

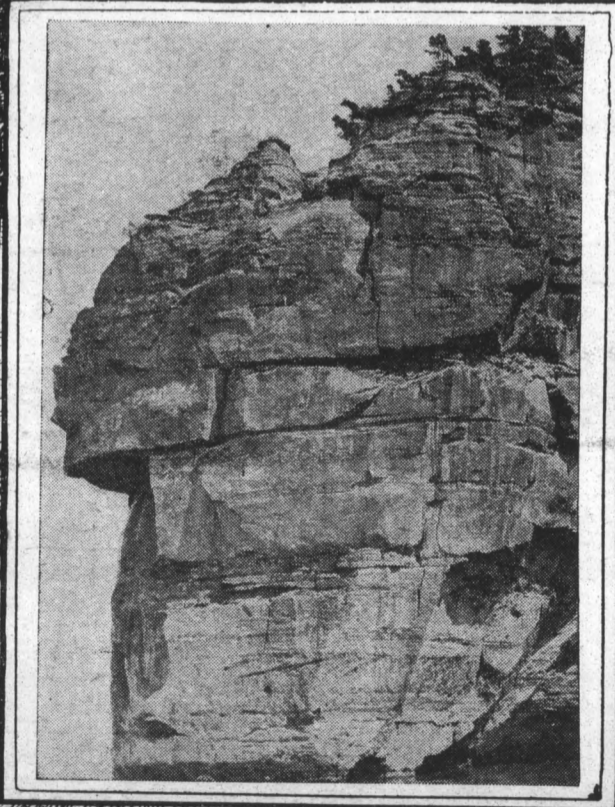
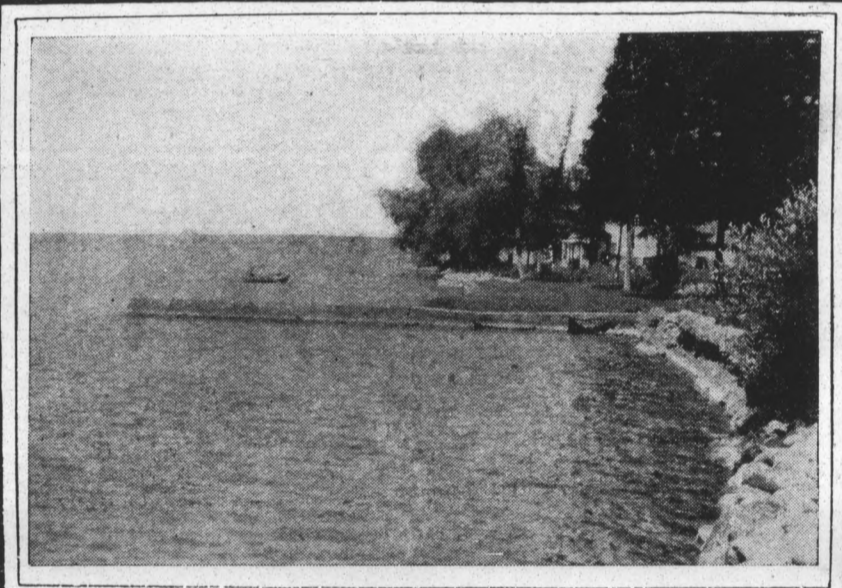
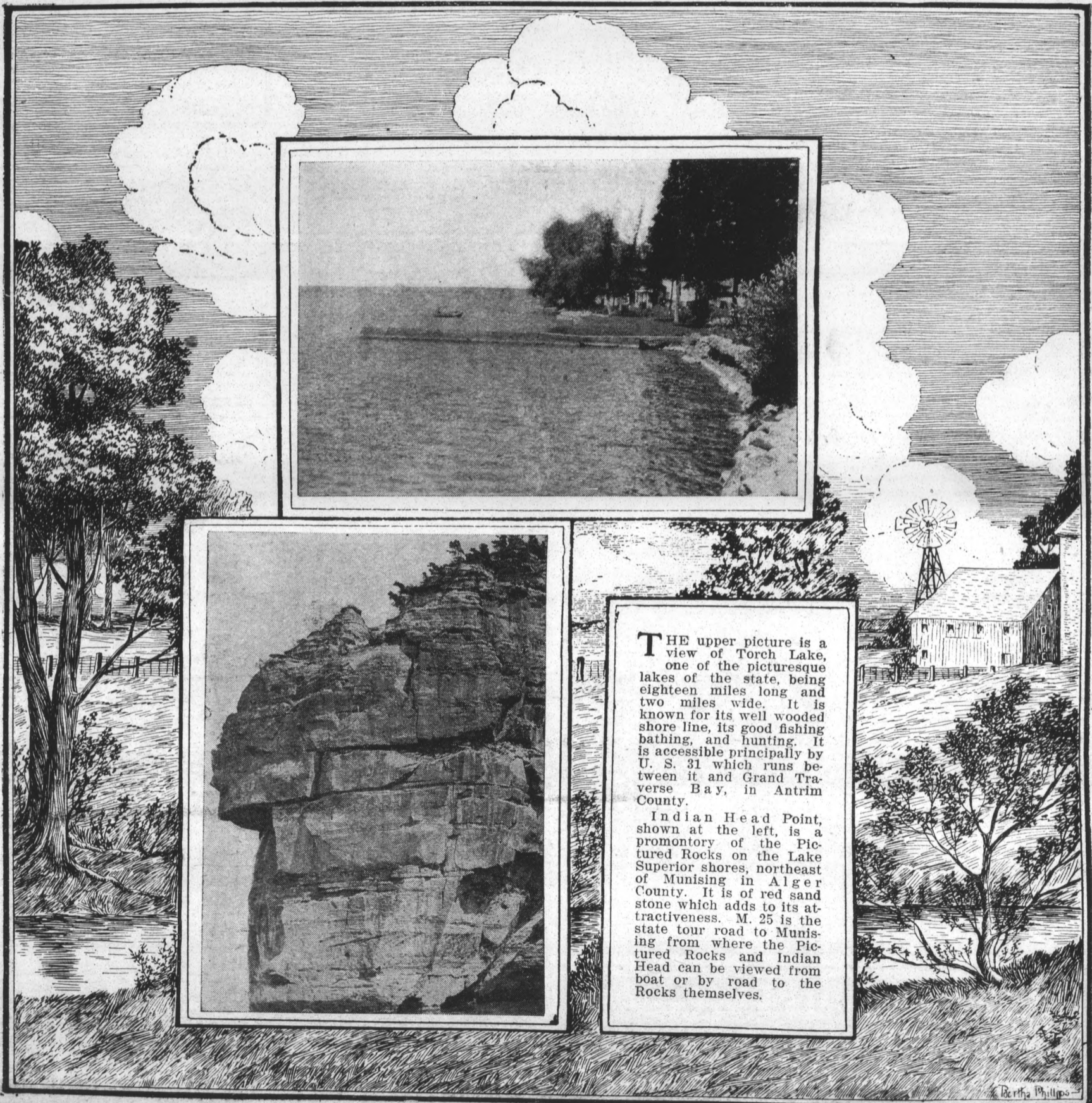
MICHIGAN FARMER

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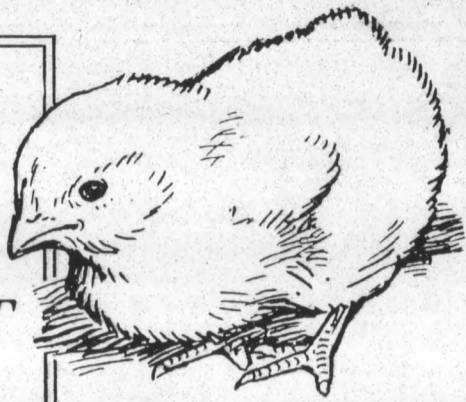


THE upper picture is a view of Torch Lake, one of the picturesque lakes of the state, being eighteen miles long and two miles wide. It is known for its well wooded shore line, its good fishing bathing, and hunting. It is accessible principally by U. S. 31 which runs between it and Grand Traverse Bay, in Antrim County.

Indian Head Point, shown at the left, is a promontory of the Pictured Rocks on the Lake Superior shores, northeast of Munising in Alger County. It is of red sand stone which adds to its attractiveness. M. 25 is the state tour road to Munising from where the Pictured Rocks and Indian Head can be viewed from boat or by road to the Rocks themselves.

Bertha Phillips

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Poultry

FACTORS IN HATCHABILITY

PROF. H. C. KNANDELL from Pennsylvania State College brought hen but the maies should be from out many useful points concerning hatchability in his talk during Farmers' Week. He said that they do not get ninety to ninety-five to one hundred per cent hatches and have produced no 300 egg hens at the Pennsylvania Station. They did find a hen that laid 296 eggs but could not get the other four eggs.

The poultry business has reached a stage where quality rather than quantity hatching is the most important. A male from a 225 egg hen might be just as good as one from a 300 egg 200 egg hens or better. The males should be selected from hens whose daughters have also been good layers.

The factor of hatchability is an inherited trait. The size, weight, color, and hatchability of eggs are important as well as the number of eggs produced. In discussing the relation of the age of hens to fertility and hatchability, the following results were obtained:

1927 Hatching Season			
Age	Eggs	Fertility	Hatchability
4 yrs.	1,746	73.2%	32.8%
3 yrs.	2,414	88.	54.3
2 yrs.	521	89.5	48.
1 yr.	3,004	93.2	57.7

They found that the old hens gave the lowest per cent of fertility and hatchability. Some of their commercial hatcherymen found that the old hens gave twenty per cent less chicks. The New England poultrymen are hatching a great deal from pullets. Getting rid of the old hens is found to reduce the danger of losses from tuberculosis.

The effect of age on the hatchability of eggs was brought out in an experiment illustrated by the following figures.

Age of eggs	Hatchability
1 day	53.4%
2 days	52.3
3 "	54.
4 "	50.6
5 "	51.7
6 "	48.7
7 "	43.7
8 "	42.9
9 "	45.7
10 "	35.5
11 "	35.

It is best to store hatching eggs at a temperature about fifty-five to sixty degrees. They can be stored in thirty dozen egg crates and the crates turned each day.

In telling of their method of handling breeding stock, Prof. Knandell states that they take away the feed for two or three days between the first and fifteenth of October and give only water. This method tends to make the hens all moult at the same time. Then about January first they use lights in the morning on the birds that are to produce hatching eggs. They believe that when the hens are in good production that they are in condition to produce hatchable eggs.

Deep yellow yolks make good chicks. When the hens are carrying plenty of yellow pigment, it is good for the hatchability of the eggs. Alfalfa leaf meal in the mash and alfalfa to pick at in the house, will improve hatchability. Cabbage also seems to help hens to produce eggs that will hatch.

DROPPING BOARD HOE

IF you use dropping boards in your poultry houses, and if you don't you should, the labor of cleaning will be reduced if you use a curved hoe.

Take a piece of one-sixteenth inch thick sheet iron, twenty inches long and five and one-half inches high and bend it into a slight curve so that the (Continued on page 393)



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You can now pay for your chicks when you get them. Absolute confidence in our chicks and faith in your honesty makes it possible for us to ship you your chicks C. O. D. Our free catalog tells all about the details. Get it today.
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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 336 egg Tanager 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.
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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. Michigan Accredited.
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Better chicks for bigger profit. It's not how much you pay, but what good quality. We breed for egg production. Barred Rocks, Reds, White Leghorns.
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VOLUME CLXX

MICHIGAN FARMER

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PUBLISHED WEEKLY ESTABLISHED 1843

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

QUALITY
RELIABILITY
SERVICE
NUMBER XI

Sells Products on Open Market

William Bristow, Master Farmer, Succeeds Without the Help of Premium Prices

WILLIAM BRISTOW'S system of farming presents a slightly different angle than has been evident in the majority of the stories in the Master Farmer series. Unfortunately for the writer this angle has no dramatic features which can be used in developing an interesting story.

The average farmer must always ask the question "can a farmer succeed financially by selling his products at regular market prices?" The majority of successful farmers produce quality products for which they secure premium prices. These high prices often enhance their income to a considerable degree. But the average farmer must dispose of his crops and animal products at par. This is the interesting point in Mr. Bristow's farming program.

On his 132-acre farm near Flat Rock, he produces no specialties for which to receive premium prices to contribute financial buoyancy to his business. He sells raw milk at the same price level that thousands of other farmers are doing. Any advantages that he may have over others lie in the efficient methods of growing ordinary crops and feeding and caring for his grade cows. In other words he is a regular dairy farmer operating under conditions that are common throughout this section.

His farm program centers about his herd of dairy cows. These cows are not pure-breeds, but have been graded up by careful selection and through the use of excellent Holstein sires. This has given Mr. Bristow a herd of efficient producers which have made possible the paying of all expenses, the providing of a good living, and



the laying by of a neat sum each year even during the past period of agricultural depression.

These twenty head of grade cows are housed in a thirty-four by forty foot stable provided with cement floors and mangers, steel stanchions, and drinking cups, and equipped with manure carriers. Two large silos add to the feed storage plant. The herd has twenty acres of pasture. He feeds silage, alfalfa hay, grains, and minerals. Mr. Bristow has made a careful study of dairy feeding to the end of getting the maximum results from the minimum of feed costs. Raw milk is sold to a nearby market.

The cows on this farm, as on a

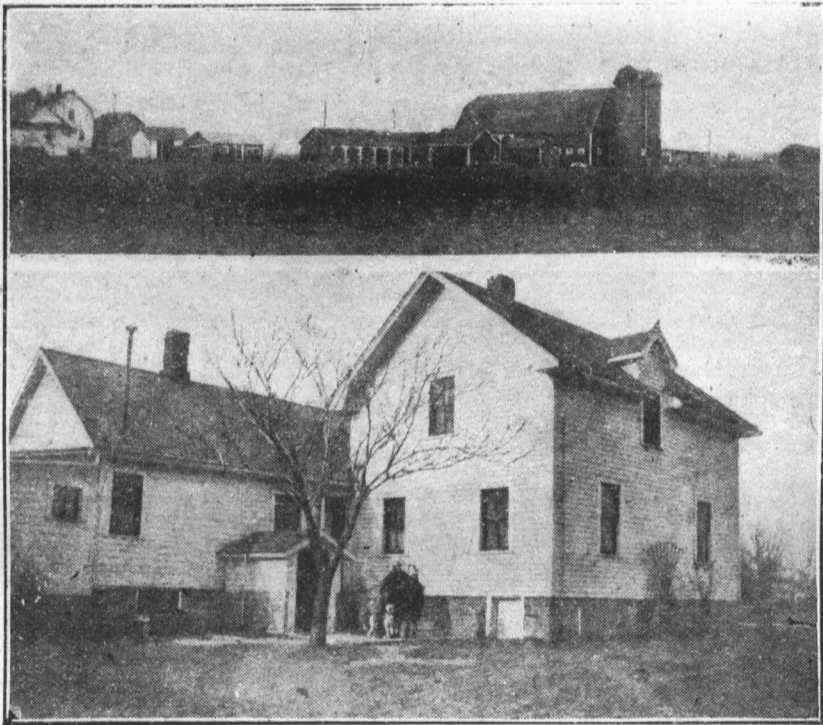
great majority of dairy farms, have proven an important factor in his soil program. Over a considerable portion of the season, the manure is drawn from the stables directly to the fields. During the winter, the wheat and alfalfa fields are top-dressed. The manure which accumulates in the spring and early summer months is spread during August on hay fields which are to be used for corn the following year. Besides the careful utilization of the stable waste, Mr. Bristow applies about two hundred pounds of commercial fertilizer to supplement the manure on fields being fitted for small grains. He also plows under corn stalks and other crop residues

not utilized in feeding or bedding the cows. Since his farm is very level and the soil is a clay loam on top of a clay subsoil, he has found it necessary to tile drain the entire farm.

He also grows alfalfa. This crop not only contributes to his soil program, but he has found it the best roughage for his dairy cows on account of its high protein content and its palatability. He produces about thirty acres each year. Grimm and Ontario Varigated varieties are sown on the wheat in the spring. No lime is required on this land. The alfalfa crop is improved through the application of a thin coat of manure during the winter. Mr. Bristow's method of making alfalfa hay differs somewhat from the recommendation most commonly given. He mows in the morning when the dew is on. The following morning this hay is raked when also damp with dew. The hay is allowed to cure in the windrow until the third day when it is drawn to the barn. By this plan he finds that practically all of the leaves are retained with the hay. Mr. Bristow has also been successful in producing crops of alfalfa seed.

While alfalfa supplies the main source of protein for his dairy herd, the carbohydrates are furnished largely by the corn plant. About twenty-four acres of corn are grown each year. This crop follows alfalfa in the rotation. For grain he uses Pickett's Yellow Dent and Leaming's Yellow Dent for silage. The corn ground is plowed in the fall and worked as many times as the weather and other duties permit before planting. By following alfalfa with corn and applying manure generously, no fertilizer is used directly on this crop unless the particular field is in special need of the additional plant food. The seed corn is carefully selected and tested, and planted with a planter. Cultivation is done with the tractor and horses, the field being covered

(Continued to page 399)



A General View of the Bristow Farmstead Appears Above, While Below Is a view of the home from the side drive

Some Advice on Oil Leases

By John R. Rood

SO many inquiries are coming to the desk concerning oil leases, how to draw them and rights and liabilities under them, that we are prompted to say a few words on the subject.

How to draw a gas and oil lease. The point is very simple, and can be shortly answered. The answer is don't. There is not one chance in a thousand that a gas or oil lease will be presented to a land owner that gives him any protection at all and the giving of it may get him into very serious difficulty. To sign a printed form commonly presented by lease solicitors is to give something for nothing.

A few of the things that should be provided for in the lease to protect the lessor, and not one of which will be found in the common printed forms, are the following:

1. That the lease shall be void if a producing well is brought in on adjoining land, unless an offset well on

the leased premises is started within a stated number of days and prosecuted to immediate completion.

2. Requiring development and drilling of a completed well within a stated time, not more than one year.

3. Provision that all equipment attached to the land shall remain as security to the lessor for the performance of the lessee's covenants until released by the lessor and in case of abandonment of the lease shall belong to the lessor.

4. A substantial and adequate rental until such time as a well shall be completed, in no case less than \$1.00 an acre per year payable in advance.

5. Provision for entry and forfeiture in case of failure of the lessee to perform any of his covenants, and that the lease shall terminate as soon as active operations cease after a well is drilled or if oil or gas are taken

from adjoining premises without immediate counter development to protect the rights of the lessor, and that the lessee shall in such case execute a written release suitable to record.

6. Provision against assignment by the lessee without the written consent of the lessor.

7. Provision to secure the lessor against waste of petroleum products and damage to buildings and crops.

8. Suitable regulation of the location of wells, storage tanks, pipe lines, and passageways.

9. Provision for metering gas sold and supply for the lessor.

10. Provision for payment by the lessee of all taxes thereafter levied in excess of the taxes assessed for the year that the lease is given.

The common rental provision is one-eighth of all oil and gas produced delivered to the lessor on the premises

and free use of gas for his domestic purposes while any is produced. This rental provision is probably fair.

It goes without saying that no one except an experienced lawyer should attempt to prepare such a lease.

The printed form leases usually presented are entirely one-sided and give the lessor no security whatever.

Ordinarily land owners are very much better off by refusing to sign any lease at all until oil in paying quantities is found in the immediate neighborhood. After such a discovery a very substantial cash bonus can be obtained for the lease, and until such discovery is made the lessor escapes a lot of risk and annoyance by having no lease, and loses nothing.

The principal value of the lease to the lessee is ordinarily as a speculation to grab off some unearned profit if oil is found in the neighborhood and take no risk and make no investment for it.

MICHIGAN SECTION THE CAPPER FARM PRESS



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VOLUME CLXX NUMBER ELEVEN

DETROIT, MARCH 17, 1928

Michigan Still Young

AS states go, Michigan is still in its childhood growth. It has unrealized possibilities, as shown by her economic land survey, that await development. Though she stands in the front rank in many of the world's activities, as these other possibilities are developed, she will grow even greater in her importance as a state.

Modern efficiency in industry is, to a great extent, a Michigan development. It is based on definite knowledge. Therefore, it is fitting that Michigan should undertake this unusual step to gain definite knowledge regarding her natural resources. This will be the basis of a sane economic development which will assure the future of the state.

The Ounce of Prevention

IT is tragic business to contemplate that over one-fifth of the more than ninety thousand fatal accidents in the United States in 1925 were to children under fourteen years of age and that about one-ninth were to children under five years of age, according to estimates given out by the National Safety Council. About two-fifths of the fatalities to the latter group were caused by burns. In the age group of five to nine years, automobile accidents and burns each caused an eighth of the fatalities, while firearms caused nearly a sixth of the deaths among children from ten to fourteen.

We are not envious of the fact that this rate was nearly twice that of England and Wales. The majority of accidents is the result of carelessness on the part of someone, either the child, parent, or motorist. But the tragic part of it all is that by the timely application of the proverbial ounce of prevention, approximately eighteen thousand children's lives might be saved annually.

England reports having succeeded in

reducing its number of accidents by creating a "child sense" in motorists and a "traffic sense" in their children. If we are to make progress in our safety first programs both in our homes and in our schools, we might, for lack of a proven program, adopt the one of our mother country.

Why Not Agricultural Day

WHY not simulate labor and set aside one day in the year when the minds of the country may be turned toward that great basic industry, agriculture? The United States Senate has been impressed with the wisdom of such a move and on March 2 adopted a joint resolution to that effect, introduced by Senator Arthur Capper of Kansas.

The first Thursday of October of each year is designated as "Agricultural Day," under the provisions of this resolution. The measure provides that the President be requested to communicate this declaration, by proclamation or otherwise, to the governors of the various states, requesting them to take such action as they deem advisable in order to bring about the observation of the day.

The resolution, which should not be construed as establishing another legal holiday, is intended to direct the thought of the nation to the importance of agriculture and the wise consideration of the problems of that industry.

It is expected that this resolution will pass the House and receive the President's signature. And may it not be that, growing out of this thoughtfulness of a nation, the farmer ultimately may find more respect for his home and property, his business better protected, and his profits a little more certain.

The American Peasant

FROM figures compiled by the department of agriculture, it appears that fewer people left the farm for the cities in 1927 than for the preceding year, but slightly more than migrated in 1925. On the other hand, 1,374,000 people moved from the cities to farms last year, against 1,135,000 in 1926 and 1,066,000 during the year of 1925. Thus for the past year there is a net movement from the farm to the cities of 604,000 persons as compared with 1,020,000 in 1926 and 834,000 in 1925.

A study made by the above department shows further than eighty-seven per cent of the people going back to the farms have had previous farming experience, indicating that many who were discouraged with farming during the depression of recent years have decided after all that the occupation is not such a bad one to follow.

It all means that farming is self-adjusting. When conditions on the farm are bad, the situation is relieved by people leaving for other occupations. When agricultural conditions improve, and the farmer fares better than people working at other lines, the drift is back to the farms. From this it would seem that the only chance for the development of a peasant class in America is for all other lines of industry to reach such a poor economic status that farmers would have no place to go when reduced to the conditions of peasantry.

Michigan's Secret Society

A SHORT time ago Lee H. Bierce of the Grand Rapids Association of Commerce, gave a talk before some fruit growers in Fennville, in which he said that one of the greatest handicaps to Michigan was a nameless secret society. Michigan farmers as well as the resort keepers of this state were suffering as a result of this society. Its membership is very large and influential as most every person in the state is unconsciously a member.

This society exists because we keep quiet about the advantages of Michigan and its products. For instance, Michigan grows some of the finest flavored fruit in the world, but no effort has been made to tell the world about it. Michigan potato growers are prominent members of this society as Michigan potatoes are not even mentioned on the menu cards of the Grand Rapids hotels.

We believe Mr. Bierce when he says that the Bay of Naples has nothing on the scenery and sunsets found along the west coast of this state, nor are the Idaho potatoes worth ten cents a pound as compared to sixty cents a bushel the Michigan farmer gets for his product. But the world knows about Naples and Idaho potatoes, as well as western apples. We agree with Mr. Bierce that Michigan needs a publicity department which could, in an inexpensive way, let the world know about many of Michigan's outstanding qualities. A good bushel of Michigan Northern Spies sent to President Coolidge would gain advertising of untold value which money could not buy, if accompanied with proper publicity efforts.

Again we concur with Mr. Bierce when he says that one of the chief troubles, perhaps, is that we have not sold Michigan to ourselves, but when we do we will be so proud of our state that we will not be able to keep still. Grant it that everyone in California has just reason for being a booster for that state, there is no just reason why a Michigander should not be a rooter for this state for there is plenty to root about. Perhaps the state should hire a psychologist to help us change our attitude of mind and break up this nefarious secret society.

Breeders' Business Code

BELOW are given the seven requirements of a business code just published by the American Jersey Cattle Club. The employment of sound ethics in the pure-bred business should prove of particular benefit to those who are constantly joining the ranks. The code reads:

- 1—Animals offered for sale must be from a Federal Accredited herd or have passed a satisfactory test for tuberculosis within the past year.
- 2—Bulls offered for sale must be from dams having either official or herd improvement association records of not less than 350 pounds of butter-fat.
- 3—Every bull over one year old is guaranteed a breeder providing the buyer's cows are in good condition. An animal is to be considered a breeder if he has sired two or more living calves in the herd of the purchaser. If not a breeder, the animal shall be replaced by one equally as good or to be returned to the seller in good condition and purchase price refunded at the option of the seller. In case of exchange, buyer and seller each are to pay transportation charges one way. If the animal is taken back, the seller pays transportation charges.
- 4—Every cow or heifer over one year old when sold is guaranteed a breeder and taken back or exchanged on the same basis as for bulls.
- 5—The seller must call attention to any unsoundness of udder or otherwise. But if an animal sold as a heifer (previous to having dropped first calf) proves to have a defective udder when she calves, it is the purchaser's loss.
- 6—The registry certificate and recorded transfer are to be supplied by the seller at his own expense, and the transaction is not complete until these papers are in the hands of the purchaser.
- 7—Price quoted shall also specify crating and delivery cost.

Although the provisions of this code are not binding, proclaiming them will tend to crystallize in the mind of buyer and seller an understanding of what is just and fair. And that is the way to better and more business whatever be the property offered.

A Little Reciprocity

THE Canadian government has announced that the importation of alfalfa seed into Canada will not be permitted, unless at least ten per cent of the seed in each container is colored red. Exception is made of alfalfa seed grown in any state bordering on Canada, or in the states of Utah, Wyoming, or South Dakota, which may be imported when at least one per cent of the seed in each container is colored orange, or sealed in the container by officers of the state in which the seed originated, and if certified that the seed is of the Grimm, Baltic, or kindred varieties of alfalfa.

This move is asserted to be for the benefit of the American purchasers of Canadian alfalfa seed as well as for the Canadian purchasers. It will prevent the shipping of alfalfa seed from southern European countries into Canada for reshipment into the United States to be sold as Canadian seed.

St. Patrick's Day

AND, be gorrah, if this ain't St. Patrick's Day. I almost fergot it like I did my wife's anniversary when she got married to me. This is the time when you think about lads and lassies, and comin' through the rye, and singing "Wearin' of the Green."

Well, if you wanta show loyalty to any Irishmen's country you've gotta wear green on this day o' celebration. But when I gotta celebrate my wife's anniversary I gotta wear black. And she says that's nobody's funeral but ours, but I guess it's ours alright. Each celebration means one year nearer to the grave and the way Sofie acts on that day, I sometimes think she's glad of it.



This Mr. Patrick became famous 'cause he drove the snakes out of Ireland, like Mr. Volstead is tryin' to do in this country. I don't know how long it took the Saint to do the job but Mr. Volstead ain't gettin' them out by shakin' his Congressional robes at them like Pat must o' done.

I don't know if St. Patrick has got anything to do with it or not, but the Irish is up-and-doin' kind o' folkses. When they come over here they fergot all about farmin' and get all the policemen's jobs they can, or if there ain't none of them around they become politicians or lawyers.

Now, if it wasn't fer the Irishman and the Jew, there wouldn't be no jokes, unless they'd be about mother-in-laws. So maybe there's something common about Irishmen, Jews, and mother-in-laws. I guess maybe it's talkin'. You never see a Irishman, Jew or mother-in-law that couldn't talk. The Irishman uses his mouth, the Jew his hands, and the mother-in-law anything that comes handy.

Well, there's three things I ain't, Irishman, Jew, or mother-in-law and I ain't wishin' myself any bad luck, but I hope I won't never be accused of bein' one. If a Irishman and a Jew is funny, and a mother-in-law is funny, a Irish or Jewish mother-in-law must be awful funny. But come to think of it there ain't nothin' funny about a mother-in-law—you kin ask any son-in-law about that.

I'm just wonderin' what kinda a mother-in-law Sofie'd make. I bet she'll make her son-in-law wear green fer her on St. Patrick's day, even if she is Dutch. HY SYCKLE.

A careful study of the records of American Guernseys and those brought from the Island show that the American cows are equal to those from the Island of Guernsey.

Bees Help the Fruit Grower

Are Big Factors in the Setting of Fruit Crop

By H. D. Hootman

THE value of honey-bees as an agent for cross-pollination has not always been appreciated by fruit growers. Many fruit growers have entertained a rather hazy impression that pollen is carried from one blossom to another or from one part of an orchard to another by the wind. This is not the case. Fruit pollen is moist. It is seldom if ever blown about by wind. Pollen transfer is carried on mainly by insects especially honey-bees. The importance of honey-bees as agents for cross-pollination cannot be over emphasized. No other insect is so well adapted for this purpose. The commercial fruit growing of the future will be largely dependent upon the domestic bee.

In a former article I mentioned the change that has taken place in fruit growing during the last twenty-five or thirty years. The transition from small orchards of many varieties to large commercial orchards of com-

ing the blossoming period wild insects are of little value, and even the influence of honey-bees cannot readily be observed for more than a few hundred feet from the location of the colonies. To assure sufficient insect activity under all weather conditions, colonies of bees should be distributed through the orchard at the rate of one colony to the acre. The placing of colonies in an orchard will provide for the most economical utilization of any flight that is made by the bees.

Move the Colonies Into the Orchard

No good fruit grower would think of harvesting his crop, carrying personally from his orchard to the packing house or storage each basket of fruit as it was picked. He increases his efficiency by moving crates or containers for the fruit into the orchard where they can be rapidly filled. To be consistent, the honey-bees efficiency can equally be greatly increased, by moving the colonies into



Ben Davis Blossoms in a Bee Yard Near a Northern Spy Orchard

paratively few varieties has caused pollination problems in some orchards. Under the variety conditions that generally exist in small orchards, the wild insects, and what honey-bees there are near the orchard generally are sufficient to effectively pollinate a satisfactory crop; but with the planting of orchards by the square mile or in large areas where a whole community is engaged in fruit growing, the wild insects are wholly inadequate to pollinate effectively the vast expanse of bloom.

Last spring a prominent Michigan fruit grower said to me, "I never see any bees in my orchard and I always have apples." He would not be convinced that insects were responsible for the transfer of pollen until he had erected at his own expense an eighteen foot cage around one of the McIntosh trees in his orchard. This cage was covered with muslin during the blossoming period to exclude all insects. He anxiously waited until the time when the muslin could be removed to note the results. Just eight apples "set" upon the tree within the cage; while other trees of equal size in the same row harvested from twelve to fifteen bushels per tree. This grower now realizes the importance of bees and has already provided for fifty colonies to be placed in his orchards this spring.

The location and size of the individual orchard are apparently the important factors that determine whether or not colonies of bees should be distributed throughout the orchard during the blossoming period. Orchards not too large in size, located near woods, swamps, or uncultivated land where wild insects can winter over in large numbers, usually set a satisfactory crop without additional bees. However, when cold, rainy weather prevails previous to and dur-

ing the blossoming period, where the bees have the advantage of a shorter flight.

About 37,000 loads of nectar are required for the production of a pound of honey. It is apparent that even a very slight saving of time or labor, becomes in the aggregate of great importance to the colony—not only by increasing the production of honey, but the more important task of providing for cross-pollination. For pollination purposes, the place for bees during blossoming time is in or near the orchard—not a half mile away.

Success with bees as pollinizing agents in an orchard is largely determined by the man using them having a knowledge of bee behavior. Only strong colonies should be used. Proper care must be exercised in moving them, and, lastly the proper placing in the orchard is all important. Instead of adhering strictly to the rule of placing colonies 210 feet apart each way in the orchard, (one colony to the acre) bee flight will be encouraged and better results obtained by locating the colonies in sheltered ravines away from windy, exposed locations. When the wind is blowing over twenty miles an hour bee flight is greatly reduced. Wind blowing among the trees creates eddies and cross currents which are avoided by bees.

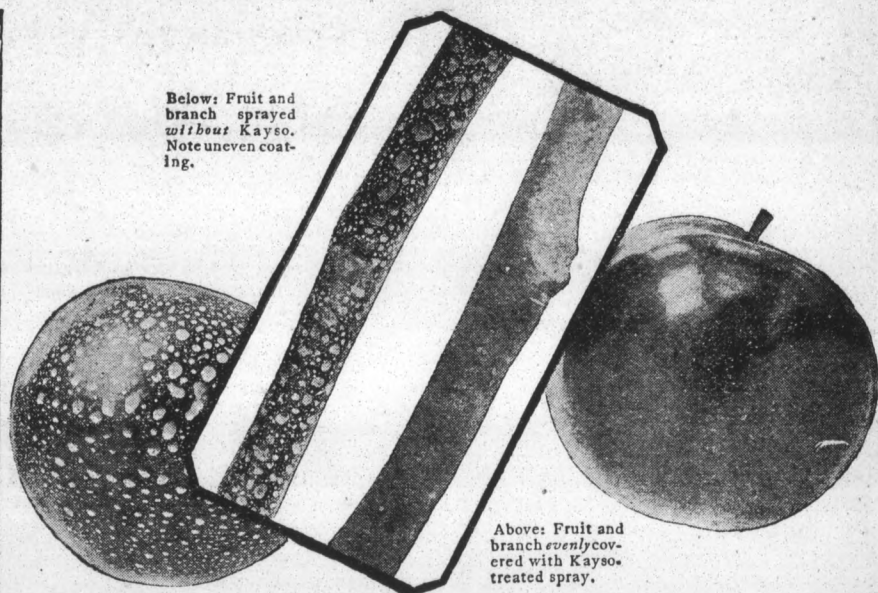
Value of "Wind Breaks"

I sometimes think the greatest benefit of "wind breaks" near many orchards has been the shelter afforded pollinizing insects working the blossoms when they are in bloom, rather than the saving of fruit that might be blown off near harvest time.

Orchard Planting Practice

In a large number of Michigan orchards, such standard varieties as Northern Spies, Rhode Island Greenings, or McIntosh have often been

(Continued on page 377)



Below: Fruit and branch sprayed without Kayso. Note uneven coating.

Above: Fruit and branch evenly covered with Kayso-treated spray.

Full spray insurance for only 2% of your spraying cost

Have you ever had a rainstorm wash expensive spray materials off your trees—just when you finished spraying?

Or have you discovered that your fruit—supposedly well sprayed—became infested after spraying?

Today thousands of farmers "insure" against just such spray losses as these simply by adding Kayso to their spray mixtures.

Makes sprays really cover

Kayso (Calcium Caseinate) acts in a spray mixture as a spreader, an adhesive, and an emulsifier.

Used in a liquid spray, it keeps the mixture in even suspension in the tank, preventing clogging and insuring equal strength in every gallon. That means more trees sprayed from each tank full.

In the spraying operation, a Kayso-treated mixture forms a heavy fine mist which covers the sprayed surface evenly and thoroughly. It does not collect in drops, as ordinary liquid sprays do.

And when the spray is on, Kayso makes it stick. Heavy dews, or even rainstorms rarely wash a Kayso-treated mixture off the trees.

Effective in any mixture

Kayso is effective in any mixture—wet or dry—under any conditions. Lime sulfur, Bordeaux, lead arsenate, nicotine and white-wash all cover better and stay on longer when mixed with Kayso. In the home-making of oil sprays, Kayso is a perfect emulsifier.

Practically speaking, Kayso pays for itself in savings of material, labor and fruit. Actually, its first cost is only about 2% of total spraying cost—based on proportions of 1 pound of Kayso to 100 gallons of spray.

You can't afford to go without this cheap spray insurance. Place a trial order with your dealer today; or write direct for full particulars.

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TRY a Michigan Farmer Liner to sell Your Poultry, Real Estate, Seeds and Nursery Stock and Miscellaneous Articles. See Page 401 for Rates.



Will Your Tractor Have an Early Grave?



Engine racing has sent many a good tractor to an early grave. Yet engine racing is easily prevented—with a Pickering Governor. For a Pickering Governor automatically controls the motor—it responds instantly to the slightest load change—there's no overspeeding when the load is dropped.

Hundreds of farmers who equipped their tractors with Pickering Governors report "steady, smooth power." "25% more power." "No more engine racing."

Pickering Governors are built for Fordson, McCormick-Deering, Twin City, Hart-Parr and all other tractors.

Clip coupon for free pamphlet which tells how Pickering Governors make tractors live longer.

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 Address

Roosevelt Saw Farm Crisis Coming

At the dinner in New York City to commemorate the twentieth anniversary of the appointment by President Roosevelt of the Commission on County Life, Senator Capper was principal speaker, delivering the address from which these extracts are taken. Dr. Nicholas Murray Butler, president of Columbia University, presided, and Colonel Theodore Roosevelt, Jr., was guest of honor. Other guests were five hundred professional men and financiers. The address dealt fully with authoritative statistical evidence proving the economic needs of agriculture.—Editor's Note.

THAT this gathering of men and women for the purpose of advancing the welfare of the farm people of America should be inspired by a man whose death occurred nearly ten years ago is not surprising to those who knew Roosevelt well.

The death of Theodore Roosevelt was a real loss to the farmers of America. More than any other national leader he foresaw and understood their difficulties and had a real desire to extend to them the nation's help in solving their economic difficulties.

Many years before most of his contemporaries, Roosevelt perceived that the people of rural America were economically handicapped. He foresaw the farm crisis long before it became an actuality.

I know this to be so because I was one of the last men in public life to talk with Roosevelt, and he then expressed to me his belief that the farmer was not on a fair and equal footing with industry and business, and that hard times were ahead for our rural population unless a constructive national agricultural policy was adopted.

Our meeting was in the Roosevelt hospital in New York, December 12, 1918. I was then governor of Kansas, and while in this city on a business trip, called upon Roosevelt at his request. I had been elected to the Senate for the term beginning the following March, and he wished to discuss with me the legislative needs of the farmers. A few days later he was removed from the hospital to his home in Oyster Bay, and died the following month.

In our conversation, he expressed the deepest interest in the condition of the farm people of America. He realized, long before most men of national prominence in political life, that there was a farm problem. Knowing my own interest in rural conditions, he volunteered to co-operate in working out a national agricultural program at Washington.

The farmers were even then laboring under difficult economic conditions, but Roosevelt saw even graver trouble ahead unless comprehensive and practical measures were adopted immediately to remove the handicaps to rural progress. It was not until two or three years later that the agricultural situation and depression became most acute—and even after that, indeed up to the present day, we had and have men in public life who deny the farmers' need to legislative assistance. They blandly assert that the farmer can work out his own salvation by increasing his efficiency.

Such was not the view of Roosevelt ten years ago. Indeed in the last article which he wrote for a publication—written where I saw him, and published in the Metropolitan Magazine of February, 1919, he urged the importance of promoting agricultural prosperity and welfare. Furthermore, he spoke of the need of getting the farmers' own viewpoints on their problems and of following the recommendations of farm leaders. He advocated the sending of farmers to Congress, and he emphasized the importance of dealing intelligently with the problem of marketing farm products.

Despite years of discussion of the subject, there is still some lack of understanding in the industrial East of what constitutes the real farm problem.

The kernel of the whole agricultural problem is in the difference between the value of what a farmer sells and what he buys. The things that a farmer sells bring thirty-four per cent more than before the war, but the average selling price of commodities which the farmer must buy is fifty-nine per cent higher than before the war.

The difference between the thirty-four per cent and the fifty-nine per cent shows the handicap against agriculture. Expressed in another way, a farmer's dollar is worth about eighty-five cents, while the rest of us have a dollar with an exchange value of one hundred cents.

Efficiency of the farmer, measured by productivity, has greatly increased. But his costs of production also have increased, and out of all proportion to the prices the farmer receives for his products. Therefore, the problem of agriculture is one of marketing as well as of production. Dealers and distributors make more out of the products of the farm than the farmers themselves.

The great trouble with the farmer today is that he has not been able to pass on to the consumer his doubled cost of production, as other industry is doing. He sells largely on the basis of a world market, and buys on an American market.

The West has waited patiently for the same degree of legislative assistance and relief that the Government nearly always has extended to the industrial East. But the West cannot wait forever. The people on the farms demand a fair return for their labor. They are entitled to it. They must have it. I say it is due the farmer, morally and economically, to place him on an equality with labor engaged in industry.

Necessarily the fight for so-called farm-relief legislation must go on until these things finally are accomplished.

The farmers have asked for no more of a price-fixing plan than our protective tariff is. Under the tariff laws the country has prospered amazingly with the exception of agriculture, which has not been admitted to full membership in the American protective system. If it is not entitled to full membership, then other industries are not.

I have been an advocate of farm-relief legislation because I believe it the part of wisdom to bring the farmer's standard of living up to the general level, rather than to drag the rest of the country down, as must happen if we do not meet this situation squarely.

The problems of rural life in America are many and serious. They will be solved by the understanding, good will, and co-operation of all our people, because this is not a nation where class is arrayed against class, but because the people of America are united for the common good.

WANT MORE MONEY FOR RESEARCH

REPRESENTATIVES of the farm organizations and other groups interested in the work of the Department of Agriculture are now wholly satisfied with the appropriations carried in the Agricultural Department bill as passed by the House, and will carry over into the Senate their fight for larger appropriations for agricultural research. The bill was amended in the House by an increase of \$280,000 to the \$1,300,000 appropriation for agricultural extension and demonstration work and \$170,000 increase in the appropriation for reforestation. For tuberculosis eradication work \$5,708,

000 is allowed which is \$245,000 below last year's allowance. The decrease is due to a falling off in demand. An appropriation of \$441,000 is allowed for eradication of hog cholera, and \$887,660 for corn borer control.

CORN BORER ERADICATION IMPOSSIBLE

MR. MARLATT, chairman of the Federal Horticultural Board, is quoted as saying that "there is no possible means of eradicating the corn borer." In his testimony before the House appropriation committee, Dr. A. F. Woods, director of scientific research, Bureau of Chemistry and Soils, said that the best that could be done by the government was to slow down the spread of the borer and aid farmers in keeping the damage to a minimum. This must be done by cultural methods, the planting of corn that is more resistant to the borer, and by a different cropping system. It is not expected that the corn borer will ever be eradicated and in all probability it will spread to the entire corn belt of the United States.

News of the Week

Investigation by Dr. A. M. Barrett, of the Psychopathic Hospital in Ann Arbor, shows that there are 6,000 insane people in Michigan that are not receiving adequate care.

Major Thomas Lanphier, commander Selfridge Field, will quit the army to devote his time to the commercial development of the "fuelless" motor invented by Lester Hendershot.

Senator Woodbridge N. Ferris has announced that he will not run for reelection.

Wm. H. Crane, one of the world's greatest comedians, died at Hollywood, California, last week at the age of eighty-three.

Tom Sawyer, the original of Mark Twain's character, died in Spokane last week.

The police officials in Detroit report that crime has decreased one-third in that city since the first of the year.

The Protestant ministers in Boulder, Colorado, have agreed not to remarry those who have been divorced unless the divorce has been the result of infidelity of their mates.

Influenza is raging in Japan, especially in Tokio. Two thousand deaths are reported and the emperor himself is afflicted.

Charles Levine, who flew as passenger from New York to Berlin, made a non-stop flight with Wilmer Stutz and Miss Mable Boll from New York to Havana, Cuba, the first one to be made.

Anti-Mussolini demonstrations became serious in Vienna when a mob of Austrians threatened to do damage to the Italian embassy.

S. H. Bemenderfer, a former official of the Ku Klux Klan, has testified that the Klan is a huge swindle, and that Catholics run the order in many states.

President Coolidge believes that the resources of the country will warrant another \$225,000,000 reduction in taxes.

Lorene Jones, a sixteen-year-old Kansas City high school girl, swore out a warrant charging her mother with assault for whipping her when she took out the family car, used up sixteen gallons of gasoline, and refused to tell where she had been.

The Detroit electrical workers union business agent, Harvey Watson, has been held by kidnapers for \$25,000 ransom.

Mrs. Catherine Fenton of New York, 104 years old, was thrilled by her first airplane ride at St. Petersburg, Florida.

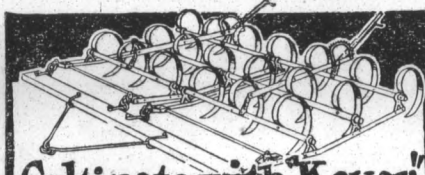
There are 218,168 students attending the public schools of Detroit. This is an increase of ten thousand since February, 1927.

Reports show that Chicago is the only one of twenty-three large cities which shows a decrease in unemployment during 1927.

Marshall Armond Diaz, commander of the Italian armies during the World War, died at Rome last month. He was 67 years old.

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Tuff-Stuff
That's what MULE-HIDE roofs are made of. You buy years of wear when you insist on MULE-HIDE.
Roll roofing or our various styles of shingles—we use all-rag felt for a base. After this base is thoroughly saturated and waterproofed with high grade Mexican asphalt, extra heavy coatings,—top and underside,—are added to insure longest wear.
There's a MULE-HIDE dealer near you. Write us if you have any difficulty locating him.
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TRY a Michigan Farmer Classified Liner. It will help you dispose of your real estate or some miscellaneous article. It will help you find that extra help you may need. Michigan Farmer Liners get big results, and cost little.



Cultivate with Kovar

Some farmers go broke while others succeed, and here's a secret of many of the successful ones. They GET THE GREATEST POSSIBLE PRODUCTION OUT OF EVERY ACRE THEY CULTIVATE. 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!
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Please send me information of the KOVAR Cultivator.
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Oil facts for farmers

This page from airplane history settles the question: "What oil is the QUALITY oil?"

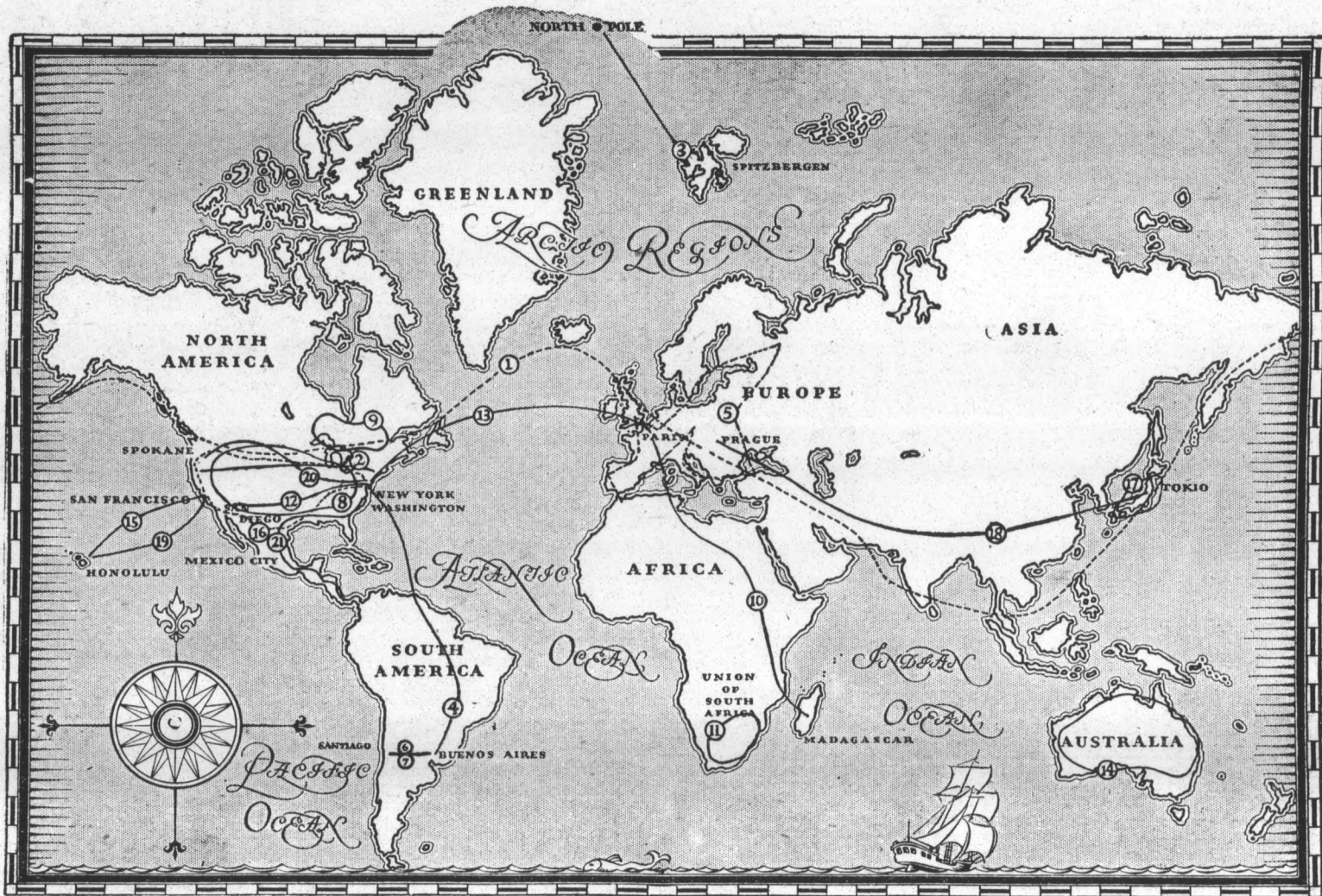
Your tractor engine operates under load conditions very similar to the airplane engine. Both engines operate under heavy load condition for hours at a time. Both run most of the time with throttle wide open, using 75% or more of their power.

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In every section of the country you will

find shrewd farmers who look beyond the purchase price when they buy oil. With Mobiloil in their tractors they frequently save 10% to 50% on oil consumption. They save on gasoline consumption. They get rid of frequent overheating.

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EVERY one of these recent flights was made with MOBIL OIL

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2. 1924—Dawn-to-Dusk across United States; Lieut. Maughan (U.S.A.).
3. 1926—To the North Pole; Commander Byrd (U.S.A.).
4. 1926—New York to Buenos Aires; Duggan, Olivero and Campanelli (Argentina).
5. 1926—Round Europe; Capt. Stanovsky (Czecho-Slovakia).
6. 1926—Over the Andes; Lieut. Doolittle (U.S.A. and Chile).
7. 1926—Over the Andes; Lieut. Cuddihy (U.S.A. and Chile).
8. 1926—Tour of the U. S. A. in Byrd North Pole Plane; Pilot Bennett (U.S.A.).

9. 1927—Winter flight over Canada; 1st Pursuit Group of U. S. Air Service (U.S.A.).
10. —1927—Paris to Madagascar; Major Dagnaux (France).
11. 1927—Around Union of South Africa; Major Miller (British).
12. 1927—San Diego to New York; Col. Lindbergh (U.S.A.).
13. 1927—New York to Paris; Col. Lindbergh (U.S.A.).

14. 1927—Around Australia; Capt. C. Kingsford-Smith and C. P. T. Ulm (British).
15. 1927—San Francisco to Honolulu; U. S. Army Fliers (U.S.A.).
16. 1927—Around U. S. A.; Col. Lindbergh (U.S.A.).
17. 1927—Around Japan; Japanese Flier (Japan).
18. 1927—Prague to Tokio; Col. Skala (Czecho-Slovakia).
19. 1927—San Francisco to Honolulu; Art Goebel (U.S.A.).
20. 1927—New York to Spokane; Charles Meyers (U.S.A.).
21. 1927—Washington, D. C., to Mexico City and Central America; Col. Lindbergh (U.S.A.).



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Fertilizer makes BETTER CORN

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.

A dealer for one of the leading brands shown below is near you to serve you. See him about spring fertilizer. He will save you money. The best farmers of your State trade with "The Fertilizer Leaders of America" and recommend these fertilizers to you.

Soft corn is poor property. You can't sell it at a profit and it makes sorry feed. Yet for the last five seasons the crop has been from 25% to 40% soft. A big loss—and, if you had any soft corn, you shared that loss.

Fertilized corn grows rapidly, ripens early, and is almost sure to be ahead or the frost. A couple of weeks' delay at planting time can be made up where 300 to 500 pounds of available plant food is applied to insure constant, steady growth.

Get your fertilizer from "The Fertilizer Leaders of America," and use it on your corn crop this year. Use more pounds per acre, and notice the difference. It is your only crop insurance—and the increased yields of better corn will be remembered long after your investment is forgotten.



Federal Chemical Co., Inc.
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When seed men start talking alfalfa, Grimm is the standard of comparison. That's because for 69 years Grimm has proved best.

Double Protection For Buyers
This year, play absolutely safe. Sow Blackfoot Brand Idaho Grimm—State Certified, produced under closest supervision from sowing to market by the largest and most reliable Grimm Alfalfa Seed Growers' Association. Do not confuse Blackfoot Brand Grimm with "Moonshine" or Grower affidavit Grimm. Unless seed is state certified it is not recognized as genuine by the State Seed Commission of Idaho. When you buy, insist on Blackfoot Brand in sealed bags.

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Handy Man's Corner

SWEARS OFF ALCOHOL

TO prevent the trouble from stoppage of oil circulation in a car in cold weather, due to freezing of the condensed moisture which collects in the crank case and mixes with the cylinder oil, I put into the crank case one-half pint of alcohol for each gallon of cylinder oil, and I have no trouble with my oil freezing in winter.

I have used this same plan for three or four winters, and as one reader reports, have had no trouble with my oil circulation freezing up. Recently an oil man showed me a sample of good oil into which a small proportion of denatured alcohol had been mixed, and how a thick gummy residue had been found. This explained the stringy clots I had sometimes found on draining out my oil, and I decided right there that I did not want such oil in my car. Most oil men agree that this is not good practice and that it is likely to cause damage if the car is driven hard with such oil in it.

This fall I put a partial suction pipe from my carburetor intake into my crank case through a hole in the valve cover plate, so as to draw out a small part of the crank case air at each suction, and since then have had no more trouble from oil circulation freezing up, even during the extremely cold weather in late December and early January. This suction should not be made too great, as this would tend to pump out too much of the oil vapor and thus use up the crank case oil too rapidly. But no more alcohol in my cylinder oil, thank you!—Dickerson.

RADIO BATTERY DOESN'T WORK

What is wrong with my radio A battery? When it is about half discharged, it won't run the set. The tubes are dim when lit. Please advise.—P. S.

The ordinary manner for testing a radio storage battery is by means of the hydrometer—1175 on the hydrometer usually indicates a complete discharge while 1275 to 1300 indicates a full charge. However, if at some time or other electrolyte was added instead of distilled water, the hydrometer reading might show one-half a charge when in reality the battery was fully discharged. The fact that your tubes are dim would indicate to me that the battery is discharged, therefore the hydrometer readings no longer indicate the value of the charge. I would suggest that you take the battery to a battery service for testing.—E. A. Sauve.

SPEED OF BUZZ SAW

What is the maximum speed for a common cordwood saw, diameter 24 inches?—O. A. C.

The safe speed of a 24-inch circular saw is about 1,500 revolutions per minute. This value is based on a peripheral, or tooth speed, of 9,000 feet per minute which applies to all sizes of circular saws. For example, a 24-inch saw would have a circumference of 6.28 feet. Dividing 9,000 by 6.28 will give 1,432 revolutions per minute safe speed. This value can, however, be raised to 1,500 revolutions per minute and still remain a safe operating speed.—E. C. Sauve, M.S.C.

LIME IN GAS ENGINE HOPPER

What would take the lime out of a water hopper on a gasoline engine?—A. H.

Lime may be removed from the gasoline engine by putting into it a mixture made up of seven parts of rain water and one part of muriatic acid. Leave the mixture in for thirty-six hours. At the drug store ask for commercial muriatic or hydrochloric acid. It will be as effective as the higher grade acid and be less expensive.—F. E. Fogle, M. S. C.



J. S. Caldwell, Vinton, Iowa, let the hogs follow the plow to clean up the grub worms in a well-fenced 10-acre clover pasture when he broke it up for corn. His crop ran 60 bushels to the acre at \$1.10, a total of \$660.00. On his other ten his fence was poor. Grubs got all but 150 bushels—a total loss of 45 bushels per acre that could have been saved with a hog-tight fence. "You can borrow \$1,000 at 7%, put it into fence and make money", says Mr. Caldwell. We claim

RED BRAND FENCE

"Galvannealed"—Copper Bearing is the best investment any farmer can make. A great many have proved this true. They know, from experience, that hogging down, pasturing after harvest and crop rotation will pay for RED BRAND FENCE in from 1 to 3 years. They know, too, that this real good, copper-bearing steel with its extra heavy zinc, "galvannealed" coating keeps rust out; that these two things make RED BRAND costless by lasting longer. Its stiff stays, well-crimped line wires, can't slip knots, help keep it straight, trim, hog-tight and bull-proof. The fence that will last the longest is the cheapest to buy.

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 interesting booklets that tell how others have made more money with hog-tight fences.



Nothing finer for Garden Plowing, Harrowing, Seeding, Cultivating, Spraying, Lawn Mowing, Belt Power.

BOLENS GARDEN TRACTOR

Instant Hitch makes all tools quickly interchangeable. Arch and Tool Control, Power Turn and other vital features. Power Pulley for Belt Work. Time Saver. Write today. GILSON MANUFACTURING CO. 788 Park Street, Port Washington, Wis.

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INTERNATIONAL PAPER COMPANY
New York, N. Y., February 29th, 1928.
The Board of Directors have declared a regular quarterly dividend of one and three-quarters (1 3/4%) per cent on the Cumulative 7% Preferred Stock of this Company, and a regular quarterly dividend of one and one-half (1 1/2%) per cent on the Cumulative 6% Preferred Stock of this Company, for the current quarter, payable April 16th, 1928, to holders of record at the close of business—April 2nd, 1928. Checks will be mailed. Transfer books will not close.
OWEN SHEPHERD, Vice-President & Treasurer.

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"Send me prices of parts of your Clark 6-ft. Reversible Extension Harrow. I have had it 16 or 18 years; it is the finest cultivator in an orchard I ever used and I have tried out several kinds."—F. G. Pickering, Joliet, Montana.
"Send me the price of a set of wooden bearings for a two-horse Reversible Single Action Harrow. I bought this harrow from you over 10 years ago. It has rendered satisfactory service year after year in spite of the fact that it received the roughest usage of any tool on the farm."—J. Philip Detsch, Nashoba, Mass.



Clark CUTAWAY 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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Please send me FREE your catalog, prices, and book, "The Soil and Its Tillage."

Name

Address

Service Department

BUILDING OF BOAT HOUSES

What are the laws, if any, regarding the subject of boat houses on the small lakes of Michigan?—R. G. S.

The owners of the shores have the right to build boat houses. They may build them out over the water if they desire. There are no regulations especially applicable as to boating on small lakes.—Rood.

SPECIAL PERMITS FOR KILLING SKUNKS

Is it legal to send away skunk hides to have them tanned after the season is closed? I want them for my own use. Would I be violating the law by killing muskrats on my barn floor? They are destroying corn in bundles. Could I have their hides tanned for my own use?—Reader.

The pelts of skunks taken during the open season may be shipped for tanning or sale at any time. It would be a violation of the law to kill muskrats during the closed season without a permit. Fur bearing animals that are doing damage to property may be destroyed under special permit on the condition that the pelts of such animals must be properly cared for and sent to the Department of Conservation, Lansing.—G. M. McCann.

CONTROL OF MOLES

I have set rose bushes and flowers in front of our house. I have noticed that something digs under the roots which seems to pick up top ground, flowers, shrubs, and roots thereby causing them to die. How can I get rid of this pest? There are also large bugs in this piece of ground. They resemble the caterpillar and are white or gray.—S. G.

The animal which is digging under your shrubs and lawn is undoubtedly the mole. There is a number of ways of eradication. Traps are used. Seeds of castor oil plant may be inserted in the runways. They are deathly to the mole. Carbon bisulphide dropped into the holes on cotton will cause suffocation. Sodium cyanide will have the same effect. The white grubs that you mention are probably cut worms. The best method of control is by means of poison bran mash. Mix bran with a little white arsenic and cheap molasses and then add a few drops of banana oil. Scatter this bait about the plants and you will have no trouble in ridding the place of the pests, but use care in protecting other animals from it.—Alex Laurie.

PAYMENT OF HIGH SCHOOL TUITION

We have a son who attended the rural school up to the eighth grade, took the seventh grade county examination and passed. Then we sent him to a parochial school in town. Does the district in which we live have to pay his tuition at high school as well as for any other child graduated out of our district as this is an accredited school? His diploma is signed by the superintendent of schools of our town.—F. C. B.

High school tuition can be paid by the district board for applicants who have a county eighth grade diploma or a certificate of promotion out of the eighth grade given by a graded school district employing a superintendent of schools. If the boy mentioned in the above question does not possess either of these the board cannot legally pay his tuition. The fact that he took the seventh grade county examination and passed does not entitle him to the high school tuition. He must have passed the eighth grade and received an eighth grade county diploma or a certificate of promotion as mentioned above.—C. L. Goodrich.

A bill before the Quebec legislature provides a tax of five per cent on restaurant meals costing over a dollar, the tax money to go to support of hospitals.

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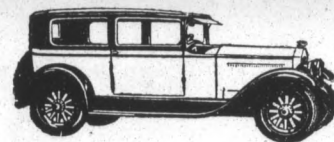
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We will tell you how. Write today for handsome free booklet. Tell us if you keep bees now. Here is a bargain: Gleanings in Bee Culture, monthly magazine, 2 years, \$1.00. "Starting Right with Bees," a book with 128 pages, 124 illustrations, and Gleanings in Bee Culture, 2 years, both \$1.50. These will absolutely teach you beekeeping. The A. I. Root Co., 613 Liberty St., Medina, O

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BEES HELP THE FRUIT GROWER

(Continued from page 371)

planted as permanent trees in large blocks. The filler trees in many of these orchards are generally such early bearing varieties as Wagener, Jonathan, Wealthy, or Grimes Golden; which serve as pollinizers for the permanent trees.

The complete removal of all the fillers in many such orchards would eliminate the pollinating variety. Several of these filler trees should be left on each acre even though it should cause a crowded condition in parts of the orchard or necessitate the removal of some of the permanent trees.

Providing for Pollination in Young Orchards

In young orchards recently planted in which pollinating varieties are entirely lacking, the most convenient means of providing pollinizers is to top-work every fourth tree in every fourth row to another variety. Occasionally cross-pollination can be provided by planting the vacancies caused by trees dying out to a pollinizing variety. A variety planted as a pollinizer must have a blooming season that overlaps that of the variety it is intended to pollinate.

"Bouquets" in Mature Orchards

In orchards of mature trees, where it is suspected that fruit setting is limited by lack of pollinizers; top grafting as was suggested for young trees is the most permanent means of insuring pollination. Until the grafts start blossoming "Bouquets" of mixed varieties (pollinizers) should be placed in buckets of water hung in the trees or placed in tubs of water ten to fifteen feet in front of colonies distributed throughout the orchard.

Making a Stubborn Orchard Bear

Early last spring there came to my attention a Northern Spy orchard located near Belding, Michigan. O. W. Braman, its owner, informed me that the yield from the eleven acres set solid to Spies had never been over 1,000 or 1,500 bushels any season during the past eight years. Practically all apples had been harvested from the north side of the block where an old home orchard of mixed varieties stood close by.

In 1925 it was thought that lack of insect activity was responsible for the unproductiveness of a south half of the orchard. A yard of forty colonies of bees was established in the orchard but this did not materially increase the yield. In 1927 "bouquets" of Ben Davis, Wagener, Roxbury Russet, and Tolman Sweet blossoms were placed in tubs of water in the bee yard. About forty more half barrel tubs were filled with "bouquets" and scattered through the south side of the orchard. Bucket "bouquets" were hung in the trees. Six additional colonies of bees were moved into the orchard for the blossoming period and substantial "bouquets" placed about ten feet in front of them. What were the results? "Bouquets" plus bees did the trick. A 5,200 bushel crop was harvested.

GROWING PLANTS UNDER CHEESE CLOTH

GOOD use can be made of cheese cloth for protecting tender plants against frost and cold winds during the spring months. Several kinds of vegetables can be grown under such covering when it would be unsafe to trust them in the open.

Protection against the cold is not the only advantage in using the cloth. It keeps out many insects. It seems that the adult insect is guided by its eye in search for suitable place to deposit eggs. The cloth conceals the plant and the fly is deceived. Many growers of vegetable plants who have become discouraged through repeated failures to grow certain things should

try a strip of cheese cloth stretched along the row and a few inches above it, high enough to give the tops room for growing.

Spinach, cauliflower, lettuce, radishes and some other vegetables do not grow well during the hot days of summer. A strip of thin cloth protects them from the driving rays of the sun and keeps the ground cool and moist. The difference between the surface thus protected and that left exposed can readily be detected. The little shade, although thin, is sufficient for the protection of a crop that can be made use of. And besides this, the growth under cheese cloth is more rapid, and maturity is hastened. Tests have been made that showed a gain of a week or ten days, and that means much to the one who takes pride in an early garden.

The market gardener, however, finds this method of growing his products rather impracticable, the expense is too great, the covering will last only for one year. But with the home garden this extra trouble and expense is not the consideration.—V. M. C.

Indians of North America made mirrors out of mica.



QUALITY

All the scientific skill and creative ability of the world's largest organization devoted exclusively to tire building enter into the manufacture of Firestone Tires. Engineers, chemists, designers, and the thousands of stockholder-employees are pledged to maintain the Firestone ideal of "Most Miles per Dollar."

The Firestone Gum-Dipped Balloon is their supreme achievement—recognized as the quality standard of the industry.

Firestone advanced the science of tire building many years by developing the special Gum-Dipping process by which every fiber of every cord in Firestone tires is saturated and

insulated with rubber, minimizing friction and heat and adding many extra thousands of miles.

With world-wide facilities for controlling raw materials at the sources, and direct distribution only to regular tire dealers through 149 Factory Branches and Warehouses, Firestone eliminates middlemen's profits and assures fresh, clean tires to motorists everywhere. Firestone Dealers—specially trained at Firestone Tire Repair Schools and Educational Meetings and with better service facilities—give valuable assistance in securing longer tire mileage and lower car upkeep.

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FIRESTONE
—the tire de luxe; Gum-Dipped for extra strength, stamina and mileage.

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AMERICANS SHOULD PRODUCE THEIR OWN RUBBER *Harvey Firestone*

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Wing's Improved White Cap still holds Ohio State record for greatest yield. Other varieties also. Highest quality Field Seeds. Moderate prices. Write Chas. B. Wing Seed Co., Dept. 324, Mechanicsburg, Ohio

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For lasting service and fire protection use metal roofing and siding—adapted to both rural and city properties.

APOLLO-KEYSTONE Galvanized Sheets (alloyed with copper for rust-resistance) gives maximum wear and satisfaction. Sold by leading metal merchants. KEYSTONE COPPER STEEL is likewise unexcelled for Roofing Tin Plates for residences and public buildings.

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Use APOLLO-KEYSTONE Quality for roofing, siding, gutters, spouting, grain bins, tanks, culverts, flumes, and all sheet metal uses.

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 ANIMAL BASE FERTILIZERS
For Every Crop

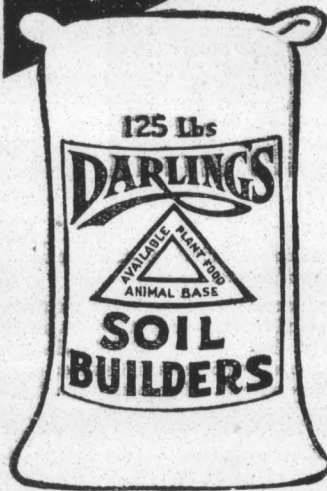
Our Superphosphate [Formerly Acid Phosphate]

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

This gives our Fertilizer mixtures better handling qualities and they do not clog in the drill. Our new million dollar plant is the only one in the middle west using this special process.

Write today for literature on Darling's Fertilizer and information about our agency proposition

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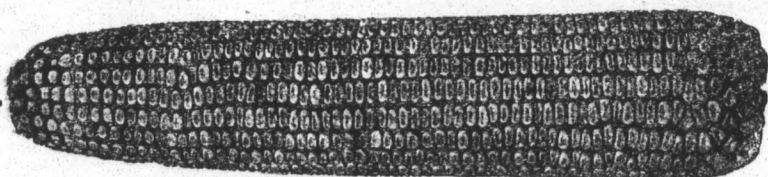


Wheel-less Plow Wheel-less Plow Wheel-less Plow Wheel-less Plow Wheel-less Plow Wheel-less Plow Wheel-less Plow Wheel-less Plow Wheel-less Plow Wheel-less Plow

Why does the two-bottom 14" new Ferguson plow for Fordsons handle like a pair of 10's or 12's of any other?

Ask your Fordson dealer or write us for the answer. A new question every month—watch for it!

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Clement's White Cap Yellow Dent, Picketts Yellow Dent and Michigan Yellow Dent (a very early dent), Certified Worthy Oats, Two-Row Barley and Sweet Clover Seed.

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.

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OATS

SENSATION One of the most productive oats in cultivation. 75 bu. and upward per acre are frequent with large white meaty grains weighing 44-46 lbs. per measured bu. of the highest quality. We are making an exceptionally low price in quantities. You should by all means try these oats. **SEED CORN** Early Clarage and White Cap. Excellent yielders and never fail to ripen. Choice seed as low as \$2.75 bu. Also barley, grass seed, soy beans, etc. Write for circular and samples. **Theo. Burt & Sons 45 Melrose, O.**

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Protective Service

Your Keys

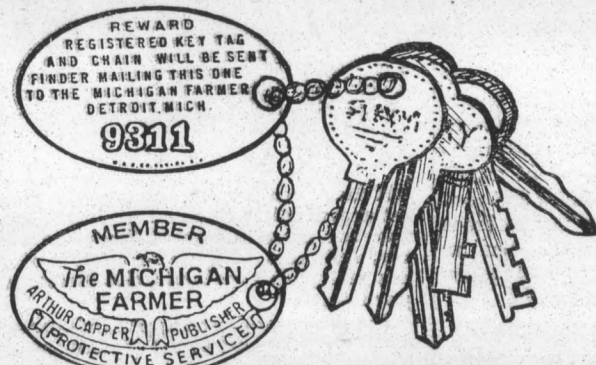
By E. A. Shearer
Manager of Protective Service

KEYS are small, but to the farmer, they are very important property. With them he can use his car, have access to his granary, chicken coup, dwelling, and other farm buildings where valuable property is stored and also to his safety deposit box in the bank and the strong box holding the family valuables. In fact, the keys on the farmer's key ring are the means of reaching practically all of his personal property.

The Michigan Farmer Protective Service is designed to protect the farmer's keys as well as his personal property from theft and his farm against trespassing. This is done through the registered key tag which goes to every member of the Michigan Farmer Protective Service.

being returned. When received at the Michigan Farmer offices, the registered number enables us to return the keys promptly to the owner.

It will be observed, therefore, that this registration of membership and the key tag is a valuable part of the Michigan Farmer Protective Service. There is, however, an additional usefulness that presents a real human feature. How many times do we rush off in a hurry to some city or town twenty-five or fifty miles distance from our home, leaving behind all means of identification. We know who we are, where we are from, and where we are going. Thus it may seem of little importance to have any means of identification on our person. But, at the coroner's court or at the morgue in any of our large cities, one can be thoroughly convinced of the need of always carrying upon his person a means of identification. Scarcely an issue of the daily press passes without recording some accident on how some person is rushed to a hospital in a critical condition and in a state of coma, separated for days from friends and relatives for lack of identification marks.



This Shows Both Sides of Registered Key Tag

It works in this fashion. John Smith of Dowagiac, Michigan, Route No. 6 takes out a membership in the Michigan Farmer Protective Service. Besides receiving his membership certificate, bearing his name and registration number, a metal Protective Service sign, a Horton Trespass warning sign, he also receives a key chain and tag which contains a serial number recorded in the Michigan Farmer offices. This metal tag has a reproduction of the Protective Service sign on one side and instructions to any finder advising that upon returning the keys to the Michigan Farmer he will receive a reward.

If John Smith loses his keys the finder will be moved to return them to the Michigan Farmer for one of three reasons. He may do this because he is honest and wishes to do what is right; or possibly to secure the reward offered; or he may choose to do it out of respect for registered property which it would be unwise to have in one's possession when accompanied with instructions on how they may be returned to their rightful owner. This plan multiplies a thousand times the chances of lost keys

The key tag about which we have been writing serves this purpose. By communicating with the Michigan Farmer offices and reporting the registered number on this tag, the name and the address of the owner can be quickly determined. This is particularly true with respect to the automobile since one's keys are necessary to motoring and the tag would quickly come to the attention of those who are rendering first aid.

This feature of the Michigan Farmer Protective Service indicates how carefully this whole program has been studied to give the members the utmost of property and life protection.

The coupon below is published to make plain to our readers how they may become members of the Michigan Farmer Protective Service. Simply follow the directions given in this coupon and you will be entitled not only to the service mentioned above, but also to the protection against the theft of farm property as outlined on membership certificates, and also against the trespassing upon your premises as provided in the Horton Trespass act. Simply fill out the coupon below and mail as directed.

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.

P. O. State

Radio Increases Milk Production

Proves That Contented Cows Give More Milk
By Clare Bloss

SINCE noting your article in the issue of March 3rd in regard to farm radios, I believe the readers of the Michigan Farmer may be interested in a radio I have in my barn and the results from same.

I have a herd of twenty pure-bred Jerseys and a year ago I made a radio to place in the barn, from spare parts left over from building other sets to sell. I not only put it there for my own pleasure but as an experiment. And it surely has proved a profitable one for me. I was milking eight cows at the time and these eight cows under the same care, feed, and water as the week previous, produced seven pounds of butter more the next week, and they never dropped back.

Milk is made while you are milking and the mental impression that the cow has while you are milking, determines the quantity of milk. Milk production centers around the nerves of the cow and the nerve center starts



The Loudspeaker and the Milkpail Go Hand in Hand on the Bloss Farm

at the head. The mental impression of the cow determines milk production. If anyone doubts this hit the cow you are milking over the back with the old three legged stool and see her hump up her back and hold her milk.

No doubt you have read where music has been used to quiet the nerves of a patient being operated upon in the great hospitals of the country. In just the same way the music from my radio makes the cows quiet and contented and they give more milk.

This herd of Jerseys has been high herd and high cow for Genesee County No. 2 C. T. A. two years in succession and they were high herd for the state one month.

Of course, there is a great deal of pleasure for the person doing the chores in the barn. The night of the big foot ball game in California, I was milking cows in Michigan at six o'clock at night by artificial light and listening to a game being played two thousand miles away at three o'clock in the afternoon, and getting every play as I put an extension cord on the loud speaker and put it behind the cow I was milking.

The set is only three tubes and the "A" Battery lasts a month and the "B's" a year or more so the expense is nothing when compared to the profit and pleasure.

NEWS FROM THE AIR

THE identity of "the Old Stager" who presides over the destinies of the Philco hour presentations of musical comedies and operettas has just been revealed after months of strict

secrecy. He is Henry M. Neely, newspaper man, music critic, and magazine editor, born in Philadelphia in 1878 and when the war broke out, went overseas with the Y. M. C. A.

Ralph Wentworth, veteran radio announcer, is an enthusiastic gardner and is now hoping for the snow to melt in order that he can get his daily dozen on his "New Jersey Farm."

During his recent morning programs, Walter Damrosch confessed himself in doubt as to the correct pronunciation of "Iowa." A few days later, letters and telegrams came pouring in from the Middle West but, it turned out, that not even Iowans themselves agree on the pronunciation. A letter from a newspaper man in Des Moines declared that the majority called it "I-uh-wuh," rather than I-O'wa or I-O-way. But according to an article forwarded, the Indians who lived in this district and gave their name to the state were called Ioways, and the efforts of early French and English settlers to spell the name, support the correctness of the final "ay."

SAD BUT TRUE

Smith: "How many controls are there on your radio set?"

Jones: "Three. My wife, my daughter, and my son."

Like MAGIC for VEGETABLES

TIME to be thinking of next season's vegetable crop. Would you like to make more money on your truck? There is one sure way to do it . . . fertilize with Chilean Nitrate of Soda.

Nitrate of Soda is magic on vegetables. It gives them an early start . . . brings them through bad weather and other adverse conditions . . . makes a bigger yield and a better one in every way. Crisp, tender, juicy vegetables that bring top prices.

Fertilizer Information

FREE—Our new 44-page book, "How to Use Chilean Nitrate of Soda", will be sent to you free, on request. Tells how and when to fertilize all crops. Please ask for Book No. 1, or tear out this advertisement and send it with your name and address.

Chilean Nitrate of Soda

EDUCATIONAL BUREAU

55 East State St.,



Columbus, Ohio

Please direct your letter to Dep. 15-C

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THEY SATISFY
and yet THEY'RE MILD

LIGGETT & MYERS TOBACCO CO.



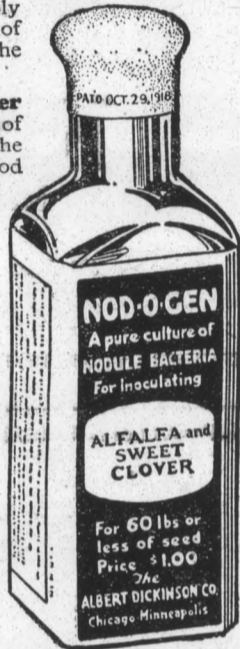
A Wagonload of Fertilizer for \$1.00

The most expensive fertilizer ingredient is nitrogen, *but you don't need to pay a high price for all your nitrogen.* Red Clover, Sweet Clover, Alfalfa and other legume crops can secure *free* nitrogen for you out of the air and convert it into plant food form, *providing* they have present in the soil plenty of live root-nodule bacteria of the right kind. Each different class of legume crops requires a different type of bacteria. *Inoculation* of the seed ensures a supply of the right bacteria, and makes certain the addition of the greatest possible amount of nitrogen fertilizer to the soil. Your experiment station urges inoculation.

Nod-O-Gen Inoculation the Greatest Fertilizer Bargain—Nod-O-Gen Inoculation is a pure culture of vigorous nitrogen-gathering root-nodule bacteria—the right kind for each crop. It is prepared on special food jelly in patented stopper bottles that furnish air, food and moisture, thus preserving the life and vigor of the bacteria indefinitely. Every four-acre size bottle of Nod-O-Gen contains over 500 million live bacteria.

A bottle of NOD-O-GEN costing only \$1.00 will inoculate 4 acres of Alfalfa or Clover and enable the plants to secure 400 lbs. of free nitrogen from the air equal to 2800 lbs. of nitrate of soda, worth over \$100.00. NOD-O-GEN is a 100 to 1 investment.

NOD-O-GEN INOCULATION is produced in the soil laboratories of The Albert Dickinson Co., and sold everywhere by dealers who handle Dickinson's "FINE TREE" Farm Seeds. If your dealer doesn't have NOD-O-GEN, mail the coupon below with a dollar bill, and a four-acre size bottle of NOD-O-GEN will be sent you at once, postpaid.



THE ALBERT DICKINSON CO., Box 788 B, Chicago, Ill.

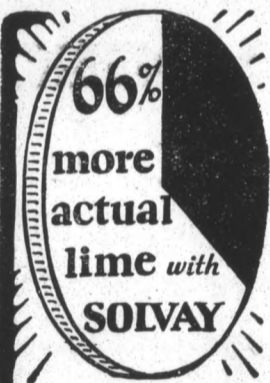
Please send.....four-acre size bottles of NOD-O-GEN for (name of crop).....to:
Name
R. R. or Box No.
Town.....
(Be sure to specify name of crop to be inoculated)



ALSIKE \$4.50 Per Bu.
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45 lbs., Bags extra 25c each 20 per cent clover.
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MICHIGAN Concrete STAVE SILOS
The last word in a permanent silo. Write for free illustrated literature. Tells how we manufacture and erect for you under best known processes.
Special Terms if You Order Now!
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A Michigan Farmer Limer Gets Results—Try One



Get the most for your limestone dollar

Here's how—when you buy lime you are really buying lime oxide (its active chemical property), and this is what you get:

For \$125.00 you can buy, on an average, delivered to your station, 25 tons Solvay Pulverized Limestone containing 12½ tons of lime oxide, or 9 tons Burnt Lime containing 7½ tons lime oxide, or 10 tons Hydrated Lime containing 7½ tons lime oxide.

You obtain 66% more actual lime for [your money when you buy Solvay Pulverized Limestone.]

Spread Solvay this year—note the bumper crops—and you'll spread Solvay every year!

Write for booklet.
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DETROIT, MICH.

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LOCAL DEALERS

Readers' Opinions

A REPLY TO THE PUNISHMENT

IN a recent issue appeared an article by G. E. C. which states that farming was God's punishment inflicted on man for his disobedience. I find this so contrary to my interpretation of the story that I wish to present the other view.

While it is true that "God sent him forth from the Garden of Eden to till the ground from which he was taken" (Gen. 3:23) a very little study of the second chapter of Genesis will at once prove that the need of a farmer was a part of the reason why man was created. Genesis 2:5, in reviewing the creative work, says, "and there was not a man to till the ground" showing that the job was here before the man.

Again in the fifteenth verse we read, "God took the man and put him in the Garden of Eden to dress and keep it." Here again is proof that Adam had work as a farmer before he sinned, even before he was forbidden to eat the fruit of the tree "in the midst of the garden."

Man was made for the occupation rather than the occupation inflicted as his punishment and perhaps if he had been busily engaged at tending the garden, his work would have prevented those longing glances at the tempting fruit.

So far as our being "inflated" over our job, we, as well as any other honest productive workman, should find joy and contentment and share a fine sense of pride in meeting well the responsibilities of our agricultural profession.

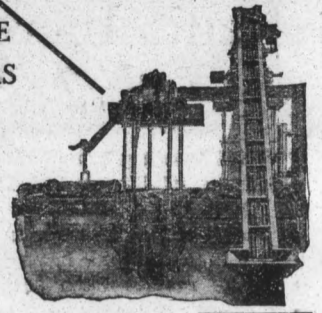
But let no one attempt to humble our farmers by calling our basic and most necessary industry, a punishment. An occasional inventory of the advantages and blessings of farm life and the confident assurance that God wanted, had work for, and created farmers, should surely make us all better, more contented citizens, co-operating with Him to "dress and keep" His earthly garden.—Clifton C. Almy.

TRESPASS LAW WORKABLE?

I AM in receipt of a letter from a former director of the department of conservation of this state commenting on my article in your issue of February 25. He claims that our new trespass law is not workable and inferior to the one we had previously. In answer to the question of its workability I referred him to a neighbor of his that it cost \$16.00 and a considerable amount of inconvenience to hunt on my place without my consent this last fall.

We like the new law and regard it as vastly superior to the old one and easy of operation. No posting is necessary in fact as long as it is up to the hunter to personally consult the owner, it seems to me, posting is inadvisable. The law makes it mandatory on any hunter to show his hunting license to the owner of property upon which he is found and stiff penalties are provided in case he refuses. I never knew of his refusing. With his name gained from the license in your possession you make a complaint to any justice and he will issue you a warrant. Give the warrant to any deputy sheriff or other deputy and in the culprit comes. As far as I know they all plead guilty, thereby saving costs. For a second offense a jail sentence is mandatory. This is a good law, all the law we need with plenty of teeth to keep the hunter where he belongs and just as easy of application as it is possible to imagine any law of being.—A. B. Cook.

SQUEEZE DOLLARS FROM APPLES WITH A



Farquhar Cider Press

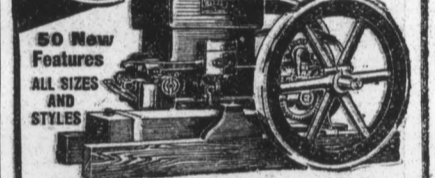
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Seeds—Berry Plants—Ornamentals
3-4 ft. Apple, 25c; 3-ft. Peach, 15c each post-paid. Guaranteed stock. Farm, Flower and Garden Seed. We have 500,000 Fruit Trees. Evergreens, Shade Trees, etc., in fact, our 1927 Catalog has everything for Garden, Farm and Lawn.
ALLEN'S NURSERY & SEED HOUSE,
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"New Coulters Make an Old Acme as Good as New"

If you have an Acme Harrow or XL Cultivator that's standing idle because the coulters are worn out listen to this:

Your implement dealer can furnish you with new coulters which will make your old Acme AS GOOD AS NEW.

It makes no difference if your Acme is 30 years old for present day Acme Coulters fit Acme Harrows bought since 1892.

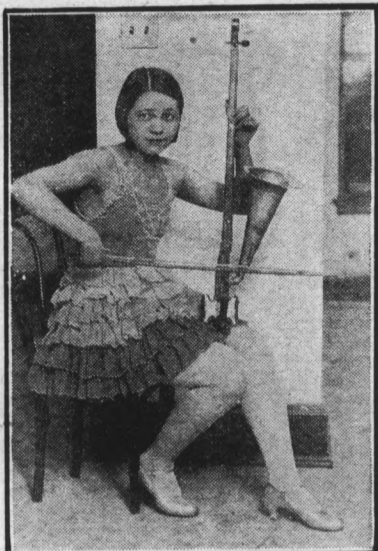
And we don't have to tell YOU that nothing beats Acme Coulters for preparing fine seed beds—quicker and cheaper than any other implement. Nothing cuts, crushes, pulverizes, and levels like these sharp, double-curved Acme Coulters.

Clip coupon for free Acme Catalog. It tells an effective way to get rid of the corn borer.

RUSSELL & BECK SUPPLY HOUSE,
17 Anson Street, Columbus, Ohio.
Send me free Acme catalog described above.

Name
Address

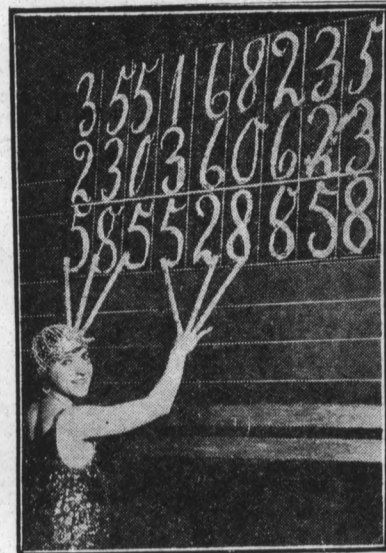
WORLD EVENTS IN PICTURES



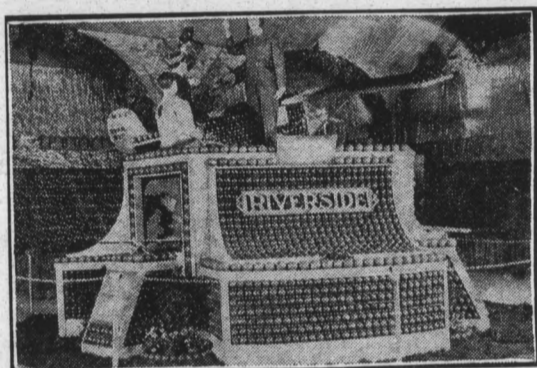
They're bobbing their hair and inventing new musical instruments in Japan.



If you lose, go right next door to the hock shop! They get you going and coming in Borneo town, where one man runs a gambling house and his neighbor a pawn broking place.



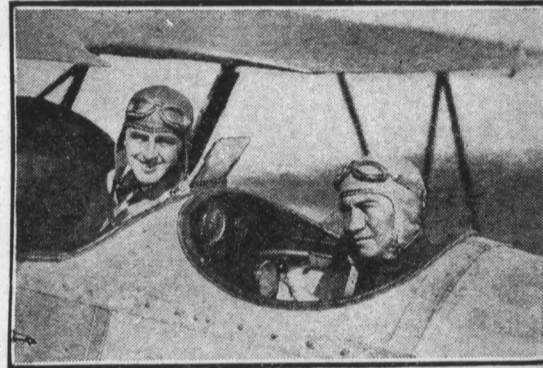
Sum job! Mental phenomenon, Fraeulein Alba adds six columns of figures at same time.



"The Spirit of Orange Juice"—Lindy's plane modeled in a new medium at the world's largest orange show in San Bernardino, Cal.



Nah-Nee-Num-Skuk, 119 years old, never sleeps indoors or eats cooked food.



Presho Stephenson and James Angel, experienced aviators, will attempt to wing their way around the horn of South America.



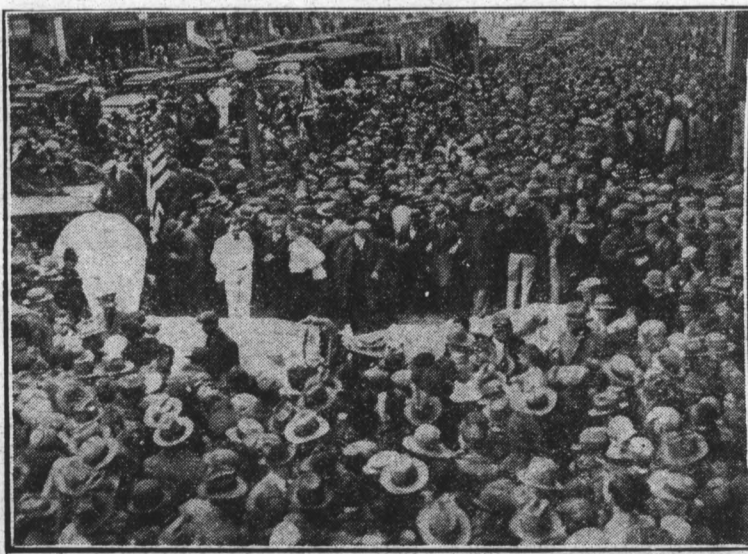
President Machado and U. S. statemen, Hughes and Fletcher, at the thirtieth anniversary celebration of the sinking of the battleship Maine which led to Cuba's independence.



This is not a head-hunter's collection—it's a display of masks made by the famous artist, W. T. Benda, a leading exponent of this type of artistry.



Eight-year-old Helmuth Lichterfeld breaks one-fifth inch chain in bare hands.



Thousands witnessed this plane crash on the busiest street in Macon, Georgia, killing two pilots and one onlooker. Many were injured as the sidewalks gave way under the great crowd.



Martin Jensen, famous Dole pilot, is coaching five-year-old Jackie Walker to fly.

BOB'S not going to leave," was the information Katie imparted.

"Has he told you so?" Mother O'Neal inquired. "I thought they were leaving tomorrow."

"Maybe so, but not Bob," was Katie's comeback, and she proved a true prophet. In halting, boyish speech, Bob Barton had passed on to his father the things that Burton had told him. The older man had listened in silence, Mother Barton sitting quietly by.

"It's all true, son," Bradley Barton had admitted, "but never before has it been brought home to me. I've never been a leader," and there was a note of pathos in Barton's voice, "and I reckon God Almighty doesn't intend me to be one, except as I may be His instrument with a violin. But you have been honored, and we are proud of you. Give the best that is in you, son. We'll call off that trip; it wouldn't do to leave you here alone."

"That was a strong conceit of Mr. Burton's about Mother Earth," said Mother Barton thoughtfully. "But it is true, too. If Mother Earth has not paid us dividends, perhaps we have overdrawn on her bank of tolerance. This may be her year to pay back."

"That field of ours is going to be a glorious sight when the ears set on," spoke up Bradley Barton, "and even now the rustle of leaves seems to tell a story. Here's what it will say to us when work is done." Bow swept across strings, and Bob could hear the sighing of wind, the vibrant murmur of strong stalks deep-rooted to withstand blasts. "Spirit of the Corn," announced Father Barton. "It's time that someone wrote an anthem to the King of Crops. Now when I get around to it— But first I'm going to help you 'make the crop.' We'll get into the fields tomorrow with two cultivators."

As they went down the rows side by side the day following Burton's visit, it seemed there was a new spirit of comradeship between son and father. Bradley Barton had put his new-found interest into words, as together they had harnessed willing teams and wheeled into action. "I've heard a lot about what a son owes to his father," observed Barton, "but I'm just beginning to be taught through this club work what a father owes to his son. Reckon if what Mr. Burton has to say about your owing loyalty to the club is true, it applies also to me. Fight to win, Bob, and I'll fight with you." With new determination and new respect for his father, Bob took up the grind again. Unconsciously the entire family began to measure the standard of home and farm achievement by the high mark demanded in completion of club projects. While Bradley Barton still lapsed into hours of idleness when his violin called, the burden of overwork was lifted from young shoulders, and Bob could find time for play without real neglect of farm or club activities. Ross Burton had accomplished far

Under the 4-H Flag

By John Francis Case

more on that eventful day than he had set out to do.

CHAPTER XI Challenge and Combat

WHEN the Pleasant Ridge club folks gathered for their monthly meeting there was a self-invited guest. Perhaps rumors had been floating about, perhaps the desire to whisper compliments into Katie O'Neal's pretty ears brought Hal Carson. Anyway, he was on hand evincing keen interest in Bob Bar-

ton's play as the club boys "warmed up" for their battle with the dads. And this time it bade fair to be a real battle. John O'Neal, thumping his big glove, yelled encouragement to his pitcher, a tall, muscular farmer who at one time had won local fame. The joke was on Bob and his mates, for Jim Henderson, father of a poultry club girl, had kept secret the fact that as Jim put it, he had "limbered up the old soup bone." On first base, Ross Burton performed with the ease of a born athlete, and in practice his crashing hits had put fear into the heart of Bob's hurler. With Carson umpiring, the game was on.

Bob Barton was no fool. While he gave his best to his team, he did not uncover the bag of tricks which had been perfected through long weeks of toil. But Bob watched every movement of the graceful Burton, absorbing all that could be learned. Before the game began he had called his mates aside and given whispered instructions which brought shrieks of laughter. "Wonder what those young divils are cookin' up," growled O'Neal. He was soon to find out. Putting little

"on" the ball, Bob's pitcher allowed such a riot of run-making in the first two innings that the fagged farmers were panting for breath. Pitcher Henderson had distinguished himself with two home runs. Now relentlessly Bob and his mates began to cut down the lead, while their pitcher tightened and, except for Burton, held the seniors safe.

The game became a riot. After five innings, with the score 15 to 14, O'Neal begged for time. "Let's call it quits," he implored. "Five innings is enough.

WASTED SYMPATHY

By Emerson O. Gildart

"Poor little dried-up Christmas-tree!
Were you born to this, pray answer me?
Snatched from your snug native berth in the marsh,
Rattled to town over roads that were harsh,
Hawked in the street in the blustering snow,
Smiled at one hour, amid tinsel and show,
Then dumped in the alley, with trash and debris—
Was this your whole story, from A down to Z,
You poor little rag-tag Christmas tree?"

Up spoke the withered wee Christmas-tree:
"Now don't you waste any tears on me!
'Tis true I am done for—that's plain to be seen;
My needles are brown where once they were green;
My day was a brief one, my even was wild;
But I put a new hope in the heart of a child!
My first-fruits of Christmas will ripen some day
When my ashes are scattered and mixed with the clay."

And the mourning old hemlocks, so green and so tall,
Were ranked by a Christmas-tree, withered and small.

say, fellows? Forfeit the game to 'em, nine to none. All we gotta do to beat 'em is keep on playin', but we feel sorry for the kids." There was a chorus of acclaim from the weary dads. As they moved off the field, O'Neal favored Bob with an expressive wink. "Thought you were smart, runnin' us old 'sprays' to death," he growled, "but we'll get you yet. Getting beat by nine runs isn't so bad." With much good-natured joshing the game broke up. As they were leaving the field, Carson called to Ross Burton and Ted Baldwin, ignoring Bob, who, with his mates, was celebrating victory. But soon Burton called the team leader. As he approached, Bob saw Carson flush in annoyance.

"Hal has challenged our 4-H team to play Warford High," said the county agent abruptly. "As you know, they have one of the best school teams in the state. Do you think we should play 'em?"

"I'm only a substitute," replied Bob, "and I've never seen Warford play. What's the real object in Carson's kindness? Of course, he expects to win."

"I know," spoke up Ted Baldwin, and there was intense feeling in his voice. "I know," Ted repeated. "Carson thinks his team can show up a bunch of farmer boys and that playing against you he can show you up, too, Bob. It looks dirty to me."

"None of that," spoke up Burton sharply. "Remember, Ted, that Carson is on our team. What do you say, Bob?"

"Play 'em," replied Bob, and his eyes flashed. "We may not win, but we'll give our best. I'll look out for myself."

"You've got me all wrong," put in Carson smoothly. "It's not so long now until we play Harmon County. They've a crack team, and you need a real game to put you in trim. Why should I want to 'show up' Barton? I've already done that and won the place. No man can beat me out of a job at first base."

"Don't flatter yourself too much, Hal," cut in the club coach. "No man on my team has his job cinched. You are a better man than Bob today; tomorrow he may 'trim' you. Individuals count for nothing with me so long as we play fair. It's the team and a victory for Brown County that I'm interested in. All right, Hal, you're on. Two weeks from today we play Warford High."

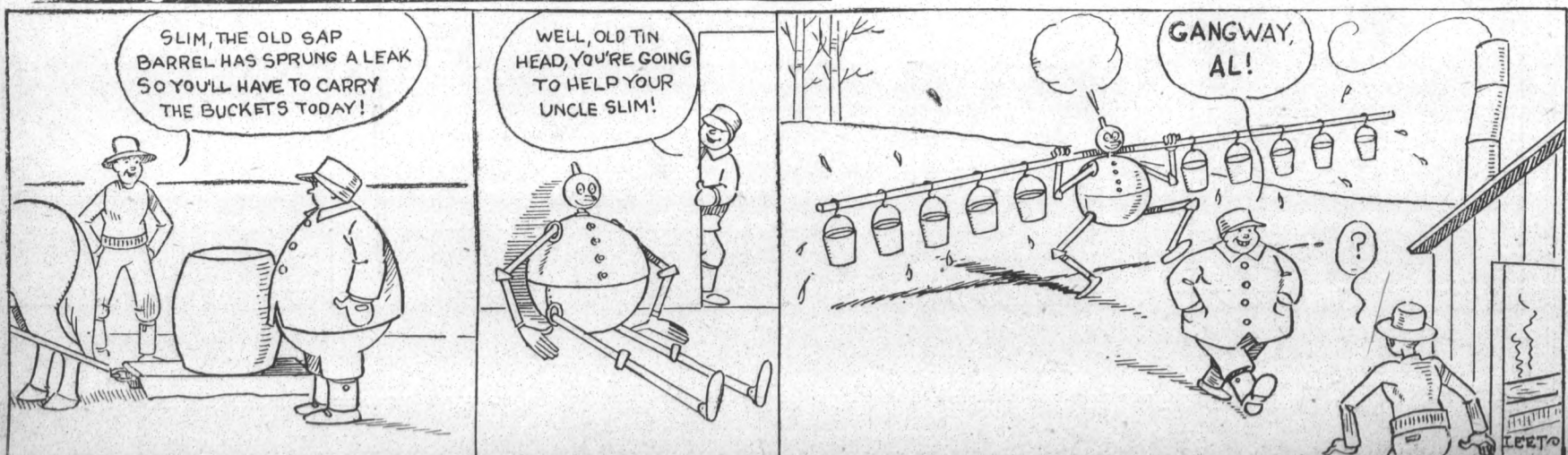
Ted Baldwin was still muttering complaints as the chums moved off together. "That guy don't belong in our gang," said the team captain. "Wants to give us practice! My eye! Eight men on that team have been playing together three years. Got a paid coach, too. Fine chance we got to beat 'em." Yet, despite these gloomy predictions, Bob Barton's heart was joyful. Again he would measure strength.

As he looked down upon the fine gathering of representative farmers with their wives and children, Bob felt

(Continued on page 387)

Activities of Al Acres—Slim Says His Middle Name is Efficiency

Frank R. Leet



for Economical Transportation



Thrilling Performance

Proved on the World's Greatest Proving Ground

Offering all the power, speed and stamina of an improved valve-in-head motor . . . constructed throughout of the finest quality materials available, with precision methods of manufacturing that are unsurpassed . . . and with its performance and dependability proved by millions of miles of testing on the great General Motors Proving Ground—

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From the heavy, banjo-type rear axle and the stronger, sturdier frame . . . to the powerful 4-wheel brakes and ball bearing worm and gear steering mechanism—this sensational new car is built to stand up! Every unit of the chassis is designed with a margin of over-strength that assures faultless performance under every condition of usage. Nor is this strength of construction confined to the chas-

sis alone—for the beautiful new Fisher bodies are built of the strongest and most durable combination of materials known to the body builder's craft . . . wood and steel, each reinforcing the other!

The nearest Chevrolet dealer has on display a complete showing of the new Chevrolet models. Go see them. You'll find beauty, performance and high quality construction that you never thought possible in an automobile—at such amazing low prices!

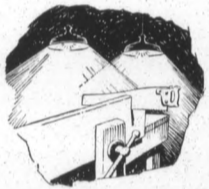
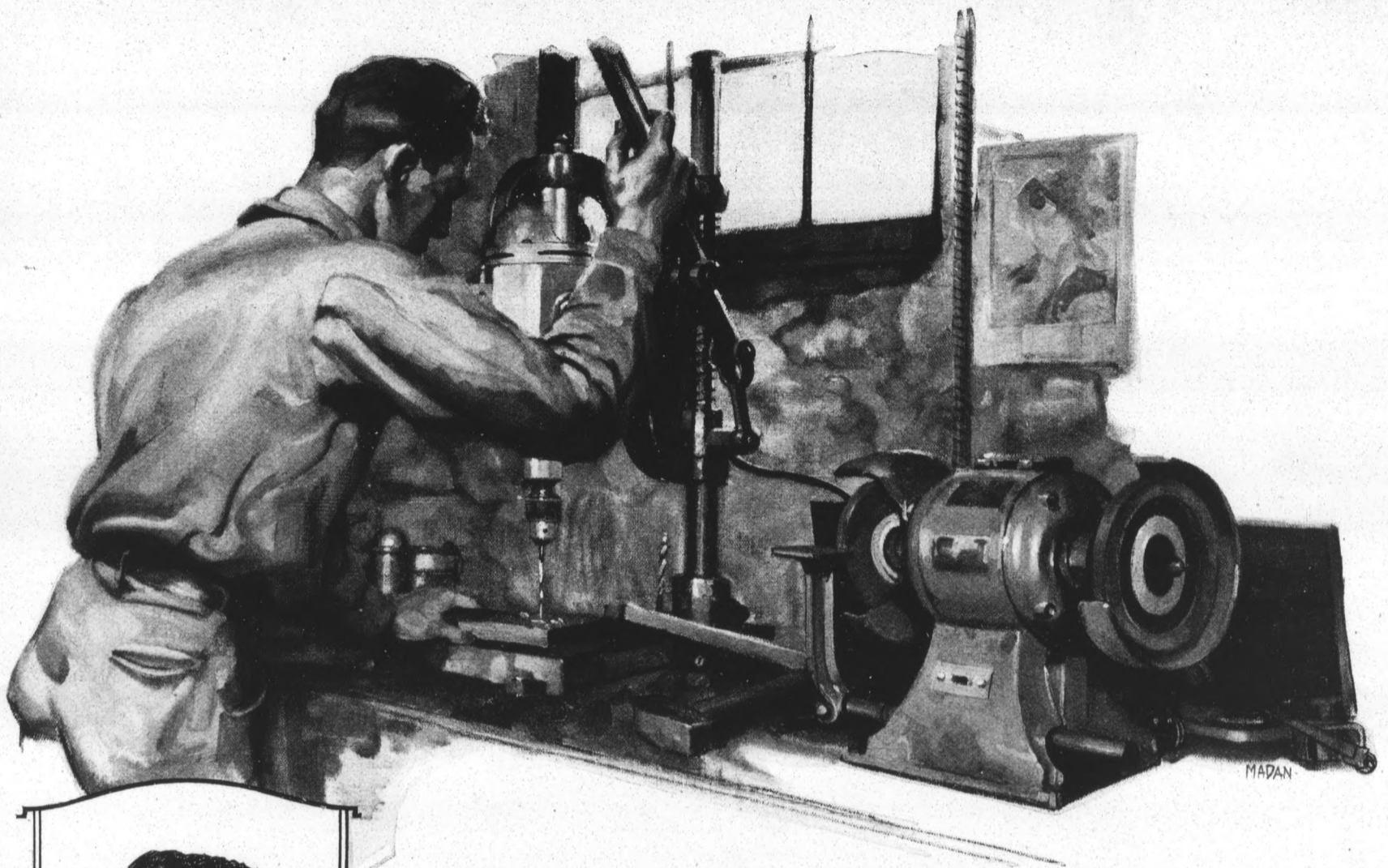
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| The Touring or Roadster | \$495 | The Imperial Landau | \$715 |
| The Coupe | \$595 | Utility Truck (Chassis Only) | \$495 |
| The 4-Door Sedan | \$675 | Light Delivery (Chassis only) | \$375 |
| The Sport Cabriolet | \$665 | All prices f.o.b. Flint, Michigan | |

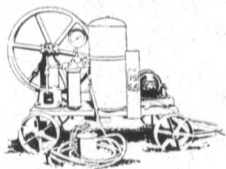




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An electric motor takes the heavy labor out of concrete mixing.



This motor-driven painting machine does the work of seven men.



No time lost heating the soldering iron—electricity keeps it hot continuously.



When Time Means Money

THE standing wheat dead ripe; dry hay in the field. and a storm predicted; the truck loaded for a quick run to market—it is at times like these that broken equipment can prove very costly.

In such crises, it is satisfying to know that a little G-E motor is waiting in your machine shop, ready to turn a grindstone, a lathe, or a drill press to make an emergency repair.

This is but one of many ways in which G-E motors, control, and other electric equipment are adding daily to the efficiency and comfort of farm life. The farmer who knows electric equipment looks for the G-E monogram before he buys.

Ask Your Power Company

If your farm is on or near an electric power line, ask the power company for a copy of the new G-E Farm Book which explains more than 100 uses for electricity on the farm.

GENERAL ELECTRIC



Anyone can be proud to own a RADIOLA 16

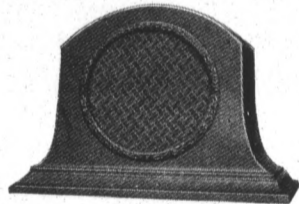
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It gives equally fine performance with storage battery or electric line power. In sensitivity, selectivity and tone quality, it has set a new standard for receivers in its price class. And its compact-



RCA RADIOLA 16

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The leader in its class. Ideal to use with Radiola 16. You can tell it by its rich, mellow tone . . . \$35

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WJZ	WBAL	KPO	KGO	KYW	WDAF
WEI	WRC	KFI	KGW	KSD	WOW
WTIC	WHAM	KFOA-KOMO		WCCO	WHAS
WJAR	KDKA	KHQ		WOC	WSM
WTAG	WLW			WHO	WMC
WCSH	WJR				WSB

ness is not the least of its merits.

Ask any RCA dealer to demonstrate for you this wonderful receiver, which is the product of the Radio Corporation of America, and its associated companies—General Electric and Westinghouse—leaders in electrical research and manufacturing. And be sure to have it demonstrated with one of the new RCA Loudspeakers, Model 100A.

There are other Radiolas ranging in price up to \$895, but none that gives more per dollar than the compact Radiola 16.

Buy with confidence



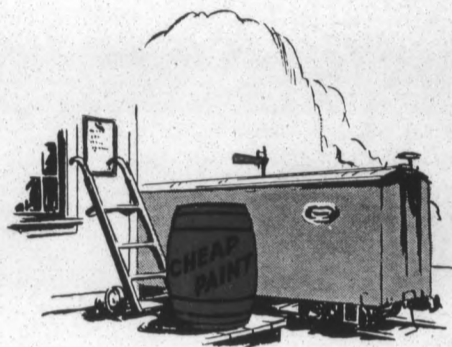
where you see this sign.

RADIO CORPORATION
OF AMERICA

RCA Radiola

MADE BY THE MAKERS OF THE RADIOTRON

NEW YORK · CHICAGO
SAN FRANCISCO



Be sure your "cheap" paint isn't a *wolf* in *sheep's* clothing

NO man ever saved money on "cheap" paint. That is because "low-price-per-gallon" and real *economy* are miles and miles apart.

So when anyone offers you a wonderful bargain on paint, look out. There are many wolves in sheep's clothing in the business of selling "cheap" paint.

There's the man who tells you of a barrel of paint shipped by mistake to your town, which he will sell you at a low price to save expense of shipping it back to the factory. *Apple-sauce!*

There's the firm that takes your order for 6 gallons of paint and boosts it to 60 gallons—and threatens to have the law on you if you refuse to accept it.

There's the unknown firm who writes you glowing reasons why they will give you special concessions purely out of friendliness. *More apple-sauce!*

There's the local dealer who tries to lure you with *low price*.

Any paint product, to be economical, must have (1) good covering ability, (2) a tough, long-wearing film, (3) colors that do not fade. And these qualities can only be produced with the finest ingredients, *which are costly*.

"Cheap" paint is cheap only because it is made of cheap materials. And the smart

tricks described here are merely used to "hoodwink" the unsuspecting buyer.

Why SWP costs you less

Fine old SWP House Paint, the world's standard for 50 years, costs more per gallon than "cheap" paint. But it costs *less* on the wall—and *much less* by the year.

Because SWP is a product of the finest white lead, zinc oxide, and linseed oil, produced in the Sherwin-Williams laboratories to unusually high standards, it has remarkable covering powers.

Where "cheap" paint will cover, on the average, only 250 sq. feet per gallon (two coats), SWP House Paint will cover 360

sq. feet per gallon, (two coats). Where 11 gallons of "cheap" paint are needed for the average house, only 7 gallons of fine old SWP are needed. It's that four gallon saving that makes fine old SWP House Paint so very economical on the wall.

But that is only the beginning. SWP, because of its fine ingredients and scientifically "balanced" formula, lasts two and a half times as long as "cheap" paint. It gives *good looking service* for five years, usually. "Cheap" paint always *looks cheap* and wears out in a very short time.

That is why "cheap" paint costs several times more than SWP for repainting.

See your local "Paint Headquarters"

Remember this—no "cheap" paint product, whether a house paint, barn paint, varnish, lacquer or enamel, can be economical. It *must* sell for a *good price* per gallon to contain the qualities that *make it economical*.

Also — no unknown concern and no concern that makes outlandish offers of "amazing quality and low price" is safe to deal with.

For best results and lowest cost, depend upon your local Sherwin-Williams dealer — "Paint Headquarters." He will tell you anything you want to know. Through the famous Sherwin-Williams Farm Painting Guide he can sell you the right finish for any surface, made by Sherwin-Williams to highest quality standards. But whatever you do — buy *good paint* if you want to save money.

We will gladly send you a copy of The Sherwin-Williams Farm Painting Guide, free.

THE SHERWIN WILLIAMS CO.

Largest Paint and Varnish Makers
in the World
Cleveland, Ohio



SHERWIN-WILLIAMS

PAINTS • VARNISHES • LACQUERS • INSECTICIDES

UNDER THE 4-H FLAG

(Continued from page 382)

a new sense of responsibility, a new pride in the work. He thrilled to the club songs and yells, the applause of the audience as father Barton led his orchestra in accompaniment to the solos charmingly rendered by Miss Edwards. As the club members stood at Bob's request, Katie O'Neal came forward to lead them in the 4-H club pledge. Her fresh young voice rang out, its fervor penetrating to every corner of the assembly room.

"As a true member," began Katie and with the others Bob took up the words, "I pledge my Head to clearer thinking, my Heart to greater loyalty, my Hands to larger service, and my Health to better living—for my club, my community, and my country." There was no applause when the pledge ended. A silence, pregnant in its meaning, held the audience of parents. It was an offer upon the altar of Americanism.

(Continued next week)

there may be other defects that impair the vision but do not interfere with reading a simple chart. Did it ever occur to you that a child with one excellent eye and one only three-fourths capacity was in more danger than if both eyes were poor? In the latter event he would get glasses promptly. Until he does the good eye will do all the work and thus be overstrained while the poor eye will deteriorate because of its dependence upon the other. It is good work for a teacher to make a simple test of the vision of her pupils, but the conscientious parent, instead of depending upon that, will have the child given careful and thorough examination by one who is expert in the work.

CHILD STAMMERS

Would adenoids cause stammering in a six year old child? What will cure it?—E. C.

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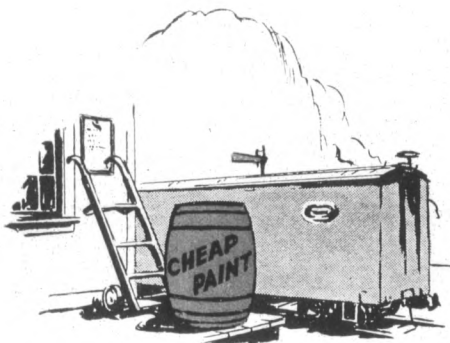
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world of enjoyment in smoking**



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Be sure your "cheap" paint isn't a *wolf* in *sheep's* clothing

NO man ever saved money on "cheap" paint. That is because "low-price-per-gallon" and real economy are miles and miles apart.

So when anyone offers you a wonderful bargain on paint, look out. There are many wolves in sheep's clothing in the business of selling "cheap" paint.

There's the man who tells you of a barrel of paint shipped by mistake to your town, which he will sell you at a low price to save expense of shipping it back to the factory. *Apple-sauce!*

There's the firm that takes your order for 6 gallons of paint and boosts it to 60 gallons—and threatens to have the law on you if you refuse to accept it.

There's the unknown firm who writes you glowing reasons why they will give you special concessions purely out of friendliness. *More apple-sauce!*

There's the local dealer who tries to lure you with *low price*.

Any paint product, to be economical, must have (1) good covering ability, (2) a tough, long-wearing film, (3) colors that do not fade. And these qualities can only be produced with the finest ingredients, *which are costly*.

"Cheap" paint is cheap only because it is made of cheap materials. And the smart

tricks described here are merely used to "hoodwink" the unsuspecting buyer.

Why SWP costs you less

Fine old SWP House Paint, the world's standard for 50 years, costs more per gallon than "cheap" paint. But it costs *less* on the wall—and *much less* by the year.

Because SWP is a product of the finest white lead, zinc oxide, and linseed oil, produced in the Sherwin-Williams laboratories to unusually high standards, it has remarkable covering powers.

Where "cheap" paint will cover, on the average, only 250 sq. feet per gallon (two coats), SWP House Paint will cover 360

sq. feet per gallon, (two coats). Where 11 gallons of "cheap" paint are needed for the average house, only 7 gallons of fine old SWP are needed. It's that four gallon saving that makes fine old SWP House Paint so very economical on the wall.

But that is only the beginning. SWP, because of its fine ingredients and scientifically "balanced" formula, lasts two and a half times as long as "cheap" paint. It gives *good looking service* for five years, usually. "Cheap" paint always *looks cheap* and wears out in a very short time.

That is why "cheap" paint costs several times more than SWP for repainting.

See your local

"Paint Headquarters"

Remember this—no "cheap" paint product, whether a house paint, barn paint, varnish, lacquer or enamel, can be economical. It *must* sell for a *good price* per gallon to contain the qualities that *make it economical*.

Also — no unknown concern and no concern that makes outlandish offers of "amazing quality and low price" is safe to deal with.

For best results and lowest cost, depend upon your local Sherwin-Williams dealer — "Paint Headquarters." He will tell you anything you want to know. Through the famous Sherwin-Williams Farm Painting Guide he can sell you the right finish for any surface, made by Sherwin-Williams to highest quality standards. But whatever you do — buy *good paint* if you want to save money.

We will gladly send you a copy of The Sherwin-Williams Farm Painting Guide, free.

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UNDER THE 4-H FLAG

(Continued from page 382)

a new sense of responsibility, a new pride in the work. He thrilled to the club songs and yells, the applause of the audience as father Barton led his orchestra in accompaniment to the solos charmingly rendered by Miss Edwards. As the club members stood at Bob's request, Katie O'Neal came forward to lead them in the 4-H club pledge. Her fresh young voice rang out, its fervor penetrating to every corner of the assembly room.

"As a true member," began Katie and with the others Bob took up the words, "I pledge my Head to clearer thinking, my Heart to greater loyalty, my Hands to larger service, and my Health to better living—for my club, my community, and my country." There was no applause when the pledge ended. A silence, pregnant in its meaning, held the audience of parents. It was an offer upon the altar of Americanism.

(Continued next week)

there may be other defects that impair the vision but do not interfere with reading a simple chart. Did it ever occur to you that a child with one excellent eye and one only three-fourths capacity was in more danger than if both eyes were poor? In the latter event he would get glasses promptly. Until he does the good eye will do all the work and thus be overstrained while the poor eye will deteriorate because of its dependence upon the other. It is good work for a teacher to make a simple test of the vision of her pupils, but the conscientious parent, instead of depending upon that, will have the child given careful and thorough examination by one who is expert in the work.

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**—then Camels are
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Mild, mellow, fra-
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Camels

Today, as for many years, Camels lead by billions, and they continue to grow

to help you



THE Farm Service "tag" hanging in the windows of our stores is an invitation for you to come in whenever you want honest advice and help in the selection of maintenance or equipment and hardware supplies. The word "service" in the "tag" means service to you. Why don't you make a greater use of it? It costs you nothing and may save you much in the way of both time and money. The next time you see a Farm Service store come in and look around.

For women

Have you a personal set of tools for your kitchen? There are many, but a pair of pliers, screw driver, hammer and a box of assorted nails and tacks are mighty useful. Stop into a "tag" store and let us fix up a set that you can keep in a handy kitchen drawer where the men folks will not be apt to carry them away. The small cost will be repaid in convenience many times.



Your Farm Service HARDWARE STORES

A Diary from the Jungle

Four Thousand Miles of Jungle, Plateau and Desert Ahead of Rough and Tumble

By Francis Flood

I'VE been too busy hanging onto motorcycle handle bars and keeping my bare knees away from the sizzling hot motor between them—and sleeping the sleep of the just tired at night—to find time to write articles of romance, adventure, and agriculture. Instead I will simply pass on the following observations from our log book as Jim and I motorcycle across the continent of Africa.

November 10—We are finally on the road with our little one-cylinder motorcycles—headed for the bush. Four thousand miles of jungle, bush, plateau, desert, and mountains ahead of us. The Niger and the Nile valleys to cross, the great Sahara Desert, and the whole black continent of Africa—and it's never been done on motorcycles before. We're off—in a clump of bush.

Real jungle this, with trees, shrubs, and riotous tropical vegetation so dense and interwoven in many places that man would have to chop his way through with an axe. And yet a good road has been laid right through its heart between the black walls of jungle on either side. A surfaced highway that shoots through the black of night, this road pierces the African bush. It is the road that draws the native blacks out of their mud huts

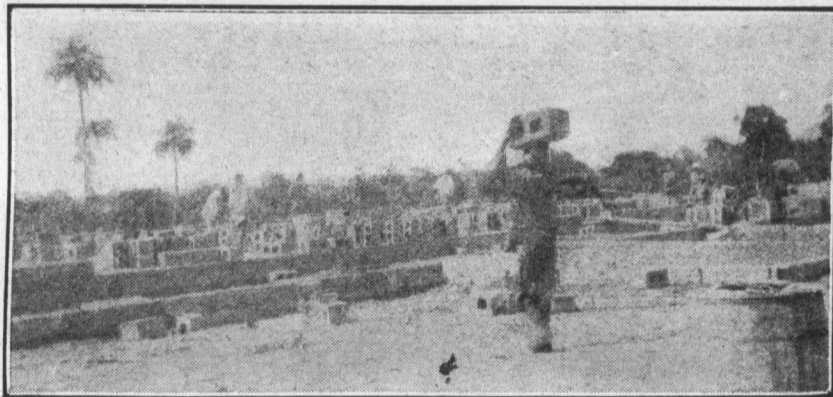
twenty miles a day, for five consecutive days.

A screeching, honking lorry comes crashing down the road and we pull off to one side and slow down lest the black devil at the wheel rip off two of our motorcycle wheels or wreck his own bus, overloaded with freight and bouncing passengers.

A LITTLE cluster of grass huts that calls itself a native village wakes up as we put-put past and all hands rush to grab the long-haired sheep and gangling dogs which always watch and wait peacefully in the road. These African dogs, for some reason, have the same feeling of indifference toward an automobile or a motorcycle that an American cow has. Between dodges I wonder why the sheep here have hair instead of wool, while the natives have wool instead of hair, and then I recall an old Hausa trader who tried to sell me a native-made blanket. It was made in Timbuctoo, a few hundred miles up the desert and was rather nattily decorated.

"Is it cotton or wool?" I inquired. The old boy didn't savvy "wool" at all, but he'd been trying to sell me ostrich and maribou feathers and he knew his wares.

"It be sheep, sah," he insisted. "No



Building Sand and Other Materials Are "Hauled" on Heads of Natives

in the bush and leads them into the light.

Hot, it is! So hot that even with our cork helmets, and our red-lined spine pads buttoned down the backs of our bush shirts, and even with the breeze stirred up by our twenty-mile gait, we welcome the shade when the sun, that was practically straight above our heads at noon, ducks for a moment behind the jungle wall. Our baby-white bare knees, and considerable bare legs as well, exposed equally to the sun and the public gaze on account of our new "colonial" suits of "shorts," soon red up angrily, but they'll get more than this before we cross the sizzling Sahara so we let 'em broil in their sweat.

A half-dozen, half-naked, half-asleep black men, hacking away at rough places in the road with their murderous looking machetes scurry to one side and grin at us as we boil on. A good American one-man tractor grader would do more road work in a day than fifty of these cheerful natives, but it would cost more to hire one per day too. If a few tons of gravel, stone, or dirt are needed for a grade or bridge approach, it is carried there by these happy menials of the Dark Continent, a basket or calabashful at a time on their kinky, solid heads. One contractor introduced the wheelbarrow in a gang of natives who were carrying sand about a quarter of a mile, unloading a boat. He found them a few hours later first filling the wheelbarrow with their calabashes and then loading wheelbarrow and all onto their heads and plodding patiently along. "These trousered apes don't know how to use their heads for anything else anyway," he growled.

I HAD seen, in Lagos, blacks going home from school with a book, a pencil, or even a bottle of ink perched serenely on their heads and tripping along just as any boy would do at home with the same things in his pocket. I'd seen them carry typewriters and alarm clocks and chickens in crates, and I even saw one bow-legged old blackamoor treading down a Lagos street with a big steel safe settled snugly on his head, unsteadied by either hand. A missionary friend told me of a native carrier of his who had toted, on the mass of bone he called his head, a crated kitchen stove weighing 142 pounds, and he lugged it

be cotton. It be sheep, sah."

"Oh, it be cheap, eh? Well, how cheap?"

"No, it be sheep, sheep. It be sheep's feathers, sah. Be make from sheep's feathers in Timbuctoo." I bought two of them, a sort of hair blanket woven in strips about eight inches wide and then sewed together to form a blanket. (And we needed them both, and more too, those cold Harmattan nights in the desert a few months later.)

November 11—Armistice Day! Mr. Patterson, our American missionary friend in Abeokuta, sixty-five miles inland from Lagos, invited me to enter the annual tennis tournament which seemed to be the principal event of the Armistice Day fete. We registered as an all-American entry in this African tournament—and found twenty-four Britishers opposing us. Sheer modesty forbids description of how Mr. Patterson and I won our way to the finals just as it grew too dark for any more playing.

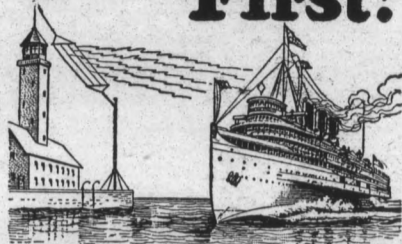
This tennis in Africa was a new one on me. At home when I see a tennis ball bouncing along off the court it is second nature for me to chase it. But as tennis is played here, a half-dozen black men or boys are deployed back of each end of the court and they chase all the balls. A white man would scorn to walk three feet for a tennis ball, and it was embarrassing for a born retriever like me to find myself galloping off with the blacks after a stray tennis ball.

NOV. 12—As early as it was safe to discard our cork helmets and be out in the sun, an hour and a half before sunset we met our opposing English finalists for the championship match. Bingo! They won the first set. But we didn't care, for we won the second and third, and the match, and the championship of Abeokuta for the Stars and Stripes. And that was that. Another big day right on the heels of Armistice day.

Nov. 13—My birthday! Three big days in a row. (I won't discuss this subject because I've reached the age when one doesn't welcome birthdays.)

Nov. 14—I might have known it! Too much celebration, and the only indisposition I've felt on the entire trip as a result. I'd stood all the terrors of the African tropics, but gave way before the dinner table hospitality

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To Lovers of Sea, Sky and Drifting Clouds:

Summer is just around the corner, and it is in order to suggest a cruise on the Great Lakes as part of your vacation.

We would be pleased to help you plan an outing of two, four, six or eight days' duration on the Lower Lakes, and supply you with pictures and descriptions of pleasant places: Niagara Falls, Mackinac Island, and others.

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A. A. SCHANTZ, President

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ST. PAUL DEPT. MF MINN.

of an American missionary. Intemperance finally got me—at the home of a missionary too. Each night as Mr. Patterson bowed us to bed he courteously offered "Now if there's anything you want, ask for it—and if we don't have it we'll send for it." And when a good South Carolina cook extends that principle to the dining table as Mrs. Patterson did, it is no wonder I weakened and fell after three holidays.

Nov. 15, 16, and 17—Still under the weather, but on November 18 we start out again and drive thirty-five miles to the government agricultural experiment station near Ibadan.

"Better have dinner and stay all night," invited Mr. Faulkner, Director of Agriculture for Nigeria, "and let us show you what we're doing here on the farm."

That evening, after looking over the

farm we strolled through a native cemetery and noticed the following inscriptions, most of them crudely hand carved on an ornate monument of sandstone: "Anna S. —, devoted wife and partner of her husband's missionary labors in the — district where they scored four converts in forty years. Well might she exclaim 'Lord, now lettest thy servant depart in peace'."

Another read, "In loving memory of Okoya Onilegbola. Died 10 December, 1909. Aged 120 years." Two graves away was another who had died at 102. This epitaph interested me. "S. P. Joke, who died — leaving a mother, husband, and ten little Jokes."

Our visit at the experimental farm, and something about agriculture in general in Nigeria will be discussed next week.

Sincerity vs. Formalism

Our Weekly Sermon—By N. A. McCune

TRAVELLERS in the Far East report the use of prayer-wheels among the Tibetans and Mongolians. These wheels are inscribed with prayers, or have pieces of paper tied to them containing prayers. When the wheel is turned rapidly, the prayers are supposed to attract the attention of the gods. But there are other forms of formalism as meaningless as this, and even more deadly, because the worshippers know better. Jesus denounced such formalism. Many people were exceedingly particular



about this feast and that custom, but "in vain do they worship me, teaching as their doctrines the precepts of men," and leaving untouched such weighty virtues as justice and

mercy. As a matter of fact, all worship tends to become formal, and to lose its essential inner meaning, unless the worshipper is on the watch to guard against it. Habit is strong with all of us, and habit is our salvation in every-day affairs. By habit we go through the mechanical operations of the day, such as getting up, dressing, walking, eating, doing the chores. If we had to stop and think everything out, the work would be long in getting done. But when this is applied to religion it is fatal, for religion requires that we put our best thought, our soul, into it. Habit, in the sense of mechanical performance, does not go.

In other words, Jesus was pleading for sincerity. An English cynic said, "A little sincerity is a dangerous thing, and a great deal of it is absolutely fatal." But we know that he was talking for effect. Sincerity is fundamental to any sort of a decent world. If people are not sincere when they tell you something, it is useless to waste time in listening. As Carlyle says, "A false man found a religion? Why, a false man cannot build a brick house! If he does not know and follow truly the properties of mortar, burnt clay and what else he works in, it is no house that he makes, but a rubbish heap." A farmer of whom I heard recently had had a hard time of it. He lost money farming in Colorado, and went to Texas, where he again lost, running up an account for groceries at one store for fifteen hundred dollars. He then moved back to Colorado, and as he left he said to his creditor, "I will pay you all I owe." "I believe you," said the store keeper, and he did pay it. It is this kind of honesty that we must put into our forms of worship, if they are to have meaning.

How the New Testament drives this home! Jesus called the professional religionists hypocrites because they did not carry out their professed beliefs sincerely. James says, "Pure religion before God and the Father is

this, to visit the fatherless and the widows in their affliction, and to keep himself unspotted from the world." John says, "Let us not love in word, but in deed and in truth." Paul says, "Though I give my body to be burned, and have not love, it profiteth me nothing."

Take the ordinary church service. How much of it do we enter into, thinking? Perhaps the Apostles Creed is part of the program. How quickly that is rattled off, "I believe in God the Father Almighty, Maker of Heaven and Earth, and in Jesus Christ His only Son, our Lord." Suppose we stopped there some Sunday, and started out to sincerely live that week as if we actually believed that we believe in God the Father and in Christ the Son. Life would take on a happier and more kindly tone. The Lord's prayer is a part of most church services. When we repeat that—think! "Our Father—" "Our Father"—to whom does the "our" refer? All we Americans? All we white people? It must, refer to all the human race, who believe in God. Then if we have a common Father, we must be brothers, all of us, white and black and brown and yellow.

What about racial consciousness, and white superiority? Who says we are superior? Did anybody say that, except we white folks? I know this goes terribly against the grain. But that is because we do not take our religion into the world of life in a sincere and whole hearted way. O, don't be alarmed. I am not arguing for intermarriage between the races. I am just talking about treating other people as if we believed that Christ was not joking when he said, "All ye are brethren." Otherwise we had better stop using the Lord's Prayer. Sincere religion goes deep, and it blows up our dearest prejudices.

Other people have brains. We white folk are not the only ones who have. One of the most popular American poets of the day is Countee Cullen, a colored boy. I wish we had space to quote him. A man who has interests in a large timber tract was telling me about a Chinaman. At their saw mill they have a scaler who stands where the logs are drawn up out of the water, and placed on the car where they are sawed up. The scaler they had was a good one, and seldom made a mistake, in estimating the number of board feet in a log. He quit, and the company employed a Chinaman. He did not use a scale, but did all the figuring in his head, and, my friend states that, as far as he knows, the Chinaman never made a mistake. Sincere worship, sincere religion. Let us try it. It will save a world of tears and trouble.

SUNDAY SCHOOL LESSON FOR MARCH 24, 1928

SUBJECT:—Jesus Denounces Formalism. Mark 7:1 to 23. GOLDEN TEXT:—Prov. 4:23.



GROW ALFALFA or Sweet Clover this year

GOOD farm management always includes the growing of some legume crops, particularly alfalfa or sweet clover. The successful production of these crops requires a soil of neutral or alkaline reaction. Lime or limestone makes the condition of the soil favorable for the growth of these crops when it is applied to the land in the proper amounts.

About one-fifth of the crop producing area of the United States is known to have acid or sour soils. Most of this area is in the central and eastern states.

The New York Central Railroad always has advocated the liberal use of liming materials and the growing of legume crops as good farm practice.



Plan now to apply lime to your soil this spring.

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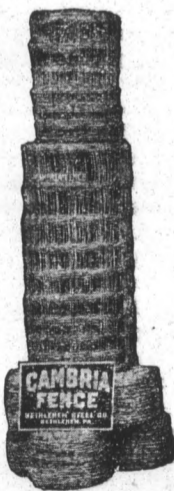
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CAMBRIA FENCE

adds value to value



Two rolls of Cambria Fence displayed with Barbed Wire

CAMBRIA FENCE retains its newness and original snap for years—it adds value to your property.

Cambria Fence is a standard, hinge-joint, cut-stay field fence made of selected steel wire, heavily coated with zinc by our own process.

Cambria Fence protects stock and crops, greatly assisting the owner in keeping his property secure and in order.

Cambria Fence is a good investment—Ask your DEALER about it!

CAMBRIA STEEL FENCE POSTS in Angle and Tee Sections are the strongest fence posts obtainable for erecting farm, poultry yard, orchard and garden fence.

BETHLEHEM STEEL COMPANY, Bethlehem, Pa.

BETHLEHEM



Make Your Own Spring Flowers

Chase Away Winter Dullness by Scattering a Bit of Bright Color About the House

ISN'T it a joy to have flowers in abundance, to add cheer and beauty and comfort at home, in the schoolroom, the church, and in the hospitals!

After the long winter when blossoms are so scarce, every one is hungry for the bright yellow daffodils and jonquils, the dainty narcissus, the fragrant hyacinths and all the other early spring flowers that are always so lovely. That longing can be satisfied now. Not always, perhaps, with the real flowers, but with flowers that are the result of your own handiwork.

Crepe paper is made in all shades and colors, so that at least half of

inch wide strips allowing one and one-half inches in length for each blossom. A strip seventy-two inches long will make forty-eight blossoms. Fold the strip in the center three times to eight thicknesses. With the strip folded in this way cut down from the edge one-half inch, every quarter inch, all along the edge through the eight thicknesses. Before unfolding the strip cut the petals into points (eight at a time) and then cut into strips of six pointed petals each. Lay a six-pointed-petal strip on a flat surface, brush the lower edge and side edge with paste. Place a two-inch strip of spool wire at the center of the lower pasted edge, three-eighths inch in. Press pasted side edge on top of the opposite edge overlapping only enough to hold securely, gather the petal one inch down from the top and press firmly around the bottom edge so the stem will be securely held in. Curl each pointed petal outward over a blade.

To assemble the buds and blossoms, first wrap two No. 9 wires ten inches long, with a one-half inch wide strip of moss green crepe paper, cut across the grain, fastening at the end with paste. Place one of the buds at the extreme top of the wire and with the one-half inch strip of moss green crepe paper wrap in the short wire stem. Add three more buds near the top on opposite sides, wrapping them in with the green strip, and in the same manner, place the blossoms around the stem, wrapping their stems close to the main stem. The blossoms should be placed so close to each other that little, if any, of the main stem shows between. The buds and blossoms

should cover about seven inches of the stem. Continue to wrap the stem and two inches below the last blossom insert two leaves on opposite sides of the stem. The leaves are cut from the moss green crepe paper, from base to tip running with the grain of the paper. They should be eight and one-half inches long and one and one-quarter inches wide in the center, which is the widest point. Taper the top into a point and the base to a width of one inch. Complete the stem wrapping and fasten with paste.

The jonquil and the narcissus are equally as easy and fascinating. The jonquil is usually made in two shades of yellow, and the narcissus in pure white with a single yellow stamen in the center.

Directions for making the jonquil and narcissus as well as twenty other kinds of artificial flowers are contained in the bulletin, "How to Make Crepe Paper Flowers." For a copy send ten cents in stamps or coin to Desk L, Michigan Farmer, Detroit.

GETTING YOUR APPLE A DAY

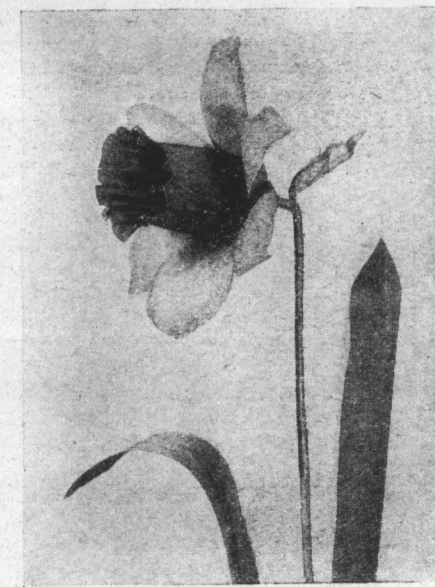
RAW apples are more useful in salads than almost any other fruit for they add crispness and combine well with other ingredients. Salads, made with diced apples and cold cooked veal or pork and celery cut in small pieces are delicious when mixed with mayonnaise or boiled dressing.

Apples, oranges, and onions make a salad combination worth trying, and the addition of chopped peanuts makes it even better. Diced apples, grated raw carrots, and raisins make another good salad. Apple, celery, and nut

salad is well known as Waldorf salad. Pineapple, celery, and apples go well together. Sliced apples and dates; diced apples, oranges, and marshmallows; apples, bananas, and figs or dates, are combinations which are favorites also. Any of these salads may be served with mayonnaise or boiled dressing on lettuce, watercress, or shredded cabbage leaves.

WOULD PLAY MORE

I AM nearly forty years old and have been a housekeeper for several years. Have a family of three



The Smiling Face of the Jonquil Radiates Cheer on Dull Days

growing girls and a mighty good husband. We are renters and like other humans have our ups and downs.

As to mistakes, I have made many. First of all, if I had my life to live over again I would play more, especially with my family. There would be more excursions to the woods or maybe to just a shady spot in the back pasture, with a basket filled mostly with sandwiches and plenty of cookies.

In my early housekeeping days it would have been scandalous to leave for a day right in the midst of a program of cleaning. I used to feel quite guilty when making sandwiches to take on these sprees. Sometimes I wouldn't go, and the children would be so disappointed.

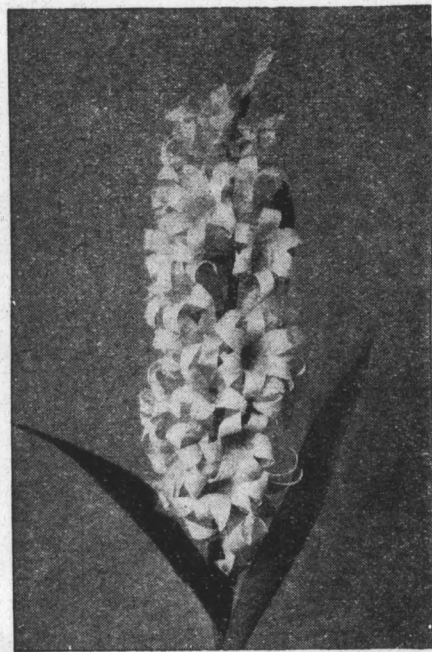
Does it pay? Yes, for my husband says it is one hundred per cent for making even tempers and my little girls talk and talk about the trips we have taken. They wash up a big pan of dishes so quickly while I go about the other work. They are growing up to know real fun and will look back upon a happy childhood.—Mrs. C. P.

HELPFUL HINTS

Brown sugar is preferred by most cooks for fruit cake or any dark cake.

To keep your electric waffle iron bright and clean, use ordinary baking soda and apply it dry.

Cut marshmallows in fourths with sharp scissors and use as a garnish in bowls of cream soup. Allow one marshmallow to every bowl.



Hyacinths Are Particularly Pleasing Arranged in Window Boxes

the problem of natural effects in artificial flowers is solved at the very start. One of the greatest delights to be experienced in crepe paper flower making is the simplicity and ease with which, seemingly complicated parts are overcome. There are so many short ways of accomplishing results that no matter how large the quantity of flowers made, the fascination of the work is not lessened.

The hyacinth is usually displayed as a growing plant in a window box or a flower pot. About thirty-five or forty of the small blossoms are arranged around the main stem with three or four buds at the top.

The little buds are made by first cutting a piece of pink (or other desired color) crepe paper, across the grain, three-quarters inch wide and five inches long. Stretch the strip and cut into three inch lengths. Double the strip lengthwise making the double strip three-eighths inch wide. Now bring the two ends together by making a semi-circle of the strip with the folded edge to the outside. Pinch the strip together and roll between the fingers. Cut off one inch down from the top, open a little at the base and with a bit of paste fasten the end of a two-inch strip of spool wire on the inside. Then press it tightly with the fingers. About four buds are enough for each stalk.

The blossoms are made of the same color as the buds, and are cut across the grain in one and three-quarters

Plan a St. Patrick's Day Party

COMIC ingenuity may well take the place of expensive elaboration for the St. Patrick's Day party. The hostess who entertains on March 17, may easily carry out the old tradition by decorating her table in green and white and giving her guests souvenirs in the form of silk shamrocks, chocolate harps, or long clay pipes.

A clever centerpiece for the table can be made by dyeing four-inch split pine sticks with green vegetable dye and arranging them in rail fence fashion around the space reserved for the centerpiece. A few green pigs should be wandering in this pasture lot, nibbling at sprigs of shamrock.

A dish of colorful fruit also makes an unusual centerpiece especially if topped with an Irish potato whose eyes are cinnamon candies, whose nose is an extended row of cloves and whose mouth is a bit of curved cinnamon bark from which protrudes the inevitable white clay pipe.

St. Patrick's Day can easily be made a feast of fun at little expense.

In this connection, the following suggestions are timely:

St. Patrick's Day Luncheon
Cream of Pea Soup, Garnished with Parsley
CROUTONS
Shamrock Salad Rolled Sandwiches
Tea
Irish Syllabub and White Cake
Mince

Shamrock Salad

2 green peppers 2 tbsp. chopped nuts
1 cup cottage cheese Dash of paprika.
3 tbsp. cream

Cut off stem end of peppers, remove seeds, and soak in cold water for ten minutes. Combine the remaining ingredients and pack tightly into the peppers. Chill and when ready to serve, slice thinly. Serve three or four slices on a bed of watercress in such a fashion as to resemble a shamrock. Dot with mayonnaise.

Rolled Sandwiches

Remove crust from loaf and cut in thin slices the length of the loaf with a very sharp knife. Spread each slice evenly with creamed butter to which finely chopped parsley has been added. For one loaf of bread, use one and one-half cups butter and three-quarters cup chopped parsley. Roll the slices and wrap them firmly in a clean towel. Chill and when ready to serve, slice each roll thinly.

Irish Syllabub

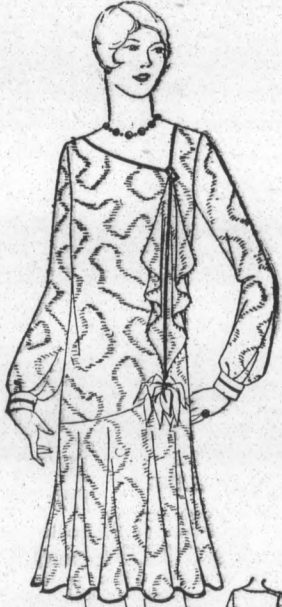
1 cup heavy cream, 2 cups peach pulp
whipped 1 tbsp. lemon juice
¾ cup confectioner's ½ cup chopped nuts
sugar

Combine the last four ingredients and blend with the whipped cream. Fill dessert glasses with this mixture and garnish with cubes of plain mint gelatin.

When oranges are expensive or difficult to obtain, canned tomato juice may be substituted for baby's orange juice.

WHAT WE'LL WEAR ON SPRING AFTERNOONS

DIAGONAL treatment of neckline and waistline, with circular skirt fulness at front, is the latest and most important movement of fashion. Pattern for this charming dress comes



3134



in sizes 16, 18 years, 36, 38, 40, and 42 inches bust measure. For it, send 13 cents to our Pattern Department.

Shop Wisely to be Well-Dressed

FOR most women, buying is a fascinating game; but the acid test in playing the game well is not in spending money but in getting real value in one's purchases. The difficulty with most women who just miss the satisfying, well-groomed appearance, is not that they do not spend enough money—or enough time even—but that they have not the right kind of philosophy about the principles of dress. The woman who dresses in good taste often spends far less money than the one who has not a definite understanding of what she needs and wants.

To understand values and to determine between needs and desires, requires definite planning and displaces hit or miss buying which is never economic. If a girl or woman wishes to appear well dressed, she will study her individual style, the lines of her figure and coloring and in a sense set her own fashion but on which will reflect the tendencies of the prevailing mode and at the same time express the individual.

One of the principles of correct dress is that all the garments worn at one time should appear to belong together. This is to be more important this season than ever, and it is one of the commonest mistakes made by women in the selection of garments. Frequently, in an impulsive moment, a woman buys a becoming hat, for the hat's sake—it's such a pretty brown—but she fails to remember that it will not look well with her new green dress—her gray shoes which she bought because she loved gray shoes, and her black coat which she hoped to wear another season.

Consequently she feels quite uncomfortable in her clothes because things do not belong together. To make out of such a collection a suitable and attractive wardrobe, one must spend more money than the woman who is wise enough to build her wardrobe about one color. The ensemble in dress is especially emphasized for the spring of 1928 and not only colors but

fabrics and accessories must harmonize.

The ideal way to plan a wardrobe is to realize that fewer and better clothes is the way to appear smart and well dressed at all times—if these have been bought with the above principles in mind.—M. Atwood, Michigan State College.

SAVE THE SOUR MILK

THAT half a cup of sour milk or cream too often goes down the sink-drain instead of being used in a delicious cake or a loaf of brown bread for supper. In many kitchens, sour milk is allowed to stand about while the cook hopes for an inspiration as to how to use it. Finally it becomes too old and is thrown out.

But sour, like sweet milk, adds materially to the nutritive value of any food of which it forms a part. Moreover, sour milk and cream are necessary ingredients in a large variety of delicious recipes for breads, cakes, cookies, doughnuts, salad dressing, sauces, and waffles. The thrifty housewife uses every drop of sour milk and keeps on file a little collection of sour-milk recipes which she has tried.

If you would like a group of recipes that require sour milk or cream, send

a stamped addressed envelope to Desk A, of this department.—Martha.

FINDS CHICKEN PROFIT IN SOUP AND SANDWICHES

FATHER was not pleased when he learned that the city wanted a part of our timber pasture for a tourist camp. I said, "Rent it to them or sell it—any way to bring the tourists near enough to sell food to them." Reluctantly he sold the desired acres. Now we have tourists with us in droves during the whole season.

After giving the subject much thought, I decided to specialize in hot noodle soup and chicken sandwiches. I chose noodles and chicken because I wanted to give them something that they could not get in town. Also, I raise hundreds of chickens every year. By the time the tourist season opens, my hens have laid their eggs, raised their brood and are ready to be sold. These and the young culls, I sell at a good profit in soup and sandwiches.—Miss H. A. S.

A RELIEF

Doctor: "As I said, you've just regained consciousness after an automobile wreck. I'm Dr. Peter and—"

Victim: "Oh! Are you quite sure? I thought you might be St. Peter."



tolerate an out-of-date range?

THERE ARE, in so many farm homes, ancient kitchen stoves that have served for twenty years or more—housewives are still "getting along" with them.

These stoves were perfectly satisfactory before kitchen comfort and convenience were thought of. They gave fine service when wood lots were bigger than the cornfields.

But now! Economy must be considered because fuel today costs money. Comfort and convenience are vital, because women are finding that the kitchen, the most used room in the house, can be made a pleasant, cheery place in which to work. How? By getting the best and most up-to-date range, because a range, you know, is used more than any other item of home equipment.

This very modern range, the GLOBE, combines old-time principles of perfect cooking (possible only on a coal and wood-burning range) with its many modern and exclusive features. Its new ideas in economy, and convenience and comfort are unequalled today. The GLOBE Cast Iron Range is beautiful, too. You'll be proud of its good looks, and proud of its uniform excellent cooking.

The GLOBE STOVE & RANGE CO., Kokomo, Indiana



THE GLOBE STOVE AND RANGE CO. 405 Broadway, Kokomo, Indiana.

Gentlemen: I am interested in hearing more about this modern range that is reviving the old-fashioned art of good cookery.

Name.....

R. F. D. or Street No.....

City or Town..... State.....

LET YOUR DEALER SHOW YOU HOW TO OWN A GLOBE

You Are Invited to

Come to EASTERN OKLAHOMA

The Inland Empire of Undeveloped Resources

Altho less than 21 years old since admitted to statehood, Oklahoma stands well to the front in agricultural production.

The Western half of the state was opened to settlement first, the Eastern portion being reserved for occupancy by the Five Civilized Tribes of American Indians.

Later, as the Indian has adopted the manners and customs of his white brothers, the surplus lands have been sold and are being brought into cultivation.

The Eastern half of Oklahoma probably has greater resources of agriculture, oil, gas, zinc, lead, coal and lumber than any other equal area in the United States.

Almost in the geographical center of the nation, with easy and quick access by rail or hard-surfaced road to such market centers as Kansas City, St. Louis and Chicago; only a few hours run by rail or motor car to gulf export harbors; with the teeming urban population of Tulsa, Muskogee, and other fast growing cities, we have an unsurpassed market for all the products of field, garden, orchard and dairy.

Alluvial valleys of unfathomed fertility—undulating prairies of black limestone soil—wooded hills and ridges specially adapted for growing peaches, grapes, and other fruits—limpid streams stocked with many kinds of fish—the home of the quail, the winter feeding ground of countless wild fowl—this is a panoramic view of Eastern Oklahoma.

Based on production values official records show that farm lands can be purchased here, now, at a lower price than in any of the surrounding states. Located far enough south to escape the long, dreary winters of the north central states, not so far south as to encounter the dampness of the lower Mississippi valley, we have here an all year climate that makes life worth living.

We have room for many more thrifty, energetic, intelligent farm families, and we therefore earnestly and cordially invite you to

COME TO EASTERN OKLAHOMA

National Colonization Company

Reference: Chamber of Commerce of State of Oklahoma, Petroleum Bldg., Oklahoma City—Tulsa Bldg., Tulsa, Oklahoma

COUPON NATIONAL COLONIZATION CO., Room 123, No. 14 E. 3rd St., Tulsa, Okla. Gentlemen: Please send me at once, free literature and price list of your Eastern Oklahoma farm bargains.



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BAYER
ASPIRIN

The whole world knows Aspirin as an effective antidote for pain. *But it's just as important to know that there is only one genuine Bayer Aspirin.* The name Bayer is on every tablet, and on the box. If it says Bayer, it's genuine; and if it doesn't, it is not! Headaches are dispelled by Bayer Aspirin. So are colds, and the pain that goes with them; even neuralgia, neuritis, and rheumatism promptly relieved. Get Bayer—with proven directions.

Physicians prescribe Bayer Aspirin; it does NOT effect the heart

Aspirin is the trade mark of Bayer Manufacture of Monosaceticacidester of Salicylicacid

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STRAWBERRIES \$2.95 per 1000 and up. Full line of Berry Plants, Grape Vines, Fruit Trees, Ornamental Shrubs, and Bulbs. Large stocks; low prices. 38 Years experience. Write at once for free illustrated catalog giving big discounts for early orders.
J. N. ROKELY & SON, Box 6, Bridgman, Michigan.

Loosen Up Chest Colds

Just Rub Away Danger

When your lungs are congested and you have a hacking cough watch out! Rub Musterole on the sore spot. There's nothing better for quick, safe relief. Musterole penetrates the skin bringing a soothing, cooling sensation and welcome relief.



Recommended by doctors and nurses, Musterole relieves cold in chest, sore throat, bronchitis, aches and pains in the back and joints. Keep Musterole handy. To Mothers: Musterole is also made in milder form for babies and small children. Ask for Children's Musterole.



BETTER THAN A MUSTARD PLASTER



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

JOHNNY CAKE LIKE MOTHER USED TO MAKE

I would like a recipe for the good old-fashioned Johnny cake. I have tried several recipes but they do not taste like mother used to make.—Mrs. H. B.

There is a number of ways of making this kind of cake. This one was contributed by one of our readers who signed herself "Seventy Years Young."

Cornbread

- 2 cups corn meal
- 2 tbs. sugar
- 1 1/2 tsp. salt
- 2 cups sour milk
- 2 tbs. shortening
- 2 eggs, beaten
- 1 tsp. soda
- 1 tb. cold water

Mix the first 5 ingredients in the top of a double boiler and cook for five minutes. Let cool, add well beaten eggs, and soda dissolved in the cold water. Bake in a shallow tin in a moderate oven for twenty-five minutes.

MEALY BUG ON OLEANDER

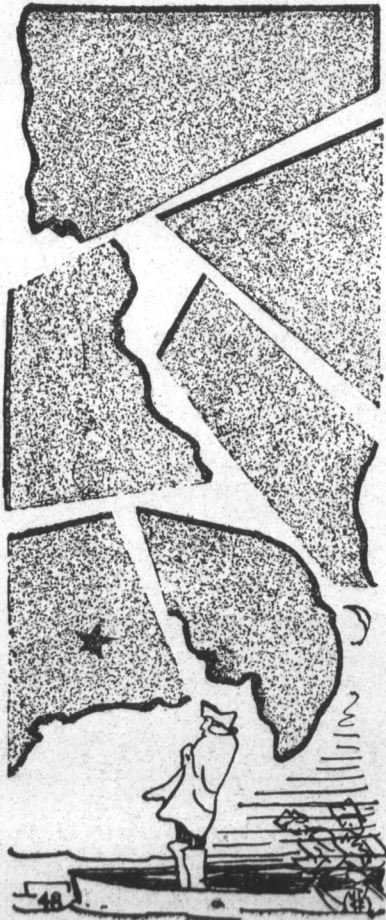
I have had an Oleander house plant for eight years which always bloomed but this year it looks sickly. Something is forming on the stems which looks like cotton batten and is sticky. I tried to wash it off with unfavorable results. I also have a smaller plant which is the same way so I don't think the trouble lies in the soil. What kind of manure would be the best to use for plants to make them grow better?—F. L.

The cottony substance that is forming on your Oleander is the mealy bug. It may be eradicated by spraying with a preparation known as



STATE SECRETS

There is an old fashioned conundrum, You may have heard somewhere, "If Miss Ouri wears Mis'Sippi's New Jersey, Now what can —?"



Volck, which can be secured from any seed house. I would not advise the use of household ammonia for plants. It is true that plants require nitrogen, but not in the form supplied by the ammonia. I would suggest that you get either a preparation known as Plant Marvel or Plant Tabs. Either may be secured from your local florist. The directions come with the material. It is easy to apply and safe if used in the doses recommended.—Alex

GERANIUM DOESN'T BLOSSOM

A year ago we bought a Martha Washington geranium that blossomed so much I finally picked the buds off as the flowers were getting to be very tiny and I was afraid the plant would die. The plant has grown quite large. Can I do anything to make it blossom again this spring?—J. S. P.

Your Martha Washington will blossom again this spring if you apply some complete fertilizer to it regularly. I would suggest the use of Plant Marvel for the purpose. It may be bought from your florist. There are other preparations of similar nature. It would be desirable to set this plant out-of-doors during the summer and make cuttings from it late in the season. They root readily in sand and will give you fine plants for next year.—Alex Laurie.

LICENSE TO SELL

If I sell home baked goods in my own home, would I have to obtain a license?—H. I. B.

We are not aware of any regulation outside of local ordinances requiring any license.—Rood.

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 California and its capitol is Sacramento.

WHO AM I?

I AM a cheery little bird just five inches long and I wear a jet black cap. My throat is black, also, but my wings and back are ashy gray. On cold winter mornings I fly to your window sill and beg for food.

It makes little difference to me whether I am right side up or not. One of my favorite stunts is to hang with my head downward from the tip of a branch while I am busy picking out seed or searching for insects' eggs. I am the farmers' best friend for best of all I like canker worms for my dinner.

I build my nest in knot holes and line it with moss and soft feathers. Sometimes I appropriate the woodpecker's last year's nest. What am I?

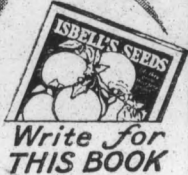
(The answer to last week's bird guessing contest was the white breasted nut hatch. Did you guess rightly? Write a letter and tell some of the things you know about our feathered friends.—Aunt Martha).

Forty-two states have enactments requiring school medical inspection, but only sixteen make it compulsory for all school districts.

RADISHES ISBELL'S EARLY BIRD



ONE OF THE MANY ISBELL SPECIALTIES



Write for THIS BOOK

This is only one of many famous Isbell specialties described in Isbell's 1928 Seed Annual—contains over 400 illustrations from our own photographs—28 pages in true-to-nature colors and accurate descriptions of best varieties of Northern Grown field, garden and flower seeds. Tells how and when to plant for best returns. Quotes direct from grower prices on Bell Brand Quality Seeds. Write today. It's FREE.

S. M. ISBELL & CO., Seed Growers
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Edwards Metal roofing, shingles, Spanish tile, sidings, ready-made garages and farm buildings, are rust-proof, fire-proof, lightning-proof. Last three times as long as ordinary kind. Quality in every detail. Styles and types for every purpose. Easy and economical to apply. Lifetime satisfaction. We are the world's largest manufacturers of sheet metal building materials. We control every operation from the raw metal to the finished product. You can buy from us at manufacturer's prices and save all intermediate profits.

FREE SAMPLES. Write today for our Free Samples and prices. Ask for Roofing Book No. 167 or for Garage Book. **The EDWARDS MFG. CO.** Estimates 517-567 Butler St., Cincinnati, O.

White Diarrhea

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

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

"Dear Sir: I see reports of so many losing their little chicks with White Diarrhea, so thought I would tell my experience. I used to lose a great many from this cause, tried many remedies and was about discouraged. As a last resort I sent to the Walker Remedy Co., Dept. 510 Waterloo, Iowa, for their Walko White Diarrhea Remedy. I used two 50c packages, raised 300 White Wyandottes and never lost one or had one sick after giving the medicine and my chickens are larger and healthier than ever before. I have found this company thoroughly reliable and always get the remedy by return mail.—Mrs. C. M. Bradshaw, Beaconsfield, Iowa."

Cause of White Diarrhea

White Diarrhea is caused by microscopic organisms which multiply with great rapidity in the intestines of diseased birds and enormous numbers are discharged with the droppings. Readers are warned to beware of White Diarrhea. Don't wait until it kills half your chicks. Take the "stitch in time that saves nine." Remember, there is scarcely a hatch without some infected chicks. Don't let these few infect your entire flock. Prevent it. Give Walko in all drinking water for the first two weeks and you won't lose one chick where you lost hundreds before. These letters prove it:

Never Lost a Single Chick

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

Never Lost One After First Dose

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

You Run No Risk

We will send Walko White Diarrhea Remedy entirely at our risk—postage prepaid—so you can see for yourself what a wonder-working remedy it is for White Diarrhea in baby chicks. So you can prove—as thousands have proven—that it will stop your losses and double, treble, even quadruple your profits. Send 50c for package of Walko (or \$1.00 for extra large box)—give it in all drinking water and watch results. You'll find you won't lose one chick where you lost dozens before. It's a positive fact. You run no risk. We guarantee to refund your money promptly if you don't find it the greatest little chick saver you ever used. The Pioneer National Bank, the oldest and strongest bank in Waterloo, Iowa, stands back of our guarantee. Walker Remedy Co., Dept. 510 Waterloo, Iowa

Just Try a Michigan Farmer
Liner for Quick Results.

Eureka Potato Planter

Increases Yield—Lowers Labor Cost
Plays for itself many times over. One man and team opens furrow, drops seed any distance or depth, drops fertilizer (if desired), covers up, marks next row. Automatic. More accurate, dependable and quicker than hand planting. Furrow opens and seed drops in plain sight. Does not injure seed. Has long life, needs few repairs. Sizes for 1 or 2 rows. Protects you against uncertain labor and season. Investigate Now.

In Stock Near You
Eureka Mower Co.
Box 832
Utica, N.Y.



Poultry Department

FLOCK SNEEZING

The pullets in one of our laying houses have been sneezing for a week. We keep permanganate of potash in the drinking water but they are not improving. We removed one that had such difficulty in breathing and killed her. I examined her, found nothing wrong with heart, lungs, liver, etc., but where wind pipe enters lung there seemed to be an obstruction on closer examination. I found the air tube had collapsed and for one-half inch was hardened like bone.—Mrs. C. S.

When most of the hens in the flock begin to sneeze and appear to be catching cold, it is probably due to general conditions such as a draughty house, lack of ventilation, overcrowding or damp litter. The first step should be to correct such conditions if they exist.

Individual treatment for the colds is the next step. Examine each bird and press the mucous from the nostrils with wads of tissue paper if such material is accumulating and preventing natural breathing. Then inject commercial disinfectant, roup cure, or strong potassium permanganate solution with a medicine dropper or one of the small syringes commonly furnished with commercial roup cures. Several treatments may be necessary to dry up the colds.

The use of potassium permanganate solution in the drinking water furnishes a mild disinfectant which may help prevent colds from spreading through the medium of the drinking water. But when the nostrils are clogged, individual treatment is usually necessary to cure the cold quickly.

The obstruction in the wind pipe may have been a hard accumulation of canker which was gradually shutting off the breath and strangling the bird and causing an inflammation in the wind pipe. By examining the wind pipe of a bird that is breathing hard it is sometimes possible to pick out the obstruction and save the bird.

SALT POISONING

Would like to know if there is anything that can be done for chickens and turkeys that have eaten salt. When feeding the cows grain, I sprinkled salt on them and the chickens and turkeys ate some of it and soon had fits and died. I gave oil but it did no good. I lost 9 chickens and one turkey in three or four hours time.—Mrs. J. W. M.

Scientists have determined that twenty-five grains of salt per pound of live weight will kill a hen. When poultry have eaten a large quantity of salt there is little that can be done to help them. The condition is not usually discovered until the birds are quite thoroughly poisoned and nearly dead. A large dose of castor oil might be helpful in some cases. Unlike the dog, the hen has no way of throwing up poisonous materials which cause sickness and for that reason the system is soon filled with any poisonous substance that is eaten. When live stock must be salted on a range or around buildings frequented by poultry, I think it often pays to use the hard salt blocks. The cows lick the blocks for their salt supply but the blocks are very hard and loose salt is not readily broken off and eaten by poultry.

DROPPING BOARD HOE

(Continued from page 368)

ends are about seventeen and one-half inches apart. Bolt the center to a handle and run light straps from each end to a point on the handle about twelve inches from the socket end.

This curved hoe covers more space than an ordinary hoe and has the advantage that it pulls the droppings into the container without spilling them off the edge.—Henry R. Zelley.

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March Poultry Notes

By R. G. Kirby



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SOME poultrymen seem to have success in preventing toe-picking by suspending colored buttons from the ceiling of the colony house so they will dangle near the edge of the brooder canopy. The chicks pick at the buttons and it has a tendency to take their attention from each other's feet. When a chick becomes bloody on the toes or around the tail it often helps to paint a little engine oil over the wound. The chicks do not like the taste of the oil and stop picking at the wound.

Irregular feeding and hunger sometimes start toe-picking. If the chicks are used to receiving scratch grain at a certain hour they learn to expect it. If they are hungry and the feed does not arrive they turn their attention to other things and if one chick has its feet picked until blood shows, other members of the flock may drag it around the brooder house while ravenously fighting for the blood.

Keeping mash before the chicks at all times seems to help in preventing the toe-picking habit. Plenty of water or milk to drink at all times is another help. The problem is to keep the chick's appetite satisfied and keep it interested in the right kind of feed. Then there will be few chicks with bloody feet. If any chicks are badly injured it pays to isolate them from the flock as their removal will aid in stopping the habit.

Coal Burning Brooder Stoves

We have the best success with coal burning brooder stoves by purchasing the large sized stoves often listed as the 1,000-chick size. Then place about 300 chicks around the canopy of such a stove and you have a good combination. The 1,000-chick size brooder will furnish enough heat for 1,000 chicks or more but that is too large a flock for most poultrymen to handle in one lot and often results in a high mortality rate and a lot of chicks stunted and weakened by crowding.

We find that in cold weather it pays to empty the ashes twice each day. This helps to prevent clogging of the grates and the poultryman can always be sure that the stove contains plenty of live coals and fresh fuel. Too often a beginner finds that the stove burns very nicely the first week. Then the ashes are not thoroughly shaken down and gradually they bank up around the edges of the stove and reduce the heat as well as the surface of live coals. Some night the fire dies down and it results in a lot of chilled chicks.

If small sized coal burning brooder stoves are used they must be given very careful attention as they clog more rapidly with ashes and burn out more quickly than the stove with ample fuel capacity.

Care of Stoves

It is safest to shake down the ashes and then leave them in the pan until the next time the stove is given attention. By that time the ashes have cooled and no small red coals

will be apt to drop out of the grates and roll into the brooder house litter. Then the ashes can be emptied without the danger of spilling hot ashes and the pan can be returned and the stove given another careful shaking.

After a stove has been operated a few days the ashes will gather in back of the pan and around the edges. It pays to keep a small shovel handy to gather up these ashes or the pan is gradually shoved forward until it prevents the secure closing of the ash pan door.

The most danger from overheating a coal burning brooder stove occurs when the fire is first built with wood and papers. Then the pipe may become very hot for a few minutes. After the coal is added to the fire the pipe will become barely warm and the coal fire will only heat the area near the floor around the brooder canopy. Be sure to watch the fires carefully when they are first started as the wood kindling seems to make a much hotter and more dangerous fire than the coal.

Hoppers for Chicks

Feed hoppers five feet long and open on both sides will give ten feet of feeding space and that is about right for a brood of 200 chicks. A foot of space to each 20 chicks seems to give plenty of space to prevent overcrowding. The strong chicks do not waste their energy in walking all over each other and the weaker chicks are not crowded and underfed or forced to fill up on sand and litter in an attempt to satisfy their appetites.

According to our experience the commercial metal hoppers which prevent the chicks from walking in the mash will give the best results. We have tried open hoppers with a piece of hardware cloth or one-half inch mesh gravel screen laid over the mash to keep the chicks from scratching out the feed. They do not scratch out the feed and they can see it readily but the wire screen soon becomes caked with droppings and forms a rather unsanitary feed hopper.

Home-Made Hoppers

If home-made chick feeders are used, I think they should be constructed along the lines of the galvanized iron commercial hoppers. The chicks can take the feed from between upright slats but no droppings will then fall in the mash and possibly spread disease. If the chicks do not readily eat from such hoppers for the first few days, the mash can be scattered on newspapers or magazines and a clean sheet used for each feeding.

At the Ohio Experiment Station legume hay chopped or recut to 1/4 or 1/2 inch lengths seemed to produce the best results. Such hay prepared in this way could be fed in the mash ration or could be offered to hens in wire netting feeders.

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Michigan Farmer Chick Bulletin

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For Your Copy

Common Poultry Diseases

III—Chicken Pox

THERE has been considerable confusion concerning the symptoms of some chicken diseases. Formerly, colds were thought different from roup, and diphtheria was classed as roup. Certain other symptoms given as of roup are now called indications of chicken pox. Now roup includes colds, and chicken pox includes diphtheria, the latter being classed as a form of the chicken pox disease.

Chicken pox is an infectious disease often resulting in serious losses. Filth or improper feeding are not factors in its cause. It is found in many kinds of fowl including turkeys, pigeons, geese, ducks, guinea fowls, wild pheasants and quail. It may be spread by direct contact with diseased birds or by discharges from affected individuals into feeds, water, etc. Exhibition birds often bring the disease into the flocks, or people may carry it from one flock to another. Even animals such as cats, dogs, and wild birds are means of dissemination.

Symptoms—The disease may appear in three forms: (1) A skin trouble with wart-like tumors or scabs appearing on combs, wattles, ears or skin of the head, and sometimes on other parts of the body. These scabs first appear as whitish spots or elevations which gradually grow larger, get yellow and finally nearly turn black. It often takes three weeks for the scabs to develop.

(2) It may be a pure mucous membrane development in which grayish or yellowish-white cheesy masses develop in the mouth and throat as well as the eyes. In some cases, the eye infection is only present and in others only the throat is troubled. The mouth and throat patches vary from the size of a pin head to covering almost the entire oral cavity and are symptoms of what is often called diphtheria. The eye infection starts with a thin discharge which thickens and accumulates under the eye lids, gluing them shut and producing a bulging of the eye.

(3) This is a combination of both the skin and oral cavity forms. The skin trouble alone often causes the birds little discomfort, but with the oral cavity affections, distress is more evident. When the mucous, or inner membranes, become troubled, there is often a clear mucous discharge from the mouth or one or both eyes. This is accompanied by difficulty in breathing which grows worse as the patches in the mouth and throat increase in size. There is often a rattling sound in the throats of the affected birds. Some sneezing and so-called bird cough may be present. Dullness, emaciation, cessation of egg production and diarrhea are often accompanying symptoms.

The disease may be acute or chronic. The acute cases die quickly, almost without warning, due to the throat patches cutting off the breath. Chronic cases may run for weeks. In some cases, eighty per cent of the birds in a flock may get the disease while in others, ten per cent is about the limit of infection. The death rate may run as high as fifty per cent.

Diagnosis—It is important to make correct diagnosis. Scabs in combs, wattles, and skin may be due to mechanical injury. Canker in the eye and cheesy masses in the mouth may be due to foreign material. The swelling of the eyes in roup may be taken as a symptom of chicken pox. However, in roup, on opening the eyes, one will find that the eye is without accumulations of matter, the swelling coming from the nasal cavities.

Treatment—Isolation of affected fowls some distance from the healthy ones is the first step. Care must be taken not to carry infection from the diseased birds. A pair of rubbers and overalls should be kept handy for work among the diseased fowls and should be taken off when through. The hands should be thoroughly washed, also, after working in the sick pen.

Birds too sick to justify treatment should be killed and burned, or buried very deeply. Enough potassium permanganate should be added to the drinking water to color it a purple or wine color. Cleaning of the coop, burning of the litter, and a spraying of the walls and floors with a three per cent creosol solution, is advisable. Reduce the use of meat scraps to a minimum, but use buttermilk freely. The birds should be encouraged to eat by giving a wet mash at noon, plenty of green feed, and all the grain they want. Good appetites give birds a greater resistance to the disease. Some advise the giving of epsom salts at the rate of one pound to a hundred birds. For this, the drinking fountains should be emptied at night and no water furnished until ten-thirty A. M. Then they should be given the epsom salts dissolved at the rate of one pound to twelve quarts of water. After an hour or hour and a half, the water should be removed and fresh, clean water given.

Individual Treatment—When symptoms appear, dip the heads of affected individuals in a two per cent solution of potassium permanganate, or a three per cent solution of boric acid, once or twice daily for thirty seconds. In dipping the head, the mouth should be opened and the beak elevated so the air therein will escape and be replaced by the solution. It is not necessary to remove the scabs on the head as that lowers the vitality of the individual. The cheesy matter in the eyes should be carefully removed and the eyes washed with a three per cent boric acid solution, after which two drops of a twenty per cent argyrol solution should be dropped into the eye. The cheesy membranes in the throat and mouth should be carefully removed and if raw places are left, they should be touched by a mixture of equal parts of tincture of iodine and glycerine.

Tuberculosis will be discussed next week.

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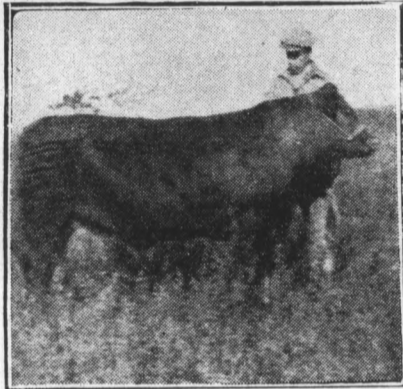
OUR PAGE

The Modern Youth

Some Thoughts Prompted by Mrs. A. B. C's Criticism

BELIEVING you were inviting comment, when you published the almost unbelievable letter of Mrs. A. B. C., I have taken into consideration many families I know personally, three of which I am to speak. It seems to me Mrs. A. B. C. needs awakening.

My first observation is a family whose parents were of foreign birth.



Jim Milligan's Steer Won \$197 and Grand Championship at the Fair

There were eight children. The father was boss. Everybody worked. When employed away from home, he either took their money or they paid board. Generally speaking, lights were out at 9:30 P. M. Young company was not encouraged. Today they are all away, self-reliant, sober, and industrious citizens. This is one extreme perhaps.

The second family was a Christian home, so to speak, parents and two dear good daughters. Fear of the modern ways of young folks was constantly in this mother's heart. So she and her husband both worked very hard to furnish a nice home, buy a large car and give these girls every opportunity possible. Many a midnight after a hard day's work found Dad patiently bringing these girls home from some social gathering, mostly the society of their church. These girls are fine specimens of American womanhood but father has passed on to the other land, and they will never recover from their remorse.

The third example is that of a friend who never had time for pleasure in youth. She was married young, and brought seven children into the world through illness and poverty. She seems to live only for them and their happiness. All the old traditions of home seem to have been placed in the background, and her home is a veritable club house for young folks. What of her children—selfish, unreliable, pleasure-seekers. Were mother to abruptly be taken from them, I doubt if they would pause long to honor her memory. Therefore, Mrs. A. B. C., you can see you are gaining nothing and your children are losing their souls.

A robin pushes her young from the nest after she has done all she can to make them fit to face the world. If your home was founded on a lasting love before their birth, and you have carefully instructed each on their moral duty to mankind, shove out those eighteen and twenty year olds and I'll miss my guess if they don't return even as the prodigal son of old, and you will kill the fatted calf and thank God for his goodness.—Mother of Five.

Perhaps I am wrong but I never can get away from the conviction that if our children are disobedient, saucy,

deceitful, etc., there must have been something amiss in the parental training. "Yes," you will say, "blame it all on the parents," but is it not true to a very great extent?

I am the mother of two girls and two boys ranging in age from six to nineteen years and have had some worries, heartaches, and doubtful moments, and yet, after each particular storm has blown over I can always see how I could have been a little more patient, more tolerant, and more discerning. So many of us are prone to forget our own youth.

I have tried to instill in the minds of my daughters, nineteen and sixteen, what a "good time" really means and that joyous, wholesome fun of all kinds in good company is their due.

They are not told that they must not smoke, drink, keep late hours and I wish them to learn to discriminate between good and evil and that the choice must rest with them, knowing that everything has its price.

We, too, have a good home and our children are encouraged to bring their friend to our home at any time, or to go to the homes of friends, the only requisite being that they must inform their parents of their whereabouts and to try to keep good associates. So

far, they have given us no trouble in that way.

We find, too, that the children of today, due, I believe, to the modern school training, exact the same respect for their wishes that the parents do of their children. For instance, my husband and I enjoy an occasional evening of bridge with our friends, and a few nights ago our sixteen-year-old daughter remarked, "Mother, you went to a bridge party last night without telling me where you were going. You wouldn't like it if I did that."

Our children often criticize our ways, but still we have the very great consolation of seeing how they enjoy getting back to father and mother and the shelter of home after a particularly hard or trying day at school or when oppressed by other woes. Then, indeed, it is sweet to be a mother and hold the confidence and respect of two grown daughters.

The boys are still under the age when "the children know it all and the parents are back numbers." Have often heard that boys are harder to discipline than girls, so can only conjecture what may be our experience later.

The joy and satisfaction of living in a comfortable farm home with a good man and four healthy, happy, "modern day," and, yes—quarrelsome—children is enough recompense for all it may have cost in work, worry, or even tears.—"Birdie."

because she sits inside all the time when the rest of us kids go out to play snowball, tag, or sliding down hill. She's afraid she'd get a cold and is very pale. She has to color her face so it will look like something.

The rest of us kids join together and have a lot of fun. If we don't go skiing we play ball or soccer, and get a lot of exercise which they say is good for growing kids. She's afraid to run for fear of breaking off her high heels. She always says the kids don't care for her. We told her if she'd play with the rest of us, she would have some fun and still she thinks she can't be without her fancy clothes. It takes a sport to have real fun.

Now, Uncle Frank, don't you think we are far better off than those who try to be pretty? It takes health and happiness to have rosy cheeks and be pretty. Ha ha.—Peggy.

That girl does not know what she is missing in life by putting herself in a show case. I feel sorry for her. Fun is what makes life worth living.

MY DAD

A true friend, is my Dad,
To me he is most dear;
And when at night, from work he comes
He fills our hearts with cheer.

He never is inactive,
He always works with zeal;
He'll do the dishes for Mother
Or a pan of potatoes, peel.

He'll do anything to amuse us,
He advises us more play.
He'll help to rig up amusements,
Or cause a swing to sway.

When Mother politely refuses
A game of my boyish desire,
Dad will come to my rescue,
and "helps me through the mire."

Though Dad isn't always perfect,
He means a lot to me;
And that he is about the best of Dads,
You will almost have to agree.
—Lester Hewitt.

THE WORK I LIKE AND WHY

Out in the beautiful summer night,
I gaze at the starlit sky,
Dreaming many hour's away
Of the work I like and why.

I couldn't be a nurse, although,
What a helpful person I'd be;
I couldn't be a dancing actress gay,
I'm too shy, and homely, you see.

Stenography doesn't strike very well,
Or office work of any kind,
Teaching out in a country school
Is a thought left far behind.

I wouldn't think of being a parlor
maid,
Nor dishwasher in a cafe.



Marguerite Foster Has Plenty of Pets

I'd rather stay on the farm and work,
Dig spuds, and help with the hay.

There's just one thing in all the world
That's my only great ambition,
To be a successful artist someday
Is a long ago made decision.

To have a studio of my own

OUR LETTER BOX

Dear Uncle Frank & Cousins:
I thank you very much for my pin and membership card that I received a few days ago. I felt very proud of it and I am sure my friends will think it grand. Anna Gossen said she was

GOLDEN CIRCLE MONTH

LAST year we designated March as the Golden Circle month during which messages from Golden Circlers were outstanding features. This year has been so crowded with interesting Merry Circle happenings that the Golden Circler event has been delayed. Perhaps, if the Golden Circlers will respond quickly, we can make April the Golden Circle month. Please let me have a message of inspiration, good thought, or interesting personal news, from all Golden Circlers, without special invitation. This request is meant for every Golden Circler. I hope that you will help me by responding immediately.—Uncle Frank.

the happiest girl in Michigan when she received her membership. I'm sure I am just as happy as she was.

Say, Uncle Frank, why do they make such funny pictures of you? Do they do it to tease you or to make us cousins laugh?

With best wishes to you and the cousins, I am your niece, Delia Alberta.

I'm glad your pin brought happiness. I guess the funny pictures are to tease and bring fun both. I think "they are good."

Dear Uncle and Cousins:

I have been a silent M. C. and reader of Our Page for several years. You have probably never heard from me before, but I'm going to make up for it this time so you won't want me to write again for some time.

I quite agree with "Michigan Boy" and his views on education. Webster says, "Education is the sum of the qualities acquired through individual instruction and social training." When a person becomes so well trained that he can learn no more, he is, in my opinion at least, a misfit. If a man cannot grow with the many new things which life is unfolding before our as-

tonished gaze, he is not a just companion for us who live in this expanding century. We, while young, do not realize the worth of an education. Later, we often wish we had more true knowledge. An education should make us see new beauties in nature and it should make us better able to appreciate the best things in life.

I am anxious to see what other Merry Circlers think of "Michigan Boy's" views on education.—"Toe."

You give an educated view of education. The one who stands still nowadays is missing much, and there are thousands standing still.

Dear Uncle Frank:

As we all know an election of officers to the Merry Circle Club has always met with a disapproval, but here is something different along that line. I, as a member of this club, think that past and present club members such as Harold Cole, Rex Ellis, and many others of the truly and greatest members have a right of honor far greater than the G. C. That right I feel could be bestowed on them by an election through Our Page.

The names of some of the most or all of the most talked about members should be printed in the Michigan Farmer and voted upon first choice, second, third and to be awarded dandy certificates, the size depending on the position the candidate has won. It could be done through the M. C. fund. I mean the cost.

I disapprove of the letters printed, not bearing the real name and address. It does not show faith in our club. I will now close giving you time on other letters. Clinton Van Duine, Route 1, Dorr, Michigan.

You have a thought for the M. C.'s consideration. Such an election would place one above another in honors and may spoil the democracy of our Circle. What do you think?

Hello Unc:

I suppose when you open this and get through reading it, you'll think you opened a box full of mischief. Well, maybe it won't be as bad as you may think it to be.

There's a girl in our neighborhood that's one of those high-toned flappers. She's afraid to wash dishes for fear of spilling her hands or breaking off her nails. We call her a house plant

By a roaring ocean side,
And beautiful scenery here and there,
To success would help me slide.

The stars have left the azures deep,
Another day is nigh,
To draw and paint is the work I like
It's my dream and ambition that's
why.—Martha E. Kolhmainen.

MORE GOLDEN CIRCLERS

IT has been some time since we awarded the Golden Circler honor, therefore, it is time that we did so. The following have been selected from the issues since October 22 when the last honors were given:

Opal Brauber, Box 194, Sterling, Michigan, for her comments on "White Amaranth" in the December 24, 1927, issue.

Earl Bowen, Route 1, Lapeer, Michigan, for his article on "Indecision" which appeared January 7, 1928.

Grace Cramer, Box 2, Comstock, Michigan, for her article on "Hope," printed January 7.

"Michigan Boy," for his excellent letter on education in January 21, issue.

Agnes Arthur, Route No. 4, Midland, Michigan, for her article on life, published January 28.

"Patty" for article on character in January 28 issue.

"Copper Penny" for letter on errors in punctuation printed February 4.

"Sammy" for her defense of modern youth in February 18 issue.

The "Critic" for poem on "Snow" which appeared in March 3 issue.

Martha Kolhmainen, Chassell, Michigan, for her poem entitled "The work I Like and Why" which appears in this issue.

Lester Hewitt, 160 Oak St., Hillsdale, Michigan, for his poem on "My Dad," published in this issue.

Clinton Van Duine, Route 1, Dorr, Michigan, for his many good letters and suggestions.

Zola M. Marsh, Box 313, Kingsley, Michigan, for her many good essays.

Lilly Tervo, Chassell, Michigan, for her good suggestions and persistency in answering contests.

We need the names and addresses of those whose pen names are only given above. Please mark "Golden Circle" on your envelope when letting us know if yours is one of the names above. I wish to compliment the above for their good work and hope they will enjoy the Golden Circle pin which will be sent them.—Uncle Frank.

WORLD'S CHAMPION BEAN GROWER

BY CHARLES B. PARK

ROLAND MYERS, a seventeen-year-old Smith-Hughes High School student of St. Louis became the world champion bean grower at this year's International Hay and Grain Show. He produced his beans on a Smith-Hughes High School project. He is one of two sons and lives on an eighty acre farm with his parents where together they carry on diversified farming.

In producing his champion beans, Roland used seed of the Robust variety which is an excellent yielder and very disease-resistant.

The soil of his field was clay loam nearly level but affording good drainage. Manure was applied early in the spring after which the plat was plowed to a depth of about eight inches. Rolling and harrowing followed, until a very fine porous seed bed was formed. This careful soil for less cultivation later on.

The seed beans planted on June the eighth, with the drill set at forty-five

pounds per acre with rows twenty inches apart. Twenty per cent acid phosphate was broadcast on the piece at the rate of one hundred pounds per acre.

In a few days the tiny shoots came through the ground and as soon as the rows could be followed, cultivation was begun. Cultivating was done deeply at first, gradually growing more shallow as the plants matured.

As frequently is the case, the long looked for rains came at about harvest time, and Roland began to worry about further vine growth and harvesting trouble. However, the weather cleared and the beans were soon pulled and bunched. After a few days they were drawn to the barn for storage to await threshing. The threshed beans picked one pound per hundred and the yield was twenty bushels per acre.

Roland prepared his show sample by first running them over the fanning mill to remove all small beans and foreign material. This process gave an uniform sample which was next run over the bean picker to remove off-colored and ill-shaped beans. The sample was completed by polishing and again hand picking.

On November twenty-first the sample was sent by registered parcel post to the International Hay and Grain Show at Chicago, where it was placed first above all entries in its class, giving Roland the honor of being the world's greatest bean producer.

RADIO CONTEST

WE would like to know what young folks think of the radio. Therefore, this contest on "What Benefits I get from the Radio." Please tell this in two hundred and fifty words or less. Don't forget your name and address in the upper left hand corner of your paper, and M. C. after your name if you are a Merry Circler.

The writers of the ten best essays will be given prizes; the first two, fountain pens; the next three, handy school dictionaries; the next five clutch pencils. All not Merry Circlers who send in good papers will be given M. C. pins and membership cards.

Thousands of young folks have opportunities to listen to a radio. Let us know what radio features you hear are of greatest value to you in education or entertainment.

Send your papers to Uncle Frank, Michigan Farmer, Detroit, Michigan, before March 23 as the contest closes then.

CONTEST WINNERS

THIS Contest showed a big majority for the essay type of contest. This was hardly fair as those who liked that kind took part in this which was of the essay type. There is no doubt but that the essay is the hardest type of contest we can have, and I am glad that the contestants this week have recognized that fact.

Story Books
Zola M. Marsh, Box 313, Kingsley.
Herbert Estes, Webberville.

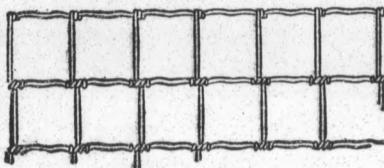
Clutch Pencils
Dorothy Munn, Rapid River, Mich.
Clinton Van Duine, R. 1, Dorr, Mich.
Alma Erickson, Chatham, Mich.

Knife
Menno G. Martin, Brutus, Mich.

Beads
Helen Piper, Shiloh, Mich.
Mildred Merritt, R. 1, Ypsilanti.

Bracelet
Lilly Tervo, Chassell, Mich.
Minda Kangos, R. 1, Rudyard.

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THE modern farmer diversifies and demands good fence for this purpose. That's why he always chooses PIONEER. Here are a few reasons why farmers who are making large profits agree that PIONEER can't be equalled for farm and poultry uses:

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100% Live Delivery guaranteed and Postage paid on	25	50	100	500
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Mixed all heavy Broilers, No Culls.....	3.25	5.50	11.00	63.00

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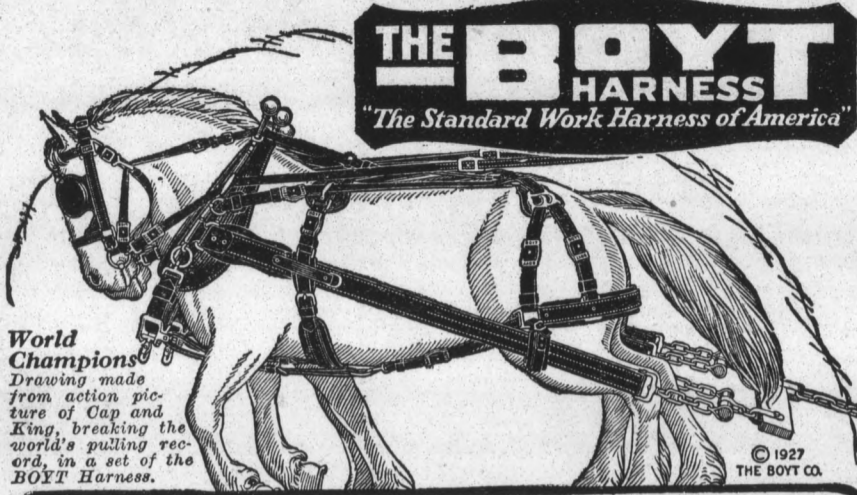
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(English Type) S. C. White Leghorns.....	3.25	6.00	11.00	52.00	100.00
S. C. Brown Leghorns (Heavy Type).....	3.25	6.00	11.00	52.00	100.00
Barred Rocks (Laying Type).....	4.00	7.75	15.00	72.00	140.00
S. C. Reds.....	4.25	7.50	14.00	67.50	130.00
Light Mixed.....	2.50	4.00	7.00		
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10% down books your order—100% live delivery prepaid. Get our free catalog. It tells all about our special mated grades. Write for it. It is time to order your pullets now. Get our latest prices.
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Strength through quality of leather
Strength in harness leather demands special tanning for three purposes—
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Without such tanning, harness leather cannot stand up. From the tanneries, capable of producing such leather, our buyers select the heaviest hides (about one out of every ten). Of these choice hides, only the back, the strongest part, is used for the BOYT Harness.

Endurance with Rustless hardware
Rust on harness metal rots leather. That is why rustless bronze hardware from a special formula, is used at more than 80 points in the BOYT Harness.
Rustless bronze hardware goes hand in hand with super-tanned leather in giving long life to the BOYT Harness. Through twenty-seven seasons, BOYT Harness has proved itself the most economical harness for farm work. Years after other harness is worn out and gone, the BOYT Harness is still going strong, giving you many extra years of service without extra cost.

Economy through finer workmanship
The Boyt Company builds more sets of standardized work harness than any other harness manufacturer in America. Each process in building the Boyt Harness is handled by men who specialize in that particular job. As a result they do it better, and at lower cost. And you get not only quality workmanship, but quality material straight through. Stitching with toughest waxed thread—laps caught with rust-proof rivets—close inspection at every step in making what thousands of farmers have found to be "the world's strongest harness."

The SAMSON HARNESS
A Super-Quality, Boyt-Built Harness
Toughest selected steer-hide, correctly tanned—rust-proof bronze hardware at 40 points—special handy belly-bands—are three big advantages of SAMSON Harness. Excepting only BOYT Harness, there is no finer harness made than the SAMSON.

BREADWINNER HARNESS
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Boyt quality leather, plus Boyt workmanship, give you the BREADWINNER, an unusually powerful harness at a low price, made possible only by large standardized production. Look it over. At less than \$70, there's no harness can touch it.

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Through authorized Boyt dealers, Boyt-Made Harness comes from factory to you at a smaller margin over the actual manufacturing cost than would otherwise be possible. And you don't have to add freight to the price. That's why your Boyt dealer can give you more harness for your money. See for yourself. Send for our big free harness catalog. **WRITE TODAY.**

THE BOYT COMPANY, 236 Court Avenue, Des Moines, Iowa.

LIVE STOCK AND DAIRYING

CLOVERLAND COW HOLDS STATE RECORDS

WHEN Jay B. Deutsch was running his Guernsey herd at Big Bay, Michigan, he made a world's record for the Guernsey breed in class DD on Rilma of Bay Cliffs 93480. That was four years ago, and even at this time only one other cow has exceeded her performance in that class, so she still holds second place. The herd, including this big cow, is now owned by L. G. and M. Y. Kaufman, at Marquette, Michigan, where Rilma has just completed another high record of 15,575.5 pounds of milk and

the protest of feeders against the decline in prices from mid-January to mid-February. An upturn of fifty cents to one dollar in the market for fed steers with weight and a little improvement in the market for light kinds was the result.

FEWER CATTLE SLAUGHTERED

DURING January, 711,000 head of cattle were slaughtered under federal inspection compared with 786,000 head a year previous. With two exceptions, this was the smallest number for the corresponding month since 1916. Slaughter during February prob-



Rilma, Owned by Loma Farms, Marquette, Holds Three Michigan Records

891.7 pounds of butter-fat, which makes her the Michigan state champion in class A. Altogether, she has made four records, as follows: 9348.9 lbs. milk, 490.2 lbs. butter-fat, class G (Junior two year old); 15,684.7 lbs. milk, 821.7 lbs. butter-fat, class DD (Senior three year old); 14,876.6 lbs. milk, 767.9 lbs. butter-fat, class AA (mature age), and 15,575.5 lbs. milk, 891.7 lbs. butter-fat, class A (mature age).

ably will make a similar showing, giving added confirmation to the belief that total slaughter for 1928 may fall as much as a million head below 1927.

SHE STOCK TAKES SHARP DECLINE

PRICES of cows and heifers recently declined sharply. They are not likely to lose much further ground in the next three months, however, owing to the seasonal shortage of butcher stock. Veal calf prices have dropped sharply from the February high point, due to larger receipts and lower prices for hides. After another strong rally, a decided downward trend can be expected.

HORSE MARKET ACTIVE

THE expanding activity in horse market circles which started several months ago is still in progress. During January, receipts of horses and mules at public stockyards were seventy-seven per cent larger than a year previous and twenty-seven per cent over the average for that month in the last five years.

Buyers have been ready to take all the good animals, but thin, poorly conditioned, light weight, and overgrown sorts are not wanted. Top sales at Chicago are around \$260 with bulk at \$100 to \$150. Range of quotations at that market are as follows: Draft horses, over 1,700 lbs., \$140 to \$260; good chunks, 1,600 to 1,700 lbs., \$140 to \$250; common chunks, 1,500 to 1,700 lbs., \$75 to \$135; wagon horses, 1,300 to 1,500 lbs., \$125 to \$175; good farm chunks, \$60 to \$110; common farm chunks \$20 to \$50; good mules \$125 to \$200.

HARD TO KEEP UP BEEF DEMAND

SUPPLIES of beef are not likely to average much smaller through the next four months than they have been in the last two months. Packers still complain of unsatisfactory dressed beef trade conditions. Continuation of extremely short supplies will be necessary to hold the market on this high level.

FEEDERS ARE SKEPTICAL

FEEDER cattle prices have not recovered much from their recent decline. Skepticism as to the fed steer market checked interest in fleshy steers suitable for a quick turn and muddy feed lots, scarcity of corn, rising feed costs and tax-paying time are other influences tending to keep buyers out of the market. Shipments of stocker and feeder cattle from public stockyards in January were fifteen per cent greater than a year previous and practically equal to the five-year average for that month.

LIGHT RECEIPTS CAUSE STEER PRICE RALLY

RECEIPTS of cattle have fallen off sharply in the last two weeks to the smallest value of the year and the smallest at this season since 1915. The shrinkage probably represented

BREEDERS' DIRECTORY

Change Copy or Cancellations must reach us Twelve Days before date of publication.

CATTLE

GUERNSEYS either sex, whose sires' dams have official records of 15,109.10 milk, 778.80 fat, 19,460.50 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 EDGWOOD DAIRY FARMS, Whitewater, Wis.

FOR SALE Three Registered Guernsey cows, T. B. tested. Priced to sell. S. W. SOMMER, Dryden, Mich.

SERVICEABLE AGE

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.

RED ROSE FARMS DAIRY

Northville, Michigan

Telephone: 344

Reference: Northville State Savings Bank

For Sale Registered Holstein Bull, old enough for spring service. Also one old enough for heavy service. Also my herd sire, 4 yrs. old, son of a 32 lb. 4-year-old heifer. Also a few females of milking age, some with semi-official records. Vernon E. Clough, Parma, Mich., R. 2.

\$250.00 buys five head of Holsteins, four high grade heifers nicely marked, from four to eight months old and one registered bull nine months old not akin to heifers. B. B. REAVEY, Akron, Michigan.

FOR SALE A yearling, registered Holstein bull. Dam has an 18 lb. A. R. O. record and he is sired by a 25 lb. bull. Also bull calves sired by 30 lb. bull and from good record dams. BEN L. SMITH, Rives Junction, 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.

VAN S. BALDWIN, Eldon, Iowa

ROSS METAL SILO Lifetime Satisfaction

MADE of copper-content Rossmetal galvanized. No shrinkage or swelling. Can be increased in height. Movable. Safe against fire and wind. No freeze troubles. Send for remarkable booklet—"What Users Say."



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Most Modern, Most Practical Silo, COPPER-IZED Metal throughout. Many exclusive features. Backed by 23 years of Experience and Responsibility. Tell us what size silo you want so we can quote factory-to-you prices. Special discounts on early orders.
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Quality Brooder Houses, Corn Cribs, Graze Bldg

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Ornamental Lawn Fences add greatly to the appearance and value of any home. My New Catalog shows big variety of styles, and at prices that will save you a lot of money. My **DIRECT FROM FACTORY** plan of dealing makes my prices lower—my customers get the benefit—and I also pay the freight. Catalog also contains descriptions and factory prices on Farm Fence, Steel Posts, Barb Wire, Gates, Metal and Roll Roofing, Paints, etc. This money saving Catalog is free—get it before you buy.—JIM BROWN, Pres. The Brown Fence & Wire Co. Dept. 2625 Cleveland, Ohio



"SPOHN'S" KEEPS US WELL

When exposed to weather or disease, give **SPOHN'S DISTEMPER COMPOUND**. For 33 years the standard remedy for Distemper, Strangles, Influenza, Pink Eye, Catarrhal Fever, Shipping Fever, Coughs and Colds. Give to sick and those exposed. Give **"SPOHN'S"** for Dog Distemper. Poultry raisers Give **"SPOHN'S"** for Roup. 60 cents and \$1.20 at drug stores. Write for free booklet. **SPOHN MEDICAL CO. DEPT. 6 GOSHEN, IND.**



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By using Kalamazoo Glazed Tile you put an added cash value into your buildings—at no extra cost to yourself. Permanent—fire-safe
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Made of vitrified fire clay by one of the largest established silo companies. You profit by purchasing AT DEALER'S COST. Write for details.

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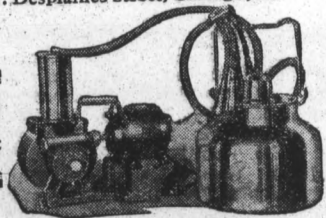
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to milk as effectively as any milker made, regardless of price. Finest materials and construction throughout. Tried and proven by thousands of farmers. Sales doubling yearly. Cows like its gentle, soothing action. Saves hours of drudgery. Delivers clean, top-price milk. Easy to operate and keep clean. Many styles and sizes.

Send for instructive booklet No. 40 FREE. Distributors Wanted—Fine opportunity for merchants and farmers. Ask for details. **MYERS-SHERMAN COMPANY** 213 N. Desplaines Street, Chicago, Ill.

\$100
Single Unit Complete



Ford's Milker
Electric or Gas Engine

LENAWEE FARMERS LIKE TESTING WORK

VOTING to continue the testing association after having completed two years of this type of herd improvement work, Lenawee County dairymen laid the plans for further development and improvement of Lenawee County dairy cattle. Willard Syers, tester for this association during the past two years, reported a gain in butter-fat production by the average herd in the Lenawee D. H. I. association.

J. B. Smith of Adrian, owner of the high herd and high cow, feels that he has been well paid for his investment in the herd improvement organization. The figures in his herd book show that thus far this year the return for a dollar expended for feed has improved materially over that realized in 1927. His herd average this year was 498 pounds butter-fat and 12,340 pounds milk against 409 pounds butter-fat in 1927.

A. C. Baltzer, in charge of dairy herd improvement associations in Michigan, was present and explained the new Holstein herd test and its value in the future dairy development.

SELLS PRODUCTS ON OPEN MARKET

(Continued from page 369)

four or five times after planting. About ten acres of the corn are used for silage and the remainder is picked for grain. The stalks on the portion where the grain is secured are plowed under for fertilizer.

Oats supplement the corn in the grain ration for the cows. About thirty acres of this cereal are grown, following corn in the rotation. Certified Wolverine seed is used. The corn ground is plowed and fitted with float and harrow, the object always being to make the soil as firm as possible. About one hundred and fifty pounds of superphosphate (acid phosphate) is applied. Last year the crop yielded seventy-five bushels per acre and the average yield of oats on this farm for the past five years has been around sixty-five bushels. The straw goes in the stables for bedding.

Mr. Bristow's only cash crop is wheat. On an average he grows about twenty acres. This cereal follows either oats or silage corn in the rotation. When oat ground is used, it is plowed, whereas the corn ground is disked after the corn is put into the silo. About two hundred pounds of superphosphate is applied to help this crop along. Also, the field is usually top-dressed during the winter with manure from the cow barns. The crop is threshed from the field. Last year his wheat yielded thirty-five bushels per acre. The five-year average is thirty bushels.

As stated before, twenty acres of the farm is given over to pasture for summer feed. June grass and sweet clover provide the pasture crops. These crops are improved by the use of top dressing and the application of commercial fertilizers.

The home is commodious, well arranged, and supplied with modern conveniences. These consist of furnace, running water, electricity, refrigerator, vacuum cleaner, bath room, power washing machine, sewage system, and septic tank.

Although Mr. Bristow and his one hired man are kept busy with the duties upon this farm, the family takes regular vacations and an active part in community affairs. They participate in church and social activities and are leaders in the local grange. Mr. Bristow has been master of the Flat Rock grange for several terms, is a member of the local farm bureau, the milk producers association, and the local board of commerce. They have two children, Alice Mary, nine years; and Allen William, four years. Alice Mary is in the fifth grade of the local school.

Never Drench Cattle

It's Dangerous

Here's the Prescription that SAVED the \$50,000 Bull

Laxotonic And Here's What the Owner Himself Says:

"R. 2, Waupaca, Wis., April 16, 1917.

DR. DAVID ROBERTS, Waukesha, Wis.

Dear Dr. Roberts:

"I thought you would be interested to know that my Holstein sire, Sir Pietertje Ormsby Mercedes 37th, has fully recovered from his attack of paralysis of the bowels. You may not know that this bull went about ten days without an action of the bowels in spite of the fact that we had given him ten pounds of salts and two quarts of raw linseed oil without effect. Of course we thought it was constipation and treated him for that, never thinking of paralysis of the bowels until you arrived and examined him and pronounced it that. Your statements at that time decided me to always treat stoppage of the bowels as though it were paralysis and not constipation, for as you say the treatment for paralysis will overcome both constipation and paralysis. That has been proven to me.

"When I think of your little 50c box of Laxotonic saving this \$50,000 bull I cannot help but feel that it is too bad that all cattle owners and breeders do not know of your valuable preparations, as well as your wonderful skill in the treatment of cattle which you so clearly demonstrated in saving this animal. I want you to know that I appreciate the prompt attention that you gave this bull, in spite of the fact that the weather was below zero and the roads were drifted and he was 150 miles from you. You will please find enclosed my check to cover your services.

Yours very truly, (Signed) John Erickson."

FOR SALE BY DEALERS OR POSTPAID 50 CENTS
Ask for FREE copy of The Cattle Specialist and how to get The Practical Home Veterinarian without cost. Veterinary advice FREE.

DR. DAVID ROBERTS VETERINARY CO., INC., 124 Grand Ave., Waukesha, Wis.

HOLSTEINS Are Hardy

For 2000 years Holsteins have been bred for ruggedness. They thrive in all climates and sections without expert care and produce profitably under varied conditions.

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SAVE the Teat

Use Moore Bros. PURPUL medicated Wax Dilators to heal without closing. After operating, when sore or congested, for reducing spiders insert this wonderful healing dilator. Avoid expensive troubles, lost quarters.

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Write us dealer's name and we will mail generous package free. At dealers 25c. dozen; 5 dozen \$1, or mailed postpaid.

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NEWTON'S Compound

For horses, cattle, hogs

Heaves, Coughs, Conditioner, Worms. Most for cost. Two cans satisfactory for Heaves or money back \$1.25 per can. Dealers or by mail. The Newton Remedy Co. Toledo, Ohio.

CATTLE AUCTION SALE

MARCH 22, 1928

30 Head High Grade Guernsey Heifers

will begin to freshen April first, bred to a registered Guernsey bull. These heifers were raised in Waukesha Co., Wisconsin. Seven miles northeast of Mendon on gravel road.

ZACK BEARD, Prop.

Registered Holsteins for sale, calves, and yearlings, males and females, good breeding, 2 bulls about ready for service. Prices reasonable. Orr Bros., Decatur, Mich.

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

FINANCIAL KING JERSEYS

We have for sale a most excellent selection of bull calves ranging in ages from 4 mos. to one year old. These calves are sired by Financial King Sensation and Financial Ford and out of Register of Merit Stock. Prices reasonable. **COLDWATER JERSEY FARM, Coldwater, Mich.**

FAIRFIELD SHORTHORNS Attractive prices on choice ready for service bulls, sired by Wilkinholm Monarch. H. B. Peters & Son, Etsie, 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.

Milking Shorthorns Bulls and females for sale, all ages. Some extra fine bred heifers. Best Jay breeding. IRVIN DOAN & SONS, Crosswell, Mich.

HOGS

FOR SALE—Duroc Gilts of type and quality, bred to High Orion No. 265227. Also a few spring boars at right prices. Shipped C. O. D. on approval. W. E. BARTLEY, Alma, Mich.

DUROC SOWS

Sold at a sacrifice. Never a better time to start in the hog business. The longer the market stays down, the higher and faster the come back. We guarantee satisfaction. LAKEFIELD FARMS, Clarkston, Mich.

DUROC BRED GILTS

bred by and to State Fair Winners, good type and quality, sold at a sacrifice and satisfaction guaranteed. E. P. HELLNER, R. 5, Ann Arbor, Mich.

DUROCS

We have a few gilts, bred for April farrow, priced to sell. Correspondence or inspection invited. NORRIS STOCK FARMS, Casnovia, Mich.

Auction Sale, March 27

35 thoroughbred Chester White gilts, 8 boars. ADAM STUECK, Pigeon, Mich.

O. I. C. HOGS on time

Write for Originators and most extensive breeders. THE L. B. SILVER CO., Box 196, Salem, Ohio

Registered O. I. C. Fall Pigs

best of breeding from prolific sows. Shipped on approval. H. J. HUDSON, R. 2, Romulus, Mich.

O. I. C's.

Good last spring pigs, not akin to fall pigs, recorded free. OTTO SCHULZE & SONS, Nashville, Mich.

For Sale—Reg. O. I. C. April & May Pigs

best of breeding. Shipped on approval. FRED W. KENNEDY & SONS, R. 1, Chelsea, Mich.

Registered O.I.C. Gilts

bred for April and May farrow. H. W. MANN, Dansville, Mich.

Large Type Poland Chinas

Fall pigs ready to ship, sired by my two great herd boars, L's Big Wonder, by Siewar's Smooth Wonder and Big Stratton by The Redemer, and from my best sows. Priced reasonable. W. E. LIVINGSTON, Parma, Mich.

FOR SALE

Poland China boars of March and April farrow. Also some choice bred gilts, due to farrow in March and April. Every one immuned for cholera. WESLEY HILE, Ionia, Mich.

LARGE TYPE

Poland China bred gilts, also fall boars and gilts. JAMES G. TAYLOR, Belding, Michigan.

A FEW

good Hampshire spring boars at a bargain. Place your order for bred gilts. JOHN W. SNYDER, St. Johns, Mich., R. 4.

SHEEP

FOR SALE 200 yearling ewes bred to lamb after May 1st. A. C. HAYES, Muir, Mich.

HORSES

For Sale Belgian Stallion Col. Erick No. 10183, light sorrel with white mane and tail. Sure foal getter, weight 2,000 lbs. WM. BRANNAN, Williamston, Mich.

FOR SALE

A few young Reg. Percheron stallions, also some Reg. mares, all ages, and at the right price. E. A. ROHLFS, Akron, Michigan.

FOR SALE

Matched team, 7 & 8 yrs. old, weight 3,800 lbs. Sound. E. H. ROWE, Lyons, Mich. R. 1, Portland phone 335 2 L 2 S.

FOR SALE

Extra good black reg. Percheron Stallion, 20 mo. old, a ton prospect. L. B. STRUBLE & SON, Muir, Mich.

MULES

WANTED the best mule team in Michigan. Prefer mares. Must be young, sound, gentle, and honest pullers. Weight around 1,200 pounds apiece or more. Address BOX 141, Michigan Farmer, Detroit.



THE LATEST MARKET REPORT



GRAIN QUOTATIONS.

Monday, March 12

Wheat.

Detroit—No. 2 red at \$1.61; No. 2 white \$1.60; No. 2 mixed at \$1.60.
Chicago—March \$1.367½; May \$1.367½; July \$1.34¾; September \$1.33¾.
Toledo—Wheat, No. 2 red at \$1.61½ @ \$1.62½.

Corn.

Detroit—No. 2 yellow \$1.04; No. 3 yellow \$1.01; No. 4 yellow 99c.
Chicago—March 94¾c; May 97¾c; July \$1.00¾; September \$1.01½.

Oats.

Detroit—No. 2 Michigan 63¾c; No. 3 white 62c; heavy oats 2c premium.
Chicago—March 55¾c; May 56¾c; July, old, 52¾c; new 52¾c; September, new, 47¾c.

Rye.

Detroit—No. 2 \$1.23; Canadian \$3.
Chicago—March \$1.167½; May \$1.17¾; July \$1.10¾; September \$1.03¾.
Toledo—\$1.23.

Beans.

Detroit—Immediate and prompt shipment \$8.20 f. o. b. shipping points.
New York—Pea domestic at \$8.00 @ \$8.75; red kidneys \$8.50 @ 9.50 to the wholesalers.
Chicago—Spot navy beans, Michigan choice, hand-picked, in sacks at \$8.50; dark red kidneys \$10.50.

Barley.

Detroit—Malting \$1.01; Feeding 97c.

Seeds.

Detroit domestic seeds:—Cash clover \$16.80; October \$15.70; March \$15.75; cash alsike \$15.75; March \$15.95; timothy at \$1.90; March \$1.90.

Hay.

Detroit—No. 1 timothy at \$13.00 @ \$14.00; standard \$12.00 @ 13.00; 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, \$15.00 @ 25.00.

Feeds.

Detroit—Winter wheat bran at \$44; spring wheat bran at \$43; standard middling at \$43; fancy middling at \$45; cracked corn at \$45; coarse corn meal \$43; chop \$38 per ton in carlots. Poultry feeds with grit \$49.00; without grit \$54.00 per ton.

WHEAT.

The advance in wheat prices which started early in February and which carried future deliveries upward about 10 cents a bushel has been checked in the last few days. Trade interests appear to be more impressed at the moment with the fact that reserves of wheat are larger than a year ago, than with the unexpectedly large apparent disappearance in the last eight months. Also, the dry area in the southwest has had some rain.

Not until growing weather arrives will it be possible to appraise the amount of damage to the new winter wheat crop, but both official and unofficial reports point to larger abandonment than usual east of the Mississippi River. Also, the dry area in the southwest has been only partly relieved. While the prospective increase in abandonment of acreage above normal may not be enough to eliminate the gain in the area planted, reports of damage are bound to have an exciting effect on the market.

RYE.

Rye stocks are slowly increasing but they remain below normal and enough is being sold for export for spring shipment to reduce pressure. Rye prices reached a new high point for the season early in the last week.

CORN

Corn prices have been marking time for three weeks. Receipts have been heavy in the last ten days although they have started to taper off again and it is probable that they will diminish rapidly as farmers become busy with field work. Shipping demand has been broad, so that the addition to the visible supply from the heavy movement recently has not been excessive. Stocks total 41,000,000 bushels compared with 47,000,000 bushels a year ago. Export trade continues disappointing and Argentina is still clearing twice as much corn for Europe as the United States. If importing countries take as much corn per week during the next three months as they have been taking dur-

ing the past six months, it will be necessary for them to purchase freely in the United States.

OATS.

Oats prices have advanced to a new high point for the season. Demand has increased without a corresponding gain in receipts, resulting in the first reduction in the visible supply of any consequence since early in the year. Farm reserves on March 1, according to the official estimate, totalled 377,000,000 bushels compared with 422,000,000 bushels a year previous. This is the smallest quantity reported since 1912.

SEEDS.

The seed market has shown a tendency to stiffen in the past week although farmers have not yet started to buy in any quantity. Dealers are still confident that orders will come in a rush with the first evidence of real spring and that demand, though later than usual, will be fully up to normal. There is still a good-sized carryover of most field seeds, particularly sweet and red clover and timothy seed, in surplus producing sections which is taking care of much of the local trade in those areas. Red and alsike clover seed declined during the week, but alfalfa, white and sweet clover remained unchanged.

FEEDS.

The mill feed market is very strong with bran and standard middling still advancing. Prices average from \$5.00 to \$6.00 a ton higher than at the corresponding period a year ago. Mixed feed manufacturers have been heavy buyers of both bran and middlings. Cottonseed meal has not followed the advance in wheat by-products.

Chicago—Bran, \$36 standard middlings, \$36.50; hominy feed, \$37.00;

gluten feed, \$38.70; old process oil meal, 34%, \$52.00; tankage, 60%, \$65; cottonseed meal, 43%, \$52.50.

HAY.

The hay market was strengthened last week by less liberal supplies and prices for timothy averaged around \$1 a ton higher than the low point reached in February. Dissatisfaction with prices offered them for hay kept farmers from loading hay and the smaller receipts were promptly reflected in the stronger market. Shipping inquiry for prairie hay remains dull as a result of the abundance of local forage and moderate requirements in many principal consuming areas.

EGGS.

The downward trend in fresh egg prices was halted last week and prices have been marked up over two cents a dozen from the low point of a week ago. The season in practically all sections of the country is later than a year ago when it was unusually early. Consumption is on a broad scale and gives no evidence of any curtailment. Dealers are entering the market for good sized lots of eggs for storage and eggs are going into warehouses freely. In addition, egg breaking plants are in operation, furnishing an outlet for many eggs, particularly in the central states and southwest. Some dealers fear a heavy lay later in the season which would permit storing to continue late into the summer and force prices down, but for the immediate future, they seem fairly well pegged.

The movement of poultry from farms is showing the usual seasonal decrease as the heavy laying season gets under way. Prices generally are steady.

Chicago—Eggs: fresh firsts, 28 @

28½c; extras 36 @ 36½c; ordinary firsts, 27c; dirties, 26c; checks, 25½c. Live poultry: Hens, 26c; capons, 28 @ 30c. springers, 29c; roosters, 20c; ducks, 28c; geese, 16c; turkeys, 28c.

Detroit—Eggs: fresh receipts, best quality, 28 @ 28½c; dirties and checks, 25½c. Live poultry: medium heavy springers 25 @ 31c; white leghorn springers, 24c; heavy hens, 26c; medium hens, 27c; roosters, 18 @ 19c; capons, 36 @ 37c; large white ducks, 30 @ 32c.

BUTTER.

The strength which developed in the butter market a week ago has been continued and prices of 92 score creamery in the Chicago wholesale market have advanced steadily to the highest point since the first of January and fully 4 cents a pound higher than the low point of a fortnight ago. Receipts have been kept closely cleared and in addition, the use of storage butter has been on a larger scale than at the corresponding period a year ago. No further increase of consequence in fresh butter production is expected until close to the grass season which is six to eight weeks away. Not all of the recent advances in wholesale prices has been passed on to the retail trade so that consumption has not suffered as a result of the recent firmness and distribution continues large.

Prices on 92 score creamery were: Chicago, 49½c; New York, 51c; Detroit, 46 @ 49c per lb.

POTATOES.

Although farmers are shipping rather heavily, the potato market continued firm at higher prices last week. Prices are attractive to growers who are bringing potatoes out of storage and hauling as rapidly as roads permit. Idaho stock is meeting a very active demand and prices at shipping points are steadily advancing. Many growers are inclined to hold for higher prices later on. Far western markets are so well supplied that they offer no outlet for Idaho stock, but shipments to middlewestern, southern, and eastern markets are large. Wisconsin round whites, U. S. No. 1, are quoted at \$2.20 to \$2.35 per 100 pounds, sacked, in the Chicago carlot market.

BEANS.

The bean market continues to advance with C. H. P. whites now quoted at \$8.40 per 100 pounds, sacked, f. o. b. Michigan shipping points. Demand is slow at the high prices, but offerings are limited and the market seems firmly pegged.

WOOL

Activity in the wool trade has diminished recently partly because of small stocks of wool still in dealers' hands and partly because mills have filled enough of their nearby requirements so that they are willing to pay the higher prices asked. Some buying is going on, including both fine and medium grades, where particular types of wool are needed and occasional bids are being placed for additional amounts at prices a few cents per scored pound below dealers' asking prices. Foreign markets continue firm although no new advances have been registered. American buyers have been less active in Australia recently, but England, Germany, and Japan have bought more freely. Contracting in the west has practically ceased although some purchases of medium wools at 33½ to 35 cents in Washington have been reported recently. Texas growers are holding for 45 cents.

DETROIT CITY MARKET

Apples, \$1.80 @ 5.00 bu; bagas, 50 @ 75c bu; beets 50 @ 90c bu; cabbage, 40 @ 75c bu; carrots, 50 @ 75c bu; celery local 50 @ 65c doz; eggs wholesale, white 29 @ 30c doz; brown 28 @ 29c doz; retail, 35 @ 40c doz; dry onions 75c @ \$1.50 bu; root parsley \$1.25 @ 1.50 bu; curly 35 @ 40c doz. bchs; parsnips 50c @ \$1.50 bu; potatoes 65c @ \$1.40 bu; poultry—hens, wholesale, 25 @ 30c lb; retail 30 @ 32c lb; broilers, wholesale, leghorns 24 @ 27c lb; rocks 26 @ 32c lb; retail 30 @ 35c lb; ducks 26 @ 30c lb; dressed poultry retail 35 @ 38c lb; ducks 35 @ 40c lb; horse radish \$6.00 @ \$8.50 bu; Hubbard squash \$1.75 @ 2.00 bu; turnips 75c @ \$1.75 bu; butter 60c lb; leeks 65 @ 90c doz. bchs; dressed hogs 13 @ 15c lb; live pigs \$5.00 ea; veal 23 @ 24c lb.

Live Stock Market Service

Monday, March 12

CHICAGO.

Hogs

Receipts 53,000. Market active, 10 @ 15c higher than Saturday's average; all interests buying; stots light lights and pigs 25c higher; tops \$8.65 paid for choice 180-210-lb. weight; bulk better grade 170-220-lb. average \$8.35 @ \$8.50; tops 230-270-lb. largely \$8.20 @ \$8.40; good to choice 280-340-lb. butchers \$8.00 @ 8.25; strictly choice 140-160-lb. average up to \$8.50; bulk medium and good grades \$7.50 @ 8.35; pigs largely \$6.25 @ 7.25; choice weights up to \$7.50 and better; bulk packing sows \$6.85 @ 7.35.

Cattle

Receipts 16,000. Market matured steers 15 @ 25c lower; slow at decline; bids off more on weighty kind scaling 1,300 lb. up; light yearlings fully steady; packers and steers strong, 25c higher; fat cows and heifers steady; small killers and shippers on speculative account; packers moving slow, bidding 75c @ \$1.00 lower on vealers; few early vealers \$12.00 @ 12.50; light offerings 75c lower, prospects \$12.00 @ 12.50; some light offerings with better grade \$13.00 @ 14.00, few \$14.50; sausage bulls 15 @ 25c lower, topping \$7.75 @ 8.00 on choice medium kind.

Sheep and Lambs

Receipts 19,000. Market on lambs with finish, 90-lb. down, active to outsiders. strong to 25c higher; shipping demand fairly broad; packers steady; good handy weights to outsiders \$16.25 @ \$16.50; bulk 90-96-lb. lambs \$15.75 @ 16.00; best 89-lb. clipped lambs \$13.75; good 79-lb. fall clipped \$14.40; light, small, choice feeding and shearing lambs strong, feeding \$14.25 @ 14.75; fat and feeders to traders \$16.

DETROIT

Cattle.

Receipts 925. Market active and steady.
Fair to good yearlings
dry-fed \$11.00 @ 12.50
Fair to good heavy steers,
dry-fed 11.00 @ 13.00
Handy weight butcher
steers 10.50 @ 11.50
Fair to good heifers 9.50 @ 10.00
Common light butchers... 8.00 @ 9.50
Best cows 8.50 @ 9.00
Butcher cows 7.00 @ 8.00
Cutters 5.75 @ 6.25

Canners 5.00 @ 5.50
Light butcher bulls 3.50 @ 9.75
Bologna bulls 7.50 @ 8.25
Stock bulls 7.00 @ 8.25
Feeders 9.00 @ 10.00
Stockers 7.00 @ 10.00
Milkers and springers... 75.00 @ 115.00

Calves.

Receipts 790. Market steady; very slow on common.
Best \$16.50 @ 17.00
Others 8.00 @ 16.25

Sheep and Lambs.

Receipts 587. Market steady to 25c higher.
Bulk good lambs \$16.00 @ 16.25
Best lambs 16.25 @ 16.75
Fair lambs 12.50 @ 14.25
Light lambs 10.00 @ 12.00
Yearlings 12.00 @ 13.25
Fair to good sheep 6.00 @ 8.75
Buck lambs 7.50 @ 12.25
Culls and common 3.00 @ 5.50

Hogs.

Receipts 1,465. Market mixed hogs 15c higher; roughs 10c; pigs 50 @ 75c higher; others steady.
Pigs 7.25
Mixed hogs 8.75
Lights 8.25
Roughs 6.85
Good Yorkers 8.75
Stags 5.50
Extreme heavies 7.00 @ 8.00

BUFFALO.

Hogs

Receipts 90,000. Hold over 611; market active 25c higher; pigs and light lights 50c @ \$1.00 higher; 160-250-lb. \$9.25, few \$9.15; 280-300-lb. \$9; pigs mostly \$8.00; 130-150-lb \$8.25 @ \$9.00; packing sows \$7.00 @ 7.75.

Cattle

Receipts 1,200. Market slow, steady; good 1,048-lb. steers \$14.25, few \$13.00 @ \$13.25; bulk medium grades \$10.75 @ 12.50; yearling heifers \$12.25; few weighty heifers \$11.00; others \$9.00 @ \$10.50; fat cows \$8.00 @ 9.50; all cutters \$5.50 @ 6.50; bulls \$6.50 @ 8.50, few \$9.00

Calves

Receipts 14. Good \$17.00; culls and common \$9.00 @ 12.50.

Sheep and Lambs

Receipts 3,000. Market active, mostly 25c higher; good to choice lambs \$17.00; throwoffs \$15.00; fat ewes \$8 @ \$9.50.

Plant growth can be regulated almost like a machine

WHILE plants, to prosper, require an abundance of all plant foods, one element controls the yield and quality of certain crops. Nitrogen is the dominant element with wheat, phosphorus with corn, potash with potatoes and legumes.

When you consider soil deficiencies, lack of balance, and plant preferences, varying proportions of plant food elements are required in the manufacture of fertilizers for different soils and crops.

These requirements can be supplied, however, with comparatively few grades. There is no earthly reason for manufacturing so many grades. Doing so increases manufacturing costs, slows up shipments, and confuses the buyer unnecessarily.

Several conferences have been held recently between state agronomists and fertilizer manufacturers. Their aim has been to reduce the number of grades, to standardize plant food proportions, to increase the demand for high grades, and to discourage the use of low grade goods with a cheaper-per-ton but higher-per-pound-of-plant-food cost. These conferences have resulted in definite agreements and recommendations.

Fertilizer users can aid materially in this campaign for fewer and better grades by buying the recommended ratios in the higher analysis forms. It will save them money. Fertilizer manufacturers will have to sacrifice some pet grades and brands. It will be a good thing for them in the long run.

Another foolishness about fertilizer is the idea that odor and dark color indicate quality. They do not. The higher grades are light in color and practically odorless. They are purer and better.

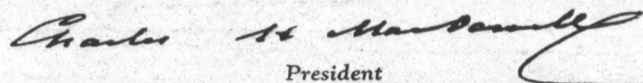
If all the fertilizer ingredients and mixed fertilizer used in the United States were mixed

into one grade, it would analyze a shade above 3% ammonia, 9% of available phosphoric acid, and 3% potash—a 1-3-1 ratio. A 3-9-3, a 4-12-4, or a 5-15-5 are all a 1-3-1 ratio. 5-15-5 furnishes plant food in the same proportions as the lower grades, and at a cheaper cost per pound of plant food. This ratio is an approved one, and is very largely used for other than truck crops.

Ville, from 1860 to 1876, at the French Experimental Station at Vincennes, did some of the most original and fundamental work on plant feeding. This was before we knew anything about bacteria. With a complete chemical fertilizer (analyzing approximately 7% nitrogen, 6% phosphoric acid, 7% potash, and without manure), he was able to grow 50 bushels of wheat per acre. On the same soil with nitrogen alone his yield dropped to 22 bushels. When he used phosphoric acid and potash alone his yield was 18 bushels. Without fertilizer he grew 12 bushels per acre. He remarks:

“... by the aid of simple chemical products and by the exclusion of all unknown substances, a maximum crop may be obtained from all plants in any place and in any condition of soil; further, by varying the quantity of these products, the work of vegetation may be regulated almost like a machine, the usefulness of which is in proportion to the fuel it consumes.”

Armour's BIG CROP high analysis fertilizers furnish plant foods in available form, properly combined to insure quick, heavy growth, and maturity, and maximum yields of first quality.


President

Armour Fertilizer Works Chicago, Ill.