of higher beef and veal prices and increasing consuming population were not enough to offset larger lamb supplies and lower business.

Present conditions indicate that beef prices will continue to be maintained at a relatively high level through 1928, and that general business conditions and the purchasing power of consumers during 1928 are likely to show some improvement from the present level, which should tend to improve the demand for lamb.

Market prices of live lambs during the last half of 1927 averaged about the same or slightly higher than a year earlier. The relatively high level through October to the middle of December was largely caused by reduced supplies of feeder lambs at central markets and the strong feeder demand as feeder lambs sold at a rather wide premium over fat lambs. Lamb pelts were also higher than a year earlier. Near the middle of December increased supplies of killing lambs, accompanied by an apparent slackening in feeder demand, caused a rather sharp break in prices of all lambs with the greatest decline on heavy weights.

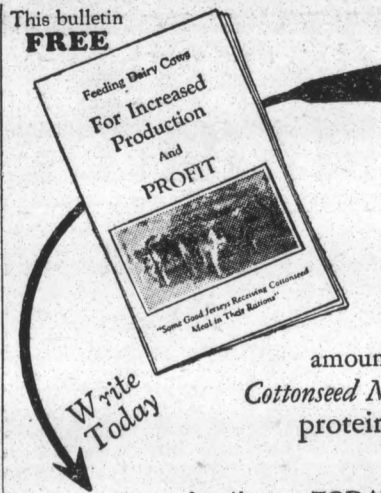
The increased numbers of lambs on feed and the increased proportion of heavy lambs as compared with a year ago indicate a considerable increase in marketings during February and March as compared with a year ago. Prices during the next few months will depend to a considerable extent on the distribution of marketings, both geographically and as to time.

With increased supplies of lambs from California and from other spring lamb areas indicated, it is probable that the spring advance in prices will be less marked than usual.

Given average weather conditions there will be more lambs to market during the last half of 1928 than a year earlier. Consumer demand may show some improvement next fall and winter over present levels, but with a lower feeder demand than a year earlier probable, the increase in consumer demand is not likely to be sufficient to offset the prospective increase in production.

Among our pure-bred Shropshire ewes there was a variation of five and a quarter pounds between the heaviest and the lightest fleece. This is well worth knowing about.—S. P.

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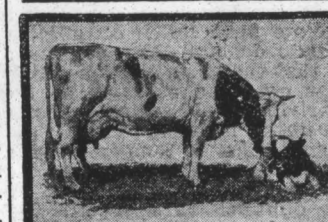
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For Sale—Reg. O. I. C. April & May Pigs best of breeding. Shipped on approval. FRED W. KENNEDY & SONS, R. 1, Chelsea, Mich.

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Chester White Gilts with quality. Have a few March gilts bred for March farrow. Also fall pigs. Will sell cheap. NEWMAN'S STOCK FARM, Marietta, Mich.

CHESTER WHITES fall pigs, service boars and bred sows of first quality. F. W. ALEXANDER, Vassar, Mich.

CHESTER WHITES a few bred gilts, fall pigs, not akin. ALBERT DORR, Clinton, Mich.

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A FEW good Hampshire spring boars at a bargain. Place your order for bred gilts. JOHN W. SNYDER, St. Johns, Mich., R. 4.

FOR SALE Poland China boars of March and April farrow. Also some choice bred gilts, due to farrow in March and April. Every one immunized for cholera. WESLEY HILE, Ionia, Mich.

LARGE TYPE Poland China bred gilts, also fall boars and gilts. JAMES G. TAYLOR, Belding, Michigan.

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FOR SALE Two hundred good mouth breeding ewes, bred to Shropshire rams, medium wool, good condition. LEWIS ERNST, Box 116, Saline, Mich., Phone 78.

A FEW bred Karabul ewes for sale, the right fur bearing kind. ANGUS HOME STOCK FARM, Davison, Mich.

200 Head Breeding Ewes mostly Delaines, bred to Reg. Shropshire rams. C. LEMEN, Dexter, Mich.

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For Sale Rising Three-Year-Old

BELGIAN STALLION

Prince de Rubis. Sorrel in color, weight 1,900, sired by Rubis. Full brother to Manitta de Rubis 10750. Grand Champion Mare at 1927 International. He is also a half brother to the famous Perwenche 9030. Dam of Prince de Rubis now owned by Michigan State College. JAMES LYNCH, Coral, Michigan.

FOR SALE 2 Percheron stallions, coming 3 and 4 yrs., black and dark gray. Are sound and will make ton stuff. Also Shorthorn bulls. Write H. B. Peters, Elsie, Mich.

FOR SALE A roan Belgian Stallion 5 yrs. old. V. J. GILBERT, 1424 Portage St., Kalamazoo, Mich.

FOR SALE Belgians, Stallion Roan Bay and six. ERIAS SNIDER, Goshen, Ind.

FOR SALE Three year old Belgian stallion, son of Rubis. See him before you buy. HENRY EICKENROTH, Pierson, Mich.

FOR SALE Five yr. old Reg. Black Percheron stallion. J. B. SIMPSON, Charlotte, Mich., R. 10.

FOR SALE Matched Pair of pure-bred Percheron mares. L. C. HUNT, Eaton Rapids, Mich.

FOR SALE 4 year old Percheron Stallion, A splendid individual. IVAN BURSLEY, R. 6, Charlotte, Michigan.



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Detroit—No. 2 red at \$1.48; No. 2 white \$1.45½; No. 2 mixed at \$1.45½.
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Toledo—Wheat, No. 2 red at \$1.48 @ \$1.49.

Corn.

Detroit—No. 2 yellow \$1.01; No. 3 yellow 98c; No. 4 yellow 96c.
Chicago—March 93c; May 96c; July 97¼.

Oats.

Detroit—No. 2 Michigan 62c; No. 3 white 60c.
Chicago—March 55c; May 55½c; July 52½c.

Rye.

Detroit—No. 2 \$1.17.
Chicago—March \$1.09½; May \$1.09½; July \$1.04½.
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New York—Pea domestic at \$7.50 @ \$8.25; red kidneys \$8.00 @ \$8.75 to the wholesalers.
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Detroit—Malting 97c; feeding 94c.

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Detroit domestic seeds:—Cash clover \$18.05; February \$18.05; March \$18.00; cash alsike \$16.20; February \$16.20; March \$16.35; timothy at \$2.05; March \$2.10.

Hay.

Detroit—No. 1 timothy at \$13.00 @ \$14.00; standard \$12.50 @ \$13.50; No. 2 timothy \$10.00 @ \$11.00; No. 1 light clover, mixed \$13 @ \$14; No. 1 clover \$11.50 @ \$12.50; wheat and oat straw \$10.00 @ \$11.00; rye straw \$11.00 @ \$12.00 alfalfa hay, alfalfa choice at Chicago, \$24.00 @ \$25.00.

Feeds.

Detroit—Winter wheat bran at \$40; spring wheat bran at \$39; standard middling at \$40; fancy middling at \$43; cracked corn at \$43; coarse corn meal \$41; chop \$40 per ton in carlots. Poultry feeds with grit \$49.00; without grit \$53.00 per ton.

WHEAT.

While wheat prices were easy during the past week, they still show the sidewise trend which has prevailed for nearly two months. Heavy offerings from the Argentine, small clearances from the United States, a downward tendency at Liverpool, an unusually large world supply in commercial channels, and rains over part of the drouth-stricken area in the southwest were the chief depressing factors. The situation was not one-sided, however, as flour trade has shown slight improvement, no real pressure from cash wheat has developed in domestic markets and unofficial reports point to rather serious damage to the new crop

in the soft winter wheat belt as well as in some of the hard winter wheat sections.

The outlook for the new crop will play a large part in determining the trend of prices from this time on. If winter damage is no greater than normal and weather conditions favor planting spring wheat, prevailing prices would be difficult to maintain. Severe damage and an unfavorable spring would pave the way for a substantial advance, however, since prices are already low enough to discount some excess in supplies.

RYE.

Receipts of rye have been large enough to cause slight accumulation in the visible supply recently, but it is so small that a moderate volume of export business next spring could create a very tight situation. Export sales were reported during the past week.

CORN

Corn prices have shown decided strength in the last few days. Primary receipts have fallen off slightly and domestic demand has continued active so that the accumulation at terminals has not been as rapid as the volume arriving would indicate. Some export business is being done right along which helps to support values. Weather has turned unfavorable for country deliveries and receipts are expected to diminish as a result. Reports that the crop failed to come up to expectations are numerous and many sections in the eastern part of the corn belt which usually have corn to sell are obliged to ship in corn.

Since November 1, primary receipts

of corn totalled 101 million bushels compared with 75 million bushels a year ago. Only 11 million bushels were added to the visible supply, however, compared with 19 million bushels last year. This shows that distributive demand is much broader than a year ago.

OATS.

The oats market has been showing a firm tone partly in sympathy with corn. Receipts have been about equal to the demand, so that the visible supply has not been diminishing rapidly, but it is already much smaller than usual at this season of the year. With the usual spring distribution of oats into consuming channels due to start soon and with a healthy corn market situation, it is probable that oats prices will work somewhat higher.

FEEDS.

The feed market was firm to strong last week, with firmness in corn and oats prices a prominent factor. Heavier feeds showed more activity and prices advanced. Buyers are exhibiting more confidence in deferred feeds, particularly for March and April shipment.

EGGS.

The fresh egg market slipped a little more last week as receipts showed some further gain and the conservative trading policy which dealers adopted at the first sign of a heavier lay continued. The supply of storage eggs has been practically exhausted so that the trade is largely dependent upon daily receipts. Prices are still seeking a level at which the flush spring production can be moved, and

barring temporary rallies as unfavorable weather conditions delay production, the trend of the market will continue downward for another month or two.

Chicago—Eggs: fresh firsts, 29c; extras, 37 @ 38c; ordinary firsts, 27 @ 28c; dirties, 26c; checks, 25c. Live poultry: Hens, 25c; capons, 28 @ 30c; springers, 29c; roosters, 20c; ducks, 27c; geese, 22c; turkeys, 28c.

Detroit—Eggs: Fresh receipts, best quality, 32 @ 33½c; dirties and checks, 27 @ 29c. Live poultry: Heavy springers, 28 @ 32c; light springers, 23c; capons, 35 @ 36c; heavy hens, 28c; light hens, 23c; roosters, 16c; geese, 20 @ 21c; ducks, 26 @ 30c; turkeys, 36 @ 38c.

BUTTER.

Price changes in the butter market recently have been small and the undertone is generally steady. Supplies are increasing gradually and the outlook favors a good sized spring butter production. This supply situation is offset, however, by the fact that prices are several cents lower than a year ago and that the supply of really fancy top grade storage butter has been fairly well cleaned up already. In addition, British butter markets have strengthened in the past fortnight, so that there is less danger of any sizable imports.

Prices on 92-score creamery were: Chicago, 45c; New York, 46½c; Detroit, 42 @ 45c per lb.

POTATOES.

The potato market has stiffened recently and slight advances have been marked up in many markets. Demand for seed potatoes is still active as all southern requirements have not yet been filled and dealers even in the more northern states are beginning to contract for their needs later on. The western crop is being marketed rapidly and in most sections the crop will be cleaned up by April. A larger percentage of the crop than usual was stored in pits this year, so that the shrinkage has been heavier than when stock is kept in warehouses. Northern round whites, U. S. No. 1, are quoted at \$1.65 to \$1.75 per 100 pounds, sacked, in the Chicago carlot market.

BEANS.

The bean market has advanced to an unexpectedly high level with Michigan C. H. P. whites now quoted at \$8.00 to \$8.25 per 100 pounds, sacked, f. o. b. Michigan shipping points. The crop of Great Northerns has been pretty closely cleaned up so that Michigan beans have little competition. Demand from the consuming trade is not heavy as the cold weather is breaking, and the market is so high that some reaction would seem imminent.

DETROIT CITY MARKET

Apples, 80c @ \$4.50 bu; bagas 50c @ \$1.00 bu; beets, 50 @ 59c bu; cabbage, 40 @ 50c bu; curly cabbage, 50c @ \$1.00 bu; red cabbage 75c @ \$1.00 bu; carrots 40 @ 60c bu; celery local 50 @ 65c doz; celery hearts 10 @ 15c ½ doz bchs; collards, green, 60 @ 90c bu; eggs wholesale, white, 45 @ 50c doz; brown, 40c doz; retail 45 @ 55c doz; French endive 75c @ \$1.00 5-lb. box; dry onions 75c @ \$1.15 bu; root parsley \$1.50 @ \$1.75 bu; curly 35 @ 40c doz. bchs; parsnips 50c @ \$1.25 bu; pears, No. 1, 75c @ \$1.25 bu; potatoes 60c @ \$1.15 bu; Poultry, hens, whole, 25 @ 30c lb; retail 30 @ 32c lb; broilers, wholesale, leg-horns, 24 @ 27c lb; rocks 26 @ 32c lb; retail 30 @ 35c lb; ducks 26 @ 30c lb; geese 25 @ 28c lb; dressed poultry, retail 35 @ 38c lb; ducks 35 @ 40c lb; black radishes 60c @ \$1.00 bu; horse radish \$6.00 @ 8.00 bu; rhubarb H. H. 65 @ 85c 5-lb. box; Hubbard squash \$1.50 @ 2.00 bu; spinach \$1.50 @ 1.60 bu; vegetable oysters 75c @ \$1.00 doz. bchs; butter 60c lb; dressed hogs 13 @ 15c lb; veal 21 @ 22c lb; root celery \$1.00 @ \$1.50 bu.

BEAN MARKET CONTINUES TO ADVANCE

THE Michigan bean market continues firm with prices at their peak, demand fairly good and supplies slowly diminishing, says a Detroit dealer.

The situation this year is somewhat like that of the year of 1922, although the shortage at present is not as serious as in that year. On January 15, 1922, while the Canners Convention was in session at Louisville, the Michigan market was \$4.45. By February 1st the price had advanced to \$5.00 and continued to rise until it

Live Stock Market Service

Monday, February 13

DETROIT

Cattle.

Receipts 649. Market opening strong to 25c higher.

Good to choice yearlings
dry-fed \$11.00 @ \$13.75
Best heavy steers, dry-fed 10.25 @ 13.00
Handy weight butchers.. 9.00 @ 11.00
Mixed steers and heifers. 9.00 @ 10.50
Handy light butchers 8.00 @ 10.00
Light butchers 6.00 @ 8.50
Best cows 7.00 @ 9.00
Butchers cows 6.00 @ 7.50
Cutters 5.50 @ 6.00
Canners 4.75 @ 5.25
Choice light bulls 6.00 @ 8.50
Bologna bulls 7.00 @ 8.00
Stock bulls 6.00 @ 7.25
Feeders 7.00 @ 9.50
Stockers 7.00 @ 8.50
Milkers and springers... 7.50 @ 11.50

Calves.

Receipts 680. Market steady.
Best \$15.00 @ 18.00
Others 7.50 @ 17.00

Sheep and Lambs.

Receipts 1,235. Market 50c higher.
Bulk good lambs..... \$ 13.00
Best lambs 15.75 @ 16.00
Fair lambs 12.50 @ 14.00
Light lambs 10.00 @ 12.00
Yearlings 12.00 @ 13.00
Fair to good sheep 6.00 @ 8.50
Buck lambs 7.50 @ 12.25
Culls and common 3.00 @ 5.50

Hogs.

Receipts 1,944. Market slow at about 25c lower than last week's close.
Pigs \$ 7.75
Mixed hogs 8.60
Lights 8.25
Roughs 6.50
Good Yorkers 8.60

Stags 5.50
Extreme heavies 7.00 @ 7.75

CHICAGO.

Hogs

Receipts 100,000. Market 15 @ 25c lower; mostly 15c lower; tops \$8.35; bulk good 170-210-lb. \$8.20 @ \$8.35; 220-300-lb. \$8.00 @ 8.25; 140-160-lb. weight \$8.00 @ 8.35; most pigs \$7.00 @ 7.25; selected strong weights up to \$7.50; bulk packing sows \$7.00 @ 7.20.

Cattle

Receipts 20,000. Market fat steers and yearling trade 25c under last week's close; slow at decline; better grades at standstill; steer run and light weight offerings of value to sell at \$14.50 down, predominating; moderate sprinklings with weight eligible to \$15.50 and better; light stockers steady; meaty feeders tend lower, bidding 25c lower on fat cows and heifers; bulls and vealers steady; most sausage bulls with weight \$8.25 @ 8.50; light vealers \$14.00 @ 15.00; shippers and small vealers \$15.00 @ 16.00, few \$16.50.

Sheep and Lambs

Receipts 22,000. Market on lambs of quality unchanged, demand broad; fat lambs active, unevenly strong to 25c higher; bulk steady grade lambs 87-lb. down \$15.50 @ 16.00, nearly \$16.25 on best handy weights; nothing done on heavies or Colorados; light native throwoffs around \$12.00; sheep 25 @ 50c higher; cream of fat ewe run \$9.50 @ \$9.75; culls up to \$7.50; feeders 25c higher, \$14.50 @ 15.50; 63-lb. average \$15.40.

BUFFALO.

Hogs

Receipts 12,500. Hold over 418; market 25 @ 50c lower; pigs steady; 160-190-lb. \$9.00; 200-225-lb. \$8.75 @ \$8.90; 300-350-lb. \$8.00 @ 8.25; light pigs \$7.75 @ 8.00; packing sows \$6.75 @ \$7.50.

Cattle

Receipts 1,750. Market steady 25c lower, closing slow; \$12.25 paid for 925-lb. yearlings and 1,230-lb. steers, few \$13.50 @ 14.00; bulk medium steers \$11.00 @ 13.00; heifer yearlings \$9.00 @ \$11.00; fat cows \$6.50 @ 9.50; all cutters \$4.25 @ 6.25; vealers \$6.50 @ 9.00.

Calves

Receipts 1,500. Market 50c higher; bulk good choice vealers \$18.00; culls and common \$11.00 @ 14.00.

Sheep and Lambs

Receipts 7,400. Market on lambs 50c higher; bulk good and choice 78-90-lbs. \$15.25; bullocks \$13.00 @ 14.00; vealers \$13.00 @ 14.00; fat ewes \$8.00 @ 9.00.

BABY CHICK LIFE INSURANCE

Why not buy Baby Chicks that are insured to live for the first critical thirty days? Send for one of the most amazing propositions ever offered on quality Baby Chicks!

FREE BOOK
explains our insurance proposition on White and Brown Leghorns, Barred and White Rocks, Reds, White Wyandottes, Ducks, Geese and Turkeys. Get your copy of this book!

State Farms Association
313 North Rose Street
KALAMAZOO, MICHIGAN

NOW IS THE TIME TO BUY BROILERS

FREE Get your copy of America's finest poultry manual, Elaborate book given with every order. Write.

Don't Wait—Order Early

Michigan Accredited—Blood Tested State Inspected Stock.
S. C. White Leghorns, Red Star Mating 100 500 1000
S. C. White Leghorns, Select Mating 13.00 62.50 120.00
Barred Plymouth Rock, Select Mating 15.00 72.50 140.00

RICHARDSON HATCHERY

"Chicks with a Future" Dundee, Box B Michigan

Chicks That are Strong and Sturdy



and from hens that are mated to cockerels from Contest Winners. Our 10th season.

S. C. W. Leghorns..... \$11.00 500 \$52.50 \$100
Barred Rocks & Rhode Island Reds.. 13.00 65.00 125
Broiler Chicks 8.00 40.00

Order direct from ad. Terms 10% with order, balance C. O. D. 100% live delivery guaranteed.

BYRON CENTER HATCHERY
Byron Center Michigan

reached \$9.75 a cwt. f. o. b. Michigan points. The present price of \$7.90 a cwt. is \$2.60 higher than it was on December 23, 1927.

The general opinion is that this advance is partly due to growers who held together for a \$5.00 basis. They were severely criticized by some of the largest buyers of beans and these buyers apparently are the main cause of such a rapid advance because they were expecting lower prices when purchases were possible at around \$5.50 a cwt. and evidently let their stocks run low in anticipation of a free movement from the farms.

Another factor is the belief that the state final production figure of 5,094,000 bushels may be too high. A survey just completed by the Michigan Bean Jobbers Association shows estimated shipments from the present crop of

4,098 carloads with 2,227 carloads still on hand, or a total of 6,325 carloads for the crop which is 1,316 carloads less than the government estimate.

Stocks in other states are not at all burdensome and although the California crop was good, it seems the demand along the coast is sufficient to take care of any surplus. Early in the season the Great Northern beans grown in Idaho and Montana were forced on the west and southwest markets but the surplus has disappeared and the price is now higher than Michigan. The possibility of importations causing any effect is discarded due to foreign crops being light.

As for the future price there is nothing impossible; however, the present market is strong and should continue to hold its own.

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.

Rate 9 cents a word, each insertion, on orders for less than four insertions; for four or more consecutive insertions 7 cents a word. Count as a word each abbreviation, initial or number. No display type or illustrations admitted. Remittances must accompany order.

Live stock advertising has a separate department and is not accepted as classified. Minimum charge 10 words.

Words	One time	Four times	Words	One time	Four times
10.....	\$0.90	\$2.80	25.....	\$2.34	\$7.28
11.....	.99	3.08	26.....	2.43	7.56
12.....	1.08	3.36	27.....	2.52	7.84
13.....	1.17	3.64	28.....	2.61	8.12
14.....	1.26	3.92	29.....	2.70	8.40
15.....	1.35	4.20	30.....	2.79	8.68
16.....	1.44	4.48	31.....	2.88	8.96
17.....	1.53	4.76	32.....	2.97	9.24
18.....	1.62	5.04	33.....	3.06	9.52
19.....	1.71	5.32	34.....	3.15	9.80
20.....	1.80	5.60	35.....	3.24	10.08
21.....	1.89	5.88	36.....	3.33	10.36
22.....	1.98	6.16	37.....	3.42	10.64
23.....	2.07	6.44	38.....	3.51	10.92
24.....	2.16	6.72	39.....	3.60	11.20
25.....	2.25	7.00	40.....	3.69	11.48

Special Notice

All advertising copy must reach this office ten days in advance of publication date.

REAL ESTATE

BUY UPPER WISCONSIN FARM LAND THIS YEAR. This Cloverland district offers you fine soil—the best for dairying—barley, oats, rye, hay, potatoes, root crops. Never had a crop failure. Clover grows wild. Plenty sunshine and rain. Numerous lakes and rivers. Excellent drainage. Plenty hunting, fishing, and trapping. Good roads. High schools, rural schools, churches, cream routes, telephones. Only a few hours to largest markets in United States. 40 or 80 acre tracts from \$12 to \$30 per acre. Lakelands priced a little higher. Small down payment—10 years on balance. Over 600 families here now. We show you how to start. Write for booklet "Happy Homes and Farms that Pay in Happy Land"—it shows pictures—settlers' letters—and tells you everything. Edward Hines Farm Land Co., Room 2152, 100 W. Monroe St., Chicago, Ill.

IN THE SAN JOAQUIN VALLEY of California general farming is a paying business, feeding millions of people in towns and cities. Alfalfa combined with dairying, hogs, and poultry, yields a good income. A small one-family farm, with little hired labor, insures success. You can work outdoors all the year. Newcomers welcome. The Santa Fe Railway has no land to sell, but offers a free service in helping you get right location. Write for illustrated San Joaquin Valley folder and get our farm paper—"The Earth"—free for six months. C. L. Seagraves, General Colonization Agent, Santa Fe Railway, 912 Railway Exchange, Chicago.

80 ACRES NEAR RR TOWN—Horses, 12 Cattle, Crops, Hay, corn, fodder, machinery, tools, etc., included. Immediate cash income from dairy, pleasant warm 6-room house, ample barns, 60 acres level land for good crops, 60 apple trees, other fruit; only 1½ miles RR, high school town over improved road. Real bargain in lovely resort district; \$2,900 takes all, part cash. For details see No. 662 in bargain folder. Copy Free. Strout Agency, 1105-BC Kresge Bldg., Detroit, Michigan.

IT MUST BE A BARGAIN—Dairy Farm, 80a, all tillable, best soil, no waste land, Flint Road, Basement barn 32x70x9 ft.; 14 steel stanchions. Cement water tank for horses, cattle, sheep; Windmill, 8-room house; plenty outbuildings; apple and peach orchard; Brick schoolhouse on farm; 10 tons hay, 10A wheat, 10A alfalfa; Bus service to Flint and Lapeer. One of the best in the county. Buildings cost more than asking price, \$100 per acre. Terms; No Trade.—H. C. Kudner, Lapeer, Michigan.

85-ACRE EQUIPPED FARM BARGAIN—High Priced District, Convenient city, on improved road; 85 acres, mostly big-producing fields, spring-watered, estimated 2,000 cds. valuable stowed, abundance fruit, good 6-room house and farm bldgs. Complete modern equip., also horses, cows, sow, 100 chickens, corn, oats, wheat, potatoes, all included for only \$5,500. With \$1,500 cash. James L. Cross, Strout Agency, 708 Smith Bldg., Flint, Michigan.

AN OPPORTUNITY RARELY OFFERED—to secure improved farm homes, 80 acres up, direct from owner, no profits, no commission; in famed dairy section Wisconsin; Bread and butter State Minnesota; Rich prairie soil North Dakota; fertile lands near best markets in Michigan. \$200 to \$1,000 cash. Balance 36 years at 5%. Write today. Federal Land Bank, St. Paul, Minn., Dept. 33.

STANISLAUS COUNTY, California—where farmers are prosperous. Crops growing all year round. Land priced low. Write free booklet, Dept. 6, Stanislaus County Development Board (County Chamber of Commerce), Modesto, California.

FOR SALE—120 acre farm, including 80 acres timber, orchard, horses, cows, pigs, equipment, etc. 8-room and 4-room house on farm, 1½ miles from town. Will sell cheap at reasonable terms. Apply Box 265, Harbor Springs, Mich.

FARMS: All kinds. Catalog and list free. Eastern Shore Trust Co., Real Estate Department, Cambridge, Maryland.

110-ACRE dairy and potato farm for sale on M-44, good buildings. Silo. Glenn Gould, Admstr., Ionia, Mich.

150 ACRES IN VEGETABLE PLANTS. Let us supply your needs in the line of plants. Write for price list. Schroer Plant Farms, Valdosta, Ga.

FOR SALE—50 acres stock and tools in Bainbridge township. Good land. Well fruited. Near Benton Harbor. Albert Scherer, Coloma, Michigan.

120-ACRE FARM FOR SALE in good shape. Owner, Box 197, Almont, Mich.

BEFORE BUYING farm write Wingard, Plymouth, Michigan for list of Michigan farm bargains.

WANTED FARMS

WANTED—To hear from owner of farm for sale for spring delivery. O. Hawley, Baldwin, Wis.

MISCELLANEOUS

125 GOOD WHITE ENVELOPES and 125 full size unruled Letter Heads all neatly printed and prepaid, one dollar. Money back if wanted. Other good printing at low prices. Address, The Braytons, Freeport, Michigan.

WHY BLAME THE BULL when your cow does not breed? Use Cow Catch 1 hour before service. Results or your money back; 85 cents for one cow. \$2.90 for five cows, postpaid. Woodstock Farm, Renton, Route 2, Box 490, Washington.

OUR 1928 CATALOG just from press. 84 pages showing largest line of Poultry Supplies in the World. (Over 300 items.) Write today for your copy Free. Brower Mfg. Co., C-27, Quincy, Ill.

BIG BARGAIN—Send \$2, receive postpaid 100 double sheets and 100 envelopes, Hammermill Bond, each printed with name, route, post office address. J. W. Barr Printing Co., Charlotte, Mich.

A FEW "SUCCESSFUL" DEMONSTRATOR INCUBATORS for quick sale at great reduction. 50 to 300 eggs capacity. Good as new. Des Moines Incubator Co., Box 734, Des Moines, Iowa.

VIRGIN WOOL YARN for sale by manufacturer at bargain. Samples free. H. A. Bartlett, Harmony, Maine.

QUILT PIECES. Lovely percales, gingham, 3 lbs. \$1.00. Mrs. George Morgan, Vicksburg, Mich.

COMPLETE JOB PRINTING PLANT—only \$275.00. Frank Reed, Carsonville, Mich.

FARM MACHINERY

HUMMER—SATTLEY IMPLEMENTS: Plows, Disc, lever, tandem and tractor harrows. Spreaders, cream separator, cultivator, rotary hoe, etc. Ask for catalogue. Seth S. Bean, Jackson, Mich.

PET AND LIVE STOCK

REGISTERED FOXES—Write for ranching offer. 100% increase guaranteed. Booklet; terms. Breeder-Agents wanted. Cleary Bros., Empire Bldg., Seattle Washington.

FOR SALE—Coon, skunk, and O'possum hounds, shipped on 30 days' trial. Frank Barker, Dept. 49, Springfield, Tenn.

RABBITS—Make Big Profits with Chinchilla Rabbits. Real money makers. Write for facts. 892 Conrad's Ranch, Denver, Colorado.

FOR SALE—Guinea Pigs, few pairs breeding stock. Adda L. Pearce, Adrian, Mich., Drexel Park.

MATTRESSES

MATTRESSES made any size, low factory prices. Catalog free. Peoria Bedding Company, Peoria, Ill.

FRUIT TREES AND NURSERY STOCK

TIFTON'S RELIABLE PLANTS. Frostproof Cabbage, Early Jersey and Charleston Wakefield, Flat Dutch, Succession, Danish Ballhead, Copenhagen Market and Golden Acre. Tomato Plants: Bonnie Best, Greater Baltimore, Livingston Globe, John Bear and Earliana. Bermuda and Florida Taker Onion Plants. Ruby King and Bull Nose Pepper Plants. Postpaid. 250, \$1.00; 500, \$1.50; 1,000, \$2.50. Express Collect \$1.50 per 1,000. Care used in packing. We guarantee to arrive in good condition. Tifton Plant Co., Tifton, Ga.

PEACH TREES, \$5 per 100 and up. Apple Trees, \$7.50 per 100 and up. In large or small lots direct to planters, by freight, parcel post, express. Plums, pears, cherries, grapes, nuts, berries, pecans. Firms in ornamental trees, vines and shrubs. Free catalog in colors. Tennessee Nursery Co., Box 125, Cleveland, Tenn.

STANDARD NURSERY STOCK, 64 new. Large, small fruits. Cantaloupe flavored plum, flowers. Hardy, cheap. Catalog. Vikla Nurseries, Lonsdale, Minnesota. Mfdm.

5 MONTMORENCY CHERRY TREES and 20 good grapes, 3 colors, \$2., delivered 150 miles. Gobles, Mich., Nurseries, Van Buren County.

PLANTS: Strawberries \$3.00, 1,000; 100 Mastodons, \$2.00; Raspberries, Blackberries, Grapes. Wholesale price list. Cloverleaf Nursery, Three Oaks, Mich.

100 MASTODON EVERBEARING \$1.75. Catalogue free. Edwin Lubke, New Buffalo, Michigan.

SEEDS

REGISTERED AND CERTIFIED WORTHY OATS. certified Wisconsin Six Row Barley, registered and certified Picket Yellow Dent Corn, certified Grimm Alfalfa. Best of quality, satisfaction guaranteed. Write for seed circular. Fairgrove Associated Seed Growers, W. R. Kirk, Secy., Fairgrove, Michigan. Members of Michigan Crop Improvement Association.

LYMAN'S GRIMM ALFALFA SEED. Buy direct from the introducer. All seed scarified, necessitating less per acre. Lyman's Best 42c per lb. No. 2 Grimm, a lighter and finer seed, but which gives excellent results, 23c per lb. while it lasts. A. B. Lyman, Introducer, Excelsior, Minnesota.

WOLVERINE OATS absolutely pure, color and germination perfect. Very heavy. One dollar bushel, bags free. Freight prepaid, Michigan, on over twenty bushel orders received before March. Checks cashed early March when seed shipped. Satisfaction guaranteed. A. B. Cook, Owosso, Mich.

REGISTERED AND CERTIFIED SEED CORN—Clement's white can yellow dent, Picketts yellow dent and Michigan yellow dent (a very early dent). Certified worthy oats. 2-row barley and sweet clover seed. Dept. A. Paul C. Clement, Britton, Michigan.

MICHIGAN REGISTERED Certified Hardigan Alfalfa seed, certified by Michigan Crop Improvement Ass'n. Purity 99.50 cleaned and scarified. Price \$32.25 per bushel, immediate delivery. Irwin Reibling, Elkton, Mich.

SCIENCE AND PRACTICE demonstrate Improved American Banner wheat, Wolverine oats, Improved Robust beans best for Michigan. A. B. Cook, Owosso, Mich.

SWEET CLOVER SEED, white blossom, grown northern Michigan. Re-cleaned, scarified. Sealed bags. Delivered your station \$6.00 bushel. Thos. Buell, Elmira, Mich.

HIGH YIELDING STRAIN Certified and Registered Golden Glow Seed Corn ripened five successive seasons near Manistee, Mich. Kate L. Renisch, Free-soil, Michigan.

YELLOW DENT SEED CORN. Germination high and guaranteed every way. Write us before buying. Geo. W. Needham, Saline, Mich.

SWEET CLOVER SEED, white blossom, cleaned, hulled, \$6.00 per bu. 95% pure. Thomas Monroe, Essexville, Mich., R. 1.

FOR SALE—Certified White Rural Seed Potatoes. Jas. Lynch, Coral, Michigan.

TOBACCO

SPECIAL OFFER—Chewing or smoking 5 lbs. \$1; 10, \$1.75; Cigars 50 for \$1.95; pay when received, money refunded if not satisfactory. Farmers Association, West Paducah, Kentucky.

HOMESPUN TOBACCO—Ripe, guaranteed. Chewing 5 lbs. \$1.50; 10, \$2.50; 20, \$4.50. Smoking 5 lbs. \$1.25; 10, \$2.00; 20, \$3.50. Farmers Union, Mayfield, Ky.

GUARANTEED HOMESPUN TOBACCO—Chewing, 5 pounds, \$1.25; 10, \$2. Smoking, 10, \$1.50. Pipe Free! Pay postman. United Farmers, Bardwell, Kentucky.

LEAF TOBACCO, good sweet chewing, 5 lbs., \$1.25; 10, \$2.00; smoking, 5 lbs., 90c; 10, \$1.50. United Farmers, Mayfield, Ky.

HOMESPUN TOBACCO: Chewing 5 lbs. \$1. Smoking 5 lbs. 75c. Pay when received. Pipe free. Farmers Union, A5, Paducah, Ky.

TOBACCO: Kentucky Sweetleaf, Mellow, Aged. Smoking 10 pounds \$1. Chewing \$1.50. Pay when received. Kentucky Farmers, Wingo, Kentucky.

POULTRY

8 VARIETIES Record of Performance Male Matings. Breeding cockerels, pullets, and chicks. Free catalog giving big early order discounts. Beckman Hatchery, Box 57, Grand Rapids, Mich.

COCKERELS. Holterman strain of Barred Plymouth Rocks, strong, healthy birds. \$4. two for \$7. Mrs. Glenn Arnold, Saranac, Mich.

S. C. R. I. RED COCKERELS—good size; color. Prices reasonable. Wesley S. Hawley, Route 3, Ludington, Michigan.

MALLARD DUCKS, trio \$5, singles \$2. M. R. Hodgdon, Birmingham, Mich.

BABY CHICKS

INSURE YOUR SUCCESS, buy Aseltine Barred Rocks or White Leghorns. Pedigreed males from Dam's laying over 200 eggs head our flocks. Blood tested five consecutive years. Tramping 400 pullets under Record of Performance supervision. Reasonable prices for this quality. Write for circular or visit our farm. Aseltine Poultry Farm, Comstock Park, Mich.

WHITE LEGHORN CHICKS from big white eggs. Shipped anywhere c. o. d. Guaranteed to live. Low prepaid prices. Trapped, pedigreed foundation stock. Egg contest records to 314 eggs. Hundreds of cockerels, pullets, hens. Bargain prices. Big 28th annual catalog free. George B. Ferris, 934 Union, Grand Rapids, Michigan.

TOWNLIN CHICKS, eggs, breeding stock in four leading varieties have made a record of profit performance for thousands of poultrymen that points the way successward for you. Don't fail to get our New 1928 Catalog. Tells how to raise chicks and why our egg blood lines make profits easy. Copy free. Townline Poultry Farm, Route 1, Box 107, Zeeland, Michigan.

BABY CHICKS—You can buy your early hatched Michigan Accredited chicks right here at home. First hatch January 15. Also booking orders now for spring delivery at special discount. Send for catalog and prices. Brummer-Fredrickson Poultry Farm, Box 28, Holland, Michigan.

BARRED ROCK CHICKS and Hatching Eggs. Record at Michigan International Egg Laying Contest; winners heavy breeds 1927. Highest Barred Rock pen from Michigan past three years and to date in present contest. F. E. Fogle, Okemos, Michigan.

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BABY CHICKS from flocks mated with cockerels from best laying strains. Closely culled for production, type, and color. Eight most popular breeds. 100% live delivery. Post paid. Write for prices. Homer Hatchery, Homer, Michigan.

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CHICKS, genuine English White Leghorns, overlying combs and non-setters. Barred Rocks 203-233 records. See display ad. Hillside Hatchery, Holland, Michigan.

MICH. CERTIFIED S. C. W. Leghorn Chicks. Why not make an additional income this year with Gibbs' Winter-Lay Strain Leghorns. All Approved R. O. P. males. Our new catalog will tell you all about them. Gibbs Winter-Lay Hatchery, Bronson, Mich., Box B.

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BROILER CHICKS—Why have empty brooder houses? Make a profit on Pinneroff broilers. Accredited and blood-tested. Incubator now running. Pinneroff Poultry Farm, R. 6, Owosso, Mich. Write for circular.

VIGOROUS BABY CHICKS. Flocks culled for vitality, type, and egg production. Barred, White, Buff Rocks, Reds, \$14; Wyandottes, Buff Orpingtons, \$15; White Leghorns, \$12.50. Waterville Hatchery, Waterville, Ohio.

BETTER BABY CHICKS from State Fair winners, production class. Eighty per cent of our chicks go to old customers. Eleven breeds. Booking orders. Living prices. Write. Litchfield Hatchery, Litchfield, Mich.

RILEY'S CHICKS—Produced from selected pure bred-to-lay and exhibition flocks of healthy, carefully culled breeders. Reasonable prices. Folder free. White Leghorns, Barred Rocks, White Wyandottes. Sunnybrook Poultry Farm, Hillsdale, Mich.

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ENGLISH LEGHORNS free from diarrhea. Customer reports 350 pullets averaged 208 eggs for year. Chicks. Prepaid \$14 per hundred, \$65 for 500, \$120 a 1,000. \$1 per hundred books order from this ad. Pleasant View Poultry Farm, Adrian, Mich.

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STATE ACCREDITED Barred Rock Chicks from T. B. and B. W. D. tested flocks. You must be satisfied. Lone Pine Poultry Farm, Leo, V. Card, Hillsdale, Mich.

MONEY IN QUALITY CHICKS. Poultry experts and satisfied customers back our profit making chicks. Illustrated catalog free. Get the facts. Windmill Pointe Hatchery, 1318 Alter Road, Detroit.

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FOLKS LISTEN. We increased our capacity, improved strains of chicks and never quoted such low prices. Write for price list. Merrill & Clare Hatcheries, Merrill, Michigan.

HOW TO RAISE CHICKS SUCCESSFULLY: new booklet just out; mailed free to chick buyers. Write postal to Chapman Poultry Farm, Box 265, Plainwell, Michigan.

BABY CHICKS and eggs for hatching from bred to lay Buff Leghorns. Hillcrest Poultry Farm, Bath, Mich.

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BABY CHICKS \$6.00 per 100. Seconds, strong, vigorous chicks, no cripples. Robt. Christopher, R. 4, Holland, Michigan.

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WHITE HOLLAND TURKEYS and White Pekin Ducks, pure-bred healthy stock. Addressed stamped envelope for reply. Alden Whitcomb, Byron Center, Mich.

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11
Standard
Styles

The New *Walsh* No-Buckle HARNESS

I want every farmer in the United States to have the opportunity of seeing and trying my new, 1928 model No-Buckle Harness. Accordingly

I Will Ship You

a Walsh harness for a 30 days' free trial on your own farm, on your own team. See for yourself that Walsh No-Buckle Harness is stronger, handsomer, better fitting, handier in every way than any other harness. Lasts so much longer that it is far more economical to buy. Write today for my big Free Book and select the style harness you would like to try.

Examine your old harness—see where buckle tongues have torn straps, where ring friction has worn straps. Then let me send you without cost or obligation a Walsh No-Buckle Harness—see with your own eyes, by using it on your own team, why Walsh is the

world's greatest harness value. This remarkable harness revolutionized the harness industry. In ten years it has won recognized world leadership. Thousands of farmers in every state, in Canada, and even in foreign countries use and praise the Walsh No-Buckle Harness.

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Buckles weaken and tear straps. By actual test in steel testing machine, a Walsh 1½-inch breeching strap holds over 1100 lbs. The same strap with buckle will break at the buckle at about 360 lbs. pull. Ordinary harness has 68 buckles. Walsh

Harness has no buckles—easy to see why Walsh is three times stronger. Rings wear straps in two places where there is ring friction. Walsh Harness has no rings. Walsh leather is given the most rigid inspection test known in the harness industry. Only the back, the choicest part of the hide is used. It is selected Northern Steer Hide, tanned by a special six months' process, explained in my free book.

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The Walsh saves costly repairs and breakdowns. No stubborn buckles to bother with when winter cold bites the fingers and straps are stiff. Walsh patented adjustable strap holders do away with buckles and rings, and the harder the pull, the tighter they hold.

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In ten minutes you can adjust a Walsh to fit any horse or mule like a glove. It's a comfortable harness, a handy harness, a handsome harness and it stays that way. Made in ten styles—Breechingless, Express, Side Backer, etc. All pictured and described in my free book.

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See How Rings Wear End of Straps in Two

Wants to Buy Collars, Too

I am sending for another harness. We sure like the one we bought from you. I would like also to try your collars. We have seen the collars—one of our neighbors

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I have been very much pleased with the harness I bought from you last spring. Am enclosing order for another set.—BENJ. F. BAUSUM, Annapolis, Md.



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I get hundreds of letters from farmers everywhere who write and give me a hunch about someone who may want to buy a set of Walsh harness. Such a letter brings the farmer who wrote it a nice little sum of money when the sale is made. I have farmers who are actually making as high as \$75. a month merely showing Walsh harness and taking orders from their neighbors. If you would like to clean up a nice sum during odd moments on Saturdays or stormy days, or at public sales, write me. I am looking for a good man to act as my distributor in his community. You can make good money, if you are the man. Address **James M. Walsh, James M. Walsh Co., Milwaukee, Wisconsin.**



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29-28

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