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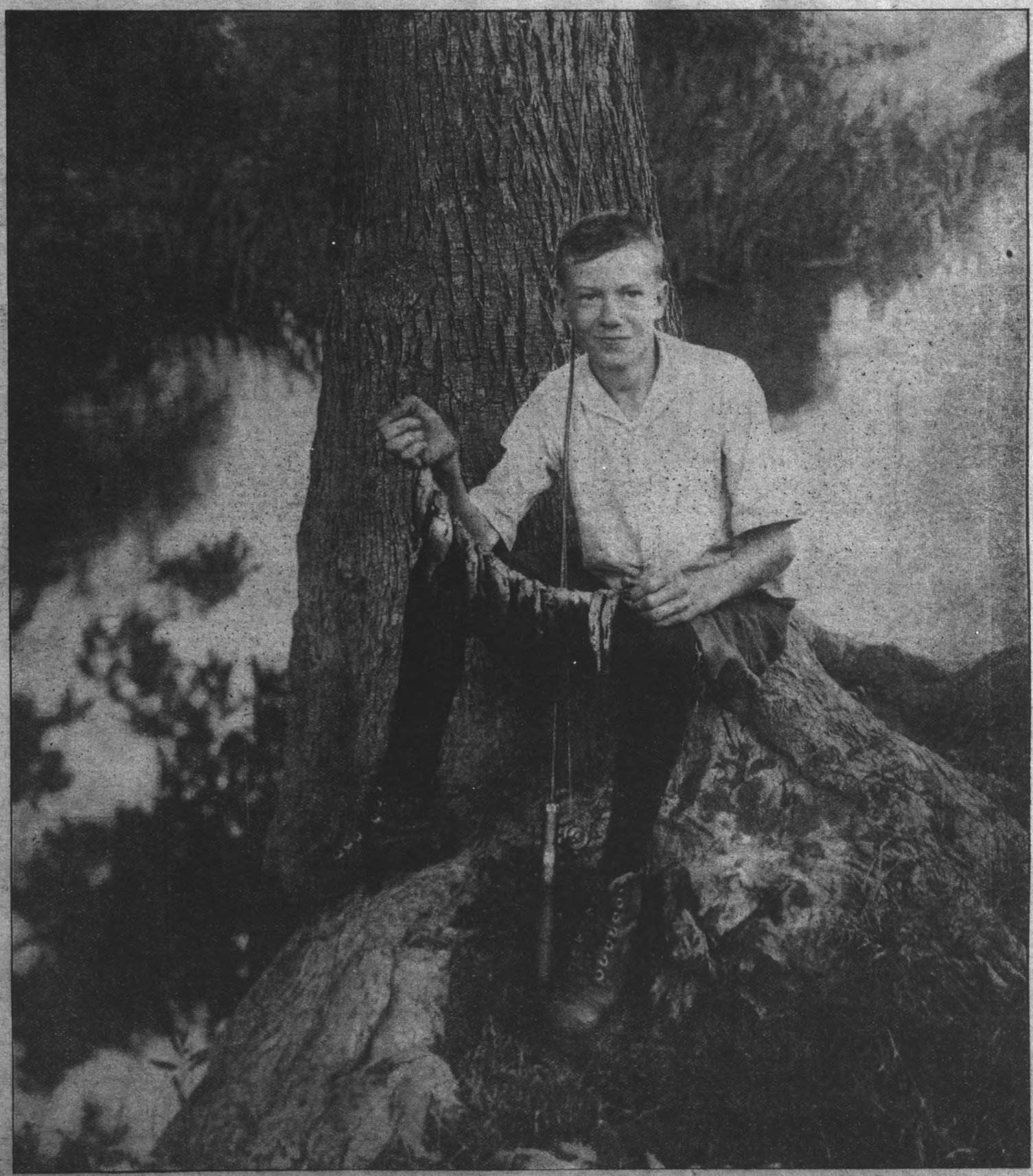

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DETROIT, JUNE 5, 1920

CURRENT COMMENT

Wholesale vs. Retail Selling

THE marketing of farm products in such manner as will bring to the producer the largest possible percentage of the consumer's dollar is the very desirable end toward which farmers everywhere are working. And through cooperative organization by industries and by communities, very substantial progress is being made toward that end.

In the evolution of the distribution of farm products, direct selling by the producer to the consumer was the first step. The development along this line by individual producers reached, in the aggregate, quite a large volume of business, and with certain special products was a gratifying success where good customers were secured and given service which would retain them. Such a special market for a special product is a desirable asset well worth the trouble involved to retain, even with the development of cooperative distribution. But as a means of disposing of the many and varied products of the average farm it is impractical, hence the development of cooperative selling on a large scale, which was the next logical development in the rapid evolution of distribution.

This latest development has, owing to the large transactions involved, been almost wholly confined to wholesale, rather than retail transactions. The fruit growers of the far west blazed the trail for wholesale cooperative selling. They were followed by the fruit growers of the south, the grain growers of the corn belt, soon by the grape growers of Michigan, and a little later by the potato growers of a large section of the state, as well as the live stock producers and the general farmers who are everywhere rapidly getting in line for the cooperative sale of their products in a wholesale way.

The failures in this development have been relatively few; probably not greater in number, if not less, than the private business failures in the same lines. And the percentage of failures is rapidly growing smaller with accumulated experience which prompts the more adequate financing and the better business management of these cooperative enterprises. Cooperative wholesale distribution of farm products is no longer an experiment. It is a demonstrated success and may properly be considered as a permanent development in the evolution of distribution.

Whether the ideal of the ultimate distribution of farm products to the final consumer will soon, if ever, be realized is far less certain. Few attempts have been made in this direction and these have not been notably successful where attempted in a large way. Of the attempts made in this direction, those made in the retail distribution of market milk have been most conspicuous. These experiments have, at best, resulted in only partial success, with a far greater proportion of ultimate failures than has been the case with wholesale cooperative selling. This experience of the pioneers in this line of development of the selling business should be carefully studied by other producers who are attracted by its possibilities, to the end that the mistakes made by them may be avoided.

In the history of the cooperative movement, cooperative buying in a wholesale way by consumers has been almost as uniformly successful, as has cooperative selling in a wholesale way by producers. In fact, the most conspicuous of the earlier cooperative successes were of this nature. In the development of privately controlled distribution, wholesale transactions have been the universal point of contact between the collectors and the distributors of food products, where direct transactions were impractical. Obviously the elimination of the collector, so far as his services may be dispensed with, as it has been demonstrated that they may in a great majority of cases, is the proper economic function of the producer. It has also been pretty clearly demonstrated that the services of the private distributor may, under favorable conditions, be economically dispensed with by organized consumers. But whether producers generally can profitably travel the full length of the road to the consumer's door still remains to be demonstrated.

The logical course in this economic development is undoubtedly the one which is now being generally followed, to its practical completion. The final answer to the question as to whether this is the most advantageous meeting point of producers and consumers remains for future development. Experience must determine this point, and this experience should not be made more costly than is necessary.

Advertising Michigan Beans

AN important and progressive step toward popularizing Michigan beans with domestic consumers and thus permanently benefiting this important factor of agricultural production in our state has been taken by the Michigan Bean Jobbers' Association. At an informal meeting of members of this association held in Lansing late in April an advertising committee was appointed and a guarantee fund of $3,625 was subscribed by those present to carry out an advertising campaign with a view to stimulating consumption to a point which would facilitate the movement of the balance of last year's crop.

At a meeting of the association held in Saginaw one month later, a report was presented by the advertising committee giving the results obtained from the expenditure of some $3,000 of this fund in the advertising of Michigan beans in a number of the larger cities of the country. From the reports received from the various cities the committee drew the following general conclusions, which will be of as great interest to bean growers as to bean jobbers:

First.—That there is an increasing demand for Michigan navy beans, caused to a large extent by the advertising which has been inserted in the newspapers.

Second.—That the high food value of the Michigan navy bean is not generally known.

Third.—That the superiority of the Michigan navy bean over the imported bean is not recognized by the general public.

Fourth.—That wholesale and retail grocers are enthusiastically inclined toward an educational campaign which would tell the American family about the Michigan navy bean and how it can be used to lower living costs.

Fifth.—That now is the opportune time to inaugurate a consistent and continuous educational campaign.

Sixth.—That the newspapers, wholesalers and retailers will cooperate with the Michigan Bean Jobbers' Association in making such a campaign a success.

Seventh.—That the Michigan navy bean can be made a principal part of the American menu today at a far lower cost than at any other time in the country's history because of the present-day economic conditions.

Eighth.—That we should place the Michigan navy bean upon a pedestal where it rightfully belongs and create for it such a demand that the people will willingly pay a premium to obtain the genuine Michigan navy bean.

Ninth.—That we should take full advantage of the opportunity to secure the cooperation of wholesalers and retailers, who are ready to push the Michigan navy bean and spread broadcast our propaganda.

The bean jobbers present at the Saginaw meeting thought so well of this experiment in the education of consumers regarding the quality of Michigan beans, that the advertising committee of the association was authorized to formulate a further publicity campaign and provision was made to finance same. This promises well for a good outlet for next year's crop and should aid in encouraging the planting of a liberal acreage to this crop this year.

Perhaps the most significant fact regarding this experimental publicity campaign is that the indirect benefits which may be derived from it are likely to surpass the direct benefits already apparent. From the official report of the meeting it appears that the investigation as to the result of the advertising suggested certain practices to the bean dealers which are likely to have a very permanent and far-reaching effect in increasing the popularity of Michigan beans with consumers throughout the country. The most important of these suggestions were the stenciling of the bags in which the beans are packed, and the enclosure of similarly stenciled paper sacks in each bag for the use of the retailer in selling the beans over the counter. The general adoption of this plan will be of great advertising value to the Michigan product and protect it in large degree from the competition of inferior products, especially if supplemented by suitable educational campaigns to impress the superiority of our product on the consumer's mind.

In view of this development it is to be regretted that the bean growers' association has become inactive, since growers could well afford to cooperate with dealers in popularizing their product.

Farmers' Liberty Bonds

THE need for new capital in the floating of new business development since the close of the war has caused the fiscal agents of new stock issues to cast an envious eye toward the accumulated savings of farmers in the form of Liberty Bonds. The salesman with investment or speculative stocks to offer has been quite willing to take the farmer's bonds at par, which sounds like quite an inducement in addition to the "unusual opportunities" offered by the stock itself. Generally the developing enterprise can use the bonds. If not the salesman is ready to convert them at the discount in order to get his fat commission for the stock sale.

There are cases where such a transaction is also profitable for the farmer, but in a majority of instances the owner of Liberty Bonds will be wise to forget the "par" offer for his bonds as an inducement to part with them, particularly unless he is positive regarding the value of the investment offered. Liberty Bonds are good property, always available as collateral and easily convertible into cash. They will yield an income while maturing and will in the end be redeemed at par.

News of the Week

Tuesday, May 25.

PRESIDENT WILSON asks congress to grant authority to accept for the United States a mandate over Armenia.—Railroads are gradually relieving the freight jam while the chiefs are urging upon the interstate commerce commission the necessity of an increase in freight rates.—A sweeping investigation of the sugar brokers of the country to obtain a fair distribution of the product if possible is to be made by the federal department of justice.—One person is killed and twelve injured in a railroad collision at Hazelton, Pa.—The American Sugar Refining Company advances sugar another cent to twenty-two and a half cents per pound.

Wednesday, May 26.

ANNOUNCEMENT comes from Japan that paper is being successfully made from a sea weed.—Italy is seeking closer trade relation with the United States.—The war department expects to settle all unliquidated war contracts before July 1.—American exports to Hong Kong have increased forty per cent since 1918.—The United States navy buys 5,200,000 barrels of crude oil.—The crash in silk market of Japan has resulted in the closing of two of her big financial institutions.

Thursday, May 27.

PRESIDENT WILSON issues a proclamation lifting all government control over cereals and cereal products on June 1.—Food prices dropped an average of twelve per cent in New York last week.—The commission on car service orders the roads to put in operation the plan of moving solid trains.—Dealers in Argentine are now permitted to export sugar up to one hundred thousand tons.—Judge Anderson declared unconstitutional the sections of the Lever law which prohibits combinations formed to limit supplies in the necessities of life and also the charging of excessive or unjust rates and prices.

Friday, May 28.

PRESIDENT WILSON vetoes the peace resolution passed by congress, stating that he could not become a party to a program that would put an ineffaceable stain on the nation's honor.—Former Minister of Reconstruction for France believes that that country will be able to pay off her immense debt within forty years.

Saturday, May 29.

AN effort to override President Wilson's veto of the republican peace resolution fails to pass the house by twenty-nine votes.—Foreign trade for April shows a net balance of $250,000,000 in favor of this country.—The army reorganization bill will go before the house without provision for universal training.

Sunday, May 30.

FOREST fires are raging in New Brunswick.—Thirteen former German passenger ships have been chartered for a trans-Atlantic mail service.—The house of representatives adopts the conference report on bill providing for a federal budget system.—Statistics compiled by the United States Forest Service show Michigan's untouched timber resources still aggregate more than 50,000,000,000 feet.

Monday, May 31.

RUSSIAN Bolshevik troops have occupied an important port on the Caspian sea.—In an engagement between French and Turkish troops near Killis, Syria, 1,200 Turks are reported killed.

Tuesday, June 1.

LORD READING, of England, is elected president of the international law congress.—A tentative agreement is reached by house and senate conferees upon a $33,000,000 appropriation for the army air service.—Forty-two persons are injured at Liscomb, Iowa, by shot cartridges fired by former soldiers as a part of the Memorial Day exercises.

Marketing Woodlot Products

Professor F. H. Sanford of the M. A. C. Forestry Department Makes Some Practical Suggestions.

AFTER reviewing the situation relating to the marketing of timber as given in the issue of May 15, the question may then be asked: What can be done to correct this condition, and the answer is patent: A large and ever-increasing per cent of woodlot owners are taking care of their timber. By this I mean that they are:

First.—Building up a full stand of young timber.

Second.—They are cutting the defective trees for fuel instead of the easiest-splitting, straightest ones, as many were doing a few years ago.

Third.—Many of these are not allowing stock to destroy the forest floor or pack the soil, as this readily checks growth by causing the loss of the soil moisture.

Fourth.—Careful and wise selective thinning is being practiced to bring about proper spacing of trees and thus a condition of maximum growth.

Taken together, all these points in the care of a woodlot may be called intensive cropping for wood. The owner looks at the product as having a value meaning that has been produced by his effort and at once assumes a value.

Such an owner is apt to think of his woodlot as a crop that has been and is in his control, and if he does, he expects a harvest that will pay him for the cost of production and a fair profit, though as yet few think in these terms, still that is in substance the idea in his mind. From this class of owners must come the demand for a fair and uniform market if the woodlot products are to be justly distributed. It is also true that such a market must be established if the proper stimulus and encouragement in timber production is to be secured to the great mass of woodlot owners.

The Community Project.

At present in nearly every small town at some time during the year, may be found the banks of logs brought there by farmers, and awaiting the arrival of a small portable mill which cuts them into the necessary sizes and dimensions required for the farm uses.

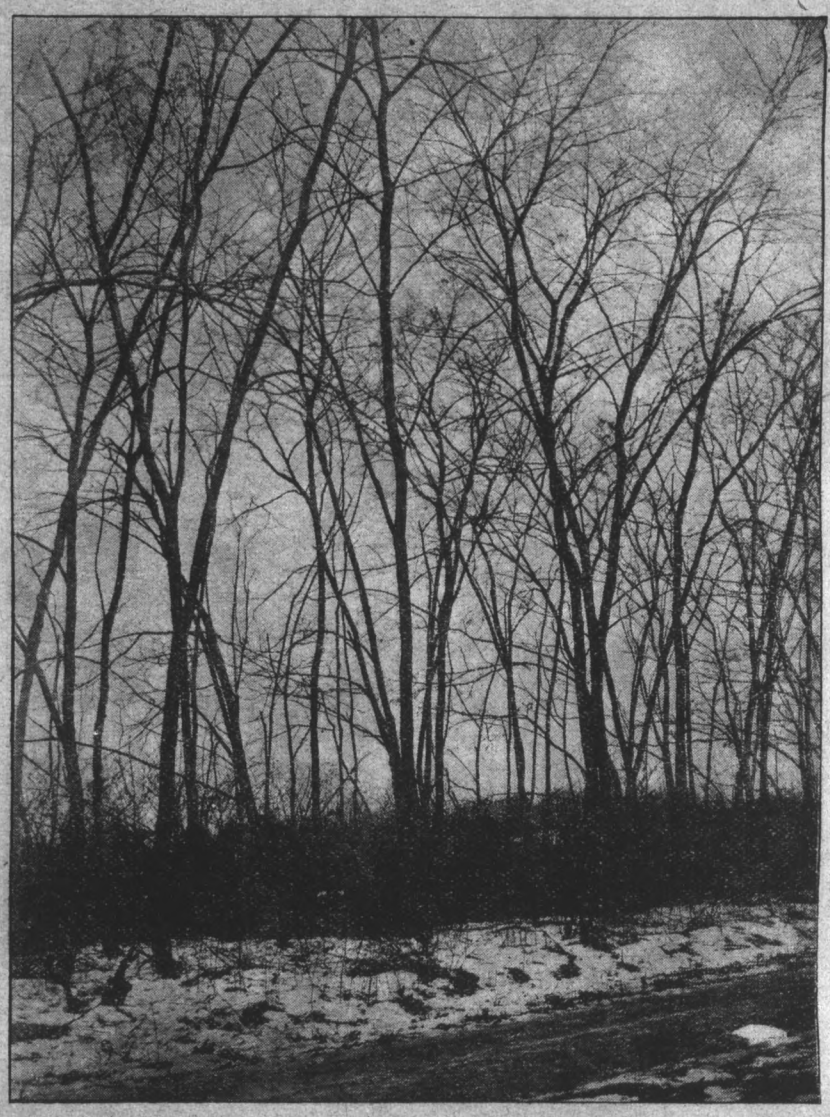
In such a yard, visited the other day, about two hundred thousand feet of choice white and red oak, maple, ash, cherry and walnut, beech and basswood was awaiting a five thousand to eight thousand daily capacity saw outfit that was incapable of turning out uniformly true thickness stuff.

Many boards from such outfits run all thicknesses, from three-quarter-inch to six and a quarter inches except under the most skillful of head sawyers. Had there been in existence a well established market for these logs of $96.80 per thousand, the value of that rollway would have been at the least, $19,360 when sawed up.

To supply these same farmers with a good grade of yellow pine or Douglas fir that would meet their requirements in every way the cost would have amounted to approximately $13,000 from quotations secured from the local dealer.

In addition to the saving of a profit of $63,600 which would have benefited the twenty-five or thirty contributors at a fair average price for the product to that rollway, each one would have had dressed lumber that was cut true to size and ready to paint.

But while the community grouping of lumber or timber either for buying or selling purposes is a step in the right direction, it is not the final word in cooperative marketing. Like the individual producer the individual community is helpless without the opportunity of exchange between other like organizations.



This row of black locusts stand along the roadside of the farm belonging to H. L. Brown, of Jackson county. Instead of keeping the volunteer sprouts cut off each summer, as many farmers do, he allowed them to grow. Today this row is half a mile long and if cut would easily average six to ten posts to the rod. In addition to the present post value of this row there is a decided windbreak value which may be maintained if a careful selection cutting is done to meet only the annual post requirements of the farm.

Once the local wood and log yards become organized units they may perfect county and state organizations to facilitate freedom of exchange.

Since the farmers of the state are joining the farm bureau almost unitedly there will be more buying and selling of woodlot products, such as logs, posts, ties, poles, maple syrup and sugar, nuts, fuel and building supplies as a part of their local activity, they will ask for wider service through their county and state organizations.

Such an organization as the farm bureau has an unlimited opportunity to put across a service to the farmers of Michigan.

Need for Cruising Assistance.

One of the very serious handicaps which the average woodlot owner suffers under at present, is his lack of knowledge of log or standing tree values as referred to above. Before he can act safely in a timber deal the farmer must know the value of his timber. He should have a definite policy in mind for the future of his woodlot and in order to lay the harvesting plans should be able to either specify terms and manner of cutting, or else be able to secure disinterested and impartial estimates and advice at reasonable costs.

Under an organization of farmers this service could be established and handled efficiently and justly. The uncertainty and unfairness between buyer and seller would gradually fade out as true values and quantities became known.

Better Markets and Closer Utilization of Choice Varieties of Wood.

Some woods of Michigan are exceedingly high-priced and valuable, but owing to the isolated and scattered condition of such timber the individual owner markets or saws it with other woods for domestic uses because of the difficulties of handling it separately.

Operating under a state organization this owner would learn of the special markets for such species. Communities or counties might assemble and buy and sell in quantities to attract the best prices of distant manufacturers.

Distribution of Necessities.

Many woodlots produce great numbers of valuable posts, ties and poles as well as a large acreage of timbered land that is annually being cleared to provide more farm and pasture land. Such products should be distributed to

(Continued on page 884).

A common condition in the woodlot sections where pasturage of the woods has prevailed for too long a time. Old mature oaks here shade the open spaces and prevent even a good growth of grass, while the live stock destroys all seedling growth as it appears. A remedy may be found when the ripe, mature timber can be marketed to advantage and the young growth encouraged to come in and fill up the open spaces.

Great acreages of land like this that are growing willow and tag-alder brush should be producing crops of some kind. Better to have it growing timber until agriculture demands it for food production than to allow it to stand like this year after year producing nothing except a very favorable condition for fires.

WORK OF OUR

Our Circuit Rider Finds a Wealth Resources in a Survey of Barry

Pleasant home of A. N. Williams

BARRY is chiefly a rural county. It is not large and to the casual observer or person prone to quote statistics rather than travel the county it belies its agricultural wealth. The crops are so diversified and the products go to market in so many forms that the general average rather than crop yields and total sales of certain products must be given proper consideration in estimating returns from farms.

The railroads wander through narrow valleys and some of the poorest farm lands. That is one thing what ails Barry county—it don't show up to advantage unless one takes the trouble to seek things. If you want to see productive, well-kept farms and progressive farmers, take a flivver and roll through miles and miles of good farming land and see some of the best farms in Michigan.

In any effort to portray its agriculture the natural advantages for live stock production must be emphasized. In dairying Barry county is on the upgrade. The pastures are luxuriant and the climate and soils right for growing corn, clover, alfalfa, and small grain. There is a keen interest in cow-testing work and breeders' associations are encouraging the keeping of better cows. Everything but the labor situation is favorable for a big expansion of the industry.

Beef feeding is a leading feature of the farming. On many farms one finds a combination of silage, hay and grain feeding. The Shorthorn Cattle Breeders' Association is doing a splendid work. There is a steady increase in the number of silos and alfalfa is taking possession of considerable of the rolling land.

Swine breeding is receiving considerable attention. One Duroc Jersey Breeders' Association at Doster has twenty members who own high-class sows and three good sires are owned jointly. By combining their interests they have secured many good advantages and succeeded in putting their community on the map as a center for good Durocs.

Interest in sheep is steadily increasing, though the topography of the county is favorable for a more rapid expansion of the industry, especially on the basis of small farm flocks for utilizing waste and grazing rough lands. It would seem that the new way of marketing wool cooperatively would stimulate an interest in this type of sheep husbandry.

Like other Michigan counties Barry goes in strong for poultry. But instead of large flocks one finds a large number of small flocks. Culling is the order of the day. One woman near Middleville has increased the egg returns from her one hundred hen flock forty per cent by simple culling methods. A number of others claim equally as good results. This work is being urged by the County Farm Bureau.

Great agricultural economists preach the doctrine of making the farm feed the family living on it. If this doctrine is based upon the right principles, then the great secret of Barry county's strength is revealed. Begin a typical rural county with no large centers of population her farms contribute largely toward feeding their families; so that what is sold is farm surplus. Apply this axiom to her farmers and you will discover why the poorer ones are being eliminated as rapidly as poor cows and hens.

SINCE the recent membership drive which rounded up something like seventeen hundred farmers in the farm bureau, organizing the producing interests seems to be the order of the day. Frank Bennett, the new county agent, is busy carrying on the work started by R. V. Tanner. The day the writer arrived at Hastings Mr. Bennett drove over to Woodland where we visited the lively Cooperative Shipping Association.

In the evening we drove to Nashville and visited the officers of the Farmers' Cooperative Creamery Association. Here is a live group of men, and one of the best creameries in Michigan. It has seven hundred members, makes forty-two thousand pounds of butter a month and sells it for seven to eight cents above the quotations for creamery firsts. The association also handles all kinds of dairy feeds.

The officers are: Will G. Hyde, president; A. T. Shepard, vice-president; C. W. Pennock, manager; Chris Marshall, W. A. Smith, L. D. Gardner, George H. Garms, C. F. Fuller, Seymour Hartwell, directors.

The Nashville Cooperative Elevator Association is getting organized for business. It will handle grain and general farm supplies. The officers are H. H. Offley, president; R. B. H. Tieche, secretary; Earl Olmstead, Glenn Worting, Arthur Mead, Fred Garlinger, Ed Penfold, Myron Tuckerman and Ed Liebhauser, directors.

At Cressey the Southern Barry Shipping Association, with Dilbert Ensign, president, and John Oslow, manager, shipped more than $150,000 worth of stock at a big saving to farmers.

At Middleville we visited the Cooperation Association, which conducts a $250,000 annual business of shipping stock and handling farm supplies. Its officers are: Jarvis H. Campbell, president; F. D. Pratt, manager; Wm. Gackler, Glenn Allen, John Sensiba, Albert Barrell, directors.

Middleville also has a cooperative creamery which does a business of about $125,000 annually. It has five hundred and fifty members and is organized on the non-profit plan. The officers are: Fred Steeby, president; F. O. Stokel, manager; Samuel Allen, Jarvis Campbell, Frank Waters, directors.

R. V. Tanner, Until Recently County Agent of Barry County, is now Assistant Manager of the State Farm Bureau Seed Department.

Over at Schultz is a prosperous cooperative creamery with Will Gorham, manager; Will Chamberlain, president. Freeport also has a live cooperative creamery. At Delton we visited the Cooperative Shipping Company, which did $120,000 worth of business last year. The officers are: W. H. Whittemore, president; R. E. Webster, vice-president; D. B. Erb, secretary; Clayton Louden, manager; C. Lechleitner, Lewis Heine, Wm. Dunning, directors.

The Delton Cooperative Creamery Company does a strictly butter-making business, owns its own trucks and does its own marketing. The officers are: Eli Lindsey, president; Marshall Norwood, vice-president; John Doster, treasurer; Philip Merlau, D. B. Erb, directors. Last year's business went above the $120,000 mark.

At Hastings the Central Barry Cooperative Association handled $210,000 worth of stock last year. It handles seventy-five per cent of the stock shipped at Hastings. The association has four hundred and seventy-five members and the officers are: Peter Kuntz, president; R. B. Walker, vice-president; C. A. Woodruff, manager; D. W. Sisson, Theron Cain, Clayton G. Humphery, Charles J. Moore, directors. At the present time efforts are being made to organize another association at Hastings to conduct an elevator and handle farm supplies.

BARRY county is pretty well organized and much of the credit belongs to R. V. Tanner, who had charge of the projects before going to Lansing to become assistant manager of the seed department of the State Farm Bureau. Frank Bennett, who succeeded Mr. Tanner, was born and raised in Kent county. He is especially well qualified to carry on this line of work for his wide experience as a Grange leader, and his convincing way of putting across his ideas are sure to serve him well in the new work.

Mr. Bennett believes that the future of cooperative effort in Barry county depends upon better rural schools. "It is very evident," he says, "that our present system of rural training is undemocratic and cannot fit our boys and girls for the broader, fuller country life just ahead of them. In the days of the old district school few community projects called for educated, trained leadership. Now such projects as good roads, cooperative buying and selling, community welfare and better farming call for educated men and women who have a clear-cut idea of business and social problems. Civic duty and community welfare demand a broad and liberal education if farmers are to make the best use of their new powers and responsibilities. The consolidated school can successfully give the boys and girls the kind of an education they need for living in the new age just ahead. I look upon the school problem as one of the really big things which the County Farm Bureau must help straighten out."

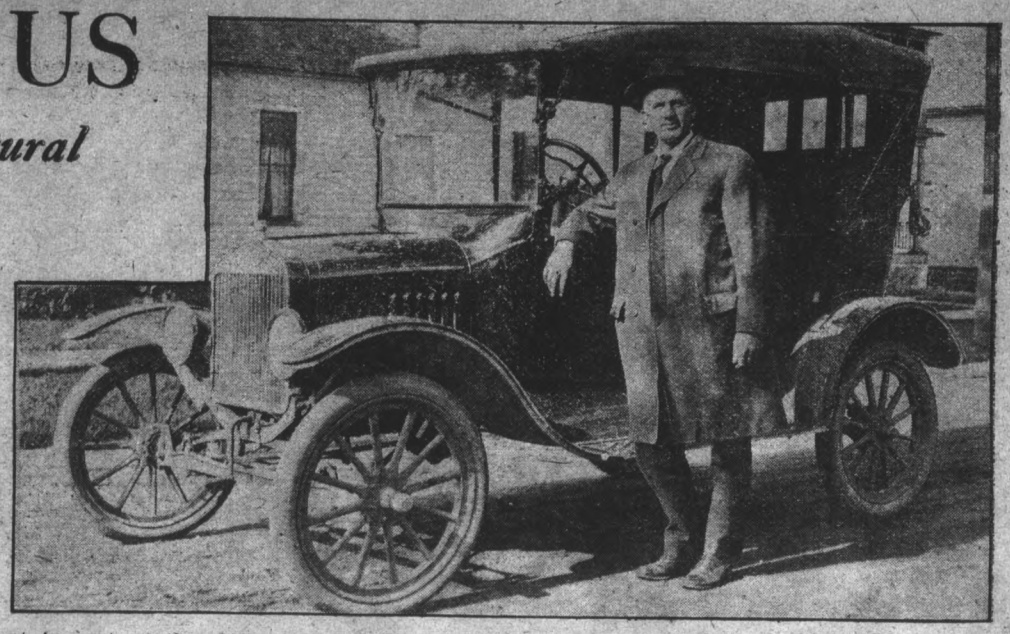
Another matter about which Mr. Bennett is exercising great caution is

Grace Oosterboon Hengerveld, 31.11-lb. Cow Belonging to H. E. Risling.

The Home of Fred J. Lawrence is Typical of Many in Barry County.

FARM BUREAUS

of Potential and Developed Agricultural County with County Agent Bennett.



County Agent F. W. Bennett

selecting the right locations for cooperative projects. Just because a few farmers in some little community are enthusiastic over the new cooperative way of buying and selling is no reason for calling a meeting to organize a new association. The big idea in this organization work is to build up a strong, well-financed association, situated at some good railroad point from which good roads radiate. One live association that enjoys liberal patronage will do more to spread the Gospel of cooperation than ten weaker ones. Unless one of these locals makes a turn-over of around $100,000 per year it is doubtful if much saving can be made in conducting the business. Of course, there are exceptions to all rules, but generally speaking there should be more attention given to the selection of suitable locations for these associations. This is a problem that the County Farm Bureau cannot afford to overlook in their general organization plans.

THAT these cooperative movements are having their influence on various dealers, jobbers and manufacturers is quite evident from the visits I have had with salesmen who are covering the territory in the counties where the associations are most active. In the hotel at Hastings I fell in with a farm implement salesman. This keen-scented trade hound has a nose for new conditions and travels about the country with his ears and eyes open. "I am here to tell you," he remarked, "that the farmers have come out of their Rip Van Winkle sleep long enough to discover that they can have something to say about their own business. This discovery is breaking up the day dreams of a lot of fellows who have always figured that they had a blanket policy on a large portion of the farmer's income. I cover quite a territory in some of the good farming states, and since I have been up here in Michigan I've bumped into enough of these cooperative associations run by farmers to know that they can give a service which means mighty warm competition for a lot of firms who are underestimating their strength. The firm that neglects to figure these things as a factor of the trade in Michigan is blind to its opportunities. It requires good salesmanship to sell these farmers, and the firms that think they can sell their goods in the old way and ignore the farmers' business organizations are due for a sudden jar.

"The thing I like best about these organizations here in Michigan is the fact that your County and State Farm Bureaus have cut out all political and social trimmings, and put the farmers in a way of getting some profits of the business that would otherwise go to fellows who have worked together so long. If cooperation can be made to save real money, farmers can provide necessary entertainment and uplift. They are no longer content to put their good money into so-called cooperative enterprises and receive their dividends in the form of songs, speeches, literature and promises of Chief Potentates and Most Dignified Runts. The big idea of all successful cooperative undertakings is to do business exactly as any good business man would do it. Any other method invites failure."

ABOUT a mile out of Hastings we visited J. E. McElwain, secretary of the Barry County Holstein Breeders' Association and breeder of registered Holstein cattle. Here we found a foundation herd of large, growthy cows from the best lines of breeding. Mr. McElwain has recently purchased from Mr. H. E. Risling for one thousand dollars, a son of his famous cow Grace Oosterboon Hengerveld and from his herd sire described below. Through the efforts of Mr. McElwain, Barry county is securing one new member each month to join its Holstein Breeders' Association.

At Mr. Risling's farm near Wood land we found Holstein cattle of the right type, size and productive capacity. Thirteen of his cows averaged above sixty-one pounds of butter-fat a month in the cow-testing association. In Mr. Risling's herd are Grace Oosterboon Hengerveld with a record of 31.11 pounds of butter; 583 pounds of milk in seven days. Duchess Girl Veeman, 29.27 pounds of butter, and 575 pounds of milk. Meta De Kol Veeman, 25.47 pounds of butter, 700 pounds of milk.

His herd sire, and the sire of Mr. McElwain's bull, Johanna Hengerveld Beets De Kol is a genuine wellbred bull, whose sire has a fine list of daughters, headed by a thirty-seven-pound four-year-old that was sold for $5,000, and he is from Aaggie Pauline Sarcastic, the greatest high-record cow of her time. His dam averaged well over eighty pounds of milk a day and made thirty-three pounds of fat in seven days. She is a granddaughter of the first century sire, the famous Hengerveld De Kol, who has ten thirty-pound daughters. Mr. Risling has about thirty head of the type and breeding that pleases the most critical breed enthusiasts.

Mr. W. R. Harper, on his Thornapple Stock Farm near Middleville, has a group of young cows coming on that one would have to travel a long ways to duplicate in type, quality and production. Mr. Harper is making some good records and since devoting his personal attention to his farm and stock is getting things in shape to go after bigger game. At the head of his herd is Veeman Pontiac Lakeside Lad, an excellent young sire, whose six nearest dams average 32.05 pounds of butter in seven days. This is one of the best and strongest bred bulls in Michigan. His sire, Alcartra Pontiac Butter Boy, is rapidly coming to the front as a sire of great producers, and when his daughters reach maturity he is sure to rank among the great sires of the breed. The dam of Mr. Harper's bull is Wheedie Queen De Kol, one of the highest record cows in Michigan, whose thirty-three-pound record completed a three-generation family of thirty-one-pound cows.

Other well-known Holstein breeders are Jordan Brothers, who have made a number of records of from twenty to twenty-six pounds of butter in seven days. Newton Brothers and L. J. Matthews, who have recently purchased, jointly, for one thousand dollars, a bull from Mr. Risling's herd. Dorr Stowell, who has some classy daughters of the Risling bull. Percy Winslow, who has some bang-up good young stuff. A. D. Miller, of Woodland, who is buying the best and breeding them better. F. D. Cutler, who recently sold his herd and has set about the task of building up another. Carey U Edmonds, the well-known Duroc Jersey swine breeder who is getting ready to make Holstein men sit up and take notice. Harold Barnum, a former M. A. C. man, who is deeply interested in Holsteins has got the foundation of a crack herd. In blood lines and production records the county is making rapid progress, and no effort is being spared to secure the best sires of the breed to improve Barry county's Holstein herds.

HOLSTEIN men have no monopoly on enthusiasm for the Barry County Shorthorn Breeders' Association, of which W. L. Thorpe is secretary, is keeping the "beef pot" boiling. Among the leading breeders are George Doster, of Doster, with forty head; I. J. Maichell, of Middleville, with twenty-four head; Ernst Richmond, of Doster, with twenty head; H. J. Flower & Son, of Milo, with thirty head; Robert Williams & Son, of Middleville, with their Milking Shorthorns; W. L. Thorpe, of Milo; Sherman Enesley, Peter Kunz and Robert Martin, of Hastings, who all have good foundation herds. Chas. Campbell, of Middleville, George Moorehouse, Eli Lindsey, E. C. Towne, Ernest Moorehouse, Thomas Gorham, C. C. Pettingill, M. N. Hughes, Fred Hughes, have all started in the game and have good foundation stock. Mr. Thorpe says: "We owe a whole lot of our first year's success to Professor Edwards of M. A. C., for his efforts to get us working together and along the right lines."

A few miles from Hastings, on the road to Woodland, we visited the farm of F. J. Lawrence & Son. The Lawrences have one of the best Duroc Jersey herds in Michigan. At the head of the herd is one of the best sons of that famous sire, Taxpayer's Model. Among the sows were large, growthy individuals of refined type and the most popular blood lines. Mr. Lawrence was formerly president of the County Farm Bureau and has always taken an interest in its activities. He grows pedigreed seed and from his field of Rosen rye last season he harvested thirty-four bushels per acre.

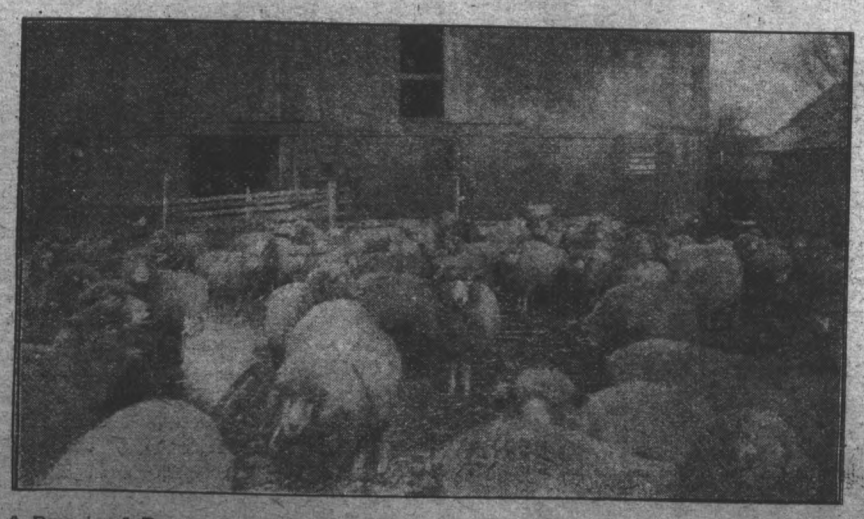
W. A. Smith, of Nashville, has one hundred and thirty acres of land devoted to dairying, hog feeding and potato growing. Mr. Smith is a crackerjack dairyman and is never content unless some of his cows lead in the monthly records of the cow-testing association.

Three miles north of Nashville we visited Roy Brumm, formerly County agent of Garry county. Mr. Brumm is an old M. A. C. man and has one of the best fenced and best laid-out farms in the county.

Charles Cridler's two-hundred-acre farm near Middleville is one of the real show farms of the county. Everything is modern and the farm is equipped with every convenience and comfort that goes to make country life worth while. Wheat, corn and alfalfa are the main crops and Holstein cattle and Duroc hogs make up the live stock.

At Delton, D. B. Erb has an excellent farm of one hundred and thirty-five acres devoted to dairying and general farming. Mr. Erb is active in all cooperative work and every movement to benefit the farmer.

W. A. Grozinger owns a fine farm of two hundred and fifteen acres a half mile from Woodland, where he feeds lambs and grows large crops of alfal-



A Bunch of Range Ewes on the Farm of Mr. Williams, who has Generally Found Good Money in Handling Western Sheep.

Hattie Belle Val DeKol, with a Record of 208.44 lbs. of Butter in Thirty Days, and 4,470 lbs. of Milk. Owned by J. E. McElwain.

fa, corn, clover and wheat. It is one of the best farms in Barry county.

Another organization that is doing good work is the Barry County Bee-keepers' Association. One of the objects of this organization is to induce bee-keepers to clean up and prevent disease from spreading among the bees of the county. John Dietrich, of Middleville, is president; C. Coulthard of Hastings, is vice-president.

MRS. JOHN C. KETCHAM, of Hastings, is a member of the executive committee of the Michigan State Farm Bureau. When asked for a brief outline of what the State Farm Bureau could do for the women on the farms of Michigan she replied: "I have several things in mind that are not ready for publication, but you can say that I am very much in sympathy with home demonstration projects and know that there is an increasing demand for such kind of field work. The great problem is to devise means of interesting a larger number of farm women in each community so that our work will be less scattered. I am also deeply interested in the boys and girls and the improvement of our rural schools. It seems to me that one of our really big problems is to correlate and unify all of our present agencies and to make the work more direct and to make better use of all of the leaders who are avalable for such work. Boys' and Girls' Club work and our rural schools are two questions so closely interwoven that I am in hopes that we may succeed in working out plans for conducting our club work through the rural schools; thus giving every boy and girl equal advantages."

No description of Barry county's agricultural activities would be complete without mentioning the efforts of the Barry County Agricultural Society to make the county fair one of the best in Michigan. For six years such men as W. L. Thorpe, W. R. Harper, John Dawson, P. A. Shelton, Robert McKibben, Elmer Risling, Robert Martin, John Hinckley, Fred Lawrence and others have worked together to make the fair an outstanding success.

Last year two hundred and fifty purebred cattle were on exhibition, the attractions were equal to those at many state fairs and every effort was made to give the people a big, clean and educational fair. Barry was the first county to hold a night fair and one of the first counties to have the fair grounds lighted with electricity. The best day's attendance last year was twenty-two thousand.

This year the fair association and the Barry County Farm Bureau are cooperating to make up one of the best farm crops exhibits of any county fair in Michigan. Prizes ranging from twenty dollars to fifty cents have been listed by the fair association for the best exhibits of grains and seeds. The farm bureau has distributed seeds in each township and farmers are taking a keen interest in the contest.

CLUB work has not been neglected in Barry county. During the summer of 1919 Miss Nathalia Vasold had charge of the work. Seven canning clubs were organized throughout the county—the Middleville Canning Club, Hastings Canning Club, Hickory Corners Canning Club, Cressey Canning Club, Pine Lake Canning Club, Lakeside Canning Club, Rutland Canning Club. Each of these clubs made an exhibit and a team representing each club gave a demonstration of cold pack at the county fair. Hickory Corners Canning Club won first prize having canned over three thousand jars of fruit, vegetables and jellies. Marguerite McElwain, member of this club, secured second place in the state in first-year canning work, canning almost four hundred jars. The Middleville team won first place in the district contest entitling them to a trip to the state fair at Detroit to compete with four other teams for the championship of the stae. They scored highest in the contest and were given a loving cup in recognition of their splendid work. The enthusiasm for clubs is increasing. In the rural schools about thirty serve hot lunches and there is great interest in garment-making clubs and handicraft work.

THE Barry County Farm Bureau is organized on the township basis. Each township having a president, vice-president and secretary and treasurer, and appointing a man in each school district to act as committeemen. They receive notices of meetings and in turn inform the members of their district. Every Tuesday a Bulletin is mailed to these leaders, which gives them special information such as coming sales, wants and schedule of meetings. These district committeemen have cards which they use filling out anything they wish to advertise for sale or wanted, and mail to the County Farm Bureau office each week and on Tuesday they are listed in the weekly bulletin free of charge. The bulletins are kept so that each member in the districts may see them. Various ways are used, some have a blackboard, others are put in the local post office or other public places. The executive board is made up of a representative from each township.

Board of Directors.

Eli Lindsey, president, owns a five-hundred-acre farm near Delton, where he conducts a general farming business which includes feeding cattle, sheep and hogs. A member of the Barry County Shorthorn Breeders' Association and one of the hardest workers for the success of the County Farm Bureau.

A. T. Shepard, vice-president, owns a large farm, and practices diversified farming. An active cooperative worker, and highly respected. Lives at Assyria.

John C. Killick, secretary-treasurer, lives on his two-hundred-acre farm near Doster, where he practices general farming and breeds Red Poll cattle. He also grows quite an acreage of potatoes. Has experience and ability.

Charles Campbell owns a one hundred and thirty-five acre farm and practices general farming, breeds Shorthorn cattle and is active in all work that tends to help his community. One of the pioneer farm bureau workers.

Fred Elliott owns a fine farm near Cressey and is much interested in the poultry business. Well qualified by experience and natural ability.

Fred A. Smith, of Hastings, owns and operates a one hundred and fifty-acre farm devoted to general farming. Has served as supervisor of his township and is interested in cooperative work.

Eli Hall has a one hundred and fifty-acre farm near Shultz and practices general farming. Has the reputation of being a stickler for justice and a square deal for the farmer.

H. J. Calkins has an eighty-acre farm near Nashville. Is active in all social and political movements that tend to benefit his community.

W. H. Shants owns and operates a dairy farm and breeds Holstein cattle. Has served in the state legislature and can fight when occasion demands.

Glenn Worting has a hundred and twenty-acre farm near Nashville and practices general farming. Is thoroughly interested in better schools and cooperative work of various kinds.

G. A. Garbutt has a hundred and sixty-acre farm near Middleville where he lives and conducts a general farming business. Stands for progress and wants quick action.

Frank Parmele has a farm of two hundred and fifty-six acres near Bedford where he practices a general farming and stock feeding business. Is progressive and has a large host of friends.

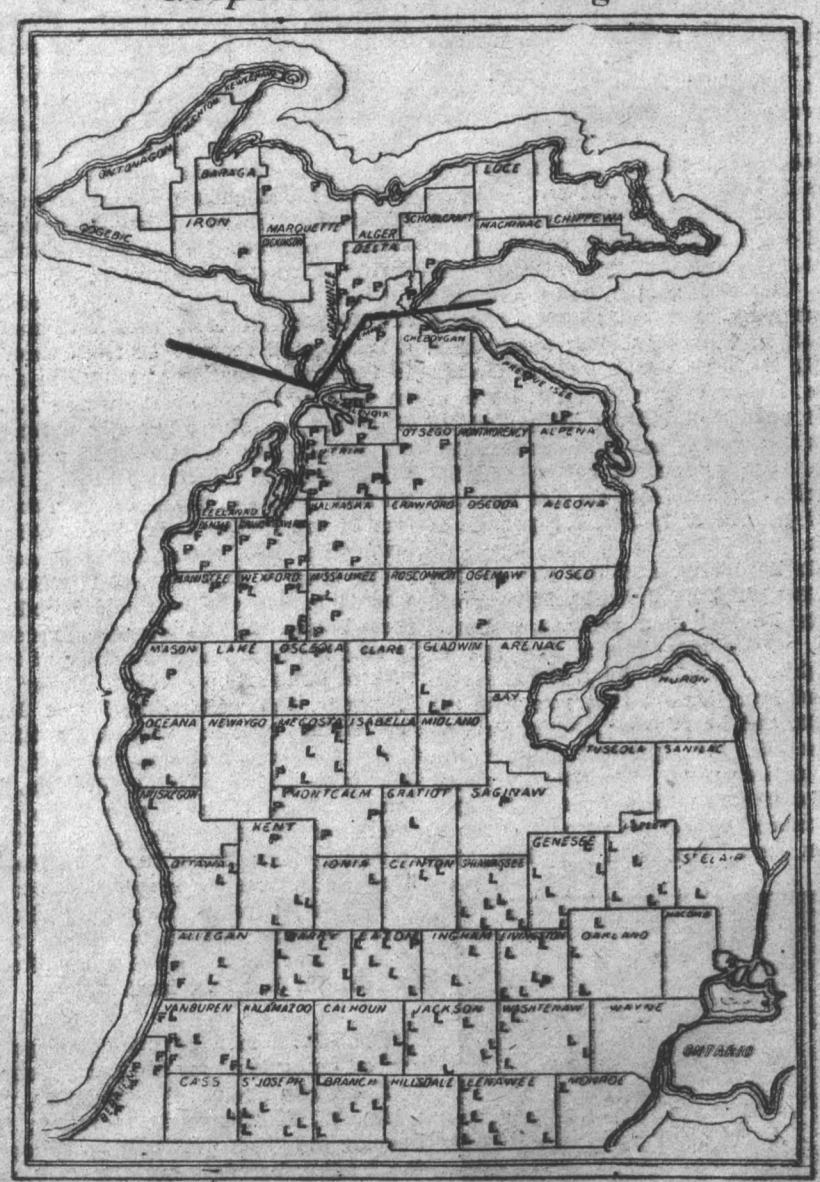
George Hatch owns a farm of eighty acres near Lake Odessa where he breeds high-class Jersey cattle and S. C. White Leghorn fowls. A city man who has made good in the country.

R. B. Walker has a splendid two hundred and forty-acre farm near Irving and is active in all work of a cooperative nature. Chairman of Marketing Committee and has had experience in institute work.

A. N. Williams owns a good farm of two hundred and fifteen acres near Hastings. Is in favor of all movements to better the farmer's condition. Can be depended upon to fight if necessary.

H. L. Rising, a successful farmer and Holstein breeder. A leader in Barry county and an experienced leader in better farming movements.

Cooperation in Michigan



THE letters on this map shows the approximate location of the local Potato (P), Live Stock (L), and Fruit Growers (F), Cooperative Associations in the state. If one refers to the map in the May 8th issue where the location of the various sugar beet growers' local associations is indicated he will have a general idea of the extent to which our Michigan farmers are cooperating in carrying on their business relations with each other and with the outside world. There are many cooperative enterprises in the state not listed here and of which we have no record. But what is here shown carries home the idea that the farm people of Michigan are thoroughly convinced that the principle of cooperation is correct. The prodigal manner in which our farmers are joining the Farm Bureaus is also significant.

FARM POPULATION DECREASES.

THAT there was a big shifting of the population of New York state from the farm to the city in 1919 is shown by a recent statistical investigation by the New York State Agricultural College, combined with the United States Department of Agriculture. The statistics show that during the past year more than three per cent of the people on farms left their homes and migrated to cities. This is in spite of the fact that farm wages are much higher than ever before, and the farmer is receiving very high prices for his crops.

A canvass was made of the farming communities throughout the entire state. Particular attention was given to the conditions on four thousand representative farms of various kinds. The results of the investigation showed that during the year about thirty-five thousand men and boys left the farm to go into other industries, and about ten thousand went from other mdustries back to the farm. This made a net loss to the state of her farming population of fully twenty-five thousand people.

This shifting has left more than ten per cent of the habitable homes on the farms vacant. At the present time there are probably twenty-four thousand empty farm houses in the state.

These conditions are hard to explain. In spite of the fact that the farm laborer received nineteen per cent higher wages in 1919 than in 1918, the number of hired men has been greatly reduced, so that there are now only one man for every three farms. Wages for single hired help averages $52.25, in addition to board, during the year, while married men received $68.50, in addition to a house for himself and family and some farm products, instead of board. Such high wages as these are unprecedented in the history of the state.

Providing this exodus from the farms continues during the coming year, there will be a much depleted farming population by 1921. This will mean fewer crops raised, of course, and continued high food prices will probably result.

Producing and Distributing Good Seeds

How the Michigan Crop Improvement Association and the State Farm Bureau Seed Department will Corrolate their Efforts to give Farmers the Maximum of Service.

A. L. Bibbins, Secretary Michigan Crop Improvement Association

AT the recent meeting of the board of directors of the Michigan Crop Improvement Association, action was taken to provide a means whereby every farmer in Michigan may be supplied with the highest quality of seed obtainable.

For several years this group of Michigan farmers, specializing in the production of pure seed, have furnished a large supply of exceptionally high quality seed and helped in placing the state of Michigan at the forepart as a seed-producing state. Not only have the results attracted the attention of farmers throughout America, but those in foreign lands as well. Inquiries concerning Michigan seed and this seed-producing organization are reaching the secretary from every state in the Union, also from Canada, Scotland, England, France and Australia, in fact, from nearly all parts of the globe.

Cooperation with State Farm Bureau Seed Department.

Athough members of the Michigan Crop Improvement Association are justly proud of the results obtained. they feel that their aim should be to place the best of seed on every farm in Michigan. To accomplish this purpose and be of the most possible service, the association is cooperating with the State Farm Bureau in formulating plans to carry out the proposed project. Mr. J. W. Nicolson and Mr. R. V. Tanner, represented the farm bureau at this joint meeting and a strong bond of cooperation was established, the result of which will be of great benefit to the entire state.

There are really two sets of plans, either of which will be of aid to anyone desiring to take advantage of the opportunity.

Plan 1.—The Michigan Crop Improvement Association, functioning as in the past, will continue to produce pure seed, the secretary issuing the seed list giving description and sources of inspected and registered seed. Anyone may obtain this list from the secretary and procure this seed directly from the producer, at the same time receiving the association guarantee as to genuineness, purity and quality. The seed department of the Michigan State Farm Bureau will function in facilitating the movement of quantity lots, especially carload shipments to out-of-state purchasers.

Plan 2.—The Michigan Crop Improvement Association will produce, inspect and register the seed as in Plan 1; the Seed Department of the State Farm Bureau to act as distributing agent to members of that organization, working through the various County Farm Bureau Seed Departments. In this manner the needs of each County Farm Bureau will be ascertained, and the supply of registered seed produced within that county utilized to fill the local demands. This will be a great saving in the transportation, and seed of high quality may be used in the same locality in which it is produced.

To aid this farm to farm movement of registered seed within the county, the directors of the Michigan Crop Improvement Association recommended that their members make a substantial reduction in price for these local sales.

In cases where there exists a surplus of seed in the county, the local seed department will pool this with the state seed department, who may utilize it to meet deficiencies that may exist in adjoining areas.

By this arrangement the Michigan-grown seed will be available first for home use and then if a surplus exists out-of-state demands will be met. In this way such situations as existed with our 1919 clover seed crop may be controlled. It will be remembered that last winter large amounts of Michigan-grown clover seed were shipped outside the state. This spring we faced such a shortage of clover seed that it became necessary to bring some in from outside sources. Not only was this expensive because of the additional handling and tranporting of the seed, but very expensive for those who received seed that is far inferior to the Michigan-grown seed that was shipped out of the state.

Origin and Increase of Seed.

Most of the registered seed grown in this state was originated and increased at the Michigan Agricultural College. At the present time the Farm Crops Department at the college has on its increase plats pure-line selections of the following well-known varieties: Rosen rye, Red Rock wheat, Wolverine and College Wonder oats, Michigan Black Barbless and Mich-2-Row barley.

In addition to the work with the grains much has been done with forage crops, especially alfalfa and the Annual White Sweet Clover. At present, Frank A. Spragg, plant breeder, has strains of alfalfa that are not only well adapted to Michigan conditions and produce large yields of hay, but offer promise as seed producers. It is hoped that some sections of Michigan may become producers of hardy and adapted alfalfa seed.

The college now has five acres of the sensational Annual White Sweet Clover. It is expected that this will produce a sufficient supply of seed to permit distribution in the spring of 1921.

The seed produced on the increase plats is distributed through the Michigan Crop Improvement Association to farmers who are tried and proved seed growers. In this manner additional increases are made and a sufficient amount of seed is soon available for the planting of large acreages. To insure the maintenance of purity, pure-line selection and increases are made each year, and thus there is always available a supply of foundation-seed-stock.

Inspection and Registration.

This pure seed is safeguarded by the very vigorous and rigid inspection system practiced by the Association, by which the identity, genuineness and purity of the seed is absolutely known. Those fields which measure up to the high standards established by the Michigan Crop Improvement Association are certified and the seed given a registry number.

By the cooperation of these two powerful farm organizations, the Farm Bureau Crop Improvement Association thought that the farmers of Michigan may always be assured of a readily available supply of adapted and high-yielding seed of the best quality.

Board of Directors and Advisors of the Michigan Crop Improvement Association.

Rural Leadership and the Rural Teacher

By Chas. H. Smith

THERE is one public institution that we cannot afford to be close-fisted with, and that is our schools. For "a republican form of government, while being the best for an educated people, is the worst for an uneducated people." If this axiom of government means anything at all it means that citizens of our country must be educated if we are to retain our present form of government intact. And all of us certainly do want to retain our government intact—which being the case we must employ professional teachers throughout the land to educate our boys and girls.

"But aren't we doing this right now?" you ask. We are employing teachers, certainly, but the big majority of them are not professional teachers. The teachers who have real ability are not remaining long in a profession which pays them such a beggarly pittance as most school boards dole out. Their worth is quickly recognized in other lines of industry and they are hired at double and sometimes treble the amount they were paid for teaching. Their places are filled to a great extent with non-professional teachers. This is why the teaching force of our country is deteriorating. Men and women, specially equipped to teach—both with college training and natural aptitude—cannot afford to do so because they are not paid living wages. They go to other occupations, weakening our teaching force.

Anything that tends to weaken the teaching force of this country strikes at the heart of the government. An efficient force of teachers must occupy the schoolhouses of our country if we are to progress in the business of living. Education of the masses is the only solution for a great many problems with which we are confronted. Industrial unrest—the conflict between capital and labor, radicalism, bolshevism, the I. W. W.'s, corrupt politics—the cure for these things is largely education. Some of these pernicious doctrines may be imported but they can make no progress among an educated people. However, we can't hope to cure them by the employment of inferior teachers.

A professional teacher in your school is worth more to the community than almost any other professional man who may serve you. The proper molding of young lives during the period when they are most plastic is a highly important matter. From the standpoint of the child's welfare and the nation's welfare—indeed, we may say of humanity's welfare—we should educate

(Continued on page 800).

News of the Agricultural World

TRAFFIC DEPARTMENT OF THE MICHIGAN FARM BUREAU OPENS.

TO assist members and cooperative organizations affiliated with the State Farm Bureau in handling traffic problems the bureau opened a traffic department June 1. Offices have been obtained in the Norris Block, Grand Rapids, Michigan, in charge of Frank E. Coombs, for several years with the Michigan Fruit Growers' Exchange. This traffic department will be conducted along the lines similar to such a department in any manufacturing concern, or board of commerce, and work in the interest of the State Farm Bureau, and of the scores of county and community farm bureaus in the state. Its principal endeavor, of course, is to assist farm bureau members in obtaining their consignments, and in delivering shipments in just as efficient and economical a manner as possible.

Routings for shipments will be furnished any farm bureau member that requests them. All rate cases of both state and interstate varieties, affecting the farm bureau interests will be investigated.

Classifications will be closely watched. This is to see that ratings and classifications of the various commodities and articles sold and purchased by farm bureau members are not increased unduly or altered unfavorably. Every possible effort wil be made to keep the State Farm Bureau, County Farm Bureaus, and local farm bureaus thoroughly acquainted with ratings and classifications and changes in the embargoes, etc. There also will be service on claims for farm bureau members, that is the securing of redress for loss and damage shipments in consignment. It is intended that this will be done at a nominal fee.

Also, as soon as it is possible an inspection bureau of this traffic department will be operated. This is for a dual purpose, to assist the carriers and also to educate the farm bureau members in the correct and best method of packing, loading of cars, etc. There also will be efforts to have the cars properly inspected by shippers before loading for their protection against loss and damage on shipments.

The first function of this department has been for the interest of the canners of the state. They are having all sorts of difficulty in getting their shipments of cans through from the east, and their coal from the south.

ILLINOIS STARTS GRAIN MARKETING.

ILLINOIS farmers are launching off a project of marketing their own grain. In the building of a membership of eighty thousand farmers, the Illinois Agricultural Association has kept the big marketing problems uppermost in mind. Wm. G. Eckhardt, Director of the Grain Marketing Department, will hold a series of fifteen meetings in each congressional district in the state, starting June 1 and continuing three weeks. The program of marketing will be discussed by grain growers, farm elevator managers, and others interested in grain marketing.

The aim of the whole program is to make a steadier flow of grain on the market and steadier prices. The association believes the only way this can be accomplished is for the producers to be in a position to market their own products. There are six hundred farmers' elevators in the state. The association will put out five men to assist organization of new elevators and help organized elevators to get on a basis so they can handle the grain of that community, whether it be storage, drying of grain or financing farmers for grain in storage. When this work is well under way, it is planned to have a farmers' clearing house or brokerage to sell direct to the manufacturer, which will eliminate unnecessary handling and cost.

The Illinois Grain Marketing program was outlined to the presidents and secretaries of the eight middle west State Farm Bureaus at a meeting held at the I. A. A. offices. It will again be the subject of discussion at a similar meeting at Ames, Iowa, on June 22.

HOUSE STANDS BY FREE SEEDS.

THE house refused a second time to accept the senate amendment to the agricultural appropriation bill eliminating the $240,000 item for free distribution of seeds by congressmen. The senate continues to refuse to permit the free seed item to remain in the bill. All other differences in the senate and house bills have been adjusted.

PROPOSES BOARD TO DRAFT FARM POLICIES.

APPOINTMENT of a commission to formulate policies for agricultural readjustment is proposed by Herbert Hoover. Such a commission, Mr. Hoover says, would find:

"That the farmer's prices are fixed by competition with world wholesale prices at the points where the world streams of food meet; that such prices bear only a remote relation to the farmer's costs of production, and that consequently any increase in the cost of placing the farmer's products on sale at these places where competition meets is a deduction from the farmer's own receipts; that the continued inflation of credits since the armistice has extended speculation and profiteering by expanding the borrowing facilities to any food distributor who wanted to indulge in such practices has widened the margin between the farmer and his market, and has likewise increased the prices of the supplies that the farmer must buy as well:

"That the burden of taxation is wrongly distributed; that the excess profits tax, as it works out, is an opportunity for food manufacturers and distributors to collect taxes for the government by adding them to the margin between the farmer and the market;

"That the war deterioration in our transportation facilities had created periodic strictures in the free flow of food from the farm to the consumer; has compelled the farmer to sell his product during a local glut and has compelled the consumer to buy during a local shortage—again an increase in the margin;

"That the whole marketing system in many of our commodities is indirect, expensive, wasteful, obsolete and increases the margins unduly;

"That our manufacturing industries have developed out of pace with our agriculture, and that our labor is being drawn in thousands from the farm to the town, at wages that farmers cannot contend with;

"That the organization of consolidated buying of American produce by European governments, and the consequent domination of our prices, is a menace to the American farmer.

"Such a commission would seek the remedy for these things with that same common sense with which similar commissions of farmers met the great economic problems of the food administration during the war and with the same consideration for farmer, distributor, and consumer."

CONTROLLING GYPSY MOTH IN EAST.

THE news that the gypsy moth is advancing close to the boundary line of New York state from Vermont should not cause serious alarm," says D. D. Ward, associate manager of the Onondaga County Farm Bureau. "The moth has already intruded into sections of New York, and has been exterminated. What has been done once can be done again—and forewarned as we are, we can do even better than this. We can prevent the pest from coming in.

"There have never been gypsy moths in Central and Northern New York counties; that is, so far as the records of recent generations show. And by using vigilance there will not be now. It is one of those cases where prevention is far less expensive than cure, for this pest is especially hard to stamp out. Arsenical preparations are used in poisoning the moths, which destroy not only orchards but all varieties of trees and verdure.

"In combating them, too, parasites are bred that feed on the moths' larvae. Strict attention must be paid to all trees. Egg nests are painted with creosote.

"I believe the pest has been held well in check in recent years. However, the cold winter of two years ago in New England seriously hindered fighting the moths, for the low temperature killed the parasites that are being bred to prey upon them. Of course, the winter just finished won't help much, either."

Mr. Ward was emphatic in accenting the need for watchfulness. He said that the chances of the moths spreading into New York were minimized by rigid quarantines established, and the isolation of infested areas.

The report of the Department of Farms and Markets says that Commissioner Wilson assures farmers that the Bureau of Plant Industry is taking extra precautions to keep the moths from crossing the Vermont line into New York state. There is a large infestation in the Green Mountain state, twenty-five miles from the line. This means a renewal of the long battle upon the nuisance.

MEASURE TO STANDARDIZE BASKETS.

A BILL now pending in congress in which farmers have a live interest fixes standards for hampers, round stave baskets, and splint baskets for fruits and vegetables. This bill, which was introduced by Representative A. H. Vestal, of Indiana, provides five different sizes for hampers, one peck, one-half bushel, five-eighths bushel, one bushel and one and one-half bushel, stating the number of cubic inches each shall contain with the dimensions of each, and seeks to standardize them and make them the only hampers that can be lawfully used, thereby eliminating thirty different sizes now in use. The same thing is sought with respect to the round stave basket, except that the sizes shall be the one-half bushel, five-eighths bushel, one bushel, one and one-half bushel and the two bushel, making five sizes and eliminating fifteen sizes. The standard splint basket sizes will be four quarts, eight quarts, twelve quarts, sixteen quarts and twenty-four quarts, eliminating twenty sizes.

In recommending this bill the committee on coinage, weights and measures says its object and purpose is to standardize certain sizes of hampers and baskets used in the marketing of fruits and vegetables, making it unlawful to manufacture, sell or offer for sale other than the sizes herein set out.

Extensive hearings have been held on the measure and the committee believes that the lack of uniformity in the sizes and dimensions of shipping containers for fruits and vegetables calls for their standardization by federal statute. The hearings disclose that at the present time there are forty-nine dilerent styles of hampers being used and thirty-four different sizes, these sizes ranging from the quart to fifty quarts. The same condition exists with reference to the round stave basket, and the splint basket, which is commonly known as the market basket.

The committee believes it is unfair to the honest shipper to have to compete with the unscrupulous dealer who uses a container having the same apparent size, but in reality a number of quarts smaller. The bill has the endorsement of the Department of Agriculture, and will undoubtedly become a law. If it prevents the dishonest huckster from defrauding the city housewives, it will be a distinct benefit to the fair dealing farmer and retailer of fruits and vegetables.—E. R.

MEMBERSHIP GROWS IN ILLINOIS.

EIGHTY-FIVE of the one hundred and two counties in Illinois now have Farm Bureaus. The membership of the Illinois Agricultural Association is now 79,618. This means that many men have signed checks for three years, paying $10.00 to the County Bureau and $5.00 to the state. Five county campaigns will be carried on in June. Organization work will continue through the summer.

RURAL LEADERSHIP AND THE RURAL TEACHER.

(Continued from page 859).

our children as well as we possibly can. And the biggest factor in doing this is to provide them with a good professional teacher.

What makes a teacher a professional? Wherein is the difference between the professional and the non-professional teacher? This may be illustrated best by comparing ourselves with a professional teacher. All of us have certain academic knowledge—we understand the different branches taught in the schoolhouses of the country and perhaps those of the colleges—and we may teach school if we are so inclined after meeting the prescribed requirements. But unless we have acquired certain special knowledge of how to teach we must remain non-professional teachers, no matter how great our knowledge of different academic branches may be.

If we expect to raise the standard of living we must have better education for our children. To have better education we must employ better teachers and the only way by which we can get them is to pay them a salary commensurate wtih their professional ability and the responsibilities placed upon them.

"Little Theatres" for the Country—*By F. W. Henshaw*

VISITORS at the Michigan State Fair at Detroit next August very likely will have opportunity to witness the beginnings of one of the most significant recreational movements now affecting country life in Michigan, in the "Little Theater" demonstrations to be given by the Rural Sociology Club of M. A. C. in response to invitation from officials in charge of the fair.

It is planned to present each day a one-act play which is both representative of the spirit of life in the rural districts and capable of presentation by school children, young people and grown-ups in such communities.

The revolution in agricultural conditions and practices during recent years and, more strongly, during recent months, has been no less marked in the play habits of the people than in other directions. Boys and girls on the farms in many sections have learned to take physical exercise in folk games in much the same manner as have the children of the cities; the fathers and mothers have learned more and more to come togther in community gatherings.

But along with this new spirit has come the automobile and the city "movie," and the temptation has been strong to desert simple home attractions of other years for the "bright lights" and nervous excitement of the neighboring centers.

Leaders in the movement for better recreation believe that if the right entertainment is supplied, dwellers on the farms will instead find their recreation with neighbors at home. The state physical education department under Floyd Rowe is lighting the way in outdoor games, while the state recreation commission and the extension department at M. A. C. are attempting to spread broadcast the gospel of community gatherings.

To cooperate with both of the two last named organizations the Rural Sociology Club was organized at M. A. C. more than two months ago under the advisory leadership of C. B. Mitchell, assistant professor of public speaking in the English department. The purposes of the club were two-fold: First, to get together, as soon as possible, a collection of plays and playlets suitable for preparation and presentation in the country, and second, to work out a few of these with respect to parts, stage settings, costumes, etc., so that their practicability might be demonstrated.

Student officers are: President, S. M. Farr; vice-president, Miss Marian Ward; secretary, Miss Mary E. Ranney; treasurer, F. P. Adolph; chairman of publicity committee, R. M. Clark.

Miss Grace Van Heulen of the Extension Department, state leader of girls' clubs, is corresponding secretary. She will act as a go-between for mem bers of the club and outside interests. For instance, if any community has a particular problem to be solved, she will make thorough investigation and ascertain its best solution.

The club is now at work on the task of cataloging suitable plays. Some of those already listed are: "What Every Woman Knows," by Mignon Quaw, of Bozeman, Montana; "The Conversion of Mother," by the same author; "Kindling the Hearth Fire," by Estelle Cook, of the University of Minnesota; "Back to the Farm," by Merlin Shumway, also of Minnesota; "Jackdaw," and "Workhouse Ward," by Lady Gregory; "Neighbors," by Zona Gale, and "Gammer Gurton's Needle," of annonymous authorship.

Rural dramatic material is surprisingly scarce, but by communicating with various agricultural colleges and publishing companies and by consulting the list prepared by the committee on pageantry and drama of the war work council of the Y. M. C. A., the collection is steadily mounting.

In order to meet conditions peculiar to Michigan, several members themselves have begun the writing of short dramas. The need for playlets in which children take part is strong, and it is likely a large proportion of these amateur writers will deal with this phase of the problem.

That this conception of the drama and its application to the country is in sympathy with actual conditions is shown by the testimony of R. A. Turner, state club leader.

"The idea seems to be springing up in widely scattered sections of the state simultaneously," says Mr. Turner. "In communities where the residents are most keenly alive to the depth and scope of neighborly entertainment, short plays of this kind already are being staged. Some of them are written by local amateurs.

"Recently I have seen four which impressed me strongly. One was 'The Making of Poorville,' given by handicraft and garment-making clubs at Tonkey School, Au Gres, Arenac county; another was 'The Rejuvenated Farm,' presented in Branch county; a third was 'Making the Best Better,' given by the Boys' and Girls' Clubs of Manistee county; and the last 'The Gardener,' written by club members in Calhoun county and presented in one of the ward schools in Battle Creek.

"These dealt with such subjects as the effect of the introduction of a corn club on the practices of an entire community, or the effect upon a backward household of the entrance of its boys and girls into calf and canning clubs. Without exception they made a 'hit' with their auditors."

In most farming sections, however, the only opportunity of the community for expression in dramatic form is found at Christmas time in the exercises at the district school. But there is an endless field in the Grange, Farmers' Clubs, and Gleaners' meetings and other neighborly sessions.

It is the aim of the members of the sociology organization either to write or to find dramatic material which goes straight to the heart of the joys and sorrows of life as it is lived today on the farms.

Making the Shoe Fit the Foot

ONE of the outstanding features of the efficiency of the Standard Oil Company (Indiana) is its ability to expand to meet conditions.

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Educators Consider Rural School Problems

Conference on Education at Washington Reveals Alarming Situation.

MANY school officials and teachers from all parts of the country attended the recent national citizens' conference on education held in Washington. The leading topic of discussion was the rural school situation which was described as "a national menace." Speaker after speaker told of the deplorable condition of education in the open country, of the thousands of children who were not receiving any school education, and of the scarcity and inefficiency of rural teachers.

In opening the conference, United States Commissioner of Education P. P. Claxton, said, "the American public must decide, and that quickly, whether it wants universal education or not. Latest figures obtained by the Federal Bureau of Education show that between 300,000 and 400,000 children in the United States last year were without schooling. Approximately seventy per cent of the people of the United States left school at fourteen years of age. Speaking of the after-war conditions and the vast debt that has accumulated, Dr. Claxton said that these debts must be paid by the wealth of the people, and wealth depends upon the people's education. Deploring the shortage of trained teachers, Dr. Claxton said that "next year there will be needed 120,000 new teachers for the elementary schools. The total number of graduates of normal schools and colleges giving professional training for elementary teachers will not exceed 30,000, which leaves a shortage of 90,000 positions in the elementary schools to be filled by persons who have not had this kind of training." Approximately 30,000 teachers will be needed by the high schools, and the total number of graduates trained for teaching in these schools will not exceed 10,000, leaving 20,000 high school positions to be filled by persons who have less education than the minimum which was set by the educational authorities a good many years ago. In January of this year, according to Dr. Claxton, reports to the Bureau of Education indicated that between 18,000 and 20,000 schools were without teachers, and 45,000 schools were supplied with temporary makeshift teachers, whose qualifications were below state requirements. More than 300,000 teachers are now teaching with less than the minimum standard of qualifications.

Colonel Leonard P. Ayres, director of education, Russell Sage Foundation, said the public schools of this country had doubled in efficiency in fifty years, and they are now only half as efficient as they should be. He presented figures showing that there are seventy-six boys in high school for every one hundred girls.

Dr. W. C. Bagley, of Columbia University, advocated the slogan, "For Every American Child a Competent Teacher." While sixty per cent of all our boys and girls are enrolled in the country schools, these schools have the larger proportion of poorly prepared teachers, and of every six illiterates in the United States, five live in the open country. Dr. Bagley declared that the school situation could not be solved by the consolidated school plan, because at least two-fifths of the district schools were not adaptable to consolidation, and no state should proceed in a high-handed method in readjusting the school system.

That there is urgent need for a higher appreciation of professionally trained teachers was emphasized by President David Felmly, of the Illinois State Normal University. A fine idealism needs to take possession of school boards, he declared.

"We have gone after wealth and neglected the spiritual side of life," said Senator Ramsdell, of Louisiana, in discussing the relation of education to material wealth and national defense.

EDUCATION and Agricultural Production," was the subject of an address by Dr. Raymond A. Pearson, president of Iowa State College of Agriculture. Dr. Pearson reviewed the development of the land grant colleges, mentioning the fact that these schools are doing a large work in training young men for teachers of agriculture in the country high schools. He said that only a small part of the appropriations for agriculture are spent directly in the interest of the farmers. Much of the money appropriated for agricultural schools is used in teaching other branches. The public needs to be reminded, continued Dr. Pearson, that agriculture furnishes all the food, and that we will never have a surplus of food again. It furnishes material for our clothing, and two-thirds of the materials for all our industries. If the public can be brought to realize the relation of agriculture to the welfare of the nation we would have no fear.

The school system of England was described by Sir Auckland Geddes, British ambassador, who said that while much attention was given to the fitting of boys and girls to earn a living, the schools are more and more directing the students to a complete preparation for life. The teachers of England are mostly young men who are looking more to present and future conditions than to the past.

Representative Horace M. Towner, of Iowa, advocated the establishment of a new department of education, and its secretary a member of the President's cabinet. Congressman Towner urged federal appropriations for public schools, asking if it is of more interest to the nation that we should eliminate hog cholera than illiteracy. He stated that 250,000 out of every million young men in the draft could not read and write, and had to be sent to school before they were fit to be soldiers.

Governor R. A. Cooper, of South Carolina, whose subject was "The Rural Schools," said the people of the south were beginning to realize that it cost less to support schools than to support illiterates. He declared that "the men who are leaving the rural communities are doing what they ought to do, until the states provide their children with educational facilities as good as they find in the cities."

The only criticism I have heard regarding the National Citizens' Conference on Education, was that it was attended to a very large extent by persons who are drawing salaries, and not those who are paying the taxes and supporting the schools. None of the farm organizations was represented on the program, or in any other capacity, although these associations of farmers are taking great interest in rural educational problems. Nearly all of the speakers spoke for the farmers, but they were not from the farms. There was much said to arouse country people to the need of greater interest in education, but the rural folks were not there to hear it.

Certification of Seed Potatoes in Michigan

By C. W. Waid, Extension Specialist, Michigan Agricultural College

SIX years ago when the extension work with potatoes in Michigan first began plans were made for the Michigan Potato Growers' Association to inspect seed potatoes for certification. The first season's work along this line showed that most of the seed in this state was so badly mixed or diseased that certification did not seem advisable at that time.

During the period which has intervened the growers in many counties, especially where the county agents have been active, have taken particular pains to improve their potato seed stock. The time seems ripe for the work of certification to be taken up and pushed with energy.

Wisconsin has been certifying seed potatoes for many years. Minnesota, New York, and several other states have been certifying for a shorter time. None of these states are better situated for the growing of seed potatoes than is Michigan. Furthermore at the present time Michigan is in a better position than any of these states to sell seed potatoes. The Michigan Potato Growers' Exchange has handled many carloads of seed during the last two years. They could have handled a much larger quantity this year if the seed had been located for them. The Seed Department in the Michigan State Farm Bureau is now ready to handle pure seeds and the Michigan Crop Improvement Association has volunteered to cooperate with the Potato Producers' Association in the matter of advertising and in other ways. The one thing needed now is the hearty cooperation of the potato growers who have potatoes which are suitable for certification.

Rules and regulations have been drawn up and agreed upon by the officers and a special committee appointed by the Michigan Potato Producers' Association. Any potato grower in Michigan may make application for the seed inspection service by complying with these rules and regulations. The inspection will be performed by duly authorized agents of the Michigan Agricultural College. Certificates of inspection will be issued by the Michigan Potato Producers' Association based upon the findings of the inspection service. The issuing of certificates will be confined to the membership of the Michigan Potato Producers' Association. Any potato grower can become a member of the Michigan Potato Producers' Association by the payment of the annual fee of two dollars to the secretary, H. C. Moore, East Lansing, Michigan.

The conditions which are required for inspection service relating to soil, seed and care are such as will under normal conditions insure a reasonably good crop of potatoes. The two things which the growers should be reasonably sure of if he asks for this inspection service is that the seed which he will use is practically pure as to variety and comparatively free from transmissible diseases such, for example, as scab, black scurf, (Rhizoctonia), wilt, black-leg, mosaic, and spindling sprout. The seed should be treated with corrosive sublimate before planting to guard against the introduction of some of these diseases. The crop should be given good care, including spraying, to prevent insect and disease injury.

Application for inspection may be made directly to the Secretary of the Michigan Potato Producers' Association, or through the county agent's office and should be in the hands of the secretary before July 1. The application fee, which consists of five dollars for five acres or under, and seventy-five cents per acre for each additional acre, should accompany the application for inspection. The money so collected will be used to pay part of the expenses of carrying on this service. The balance of the expense for this year, when of necessity the applicants will be few, will be borne by the college. The growers whose fields pass inspection and who desire to have their stock certified by the Michigan Potato Producers' Association will be required to pay an additional fee of one cent per bushel for the seed certified.

There will be two field and one bin inspection. Fields that fail to pass the first inspection will not be given the later inspection. The standard for certification briefly stated are: That a field will be disqualified which shows at the first inspection more than ten per cent of any of the common diseases or more than fifteen per cent if all combined. A somewhat smaller percentage will be required at the second inspection. The bin inspection must show that the potatoes are practically free from serious infection of diseases or varietal mixtures. Of the certified seed potatoes offered for sale not over three per cent by weight shall weigh less than two ounces and not over five per cent shall weigh over twelve ounces. The growers will be held responsible for injuries due to most and improper handling after the potatoes have been certified. Potatoes sold as certified seed when shipped must be in clean bags which contain one hundred pounds net and be tagged with the authorized certification tag of the association.

A somewhat more detailed plan of selling will probably be worked out before potato digging time. Probably some arrangement will be made whereby the growers who care to do so may pool their potatoes and sell through the seed department of the farm bureau. This plan can be made a community proposition although at the start it will no doubt be largely an individual affair.

The use of a portable elevator reduces the time required to unload grain into the bin by about seventy-five per cent.

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As statements like this make apparent, more and more farmers are preventing the bruising of fruit, mutilation of delicate vegetables and much shrinkage in livestock by hauling on Goodyear Cord Tires.

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The able pneumatics thus become important factors in the marketing of perishable produce and carefully fattened animals, as well as in practically all the work of raising and handling on and off the farm.

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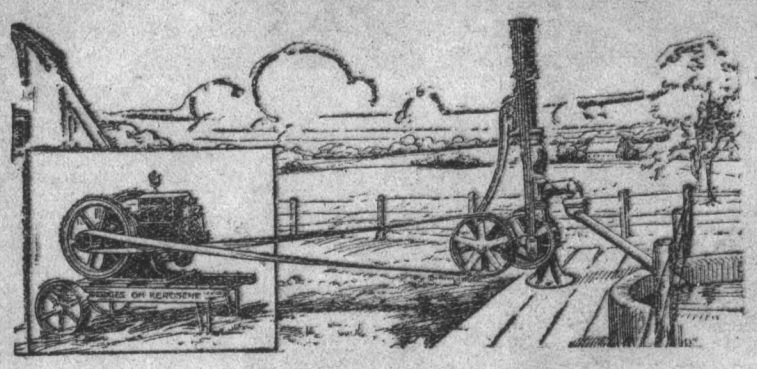

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International quality in general and International Kerosene Engine quality in particular are everywhere admitted and admired. These engines are reliable, simple, long-lasting and economical. Among the sizes—1½, 3, 6, and 10—is your correct size. See the International dealer.

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Farmers Oppose Nolan Bill

What Our Special Representative Uncovered at the National Capital.

THE Nolan land tax bill, H. R. 12,397, is much in the public mind because of the publicity given it by the recent referendum conducted by the American Federation of Farm Bureaus, which showed that the farmers everywhere are practically unanimous in opposition to it.

According to the text of the Nolan bill it "provides for the raising of public revenues by a tax upon the privileges of the use and enjoyment of lands of large value." All persons, firms, associations and corporations owning land in value in excess of ten thousand dollars, not including improvements, whether in possession or leased to others, would be subject to an excise tax upon such excess at the rate of one per cent if this bill should become a law. Where land is leased and the value of the lease is in excess of ten thousand dollars such value shall be deducted from consideration in determining the tax to be assessed against the owner, and shall be charged against the lessee. It shall also be the duty of every owner of any interests in land, the value of the fee or lease of which is in excess of ten thousand, to report his interests therein before March 1 of each year to the Commissioner of Internal Revenue on blanks prepared by him. It is required that the owner shall give such information in regard to the purchase price, sale value, and the like, as will enable the Commissioner of Internal Revenue to determine therefrom, and from such other data as he may obtain, the true value of the land holdings of the taxpayer. It shall further be the duty of the taxpayer in the event of a sale of all or any part of the land of which he has reported himself as the owner, to report to the Commissioner of Internal Revenue, the price at which said sale was made. In the event that the payment is not made as directed by this bill, the taxpayer will be subject to an additional payment of five per cent and an additional payment of one per cent for each month it is delayed, and no conveyance made by him shall be admitted to record of date on or after July 1 of any year, unless he shall have first procured from the Commissioner of Internal Revenue and exhibited to the recording officer a certificate that all taxes under this act are paid.

The Nolan bill is sometimes referred to as the Nolan-Ralston bill because it was drafted by a Washington lawyer named Ralston, who is one of the attorneys for the American Federation of Labor. Congressman Nolan is from a San Francisco labor district, and is a leader of the labor forces in the house. His bill, however, is backed by a group of manufacturers, who, it is said, are willing to spend several hundred thousand dollars in an effort to put it through congress.

The National Grange is strongly opposing the Nolan bill. Dr. T. C. Atkeson, the Washington representative, says it is a "deliberate effort to shift federal taxation to the land. No account is taken of present taxes on real estate or on farmers' incomes. They are to remain as at present, and in addition to that a further burden of a billion dollars a year is to be placed on the shoulders of the farmers of the country should this bill become a law." The opposition of the American Federation of Farm Bureaus is well known.

It is not believed that the Nolan bill will be seriously considered in congress. It was referred to the committee on Ways and Means and ordered printed on February 7, 1920, and here it will probably remain unless brought up by special order. The Washington representatives of the National Grange and the American Federation of Farm Bureaus are bringing all the pressure at their command to bear against the bill, and are keeping a close watch to see that it is defeated if it comes up for action.

If the agricultural interests were dependent entirely upon members of congress coming from districts in which the farmers compose a majority of the voters, to secure legislation in their favor or to defeat harmful legislation, their case would be hopeless. In making a careful survey of rural and urban population in the congressional districts, I have classified one hundred and twenty-five as purely urban, one hundred and eight as largely urban, and two hundred which are usually classed as rural districts.

While these figures may make it appear that there are more rural congressmen than those coming from the cities, the facts remain that more than two-thirds of the voters live in places of more than five thousand population, while less than one-fourth of the others are actually engaged in farming. In the strictly agricultural states, the villages are dependent upon agriculture, yet even in these states more than one-half of the people live in villages and towns.

It is not uncommon to find representatives from districts quite largely urban, standing firmly in favor of legislation demanded by the farmers, while some lawyer from a so-called rural district, elected by the farmers' votes and whose home address is a country village, may be lined up against nearly everything that the farmers want. In the case of the Nolan bill it is evident that there are a considerable number of representatives who if they have opportunity will vote against it for other reasons than its effect upon agriculture.

The land settlement feature of the soldiers' bonus bill is a live issue just now. Representative Bertrand H. Snell of New York state, who is leading the fight against this land exploitation proposition, tells me that it is the same word for word as the old Mondell bill, and will mean the expenditure of unknown millions for the opening up of swampy and arid lands for settlement. A large majority of the members of congress are opposed to this land scheme, but there is serious danger that it may be put through congress at any time, by gag rule. The National Grange representatives will issue a statement, aiming to arouse the opponents of this clause in the bonus bill to immediate action to secure its defeat.—E. E. R.

GUERNSEY BREEDERS OF BERRIEN COUNTY MEET.

Berrien County Guernsey Breeding Association will hold their summer meeting and picnic at Eau Claire, Michigan, on June 11, 1920.

Mr. F. B. Hills, of The American Guernsey Cattle Club, Peterboro, New Hampshire, will address the meeting on a subject of great interest to the Guernsey breeders. Prof. C. R. George, of Purdue University, will give one of his interesting addresses and conduct a judging contest with the good Guernseys that will be brought in. Everyone interested in Guernseys is invited to come and enjoy the day with us. Don't forget the pot-luck dinner at noon.—G. C.

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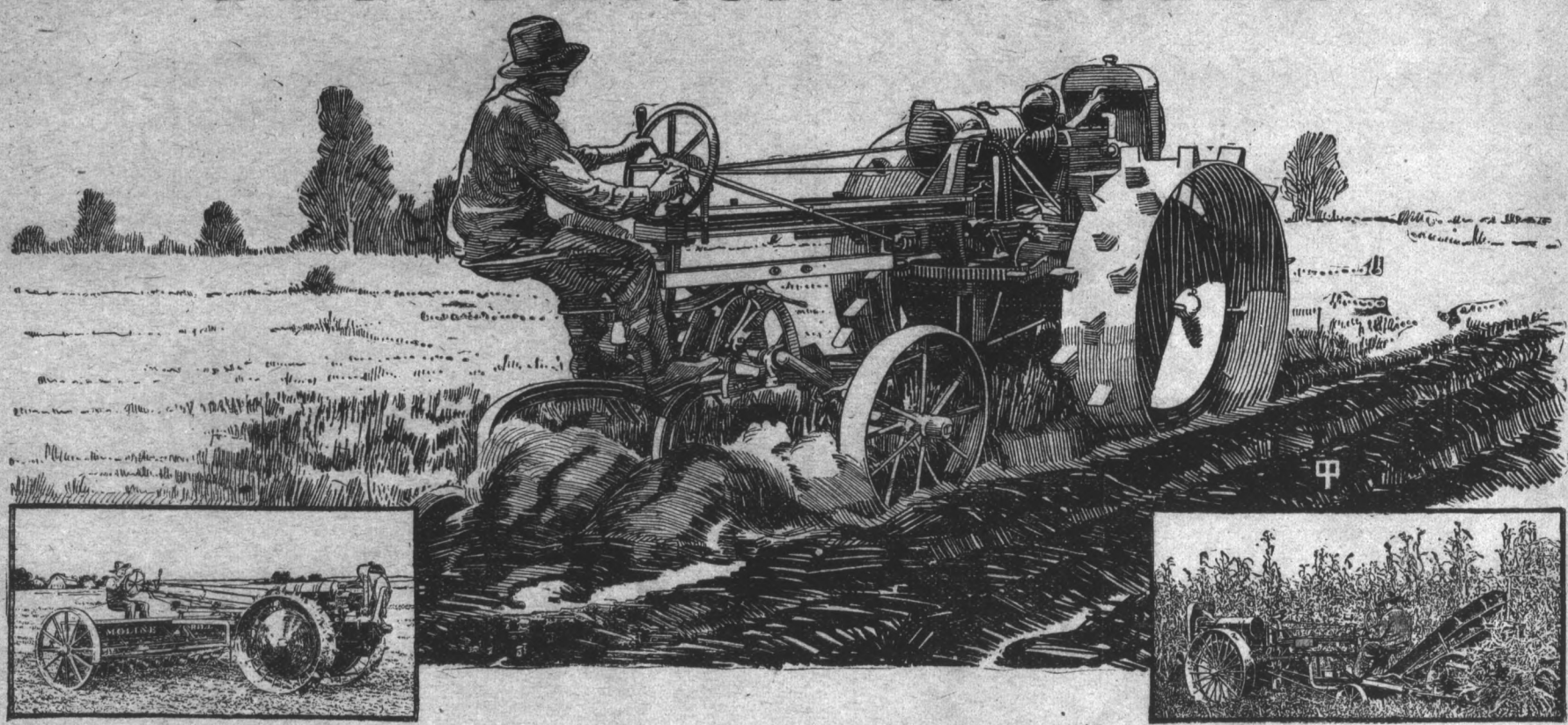

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It places the power of nine big horses where the horses stood. It is operated in the same manner as horses—from the seat of the implement. And it does all the field work that horses do, including cultivation of row crops.

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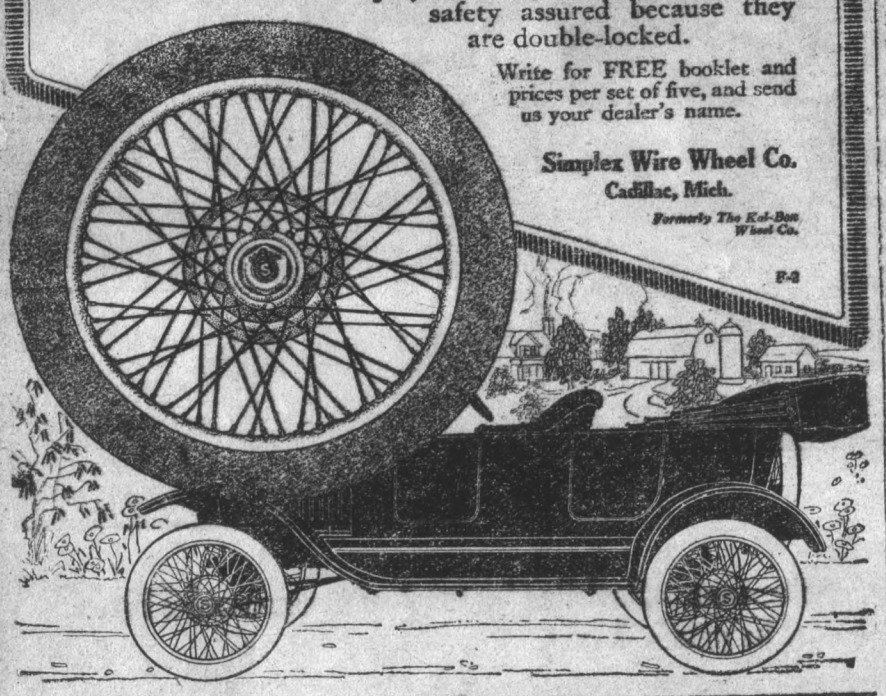

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It is ready to use as soon as mixed with water. It can be applied to wood, brick, stone or cement or over whitewash with a brush or a spray pump. It does not blister, flake or peel off. The dry powder is unexcelled as a lice powder.

The use of Carbola means light, clean-smelling buildings and they mean healthy stock and therefore better production and larger profits. It is used and endorsed by thousands in all parts of the country. Get some today and have it ready for a rainy day. Your hardware, seed, paint or drug dealer has Carbola or can get it. If not, order direct—prompt shipment by parcel post or express.

10 lbs. (10 gals.) $1.25 and postage. 20 lbs. (20 gals.) $2.50 del. 50 lbs. (50 gals.) $5 del. Add 25% for points west of the Rockies

For the convenience of large farms, Carbola is also packed in barrels that hold about 350 lbs. each

CARBOLA CHEMICAL COMPANY, Inc., Dept. X 7 E. 42d St., N.Y.C.

When You Write to Advertisers Please Mention This Paper.

Canners Appeal for Supplies

THE canning industry, the can making industry, and the tin plate industry have united on filing a brief with the Interstate Commerce Commission, urging the necessity for immediate preference in the car supply and transportation of tin plate and other materials needed in can manufactures, to avert the loss of at least fifty per cent of the nation's seasonal food crops. Appeal is not made on the ground of any private interest or group of interests, but on the ground of national importance and grave danger to the food supply of the people.

A. P. Strasbough, chairman of the special committee on tin plate and tin cans, of the National Canners' Association, declared recently that "unless immediate action is taken to supply freight cars the production of canned food will be heavily curtailed."

"The growth of the canning industry in recent years has made necessary the manufacture and distribution early in the year and well in advance of the canning season of a very large quantity of cans. If the can supply of the country were produced by makers and held in their warehouses until the canning season, the car supply and railroad service of the country, even under the best conditions and in normal times, has been proved quite insufficient to handle these cans during the short canning season. It has been the practice in recent years of the can makers to store with the canners on the ground where the cans are to be used sixty to seventy-five per cent of the cans estimated for use. These cans have been shipped at the convenience of the can maker and during times when rapid delivery was unessential. Up to the present time the can makers of the country have not been able to store with the canners more than thirty per cent of the usual advance deliveries for the coming season. There is in operation at the present time not more than twenty-five per cent of the can-making capacity of the country, and at no time during this year has the can-making industry been operating to more than fifty per cent of required capacity. This shortage in production has been caused by lack of tin plate. Can makers have used up the stock of tin plate they could secure, and are not operating more heavily today than above stated because they cannot get the tin plate. The time has come when, if very great shortage in cans and consequently in production of canned foods is not to be suffered, these conditions must be changed, and sufficient materials must be procured to operate can factories not only at full capacity, but at forced capacity by night work.

In order to avoid congestion in shipments during the packing season, these cans must be loaded and shipped to the canners' warehouses as rapidly as made and at the present time cars cannot be obtained for this purpose. At the present time cars cannot be obtained and moved to destination in sufficient quantities to care for even the present limited production of the can makers.

"It seems to these allied industries that the first step is to secure transportation of the present available stock of tin plate from the mills to the can makers and facilities for transportation of the cans to be made from this material to the canners. So far as these stocks will go this will get the can makers into operation, will get the cans into the canners' warehouses, will relieve the warehouses of the tin plate mills which are now choked to suffocation, and provide an outlet. On the other hand, these stocks of tin plate, while very large, are only adequate for temporary relief. If made into cans and delivered they will take care of the earlier crops, but the later and larger crops are dependent upon tin plate yet to be made in much larger quantities than has been made at any time during this year.

"There are now at the tin plate mills approximately two and one-half million base boxes of tin plate packed and ready for shipment. To move this plate will require thirty-six hundred thirty-five to forty-ton box cars. The normal production of the tin plate mills of the country which is necessary for the next two months is six hundred and fifty thousand base boxes per week, requiring nine hundred and twenty-eight thirty-five ton box cars to move it. These cars are required in the Pittsburgh, Wheeling, Mahoning, and Shenango Valley districts chiefly, with other mills throughout Ohio and Indiana. Figures are not at the moment available for estimating the number of cars required for the transportation of coal, coke, steel and other supplies, but it can be easily seen that they are very large and just as vital and important. As this tin plate is received and manufactured into cans it will require at least five hundred box cars per day to transport it to the canners. These cars are needed in the Pittsburgh, Baltimore, Chicago, Indianapolis, Wheeling, Cincinnati and Rochester districts for distribution generally throughout the adjacent states. It is the effort of this statement to impress upon you the gravity of this situation and to indicate the chain upon which it hangs, each link of which is as important as the other.

THE CALHOUN COUNTY FARM BUREAU RESOLUTIONS.

THIS convention declares it to be its earnest desire and purpose to cooperate with the Michigan State Farm Bureau and with the National Federation of Farm Bureaus in efforts toward the improvement of agricultural conditions.

This convention urges early action in the establishment of Farm Bureau local cooperative organizations in every market center in Calhoun county, where the need is sufficient to make such an organization an economical institution, and that each one of the so established cooperative associations be a part of the Farm Bureau, its managers and directors becoming part of the working staff of the Farm Bureau. It further urges that each of the cooperative organizations, now doing business in the county, work with the Farm Bureau in promoting the interests of the farmers.

This convention urges all farmers in Calhoun county who raise sheep, to take advantage of the offer made the Farm Bureau and pool their wool.

This convention favors the adoption of the school district plan of organizing our towns in farm bureaus and urges the township officers to take immediate action in appointing chairmen in each district.

This convention favors the adoption of central standard time in Calhoun county and throughout the state and urges that local option on the daylight saving law be done away with.

This convention favors the plan of giving all the members of the Calhoun County Farm Bureau whose major financial interests are in the farming business the privilege to act as officers of the organization.

EN-AR-CO MOTOR OIL

Ferdinand Indiana
Jan 7 1919.

Dear Sir. Just a few lines to let you know that I am absolutely satisfied with "Enarco Motor Oil." I have been using "Enarco Oil" for a summer.

Before using "Enarco Motor Oil" I always had to have the carbon taken out of the engine. But since using "Enarco Oil" I did not take out the carbon for 2 years & any more than satisfied I also used Enarco Motor Grease" for about a year now & it sure is cheaper in the long run than cheap grades.

I have a 1916 Model 26 Maxwell & runs fine with Enarco Motor Oil & Red and White Rose Gasoline. It has run about 15000 miles & runs like new.

Yours truly
Val Fleig

J. G. DUIS
SHATTUC, ILLINOIS.

The National Refining Co., Shattuc, Ill. Jan. 6th, 1920.
Cleveland, Ohio.

Gent Sirs:-

Received the "National News" for some, indefinite time, don't know how long, for the first issue went into the waste basket, the way of most "advertising",- then found there were jokes in it, which I enjoyed very much, then found it was not all a joke- in fact, I found that NATIONAL REFINING PRODUCTS were no "joke" at all. I was induced to try EN-AR-CO and White Rose Gasoline and now nearly all of my Ford motor troubles have vanished. If I could get a perfect carburetter I would have no more trouble due to inferior oil or Gasoline.

Do you remember when we were schoolboys and read Longfellow's poem about the "Youth who bore, mid snow and ice, a banner with a strange device, Excelsior"?- The word EN-AR-CO struck me very forcibly at first, then I compared it to EXCELSIOR. Now, I verily believe that if that boy had used EN-AR-CO!! he would have got through all right.

Yours for more P.P.!

J G Duis

JOEL E. DILS
POULTRY AND PET STOCK FANCIER

Jewell, Ohio. Jan 2 1920

National Refining Co
Cleveland, O.

It does not matter what the price of the Light oil is by April 1st will be satisfactory to me — this oil has given me the least trouble of any oil I have ever burned in my Stromberg and it leaves it were not corrode or rust the lamp wick - for well it may, this season the burner - as has other oil which I have used — I am enclosing bill of lading of long 4-barrel sent to Kindly O — Respt

Joel E. Dils

As we have a Auburn Car and Huffy Farmer tractor, I intend to use more of your oil and for the coming year.

Yours truly
Max Effinger Pres
Cedar Falls Iowa.
Route 3 Box 163

SILVER CREEK FUEL AND FEED CO.
BOTTSCHAFER BROS. Proprietors
DEALERS IN
Coal Coke Wood Flour Feed Hay Straw Cement
Agents for LARRO DAIRY FEED
GRAND RAPIDS MICH.

The National Refining Company.
Cleveland, Ohio.

Gentlemen:-

Last summer we purchased from you people 6 50 gal. barrel of your Enarco National Motor Oil. It was I can say the best oil we have used yet, having had no carbon trouble at all with the two trucks and the touring car in which we used same. We always had trouble when using other oils which we tried, but since we received the Enarco, our carbon and other troubles originating from the oils ceased.

We made one mistake however, which has cost us twice what a barrel of your Enarco would have cost, it is this, when the barrel of oil which we received from you was gone, we neglected to reorder from you was gone, we thinking that we had been using would be just as good. We were badly mistaken however, for had used the new oil only a week and our oil pipes clogged and clean out twice since we stopped using Enarco, cooling be I mentioned before twice what the Enarco would have cost us had we gone to the little extra trouble of buying from you.

We guarantee you however, that Experience is the best Teacher, and we will use Enarco Oil from now on, having learned that the best is same for good.

Trusting that you can see this bit of evidence to some advantage, I am yours.

Dick Bottschafer.

The Experience of Others
Insists that *You* Use *En-ar-co*

Our records show that most users of En-ar-co Motor Oil are experienced motorists. They have tried many brands. And made careful comparisons.

We have in our files more than a hundred thousand letters and signed testimonials. All enthusiastically praise this scientifically refined oil. They are your guarantee of En-ar-co high quality.

The experience of these motorists should be your guide in determining the oil YOU use — En-ar-co.

There are many other En-ar-co products. All excel as does En-ar-co Motor Oil.

White Rose Gasoline — clean, uniform, powerful. National Light Oil for Tractor fuel, also best for lamps, oil stoves and incubators. Black Beauty Axle Grease for wagons. Always look for the En-ar-co trade-mark!

Look for the En-ar-co trade-mark shown in this advertisement. It is your assurance of the best. Don't experiment with other brands when you can get En-ar-co.

THE NATIONAL REFINING COMPANY

Branches in 89 Cities **2101 Rose Bldg., Cleveland, Ohio**

Buy of your local dealer. If he cannot supply you — mail your order direct.

Lexington Motor Sales Co.
INCORPORATED
275-277 EAST MAIN STREET
LEXINGTON, KY

October 26, 1920

National Refining Co.
Evansville, Ind.

Gentlemen:-

Shortly after entering business here in June this year, your Mr. Mounts called upon us, presented his samples and proposition to handle Enarco oils, and a trial order was given. The oils proved to be so satisfactory among our trade and shipments were made so promptly we concluded to use them exclusively. We consider Enarco oils of the highest grade and frequently receive compliments on their action in various motor cars.

Yours very truly,
LEXINGTON MOTOR SALES CO.
Smallwood Owen

DIXIE AUTOMOBILE COMPANY
OAKLAND
ACCESSORIES AND REPAIRING
LEXINGTON, KY. October 28, 1919

The National Refining Company,
Evansville, Indiana.

Gentlemen:

Knowing from experience that a dissatisfied customer will take the pains to tell you frankly of his opinion of your service or your goods and that a satisfied one seldom thinks to tell you or his satisfaction but when one drops in to compliment your treatment of him or the quality of your product it is a treat indeed.

For this reason we are writing to give you this little treat to which you are entitled, thinking perhaps it might be of some benefit to you to refer some one we have been getting out of the splendid service we have been using for nearly a year and have found it to be so good that we can truthfully say that we have been using it for a long time to investigate it thoroughly. We cannot speak too highly of the cooperation which we have received from you and Mr. Mounts, your representative to push our oil sales and we can frankly say that they have doubled since we started with you.

We are using your oil exclusively and expect to continue to do so as it seems to meet the demand for a high grade oil better than anything we have ever used.

With best wishes for your continued success

We remain,

Yours very truly,
DIXIE AUTOMOBILE COMPANY
Incorporated
W. H. Curtis
Sec. & Treas.

Best for transmissions, gears and differentials on motor cars and tractors

En-ar-co Motor Grease

1491 Content Street,
Lakewood, Ohio.
December 1st, 1919.

Chas. L. Archbold,
Advertising Manager,
National Refining Co.
Cleveland Ohio.

Dear Mr Archbold,-

I have been testing gasoline and oil of different companies on my car for the purpose of securing the best operation of the engine at all times. After trying a number of others, I heard that White Rose Gasoline and En-ar-co oil would give better results. I decided to try it thinking that I was already getting good service out of the engine and would not likely notice any difference.

I got some En-ar-co oil and White Rose Gasoline. I believe in making a test as specifications require. Oil of one brand and gasoline of another would not be a fair basis for test. I was surprised with the results. If there had been a little difference, I could have attributed to weather conditions, but as there was a marked improvement in climbing hills, in starting on cold mornings, and in getting under way, I am convinced that this added satisfaction is in the gas and oil.

Yours respectfully,
Wm Caldwell

STAFFORD GRAIN COMPANY
INCORPORATED
GRAIN, SEED, FLOUR AND FEED
HOPE INDIANA Aug. 16 1919

The National Refining Co.
Cleveland, Ohio.

Gentlemen.

Why I use En-ar-co Motor Oil?

I belong to "The Dont Worry Club" and want to remain in good standing. I do not worry about the price because it costs very little. I were the Light Grade oil. No reason to worry. Then used in engine I do not worry about carbon or engine heating. No carbon is formed. The lubrication is so good that the engine cannot heat. When used on other bearings I do not worry about friction. The oil spreads evenly and more well and friction is reduced to the minimum. I do not worry about the amount required, a little "goes a long way". I am using En-ar-co in my Big Six Studebaker Touring Car and above statements are facts.

I believe it will do no harm to add that White Rose Gasoline and helped me to retain my standing in "The Dont Worry Club"

Yours truly

C L Stafford

You May Not Wisely Delay Ordering Your 1920

DE LAVAL
CREAM SEPARATOR

There are a dozen reasons why this is so.

For three years it has not been possible to make enough De Laval machines to meet the demand. More than ever are being made this year, but the demand is still greater.

Cream Separators have advanced less in price than anything else used or produced by the farmer during the war years. If labor and material costs continue to advance so must separator prices.

Such an advance must very soon come from increased freight rates, if from no other cause.

Freights are still slow and uncertain. There may be unavoidable delay in getting a machine when you badly need it from this reason.

The flush of milk and hot weather are near at hand, when a De Laval saves most and an inferior or half-worn-out separator wastes most.

There all still other reasons, which a De Laval best demonstrates for itself. You will have no difficulty in observing them. Every local De Laval agent will be glad to afford you the opportunity to do so.

If you don't know the nearest agent simply address the nearest main office, as below.

The De Laval Separator Co.

165 Broadway NEW YORK — 29 East Madison Street CHICAGO — 61 Beale Street SAN FRANCISCO

50,000 Branches and Local Agencies the World Over

Our Service Department

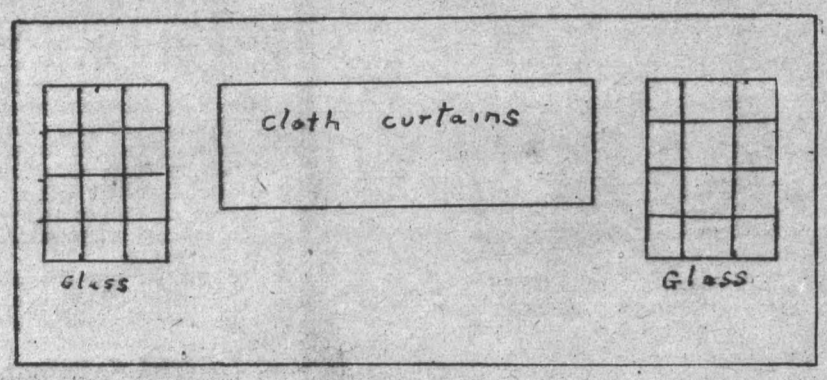
House for Two Hundred Hens

We are planning to build a poultry house 14x45 feet, shed roof type. As it costs so much to build, would like to get the right idea on how to build. Seeing Mr. Kirby's answer to J. S., thought possibly he could help us. Do you think a shed roof type practical? How would you arrange the curtain space in front to be twice the area of glass? The house is to be four feet in the rear and eight feet in front, on about an eight-inch wall. Are dirt floors practical where it is filled in to the top of about an eight-inch wall? Would like to have Mr. Kirby draw plans and give dimensions of what he thought would be practical for a poultry house with that amount of floor space. Would that size of coop, house two hundred Leghorn hens? How would you arrange roosts to be out of draughts with so much open space?

Washtenaw Co. C. A. T.

The shed-roof type of poultry house is practical and is used extensively by experienced poultrymen. It is high enough in front to permit the operator to work inside with ease, and all of the melting snows and rains drain off at the rear. This prevents much of the mud and water in front of the house where the birds walk. It is more simple to build than other styles of houses and most farmers can construct them without the help of a skilled carpenter. And labor costs money.

A practical plan is to allow a square foot of glass to sixteen square feet of floor space and a square foot of muslin curtain to each eight feet of floor space. They might be arranged in each laying house or section of a laying house as indicated in the sketch.



We do not like dirt floors in a poultry house unless the dirt is sand. Garden loam becomes very dry and dusty in a poultry house and the scratching of the birds fills the house with dust, making it unhealthy both for the birds and the poultryman who must work in the house. A cement floor covered with a couple of inches of sand makes a fine floor. If the walls are of cement to keep out rats and furnish a firm foundation, a good floor might be made all of sand. In that case it should be filled in early in the summer so that it can dry out thoroughly before fall. If a house is damp because of a damp floor it is apt to result in colds and roup during the fall and winter.

A 14x45 house would be satisfactory but that only gives an area of 630 square feet. We believe that 200 Leghorns will do better if they have four square feet per bird or 800 square feet. We would build the house 20x40 and divide it in the middle two sections, each 20x20. The partition would help to keep the house warmer in the winter and the door between the two sections could be left open in the summer when more air is needed. When a house is twenty feet deep the birds roost at the back of the house, far enough from the open front so they are not touched by draughts. We would never wish to build a house less than fourteen feet deep because the birds would have to roost too close to the windows. And we believe that a house twenty feet deep is more satisfactory than the fourteen-foot depth.

At the back of the house a roosting platform can be constructed. Roosts can be made of two-by-three pieces with the upper edges rounded. Nail these roosts in sections of three each and hinge the sections to the back wall of the house. Then they can be raised and hooked to the ceiling when the dropping boards need scraping. The nests can be built in portable sections which can be placed against the side walls of the house. R. G. K.

HIGHWAY FENCES.

The land of my neighbor across the road is open to commons and into crops, and I have no way in driving my stock to and from pasture without passing his land. If my cattle run into his crops in passing, can he make me any trouble? Could he be compelled to put up some sort of protection against stock? I try to keep the cattle out when passing, but sometimes it is unavoidable, and he threatens all manner of things if I don't keep them out.—D. W. M.

We know of no duty to fence along the highway; but on the other hand, driving stock along a highway is a lawful use of the highway, and if the cattle escape from the driver without his fault and injure the crops growing on the adjoining lands the owner of the stock is not liable for the injury, provided he pursues the stock with diligence and removes them as soon and with as little injury as possible. In determining whether the owner of the stock is negligent, it is proper to consider that he knows the natural propensity of the stock to wander out of the way, and he is bound to use every precaution to prevent them from doing so. J. R. R.

MORE TUBERCULOSIS.

My hens are dying off fast. The first thing they show lameness in one foot and then get weak and die. The liver is covered with white, hard bunches or scales. What is the disease and what can I do for them?

Gratiot Co. Subscriber.

This trouble is undoubtedly due to tuberculosis and it will be best to kill off the flock and start with new stock after the soil has been freshened by cultivation and the poultry house thoroughly disinfected. Birds that have died from the disease should be burned rather than buried where they may be dug up by dogs. This is a very serious trouble and there is no cure. It must be controlled by prevention and this means breeding from the most vigorous stock that can be obtained and giving the birds the best of care. Even then the best managed flocks are in some danger from tuberculosis, but it will occur less often among the flocks of hens which live under the best conditions.—K.

A Good Clubbing Offer

OFFER No. 109.

The Michigan Farmer, one year	$1.00
People's Popular Monthly, 1 year	.35
Home Life, one year	.35
Gentlewoman, one year	.25
Household Journal, one year	.35
Total value	$2.30

All for $1.70.

OFFER No. 110.

The Michigan Farmer, one year	$1.00
Pictorial Review, one year	3.00
Woman's World, one year	.50
Total value	$4.50

All for $3.75.

OFFER No. 111.

The Michigan Farmer, one year	$1.00
Woman's Home Companion, 1 yr.	2.00
McCall's Magazine, one year	1.50
Total value	$4.50

All for $3.00.

OFFER No. 112.

The Michigan Farmer, one year	$1.00
National Sportsman, one year	2.00
Game Breeder, one year	1.00
Total value	$4.00

All for $3.00.

OFFER No. 113.

The Michigan Farmer, one year	$1.00
Breeders' Gazette, one year	1.50
Total value	$2.50

Both for $2.15.

Save your thresh bill with a "Red River Special"

Thresh with a Red River Special this year and save enough grain and time to pay the thresh bill. This is the thresher that *beats out* the grain—goes after every kernel and saves it for you.

Hire the thresherman with a Red River Special, or if you want a thresher for your own use, ask about our "Junior."

(Write for Circulars)

NICHOLS & SHEPARD CO.

(In Continuous Business Since 1848)

Builders Exclusively of Red River Special Threshers, Wind Stackers, Feeders, Steam and Oil-Gas Traction Engines. **Battle Creek, Mich.**

WALL FOR BARN.

As I intend building a barn 40x70 feet, would like a little advice about the wall. I think I will use cement. How strong should I mix it, and how thick should I make the wall? By using plenty of stone, does it need any other reinforcement, or will the stone prevent it from cracking? Would you advise any foundation under this wall, and how much?

Mecosta Co. H. B.

The average barn wall constructed of poured concrete is twelve inches thick, but if you are figuring on using field stone, the thickness of walls will depend upon the size of stones. If the stones are small and not over six inches in diameter, a twelve-inch wall would be satisfactory. If they are larger, it might be best to make it fourteen inches thick. The average width of a stone wall is eighteen inches.

The concrete should be mixed as follows: One part cement to two and one-half parts sand to three parts of crushed rock, where such material is available.

Where you have a bank run, the mixture of one part of Portland cement to five parts of the bank run is satisfactory. The concrete should be mixed rather wet so that it will run in around the stone to fill all of the voids. It is very important that the wall be dense and solid.

It is not necessary to use any reinforcement in a wall twelve inches thick.

It would be necessary to have a footing under this wall which should run down to solid earth and below the frost line, which is about four feet in your locality. This footing should be at least twenty-four inches wide and twelve inches thick. This would be an excellent place to use your stone.

We believe that it would pay you well to study the possibility of hollow tile for your barn. The present price of lumber, which has to be used for forms, makes solid concrete wall above the ground rather expensive. Hollow tile would make an excellent wall for barns, and the two or more air spaces in the wall makes a warm building in winter and a cool building in summer. It would be free from dampness. Its walls cannot absorb moisture, because of the impervious nature of the material.

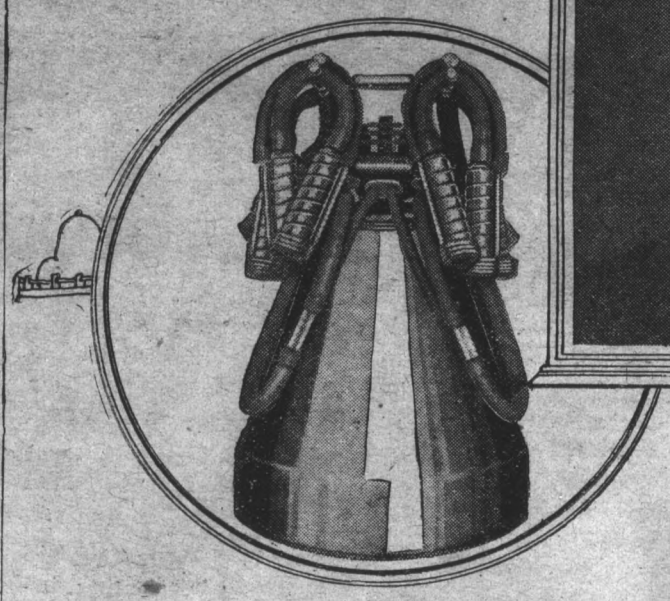
Animals quartered in such a building thrive unusually well, because a barn of this construction provides an ideal shelter. Due to its tight, perfectly bonded hollow walls, the animals within are protected from drafts. This means that the greater portion of the food given them will serve the purpose of such feeding. It might be well to put a little thought into the matter of concrete blocks for farm walls. H. M. WARD.

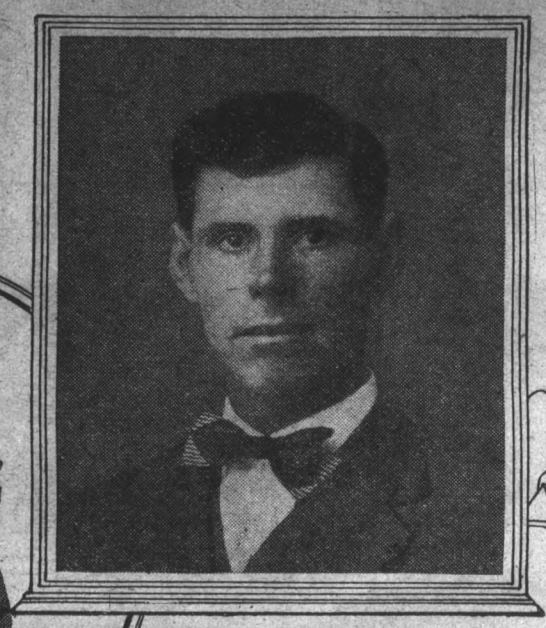
BUGS RUIN ASTERS.

Could someone give a remedy for getting rid of the tiny brown bug on asters? My bed of asters was ruined last summer by this insect.—

Eaton Co. L. F.

Asters are subject to the attacks of more than one insect, and your inquiry does not state what portion of the plant was attacked. If these bugs worked above ground and ate the leaves an arsenical poison such as arsenate of lead applied either as a dust or as a spray, will control them. If the insects that did the damage were the sucking variety then an arsenical would be useless. In this case apply some nicotine sulphate, such as Black Leaf forty. Directions on the bottle will tell how much to dilute it. With this material the insects must be hit in order to get results. Better results can be had if any of these poisons are applied when the bugs are small.—D. B. W.





ART BUTTERBRODT

A Perfection Enthusiast! Art Butterbrodt Converted!

"FOUR years ago", says Mr. Butterbrodt in telling how he became an enthusiastic user of a Perfection Milker. "I bought the second Perfection Milker sold in this vicinity. At that time this milker was generally unknown in this locality, while today it is generally recognized as the best machine on the market. I bought a Perfection when I was not wholly convinced of the practicability of any milker, but now I wouldn't part with it."

Cows Teats and Udders In Perfect Condition

"When my cows went dry I even feared that some bad effects would be revealed after freshening. However, I was surprised to find that after freshening my cows milked more evenly on all four quarters than they ever did when milked by hand.

"A year ago I milked my cows three times a day with the machine for a period of six months. At the end of this period the cows' teats and udders were in as perfect condition as ever."

The Best Hired Man

"The milker was just as willing to work three times a day as twice. It never kicked and has never refused to work when I wanted to use it since the day it was installed in my barn. At the end of four years continuous use I am free to state that I find milking with the Perfection more satisfactory than hand milking. And the Perfection makes it easier to secure hired help and to keep the help in good humor."

It's Time For You To Investigate

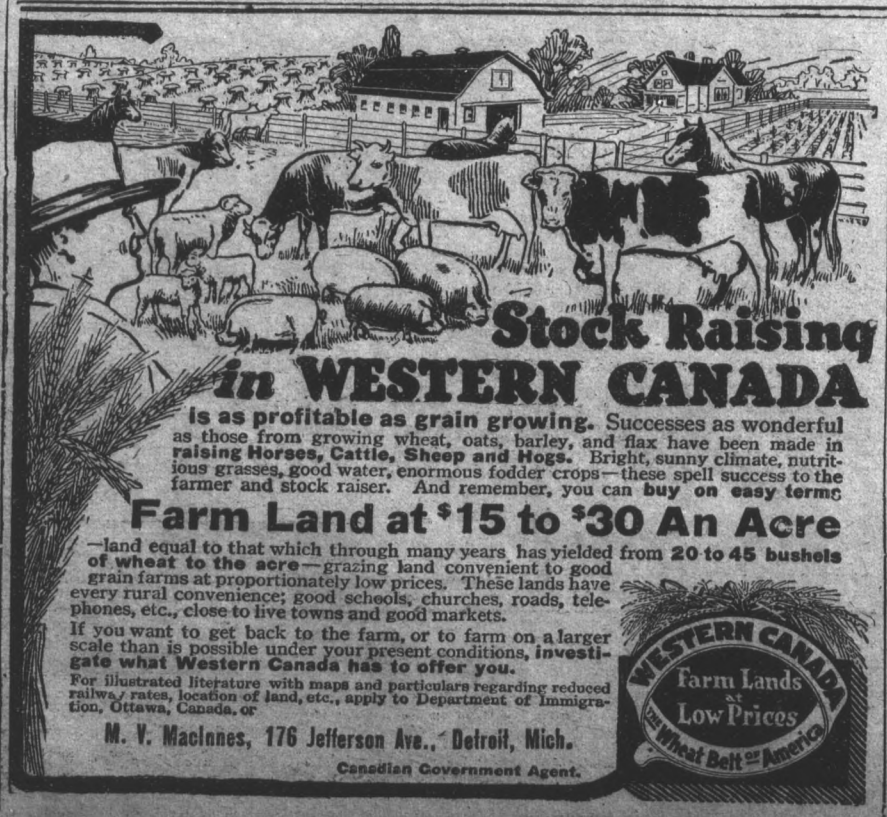
Thousands of dairymen are putting in the Perfection Milker every year. It's the answer to the labor problem. Investigate for yourself. We'll gladly send you names and addresses of Perfection owners, together with a free copy of "What the Dairyman Wants to Know" the book that answers every question about milking machines. Today is the day to write.

Perfection Manufacturing Company

212 E. Hennepin Avenue Minneapolis, Minn.

The Perfection is the Milker with the Downward Squeeze Like the Calf

PERFECTION MILKER



PAINT $1.35 PER Gallon

ORDER DIRECT FROM FACTORY

We will send you as many gallons as you want of good quality red or brown

BARN PAINT

upon receipt of remittance. We are paint specialists and can supply you with paint for any purpose. Tell us your wants and let us quote you low prices. We can save you money by shipping direct from our factory. Satisfaction Guaranteed. On orders for thirty gallons or over we will prepay the freight within a radius of three hundred miles.

AMALGAMATED PAINT CO.
Factory: 383 Wayne St., JERSEY CITY, N.J.

6 Cents per Foot and up. Costs less than wood. 40 designs. All steel. For Lawns, Churches and Cemeteries. Write for free Catalog and Special Prices.
Kokomo Fence Machine Co. 47 North St., Kokomo, Ind.

Send for Catalog

FARM WAGONS

High or low wheels—steel or wood—wide or narrow tires. Wagon parts of all kinds. Wheels to fit any running gear. Catalog illustrated in colors free.

Electric Wheel Co., 35 Elm St., Quincy, Ill.

LINE FENCE.

There are adjoining farms with a road running through them so as to leave part of each farm on both sides of the road; one of the farmers sells that part of his farm lying on one side of the road, and the adjoining farmer refuses to build any of the fence on that side of the road, claiming that all of his part of the line fence is on the other side of the road. What are the rights of the parties?—R. M.

No obligation exists apart from statute to maintain partition fences for the benefit of an adjoining proprietor; each must keep his stock at home at his peril. And our statute being in derogation of the common law must have a reasonably strict construction. The language of the statutes of the different states differ, and it is believed that the subscriber's question has never been passed on by our supreme court. However, it has been held in other states not having more favorable statutes, that the division made by agreement or by the fence viewers is operative only so long as the ownership on both sides is undivided. When the line on either side comes into different hands there must be a new division of the fence. Our statute provides: "The respective occupants of lands enclosed with fences shall keep up and maintain partition fences between their own and the next adjoining enclosure in equal shares."

J. R. R.

CONGESTION OF THE LUNGS.

We have a few chickens which breathe hard; their heads get black. This disease seems to increase. Will you advise me what the disease is and what to do for them?

Oceana Co. F. A. A.

The trouble is probably congestion of the lungs, which has resulted from a cold or bronchitis. In such cases there is very difficult breathing and the comb will become bluish, due to the congestion and the fact that the bird cannot obtain enough air. The trouble may end in pneumonia and death or a fairly rapid recovery of the sick bird. This has been a cold spring with many raw windy days and this is possibly the cause of the sickness. The bet cure is in prevention and consists in keeping the flocks in the houses when the weather conditions are very bad.—K.

RIGHTS OF LIFE TENANTS.

A deeds a piece of property to B, a relative, taking a life lease on this property. If B improves this property and pays the life lease every year, what would be his rights in case A should change his mind at any time? Can A cancel deed and take back the property?—R. R.

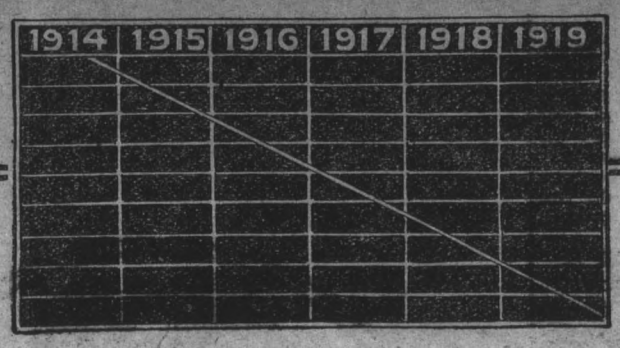
Such a deed can be avoided only on such grounds as would avoid any other deed, such as fraud or undue influence in procuring the execution of the instrument, or lack of mental capacity of the person making it, or the like. A change of mind amounts to nothing. If the court should order an annulment of the deed, the person making the improvements in good faith would be awarded a lien on the land for what the improvements were worth.

J. R. R.

PROVISION STORAGE CONTRACT.

Our local dealer advertised last fall that he would store potatoes until the price was up to suit the farmer and then buy them, the farmer paying the storage, so we hauled our potatoes to his warehouse and stored them there. When we got ready to sell he refused to buy them, at the same time buying from people who brought them in by the load, for market price, but our potatoes he would not take until the price was down to suit him. Had he a right to do this? Did he not have to do as he advertised? In this way he skinned us out of $300. Can we make him pay the difference?—F. J.

This would look like a breach of contract for which the storage merchant is liable.



Tire cost has been cut in two

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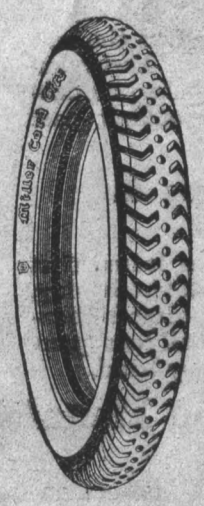
The Crawford Auto Co. of El Paso, Texas, report 33,000 miles from a Miller Cord Tire. We would like to know if anyone knows a record which can match that.

Tread Patented

Center tread smooth, with suction cups to firmly grasp wet asphalt. *Geared-to-the-Road* side treads mesh like cogs in dirt.



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Makers of Miller Red and Gray Inner Tubes—the Team-Mates of Uniform Tires—Also Miller Surgeons Grade Rubber Goods, for homes as well as hospitals.

Miller Tire experts, in the past five years, have more than doubled their average tire mileage. They have cut the cost-per-mile in two.

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The demand for Miller Tires has multiplied 20-fold in that time, because of these results. Hundreds of thousands of motorists have tried them and adopted them. And Miller Tires are now used exclusively in some of the hardest services in America.

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The Miller factory has for 24 years specialized in fine rubber. Ten years ago they applied that experience to building a super-grade tire.

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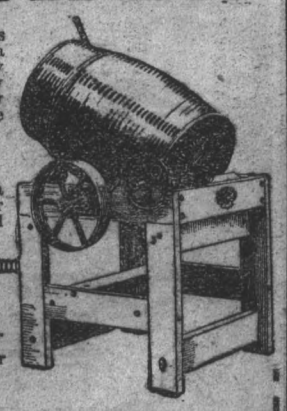

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We have for sale 15,000 acres of fine unimproved lands, well located, close to schools, that we sell on easy terms. A fine farm of 528 acres, all well improved, good buildings, basement barns, silos, orchards, all modern improvements. A sheep ranch of 310 acres, all fenced, well watered, good buildings, orchards. Three stock ranches, well fenced, grassed and watered.
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Ranch for sale or trade for smaller property. Location Clare County, Mich., 7 miles from Harrison County seat. Terms reasonable, price right, 1022 acres, 200 acres cleared, two sets of buildings, can be sold in two parts, 322 and 600 acres, the best of soil. Can give immediate possession. Cause of selling, unable to work.
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SAM TROUP, Chase, Mich

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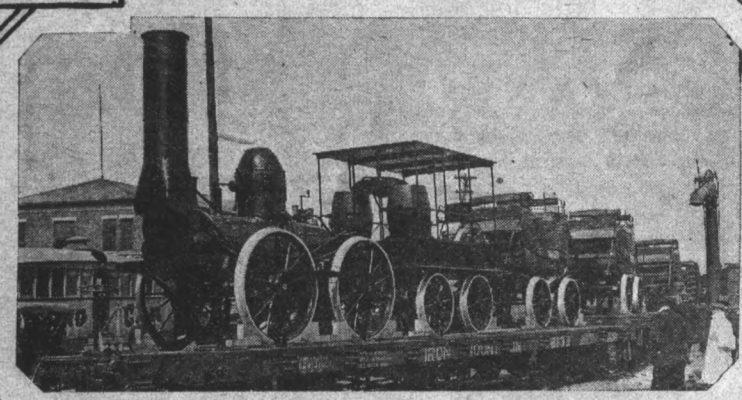
WORLD EVENTS IN PICTURES

Wherever General Pershing went on his inspection trip of the Panama Canal, he was overwhelmed by armies of kiddies.

Designer of medal to be awarded to every chaplain who served with U. S. army, navy or the marines.

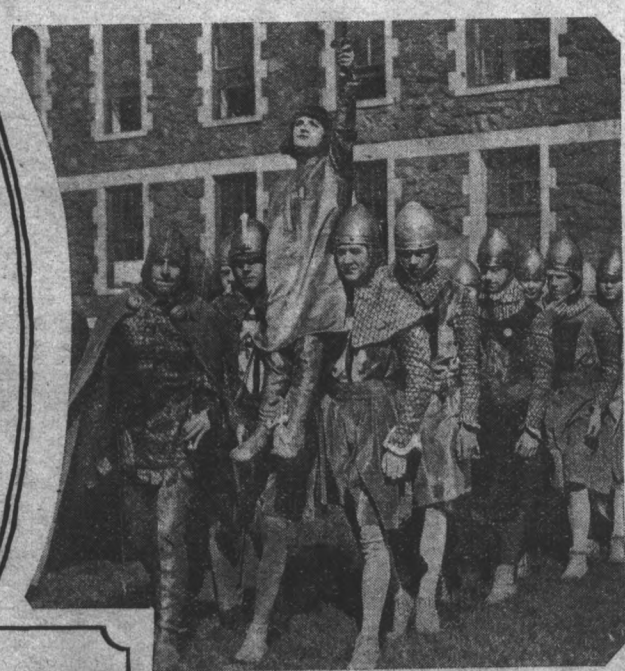
Now that the war is over, Uncle Sam finds no use for the hundreds of submarine chasers which rendered valiant service during the war. Here are a few of the boats to be auctioned.



Famous old locomotive, "Dewitt Clinton," and train of 1831 is to be exhibited in New York.

Russia's most noted novelist, Merezkowski, here shown at his desk in Warsaw, is coming to America to lecture against Bolshevism.

Miss Colyer, England's champion tennis player, does as much of her playing in the air as on the ground, as is shown by this picture.



One of the features in the magnificent pageant given by ten thousand New York school children, was the canonization of Joan of Arc.

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THE VALLEY OF THE GIANTS

A ROMANCE OF THE REDWOODS

By Peter B. Kyne

Again the Colonel assimilated the hint, but preferred to dissemble. "Oh, you can't steal him from me, Cardigan," he laughed. "I warn you in advance—so spare yourself the effort."

"I'll try anything once," Bryce retorted with equal good nature. "However, I don't want to steal him from you. I want to ascertain from him where he procured this burl. There may be more in the same neighborhood where he got this."

"He wouldn't tell you."

"He might. I'm a persuasive little cuss when I choose to exert myself."

"Rondeau is not communicative. He requires lots of persuading."

"What delicious soup!" Bryce murmured blandly. "Miss Sumner, may I have a cracker?"

The dinner passed pleasantly; the challenge and defiance between guest and host had been so skillfully and gracefully exchanged that Shirley hadn't the slightest suspicion that these two well-groomed men had, under her very nose, as it were, agreed to be enemies and then, for the time being, turned their attention to other and more trifling matters: Coffee was served in the living-room, and through the fragrant smoke of Pennington's fifty-cent perfectos a sprightly three-cornered conversation continued for an hour. Then the Colonel, secretly enraged at the calm, mocking, contemplative glances which Bryce ever and anon bestowed upon him, and unable longer to convince himself that he was too apprehensive—that this cool young man knew nothing and would do nothing even if he knew something—rose, pleaded the necessity for looking over some papers, and bade Bryce good-night. Foolishly he proffered Bryce a limp hand; and a demon of deviltry taking possession of the latter, this time he squeezed with a simple, hearty earnestness, the while he said:

"Colonel Pennington, I hope I do not have to assure you that my visit here this evening has not only been delightful but—er—instructive. Good-night, sir, and pleasant dreams."

With difficulty the Colonel suppressed a groan. However, he was not the sort of man who suffers in silence; for a minute later the butler, leaning over the banisters as his master climbed the stairs to his library, heard the latter curse with an eloquence that was singularly appealing.

CHAPTER XIV.

COLONEL SETH PENNINGTON looked up sourly as a clerk entered his private office. "Well?" he demanded brusquely. When addressing his employes, the Colonel seldom bothered to assume his pontifical manner.

"Mr. Bryce Cardigan is waiting to see you, sir."

"Very well. Show him in."

Bryce entered. "Good morning, Colonel," he said pleasantly and brazenly thrust out his hand.

"Not for me, my boy," the Colonel assured him. "I had enough of that last night. We'll just consider the hand-shaking all attended to, if you please. Have a chair, sit down and tell me what I can do to make you happy."

"I'm delighted to find you in such a generous frame of mind, Colonel. You can make me genuinely happy by renewing, for ten years on the same terms as the original contract, your arrangement to freight the logs of the Cardigan Redwood Lumber Company from the woods to tidewater."

Colonel Pennington cleared his throat with a propitiatory "Ahem-m!" Then he removed his gold spectacles and carefully wiped them with a silk handkerchief, as carefully replaced them upon his aristocratic nose, and then gazed curiously at Bryce.

"Upon my soul!" he breathed.

"I realized, of course, that this is reopening an issue which you have been pleased to regard as having been settled in the last letter my father had from you, and wherein you named terms that were absolutely prohibitive."

"My dear young friend! My very dear young friend! I must protest at being asked to discuss this matter. Your father and I have been over it in detail; we failed to agree, and that settles it. As a matter of fact, I am not in position to handle your logs with my limited rolling-stock, and that old hauling contract which I took over when I bought the mills, timber-lands, and logging railroad from the late Mr. Henderson and incorporated into the Laguna Grande Lumber Company, has been an embarrassment I have longed to rid myself of. Under those circumstances you could scarcely expect me to saddle myself with it again, at your mere request and solely to oblige you."

"I did not expect you to agree to my request. I am not quite that optimistic," Bryce replied evenly.

"Then why did you ask me?"

"I thought that possibly, if I reopened negotiations, you might have a reasonable counter-proposition to suggest."

"I haven't thought of any."

"I suppose if I agreed to sell you that quarter-section of timber in the little valley over yonder" (he pointed to the east) "and the natural outlet for your Squaw Creek timber, you'd quickly think of one," Bryce suggested pointedly.

"No, I am not in the market for that Valley of the Giants, as your idealistic father prefers to call it. Once I would have purchased it for double its value, but at present I am not interested."

"Nevertheless it would be an advantage for you to possess it."

"My dear boy, the possession of that big timber is an advantage I expect to enjoy before I acquire many more gray hairs. But I do not expect to pay for it."

"Do you expect me to offer it to you as a bonus for renewing our hauling contract?"

The Colonel snapped his fingers. "By George," he declared, "that's a bright idea, and a few months ago I would have been inclined to consider it very seriously. But now—"

"You figure you've got us winging, eh?" Bryce was smiling pleasantly.

"I am making no admissions," Pennington responded enigmatically—"nor any hauling contracts for my neighbor's logs," he added.

"You may change your mind."

"Never."

"I suppose I'll have to abandon logging in Township Nine and go back to the San Hedrin," Bryce sighed resignedly.

"If you do, you'll go broke. You can't afford it. You're on the verge of insolvency this minute."

"I suppose, since you decline to haul our logs, after the expiration of our present contract, and in view of the fact that we are not financially able to build our own logging railroad, that the wisest course my father and I could pursue would be to sell our timber in Township Nine to you. It adjoins your holdings in the same township."

"I had a notion the situation would begin to dawn upon you." The Colonel was smiling now; his handsome face was gradually assuming the expression pontifical. "I'll give you a dollar a thousand feet stumpage for it."

"On whose cruise?"

"Oh, my own cruisers will estimate it."

"I'm afraid I can't accept that offer. We paid a dollar and a half for it, you know, and if we sold it to you at a dollar, the sale would not bring us sufficient money to take up our bonded indebtedness; we'd only have the San Hedrin timber and the Valley of the Giants left, and since we cannot log either of these at present, naturally we'd be out of business."

"That's the way I figured it, my boy."

"Well—we're not going out of business."

"Pardon me for disagreeing with you. I think you are."

"Not much! We can't afford it."

The Colonel smiled benignantly. "My dear boy, my very dear young friend,

To aid in correlating the efforts of the various agencies working at the great task of developing community spirit and community personal resources perhaps no move has done more toward the achievement of that end in this state than has the summer courses at the Michigan Agricultural College for ministers and religious workers having country charges.

AL ACRES—At That Percy May Not be Irrational. —*By Frank R. Leet*

listen to me. Your paternal ancestor is the only human being who has ever succeeded in making a perfect monkey out of me. When I wanted to purchase from him a right of way through his absurd Valley of the Giants, in order that I might log my Squaw Creek timber, he refused me. And to add insult to injury, he spouted a lot of rot about his big trees, how much they meant to him, and the utter artistic horror of running a logging-train through the grove—particularly since he planned to bequeath it to Sequoia as a public park. He expects the city to grow up to it during the next twenty years.

"My boy, that was the first bad break your father made. His second break was his refusal to sell me a mill-site. He was the first man in this county, and he had been shrewd enough to hog all the water-front real estate and hold onto it. I remember he called himself a progressive citizen, and when I asked him why he was so assiduously blocking the wheels of progress, he replied that the railroad would build in from the south some day, but that when it did, its builders would have to be assured of terminal facilities on Humboldt Bay. 'By holding intact the spot where rail and water are bound to meet,' he told me, 'I insure the terminal on tidewater which the railroad must have before consenting to build. But if I sell to Tom, Dick and Harry, they will be certain to gouge the railroad when the latter tries to buy it from them. They may scare the railroad away'."

"Naturally!" Bryce replied. "The average human being is a hog, and merciless when he has the upper hand. He figures that a bird in the hand is worth two in the bush. My father, on the contrary, has always planned for the future. He didn't want that railroad blocked by land-speculators and its building delayed. The country needed rail connection with the outside world, and moreover his San Hedrin timber isn't worth a hoot until that feeder to a transcontinnetal road shall be built to tap it."

"But he sold Bill Henderson the mill-site on tidewater that he refused to sell me, and later I had to pay Henderson's heirs a whooping price for it. And I haven't half the land I need."

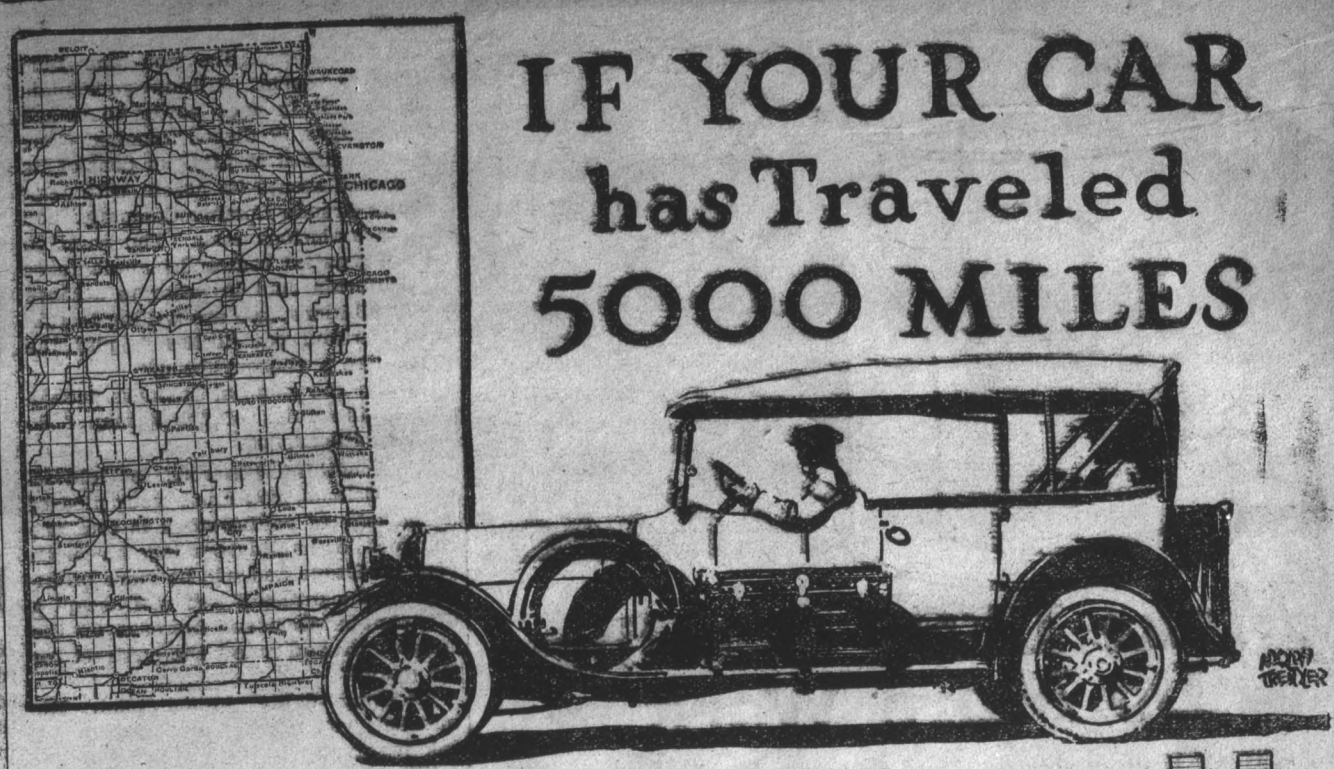
"But he needed Henderson then. They had a deal on together. You must remember, Colonel, that while Bill Henderson held that Squaw Creek timber he later sold you, my father would never sell him a mill-site. Can't you see the sporting point of view involved? My father and Bill Henderson were good-natured rivals; for thirty years they had tried to outgame each other on that Squaw Creek timber. Henderson thought he could force my father to buy at a certain price, and my father thought he could force Henderson to sell at a lesser price; they were perfectly frank about it with each other and held no grudges. Of course, after you bought Henderson out, you foolishly took over his job of trying to outgame my father. That's why you bought Henderson out, isn't it? You had a vision of my father paying you a nice profit on your investment, but he fooled you, and now you're peeved and won't play."

Bryce hitched his chair toward the Colonel. "Why shouldn't my dad be nice to Bill Henderson after the feud ended?" he continued. "They could play the game together then, and they did. Colonel, why can't you be as sporty as Henderson and my father? They fought each other, but they always fought fairly and in the open, and they never lost the respect and liking each had for the other."

"I will not renew your logging contract. That is final, young man. No man can ride me with spurs and get away with it."

"Oh, I knew that yesterday."

"Then why have you called on me



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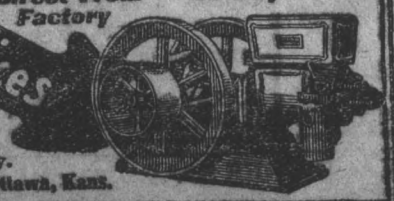

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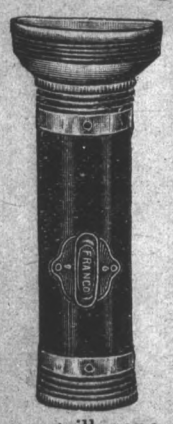

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today, taking up my time on a dead issue?"

"I wanted to give you one final chance to repent. I know your plan. You have it in your power to smash the Cardigan Redwood Lumber Company, acquire it at fifty per cent of its value, and merge its assets with your Laguna Grande Lumber Company. You are an ambitious man. You want to be the greatest redwood manufacturer in California, and in order to achieve your ambitions, you are willing to ruin a competitor: you decline to play the game like a thoroughbred."

"I play the game of business according to the rules of the game; I do nothing illegal, sir."

"And nothing generous or chivalrous. Colonel, you know your plea of a shortage of rolling-stock is that the contract for hauling our logs has been very profitable and will be more profitable in the future if you will accept a fifty-cent-per-thousand increase on the freight-rate and renew the contract for ten years."

"Nothing doing, young man. Remember, you are not in a position to ask favors."

"Then I suppose we'll have to go down fighting?"

"I do not anticipate much of a fight."

"You'll get as much as I can give you."

"I'm not at all apprehensive."

"And I'll begin by running your woods-boss out of the country."

"Ah-h!"

"You know why, of course—those burl panels in your dining-room. Rondeau felled a tree in our Valley of the Giants to get that burl for you, Colonel Pennington."

Pennington flushed. "I defy you to prove that," he almost shouted.

"Very well. I'll make Rondeau confess; perhaps he'll even tell me who sent him after the burl. Upon my word, I think you inspired that dastardly raid. At any rate, I know Rondeau is guilty, and you, as his employer and the beneficiary of his crime, must accept the odium."

The Colonel's face went white. "I do not admit anything except that you appear to have lost your head, young man. However, for the sake of argument: granting that Rondeau felled that tree, he did it under the apprehension that your Valley of the Giants is a part of my Squaw Creek timber adjoining."

"I do not believe that. There was malice in the act—brutality even; for my mother's grave identified the land as ours, and Rondeau felled the tree on her tombstone."

"If that is so, and Rondeau felled that tree—I do not believe he did—I am sincerely sorry, Cardigan. Name your price and I will pay you for the tree. I do not desire any trouble to develop over this affair."

"You can't pay for that tree," Bryce burst forth. "No pitiful human being can pay in dollars and cents for the wanton destruction of God's handiwork. You wanted that burl, and when my father was blind and could no longer make his Sunday pilgrimages up to that grove, your woods-boss went up and stole that which you knew you could not buy."

"That will be about all from you young man. Get out of my office. And by the way, forget that you have met my niece."

"It's your office—so I'll get out. As for your second command"—he snapped his fingers in Pennington's face—"fooey!"

When Bryce had gone, the Colonel hurriedly called his logging-camp on the telephone and asked for Jules Rondeau, only to be informed, by the timekeeper who answered the telephone, that Rondeau was up in the green timber with the choppers and could not be gotten to the telephone in less than two hours.

"Do not send for him, then," Pennington commanded. "I'm coming up on the eleven-fifteen train and will talk to him when he comes in for his lunch."

At eleven o'clock, and just as the Colonel was leaving to board the eleven-fifteen logging-train bound empty for the woods, Shirley Sumner made her appearance in his office.

"Uncle Seth," she complained, "I'm lonesome. The bookkeeper tells me you're going up to the logging-camp. May I go with you?"

"By all means. Usually I ride in the cab with the engineer or fireman; but if you're coming, I'll have them hook on the caboose. Step lively, my dear, or they'll be holding the train for us and upsetting our schedule."

CHAPTER XV.

BY virtue of their logging contract with Pennington, the Cardigans and their employes were transported free over Pennington's logging railroad; hence, when Bryce Cardigan resolved to wait upon Jules Rondeau in the matter of that murdered Giant, it was characteristic of him to choose the shortest and most direct route to his quarry, and as the long string of empty logging-trucks came crawling off the Laguna Grande Lumber Company's log-dump, he swung over the side, quite ignorant of the fact that Shirley and her precious relative were riding in the little caboose in the rear.

At twelve-ten the train slid in on the log landing of the Laguna Grande Lumber Company's main camp, and Bryce dropped off and approached the engineer of the little donkey-engine used for loading the logs. "Where's Rondeau?" he asked.

The engineer pointed to a huge, swarthy man approaching across the clearing in which the camp was situated. "That's him," he replied. And without further ado, Bryce strode to meet his man.

"Are you Jules Rondeau?" he demanded as he came up to the woods-boss. The latter nodded. "I'm Bryce Cardigan," his interrogator announced, "and I'm here to thrash you for chopping that big redwood tree over in that little valley where my mother is buried."

"Oh!" Rondeau smiled. "Wiz pleasure, M'sieur." And without a moment's hesitation he rushed. Bryce backed away from him warily, and they circled.

"When I get through with you, Rondeau," Bryce said distinctly, "it'll take a good man to lead you to your meals. This country isn't big enough for both of us, and since you came here last, you've got to go first."

Bryce stepped in, feinted for Rondeau's jaw with his right, and when the woods-boss quickly covered, ripped a sizzling left into the latter's midriff. Rondeau grunted and dropped his guard, with the result that Bryce's great fists played a devil's tatoo on his countenance before he could crouch and cover.

"This is a tough one," thought Bryce. His blows had not, apparently, had the slightest effect on the woods-boss. Crouched low and with his arms wrapped around his head, Rondeau still came on unfalteringly, and Bryce was forced to give way before him; to save his hands, he avoided the risk of battering Rondeau's hard head and sinewy arms.

Already word that the woods-boss was battling with a stranger had been shouted into the camp dining-room, and the entire crew of that camp, abandoning their half-finished meal, came pouring forth to view the contest. Out of the tail of his eye Bryce saw them coming, but he was not apprehensive, for he knew the code of the woodsman: "Let every man roll his own hoop." It would be a fight to a finish, for no man would interfere; striking, kicking, gouging, biting, or

choking would not be looked upon as unsportsmanlike; and as Bryce backed cautiously away from the huge, lithe, active, and powerful man before him, he realized that Jules Rondeau was, as his father had stated, "top dog among the lumberjacks."

Rondeau, it was apparent, had no stomach for Bryce's style of combat. He wanted a rough-and-tumble fight and kept rushing, hoping to clinch; if he could but get his great hands on Bryce, he would wrestle him down, climb him, and finish the fight in jiffy-time. But a rough-and-tumble was exactly what Bryce was striving to avoid, hence when Rondeau rushed, Bryce side-stepped and peppered the woodsman's ribs. But the woods-crew, which by now was ringed around them, began to voice disapproval of this style of battle.

"Clinch with him, dancing master," a voice roared.

"Tie into him, Rondeau," another shouted.

"It's a fair match," cried another, "and the red one picked on the main push. He was looking for a fight, an' he ought to get it; but these fancy fights don't suit me. Flop him, stranger, flop him."

"Rondeau can't catch him," a fourth man jeered. "He's a foot-racer, not a fighter."

Suddenly two powerful hands were placed between Bryce's shoulders, effectually halting his backward progress; then he was propelled violently forward until he collided with Rondeau. With a bellow of triumph, the woods-boss's gorilla-like arms were around Bryce, swinging him until he faced the man who had forced him into that terrible grip. This was no less a personage than Colonel Seth Pennington, and it was obvious he had taken charge of what he considered the obsequies.

"Stand back, you men, and give them room," he shouted. "Rondeau will take care of him now. Stand back, I say. I'll discharge the man that interferes."

With a heave and a grunt Rondeau lifted his antagonist, and the pair went crashing to the earth together, Bryce underneath. And then something happened. With a howl of pain, Rondeau rolled over on his back and lay clasping his left wrist in his right hand, while Bryce scrambled to his feet.

"The good old wrist-lock does the trick," he announced; and stooping, he grasped the woods-boss by the collar with his left hand, lifted him, and struck him a terrible blow in the face with his right. But for the arm that upheld him, Rondeau would have fallen. To have him fall, however, was no part of Bryce's plan. Jerking the fellow toward him, he passed his arm around Rondeau's neck, holding the latter's head as in a vise with the crook of his elbow. And then the battering started. When it was finished, Bryce let his man go, and Rondeau, bloody, sobbing, and semi-conscious, sprawled on the ground.

Bryce bent over him. "Now, damn, you," he roared, "who felled that tree in Cardigan's Redwoods?"

"I did, M'sieur. Enough—I confess!" The words were a whisper.

"Did Colonel Pennington suggest it to you?"

"He want ze burl. By gar, I do not want to fell zat tree—"

"That's all I want to know." Stooping, Bryce seized Rondeau by the nape of the neck and the slack of his overalls, lifted him shoulder-high and threw him, as one throws a sack of meal, full at Colonel Pennington.

"You threw me at him. Now I throw him at you. You damned, thieving, greedy, hypocritical scoundrel, if it weren't for your years and your gray hair, I'd kill you."

(Continued next week).

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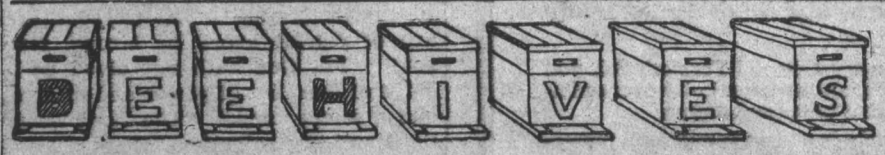

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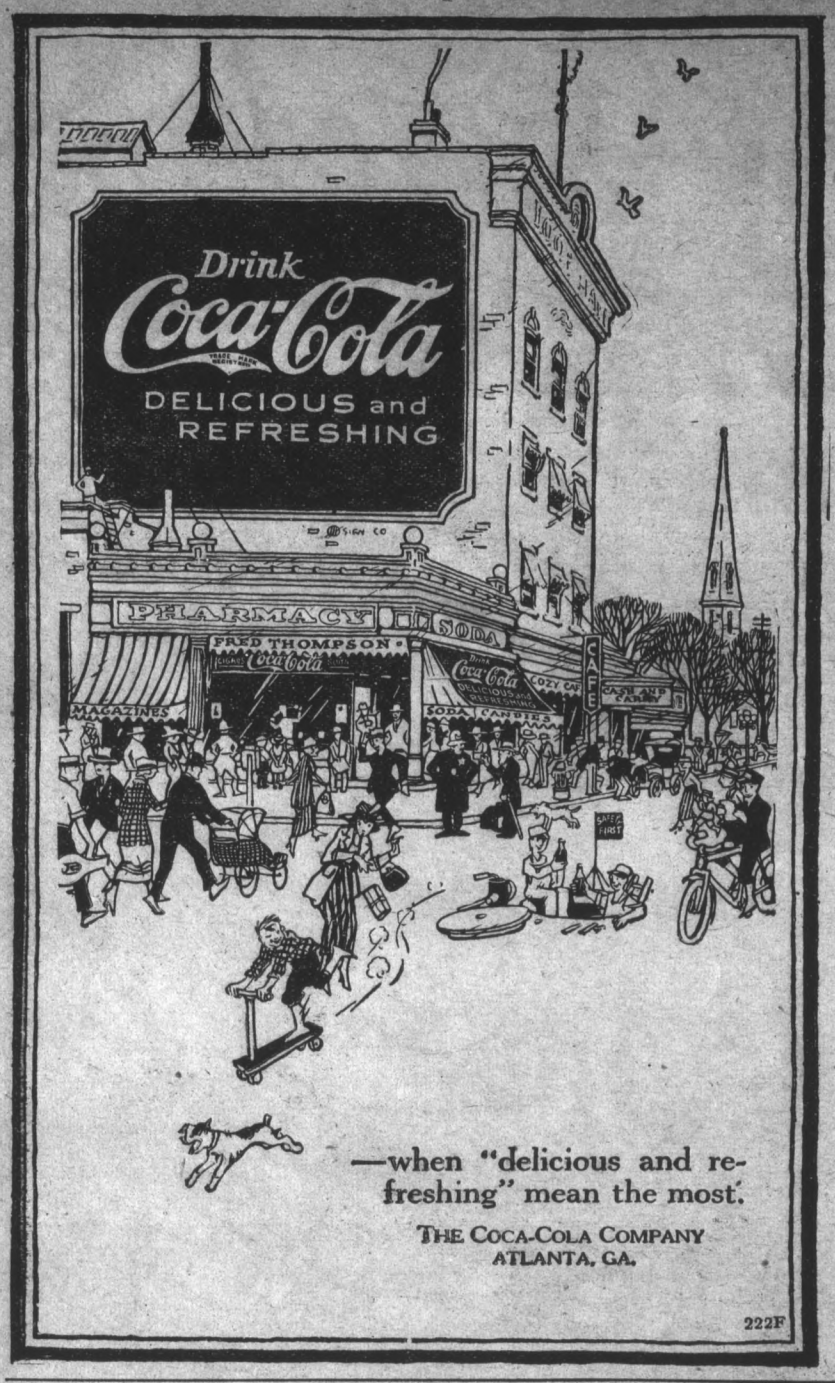

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Religion and Health

(Our Weekly Sermon)

By N. A. McCune

DOES religion have anything to do with one's health? Experience and science answer in the affirmative. In fact, the relationship is far closer than most people imagine. Certain diseases or types of disease are on the increase in America, namely those of the nervous type and diseases which spring from that source. Heart trouble and high blood pressure take their annual toll of thousands. These have a relationship with the mental state. In fact, several diseases of the heart are directly aggravated by the state of the patient's mind. By changing the mental state, from gloomy and pessimistic to contented and hopeful, personal faith may have a powerful influence. An immoral, wild-living husband had a blood pressure of 180. While away from his family, he professed conversion. He came home, was reunited to his wife and children, and his blood pressure dropped to 140. A young man had suffered long from nervous prostration. He had experimented with baths, medicine, hypnotism, the "rest cure," and all had failed. One night he was passing a church where evangelistic services were being held. Attracted by the hearty singing, he went in. He was greatly impressed by the preacher's positive convictions, and his tremendous earnestness. Many of the people seemed to be free from anxiety, and their faces bore testimony to inward peace. He attended the meetings again, accepted the invitation to become a Christian, and joined the church. Immediately he was put to work. He joined a club of volunteer workers and began to invite his friends to attend the meetings. He forgot himself. In ten days he was another person. His countenance changed. He became cheerful and happy. The power of personal faith in God is nowhere better exemplified than in the cases of victory over drunkenness. We hope it will not be long until America will see the last drunken man, but in the meantime there are still many who need the power of religion to remove the appetite and restore them to a normal condition.

WHAT are the elements in Christianity that give it this grip on the body? Well, first, there is the chart of Christianity, the Bible. The Bible is the greatest storehouse of strength and courage known. Much disease is a state of fear, and fear is always branded in the Bible as a state of slavery. Over and over we are enjoined not to be afraid. "Fear not, fear not," is the oft-recurring command. The Bible breathes courage as Lake Michigan breathes ozone. That is why Bible reading men have been strong men, in all ages. Take at random a few passages of this nature: "Casting all your care upon Him, for He careth for you." "Say to them that are of fearful heart, be strong, fear not." "For God hath not given us a spirit of fear, but of power and of love, and a sound mind." "The Lord is my light and my salvation, whom shall I fear?" And He said to the woman, thy faith hath saved thee, go in peace," and hundreds more, of like passages.

NEXT is the practice of prayer. Doctor Hyslop, superintendent of the Bethlehem Royal Hospital, London, England, says: "As an alienist, and one whose life has been concerned with the suffering of the mind, I would state that of all hygienic measures to counteract disturbed sleep, depressed spirits, and all the miserable sequels of a distressed mind, I would undoubtedly give the first place to the simple habit of prayer." A woman once went to a doctor, in extreme nervous agitation. It was explained to her that she was suffering from no organic disease, but she would not listen to this kind of advice. She said she was going to lose her mind, and further treatment was of no use. The doctor was a man who knew the power of personal faith, and he decided to try that remedy on his patient. He told her not to be discouraged, as he knew of a certain treatment that would do her a world of good, if it did not effect a permanent cure. But she must be faithful and use it every day. Her curiosity was aroused. She signed a written promise that she would do exactly as the doctor prescribed. The prescription was as follows: Three times a day she was to go into a room alone and draw the curtains, place a chair in the middle of the room and kneel down and pray for ten minutes. She was to pray aloud, slowly and distinctly. The woman said she could not do it. She had not prayed for years, nor been to church, and she had lost all faith in those things. It was all humbug. The doctor showed her the written promise, which she had signed. That floored her, and she promised to try. Three weeks later she returned. She had gained complete mastery over her mental difficulties. She had gained five pounds, slept well, and her neighbors remarked her great improvement. She said that after a few days her praying began to have a real meaning to her, and she entered into it all her soul. Religion, if it be genuine, has an effect on the body.

Sunshine Hollow Items

By Rube Rubicon

Grandpa Jones says he will stick to the farm just as long as he can tramp around with his shoes full of feet and his head full of sense. He don't believe in retiring anything but automobiles. He has three boys in the city, and between them those boys have nine children. It keeps Grandpa Jones busy chasing chickens and buying sugar to keep those kids fed during summer vacation on the farm. Both Grandpa and Grandma are sort of glad when school begins, but they like a pretty good dose of visiting every summer and seem to survive. Lots of folks in the cities don't appreciate the grandfathers and grandmothers back on the farm the way they ought to. Guess it's because they're too busy.

Porter Greenwood says that George Washington took a hack at the cherry tree according to history, but if he had been living now he would have taken a taxicab. Porter says that he is different from George, because there is no evidence that George ever got caught telling a lie, while he gets showed up by his wife every time he tells one.

The Muggins triplets are cutting down the cost of living by buying one chocolate soda and taking three straws. Yesterday it ended in a fight because Jerry Muggin sucked the fastest on his straw. Tom Allen, the druggist, says there is more money in postage stamps than selling sodas to those Muggins.

Stephen McCann says his father gave him a fine start in life. One day the old man said, "Stephen, after today every meal that you eat in this house is going to cost you thirty cents." It gave Stephen such a start that he has been working mighty hard ever since.

City Life vs. Country Life

By Margaret Winslow

We used to live in the city,
And a thousand bones a year
Seemed like a pretty big income
'Till along came the profiteer.

Then up went the price of groceries,
And the things we have to wear;
Then it seemed as though Father's income
Was too small the strain to bear.

When Father received his pay check
There were always bill to pay,
And the bills kept growing larger
With every passing day.

Each week the price was higher,
On sugar, shoes and rent,
And gas and coal and everything;
O, the money was soon spent.

When Mother would sit and figure,
Her brow with care was lined,
For the solution of the problem
Was surely hard to find.

Each week, just thirty dollars
Was earned by my dear dad;
To see my parents worrying
Made me feel awful sad.

"There's shoes to get for the baby,"
I'd hear my mother say;
"The rent is due, and the ice-man
Will come to collect today.

"The flour is gone—and the butter,
But we'll have to go without,
For the milkman said we'd have to pay
Or he'd leave us off his route."

"You must pay your insurance;
The coal is almost gone,
The gas bill's due—oh, dear, oh, dear!
There must be something wrong."

"For I can't make thirty dollars
Pay all these weekly bills;
Yet I've got to do it somehow,
Oh! This is the life that kills."

Thus Mother and Father would worry,
And figure, and go without
The things they should have had each day,
To make life worth a shout.

At last they got so sick and tired
Of worrying along,
They bought a farm, and here we are!
Now Mother sings a song.

For she is happy all the day,
From care and worry free,
And Dad goes whistling to his work,
So blithe and gay is he.

There's all the milk and eggs and cream
The family wants to use,
And more besides, to sell down town;
Now isn't that good news?

There's lots of fruit of every kind,
And vegetables, too,
We just go out and gather them,
That's all we have to do.

There's lots of wood about the place,
It doesn't cost a dime,
We just go out and saw it up;
There's fuel all the time.

No rent to pay—no men to meet
Who would collecting come,
For garbage, ice and water, too,
And everything under the sun.

Out here the children run and play,
And yell to beat the band;
There's lots of room for all their noise
In this big country-land.

When Father sells his wool and lambs,
Or calves or pigs or hay,
We all dress up and go along
And have a holiday.

A thousand plunks go in the bank,
A thousand pay the debt,
The rest we spend for clothes and things
We all have wished to get.

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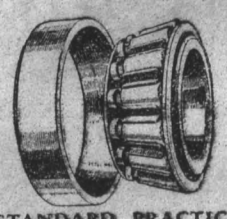

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Our Boys' and Girls' Department

The Treasure in the Hay Mow

By Lemuel L. De Bra

THE day was intensely hot. Of the six boys who had begun the task of cleaning out the old hay to make ready for the new crop which they would start hauling Monday, only Rob and his chum, Ben, remained. Far across the meadow, Rob Warren could see the shady clump of willows by the stream where the other boys had gone swimming.

Sitting in the window of the haymow, Rob had been thinking, longingly, of that swimming pool. The other boys had coaxed him to go with them. They had argued that there would be time Monday morning to finish the job of getting out the old hay. But Rob had promised his father he would try to clean up the job Saturday. So he had staid; and Ben Manning had staid with him. Wringing wet with perspiration, gasping for breath in the hot, dust-laden air, and with every muscle sore from tugging with the pitchfork at the tangled hay, Rob had gone to the window for a moment's rest and fresh air.

Suddenly he heard a startled cry from Ben. Rob leaped to his feet. He turned and scrambled across the hay to where he had left his chum.

Ben Manning was a fat, good-natured fellow, with curly, red hair, and blue eyes that seemed always to be laughing. Now Rob saw him down on his knees, his face dripping with perspiration, and his short, fat arms tugging at something buried in the hay.

"What is it?" cried Bob.

"Ca-can't you see it's a grip?" panted Ben. "And it's full of goldbricks, too, from the weight of it!"

Rob hastened to his side, and helped Ben uncover the object, which really proved to be a large, brown grip. It was very heavy, and was securely bound with straps. The boys looked at it, then at each other in mystified surprise.

"How did that get here?" demanded Ben.

Rob shook his head. Ben ran his stubby fingers through his red hair and tried to appear very thoughtful.

"Burglars!" he gasped finally.

Bob stared at him, wide-eyed. "Sure enough!" he agreed.

"Let's open it."

Rob looked quickly around the haymow as though afraid that someone might be watching. Yet he knew they were alone. Even his father and mother were away—had driven to town and were not to return until evening. He nodded to Ben, and they began unfasten the straps.

The straps were buckled tight, and the boys' fingers were nervously eager. It took them sometime to unfasten the grip. Then, slowly, Bob worked the top off. And at what they saw, both boys gasped in astonishment. The grip was filled with watches, cuff links, and other jewelry.

"Burglars!" repeated Ben, in an awed whisper.

"Sure!"

"What'll we do?"

For a moment Rob was silent. He looked in wonder at the heap of shining gold. When had the burglars hidden it there? When would they come for it? Probably the thieves realized that the new haying season was on and they would return soon. Yes, they might come that very night.

"I'll telephone to town and have the sheriff come at once," concluded Rob Warren.

"That's it!" Ben agreed.

Rob started across the hay toward the driveway. Ben looked at the grip of jewelry, then waddled after him.

"Hadn't you better stay here and watch that?" asked Rob.

Again Ben looked at the grip filled with shining gold. Slowly his eyes rolled around toward the dark corners of the barn. "Don't-don't you think I'd better go along and help telephone?" he stammered, and slid down the hay into the driveway after Rob.

With Ben at his heels, Rob hurried along the driveway toward the main door of the barn. Just as he was about to step out of the door he halted in his tracks, stared for a moment down the lane that led to the county road, then seized Ben by the arm and drew him back into the empty granary that opened into the driveway. "Someone's coming!" he whispered.

Cautiously, Ben peeked out. "Sure enough!" he exclaimed in a low voice. "Two men. Who are they?"

"They're strangers around here," said Rob significantly.

Ben started. "But—but burglars wouldn't come in the daytime," he objected.

"Maybe they know my folks are in town."

Evidently this impressed Ben, for he drew a long face. He was about to speak again when Rob raised a finger and cautioned silence.

A moment later the two boys concealed in the darkness of the granary, saw two roughly-dressed men sneak in through the barn door. The two men looked sharply around.

"Remember where we hid it, Bill?" one of the men demanded.

"Yep."

"Then get it! Everyone's in town 'cept them kids, and they're down swimming; but I'd better watch here while you get the grip."

While one stood watch at the door, the other man hurried into the haymow. His heart in his mouth, Rob watched the fellow at the door. What would happen when the other burglar found the grip uncovered—and open.

He did not have long to wait. The burglar, dragging the heavy grip, came stamping down the driveway to where the guard stood. His face showed his agitation. "Someone's uncovered this!" he gasped.

"And left it lying there?"

The other fellow gulped, and nodded his head. The guard's eyes narrowed. He looked around suspiciously, and one hand went to a hip pocket. "A trap!" he growled.

At that instant, the open door of the granary, just opposite the two men, attracted their attention. They peered into the darkness. Rob shrank back against the wall, and, in doing so, one hand came in contact with something cold and hard. Then he remembered. It was his father's shotgun. They had left it in the granary lately since trying to shoot that chicken-hawk.

Unconsciously Rob's fingers tightened on the weapon. He saw the men were still peering toward him. Slowly he lifted the gun. He drew back the two triggers.

"Let's beat it!" exclaimed one of the men.

The other nodded. He picked up the grip, and both men turned toward the door.

Then came a sharp cry from the granary. "Halt! Hands up!"

The burglar dropped the grip as though it were red-hot. Both men whirled again and faced the granary. They saw the yawning mouth of a double-barreled shotgun aimed at them. As though jerked by a wire, four hands went up.

"Great Scott!" gasped Ben, under his breath.

"Ben, listen!" whispered Rob Warren. "You climb out that back window, skip around to the house, and 'phone the sheriff. I'll stay here until he comes."

"Sure, I'll—I'll go," said Ben very promptly.

Rob heard him tip-toe rapidly across the granary floor. Then he heard the boy scramble out the window. And Rob was alone with the thieves.

His heart was beating painfully. He had wanted very much to ask Ben to take the gun and let him run to the 'phone. But Rob knew he should be brave; and he tried his best, although it was all he could do to hold the gun steady. He was glad the burglars could not see his face.

For a moment—it seemed a fearfully long moment to Rob—all was silent. Rob could hear the wild beating of his own pulse. The thieves shifted their weight from one foot to another.

"Wot's de game?" demanded one, gruffly.

"You're prisoners," replied Rob, be-

For Boys and Girls

By E. T. Meredith, Secretary of Agriculture

I WANT to say just a few words to the farm boys and girls, and the older people need not bother to read it at all. Now, you and I know that the Boys' and Girls' Club work represents one of the most important lines of agricultural activity in the United States today. I believe it is important, because it has such large possibilities. We men and women who are trying to improve farming and farm life will be out of the game when you boys and girls are just reaching the prime of life. You have the advantage of us because you are learning the principles of good agriculture and home-making while you are still young enough to learn to the best advantage and to apply in a practical way the knowledge thus gained throughout your whole lives.

Even as boys and girls you are accomplishing more good than can be measured. The good that you will be able to do will increase as you grow older and, when you become full-grown men and women, you can supply for the agricultural forces of this nation a leadership such as the world has never known before.

I CONGRATULATE the Boys' and Girls' Club members. And I would like to ask a favor of the boys and girls who are not members of the clubs. We are trying—the United States Department of Agriculture, the state agricultural colleges, and a great many other people—to make the farms of this country more profitable and home life on the farm more pleasant. I wish the rest of you boys and girls would join those who are already members of the clubs and help us in accomplishing this great service for our common country. It is a patriotic thing to do; and it is a service that can not be rendered by anybody except you boys and girls.

THE year 1920 should be the biggest year in the history of Boys' and Girls' Club work—and I am confident it will be. The country is facing a difficult situation, because so many men have left the farms to work in the city. The good work that the club boys and girls can do will help to overcome that handicap—and the club boys and girls will do that kind of work this year. It may hearten you to know that many of us here in the Department of Agriculture look upon the Boys' and Girls' Clubs much as Caesar must have looked upon the Tenth Legion, or Napoleon upon the Old Guard. The other forces may fail, but we know that we can rely on you.

I might not be willing to see you undertake such serious service if I did not know that, while you work hard, you play joyously together. I am sure that the boys and girls in the clubs have better times than the boys and girls who are not in the clubs, and that is an additional compensation to you for the hard work you do in the club work.

cause he did not know what else to say.

This reply did not seem to surprise the men very much, yet Rob saw them look at each other knowingly. One started to lower his hands.

"Hey, kid, come out here!" he called, affecting a friendly tone. "We want to talk to you."

Rob's heart skipped a beat. He knew, then, that his voice had betrayed him. The men realized now that it was only a boy they had to deal with.

"I'm satisfied here," Rob replied, as boldly as he could. "And you stay there where you are."

For another moment the men looked at each other significantly. Rob's arms were growing tired holding the heavy gun in that cramped position. He wished Ben would return. By this time, Ben surely had got the sheriff on the 'phone. Why didn't the boy come back?

"We'll give you a fine gold watch if you'll put down that cannon and let us go," the guard said coaxingly. "Come; be a good fellow. Look—" and he made a move toward the grip.

"Stop!" cried Rob. "And keep your hands up!"

The men scowled savagely, but they put up their hands again. One whispered something to the other, and Rob saw that they took a half-step closer.

Still there was no sign of Ben. What had happened to the boy? Rob wondered if he had run away and left him alone. Perhaps he had not even telephoned to the sheriff. Still Rob knew that wouldn't be at all like his chum Ben.

The men took another cautious step closer. Rob did not know what to do. He knew the thieves were planning to creep up and rush him. His trembling finger tightened on the trigger.

"Don't you know how tired our arms get, holding them up like this?" demanded the guard. Rob knew they were just parleying for time. For even as he spoke, the guard crept a few inches nearer.

So Bob made no reply. Besides, he was thinking of his own cramping arms. And he tried to think what he would do when the men finally leaped at him. Would he shoot? He shuddered at the thought.

Now the two men were only a few feet away. Rob began to notice that they were powerful fellows. Well, another moment would tell the story. With a cry, they would leap at him. His finger would tighten quickly on the trigger. There would be an awful roar as both barrels—

Then, suddenly, a thought flashed through Bob's mind that left him weak and trembling and almost panic stricken. He remembered:

The shotgun was empty!

Only the day before, his father had used the very last shell they had in firing at that chicken-hawk. And now, Rob was facing two desperate thieves who were slowly creeping upon him and were now almost ready to spring—and facing them with an empty gun. The boy wanted to throw down the useless weapon. He wanted to scream at the top of his voice and to run away as fast as his legs could carry him.

He wondered what really would happen. He tried to think what would be the best thing to do. He wondered if the sheriff had started yet. Perhaps he had seen Rob's father and mother and had told them. What would Mr. Warren think?

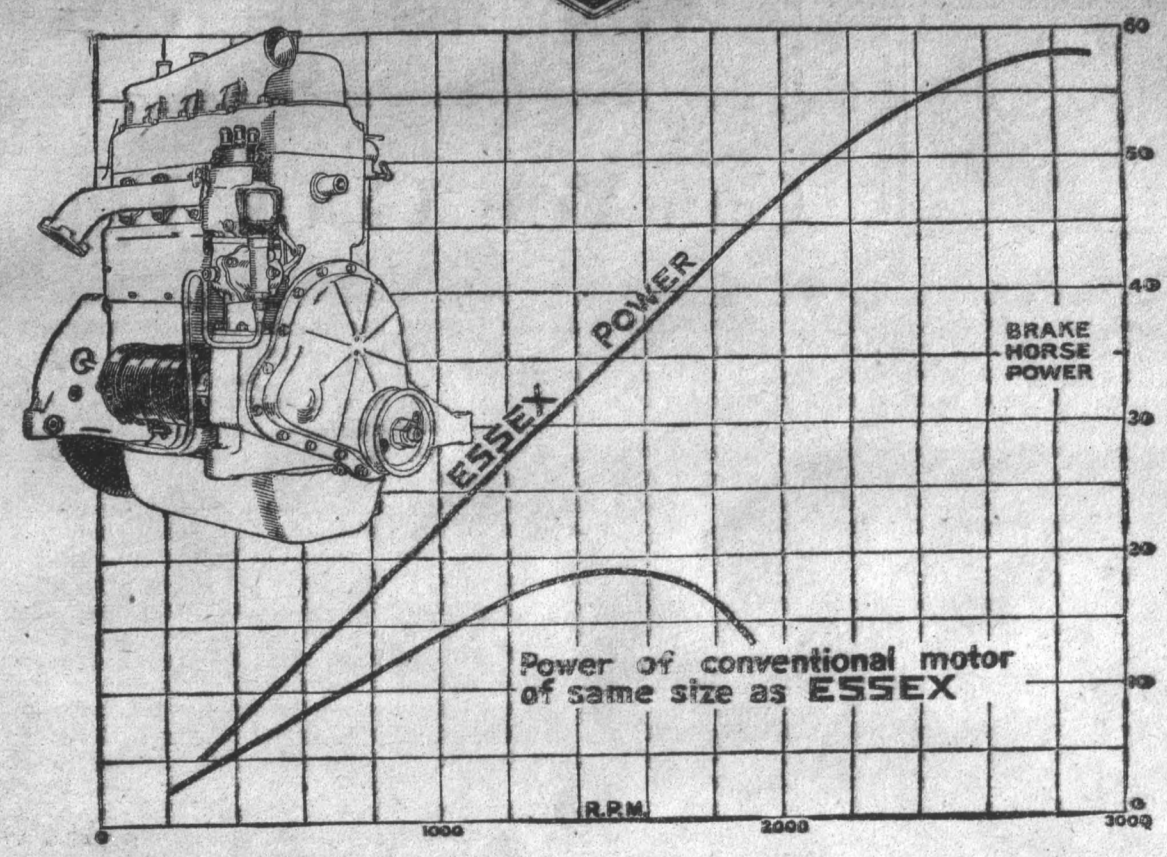
As the picture of his father came before his eyes, Ben was suddenly ashamed of his fear. His father would not be afraid. His father was the kindest and the bravest man who ever lived, he told himself.

The boy's shoulders straightened. He was brave. He would not flinch. He, too, was a Warren!

His head went up, proudly. His teeth came together with a firm click,

(Continued on page 885).

ESSEX MOTORS DETROIT U.S.A.



Note How Essex Trebles Motor Power

The swing of interest to light cars, led by champions of the Essex, calls for particular caution.

Some may think of Essex only as one of a finer type, marking a general advance in standards throughout the light car field.

But the facts quickly expose that mistake. The Essex Motor is patented. No larger than standard motors that yield but 18 H. P. at utmost, the Essex delivers 55 H. P. And Essex performance, so enthusiastically admired by all motordom is the product of that exclusive invention.

Essex has set the greatest official endurance record of 3037 miles in 50 hours. It has never been equalled by any car, regardless of size or price. And Essex made the world's 24-hour road record of 1061 miles.

All Results of Its Patented Motor

For cars of its piston displacement it has set every official record from 1 to 50 hours. And in its first year it set a selling record never equalled in motor history.

It creates a new standard of light car capacity in a totally new type. And it cannot be copied. Do not forget that. You can get the abilities for which these records stand, only in the Essex.

Essex Motors, Detroit, Michigan

(199)

LICE PROOF HEN ROOST

Factory Prices Free Booklet

Fill tank with oil or dip for the stuff you spray with. Roost become saturated killing lice and mites, have healthy hens and DOZENS MORE EGGS. ALLION VERMIN PROOF PERCH CO., Dexter, Michigan

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Baby chicks; Standard Bred S. C. White and Brown Also English White Leghorns. Bred to lay, large white eggs. Safe arrival guaranteed, shipped up to your door by parcel post. Free catalogue with list. WOLVERINE HATCHERY, R. 2, Zeeland, Mich

Barred Rock Baby Chicks. Order your June chicks now. Apply for terms. H. H. PIERCE, Jerome, Mich

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Rose and Single Comb R. I. Reds. Barred Plymouth Rocks. Superior Color. Prolific Layers. Prepaid by parcel post and safe delivery guaranteed. Illustrated catalog free. INTERLAKES FARM, Box 39, Lawrence, Mich.

Baby Chicks. Eleven leading varieties, bred from show-stock, to produce eggs, at utility prices. Send for illustrated catalog and price list. Ohls Poultry Yard and Hatcheries, Dept. B, Marion, O.

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HOMESTEAD FARMS

A cooperative work in Pure Breed Practical Poultry. Chicks and eggs delivered at your door prepaid.

Standard Heavy and Laying Breeds.

You will be interested in the Extra Quality White Leghorns Inspected and certified as Heavy Producers by the Poultry Extension Specialist of the Agriculture College. Live and healthy chicks and satisfactory hatch from Eggs guaranteed.

S. C. Reds. One pen only Cockerel and five Pullets; large egg conformation.

Send for new Catalog with illustrations; it well help you raise your Chicks. Also it explains the Homestead Farms plan of cooperation.

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Baby Chicks S.C.White Leghorns, bred to lay. After Apr. 1 will sell chix and eggs from my exhibition pens, write for prices. HILLSIDE POULTRY FARM, Hillsdale, Mich

BARRED ROCKS. Eggs from vigorous early maturing stock from heavy laying strain. $2 per 15, $5 per 45. Prepaid by parcel post. R. G. Kirby, Route 1, East Lansing, Mich.

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Buff Leghorn and White Leghorn Cockerels from 200 egg strains. Eggs and baby chicks. A few pens. Dr. WILLIAM SMITH, Petersburg, Mich

For Sale Purebred Golden Wyandotte cockerels, prize-winning laying strain $5 each, also eggs for hatching $2 per 15. G. A. McFate, Horton, Mich.

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S. C. White Leghorns	17.00	82.50	160.00
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Crescent White Leghorns; also Anconas, Brown and Buff Leghorns, Black Minorcas, Reds, Rocks (Barred and White), and Wyandottes (Silver-laced and White). WE HATCH the eggs of Roganized flocks on range on separate farms. Crescent Egg Company, Allegan, Mich.

Chicks S. C. Brown, English White Leghorn and Sheppard strain Anconas. Order now for June and July delivery. L. E. Brink, R. 1, Holland, Mich.

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20 cents each. From one of the largest flocks in the world. Can make prompt shipments. LAKESIDE FRUIT & STOCK FARM, Pinckney, Mich.

Baby Chix Whites and Brown Leghorns, B. P. Rocks, and Anconas at reduced prices for June and July. Catalog free. Knoll's Hatchery, R. 3, Holland, Mich.

EGGS from trapnested S. C. White Leghorns, Barron strain, also White Wyandottes that lay, at $10.00 per hundred or $2.00 per setting of 15 eggs. MACALWHITE POULTRY YARDS, Caro, Michigan

Additional Poultry Ads on Page 883

Woman's Interests

Can You Cook Eggs?

EGGS furnish a valuable food as they are rich in proteids, easily digested and furnish a valuable substitute for meat. The yolk contains iron, calcium and phosphorus and helps to make eggs valuable in infant feeding. People troubled with anaemia or those having tuberculosis, and convalescents find them a most valuable food. Though most people find them easy of digestion occasionally someone complains that eggs make them bilious. In this case, if eggs have been ordered, try cooking them in ways in which the white and yolk will be mixed, as in omelets, scrambled eggs or egg nogs. The white is broken up by beating and rendered more easy of digestion. If they cannot be taken even in this way, omit the yolks and give only the whites. It is usually the yolk which disagrees.

The person who is willing to learn finds daily evidence of the truth of the old saw, "One is never too old to learn." Even in the age-old profession of cooking, new things are always being discovered and a great many old things are daily being learned by the woman with an open mind. Take the very simple act of cooking eggs. It took one cook exactly fourteen housekeeping years to learn the right way to fry an egg. Although all good cookbooks told her that eggs must be cooked slowly, and with a low temperature, she made the mistake of thinking that eggs could be made to submit to the mania for speed which has invaded every walk of life. Boiling hot fat, a high fire and speed always turned out a hectic looking egg, with frizzled edges, a white cooked so hard that it couldn't be eaten, and a yolk overdone around the edges and underdone in the middle.

As a matter of fact, eggs should never be submitted to a temperature above 180 degrees. Even when "boiling" eggs the water should not be boiled, as the boiling temperature is 212 degrees. The reason for this is that the egg white is almost pure albumen, and albumen submitted to a high temperature becomes tough, leathery and indigestible. The popular three-minute boiled egg, which is the only one known in many a household is, therefore, wrong. It results in an egg with the outside near the shell cooked too hard and the inside often underdone and unpalatable.

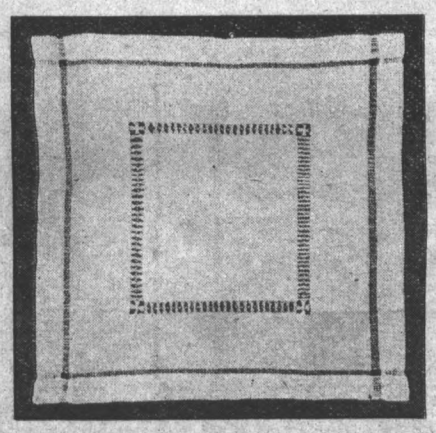
Instead of boiling three minutes, try this method: Put one pint of boiling water for every egg in your saucepan —unless you have a large number of eggs—put in the eggs, and let the dish stand uncovered on the back of the range for eight or ten minutes. The heat should neither be increased nor decreased during this time. For hard-boiled eggs let them stand three-quarters of an hour. This way of cooking gives a soft, easily digested egg.

To fry eggs, faithfully observe the same rule of low temperature. Have plenty of hot fat in the frying pan, but do not let it splutter. If it does it is too hot. Break the eggs one at a time into a cup or saucer and enter into the fat one at a time. Let the white set after each one before another is put in. This will usually happen while the second egg is being broken. When the frying pan is filled—do not crowd—dip the hot fat over the eggs with a spoon until a film forms over the white. Then remove to a hot platter, sprinkle with salt and a dash of pepper, garnish the platter with a bit of parsley and serve.

Poaching eggs so that the white is firm and the edges even is an art only acquired by super-careful cooks. First grease the bottom of your iron spider, then partly fill with boiling water and add a bit of salt. Break the eggs into a cup and turn them into the water as for frying eggs, taking care that the spider stands where the water will not even simmer. The top of the yolk should just emerge from the water. Let stand in the water until the white is firm and a film covers the top. Then remove with a skimmer.—A. A. L.

"The Evolution of the Flour Sack"

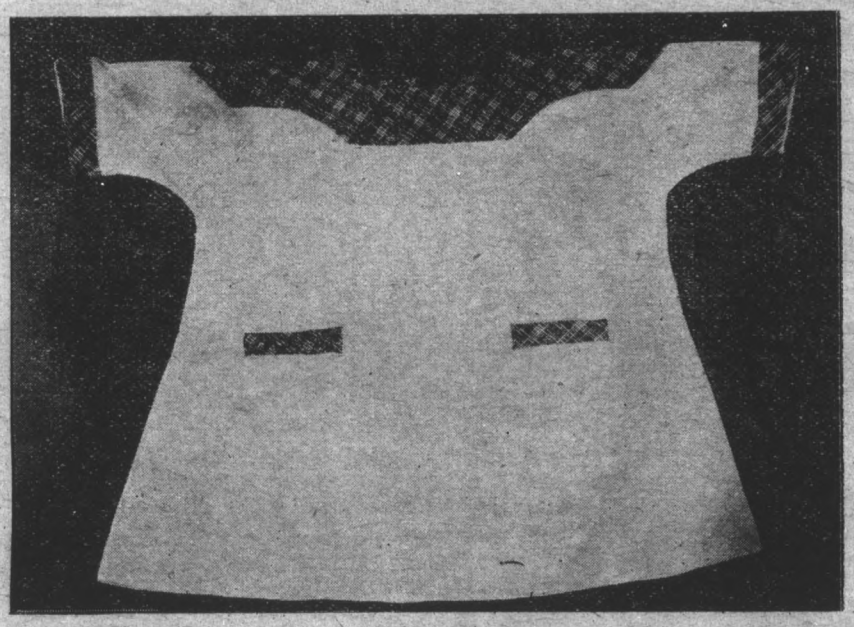
AMONG the exhibits at the Housewives' Congress held in conjunction with Farmers' Week at the Agricultural College last winter, none was of greater interest to thrifty women than a collection of little garments labeled, "The Evolution of the Flour Sack." This was the work of the sewing clubs of the northern peninsula, working under the direction of the extension department of the college. With unbleached cotton selling at five and six times pre-war prices many women have been wondering just what to do without this spring, so anything which promises to be a satisfactory substitute for household cottons is eagerly welcomed.



Dainty Drawnwork Centerpiece Evolved from a Flour Sack.

The extension work in the northern peninsula is carried on under the direction of Miss Aurelia Potts, assistant home demonstration leader. She is assisted by five young women, and these six workers conduct thirty-two clothing clubs, fifteen food clubs, one to study a farm budget, and one on home conveniences. There seems to be no use to which these efficient young women, and the members of the clubs, have not put the humble flour sack. Everything from infants' nighties to lunch sets have been evolved, and the results are wholly satisfactory. There were feeding bibs for children, dresses, boys' blouses, combination suits, aprons for mother, petticoats, handkerchiefs, and various other articles which can be made from cotton.

Of course, the sacking was not all of the same quality. Some was fine and closely woven, while other pieces resembled cheesecloth. The finest piece shown was used in the drawn-work centerpieces shown in the illustration.

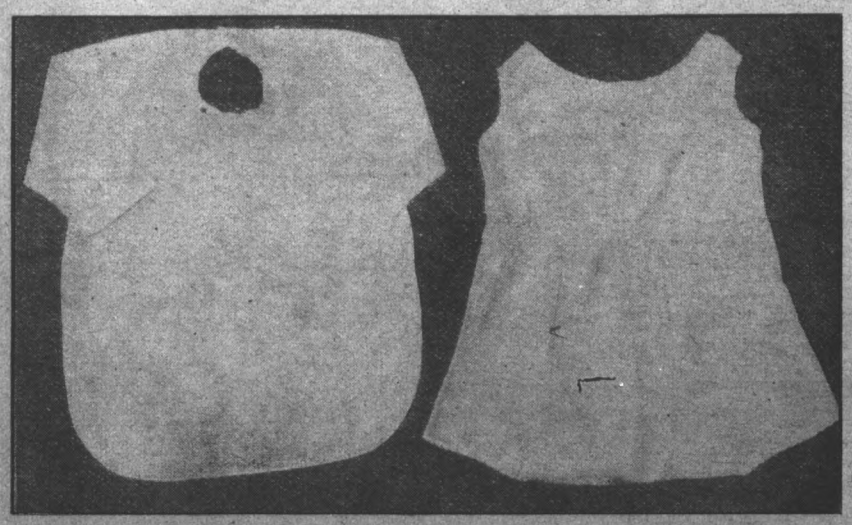


Bias Bands of Gingham give this Slip the Desired Touch of Color.

The cloth in this was so much like the linen usually used for these centerpieces that it was hard to believe it mas really only a flour sack. The work was done by a Finnish school girl and was the piece on which her mother taught her to do drawn-work.

For the small boy's Sunday blouse an unbleached sack offers pleasing possibilities. The one which is illustrated was almost an ecru in color and had neat cuffs and collar and pocket band of blue in good contrast. No small boy could help feeling dressed up in this attractive looking blouse.

Easy to make and extremely useful are the feeding bib and child's slip shown in the picture. As you see, they are faced with gingham to give the desired touch of color. The combination suit is a useful little garment, combining waist, drawers and petti-



Child's One-piece Feeding Apron and Combination Garment.

A Flour Sack and a Little Ingenuity—Result—an Attractive Blouse.

Send Your Name No Money

Don't Send One Penny! Just send your name and address and give sizes—send no money. I will ship this embroidered voile waist, linene skirt and muslin petticoat to you on approval. The waist and skirt are worth the price alone, so you are getting the petticoat absolutely free. Order at our risk; if the outfit does not please you, return it at our expense. The trial will cost you nothing.

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You will save $1.99 by ordering this whole outfit now. Guaranteed to wash perfectly and give excellent wear. The waist is made of fine sheer voile, prettily embroidered. White only. Sizes 32 to 44. The skirt is made of a heavy ramie linene crash. Two stylish pockets and loose belt. Cut full and roomy. Color, white only. Sizes 22 to 36 waist measure, 36 to 42 length. The petticoat is made of muslin with an embroidered flounce.

Send just your name and address—no money. Pay the postman $3.98 only when he brings the 3-piece outfit. We pay transportation charges. This is a get-acquainted bargain—don't miss it. If for any reason you are not pleased, return the outfit and we will refund your money. This is our risk, not yours. Be sure and give sizes. Order by No. 480.

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coat in one. The front of the garment is in one piece and the extreme fullness makes an extra petticoat unnecessary.

Patterns for any of these garments will be furnished any woman in Michigan who wishes them. Write to Miss Aurelia Potts, Court House, Marquette, Michigan. They are all easily made, being as simple in construction as it is possible to make them. Flour sacks may often be bought of your local baker.

WHEN YOU START CLEANING.

FOR the inexperienced housekeeper, here is a good rule for cleansing agents. Use one-half teaspoon washing soda, one tablespoon borax, two

tablespoons of ammonia, or one teaspoon of lye to each gallon of water.

For scouring.—Use whiting mixed with water for aluminum; mixed with kerosene for iron and porcelain, and with water, alcohol or ammonia for silver.

Use rottenstone mixed with sweet oil for brass, copper and pewter.

Use bathbrick for steel, iron and zinc.

Use fine steel wool for aluminum or hard metal surfaces and wood.

For Woodwork.—Painted, use a cloth wrung out of suds made with white soap. Soap applied directly dulls the paint.

Enameled.—Use hot water only. No soap.

Oiled, Varnished or Shellaced.—Use oiled dusters and mops. If very dirty, wash as painted wood, then rub with a cloth sprinkled with linseed oil or furniture polish.

Waxed.—Use dry cloths and mops. Oil softens the wax.

Linoleum, Oilcloth and Cork Carpet.—Dust daily with covered broom, soft brush, or dry mop. When in need of washing, wring cloth fairly dry from soapy water. Too much water gets underneath and rots floor and covering.

In wiping down walls, use light strokes with broom covered with canton flannel bag or a lamb's wool brush. If you bear on hard you rub in the dirt.

HOME QUERIES.

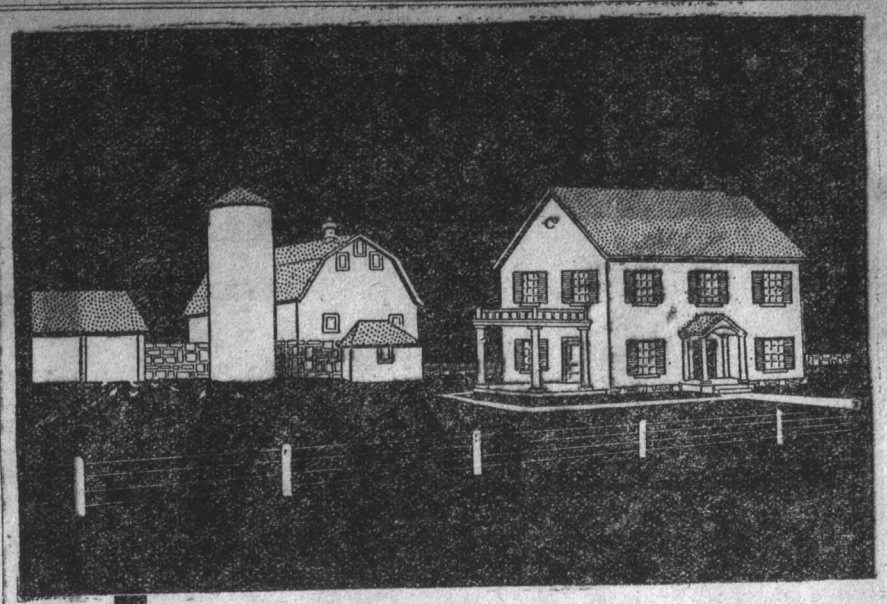
Reader.—Flat wall paint may be used to renovate window curtains. To use it, remove the curtain from the roller and tack tightly to a table or smooth surface large enough to hold the curtain. Apply the paint evenly, and then go over with a dry, clean brush to remove streaks.

The glory of work—yours, mine, everybody's—is the chief glory of life. It is not gold or silver, or education or culture; it is not honesty or virtue, or anything which we may possess, which makes our lives worth living. Our success or failure depends on what we do with what we have.

For health and normal growth there is no substitute for butter-fat, in the human diet.

Decayed teeth in children may cause diseased tonsils, adenoids and various digestive troubles or even in some cases colds, sore throat, kernels in the neck, and perhaps scrofula.

Milk is a perfect food. There is no substitute for it, while it is a substitute for all other foods.



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contains the same uniform quality of goodness that makes this table beverage so popular.
Make it strong or mild as you prefer by varying the quantity used.
No wonder so many prefer it to coffee, not alone on account of taste but because of its abundant healthfulness. *Truly—*

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Total value	$3.75
All for $2.25.	

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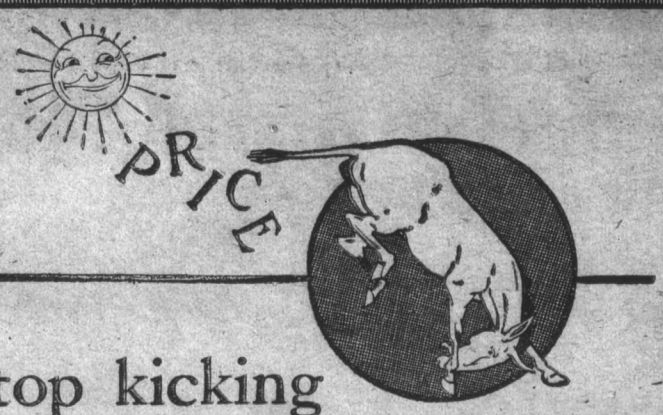
The Michigan Farmer, one year	$1.00
Metropolitan Magazine, one year	3.00
Boy's Life, one year	1.50
Total value	$5.50
All for $4.25.	

Lowe's



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The paint that Lowe Brothers make, will, with just ordinary brushing, go farther than other paints. This is a fact we have proven over and over, and can do it over and over again.

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Treating Seed Potatoes

Questions and Answers—By Dr. G. H. Coons

Question.—What solution does the college recommend? Answer.—(a) Formaldehyde, one pint to thirty gallons of water, for scab, treat for thirty minutes to one and a half hours. With this solution potatoes showing black scurf should be sorted out. (b) Corrosive sublimate, four ounces to thirty gallons. Treat for thirty minutes to one and a half hours. This controls both scab and black scurf.

Q.—May the solutions be used repeatedly? A.—Formaldehyde, yes; corrosive sublimate, no.

Q.—How can corrosive sublimate be kept up to strength? A.—Use four times, then discard; or add one ounce after each batch is dipped, keeping the solution up to the thirty-gallon mark by addition of water.

Q.—Is it safe to dip cut seed? A.—It is not always safe. We have had failures from dipping cut seed. Play safe.

Q.—Should seed be left over night in the solutions? A.—We did in an experiment and killed every potato. One and a half to two hours is the safe limit. Let the experiment station do the experimenting.

Q.—What about the hot formaldehyde recommended by the Iowa Station, in which tubers are treated two minutes in formaldehyde, one pint to thirty gallons at 120 degrees F.? A.—This is all right for scab but of doubtful value for black scurf.

Q.—Do you recommend the formaldehyde gas treatment? A.—No.

Q.—How many eyes do you recommend? A.—Send for Michigan Experiment Station Quarterly Bulletin for May, 1920.

Q.—How shall I get rid of the poisonous solution from corrosive sublimate? A.—Pour it into a pit on sandy ground where it will seep away.

Q.—What shall I use for treating? A.—For quantities up to fifty bushels, use barrels. Tight sugar barrels, oil or vinegar barrels are fine. Rig up a pulley to raise the sacks. Treat about two bushels at a time. For larger quantities make a vat of heavy lumber, line with tarpaulin large enough to hold twelve crates. Some people use a flat bottom boat and scoop out the tubers.

Q.—Can a metal stock tank be employed? A.—For formaldehyde, yes. Corrosive sublimate, no, use wood or cement.

Q.—How long can the tubers be kept after treatment? A.—As long as you please, so that they do not heat, freeze or sprout excessively. Cut tubers must be kept cool and dry.

Q.—Is it safe to treat green sprouted potatoes? A.—We have treated them thirty minutes without injury.

Q.—Are chemicals scarce this year? A.—Yes, scarce and high. Get yours early.

Q.—Is there anything new in treatment? A.—No, the old methods work all right if you will do your part.

Q.—Explain why I, who have never treated, have never had any scab? A.—Acid soils tend to decrease scab. You have an acid farm. If you ever get a good stand of clover or alfalfa and then put potatoes on a good clover or alfalfa sod, look out.

Q.—Does manure make scab? A.—No, but manure tends to make the soil reaction alkaline and this favors the scab germ. Treatment of seed makes manuring safe with potatoes.

Q.—I treated and still have scab. How do you account for it? A.—(1) You may have reinfected the tubers from old sacks or crates; (2) you may have a naturally limy soil. Scab is hard to control here; (3) You may have a scab-infected field, due to failure to rotate potatoes. Garden soils often give scabby tubers from this cause.

Q.—Will treatment control blight? A.—No, and furthermore it won't control "bugs."

Q.—Is it safe to plant scabby seed? A.—Scabby seed is poor seed, and no good farmer tries to fool nature. Plant only sound, smooth tubers.

Q.—Is scab caused by wireworms or white grubs? A.—No, but certain soil animals, the mites, deepen scab spots, making what we call deep scab.

Q.—Can scabby seed be sold? A.—The government grades restrict the amount of scab permissible to a low figure and tubers must not show much blemish.

Q.—Does scab vary with seasons? A.—Hot seasons bring greatest number of reports of damage.

Q.—Does scab affect any other crops? A.—Beets, surely; other root crops are probably attacked but the scab is overlooked.

Q.—Do scab and black scurf occur naturally in soil? A.—Yes, scab probably exists in limy soils naturally. Black scurf seems worse in newly cleared forest soils.

Q.—Is there a bulletin on potato diseases? A.—Yes, Special Bulletin No. 85, of the Michigan Experiment Station, can be had free upon application to Director R. S. Shaw, East Lansing, Michigan.

WAS THIS POTATO BLIGHT?

Did we have late blight last year? If not, what caused my potatoes to blight about the middle of July? What can I treat the seed with to prevent it?

Calhoun Co. J. R.

Late blight did not appear last year in Michigan. The blight you refer to was what is called Tip Burn, formerly thought to be due to hot, dry weather, but now assigned to the attack of leaf hoppers. Seed treatment is not effective in preventing this trouble, though it is fine for scab and Rhizoctonia.

You will have to spray your potatoes beginning when they are a few inches high and keeping at them all the season at intervals of ten days to two weeks. Use home-made Bordeaux Mixture. Send to the Michigan Agricultural College for Special Bulletin No. 85 for a full discussion of the hows and whys of spraying. G. H. C.

Tuber Affected with Black Scurf.

HEN WITH WARTS.

We are subscribers to the Michigan Farmer and certainly appreciate it very much. We have a Plymouth Rock hen who has bunches of various sizes on her feet and legs up to the first joint. They vary in size. Do not look sore. They are like warty growths. Some are raised up more than others. She appears healthy, eats good, combs are good color and she is plump and healthy looking. What can be done for her?

Tuscola Co. C. L. F.

Horny growths or warts are occasionally found on the skin of fowls as is the case with other animals. We know of nothing that is practical to do in such a case. The trouble may not cause the bird any inconvenience or reduce her vitality or egg-laying ability. We would simply cull out any hens that are so afflicted and not use them for breeding purposes. The growths do not often occur and you may never have another hen develop them.—K.

FEEDING THE LITTLE CHICKS.

Limited feeding for young chicks during the first few days and weeks after hatching is advised by Prof. C. H. Burgess, head of the poultry department at M. A. C., who has prepared a set of simple health rules for the fluffy youngsters.

"Practice retarded or limited early feeding," says Professor Burgess. "Nature has provided the newly hatched chick with a 'bread basket' containing sufficient food to last from sixty to seventy-two hours. Before emerging from the shell the yolk is absorbed into the body of the chick for nourishment during the first three days of its existence. Do not feed too soon."

Professor Burgess has outlined the essentials of the chicks' care in a special chart which shows what steps should be taken each day. These may be summarized as follows:

First Day.—Leave chicks in incubator and supply more pure air.

Second Day.—Provide sour milk in shallow pans; also feed some chick grit.

Third Day.—Give first solid food. This mash is suggested for one hundred chicks: One raw egg, three small handfuls of rolled oats and three small handfuls of bran. Thoroughly mix by rubbing and give four feeds three hours apart. A dash of fine charcoal and bone meal helps.

Fourth to Fourteenth Day.—Keep chicks hungry and active. Give two feedings of commercial chick feed, two feedings of the egg, oat and bran mixture, and one feeding of green food, sprouted oats, lettuce, etc. Supply hourly skim-milk for at least first two weeks.

After Second Week.—Simplify and cheapen the ration. Substitute the following mash: Bran, middlings, corn meal, ground oats, equal parts by weight, and ten per cent meat scrap. Increase the size of grain feed as the chicks grow older.

These points should also be kept in mind:

A dry mash of bran, ground oats and meat scrap will prevent toe picking and other cannibalism.

Do not overfeed, prevent crowding, provide plenty of fresh water and keep them exercising.

COMMISSION FOR SALE OF LAND.

If a land agent brings a man from a nearby city out to our section to buy a farm and I sell to this buyer, can the agent collect from me a commission when there has been no previous conversation between the agent and myself about the selling of the land?—J. K.

There is no liability to pay commission for the sale of land in the absence of a written agreement to do so signed by the party sued. Our statute so declares. J. R. R.

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All—Attention Send for my special price on S. C. W. Leghorn June chicks. Safe arrival guaranteed. Postpaid. H. W. TIMMER, R. 5, Holland, Mich.

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Chicks Bred-to-Lay and Exhibition S. C. W Leghorns, stock that produced the winners in the state demonstration farm work. Winners at Detroit, Toledo and Oil City, Pa. Shows. $10.50 per 50, $20 per 100, $35 per 500. Safe delivery postage paid. Sunnybrook Poultry Farm, Hillsdale, Mich

Chicks, Leghorns, Minorcas, Spanish, Houdans, Campines, Reds, Rocks, Orpingtons, Brahmas, Wyandottes. Tyrone Poultry Farm, Fenton, Mich

Barred Rocks egg contest winners, eggs from strain with records to 290 a year. $2.00 per setting prepaid by P. P. Circular free. FRED ASTLING, Constantine, Mich.

Special Prices on Chicks

From June 15th on

20,000 chicks per week.

By parcel post prepaid. Delivered to you. Guarantee Live delivery. Our chicks are hatched from pure bred farm range stock. Stock of good quality. Bred for heavy egg production. We have Utility and Exhibition Quality. Don't fail to take advantage of the prices below for these chicks will be money makers, for eggs and poultry are going to be higher again. Now understand that these prices will include our number one grade of chicks.

Will ship any number from 25 on up.
S. C. White and Brown Leghorns at 13 cts. R. C and S. C. Reds and Barred Rocks at 16 cts. S. C. Anconas at 15 cts. S. C. Black Minorcas at 18 cts. S. C. Buff Orpingtons at 20 cts. Odds and Ends at 12 cts. Send in your order direct from this ad. Or send for our free circular.

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East High St., Fostoria, Ohio.

DAY OLD CHICKS S. C. W. Leghorns. Exclusively. Vigorous, sturdy chicks. From heavy laying strain. Seventh season. Send for price list to CITY LIMITS HATCHERY, R. No. 5, Box H, Holland, Michigan

CHICKS We have shipped thousands each season since 1904. Are booking orders now for Spring delivery, booklet and testimonials. FREEPORT HATCHERY, Box 12, Freeport, Mich

Fowler's Buff Rocks. We are now booking orders for eggs. A few choice cockerels left. R. B. FOWLER, Hartford, Mich.

Edgewood Chicks S. C. White Leghorns, Barron Strain $20 per 100. Guaranteed. EDGEWOOD POULTRY FARM, Brighton, Mich.

Additional Poultry Ads on Page 885

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The sturdy trapper can stand the hardships of the frozen North—he is hardened to them.

Gillette Non-Skid Tires stand the grind of travel—because they are hardened to the hardships of road and climate and possess the proper non-skid principle.

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Wear down slowly—evenly. Due to the improved Gillette Chilled Rubber Process. It reduces sand blisters—eliminates all tread separation with its resultant blow-outs. Second year sale of Gillette Tires was greater than the second year sale of any other tire.

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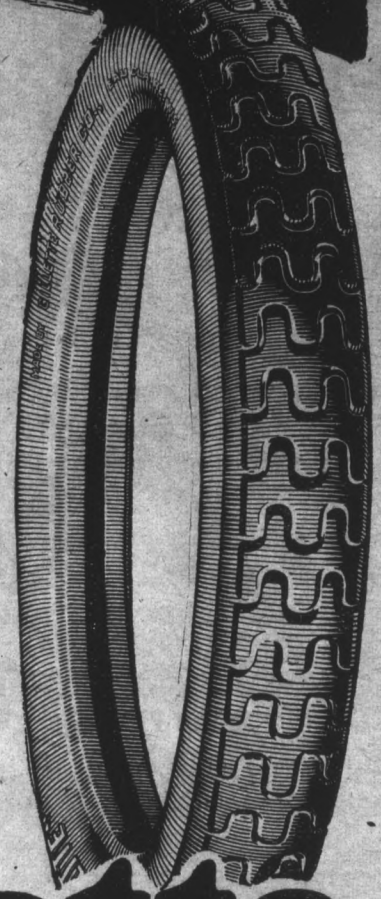

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The Premo Jr. Model B is a well-made, substantial, reliable camera in every respect. This camera has to stand the usual rigid tests which are applied to all cameras made by The Eastman Kodak Company. It loads and unloads in daylight with the Premo Film Pack of twelve exposures. It makes pictures 2¼x3¼ inches in size and the negatives are of such quality that excellent enlargements can be made from them.

The instrument is fitted with an automatic shutter, which works for both time and "snap shot" exposures, and the best grade of single achromatic lens that can be obtained. It has two finders, one for vertical, the other for horizontal pictures—in fact, it is as well equipped a camera as could be wished for in the box type. It will produce first-class results in all ordinary amateur photographic work, such as snapshots in good light, time exposures, home portraits, landscape and street photography, and the like. This camera is unusually simple to load and operate. A complete book of instructions is included with each one, and even a schoolboy who never had a camera in his hands before, can make good pictures with the Model B Premo Jr. within half an hour after getting it. **Sent charges prepaid for three subscriptions, or for one subscription and $1.50 additional.**

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H. G. BENNETT & CO., Westerville, Ohio.

Marketing Woodlot Products

(Continued from page 855).

other sections of the state where needed.

The buying of cedar posts and poles is a distinct service which should be undertaken by the farmers themselves in organization and distributed with the lowest possible intermediate charges.

Other products, as shingles, grape stakes, and even building materials of all kinds might well be added to the long list of services which should be distributed through organized effort.

Timber Conservation.

A matter which is yearly receiving more and more attention from thoughtful farmers is that of timber preservation. The short life and high first cost of the untreated fence post or telephone pole is annually attracting more attention and is the cause of numberless queries. Unless the individual farmer uses one hundred or more fence posts a year he is seldom justified in maintaining a treating plant of his own, while the small makeshift barrel size outfits are shallow and wasteful of time and creosote to such an extent that their usefulness is limited to certain purposes.

The Large Custom or Cooperative Preservative Plant.

Several plants for custom fence post treating are to be found in the state and these seem to be operating along right lines, so far as minimum of waste and thoroughness of treatment are concerned.

Of course, charges vary widely with private plants and if the buying of creosote as well as operation of township plants were handled by organized effort the service would be greatly extended and the life of the treated wood when used in the earth greatly increased.

Community Effort Needed.

The advantages of an overhead organization for the successful marketing and distribution of woodlot products are possible and workable. Such a plan is not a fancy or a dream, but a very real need if waste and needless sacrificing of values are to be overcome.

Whether the organization is already created or whether it is yet to be born matters little, so long as it works out the service demanded by small acreage timber owners everywhere in the state, and carries efficiently and accurately that service for the benefit of the people of the state.

First.—Such a service must be statewide and should include definite lines of activity that bear upon future timber production as well as present consumption and demand. That the need for a good market is urgent is acknowledged by owners of standing timber who have tried to sell that timber to advantage during the past few years. And in order to be effective to all it must be a market that is available to all.

Second.—Any service that provided for the marketing of timber and did not encourage the production of timber as a distinct farm crop would be lop-sided. The production of timber must be made as intensive as other farm crops. Instruction and personal service in planting and cultural operations should become as necessary an adjunct to this phase of service as the selection of good seed is to annual farm crop.

Third.—The gathering of accurate reliable data to timber owners by estimating values of salable timber, cordwood, posts and other products, for which just charges should be made would constitute a very important division of this service. In connection with such service, much could be done to establish uniform scales and practices of measurement of forest products between woodlot owners and buyers.

Fourth.—The use of valuable woods for common purposes would be easily and quickly stopped through opening of wider markets for special products as well as through heavy buying of common grades of lumber for farm building purposes.

It may be safely said that any cooperative or organized plan of operation that is broad gauge and state or nation-wide will soon eliminate the need for destructive and wasteful methods of handling our woodlot wealth, by broadening the demand, facilitating exchange, conserving waste or extravagance in use and by prolonging life of the available supplies. That such a program would be profitable and that it would lead to better and more intensive production and planting of forest and woodlot areas is self-evident to any thinking man.

GOOD ROADS.

BY J. T. DANIELS.

THE advent of the automobile has emphasized very noticeably the general desire for good roads which everyone may enjoy who rides on our highways. The earnest efforts now being made by state and nation to meet the demand in this matter it is hoped will bring the desired results, but in order that this may be made certain, much care will be required lest the expense incurred fail of producing permanent good roads.

The necessity for careful and correct survey and then the exact fulfilling of same in the work performed would seem to assure good results, but as one rides over some of our state reward roads, evidence is seen of failure to comply with the requirements that "the slope of the roadbed shall be such that the water may run readily into the side ditches," for on portions of these roads their level or nearly level condition causes the rains to soak into the ground where it falls instead of running into the side ditches, and thereby much harm results to the roadbed.

Very great improvement of our highways would result and without large cost, if the road graders and road drags or scrapers purchased and owned by each township were put to their proper use at the right time instead of being left to rust out in idleness. The filling of the ruts when the soil is in proper condition—not too wet nor too dry—can be accomplished with the proper and already provided tools with comparatively small cost, a faithful man with a good span of horses being able to fill the ruts for a number of miles, in each day's faithful work with the road drag.

It is readily seen that there should be a graded slope from the crown of the road to the bottom of the side ditch, instead of making the ditch nearly perpendicular on the side next to the turnpike. If this be done, the water would, as previously stated, run into the side ditches more readily and there would be less danger of harm resulting if a vehicle should accidentally pass into the ditch.

These are truly busy days, yet our roads ought not to be left in the rutted condition in which many miles are found. A vigorous public sentiment should be created sufficiently strong to make and keep all of our highways in proper condition, for the taxpayer, though he live on a highway somewhat retired, yet would appreciate having the road passing his home properly cared for as do we who fortunately have a state reward highway passing our homes. Let's not allow any "ruts" of any kind to remain.

THE TREASURE IN THE HAY MOW.

(Continued from page 879).

and his eyes flashed with determination. There was not a tremor in the voice that cried a sharp warning:

"Stand back!"

Something in the timbre of that voice caught the ears of the men. They saw the muzzle of that shotgun move a trifle higher. And they fell back.

A moment later Rob heard voices and quick steps just outside the barn door. Shadows fell across the doorway; and a man stepped in. Rob recognized him as the neighbor's hired man. He carried a hay rope. He took one look at the two men, then at the muzzle of the shotgun protruding from the granary door. And he promptly started tying the captives. An instant later Rob dropped his useless gun and walked out of the granary.

"I telephoned the sheriff, all right," explained Ben; "but on my way back I saw Tom down in the meadow. I ran for him so fast I nearly lost my suspenders."

There was another surprise in store for the boys when the sheriff came. That officer at once recognized the two prisoners as yeggmen for whom there was a big reward. He insisted that it belonged to the boys. Mr. Warren saw no reason why they shouldn't accept it, so, after insisting that the hired man get a third share, Rob and Ben agreed to go to town with the sheriff and claim the money.

The sheriff wanted to take along the shotgun as a further precaution—and then Rob had to tell. The amazement and chagrin of the thieves was laughable when they learned that they had been captured by a plucky boy with an empty gun.

"My, oh, my!" exclaimed Ben. "Wasn't that funny? And what a brave fellow Rob is! Just like me. Me—I wasn't ever scared a bit."

"After all, it isn't the gun that counts," said Mr. Warren. "It's the man behind the gun. Rob is not the kind to give up easily. If he had gone swimming like the rest, he wouldn't have found this stolen jewelry. But he stuck to his job. And if he had given up when he remembered that the gun was empty, the thieves would have escaped with their loot. But Rob didn't give up. He stood his ground. I can always depend on my Rob."

A lump came into Rob's throat as big as a doughnut. He was glad now that he had done as he knew his father would have done; he was glad he had not given up.

TRESPASSERS ALONG STREAMS.

A creek runs through our land, but every year crops are destroyed by trespassers going to and fro along the banks of this stream. What rights have we, and can we recover our loss?

L. D. H.

No one has the right to travel on the banks of a stream on private land without the consent of the owner, and the same remedies exist for such trespasses as for any other. The trespassers may be ordered out and put off with gentle hands, or they may be sued in trespass for the damages and costs.

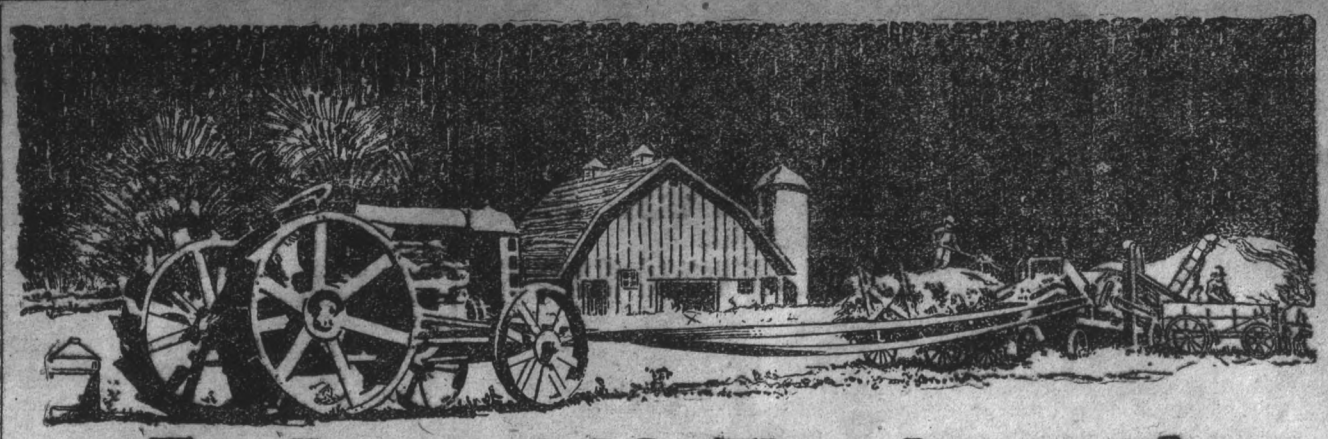
J. R. R.

MOVING LINE FENCE.

A line fence which had been in the same place for nineteen years was changed when tile drain was put through, supposedly on the line. On account of the swampy nature of the land the drain was crooked and made necessary the building of a crooked fence. Now drain is established elsewhere. Can I make county surveyor establish the true line so I can rebuild line fence?—C. K.

If the questioner knows where the line is he can put the fence back without any reestablishment of the line. If not, he can have a new survey made by the county surveyor.

J. R. R.



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Poultry Manure Wanted Will pay $4.00 per hundred pounds for good poultry droppings. Ship by freight to H. H. ELLIS FARM, Ada, Mich.

Single Comb BLACK MINORCAS

We are using a $50 cock bird. A sire of winners, weighs 11½ lbs. Eggs $4.00 per setting of 15.

R. W. MILLS, Saline, Michigan

DANGER If chix and eggs are not shipped right. **Chix 15c Up** 100,000 Chix this season. Best Blooded stock ever produced at low prices quoted. Selected Utility, Exhibition trapnested stock. 10 varieties. Hatching eggs. Hens, Ducks. Book your orders early. Avoid disappointment. Stamps appreciated. Beckman Hatchery, 26 E. Lyon St., Grand Rapids, Mich.

HATCHING EGGS Plymouth Rocks (all varieties,) Wyandotte, Ancona, and Rouen Ducks. Catalog 2c. Sheridan Poultry Yards, R.4, Sheridan, Mich.

Rhode Island Whites
Are the best all purpose Birds being year round layers. Eggs and chicks and a few good males.
H. H. JUMP, Jackson, Michigan.

LAYBILT S. C. W. LEGHORNS
large, great layers, pure white. Strong, Day-Old Chicks. Hatch every week. Guaranteed delivery, full count, alive and lively $18.00 per 100. Parcel postpaid.
V. A. MORSE, IONIA, MICHIGAN

Hatching eggs from a vigorous heavy laying stock. **HS.** C. W. Leghorns, Barred Rocks, W. Wyandottes, Buff Orpingtons. 15, $1.50; 50, $4.50; 100, $8.00. Shipped prepaid. Miller Poultry Farm, Nappanee, Ind.

LOOK! BABY CHICKS **$14 A 100 UP!**
By insured parcel post, postage paid. 40 breeds chicks, 4 breeds ducks. Get May and June chicks for December layers. Catalog free, stamps appreciated.
NABOB HATCHERIES, GAMBIER, OHIO

JOHN'S Big Beautiful Barred Rocks are hen hatched grow quick good layers 30 eggs $3.50; 50, $5. Cockerels $4 to $6. Photos. John Northon, Clare, Mich.

R.C. Brown Leghorn eggs $1.50 for 15, $8 per 100. Kulp and Gale strains. M. Pekin duck eggs $1.50 for 8.
MRS. CLAUDIA BETTS, Hillsdale, Mich.

S. C. Brown Leghorns Excellent layers. Farm range. Eggs postpaid. 15, $1.50; 30, $3; 45, $4; 100 $8. Floyd Robertson R. 1. Lexington, Indiana.

Silver Laced Golden and White Wyandotte eggs from best quality only $3.00 per 15, $5.00 per 30 by prepaid parcels post. C. W. Browning, R.2, Portland, Mich.

Snowy White Rocks, dandy layers. Fishel strain Eggs prepaid, $1.50-15; $2.75-30; $4-50; $7-100
MRS. EARL DEHNHOFF, Vanburen, Ohio

S. C. W. Orpingtons Eggs $1.75 per 15 postpaid. Day-old Chix. M.E.Thompson, Evergreen Rd. Redford, Mich.

WHITE WYANDOTTES, free range farm flock improved by 15 years careful selection. 15 eggs 2.50; 30 4.50; 50 or more .10 each by mail prepaid. Cockerels 3.50, 2 for $5. Vern Moore R. 1 Hartford, Mich.

White Plymoth Rocks Choice breeding. Eggs 15, $2.00; 100, $10.00, prepaid.
RICHARD M. GRETTON, Mason, Mich

Ten Eggs for $3.75 from pure Toulouse geese Parcel post paid.
MRS. AMY SOUTHWORTH, Allen, Mich.

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(58)

The Agricultural Outlook

A Reader's Opinion

Gentlemen:—I enclose check for $3 in payment of the Michigan Farmer for a period of five years. I like your editorials on farming subjects better than I do the editorials of some other farm papers that I take, of which there are six.

I note in recent issues that the farmers supplying milk to Detroit are up against a price for milk set by the Federal Fair Price Committee that is below the cost of production. This price-fixing by outsiders is all wrong, in my way of thinking. Suppose some outsider set the price for your paper, or an advertisement in it, for example; suppose the taxpayer set the amount of tax he should pay, how much tax would the government get? It is wrong. This cost and price-fixing of dairy products is a big proposition and should be settled wisely. Let me venture this prediction: that if the farmers do not keep enough cattle on the farms to consume the roughages grown thereon and turned into food fit for human consumption, that there will come a time, sooner or later, when the human race will have to consume these roughages themselves. I may be mistaken. I hope so.

I would like to give you a little of my experience. I purchased this farm six years ago this spring; had something over $1,100 left after paying for it; the second year had to borrow money to pay taxes; this set me to cost accounting in 1916 at which time it cost me fifty cents a day to keep a cow; thirty-seven cents in summer and sixty-three cents in winter; I weigh the milk from each cow and keep a record of it, also test each cow's milk with a Babcock tester. I find that the average cost of producing a quart of milk per year is 10.6 cents and that the average cost of producing a pound of butter per year is 73.4 cents. This cost was to the tally-board in barn. The cost of selling the milk and butter, and the cost of making the butter should be added to this. The average price I got for this butter, (1918), was fifty-five cents.

Here is my idea on the price-fixing of dairy products: All farmers should aim to have their cows come fresh at different periods so as to keep a constant supply as near as possible. The farmers to have town, county, state and United States organizations through which they sell not only their dairy products, but all products of the farm. It should be the business of these different organizations to know the amount of milk produced and the number of cows in the dairies that produce it, to find the cost of production and fix the price accordingly. Here is the way I work the scheme with hens: I have figured the cost of keeping a hen at one and a half cents per day; I know how many hens I have and how much it costs per day to keep them; if the hens lay a dozen eggs they are charged five or ten cents a dozen for selling them, if they do not lay, they are not charged for selling them. If I market the eggs once a week, I know how much it has cost to keep them for that week, and I know how many dozen eggs I have for that week and try to fix a price accordingly. I sell direct to the consumer and the past two years have no kick coming.

I am in favor of only one farmers' organization, that organization to have the first and last word to say at Washington, and to the consumer. The middlemen I would cut out wholly, if possible. I claim there is not any real value added to an article by passing through a half dozen hands, nor in shipping it back and forth from one party to another. For instance, you take a bushel of potatoes, there is no more food value added to those potatoes after leaving the farmer's hands.

I would like to see the farmers have one good, strong organization. There is getting to be so many now that nobody at Washington or anywhere else, knows who is speaking for the farmer. I would like, if it is not asking too much, for the farm papers to ask the opinion of its readers as to forming a national organization, with subsidiary state, county and town organizations, for the purpose of handling all products the farmers buy and sell.

W. A. MORSE.

A Group of Holstein Boosters

HENS DIE ON NESTS.

During the last week or ten days I have lost four hens. About every two or three days we find one dead on the nest. They seem healthy and all right. What ails them, and what can I do for them?

Montcalm Co. Mrs. D. G.

When the hens are laying heavily in the spring it is not unusual to occasionally find a hen dead on the nest or under the roosts. A post mortem examination may furnish some clue to the trouble. Hens sometimes die because of a hemorrhage of the brain, commonly called apoplexy. This seldom occurs except among very fat birds. Then it is due to over-straining during egg-laying, or to the eating of too much heavy feed. If this has occurred a post mortem will show clots on the brain. An occasional loss of this kind need not cause too much worry as fowls are subject to a certain per cent of mortality the same as other animals, even though their living conditions are the best. However, it pays to try and locate the cause of every possible loss and thus reduce the mortality rate to as low a per cent as possible.—K.

BREEDERS' DIRECTORY

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

Wildwood Farms Angus

Home of Edgar of Dalmeny one of the world's greatest sires.

He produced Erodemas, the grand champion bull at show in Perth, Scotland in Jan. 1919, and He produced Blue Bell a cross-bred heifer which was awarded the championship at the Smithfield, (Eng.) fat stock show in Dec. 1919. (The latter is Englands, equivilent of our Chicago International.)

Edgar is now an **American Citizen,** and is here for the purpose of bettering the breed in this country.

Edgar's calves are as yet too young to offer for sale but they are a promising lot and are being spoken for fast.

We have a few choice young bulls by **Black Monarch III** who won the Mich. State Fair Grand Championship in 1914- 1915-1916, still for sale.

Our herd is under State and Federal supervision

A visit will interest you, write for particulars.

WILDWOOD FARMS
ORION, MICHIGAN
W. E. SCRIPPS, Prop., Sidney Smith, Supt.

WOODCOTE ANGUS
Established in 1900
Trojan-Ericas and Blackbirds.
Write for 1920 Bull sale list.
WOODCOTE STOCK FARM,
Ionia, Mich.

For Sale At reasonable prices. Registered Aberdeen-Angus bulls from ten to twenty-two months of age. LANG BROS, Davison, Mich.

Three registered Guernsey bull calves. May Rose breeding, closely related to Spottswood Daisy Pearl, Dolly Dimples, Langwater Nancy, Langwater Hope, Langwater Daisy and imported Itchen Daisy 3rd, cows that have the higher milk and butter fat production of the breed. Calves sired by Albany's King of Anna Dean Farm: his grand dam Spottswood Daisy Pearl. Alec Harper, & Ed. Lowe, Robinson Rd. Grand Rapids, Mich.

Reg. May Rose Guernseys
One bull service age. 17 months old bull calf. Farmer prices. Send for picture and pedigree. Herds on Federal Accredit List.
GILMORE BROTHERS, CAMDEN, MICH.

GUERNSEY BULL CALVES whose sire's dam made 17,460.20 milk, 909.05 fat. Their mother's sire's dam made 15,169.10 milk, 778.80 fat.
T. V. HICKS, Battle Creek, Mich.

FOR SALE Three Aberdeen-Angus bulls, age 20 months, nine months and seven months. Bred from the best stock in America. Also 320 acres land in Isabella County.
BRINTON F. HALL, Belding, Michigan

Guernsey Bull Calf, Linded of Walter Phipps Farm. Born May 2-1919. $100.00 f.o.b. Novi or Birmingham, Walter Phipps Farm, 80 Alfred St. Detroit, Mich.

Registered GUERNSEYS--Two orders for the same bull calf the same day makes a fellow mad, just one left, that will be old enough for service in a couple of months.
J. M. WILLIAMS, North Adams, Mich.

Reg. Guernsey Bulls for sale cheap from 1 to 12 months old and from good producing and tuberculin tested cows. C. E. Lambert & Sons, Linwood, Mich.

For Sale Registered Guernsey bulls. May Rose breeding cheap if taken soon Come or write. John Ebels R, 2 Holland, Michigan.

GUERNSEYS —REGISTERED BULL CALVES
Containing blood of world champions.
HICKS' GUERNSEY FARM, Saginaw, W.S. Mich

Herd Federal inspected. Bull calf Guernseys. 7 mos. old, sired by a son of Imp. Spotwoods Sequel. Dam, a high class cow of A. R. breeding. $150 takes him. 5 others 3 to 6 mos. old priced right. Satisfaction guaranteed. G. W. & H. G. Ray, Albion, Mich.

Facts in BLACK & WHITE

Average 7-day Milk Production 433.4 Pounds

The great and growing popularity of the Holstein breed is wholly due to high average production, regardless of the fact that Purebred Holsteins hold all world's records for milk and butter fat production.

During the year just closed 9,524 Holstein cows and heifers were under test. The 8,619 animals tested on short time test taken as a herd, the average 7-day production for each animal was 433.4 pounds of milk, showing an average of 3.59 per cent of butterfat.

Send today for our illustrated and valuable booklets giving all the facts pertaining to purebred Holstein-Friesian cattle and their wonderful progress. Write today.

THE HOLSTEIN-FRIESIAN ASSOCIATION
164 Hudson Street
Brattleboro Vermont.

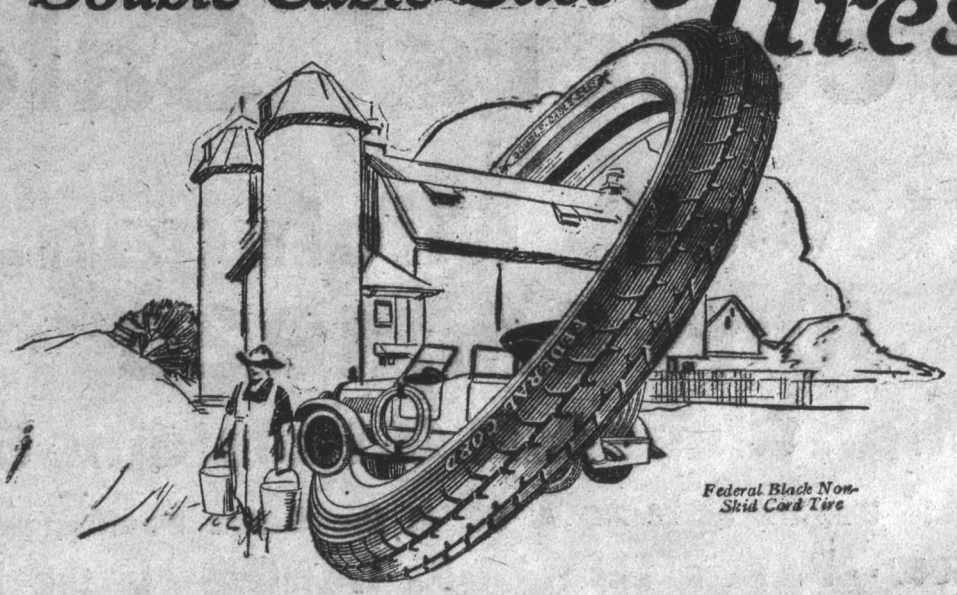
THE HOG TRADE.

NOT long ago prices for hogs fell to the lowest level recorded in a long time, but the market rallied later on better general buying, with especially good purchases of the better class for shipment from Chicago to eastern shipping points. There has been a great narrowing in the spread in prices, with the bulk of the sales made in the Chicago Stock Yards at a range of seventy cents per hundred pounds, and prime light to medium weight butchers weighing from 190 to 250 pounds market toppers. The best heavy butcher hogs sell forty-five cents below the highest prices. Rough heavy packer hogs are lowest of all in price, selling at an extremely large discount, but of late there has been a pronounced improvement in the demand for the better class of heavy hogs. Recent receipts of hogs have averaged in weight only 235 pounds, or seven pounds less than a week earlier, many owners letting their young hogs go to market, as they feared further reductions in prices. The domestic consumption of fresh and cured hog products continues extremely large, despite their unusual dearness, for retail butcher shops fail to mark down their prices in accordance with the declines in wholesale prices. Reductions in hog prices since the high time last year have been enormous, and recent sales were made in the Chicago market of pork around $21 a barrel lower than a year ago, lard and other cured products showing similar price reductions. The foreign trade shows gains in recent exports of lard, but the exports of hog meats shows a big falling off as compared with those for a year ago. During a recent week exports from Atlantic ports included 9,041,000 pounds of lard, comparing with 10,719,000 pounds for the corresponding week of 1919, while exports were made of only 9,030,000 pounds of cured hog meats, comparing with 28,949,000 pounds a year ago.

COLLAPSE IN LAMB PRICES.

THE recent slump of $2.00 to $3.00 per hundred pounds in lambs placed the Chicago market on the lowest level of the year, but there was a fair reaction later in prices for the better class. Everything now goes to market shorn except spring lambs, the principal part of the springs coming from California, and their average quality is much poorer than a year ago. Prices for these flocks cover an extremely wide range, there being a spread of about $4.75 per one hundred pounds between the best and the poorest, and sales have taken place of thin extremely light weight California spring lambs as low as $13.50 per one hundred pounds, some lots of the same kind going to packers at that price. The Chicago market has been adversely affected by the heavy importations during recent weeks of frozen carcasses of New Zealand lambs, these coming into direct competition with native lambs. As usual, the big packing firms doing business in Chicago have kept on bringing in large supplies of last year's lambs from western primary points, thereby checking competition in the open market, and this is naturally a powerful bearish influence. Great numbers of Arizona and California spring lambs have been arriving on the Kansas City market, as well as Texas sheep and goats, and in a recent day there were arrivals in the Fort Worth, Texas, stock yards of about eight thousand goats. It is customary for the goats to become "lamb" after slaughtered. Fair sales are made of ewe lambs for breeding purposes at $11.25@12.50. Extremely few wethers and ewes are being sent to market, and prices are mostly nominal.

FEDERAL
Double Cable Base Tires



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When you use Federal Tires, your power drives *the car*—it doesn't run a grist mill, of *wheel-rims against tires.*

Federal Tires are grappled inseparably to the rims by four steel cables—the Double-Cable-Base—exclusive to Federal Tires.

This is why Federal Tires do not come off, slip, slide or creep, rim-cut or blow out just above the rim.

Avoid rim-troubles—get the mileage that thousands of other Federal users are getting. Go to the Federal dealer and equip with Federals.

THE FEDERAL RUBBER COMPANY, *of Illinois, Factories, Cudahy, Wis.*
Manufacturers of Federal Automobile Tires, Tubes and Sundries, Motorcycle, Bicycle and Carriage Tires, Rubber Heels, Horse Shoe Pads, Rubber Matting and Mechanical Rubber Goods

REGISTERED Holstein bulls sired by King Zerma Alcartra Pontiac, son of the $50,000 bull; some from good A. R. O. cows. G. H. Giddings, Gobleville, Mich

Winnwood Herd
—SENIOR HERD SIRE—
Flint Maplecrest Boy (166974)
4 years old and weighs 3000 lbs. We have a few of his sons ready for service and some little fellows straight as a line and priced right the daughters of Flint Maplecrest Boy are making good.
—JUNIOR HERD SIRE—
Sir Ormsby Skylark Burke (249 66)
A brother to the world champion cow over all breeds (Duchess Sylark Ormsby) 1506 lbs. of butter in one year. He is the best bred Ormsby bull in Michigan his dam a daughter of King Segis Pontiac she is a sister to King Segis Pontiac Count and the $50,000 bull King Segis Pontiac Alcartra, we said get a better bull (we got ours) one of his sons out of a daughter of Flint Maplecrest Boy will make some herd sire.
JOHN H. WINN, (Inc.)
ROSCOMMON, MICH.

BUTTER BOY ROSINA PRINCE 25752. Herd sire Son of King Ona. His sire is from a 30 lb. cow that made 1845 lbs. in one years, and Dam Butter Boy Rosina 2nd 20540 made 29 lbs., and almost 900 lbs. in ten months, she has a 33 and 34 lb. sister. Have some fine Bulls and Heifers and some heifers bred to him, all from A. R. O. Cows, with records from 22 to 30 lbs. Hampshire Hogs—Fall Boars ready for service, and gilts. Also booking orders for Spring Pigs Belgium, Percheron Stallions and Mares. Imported and American bred. Write or come and see us.
SAGINAW VALLEY STOCK FARM,
Saginaw, W. S., Michigan
ELI SPRUNGER & SON, Proprietors.

$100 for purebred Holstein bull calf born April 24, reg. and del. Sire—Long Beach De Kol Korndyke whose dam, a daughter of Pontiac Aaggie Korndyke, made 1223 pounds butter in year with average test of 4.59% fat. Calf ⅞ white, large. Dam untested.
FRED BURKE, - - - BRANCH, MICH.

Holsteins of Quality
Fifteen High Grade Holstein Cows For Sale
E. A. HARDY, Rochester, Mich.

OUR HERD SIRE
Model King Segis Glista
By a 30 lb. son of Lakeside King Segis Alban De Kol. His dam Glista Fenelle 32.37 lbs. Her dam Glista Ernestine 35.26 lbs. His three nearest dams average over 33 lbs and his forty-six nearest tested relatives average over 30 lbs. of butter in seven days. Write for prices on his sons.
Grand River Stock Farms
C. G. Twiss, Mgr. Eaton Rapids, Mich.

$150 Buys reg. Holstein heifer past 1 yr. old. Good individual, high class breeding, guaranteed O. K. B. B. REAVEY, Akron, Mich.

A Good Note accepted in payment of finely bred registered Holstein bull calves. Quality of the best, and at prices within reach of all. Write. GEO. D. CLARKE, - - - - Vassar, Mich.

A BULLY GOOD BULL CALF.
Born July 1919. His six nearest dams have good yearly records. Amongst them are three world's records Good individual, nicely marked, and worth in any good herd all he will cost. You can't pay too much for this kind. I have a fine four months bull, not quite so well bred but a nice one.
L. E. CONNELL Fayette, Ohio

REG. Holstein Bull has been my Senior Herd sire, 20 dams average 31 lbs, must sell to avoid inbreeding as I have 18 daughters of his. J. R. Hicks, St. Johns, Mich.

HOLSTEIN
BULL CALVES FOR SALE
From dams with good records.
BULL CALVES SIRED BY 45 lb. BULL.
BULL CALVES SIRED BY 34 lb. BULL.
BULL CALVES SIRED BY 33 lb. BULL.
PRICES VERY REASONABLE.
Privelege of return if not satisfied.
A. W. COPLAND,
Birmingham, Michigan.
Herd under State and Federal Supervision.

For Sale: Registered Holstein Cattle, our herd sire born March 27, 1917, 8 cows, and 3 heifer calves. Write for records and particulars to the BLACK & WHITE FARM, Fremont, Mich.

Grade Up Your Herd with a pure bred Holstein bull. Have several for sale at low prices.
JOSEPH H. BREWER, Grand Rapids, Michigan

The Traverse Herd
We have what you want in BULL CALVES, the large, fine growthy type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dam's records up to 20 lbs. Write for pedigrees and quotations, stating about age desired.
TRAVERSE CITY STATE HOSPITAL
Traverse City, Mich.

FOR SALE three Registered Holstein-Friesian 2-year old heifers. Will make fine cows, best of breeding, sired by a Pontiac Bull. Will sell one or the three.
HENRY S. ROHLFS, Akron, Mich.

Hatch Herd
(State and Federal Tested)
Ypsilanti, Michigan
Offers young sires, yearlings and younger, out of choice advanced registry dams and King Korndyke Artis Vale: Own dam 34.16 lbs. butter in 7 days; average 2 nearest dams 37.61, 6 nearest 33.93, 20 nearest 27.83

Bazley Stock Farm
YPSILANTI, MICH.
Increase Your Production at the Price of $50.
Bull born May 3rd. Sire a grand son of John Hengerveld Lad 61 A. R. O. daughters. Dam a 2 year old grand daughter of a 21 lb. Cow that will be tested at next freshing. We have just finished testing 2 cows. One made over 30 lbs. the other made 27.65 from 779 lbs. of milk in 7 days.
JOHN BAZLEY
319 ATKINSON AVE.
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LONG DISTANCE HOLSTEIN BULL CALF Born Dec. 24 1919. Seven close up dams average above 1200 lbs. butter and 24,000 lbs. milk in 1 yr. His dam untested $100. A. Fleming, Lake, Mich.

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20 Cows and Heifers of popular breeding for sale also bulls not related.
ALLEN BROS.
PAW PAW, MICHIGAN

After the Minnesota National Sale

THEN

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Breeders' Sale

AT

Howell, Michigan

June 8th, 1920

50 High Class A.R.O. Holsteins 50

Sale Begins at 10:30 A. M. at the Sales Pavilion

Auctioneer -- B. V. KELLEY S. T. WOOD -- In the Box

McPherson Farms Co. & Cluny Stock Farms

Howell, Michigan

Herefords. Just purchased 3 new herds, now have 150 head; we offer you anything desired either sex, horned or polled, any age. Priced reasonable. THE McCARTYS, Bad Axe, Mich.

HARWOOD HEREFORDS

Can spare a few females, cows with calf at side, open or bred heifers, also a few bulls old enough for service. Breeding and condition right.

Jay Harwood & Son, Ionia, Mich.
Farm Six Miles South of Ionia

The Wildwood Farm

Jersey Cattle, Majesty strain, Herd on State accredited list, R. of M. testing constantly done. Bulls for sale. ALVIN BALDEN, Phone 143-5, Capac, Mich.

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

FOR SALE Jersey Bulls ready for service R. of M. ancestors. Raleigh-St. Lambert breeding. Jerseys stand for economy. Waterman & Waterman, Packard Rd. Ann Arbor, Mich.

For Sale Jersey bull calves of Majesty breeding from good producing stock. Herd on Government "Accredited List." Write for price and pedigree to C. A. TAGGETT, R. 2, Fairgrove, Mich.

LILLIE Farmstead Jerseys—A few heifers bred to freshen soon, heifers bred to freshen next fall, 3 cows, R. of M. bull calves. C. C. Lillie, Coopersville, Mich

Bulls ready for service from our herd bull Marguerites Premier, gdson, of Pogis 99th of Hoed Farm, and cows now on test for R. of M. Smith & Parker, Howell, Mich.

For Sale. Jersey bull ready for service sired by Flying Foxe's Gay Lad. Dam record 472.5 lbs. butter 8675 lbs. milk. Notten Farm, Grass Lake, Mich.

BIDWELL SHORTHORNS You Can Buy

a bull that will put weights on your dairy calves—the difference will soon pay for the bull. Now selling good Scotch and Scotch-topped yearlings, reasonably priced. A roan, senior yearling, a Missie of Villager breeding, a herd bull prospect, Federal Test.

BIDWELL STOCK FARM,
Box D, Tecumseh, Michigan

Richland Stock Farms

Home of the Michigan Champions.
Shorthorn Sires in Service:

IMP. Lorne, IMP. Newton Champion, Sterling Supreme. Why not buy a young bull to head your herd that carries the blood that is making Shorthorn History. Only a few real headers left. Write your wants.

C. H. PRESCOTT & SONS, Tawas City, Mich.

Royal Bruce 795521 heads our herd. Three half brothers sold for $55,000.00 one Cluny Proud Augusta going to head Wm. Duthies of collyne's herd at $21,000.00. One bull and a number of females for sale.
CARR BROS. & CO. Bad Axe, Mich.
Norman Carr, Secretary.

For Sale Shorthorns of Quality Scotch and Scotch Topped descendents of Archers Hope, Avondale, Max walton Sulton and White Hall Sulton, Model Type, by the Oscola Co. Shorthorn Breeders Ass. John Schmidt, Sec. Reed City, Mich.

Central Mich. Shorthorn Breeders Asso. offer 40 bulls, 38 females, write for new list.
OSCAR SKINNER, Sec. Gowen, Mich.

Shorthorns Scotch and Scotch Topped bulls and heifers priced right. Sultan Champion heads herd, one scotch two yr. old herd bull by Red Cumberland priced right.
H. J. FLOWER & SON, Milo, Mich.

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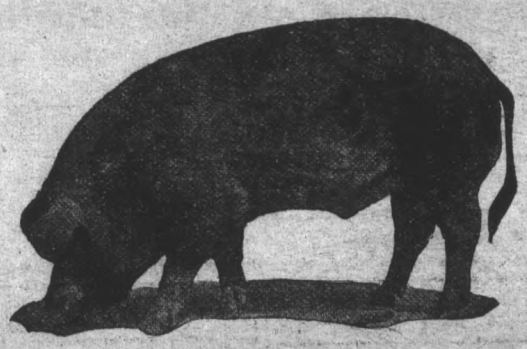

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He is an intensely bred Orion Cherry King boar from Fancy Orion King 6837 and Miss Cherry Bob 219,782. Don't make them any better. A sure producer, in a class by himself. Has a reddish golden coat, the kind so eagerly sought by breeders.

We offer sons of Liberty ready to serve, also gilts in pig to Liberty, the typey kind that were bred right.

Booking orders for Spring pigs to be shipped when weaned. Write for our special introductory offer for next 30 days. An opportunity worth while.

Our three great herd boars, Liberty, Proud Cherry King, 2d, Merridels King Willetta.

BROAD VIEW FARM, Inc.

La Porte, Indiana

O. I. C. SOWS FOR SALE

One of the Best Herds in Michigan

Spring gilts and fall yearlings bred for March, April and May litters. I ship C. O. D., pay express and register in buyer's name. If you want a BIG TYPE sow, guaranteed right in every way, write me.

J. CARL JEWETT, R. 5, Mason, Michigan.

One Shorthorn bull, eleven months old, extra good.
TED WALDO, R. 3, Grand Ledge, Mich.

The Kent Co. Shorthorn Assn. have males and females of quality for sale. A. E. RAAB, Sec., Caledonia, Mich.

Milking SHORTHORNS. Clay bred bull calves Herds under Federal Supervision.
Davidson & Hall, Beland & Beland, Tecumseh, Mich

Shorthorns Good Scotch bred bulls, cows and heifers priced right.
W. B. McQUILLAN, R. 7, Howell, Mich.

MEADOW Hills Shorthorns. Herd headed by Silver King, full brother of Lavender Sultan Purdue University's great sire. For sale females of all ages, a few young bulls. Geo. D. Doster, Doster, Mich.

Shorthorns Scotch and Scotch Topped, only a few left at old prices.
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St. Joseph Valley Shorthorn Ass'n has for sale males and females of all ages and best breeding.
AARON HAGENBUCH, Sec-treas. Three Rivers, Mich

Wayside Farm Brown Swiss—1 yearling bull, 2 bull calves 7 mo., well bred, well fed, good individuals, satisfaction guaranteed. Ervin R. Moore, Osseo, Mich.

HOGS

Berkshires size with quality is our specialty. Write your wants to
M. G. MOSHER & SONS, Osseo, Mich.

Registered Berkshires, Gilts, and Sows bred for April May and June farrow. A yearling Boar and a few younger. Spring pigs. Chase Stock Farm, Marlette, Mich.

LARGE Berkshires. Ten years a breeder, Let us convince you that we have the kind you want. Cir. Satisfaction guar. W. H. Every, Manchester, Mich.

Duroc sows and gilts bred to Walts King 92949, who has sired more 1st and 2nd prize pigs at the State Fair in last 2 years than any other Duroc boar. Everyone will be a money maker for the buyer. Cat. and price list.
NEWTON BARNHART, St. Johns, Mich.

Michigana Farm Durocs

We breed and sell good hogs.
O. F. FOSTER, Mgr. Pavilion, Michigan

DUROC JERSEYS. Spring pigs ready for delivery, $10.00 each. LAKE SIDE STOCK FRUIT FARM, Pinckney, Michigan.

ROYAL BRED DUROC GILTS

Dams sired by Michigan Cherry Col. Bred to Jacks Cherry Orion King, No. 169259. Son of the $10,000 champion, Jacks Orion King 2nd, all high class stock, write for prices. The Jennings Farms, R. 1, Bailey, Mich.

DUROC JERSEYS

Two sows of great breeding and choice individuals weighing about 300 lbs. each due to farrow in June price $85 each, first checks get them. RUSH BROS., OAKWOOD FARM, Romeo, Mich.

DUROC JERSEYS

Bred gilts all sold. Get in your orders early for March and April pigs. Either sex or pairs not akin.
F. J. DRODT, Monroe, Mich. R. 1.

DUROC JERSEYS
E. D. HEYDENBERK, Wayland, Mich.

Duroc bred sows and gilts sired by Orion Cherry King Col. 2nd., bred to All Col. of Sangamo 2nd. First class lot, reasonable. W. C. Taylor, Milan, Mich.

Duroc Jersey fall and spring pigs for sale. We sell you only the best, ship C. O. D. subject to your approval. Register in buyers name and guarantee satisfaction W. E. BARTLEY, Alma, Michigan

DUROC PIGS for sale $15.00 each. registered.
FRANK LAMB, Cassopolis, Mich.

CHESTERS, spring pigs in pairs or trios from strictly big type mature stock. A few gilts bred for May farrow.
F. W. ALEXANDER, Vassar, Mich.

I HAVE started thousands of breeders on the road to success. I can help you. I want to place one hog from my great herd in every community where I am not already represented by these fine early developers—ready for market at six months old. Write for my plan—"More Money from Hogs."
G. S. BENJAMIN, R. F. D. 10, Portland, Michigan

O. I. C. and Chester White Swine

Strictly Big Type with quality. Spring pigs of March and April farrow. A choice lot of boars. Will only spare a few more gilts at present. Will ship C. O. D. and record them free.
Newman's Stock Farm, Marlette, Mich. R. No. 1.

O. I. C's Am offering a few September pigs that combine size and quality.
C. J. THOMPSON, Rockford, Mich.

O. I. C's A few choice late fall and winter boars, also a fine two year old boar.
WEBER BROS., R. No. 2, Royal Oak, Mich.

O. I. C's. Big type serviceable boars. Gilts bred for May and June farrow.
G. P. ANDREWS, DANSVILLE, MICHIGAN

O.I.C. Gilts bred for March and April farrow, guaranteed safe with pigs. Fall pigs and a few service boars. Herd immuned by D. T. F. C. Burgess, R. 3, Mason, Mich.

O. I. C's Eight young boars and spring pigs for June shipment.
CLOVER LEAF STOCK FARM, Monroe, Mich.

O. I. C.'s Booking orders for spring pigs, we register free and ship C. O. D.
A. J. BARKER & SON, Belmont, Mich.

O. I. C's Champion yearling boar. Bred Gilts and March and April pigs.
Vernon C. Fry, 808 Vinton Bldg., Detroit, Mich.

O. I. C's. 5 last fall boars and 15 last fall gilts bred for fall farrow. Weight 230 to 325 lbs. extra good stock. Also this springs pigs not akin. ¾ mile west of depot. Citizens phone 124. Otto B. Schulze, Nashville, Mich.

L. S. P. C.

One 400 lb. sow and 7 pigs by side, price $100.00. One 275 lb. gilt and 6 pigs by side, price $85.00. Two choice boars.
H. O. SWARTZ, Schoolcraft, Mich.

Big Type Poland Chinas

Our herd is representative of the best in Big Type. The $40,000.00 "The Yankee", the $50,000.00 "The Clansman", and the priceless "Giant Buster" are all represented. We aim to keep up-to-date blood lines and only quality stuff. Come over and see us PUBLIC SALE OCT. 27th. WESLEY HILE, R. 6, Ionia, Mich.

MILLER Meadow's L. T. P. C. boars all sold. Gilts sired by General Jones and bred to our young boar Alaska, address CLYDE WEAVER, Coresco, Mich.

Veterinary.

CONDUCTED BY DR. W. C. FAIR.

Cows Fail to Come in Heat.—I have seen in the veterinary department of our paper a treatment of one dram of ground nux vomica and one dram of ground capsicum given to bring on heat in cows. I first gave "Kow Kure" and it failed. I then went to the drug store and purchased one ounce of each and divided it into sixteen doses, but the druggist told me to make it into eight doses, but this treatment has also failed. I gave the medicine twice a day. W. C. B., Jackson, Mich.—In order to obtain satisfactory results in these kind of cases the treatment should be kept up for several weeks, or until cow comes in heat. It should be understood that some cows are shy breeders, others are barren and never will come in heat; furthermore, it is no mistake in having such cows examined with a view of ascertaining the cause of them not coming in heat.

Cow Coughs.—I have a young heifer which dropped a calf March 10. Since that time she has had a cough. She has good feed, am fattening calf on her. She fails to lay on flesh. What can be done for her? C. W. DeB., Bedford, Mich.—Give her a teaspoon of ginger and a tablespoonful of powdered licorice in feed three times a day. Rub her throat with camphorated oil twice a day.

Warts.—I have a two-year-old heifer that is covered with warts, especially on neck and shoulders. G. W. R., Skondiv, Mich.—Apply either castor or olive oil once a day; give her two drams of Fowler's Solution at a dose twice a day, until the warts are gone. Warts with well defined neck, should always be cut or clipped off. If a more active remedy is needed write again.

Loss of Appetite.—I have a Durham bull two and a half years old that is not thriving. His coat is rough and he fails to eat enough food. He is offered several kinds of feed, but has little appetite. W. B., Oakley, Mich.—Give him one dram of fluid extract of nux vomica, two drams of fluid extract of cinchona and half an ounce of Fowler's solution at a dose three times a day until he is well. This medicine can be given in his drinking water, or in one quart of water as a drench.

Scours.—My young cattle below a year old have been troubled with the scours. Several of them have died and my neighbors complain of their young stock having this same ailment. At first my yearlings were sick, now the young calves are scouring. W. H. I., Bendon, Mich.—Scouring is a common result of indigestion, and at first may be nothing more than nature attempting to relieve the stomach and bowels of offensive and irritating contents. As the indigestion persists, however, the fermentations going on in the undigested masses become steadily more complex and active, and what was at first the mere result of irritation or suspended digestion comes to be a genuine contagious disease, in which the organized ferments propagate the affection from animal to animal and from herd to herd. Started in a cow stable it is liable to persist for years, or until the building has been thoroughly cleansed and disinfected. In the treatment of scours, give a dose of castor oil, then give salol or any of the bowel antiseptics, but I believe your herd and the neighbors require the services of a competent veterinarian, to oversee the cleaning and disinfecting, with a view of getting rid of the infection.

Infected Udder.—We have a cow that gives milk that has a whole lot of little specks in it, and we believe she has garget. G. H., Bangor, Mich.—Give her a teaspoonful of hyposulphite of soda in feed two or three times a day. She should be milked clean three times a day.

Ringworm.—Our calves are bothered with ringworm and none of the remedies I have applied have done any good. L. F. S., Comins, Mich.—Paint sore parts with tincture of iodine three times a week.

Chronic Garget—Vertigo.—Last fall my cow came fresh; since then one-quarter of bag is hard and caked. I also have a sow twelve months old that occasionally staggers. M. H., Harrison, Mich.—Apply iodine ointment to udder daily. Give sow fifteen grains of bromide of potash twice a day.

"Save the Surface and you save all"

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WHEN you see a painter using Heath & Milligan Dependable Paint or a dealer selling it, you may be sure that they both *stand* for giving you a square deal.

For our **dependable** trade-mark stands for the highest paint quality that money, brains and facilities can make. It means "Cheapest in the End" for you—the very thing you want. You as an owner of property can, therefore, safely use our Trade Mark as a safe guide when you buy.

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There are over 50 distinct Heath & Milligan Products for you to use. One for each surface around the farm and home from the front gate to the back fence. They are all of the same high standard quality. Use them and see for yourself that they go farther, require less time to apply, look better, wear longer than paints which cost less in the can.

Free Paint Book

Heath & Milligan Paints have been used throughout the United States since 1851. That's a long time. With the knowledge and experience gained during these years our new book "How to Paint" has been written. This book will save you time, money and worry—lots of each and it's free—though worth twenty-five cents easily. If you want a copy, return this coupon.

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Ask our dealer in your town for a copy of our FREE Book "How to Paint." He has a supply now. Or return this coupon to us and we will mail it.

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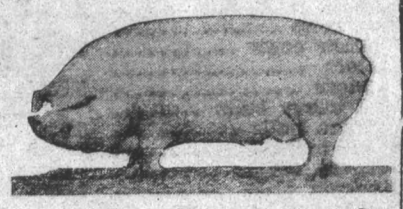
THE FAMOUS
O.I.C. SWINE



We have the undefeated Herd of the World. Winning premier breeder and exhibitor at every fair shown in 1919-1918-1917, including the following state fairs---Ohio, Michigan, Indiana, Illinois, Missouri, Kentucky, Tennessee, Oklahoma, New York, Alabama, Tri-state fair Memphis, and the National at O.I.C twice. Stock of all ages for sale. Registered free in the O.I.C. association. Order now. We will ship any of our stock on approval allow you to keep three days before you have to pay for it. You will be your own judge on your own farm.

CRANDELL'S PRIZE HOGS, Cass City, Mich.

Bred Sow Sale at Fairgrounds August 5th. Carey U. Edmonds, Hastings, Mich

For Sale: Purebred O. I. C. pigs, eight weeks old, from the son of the noted sires, Callaway Ed. and C. C. Schoolmaster. Their dam by Longfellow. These pigs are well-grown and are good ones. For prices and particulars address C. S. MOTT, Flint, Mich.

B. T. P. C.
All sold out except some Fall Gilts. Thanking my customers.
JOHN D. WILEY, Schoolcraft, Mich

BOARS! Oh Boys!
Sons and grandsons of the Mighty Giant Buster. The big boned useful kind. Priced for a quick sale. JNO. C. BUTLER, Bell Phone, Portland, Mich.

Big Bob Mastodon pigs takes the cake, book your order now. Fall boars and gilts sired by a grandson of Disher Giant, open or bred to Big Bob for Sept. 23 yearling sons. O. E. GARNANT, Eaton Rapids, Mich

Big Type Poland Chinas with quality, at reasonable prices. Pigs of both sex, and bred sows and gilts. G. A. BAUMGARDNER, R.2, Middleville, Mich

Big Type P. C. Bred gilts, Fall yearlings, prize winners, out 1100 lb. sire and mammoth sows from Iowa's greatest herds. E. J. Mathewson, Burr Oak, Mich.

Big Type Polands all sold out. Watch this ad for further announcements. Breeding stock for sale in season. L. L. CHAMBERLAIN, Marcellus, Mich.

LEONARD'S B. T. P. C. bred sows all sold. Order booked for boar pigs at weaning time from Mich. Champion Herd. E. R. Leonard, R. 3, St. Louis, Mich

I am offering Large Type Poland China Sows, bred to F's Orange, at reasonable prices; also fall pigs. Write or call Clyde Fisher, St. Louis, Mich. R.R.3.

"Lindhurst" Poland Chinas
Mammoth Ben's Chief No. 352167 heads our herd. Sows by Mammoth Ben, Upsome Lad, Joe Mastodon, Gertsdale Jones, and Capt. Price. Pigs by Mammoth Ben's Chief, Mountain Jack, and Orange Model. For sale fall boars and gilts sired by a son of Bower's Mammoth Joe. A few herd sows priced to sell. Get in line for spring boars.
WM. H. LIND, Citz. Phone, Alto, Mich.

6th ANNUAL P. C. Bred Sow Sale March 11, 1920. For particulars write W. J. HAGELSHAW, Augusta, Mich.

LARGE TYPE P.C. SWINE. One yearling boar, one fall yearling boar, fall pigs, a few more bred sows. R. W. Mills, Saline, Mich.

Poland China Brood Sows Bred for May and June farrow, $50.00 Maplewood Stock Farm, Allegan, Mich.

FOR SALE A few L. T. P. C. gilts being bred for August and September farrow. A. A. Feldkamp, Manchester, Mich., R. F. D. 2

FOR SALE Registered Big type Poland China gilts bred for Sept. farrow, weighing 225 lbs. for $60, spring pigs all sold, guarantee satisfaction. DORUS HOVER, Akron, Mich.

HAMPSHIRES

Spring boar pigs, sired by Steuben's Perfection and Cherokee Jim, 1st prize Ind. State Fair. Other winners at other fairs. Tried sows bred. Satisfaction guaranteed. Will ship C. O. D. Address,
STEUBEN'S HAMPSHIRE FARM
R. R 3, Angola, Ind.

Edgewood Hampshires
All bred gilts sold. Now booking orders for gilts bred for fall farrow, and pigs for pig club work only. Depew Head, Edgewood Farm, Marion, Ohio.

Hampshire bred gilts now ready to ship and spring and fall pigs from new blood lines. JOHN W. SNYDER, R. 4, St. Johns, Mich.

SHEEP.

Idle Wild Stock Farms Shropshire yearling rams from prize winning stock. Make your selection early. Cliff Middleton, Proprietor, Clayton, Mich. R. 3.

Additional Stock Ads on Page 891

LATEST MARKET REPORTS

FIRST EDITION.

The market reports in this edition were revised and corrected Tuesday noon, June 1.

WHEAT

Reports from Argentina saying that the loading of wheat from that country had been discontinued by government orders caused considerable buying on the Chicago market. The meager offerings were picked up at the beginning of Saturday's business. Later it was learned that the report was untrue and that exports are to be increased rather than diminished which caused a heavy unloading by early buyers. At Detroit not much wheat is arriving by rail, although dealers are said to be bidding at country points, but another cargo is coming from Chicago which will supply the immediate needs. Present values on the local market Saturday were as follows:

No. 1 red	$3.15
No. 1 mixed	3.13
No. 1 white	3.13
No. 2 red	3.12
No. 3 red	3.09

CORN

Prices have fluctuated during the past week but the general situation remains about the same. The wide range in prices seems due to the attempts of the market to adjust itself to new conditions that are expected to come. Cash corn has been scarce and firm most of the week, but dealers are looking for a larger movement. On the other hand, an active demand is expected as soon as the supplies begin moving. Present quotations are as follows:

No. 3	$2.00
No. 3 yellow	2.05
No. 4 yellow	2.00
No. 5 yellow	1.96
No. 6 yellow	1.93

OATS

Saturday's market for oats showed no material change. A number of traders predict that there will be a rush to sell if Tuesday's receipts show up heavy. Quotations on the local market Saturday were as follows:

No. 2 white	$1.23
No. 1 mixed	1.22
No. 4 white	1.21

RYE

Rye has been dull and inactive for several days, but advanced five cents Saturday, when Cash No. 2 rye was quoted at $2.10 per bushel on the Detroit market.

SEEDS

There is not much activity in the local seed market. Present quotations are as follows: Prime red clover at $26.50; alsike $26.50; timothy $5.60 a bushel.

FEEDS

There has been no material change in the feed situation during the past week. On the Detroit market the following quotations were held good for Saturday: Bran $58@59; standard middlings $59@60; fine middlings $60@62; coarse corn meal $78@80; cracked corn $80.50; chop $72@73 per ton in 100-pound sacks.

HAY

Receipts of hay continue light and prices Saturday were unchanged. No. 1 timothy $37.50@38; standard $36.50@37; light mixed $36.50@37; No. 2 timothy $35.50; No. 3 timothy $32@35; No. 1 mixed $35.50@36; No. 1 clover $35.50@36; rye straw $12.50@13; wheat and oat straw $12.50@13 a ton in carlots.

At Pittsburgh considerable hay is arriving but the demand is equal to the receipts at the following prices: No. 1 timothy $44@45; standard $43@44; No. 2 timothy $42@43; No. 3 timothy $40@41; No. 1 oat straw $18.50@19; No. do oat straw $18@18.50; No. 1 wheat straw $18@18.50; No. 2 wheat straw $17.50@18; No. 1 rye straw at $18.50@19; No. 2 rye straw $18@18.50.

BEANS

Beans are quoted steady but the demand on the local market is inactive. Choice pea beans for immediate shipment are quoted at $7.85 per cwt. At New York choice pea beans are quoted at $8@8.25 per cwt.

POTATOES

On the local market a little improvement is noted in the demand. Receipts amount to almost nothing and the quality is not in keeping with the price. Old stock Michigan Round Whites in 150-pound sacks are quoted at $13@13.25.

BUTTER

Butter receipts are increasing and prices are declining. Consumers are purchasing in only small quantities while production is increasing in most dairying regions. At Detroit No. 1 creamery butter is quoted at 48½@49c per pound.

CHEESE

Saturday's quotations on the local market were as follows: Michigan flats 29@29½c; New York flats, June make 22½c; brick 30@30½c; longhorns 31½c; Michigan single daisies 31c; Wisconsin double daisies 30½c; Wisconsin twins 29c; limburger, October make 35@35½c; domestic block Swiss 39@40c; imported Swiss 85c

EGGS

The market is easy and prices are declining almost every day. Saturday's quotations on the local market were 42@42½c for No. 1 packed extras and 39½c for No. 1 fresh eggs.

POULTRY

The demand for poultry is very light and the feeling is weak. Broilers are in demand but there is no demand for chickens and hens. Saturday's quotations on the local market were as follows for live poultry: Broilers 70@75c per lb; spring chickens, best 31@32c; hens 37@38c; small hens 37@38c; roosters 22@23; geese 30@35c; ducks 40@45c; turkeys 44@45c.

WOOL

Dealers in the Boston market, and growers of wool in the west are in the midst of a critical period. For the present the primary and secondary markets are drifting. Dealers do not know what to offer for the new clips, or they suggest prices which growers will not consider for a moment, while business is nil because the manufacturing situation is uncertain. Western wool is moving slowly. Cars are hard to get at shipping points. Not for weeks will the movement of wool assume sizable proportions and it is estimated that the weight of the clip will not be known until two or three months later than usual. New Missouri wool, mostly quarter-blood, is reported to have been offered in St. Louis at prices which would mean a cost of 45@50c for lots laid down here. Ohio growers are still firm, quoting fleeces on the following basis: Fine unwashed delaine 80@85c; fine unwashed clothing 67@68c; half-blood combing 75c; three-eighths-blood combing 63c; quarter-blood combing, 60c per pound.

GRAND RAPIDS

There has been a decline this week of ten cents per bushel in the paying price of wheat by milling companies. The price now is $2.90 for No. 1 red and $2.88 for No. 1 white. Subsidiary grains followed the decline in wheat and prices now are: Rye $1.75 per bushel; oats 96c; corn $2; buckwheat and barley unchanged at $2.90 per cwt for former and $1.80 for latter. The hide market is weaker and lower for both cattle and calf. Dealers cut the price from two to five cents a pound. Wool is off to 50c for fine and rejects and 40c for medium and unwashed. The market for red kidney beans is higher, dealers bidding $13 per cwt. White beans are unchanged at $6.75 per cwt. Potatoes are becoming scarce and some outside buying stations are closed. Dealers now pay $4@4.50 per bushel.

NEW YORK PRODUCE MARKET.

Butter.—Butter prices have declined during the week, but very gradually. On the whole the market has been very irregular. With the flush season approaching buyers feel that the price of butter must fall considerably, hence they keep their purchases down to the minimum. That, very naturally, keeps the market in a constant state of nervousness. Receivers are anxious to keep their stocks cleared to avoid carrying any butter over into a time of low prices, hence the supply of butter in the market has little influence on the quotation at present. The fact is there is a shortage of butter just now. That is due in large part to the poor transportation facilities that are furnished by railroads and also to the lateness of the season. Ordinarily with no more butter in stores than at present prices would shoot skyward. However, real active demand is lacking. On Monday, the market opened with extras quoted at 61½c. On Tuesday, a marked weakness developed and the price declined one and a half cents. There were successive declines of half a cent on Wednesday and Thursday, but on Friday buyers began to lay in stocks for the holiday of Monday and in consequence the price recovered one cent. At the close on Friday, quotations were: Extras 59½@60c; higher scoring than extras 60½@76c; firsts 55@59c; seconds 50@54c.

Cheese.—The cheese market is quiet with indications that prices will decline soon. That will be due to increased receipts, which will come naturally because of the season's increase in make and because of bettered railroad conditions. There is little export trade at present and domestic buying is curtailed because of the probability that prices will go lower soon. Established quotations are: Common to good 26@27c; average run 27¼@27¾c; specials 28½@28¾c.

Eggs.—Receipts of eggs are normal for this season of the year. Considerable quantities of the stocks that are being received are being placed in storage. It is well that speculators are operating as there are nearly one-half million less cases of eggs in storage at present than at this time last year. During the greater part of last week and until Tuesday of this there was a constant slump in the egg market. However, the market now seems to be somewhat stabilized and is fairly firm. Quotations are: Firsts, 41@42½c; extra firsts 43½@44½c; and extras 47@48c.

Poultry.—Receipts of live poultry have been heavy during the week but demand has been strong. The market has changed very little during the week, but has been very steady. Quotations are: Fowls 40@41c; broilers 75@85c; old roosters 25c; turkeys at 30c; ducks 23@25c; geese 20@22c.

Live Stock Market Service

DETROIT

Cattle.

Market strong and 25@50c higher than last week's close.

Best heavy steers	$11.50@11.75
Best handy wt bu steers	11.50@12.25
Mixed steers and heifers	10.00@11.25
Handy light butchers	9.00@10.00
Light butchers	8.00@ 8.75
Best cows	8.75@ 9.00
Butcher cows	7.50@ 8.25
Cutters	6.00
Canners	5.00@ 5.75
Best heavy bulls	8.50
Bologna bulls	8.00@ 8.25
Stock bulls	7.00@ 7.50
Feeders	9.00@11.00
Stockers	7.50@ 8.75
Milkers and springers	$ 85@ 125

Veal Calves.

Market strong.

Best	$17.00@18.00
Others	10.00@14.00

Sheep and Lambs.

Market dull.

Best lambs	$ 16.00
Fair lambs	14.00@15.00
Light to common	9.00@12.00
Fair to good sheep	9.00@10.00
Culls	3.00@ 6.00

Hogs.

Market 25c lower than Monday.

Pigs	$13.25
Mixed hogs	14.50@14.80

CHICAGO

Hogs.

Estimated receipts today are 36,000; holdover 15,123. Market is mostly 25c lower than yesterday's average; heavies very dull. Bulk of sales $13.85@14.50; tops $14.60; heavy 250 lbs up, medium, good and choice at $13.60@14.30; medium 200 to 250 lbs, medium, good and choice $14.10@14.60; light 150 to 200 lbs, common, medium, good and choice $14@14.60; light lights 130 to 150 lbs, common, medium, good and choice $13.50@14.40; heavy packing sows 250 lbs up smooth $12.50@13.35; packing sows 200 lbs up rough $12@12.50; pigs 130 lbs down, medium, good and choice $11.50@13.75.

Cattle.

Estimated receipts today are 7,000. Market steady to 40c higher; calves 50c higher. Beef steers, medium and heivy weight 1100 lbs up, choice and prime $13.15@14.25; do medium and good $11.90@13.50; do common $10.75@11.90; light weight 1100 lbs down, good and choice $13@14.25; do common and medium $10.50@13; butcher cattle, heifers, common, medium, good and choice $7.75@13; cows, common, medium, good and choice $7.60@11.25; bulls, bologna and beef at $7.60@11; canners and cutters, cows and heifers $4.75@7.50; do canner steers $6.25@8.50; veal calves, light and handyweight, medium, good and choice at $12.25@15; feeder steers, common, medium, good and choice at $9@11.85; stocker steers, common, medium, good and choice $7.75@11.15; stocker cows and heifers, common, medium, good and choice $7.25@9.75; stocker calves common, medium, good and choice at $7.50@10.50.

Sheep and Lambs.

Estimated receipts today are 13,000. Market slow, mostly steady on best grades; others weak. Lambs 84 lbs down, medium, good choice and prime $14.50@17.50; do 85 lbs up, medium, good, choice and prime $13.50@17.25; do culls and common $10@13.50; feeder lambs, medium, good and choice at at $15@17.50; spring lambs, medium, good, choice and prime $11.75@14.75; ewes, medium, good and choice $7@10.50; ewes, cull and common $2.50@6.50; yearling wethers, medium, good and choice $11@13.50.

BUFFALO

Pigs at $13.25@13.75; heavies $15@15.25; others $15.25@15.40; lambs at $17.50@18.

CENTRAL MICHIGAN POLAND-CHINA BREEDERS BUSY.

The breeders of Big Type Poland-China hogs, of central Michigan, have long felt the need of a closer fraternal spirit among ourselves, as breeders, to promote public sales and for the best interest of the breed in our state, and particularly for our section of the state.

At a meeting on May 15, 1920, E. R. Leonard, St. Louis, was elected president, and C. A. Boone, Blanchard, secretary-treasurer of The Central Michigan Big Type Poland-China Breeders' Association.

A sale circuit was formed for October 26 to October 30, with The Boone-Hill Company, Blanchard, E. R. Leonard, St. Louis, Charles Wetzel Sons, Ithaca, Brewbaker & Sons, Elsie, and Wesley Hile, Ionia. This will be a five-day circuit, the first sale circuit of the Big Types ever held in Michigan. Leading blood is well represented in the several herds, and this will afford an opportunity for the public to obtain advanced Poland-Chinas at their own bids. It is hoped that the breeders of the state, as well as other states, will help make this a success.

In a short time every breeder in our territory will be a member of this association, and a large sale circuit is looked for next-year, with possibly a bred sow circuit this winter.—C. A. BOONE, Secretary.

COMING LIVE STOCK SALES.

Holstein, June 8, McPherson Farms, Howell, Michigan.

Poland-Chinas, Oct. 26, Wesley Hile, Ionia.

Big Type Poland-China Sale Circuit in Central Michigan, October 26-30.

M. A. C. News Letter

BECAUSE concentrated feeds have recently undergone considerable increases in price, the use of forage crops has become doubly important in keeping down the cost of pork production, it is held by Prof. W. E. J. Edwards, of the Animal Husbandry Department at M. A. C.

Tests at the Experiment Station at East Lansing and on a number of farms elsewhere have shown that from one-third to one-half less grain is required to produce a given amount of pork on pasture than in a pen or dry lot.

Good pasture for hogs is provided by either alfalfa or the clovers, but since there are many farms where these crops can be utilized, it is necessary to provide some other kind of forage. During the early summer, June grass pasture is excellent, but it cannot be depended upon during hot weather. To fill the need during this period rape may be used, according to Professor Edwards. It not only grows rapidly on any type of soil except very light sand, but it remains fresh throughout the summer.

"Rape gives best results," says Prof. Edwards, "if sown from early spring as soon as the soil warms up to June 15, or even later, depending upon the weather conditions. Dwarf Essex is the best variety for our use. The seed is very fine and requires a good fine seedbed containing considerable moisture in order that it germinate evenly and strong. Lots where hogs have been running all winter can be used to good advantage in growing rape. It is usually sown broadcast, using about five pounds of seed per acre, but as the crop requires much moisture it may be advisable on light sandy soils to sow in drills about twenty-eight inches apart and cultivate between the rows, using from three to three and one-half pounds of seed per acre. When the rape is about eight or ten inches high, the pigs should be turned in. It should not be pastured very closely and if two lots are sown so that the hogs may be rotated from one side to the other, new shoots develop and keep the crop fresh and green through the whole season."

With the high price of labor the present development of production of high standard seed means much to Michigan farmers. It is pointed out by A. L. Bibbins, secretary of the Michigan Crop Improvement Association, that better seed at reasonable prices means higher production without extra expense of labor or capital and therefore a benefit to agriculture of the whole state.

More than ever before it is necessary for people on the farms and people in the cities to understand each other and the problems which each class face, in the opinion of Prof. J. F. Cox, of the Farm Crops Department at M. A. C.

"The interchange of speakers and meetings," says Professor Cox, "which has begun between Chambers of Commerce, Rotary Clubs, and other business mens' organizations, and nearby Farm Bureaus, Granges, Gleaners' organizations and Farmers' Clubs, should have a great influence in bringing about a widespread understanding of the relationship existing between city and country."

Professor Cox holds that, despite charges to the contrary, recent steps for closer cooperation of farmers, such as the formation of the Michigan Farm Bureau, have helped both to retain farmers and their helpers on the land and to lower the cost of food products to the consumer. HENSHAW.

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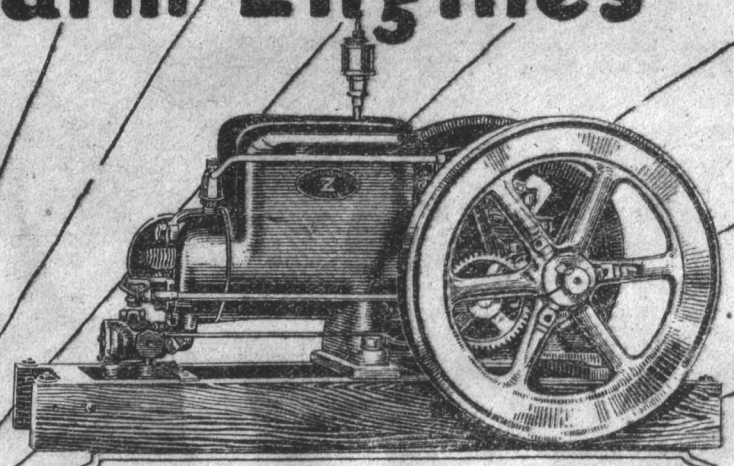

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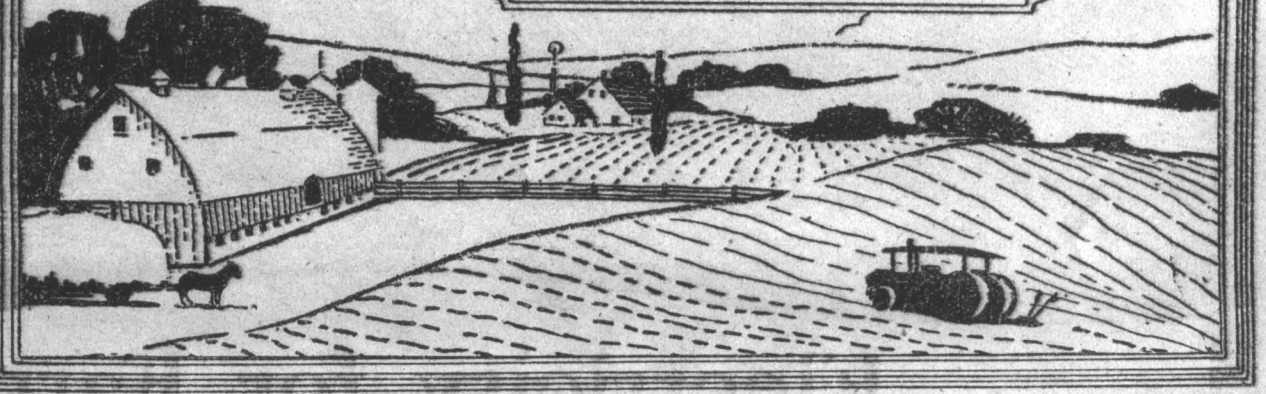

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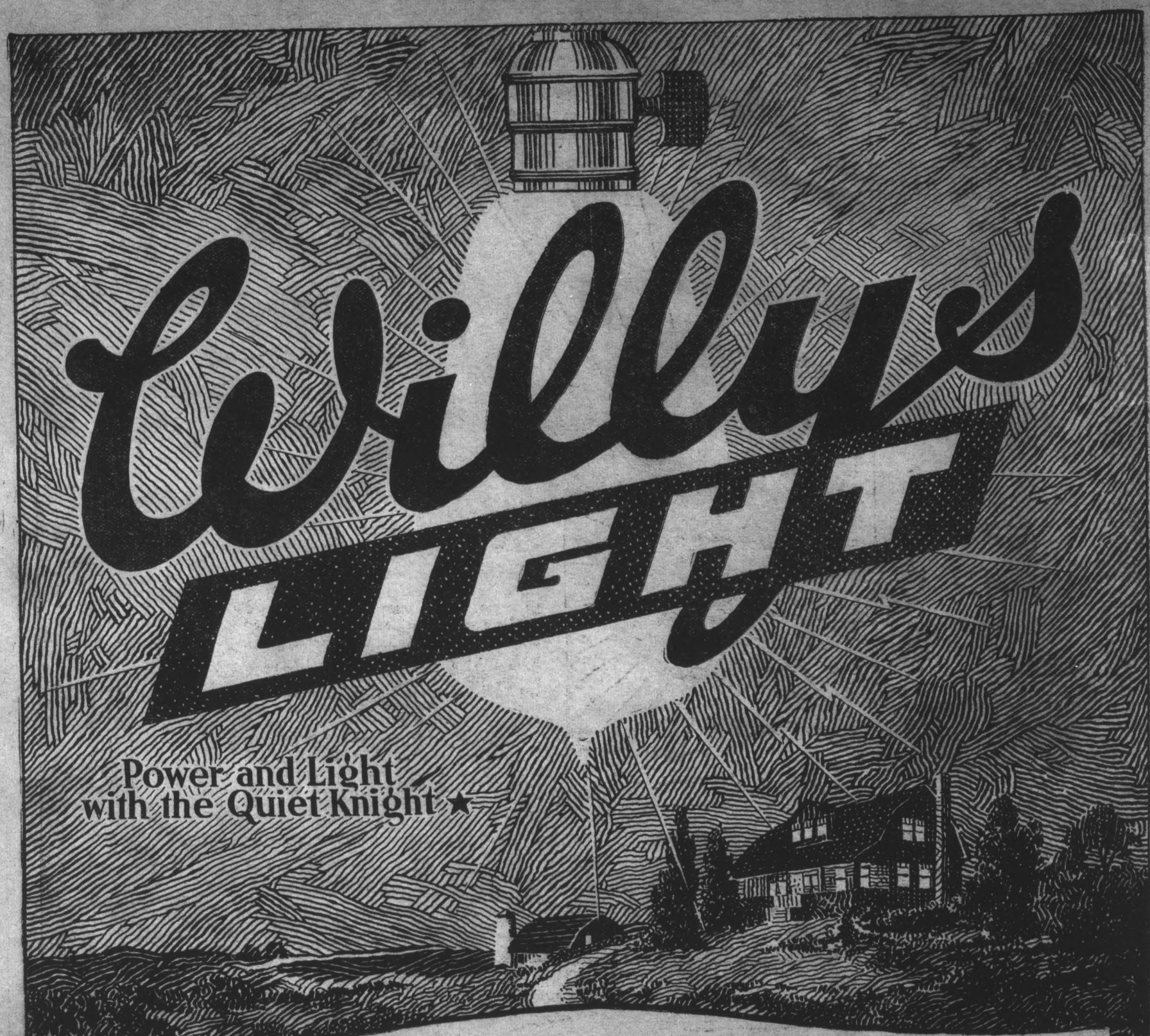

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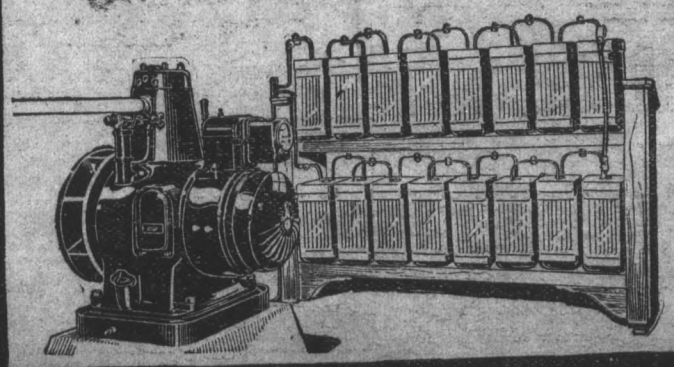

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