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Land Clearing Demonstration Lessons

By W. P. HARTMAN

Agr'l and Ind'l Agt., G. R. & I. Ry.



Placing Dynamite to Split Stump.

NATURALLY the most vital problem affecting the development of Northern Michigan is the matter of bringing the present idle acres under the plow and while tens of thousands of acres of land are tilled around the stumps, economy and efficiency clearly demand the removal of these obstacles which not only take up valuable area but also increase the time of working the field, increase the cost of keeping implements in repair, plow points, for example, and moreover prohibit the use of much of our latest improved, and in this day of labor scarcity, absolutely essential farm machinery—the potato digger and so on.

There are about as many ways in practice of clearing land as there are kinds of trees that grow upon the land. It was with a view to determining the quickest and cheapest methods of land clearing, the most approved methods of farm drainage and the economy of treating fence posts and other farm timbers with creosote that the Michigan Agricultural College, the Public Domain Commission, the Western Michigan Development Bureau, the DuPont Powder Company, the Barrett Manufacturing Company, and manufac-

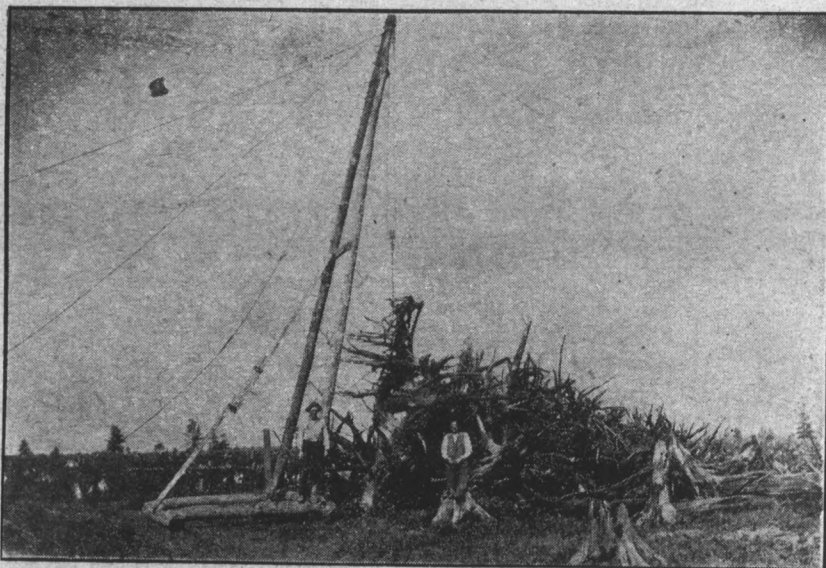
turers of stump pullers with the Grand Rapids & Indiana Railway cooperating, conducted demonstrations at the Railway Company's Demonstration Farm No. 1, Howard City, on October 25-27.

On the first day there was a constant downpour of rain from morning until night; therefore the field demonstrations had to be abandoned and in their stead an all-day meeting was held in Howard City in the Community Theater, with lectures by prominent authorities, and the lectures on land clearing reinforced and elaborated upon by the use of some four thousand feet of moving pictures. It was a busy session, this day meeting, the speakers everyone of them thoroughly versed in the subjects they discussed and the nature of the program afforded them little incentive to stray far from the topic in hand.

Wisconsin the Pioneer.

The feature lecture of the day was that given by Prof. F. M. White, of the Farm Mechanics Department, University of Wisconsin. In the way of public demonstrations of this character our Wisconsin neighbors have somewhat acted as pioneers. The transportation companies and the state development association starting the work with the state itself following up, having recently appropriated a fairly liberal sum to continue the demonstration work for another two years. Prof. White, with the late Carl Livingston, of the same university, has been with three land clearing demonstration trains operated in that state during the past two years. Two of the principal factors in connection with their demonstrations were the accumulation of cost data and comparative efficiency of dynamite and various types of stump pullers. They found in the majority of instances that a combination of dynamite and stump puller gave the best results.

Glen R. Munshaw, Deputy Commissioner of Immigration, representing the Public Domain Commission, spoke



Stump Piler Used at G. R. & I. Demonstration Farm No. 3, Cadillac, Mich.



Blasting Stumps in Land Clearing.

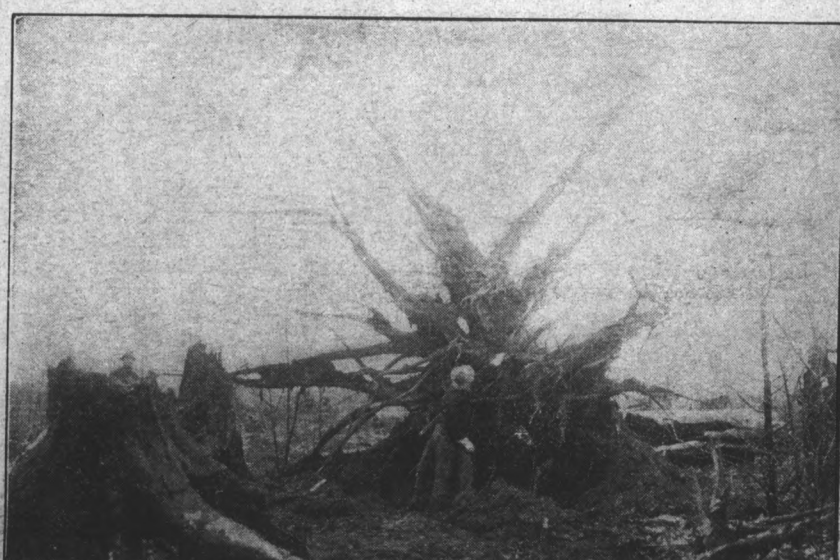
briefly upon the importance to the commonwealth, and to the country as a whole, of getting more of our land cleared promptly; showing by statistics the relatively small area of land actually cleared in the northern part of the lower peninsula.

John I. Gibson, of the Western Michigan Development Bureau, aside from making a characteristically strong appeal on the Liberty Loan Bond issue, discussed at some length the agricultural activities and possibilities of western and northern Michigan.

Farmers Interested in Land Drainage.

Prof. H. H. Musselman, of the Farm Mechanics Department, Michigan Agricultural College, handled the subject of farm drainage, supporting his arguments, which were very clearly defined, with an attractive group of hand-colored lantern slides. Drainage is a phase of farm management of rapidly growing importance and that the farmers are keenly alive to the subject was very clearly demonstrated by the response to Prof. Musselman's talk.

K. C. Barth, Creosote Expert for the Barrett Manufacturing Company, used a strikingly well selected assortment (Continued on page 463).



Before and After Pulling. This 157-year-old Pine Stump is 4x3 Feet in Diameter. Stump and Roots will Make About 8½ Cords of 16-inch Wood.

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CURRENT COMMENT.

The Transportation Problem.

While the country has been at war but seven months, and while war materials have only just commenced to move in any volume, the transportation difficulties ahead of the country are already very much in evidence, notwithstanding the fact that railroad efficiency has been increased to a marked degree by the patriotic cooperation of the roads and the governmental distribution of equipment. With the increased burden which will be inevitably put upon the transportation facilities of the country with the progress of the war, the outlook would be serious indeed, were it not for the possibility of greatly increasing the use of the public highways for heavy transportation purposes.

It is indeed fortunate for this state and the country at large that such material progress has been made in the permanent improvement of country roads during recent years. With the increased mileage of improved roads radiating from our principal urban centers an increased amount of the products of the farms has been transported to the market or direct to consumers through the use of auto trucks. It is a common sight these days to see truck loads of potatoes and other farm products being brought to market from points fifty and sixty miles distant for immediate distribution to consumers, thus alike benefiting the grower who is able to dispose of his product more quickly than would be the case if railway transportation were alone depended upon in the marketing of his products. It is in like manner a benefit to the consumer who is thus enabled to draw directly upon a much larger supply of products than would otherwise be the case.

In anticipation of military needs, the federal government is placing special emphasis upon the early completion of missing links in otherwise well improved roads which will be of first importance in the transportation of war material by similar means. Something of the adaptability of this modern form of transportation is revealed by the establishment of a truck line by one of the large centrally located tire manu-

facturers who have established and are operating a line of truck transportation over six hundred miles long from the factory to the seaboard, which conveys finished goods to their eastern distributing branch and brings back raw materials from fabric mills to the factory.

It is indeed fortunate that the good roads propaganda and the development of the auto truck have furnished at hand the means for the temporary solution of the vexed transportation problem incident to our participation in the war. From this standpoint the importance of the completion of trunk line roads and the proper maintenance of permanent roads already constructed can hardly be over-estimated. Local authorities everywhere should cooperate with the highway officials of state and nation, to the end that important trunk lines may be completed at the earliest possible date, and that roads already constructed may be maintained in the best possible condition to withstand the heavy traffic to which they must of necessity be subjected on this account. The proper development and maintenance of trunk line highways has become a matter for patriotic and business consideration which should not for any reason be opposed or neglected by the people of the community.

The Bean Situation.

State Market Director McBride reports from Washington that the bean situation is encouraging. The price fixed by the United States for November for army and navy uses was not based on cost. Mainly on the Pacific Coast beans had been delivered to the warehouses at ten cents per pound or less. The rules for operation under the license system would not allow the payment above this basis or it would be governmental encouragement to speculation. While this worked some injustice, it was apparently unavoidable. The cost accountant for supplies of the Federal Trade Commission advises that due consideration of cost of growing must be given in the future.

There have been two cargoes of block tin sunk by submarines and as a precautionary measure until the can situation is known the United States has forbidden the canning of dry peas and will license canners to protect the canning of dry beans, first, for government use, and secondly for a large general trade. This, if given proper administration would enable Michigan frosted stock to be marketed and canned ahead of imported beans. Michigan has special needs and interests in the disposal of this year's bean crop that makes it imperative for a representative of this interest to be at Washington most of the time for at least the next sixty days.

The English language has, in recent generations

Simplified Spelling. at least, undergone a constant and rather rapid change both in orthography and commonly used construction. This change has been uniformly toward simplification, with the possible exception of the introduction of some foreign words into the English vocabulary. One does not fully appreciate the extent of this change until he comes in contact with English writings of a century ago, which are at once hard to read and difficult to understand. For the most part, this change has been brought about by common usage, in which there has been general acquiescence.

In recent years an attempt has been made to introduce the simplified spelling of a considerable number of English words by dropping silent and useless letters. While this attempt, with which every Michigan Farmer reader is more or less familiar, has apparently not met with the universal popular approval which its champions believe it

to merit, there are many excellent arguments in favor of this system of so-called phonetic or simplified spelling. Among these arguments is the fact that by the shortening of these words as proposed, by an average of two letters each, more than fifteen per cent of the time and space required in their use would be economized. The ease with which the child could master the orthography of our language would also be increased. The objections and criticisms of educated foreigners concerning our language would also be obviated, and the chance of the ultimate adoption of English as a world language in the coming struggle for a medium of universal expression would be increased.

Many college professors and leading librarians have endorsed the following list of words which we are publishing herewith, and many publications are using the simplified form of spelling of all or a portion of these words. We would be pleased to have an expression from as many of our readers as are interested regarding their attitude toward simplified spelling, so far as it may apply to the education of their children and the literature coming into their homes. The following list is appended for such consideration:

Accurst instead of Accursed.
Affixt instead of Affixed.
Altho instead of Although.
Blest instead of Blessed.
Bot instead of Bought.
Carest instead of Caressed.
Chapt instead of Chapped.
Clapt instead of Clapped.
Claspt instead of Clasped.
Comprest instead of Compressed.
Confest instead of Confessed.
Cropt instead of Cropped.
Crost instead of Crossed.
Crusht instead of Crushed.
Curst instead of Cursed.
Dasht instead of Dashed.
Deprest instead of Depressed.
Dipt instead of Dipped.
Discust instead of Discussed.
Distrest instead of Distressed.
Draft instead of Draught.
Drest instead of Dressed.
Dript instead of Dripped.
Droopt instead of Drooped.
Dropt instead of Dropped.
Exprest instead of Expressed.
Fixt instead of Fixed.
Gript instead of Gripped.
Heapt instead of Heaped.
Husht instead of Hushed.
Imprest instead of Impressed.
Kist instead of Kissed.
Lapt instead of Lapped.
Leapt instead of Leaped.
Lookt instead of Looked.
Mist instead of Missed.
Mixt instead of Mixed.
Nipt instead of Nipped.
Opprest instead of Oppressed.
Past instead of Passed.
Poest instead of Possessed.
Prefixt instead of Prefixed.
Prest instead of Pressed.
Profest instead of Professed.
Propt instead of Propped.
Rapt instead of Rapped.
Ript instead of Ripped.
Slipt instead of Slipped.
Skipt instead of Skipped.
Snapt instead of Snapped.
Stept instead of Stepped.
Stopt instead of Stopped.
Stript instead of Stripped.
Suprest instead of Suppressed.
Tapt instead of Tapped.
Tho instead of Though.
Thoro instead of Thorough.
Thorofare instead of Thoroughfare.
Thoroely instead of Thoroughly.
Thot instead of Thought.
Thru instead of Through.
Thruout instead of Throughout.
Tipt instead of Tipped.
Topt instead of Topped.
Trapt instead of Trapped.
Trof instead of Trough.
Vext instead of Vexed.
Washt instead of Washed.
Whipt instead of Whipped.
Wrapt instead of Wrapped.

HAPPENINGS OF THE WEEK.

Foreign.

The European War.—All efforts of the entente allies have been centered this past week on checking the Teutonic drive in northern Italy. The Germans have reached the Piava river. At the lower end of this stream they were attacked early this week by a strong Italian command and forced back, according to the Berlin war office and the Italians are making a stand. On the other hand, the invaders have been successful in crossing the upper end of the stream, having occupied the city of Belluno. British and French forces have arrived at the front in Italy. The Italian army was reorganized last week with General Diaz in command.—There has been but little activity on the western front. No German counter-attacks have followed the advances recently made by the British and French troops. Last week a small detachment of American troops were cut off from their base of supplies by a barrage fire. Three of the men were killed, five injured and several taken prisoners. A second attempt by the Germans was successfully repulsed.—British forces are advancing in Asia Minor where the Turks are retreating toward Constantinople. Gaza, a seaport of Palestine, is now in the hands of the British.—The situation in Russia became extremely serious last week when the extremists, or Bolsheviks, gained control of Petrograd and the territory immediately surrounding the capital. Premier Kerensky was obliged to flee, but he is now returning at the head of a considerable force to regain control. He was successful in a battle at Gatchina, thirty miles southwest of Petrograd. The Cossacks are supporting him. At Moscow the Red Guard, the Bolshevik forces, were defeated by troops loyal to Kerensky's government. By reason of the fact that all sources of information are in the hands of the extremists, little dependable knowledge of the exact situation can be secured.

Finland is now a separate nation. A proclamation has been issued announcing the separation from Russia and the establishment of a responsible government. However, the new administration has also proclaimed that a state of war exists.

President Carranza of Mexico, has appointed Adolfo De La Huerta, a business man, as Mexico's consul to New York City.

The national Chinese council summoned as a parliament to frame election laws, held its first meeting at Peking last Saturday with delegates from all provinces except Yun Nan.

A movement is on to make the Chinese district about Canton an independent government. To prevent the materialization of this effort, a large number of troops from the northern provinces are now marching south prepared to clash with the supporters of the independent plans.

With increased acreage and all crops in splendid condition, Ireland's present agricultural prosperity reaches beyond all former banner years. The island will have plenty of food to supply her own needs, and considerable to export.

Canada now has a newsprint dictator. R. K. Pringle, K. C., has been appointed to fix prices and regulate the distribution of paper.

Through the financial aid of Great Britain the government of Brazil has been able to break the hold of German propagandists in the chamber of deputies and measures designed to give control over commercial bodies and institutions owned by Teutonic capital have been agreed to.

The former queen of Hawaii, Liliuokalani, died Sunday at Honolulu.

National.

The Aero Club of America is completing plans for the establishment of four trans-continental airways. One of these main arteries from Boston to Seattle will include Detroit and Grand Rapids. The object of laying out these courses of travel by air is to establish in the larger cities suitable landing places. Numerous smaller courses will be established as the system is developed.

Secret service agents have discovered food stuffs and property valued at more than \$73,000,000 stored in warehouses in New York City.

New York City's water front was the scene of another disastrous fire on Sunday, when a large wire factory working on war orders was destroyed with a loss of approximately \$2,000,000.

A paper mill at Otsego, Mich., was destroyed by fire last Saturday night. The loss is estimated at \$20,000.

Fire burned the new auditorium at Dayton, Ohio, entailing a loss of over \$300,000.

LAND CLEARING DEMONSTRATION LESSONS.

(Continued from first page).

of lantern slides and with his crisp manner in making emphatic points, his subject of treating farm timbers, supplemented by the practical demonstration the following day, left little doubt in the minds of those attending as to the importance and direct profit in observing this phase of farm industry conservation.

Messrs. Means and Mathewson, of the DuPont Powder Company, spoke on the use of dynamite in clearing land and for ditch blasting. Mr. Mathewson has been connected with the Wisconsin work on demonstration trains and otherwise. Mr. Means is the official demonstrator for the company in the lower peninsula of Michigan. Their talks on methods and costs were accompanied by moving pictures.

Some of the county agricultural agents present spoke briefly upon the various problems in their respective counties, all emphasizing the need of more practical demonstration work along different lines.

Marketable Fuel from Pine Stumps.

E. C. Mandenberg, Extension Specialist, Forestry Department, Michigan Agricultural College, undoubtedly had the most pleasing single message of any of the speakers, in that, according to various cost records under varying conditions, it is proved that on the average to clear the land ready for the plow, about sixty per cent represents the cost of getting the stump out of the ground, the remaining forty per cent is cost absorbed in getting the stumps off the land. Ofttimes, especially in the past, dragged into the hideous and wasteful—some folks say, artistic—stump fence rows. Mr. Mandenberg was prepared to show by correspondence and cost figures that the cost of removing the stumps from the land could be reversed and converted into a profit since an actual market had been developed for fuel wood from the pine stumps and roots on the markets of Grand Rapids, Detroit and other large nearby cities; not to mention the small towns that are at this time in immediate need of fuel. This new market gives promise of paying between \$2.10 and \$2.25 a cord, f. o. b. cars at loading station, cut in lengths of sixteen inches, diameter of the wood to range up to a maximum of twelve inches. Mr. Mandenberg is in close touch with the fuel dealers and at this time has orders placed with him for more than a hundred carloads of this particular class of wood and all farmers interested should communicate with him at once.

Field Demonstration.

The field demonstrations at the demonstration farm on Saturday were a success in every particular, notwithstanding the rain and snow. More than a hundred people were in attendance and remained until dark. Judging from reports of those attending from other counties and later reports by correspondence it is safe to conclude that at least six hundred people would have attended had the weather been favorable. For example, one county had arranged to send twenty-six automobile loads with an average

of five persons to the car. As it was the attendance was representative and from various counties, Emmet county and South.

The three common types of stump pullers were operated. The two-horse capstan type, the tripod and the one-man hand-puller. All of them have their distinctive merits. In our own clearing operations in 1915, 1916 and this year, clearing some fifty-five acres at Farm No. 1, Howard City, twenty acres at Farm No. 2, Big Rapids, and

ters of soil represent an entirely different proposition.

Land Clearing Costs.

From our own experience in clearing land we give the following: At Farm No. 3, Cadillac, 1915, 90.7 pine stumps per acre, no scrub growth nor hand grubbing required, cost \$25.36 per acre, or \$.279 per stump. This included the cost of pulling and dragging all stumps off the land, also snagging out broken roots leaving the land ready for the plow. At Farm No. 2, Big Rapids, area

poplars, making a total of all stumps and snags of 1,818, representing 188.9 stumps and snags per acre. This cost included taking out all roots and leaving the land in perfect conditions for the plow. There are few, if any, other acres in the lower peninsula that would require as much hand and team labor as this particular tract.

During September and October of this year we pulled stumps on another plat of a fraction over eleven acres. The cost of pulling the stumps being 14½ cents each. It is our plan to work these stumps and roots into cordwood during the winter, using dynamite to break the stumps to make them easily handled on a saw frame.

It is very probable that demonstrations similar to that of October 27 will be conducted in the lower peninsula during 1918; in fact, some of the county agents have already partially arranged for local demonstrations.

HILL VS. DRILL PLANTING OF BEANS.

From time to time, the hill vs. the drill method of planting beans has been discussed in the Michigan Farmer, always to the disparagement of the former.

I have had some experience with both methods which may be of interest to prospective bean growers. A number of years ago, I planted ten acres of beans, drilling one-half bushel of seed to the acre. There was a good stand, the beans coming up evenly in all parts of the field, but in spite of early and frequent cultivation, they became quite weedy, especially with pigeon grass. This made about double the amount of material to handle when the crop was gathered and threshed. This year, with the constant rains, the weeds have been harder to control than usual. It has been very difficult to cure the vines and with the addition of the large amount of foreign matter present with them, it remains to be seen in what condition the beans will thresh out.

This year I rowed my five-acre field both ways, using a thirty-two-inch marker, thirty inches would be preferable. Using a corn planter, I planted six to eight beans in a hill. This required eight quarts to the acre, saving at least a peck of seed, no small item at ten dollars per bushel. The field was kept almost entirely free from weeds. We pulled by hand and having no weeds or grass to cure out, we were able to draw the beans in a much shorter time, thus largely eliminating the danger from rain. They are not yet threshed, but growers who have seen them say that they will yield as much or more than the drilled beans in this section.

Not the least advantage in the hill method is the ease with which the land can be prepared for wheat. We used a Vowels cultivator twice and drilled with a disk drill and have almost a perfect seed bed.

Livingston Co.

C. R. Ross.

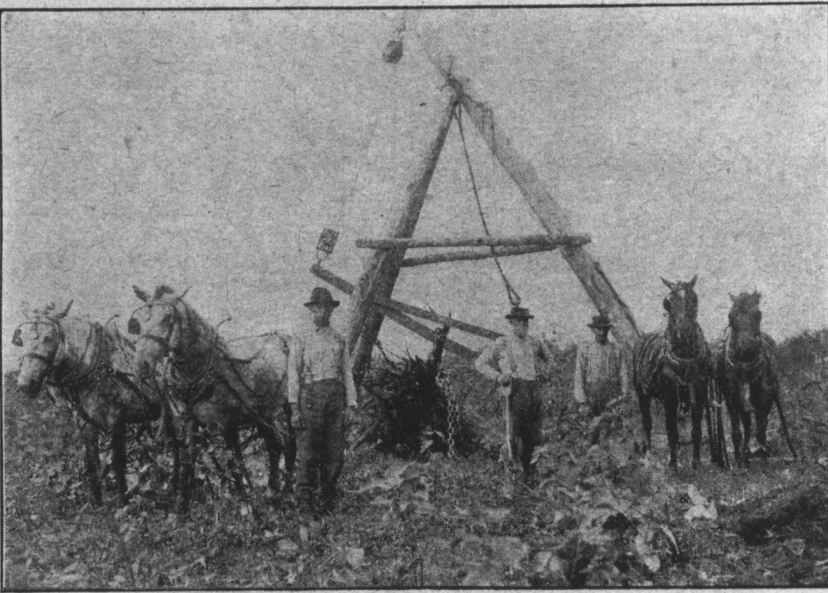
In storing the farm implements in the tool shed it will pay to arrange them in such order as will save time and effort next spring by making those first needed easily accessible.



One-man Stump Puller, One of Three Types Used at the Demonstration.

twenty acres at Farm No. 3, Cadillac, 20.16 acres with 39.1 stumps per acre, we have in all cases used the tripod machine and in all likelihood will continue to use this type in any future work, unless something better than we have yet seen is brought on to the market. It is admitted by all, the powder companies and others, that the use of dynamite in blasting pine stumps on sand land is to be recommended only where the operator wants the stump

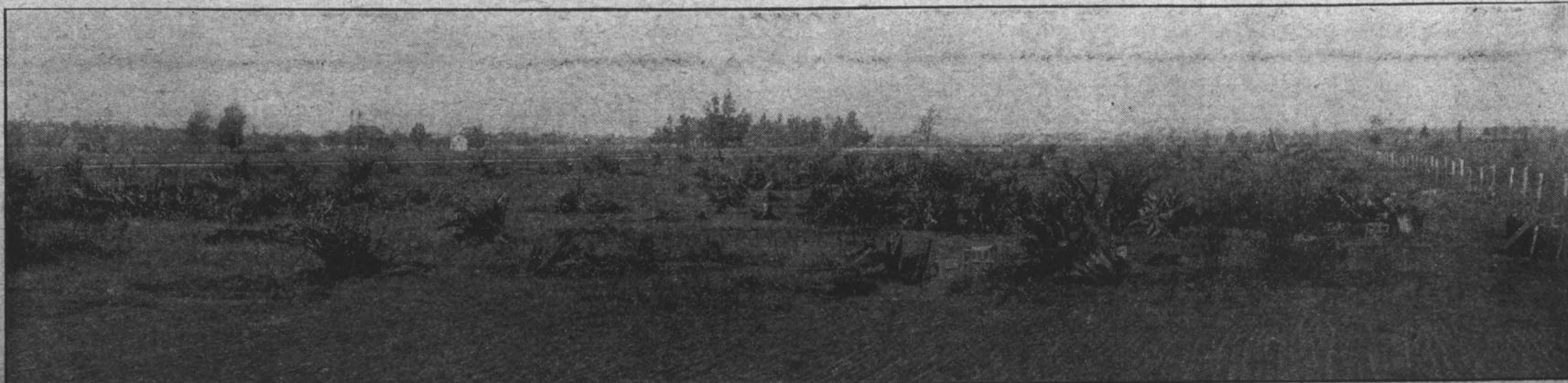
cost per acre \$15.00, cost per stump \$.383. In the same year at Farm No. 1, Howard City, about thirty acres were cleared. On some of this area the stumps had been pulled and stacked, leaving only a few roots to be snagged. A portion had no stumps pulled but the land had been cropped around the stumps for a long period of years, the balance of five to six acres was new



Tripod Stump Puller, One of the Popular Types Used in Michigan.

reduced to small size for convenience in handling and it would seem from experiments that the cheapest way would be to use the dynamite to break the stump after it has been pulled with the machine. In order to develop maximum results in the use of dynamite resistance to the charge is imperative. The sand soils do not provide this required resistance. However, other types of stumps on other charac-

land. Practically every acre made a different cost figure. Therefore cost figures on this would be misleading. However, the fall of 1916 and spring of 1917 we cleared plat of 9.62 acres, total cost being \$467.30, the cost per acre \$48.576. On this plat there were 504 pine stumps, 810 oak and twenty-six poplar, a total of 1,340, which we were required to pull, while we were able to snag out an additional 478 oaks and



Plot of Eleven Acres Cleared this Fall on G. R. & I. Ry Demonstration Farm No. 1, Howard City, Mich., at a Cost of 14½ Cents Each for Pulling Stumps.

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Seed Corn

By PROF. J. F. COX

THERE is a great scarcity in Michigan of corn suitable for seed purposes. After two months' active field work on the part of county agents, extension specialists and a number of special agents employed for the purpose, only 14,560 bushels of seed corn have been reported from the field to the farm crops department of the Michigan Agricultural College. These men worked in every corn-growing county in Michigan. Their meager returns show clearly the dire situation facing Michigan corn growers.

The acreage planted to corn this year was 1,978,000 acres. To plant this large an area 449,500 bushels of corn is needed, allowing one bushel of corn in the fall for every four acres to be planted. Of this amount we can put our hands on less than one-thirtieth at the present time. Without a doubt our survey failed to secure all of the seed corn in Michigan but it was nevertheless as comprehensive and thorough as we could make it. There may be five times as much, or even ten times as much corn which will make seed in the state, though I doubt it greatly. It is not conceivable, however, that there is anything like thirty times as much corn in the state as has been located. Wisconsin reports an even greater shortage and there is a scarcity in all northern states of early varieties. Minnesota is the only section reporting a surplus of corn adapted to Michigan. I am planning to look over the situation there at once and see whether or not large quantities of medium early and early varieties are available for Michigan. We can grow their corn in Michigan with safety.

If we had on hand, or had options on 100,000 bushels of adapted corn suitable for seed, it would go far toward assuring our next year's corn crop. To finance the purchase of this large amount of seed corn should not be a difficult matter in view of the great need, but will require the advice and cooperation of Michigan bankers and grain dealers. Not only adapted corn from other sections, but all Michigan corn suitable for seed which is not being held for that purpose but will be fed or go into ordinary trade channels, must also be purchased and held.

Unless great effort is made to secure Michigan grown varieties and adapted varieties for northern localities, Michigan farmers will be forced to plant seed from states to the south of us, which will result in great loss in next year's crop.

There is no single crop in Michigan which contributes as much to the welfare of Michigan people. On it depends our great dairying and feeding industries. Not only the prosperity of farmers, but the welfare and safety of grain dealers, tradesmen, bankers and of all Michigan people depend to a considerable extent on the planting of a great corn crop next year. This problem demands immediate attention, and no stone should be left unturned until enough seed is in sight to plant Michigan's corn crop the coming season.

ANOTHER METHOD OF SAVING BEANS.

I saw in last week's issue of the Michigan Farmer a method of caring for beans in wet weather. I think this would be a very slow and tedious operation, if one had many beans. I think my son, who is conducting my farm, has that beaten in a good many ways.

When the long rains came on in October we had two good loads in the field. He took forty rods of wire fencing and stretched it along the ground, fastened it at both ends and every ten feet or so laid rails or posts which kept it up about two or three feet from the

ground. Upon this he placed the beans. They came out in fine shape and will not pick over a pound, while I have seen other beans that laid on the ground during the same time that pick seventeen or eighteen pounds. At the high price of beans it pays to save them. Two men and a team did all this work in half a day. I think it saved us \$100.

Gratiot Co.

L. B. SAWYER.

Saving Labor

WE are feeling now the scarcity of labor. Another season this will be still more noticeable. We must therefore, start now to prepare for the labor situation at that time.

How can we do this? First by cooperating more intensely among ourselves. Each neighborhood planning as a whole the maximum use of certain farm machinery that may be too expensive to buy individually, as manure spreaders, silo cutters, feed grinders, ditch diggers, etc. It is economy to buy fertilizers in advance so they can be hauled and stored in the barn during the winter for spring and fall use. Each person should be able to know how much he needs. A great saving can be made by buying in carlots.

The planning of work far in advance will in many cases make many working days and possibly months difference in the course of the year's work. We should also plan on growing such crops that require the least amount of time for harvesting compared with the money and nutritive value. We should also plan on having such crops that will make use of a farmer's time as well as that the hired help continuously, and not have all the work pile up at one time.

Things to be Done During the Winter.

See that all machinery is well greased to prevent rust, housed as soon as not needed, as well as all repairs made, each machine being looked over very carefully to see if there are any worn parts that need to be replaced. One binder I saw this summer had been used every season for the last twenty years. It cut seventy-two acres of grain this year. It could not have done this if it had not been taken care of. Clean, oil and repair all harness. A well oiled harness will last twice as long as the one misused.

Make gates that are light, serviceable, easy to operate. Did you ever think how many minutes, as well as hard work, could be saved by having such gates? You get accustomed to seeing and using your own gate, but notice those of someone else. Some of you have spent hours, possibly days of valuable time during the busy season repairing fences, but only in a makeshift way to keep the cows out for the time, only to be compelled to do it again in a day or two. Such places can be fixed at odd times during the winter, and in many cases the loss of crops damaged by the cattle would have paid for the labor several times. Besides getting mad at oneself on account of one's own carelessness is hard on a person's morals.

Replacing a broken hinge, on the barn door or putting a cheap fastener on it instead of using a prop may save minutes which, taken as a whole, are valuable. Repairing buildings, stopping cold draughts on the cattle saves feed because it makes the cows produce more economically.

Farmers as a whole have cooperated in their work more this year than ever before. There is a great difference, however, in the amount of work done with the same help in a given time on the different farms. One man is a hustler and had everything ready in advance, another takes plenty of time for everything and being unable to prepare for a certain kind of work until the moment it is needed, causes a great amount of wasted time.

Wayne Co. Ag. Agt. O. I. GREGG.

The Farm Berry Patch

MANY times, when reading in the papers that there were relatively a large number of farms that had no berry patches on them, I have been rather skeptical as to the truth of this statement. Since having had an opportunity, however, to be on a number of farms, I find that the statement is all too true. It is very much the exception rather than the rule to find a farm that has growing on it enough raspberry, blackberry and strawberry plants together with currants and gooseberries to furnish the family with a supply of each one that will last from one year until the next. Of course, this statement would need to be modified somewhat for many families do not like gooseberries and for this reason the garden of such a family would not need to contain this particular kind of fruit.

Requirements of the Bush Fruits.

There are none of the bush fruits that require an especially strong soil; neither do strawberries. Thus it will be seen that the average farm contains a number of spots that are suitable for the planting of these small fruits. Unquestionably strawberries should be planted so that they may be cultivated for at least the first two years. The rows should be at least three feet apart and many gardeners consider four feet to be better, because it gives more room for cultivation and harvesting of the berries.

It is customary to plant most varieties of raspberries four feet apart each way. The smaller sorts may be put at less distance apart while the very large varieties will need to be put even farther apart than this. Raspberries may be placed almost anywhere in the garden and they should be cultivated two or three times every year. The pruning of raspberries is also an annual job and consists in cutting out the canes which have already borne fruit and in topping back those which are to bear fruit next year.

Blackberries are planted from five to seven feet apart and cultivated the first year or two. After this the plants are allowed to grow any way they choose and further cultivation is out of the question, due to the fact that the bushes usually have so many thorns.

Gooseberries and Currants for the Farm Fruit Garden.

Currants and gooseberries are two small fruits that should be grown more extensively on our farms. One of the great redeeming qualities of these two fruits is that they are not particular as to the time of harvesting. If it is not convenient to harvest them when they first appear to be ripe, they will not deteriorate appreciably by remaining upon the bushes two or three weeks longer. For this reason picking the gooseberries or currants is a job that can be made to fill in the time between more urgent tasks. Added to this fact, currants and gooseberries are usually very saleable, and if there are any more produced than the family cares for the excess can be marketed to good advantage. Of course, the gooseberry is open to some objection since many of the brambles are so thorny but there are several varieties that are nearly free from these "instruments of torture" and when planning out the fruit garden the smooth gooseberries should be planted.

How to Plant.

It is exceedingly irksome to observe some people planting their brambles. Many believe that they should dig a hole a foot deep, fill it with manure and then put the bush into this hole. Some even go so far as to carry water to the plants. Whether to plant in the spring or in the fall is a matter that cannot always be definitely decided. I like the fall planting because it allows the plant to get firmly established before winter. The soil about

the roots is thoroughly compacted by the heaving and thawing and the plant is ready to bear fruit the next season. It should be remembered that most of these brambles should be planted not more than three inches deep and it is a good scheme to do the planting after a rain. Where the plant is to be placed, stick a spade down into the earth and bend it forward, put the plant into the hole thus made and compact the soil thoroughly by pushing the earth that was moved by the spade back about the plant. This compacting of the soil about the roots of the newly set plant is one of the most important features in transplanting. After the plants have been set out, frequent cultivation now and then keeps down the weeds and keeps a crust from forming; both these are of considerable benefit to the plants.

None of the brambles are very particular as to soil requirements; neither do they require careful cultivation after they have become established. They return a large amount of food for the area upon which they grow and for these reasons steps should be taken immediately to enable every farm family to store in its larder a sufficient supply of these small fruits to allow the members of the family all they desire throughout the year.

Indiana.

I. J. MATHEWS.

HOT-BED PROVIDES WINTER VEGETABLES.

The fall hot-bed will supply the table with a few fresh vegetables during the late fall and early winter. If the hot-bed does not already exist, there is still time to build one and plant it. J. T. Rosa, Jr., of the University of Missouri College of Agriculture, offers suggestions for making the bed: Select the warmest and sunniest spot in the garden, where water never stands, and put the hot-bed there. Dig a pit fifteen to eighteen inches deep, six feet wide, and as long as the hot-bed is desired. Let the pit extend east and west. Next build a frame around the pit, preferably of two-inch boards for a permanent structure, having the rear or north wall fifteen inches high and the south wall eight inches above the margin of the pit. Bank part of the excavated soil around the outside of the frame, to give additional protection. Now fill the pit with fresh straw stable manure to a depth of fifteen inches after it is packed down by tamping. Above this, place four inches of fine rich garden soil, in which the vegetable seeds are to be sown.

Sow lettuce in rows eight inches apart unless there are plants ready for transplanting to the hot-bed. Sow Crimson Globe radish and also onion sets in rows four inches apart between the lettuce, and beets and carrots six inches apart. These vegetables must be thinned and watered carefully. Cover the hot-bed with glass sash at night and during cold days. If the weather becomes very cold, old carpets and boards will give extra protection. A supply of these vegetables may be had until after the holidays from a carefully handled hot-bed. The same outfit can be used to grow early vegetables and plants in the spring.

Fall planting of fruit trees should be delayed to late November or early December, advises the United States Department of Agriculture.

A pomologist of the department writes in reply to a New Jersey inquiry he would hesitate to advise planting in any section as early as October because of probably injury to the trees. In sections of the north where cold weather prohibits planting in November or December, he says, it is usually better to plant in the spring. Apple trees can be planted with safety in the fall farther north than peach trees and other less hardy kinds.

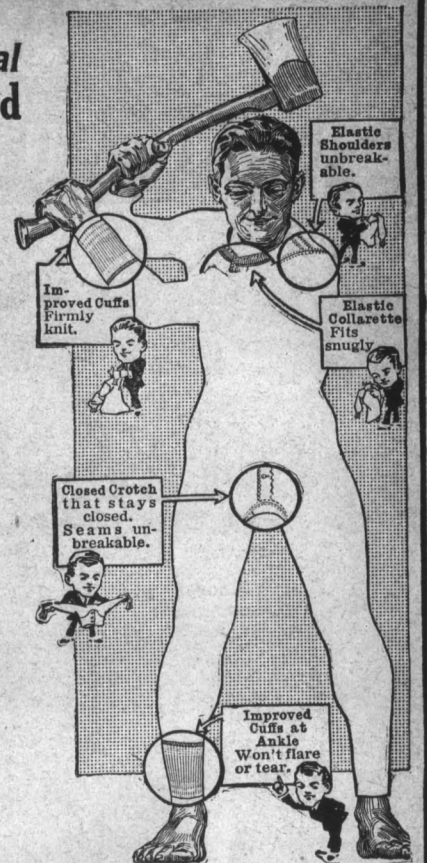
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Future Hog Prices

Joseph P. Cotton, chief of the United States Food Administration meat division, today issued the following statement relative to the prices of hogs:

The main purposes of the Food Administration as to hogs are four: To see that the producer at all times can count on a fair price for his hogs so that it will be profitable to him, to see that the farmer increases the number of hogs bred, to limit the profit of the packer and the middleman and to eliminate speculation.

All these purposes are necessary because we must have more hogs, so that the ultimate consumer shall at all times get an adequate supply of hogs at the lowest feasible price.

We shall establish rigid control of the packer. Fair prices to the farmer for his hogs, we believe, will be brought about by the full control which the Food Administration has over the buying of the Allies, our army and navy, the Red Cross, the Belgian relief and the neutrals, which together constitute a considerable factor in the market.

The first step is to stop the sudden break in prices paid for hogs at the central markets. These prices must become stable so that the farmer knows where he stands, and will feel justified in increasing hogs for next winter. The prices so far as we can affect them will not go below a minimum of about \$15.50 per hundred weight for the average of the packers' droves on the Chicago market until further notice.

We have had, and shall have, the advice of a board composed of practical hog growers and experts. That board advises that the best yardstick to measure the cost of production of the hog is the cost of corn. That board further advises that the ratio of corn price to hog price on the average over a series of years has been about twelve to one (or a little less). In the past, when the ratio has gone lower than twelve to one, the stock of hogs in the country has decreased. When it was higher than twelve, the hogs have increased. That board has given its judgment that to bring the stock of hogs back to normal under present conditions the ratio should be about thirteen. Therefore, as to the hogs farrowed next spring, we will try to stabilize the price so that the farmer can count on getting for each one hundred pounds of hog ready for market, thirteen times the average cost per bushel of the corn fed into the hogs.

Let there be no misunderstanding of this statement. It is not a guarantee backed by money. It is not a promise by the packers. It is a statement of the intention and policy of the Food Administration which means to do justice to the farmer.

BROOD SOW MUST BE CAREFULLY FED IN WINTER.

What to feed the brood sow is a question pertinent now for practically every live stock man and farmer in the state. Careful and judicious feeding of the brood sow is something that can not be slighted, for in addition to her own welfare, the well-being and proper development of her unborn young must be thought of. It is highly important, therefore, that the mother be provided both with sufficient nourishing food and plenty of exercise.

The exact amount of feed required, however, cannot be stated definitely for much depends upon condition, age and the individual sow. The best rule to go by is not to allow them to become thin, while on the other hand, it is not wise to allow them to become very fat. Sows in fair condition in the fall should gain from fifty to seventy-five pounds at least before farrowing time, for the loss in weight during parturition may be equal to this. This

gain should be put on gradually, for it is advisable to spread it over the entire period, especially during the final six or eight weeks of pregnancy. By so doing the healthy development of the unborn litter is assured.

With sows in good healthy condition about one and a quarter pounds of grain per day for every one hundred pounds of live weight should produce about the desired gains. Some sows need more, others less. Equal parts of ground corn, oats and wheat middlings makes an excellent ration. During the colder weather, if plenty of exercise is provided, a larger proportion of corn can be fed. Barley or rye, in place of the corn, do well also. Equal parts of corn and middlings, or ten to twelve parts of corn to one part sixty per cent digester tankage make good rations. It matters little which ration is used if care be taken to see that it is palatable, has the proper bulk and contains the desired nutrients. Corn, barley and other fat-forming feeds must be fed in limited quantities; muscle and bone builders, such as middlings, oats, tankage and alfalfa are very essential and should form a considerable portion of the ration. Good well cured alfalfa, fed in racks, is greatly relished and supplies at the same time the necessary bulk. It is also a good bone and muscle builder. Some prefer to chop the alfalfa, and after steeping in water for several hours, mix it with the grain ration. Handled in this manner the amount eaten can be more nearly regulated.

A small amount of succulent feed, such as mangels or garbage, gives variety and tends to keep sows in a healthy condition.

Mich. Ag. Col. W. E. J. EDWARDS

SOUTHERN MICHIGAN SHORTHORN SALE.

The first annual Shorthorn sale of the Southern Michigan Shorthorn Breeders' Association, held at the Fair Grounds, Hillsdale, Mich., Wednesday, October 24, was one of the most successful sales held in southern Michigan. The twenty-one head of females averaged \$233. The breeders and farmers who were attracted by good quality of the cattle, were certain they made good investments. Mysie of Allen 11th, 131258, bred and consigned by T. M. Southworth & Son, topped the sale at \$405. The good bulls in the sale ranged in price from \$100 to \$160. Following are the sales:

White Empress, calved February 25, 1914, to W. E. Appleman & Son, Woolcottville, Ind., \$400.

Daisy Belle, calved October 16, 1916, to William Osius, Hillsdale, Mich., \$185.

Phyllis 8th, calved November 22, 1916, to Murry & Perkins, Helmer, Ind., \$200.

Village View Duchess, calved November 30, 1915, to E. M. Parkhurst, Reed City, Mich., \$190.

Ellen, calved April 25, 1915, to E. M. Parkhurst, \$205.

Julia, calved April 28, 1916, to A. G. Wells, North Adams, Mich., \$130.

Rosewood, calved June 30, 1916, to E. J. Frank, Montgomery, Mich., \$195.

Mary Barrington 68th, calved August 5, 1915, to Murry & Perkins, \$185.

Gady Belle 2nd, calved November 1, 1910, to Murry & Perkins, \$140.

Coldwater Belle, calved June 15, 1911, to Earl Denning, Jonesville, Mich., \$160.

Fair Beauty 4th, calved August 12, 1914, to G. P. Card, Reading, Mich., \$155.

Mysie of Allen 11th, calved April 11, 1909, to A. G. Wells, \$405.

Mysie of Allen 14th, calved June 19, 1910, to Murry & Perkins, \$275.

Marry Barrington 3rd, calved December 25, 1911, to W. E. Appleman, \$200.

Marry Barrington 62d, calved October 6, 1911, to Murry & Perkins, \$390.

Jennie, calved July 5, 1913, to F. N. Baker & Son, North Adams, Mich., \$200.

Lula, calved October 17, 1915, to E. M. Parkhurst, \$235.

Daisy, calved June 20, 1915, E. M. Parkhurst, \$360.

Mary A. 2nd, calved May 10, 1915, to F. N. Baker & Son, \$225.

Marry A. 3rd, calved May 25, 1916, to W. E. Appleman, \$170.

Molly, calved December 24, 1912, to William Osius,

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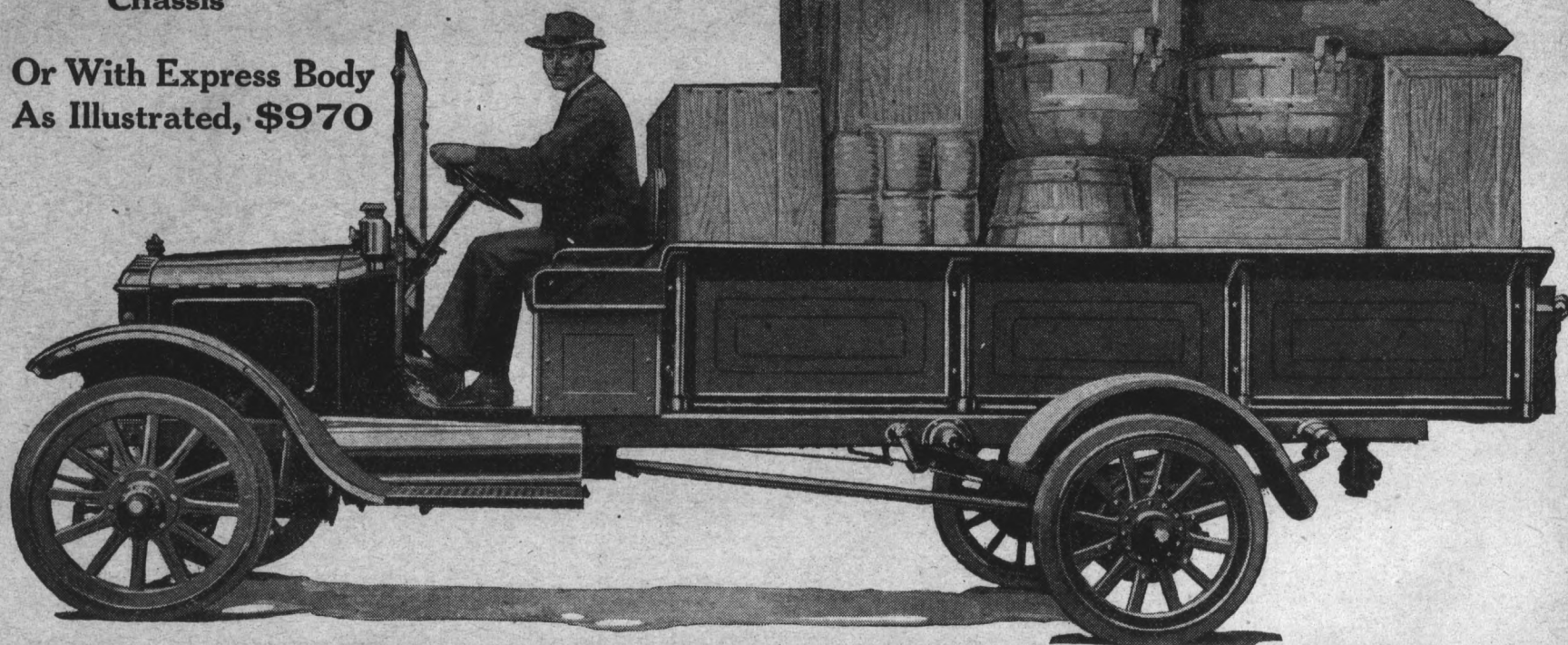
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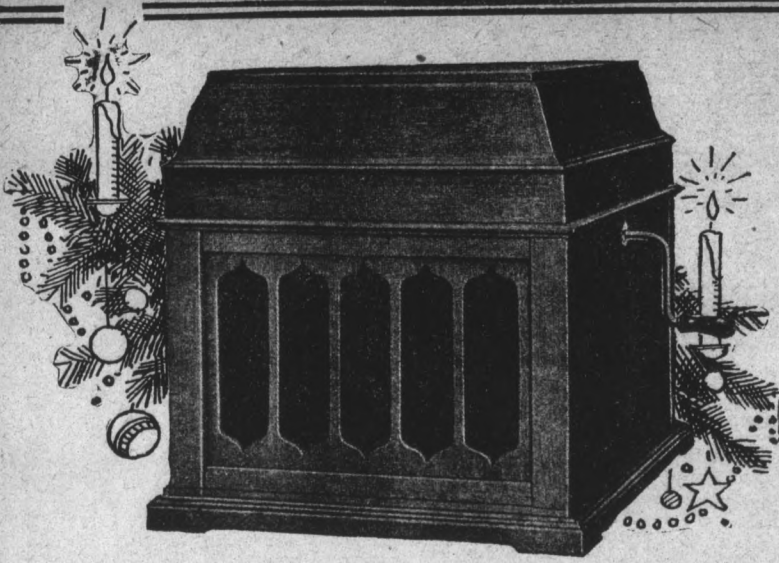
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Have you ever stopped to realize that all voices, and all musical instruments, excepting one, have their limitations? As wonderful as a piano is, it can give you only piano music; as beautiful as an organ is, it can give you only organ music; as marvelous as the human voice is, it can only sing. It is the same with the violin, the cornet, the accordion or any other instrument which you might have in your home or might consider purchasing. These are excellent in their way, but we are sure you will agree that none of them is completely satisfying.

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Music was never more welcome in the American home than it is today. Home has never meant more to Americans than it does today. With some of our boys at the front and many preparing to go, the tenderest and deepest emotions surge through our souls. It is then that nothing is more appropriate than good music as the companion of our leisure hours. Whatever your tastes, whatever your mood, there are many selections in the Blue Amberol Record Catalog to suit—beautiful old hymns that seem to just lift you out of your immediate surroundings to a higher plane where the spirit is free and unfettered by the irksomeness of the daily routine

—thrilling band records that just make you feel like getting up and marching around the room—noble patriotic numbers that would stir the heart of a traitor—tender old and new songs and ballads that go straight to your heart—majestic grand opera that appeals to the deepest of human emotions—lively dance pieces, ragtime and funny records—entertainment of all kinds for young and old.

So that you may have an idea of the many wonderful selections to be found in the Blue Amberol Record Catalog, we have picked a few here and there and they're printed below. Look them over. You are sure to find many of your favorites.

FOR CHRISTMAS

Angels from the Realms of Glory
Bells of Christmas
Birthday of a King
Hail! Hail! Day of Days
Hark! Hark! My Soul
It Came Upon the Midnight Clear
Joy to the World
Night Before Christmas
Old Jim's Christmas Hymn
O Little Town of Bethlehem
Once in Royal David's City
Ring Out the Bells for Christmas
Ring Out, Wild Bells
Santa Claus
Silent Night
Star of Bethlehem
Sweet Christmas Bells
When Christmas Bells are Ringing

SACRED

Ave Maria
Beautiful Isle of Somewhere
Crucifix
God is Love, His Mercy Brightens
My Ain Country
Rock of Ages
Face to Face

QUARTETS

The Bridge
Come Where My Love Lies Dreaming
Darling Nellie Gray
Maple Leaf Forever
Massa's in de Cold, Cold Ground
Laughing Song
The Rosary
We're Tenting To-night
Way Back Home

HAWAIIAN

Aloha Oe (Farewell to Thee)
Kamehameha March
Medley of Hawaiian Airs
Moani Ke Ala
Waiata (Waltz Song)
Kolohe
Pulape

BANDS

At the Mill March
Battle of the Marne—Descriptive
Benediction of the Poignards—Huguenots
Clowworm
Humpty Dumpty Rag
In the Clock Store—Descriptive Fantasia
Jolly Coppermith—with Anvil, Singing and Whistling
My Old Kentucky Home Fantasia
United States Passing in Review

INSTRUMENTAL SOLOS

I Hope I Don't Intrude, Bells
King of Air March, Xylophone
Kiss Waltz, Saxophone
Lullaby—Jocelyn, Cornet
Medley of Southern Airs, Banjo
Old Black Joe, Piano
Peg o' My Heart, Violin

DANCE

Carnival One-Step
Destiny Waltz
Good-Night Waltz
Money Musk Medley Virginia Reel
Oh, You Silvery Bells Medley Two-Step
Old Comrades March
Stop! Look! Listen! Fox Trot
Ticking Love Taps Fox Trot
Leg of Mutton One Step

GRAND OPERA

Elisir d'Amore—Una furtiva lagrima
Faust—Air des Bijoux
Pagliacci—Prologue
Rigoletto—Caro nome
Trio from Faust
Bridal Chorus from Lohengrin
Mignon—Ahl! Non credevi tu!

VOCAL DUETS

All Aboard for Blanket Bay
As We Parted at the Gate
Auf Wiedersehen—The Blue Paradise
Barcarolle (Oh, Lovely Night)—Tales of Hoffman
Every Little Movement—Madame Sherry
For You
Good-Bye, Good Luck, God Bless You
Land of Golden Dreams
I Was Never Nearer Heaven in My Life

THE PHONOGRAPH COMPANY, 256 WOODWARD AVE., DETROIT, MICH.

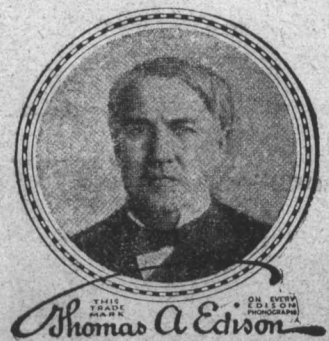
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Magazine Section

LITERATURE
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MICHIGAN FARMER
AND *LIVE STOCK* JOURNAL
PUBLISHED WEEKLY. ESTABLISHED 1843.

The FARM BOY
and GIRL
SCIENTIFIC and
MECHANICAL

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

THE first time that Thanksgiving Day and the turkey were brought into intimate relation was upon the occasion when Governor Bradford, of Plymouth Colony, in 1621, set aside a day of thanksgiving to celebrate the gathering of the first harvest made by the doughty Pilgrims who had come over in the Mayflower the year previous. The harvest had saved the colony. Incident to the religious features of the occasion the governor sent out four men with their flint-lock fowling pieces to procure meat to grace the festive board which was to be provided, in order that the colonists "might after a more special manner rejoice together."

In those days the wild turkey still strutted in unrestricted pride and

splendor through the forests of New England, and that in plenteous flocks. Doubtless the then friendly red men had introduced the early settlers to the creamy taste of the white, and succulence of the dark meat of the turkey; so wild turkeys were the quest of the hunters, and upon the occasion alluded to constituted the piece de resistance of the banquet. From that good day to this the turkey, either wild or tame, has occupied the place of honor on the Thanksgiving table where opportunity or opulence could possibly provide it, and from the eastern tip of Maine to the

The American Turkey

By EARL W. GAGE

Golden Gate of San Francisco—from the topmost border of North Dakota to the magnolia-scented shores of the Gulf of Mexico. Thus on the last Thursday of November of each year, the day that custom has assigned for this unique celebration, the turkey gobbler reigns as uncrowned king of the festival, although he needs must die to achieve that honor.

Just why the bird should have been called "turkey" in the English language no one seems to know. The realm of His Sultanic Majesty had no more to do with the introduction of the

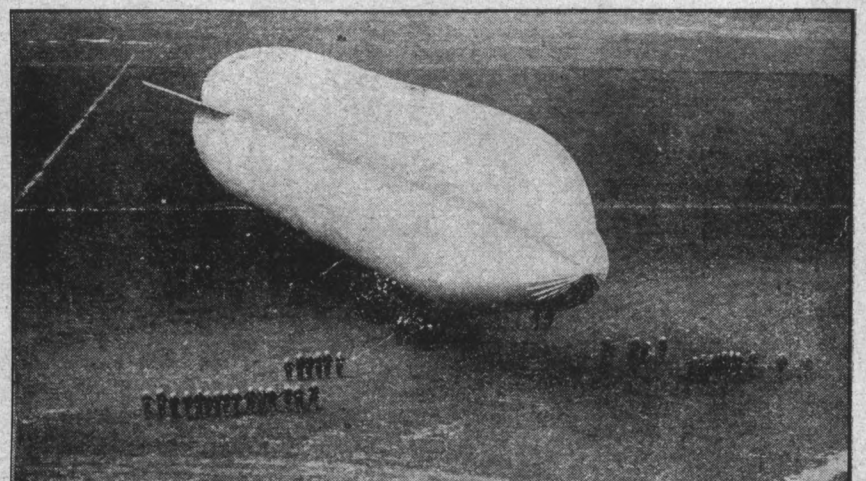
bird to polite society than did Greenland or Kamchatka. The real turkey is a bird indigenous to North America and was first introduced into Europe by the returning Spanish adventurers who had found it in the New World. It may be that since the bird was brought to northern Europe from Spain the generally ignorant public concluded that, like many other unusual things it came from Turkey or the Far East. Again, the bird may have named itself, since the call of the hen to her chicks sounds like tur-r-rk, tur-r-r-k. At any rate, there is no actual connection between the bird and the country of the same name.

The turkey was a favorite fowl among the aboriginal inhabitants of America. It had its habitat over all

WORLD EVENTS IN PICTURES



German Prisoners Build Camps for the American Soldiers Abroad.



Giant Dirigibles Used to Guard England's Coast Against Enemy Air Attacks.



American Soldiers Cleaning Machine Guns Before Going to Trenches.



Schooling American Soldiers in Modern Trench Warfare.



Fire Destroys Soldiers' Quarters and Store Houses at American Army Post.



British Doctor Gives First Aid to German Wounded After Battle of Menin Rd.

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J. L. Dodge writes:
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that section where grew its favorite food, Indian corn. When Cortez, in 1519, first reached the realm of the Aztecs, Montezuma entertained him with royal splendor, and among the delicious viands set before the Spanish invaders was roasted turkey. It was found that the Aztecs had domesticated the fowl to quite an extent, and that it was also plentiful in its wild state.

North of the Rio Grande the bird was equally well known, and the adventurous Coronado found it among the cliff-dwelling Indians and other tribes he met on his expedition through what is now Texas, Arizona and New Mexico. The Zuni Indians seem to have known of the turkey for centuries, and some of their earliest traditions deal with this interesting bird. Not only did the bird serve as a delectable food, but its feathers formed a valuable asset for purposes of adornment in the headgear of the Indians and for embellishing the garments of the women, aside from lending accuracy to the flight of their arrows. When the English settled Massachusetts they found wild turkeys in abundance, and other colonists found them from New England to Florida.

The wild turkey of America, therefore, is without doubt the progenitor of all kinds of turkeys the world over. Ornithologists in general accept the view that all turkeys have descended from the three forms known today as the North American, the Mexican, and the Honduras (Ocellata) varieties. The bird found in certain forest regions of South America known as the curassow, although sometimes called the South American turkey, in reality belongs to a different family, and scientists hold that any real turkeys found in that continent are immigrants.

Turkeys were first eaten in France at the great banquet which was held to commemorate the marriage of Charles IX and Elizabeth of Austria. A consignment arriving at St. Malo was immediately dispatched by some zealous local authority to the king's kitchen. This thoughtful action was not in vain. The king, queen-mother, and the Cardinal De Lorraine ate so much, or so many, of the birds—delicately cooked and served on spits—that they were laid down by indigestion during the whole of the following day. Subsequently, King Charles established turkey-breeding pens on his farm in the forest of St. Germain.

At the time of the expedition of Cortez to Mexico the despised and persecuted Jews were very numerous in Spain and engaged, as they usually are by their natural adaptability for gain in merchandising. Their acuteness led them to deal in foreign birds, curiosities and rarities, by which they reaped large profits, as these things were only purchased by the wealthy. Naturally they saw in this importation an opportunity for gain, which they seized, and as they used their own language as much as possible, it was not long before the Hebrew name for peacock became well known. Doubtless they designated it as the "American peacock," for it was well known whence it came. Thus it would be constantly heard in the market places, while the more scientific name of "pavo" would be heard only among the educated few, and so by force of numbers the name was used and anglicized into turkey. Furthermore, the name was formerly spelled "turkey," as when Corbet, Bishop of Oxford, writes to Buckingham: "Like very poore or counterfeit poore men, who, to preserve their turkey or their hen, do offer up themselves."

Oviedo in 1527 probably gave the first description of the turkey and spoke of it as having been taken from Mexico to the West Indies by Spaniards and there bred in domestication.

Shakespeare and other old dramatists make mention of the turkey. "Tis no matter," says Captain Fluellen, of Ancient Pistol, "Tis no matter for his swellings nor his turkey-cocks;" and

Fabian in "Twelfth Night" says of Malvolio, "Contemplation makes a rare turkey-cock of him." A better remembered passage is that in the first part of "Henry IV," preceding the robbery at Gad's Hill: "God's body," says the first carrier, "the turkeys in my panners are quite starved."

Benjamin Franklin was a great admirer of the turkey and suggested that it be our national bird instead of the eagle, and this suggestion if put to a vote today might carry, so popular has become our national Thanksgiving Day bird.

TO THE BOYS IN KHAKI.

BY TERESA G. MORRIS.

You are "Sammies," dauntless, bold,
 And we, but maidens, fearful;
 Still, like Amazons of old,
 We scorn to be just tearful.

And so, to help the cause along,
 Our knitted aid we send,
 With reinforcements warm and strong,
 The bloody fray to end.

'Neath every stitch a good wish lies,
 For God your lives to bless.
 And, we with prayers, and hopes and sighs,
 Would bid you "Speed Success!"

"A woman's hand in everything,"
 Says History's printed page.
 Here's knitted aid from Girldom,
 Now let grim Winter rage!

INDIAN SUMMER.

BY J. A. KAISER.

A shining nimbus over all the world:
 An almost breathless calm upon the hills:
 The oaks, with banners crimson-hued,
 unfurled:
 The verdure turned to brown along
 the rills:

A pensive, dreamy sense o'er earth and sky:
 A stillness that the chirping cricket breaks,
 Or leaf or nut that falls from branches high,
 Or honking wild goose bound for
 southern lakes:

The shocks of corn that stand like
 chieftains bold:
 The heaps of yellow ears that grace
 the field:
 The pumpkins gleaming with their hue
 of gold:
 The heaps of russet, red, and green
 the orchards yield:

No birds a-tune with springtime melody:
 No verdant landscapes bright with
 summer bloom:
 But beauty and a sense of mystery
 That ward away awhile the winter
 gloom.

No wonder that the red man loved
 these days—
 The days of plenty and of tempered
 heat,
 When 'mid the painted forest's hidden
 ways,
 He shot the bounding elk and wild
 deer fleet.

The dusky, dark-eyed maidens roamed
 the wild,
 And gathered fruits and nuts to grace
 the feast;
 And youthful lovers met where Nature
 smiled,
 And joy and gladness were their law
 and priest.

The camp-fire's smoke, slow-lifting, upward curled
 And mingled with the soft and
 dreamy haze.
 The horn of plenty filled the red man's
 world,
 And happy and contented were his
 days.

THE UP-TO-DATE HOUSEWIFE.

BY LULU G. PARKER.

Mrs. Sol Grundy conserves food Monday,
 Knits for soldiers Tuesday, gauze work
 Wednesday,
 Hospital shirts Thursday, kit-bags Friday,
 Enthuses others Saturday, sings for
 Sammies Sunday,
 Patriots, imitate Mrs. Sol Grundy.

MOTHER GOOSE TO DATE.

BY LULU G. PARKER.

Little Miss Muffet sits on a tuffet,
 Her Red Cross work on her knee;
 She's knitting a sock or a sweater
 But does not know which it will be.

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THE MICHIGAN FARMER, Detroit, Mich.

Bumper the White Rabbit

By GEORGE ETHELBERT WALSH

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Bumper Is Sold

BUMPER was taken to the street corner with Fluffy, Dimples and Pickles. It was a cloudy day, and the old woman limped as she walked along with her basket on her arm. Damp weather always brought out her rheumatism, and sometimes made her very cross.

Dimples and Fluffy began playing they were on a ship in a storm, and when a drop of rain hit Pickles on the nose he squealed with delight, and joined them in the game. They scampered around so lively inside that the old woman stopped and opened the cover of the basket.

"Stop that!" she said quite angrily, "or I'll dump you all in the gutter!"

The threat was enough to send each to a corner of the basket, where they eyed each other and tried to think up some less boisterous game. It was beginning to rain steadily outside, and the water trickled through the top of the basket. Every time a drop hit one, he squealed, but no one dared to jump and run around.

Now rabbits don't sell very well on rainy days, especially white rabbits. Their fur gets all wet and roughened up, and they look more like half-drowned rats than pretty, fluffy bunnies. Fluffy was taken out of the basket first, but nobody took any notice of her, and when she came back she was all wet and shivery.

"B-r-r-r, it's awfully wet outside," she said, shaking with the cold. "I'm glad nobody bought me, for I'd rather be in here safe and warm than in somebody's arms."

Pickles's turn came next. He had an ingrowing toe nail, which sometimes made him grouchy and sour, so he was dubbed Pickles. He looked and acted like his name now. He squealed when the old woman picked him up in her hand, and when a splash of rain landed on the back of his neck he kicked both hind legs and wriggled his body free and fell plump back into the basket.

The old woman was very angry. "You, Pickles," she growled, "you'll go to bed tonight without any supper."

Somebody passed just then, a lady with an umbrella over her head, and the woman with rabbits to sell turned to her in her most beguiling way. "Rabbits, lady! Nice, pretty rabbits for sale!"

The lady stopped long enough to let her umbrella drip all over the basket, and then she asked: "Are they white rabbits? I don't want any other kind."

"Yes, ma'm, pure white bunnies, with pink eyes, and long fluffy ears—the dearest and cutest little things you ever saw. Let me show you."

With that she made a grab in the basket. It was a blind-man's bluff grab, for she couldn't see one of the rabbits huddling in the corners. Bumper was the nearest, and her hand closed over him.

"That's the prettiest one I have, ma'm," she said. "He's my pet and I hate to sell him, but I need the money an' you can have him."

It was raining pitchforks outside, or something like that, and, for a moment, Bumper couldn't see anything but the big drops of water splashing in his eyes. Then the lady held the umbrella over his head, and he looked up into her face. She was a sweet, womanly lady, but not exactly the kind of mistress Bumper had pictured belonging to.

"He is a dear little thing," the lady said, taking him in her arms and rubbing his back. "And so friendly! Why,

he's trying to cuddle up under my arm."

The fact was, Bumper was trying to get in her muff away from the dripping umbrella. He made a dive for the nearest open end, and squeezed all but his tail through.

"How cute of him! I believe I must take him. How much is he?"

Now Bumper's heart nearly stopped beating when he heard the lady ask this question, for had not his mother told him that he cost too much money for most people to buy? Did this lady have plenty of money, or did she put it all on her back and starve her stomach? She was very beautifully dressed, and her cheeks were not very plump and fat—not a bit like those of the read-headed girl with a freckle on the end of her nose.

"Two dollars, ma'm, an' he's cheap at that! You don't find rabbits like him once in a year."

Bumper's hopes took a sudden drop. Two dollars? Why, Jimsy had been sold for one dollar, and Wheelies for seventy-five cents, while Topsy, who was old and fat, brought only fifty cents. My, two dollars was an awful lot of money.

"Two dollars," repeated the lady, fumbling in her dress with one hand. Then, to Bumper's surprise and delight, she added: "I think I'll take him. I want him for my nephew. Toby's hard to suit, but I think he'll be pleased with a rabbit. What did you say you called him?"

"Bumper, ma'am!"

"That's a queer name, but I like it."

"It was because he was always bumping his nose when he was a tiny mite," the old woman explained, taking the two dollars from the lady. "His mother named him first, and then his brothers and sisters took it up, and, of course, I had to follow 'em. Rabbits don't like to be called by two different names, and if I was you, ma'm, I'd keep on calling him Bumper. He wouldn't know any other name."

"I will always call him Bumper, but"—sighing—"I'm afraid Toby will want to nickname him. He makes up the funniest names for all his pets."

"Tell him then Bumper will run away and never come back. Rabbits are more knowing than you think, ma'm."

"I always thought they were very cute, and gentle, but very stupid," replied the lady. "But maybe I was wrong. Bumper doesn't look stupid."

"Lordy, ma'm! he ain't no more stupid than that Toby you speak of, whoever he may be."

"Well, Toby isn't stupid, whatever else you may say of him," smiled the lady. "He's bright enough, but he's sometimes very thoughtless, and I fear a little cruel."

"Cruel, ma'm!" And the old woman who sold rabbits for a living stiffened her bent form, and frowned. She stretched forth a hand as if to reclaim her Bumper, but the lady moved away with her purchase under her arm.

"Oh, I'll see that he isn't cruel to Bumper," she said.

While listening to all this conversation, Bumper experienced strange and unusual emotions. He had learned more about white rabbits in a few moments than his mother had ever taught him in all the days of his youth. They were considered stupid, were they—but cute and gentle. Huh! He wasn't stupid! No, indeed! If the lady thought so he'd show her what a mistake she'd made.

Just to prove it, Bumper began to gnaw at the lining of the muff, and pretty soon got his whole body under

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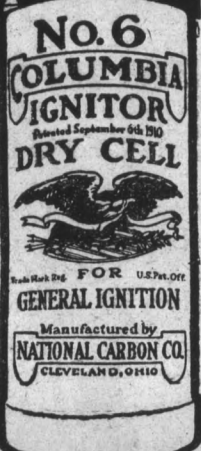


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it, and then he began to kick and wrig-
gle to get out. He felt he was being
smothered alive, and he squealed aloud.
The lady finally rescued him, but not
until she had torn away half the lining
from her muff.

"Oh, you stupid little Bumper!" she
said, reprovingly. "You mustn't do
such things!"

Bumper felt so crestfallen at this re-
buke that he remained perfectly quiet
during the rest of the walk. He snug-
gled up into the crook of her arm, and
peeped out once only when they reach-
ed a big house and began ascending
the steps.

So this was to be his future home!
What a big place it was! Why, hun-
dreds and hundreds of white rabbits
could live in that house and never lack
for elbow room.

Just then, when Bumper began to
feel a little proud of his future home,
a great noise and clatter behind the
door startled him, and it opened so
suddenly that he nearly popped out of
the lady's arms. And what happened
to him behind that door of the big
house might fill chapters and chapters,
but it will all be told in the next story.

Doing Our Bit

By J. A. BROWN

WITH cold weather coming on the
problem of fuel faces us with
renewed seriousness. In the
last few years there has been a strin-
gency in the coal market. Perhaps
last year this was more pronounced
than ever; for day after day in our cit-
ies the coal dealers were forced to turn
the people away because they could
not get the precious black diamonds
from the mines. We were told last
winter that the shortage was due, not
to a decrease in mining, but rather to
an impossibility to secure cars for
shipping.

This year there may be a lack of
shipping facilities, too; but that will
not be the big factor in coal shortage
this season. We are at present engag-
ed in one of the greatest military strug-
gles that the world has ever known.
Our boats are plowing the seas in an
earnest endeavor to do their part to
"make the world safe for democracy."
In a more pronounced sense it becomes
our duty also to send more food to our
allies. All of this calls for increased
shipping, which in turn demands great-
er fuel supplies. The needs of our
navy and merchant marine must be
met. Hence there exists a patriotism
in the matter of fuel as well as of
fighters, food, and finance.

It is not the aim of this article to
advocate the using of less fuel on our
farms, although in a few cases this
may need emphasizing. The motive
here is to impress upon us the fact
that in many of our rural districts a
proper patriotism does not exist in the
matter of wood conservation. From
the headquarters of the federal food
commissioner we are being urged to
have wheatless and meatless days.
This, of course, to permit our country
to furnish more of these kinds of food
to our allies. Wheat and meat are
more easily exported than many of the
other forms of food, and so it becomes
a duty of patriotic people to use more
frequently that which is not exportable.

The same situation exists in reference
to fuel if we only stop long enough to
notice it. Our navy and the allied na-
tions need great amounts of coal. It
is the duty of every patriotic American
to conserve the supplies as far as pos-
sible. The writer has traveled quite
extensively throughout this state and
some of the others, and he is sure that
there is much waste of fuel every year
in our rural localities. At this time
when our boys are offering their lives
for the honor and endurance of this na-
tion, it is very poor patriotism on the
part of owners of fuel to permit it to
go to decay. They might make use of
it themselves and thus insure a larger
supply of coal for the navy.

It is impossible to drive far along
the country roads without seeing the
waste of fuel in wood-lot and forest.
In many places trees uprooted by the
storm are permitted to remain year af-
ter year. Large limbs broken off of
giant trees fall from time to time and
are not touched by any fuel-producing
hand. In many places where logs have
been cut for the saw-mill the limb wood
is left to decay on the ground. In one
forest that the writer passed many
times during a space of three or four
years trees had been undermined by
water until they had tipped over, pil-
ing upon one another in veritable cob-
ble-work style. Yet they had never
been utilized for fuel or anything else,
but were left as the years passed, to
become the prey of the destructive
force of the elements. Still another
wood through which a miniature tor-
nado had passed was completely neg-
lected, and the potential fuel left to
decay in sunshine, wind and rain.

The farmer is not always at fault in
this matter, however, for in many in-
stances it is impossible for him to do
the work himself, and help is so scarce
that he cannot hire. Yet this is not a
universal excuse. Many farmers re-
frain from cutting up their fallen tim-
ber because it is handier to burn coal.
One farmer said that he could burn
kerosene oil cheaper than he could cut
and draw the wood. It should not at
this time be a matter of convenience
or cheapness that engages our minds,
but rather one of patriotism. If the
farmer does not care to cut up the
waste in his woods, let him give oth-
ers an opportunity to do it, either on
shares or by buying outright. In every
city and village are people who would
be only too glad to go out to some
farmer's wood-lot and clean up the re-
fuse for him.

Then in many places there are
swamp acres owned by non-resident
parties, who seldom visit the locality,
but who hang on to the property in
hopes of making a good thing out of it
some day. The writer knows of eighty
acres of unimproved land in one place
in Michigan where the owners have
not been to see it for years. The fuel
waste there is great, to say the least.
Such a state of affairs is almost crim-
inal in this time of coal scarcity. Un-
doubtedly before the warm weather of
next spring comes there will be fami-
lies suffering from the lack of fuel. If
they had access to a place where fuel
is going to waste like some we have
mentioned the situation would be
greatly relieved.

Anyone who has traveled in some of
the northern counties of the lower pe-
ninsula knows that there are thou-
sands of cords of wood going to waste.
On the unoccupied cut-over pine land
there are myriads of pine stubs, silent
testimonies to former wind storms and
forest fires. These stubs dot the land-
scape as far as the eye can see, and
they contain much wood suitable for
fuel. Besides these there are decay-
ing logs left by the lumbering compa-
nies as unsuitable for sawing. If cut
into furnace or stove lengths this wood
would make good fuel yet. But there
it lays year after year doing no one
any good, whereas it might be made to
appreciably relieve the coal situation.

However, there is somewhat of a
problem to this. Those who own the
land are non-residents in many cases,
and they are so far removed from it
that they have no interest in the fuel
situation there. Those who are resi-
dent owners are interested only in their
own supply, and are anxious to get
their land cleared so as to raise crops.
Hence every year large amounts of
wood go up in smoke from the great
log heaps drawn together for burning.
If individuals cannot make the cutting
of this wood into stove lengths for
commercial purposes pay, the cities
near at hand ought to take up the propo-
sition and send out their paupers and
tramps and hoboes to cut it.

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Our Interest In Democracy Abroad

By EVARTS B. GREEN

(Concluded from last week.)

WEBSTER'S ardent defense of American political ideals was doubtless influenced by his desire to stimulate patriotism and check the rising tide of sectional feeling which had developed out of the slavery controversy. A few years later, the government whose principles Webster had so eloquently expounded was fighting for its own existence, and obliged to look on helplessly while the same Napoleon who had overthrown the second French Republic proceeded to set up a vassal monarchy in Mexico with an Austrian prince at its head. Once more, as in the days of our struggle for independence, a leader of American democracy appealed to European liberals for their sympathy and moral support. In his great message of July 4, 1861, Lincoln declared that the war for the Union was essentially a "people's contest." "This issue," he said, "embraces more than the fate of these United States. It presents to the whole family of man the question whether a constitutional republic or democracy—a government of the people by the same people—can or can not maintain its territorial integrity against its own domestic foes."

In 1863, after the emancipation proclamation, Lincoln was able to make a still stronger appeal to European liberals, and this appeal met with a hearty response, especially from the "plain people" of England. In one of the most notable letters he ever wrote, he acknowledged a sympathetic address from the workmen of London and thanked them for the "exalted and humane sentiments by which it was inspired." He went on to declare his faith in the community of democratic interests on both sides of the Atlantic:

As these sentiments are manifestly the enduring support of the free institutions of England, so I am sure also that they constitute the only reliable basis for free institutions throughout the world.

The resources, advantages, and powers of the American people are very great, and they have consequently succeeded to equally great responsibilities.

It seems to have devolved upon them to test whether a government established on the principles of human freedom can be maintained against an effort to build one upon the exclusive foundation of human bondage. They will rejoice with me in the new evidences which your proceedings furnish that the magnanimity they are exhibiting is justly estimated by the true friends of freedom and humanity in foreign countries.

At a time when a strong section of the English ruling class were ready to recognize the Southern Confederacy and so prevent the restoration of the Union, the ability of the British workmen to recognize this solidarity of democratic interests was a political fact of great importance.

The closing years of this warlike decade brought some notable victories for democracy, in both hemispheres, despite the military methods which made Prussia a world power. The federal republic of the United States was saved from disintegration and established on a more democratic basis. Under pressure from the United States Napoleon III withdrew his troops from Mexico in 1867, and the imperial government which he had set up there collapsed at once. Three years later Napoleon's Empire at home also broke down under the stress of war and the third French Republic was established. This was also a victorious time for the British democracy. In 1867 the voting privilege was given for the first time to a large section of the working classes in the industrial centers of England and in the same year Canada secured a new constitution with almost complete freedom for the management of her own affairs. And with all these changes came a better understanding between the United States and the two

great liberal states of western Europe. The reestablishment of the French Republic gave the United States an opportunity to illustrate one of the interesting traditions of our diplomacy, namely, that of giving prompt recognition to a new republican government. Twenty-two years before, in 1848, the American minister in Paris was the first to recognize the second French Republic, and our secretary of state, approving this step, declared that if he had allowed the representative of any other nation to precede him "in this good work it would have been regretted by the President." When Napoleon III overthrew this republican government our minister refused for a time to attend his weekly receptions, because he did not wish to give satisfaction to a step by which the safeguards of civil and political liberty had been "trodden underfoot."

In 1870, when the present republic was founded, the trans-Atlantic cable was already in operation, and in accordance with telegraphic instructions from President Grant, the American minister was again the first to recognize it and extend congratulations to the French people on establishing a government "disconnected with the dynastic traditions of Europe." When, therefore, during the past year our government took the lead in recognizing the republic of Russia it was following definite American precedents.

A study of this record clearly establishes two features of American policy during the life of our republic: First, that the traditional sympathy of the American people with popular government abroad has repeatedly been declared in the public utterances of our official representatives. We have not felt bound to suppress even in the formal documents of our government our inveterate prejudice in favor of free institutions and our sense of the essential unity of the cause of liberalism and self-government throughout the world. Secondly, we have declared with special emphasis not only our sympathy with, but our practical interest in, the defense of other American republics against efforts to extend the European system to this hemisphere. We have done this, partly at least, on the ground that there was a difference between our system and that of Europe, resulting from the difference in our political institutions; that states founded upon liberal or democratic institutions have a common interest as against those which are based upon dynastic and reactionary principles.

Until recently we have limited our actual intervention in defense of these principles to the American hemisphere. As Mr. Olney said in his famous note to Lord Salisbury during the Venezuelan boundary dispute of 1895, we have desired to keep free from the system which has converted Europe into a group of armed camps. We have believed in the possibility of American isolation from the dominant forces of the Old World. During the last quarter century, however, the world has undergone enormous changes. The great military power which has threatened to dominate Europe has extended its formidable system of espionage to the New World; it has attempted to draw one of our Latin-American neighbors into a conspiracy against our territory; its submarines have attacked American commerce within a few miles of our coast. To the ocean steamship and the ocean cable have now been added the airship and the wireless telegraph. It is these hard facts which have put an end to the "splendid isolation" of our earlier days. It is only in a world made safe for democracy that America herself can be safe and free.

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Woman and Her Needs

Making Our Men Conservationists

HOW to make our husbands conservationists," was the problem launched by one woman at a club meeting in Michigan recently. "How are we going to make our men observe meatless days when they can walk into a restaurant or hotel anywhere and order meat at noon?" demanded this ardent Hooverite. "Here I spend hours in my kitchen working over menus that will save meat and wheat, and the children and I eat the mixtures I concoct. But my husband who lunches down town, is eating beef-steak or baked ham, while we dine off split pea soup. His excuse is that the cafes don't offer anything but meat dishes, and I know he could get macaroni or baked beans if he wanted to. How are we going to make our men fall in line?"

"Madam Chairman," came back a gray-haired lady tartly, "let me remind the member that the men haven't been asked to go without. So far it is only the women who have been appealed to to conserve. There are 2,000,000 acres of land planted to tobacco which might be turned over to food crops, and if this were done nobody would need to sacrifice."

The question was left up in the air, for while several women insisted that restaurants are observing conservation days and the men could abstain from meat and wheat if they would, all agreed that while you can lead a horse to water you can't make him drink. And if the men don't want to go without meat, and a meat dish is offered, of course they are going to take it.

It brought up a situation, though, which more than one woman has noticed. Why haven't the men been addressed by the government on the subject of thrift and sacrifice? The whole proposition has been put up to the women. And every woman knows that she cooks what "he" will eat. Women are always ready to substitute stews for steaks and turnips for asparagus and celery hearts. It is the men who refuse to eat "messes" and "cow fodder." Now, isn't it? If it were put to a vote right down through the entire circulation list you would see that in more than ninety per cent of the homes it is the women who like the boiled dinners, rutabagas, onions, carrots and cabbage—the vegetables which cost little—and the men who want creamed corn and peas and the higher priced foods. And what the average American man wants, he is going to have so long as his money holds out. That has always been his policy, and it will take more than a thrift campaign among the women folks to bring him into line.

There's his precious pipe, too. Hasn't it pleased you to listen to the roar that has gone up since tobaccoists have boosted the price of cigars and tobacco? When the news went out that sodas and face powder were going to be taxed, the men chortled with glee, and had no end of fun with friend wife over her new war tax. But when they stopped at the cigar stand and ordered their usual smoke, and found that the thrifty merchant had tacked a cent onto the price of cigars of all sorts, what a wail and a protest! I've heard more from men about the injustice of that one cent increase on cigars than I heard when the price of flour went up from seventy cents for a twenty-four and a half pound sack to \$2.15. That was a question for the women to handle. There's your money and you can make it go. That's up to you. But for Man—the wage earner—to be asked to pay a whole cent more for a cigar,

which no one but himself enjoys, that is Prussianism run wild. Every man I know has investigated and found out that the dealer is making in the neighborhood of 500 per cent profit on the strength of the war tax. Some of the most inveterate smokers have vowed they won't pay it. They've always got tobacco for ten cents and they'll not pay twelve, so there! I suppose that means they'll boycott tobacco, but we women know just how long a tobacco boycott would last.

I've always been against excess profits. But this one fills my soul with unholy glee. Perhaps it may do something towards waking the men up to the necessity of conserving along other lines. Perhaps it may open their eyes to the fact that other dealers have been making excess profits for some time, and are still at it. Who knows but that it may lead to something besides investigations and talk? Now that the men are hit hard by the tax, we may see something accomplished in the way of price reductions. They can prove to a fraction of a mill just how much profit the cigar dealer is getting off his raise in price. Perhaps they may be able to figure out how much profit the grocer and butcher and milk man, not to mention the baker, whose family is starving on bread at current prices, are making.

Long live the price-raising tobaccoists, say I. May their tribe, and prices, increase.

DEBORAH.

CONSERVATION DAY SUGGESTIONS.

Meatless Day.—Breakfast, egg and tomato on toast; lunch or supper, cream pea soup; dinner, lima beans with mushrooms.

Wheatless Day.—Breakfast, rice pancakes; lunch or supper, corn meal and hominy bread; dinner, corn pone.

These recipes are selected with an idea to doing away entirely with wheat flour. Most of the recipes for using corn meal call also for wheat flour, but in the language of the colored woman who called for an all-black handkerchief to carry to a funeral, "When ah mourns, ah mourns." If we are to have wheatless day, let's have it. Some of the recipes have been tried on the Prussianized family of the household editor. The corn recipes given today are from the government bulletin, except the griddle cakes, and have, no doubt, been tried by the government experts. The only change made is in substituting corn starch for wheat flour in the corn pones. The bulletin calls for one-fourth cup of wheat flour.

Egg and Tomato on Toast.—This is a favorite dish, either for breakfast or supper. One cup of canned tomatoes stewed until large pieces break up; butter the size of a walnut; two teaspoons of sugar; salt and pepper. When tomatoes are well stewed, stir in one heaping teaspoon of flour dissolved in cold water, and three eggs. Stir constantly until eggs set. Dip on pieces of hot buttered toast and serve at once.

Cream Pea Soup.—Use for this canned green peas. Cook until soft enough to go through strainer, and add water in which the peas are cooked, to soup. Add strained peas to one pint, or one quart, of white sauce, depending upon the size of the family. If cream is plentiful, add a half cup of whipped cream just before serving.

Lima Beans with Mushrooms.—Soak one cup of lima beans over night, or twelve hours. Allow two hours for slow cooking before you wish to serve.

Bring to boil in cold water, add a pinch of soda, boil up well and pour off this water. Pour over boiling water, boil up and drain a second time. Then cover with boiling water and let simmer slowly till soft. When tender add to them a half can of mushrooms, and cream as you would string beans.

Rice Griddle Cakes.—Pour two cups of scalded milk over two cups of cooked rice and let stand until morning. In the morning add two cups of corn meal, two eggs, two teaspoons of salt, two tablespoons of sugar, two tablespoons of melted butter, four level teaspoons of baking powder, one cup of milk and one cup of the starchy water in which the rice was cooked. Sift baking powder with the corn meal. Beat these well and cook as any griddle cake.

Corn Pone.—Two cups of corn meal, one-third cup of water, one-third cup of sour milk or buttermilk, one-fourth teaspoon of soda, one-fourth cup corn starch, one teaspoon of salt, one tablespoon of sugar, two teaspoons of baking powder.

Pour water and milk over corn meal in double boiler and cook a few minutes, or boil the water, pour it over the meal and then add milk. Sift the corn starch, salt, sugar, baking powder and soda together, add to corn meal when it is cool. The mixture should be just stiff enough to form into cakes, or "pones." Form into cakes and place in a hot, well-greased pan and bake in hot oven until brown. The cakes should be lightly handled and not pressed down after putting in the pan.

SAFETY FIRST.

BY ELLA E. ROCKWOOD.

The above words meet the eye of the beholder at every turn these days and probably have some degree of influence in preventing accidents. Yet, since familiarity begets contempt the legend loses its force, and, seeing, we see not in the true sense of the word. Neither do we stop, look, and listen as we approach a railroad crossing, much against the wishes of the engineer, who would be spared a great deal of nerve strain if we did so, or at least gave him a signal to relieve his fear that the approaching train is not observed.

By exercising even a reasonable amount of caution many serious accidents might be prevented. The unavoidable accident is in another class and will be left out of the argument at the present time. But every day we read of horrible suffering and oftentimes of death brought about by a purely preventable occurrence induced solely by thoughtlessness on the part of someone. Perhaps all the people in the world will never come to fully understand how dangerous it is to use coal oil or kerosene for kindling a fire. Yet few neighborhoods have been fortunate enough to escape at least one horrible example to demonstrate the fact. Usually it is the mother of small children with her little ones, one or more of them, who becomes the victim resulting from her own carelessness.

The open tub or pail of hot water, the imperfectly covered cistern and the teakettle pulled by tiny fingers from its resting place, kills or disfigures for life scores of innocents every year. Even the tea and coffee pot and the kettle of hot soup prepared for the family meal are often means contributing to a sad accident where little ones are too young to understand the danger in familiar, and seemingly harmless objects like these. The awful results which follow teach the lesson of carefulness to the parent, but too late to save suffering and innocent lives.

But not all the preventable accidents are those which claim children as their victims. Older persons often suffer grievously from the results of their own carelessness. During the past summer a number of such cases have come to people within almost a single neighborhood, and not one of them was caus-

ed by an automobile which so frequently is the instrument concerned in accidents, preventable and non-preventable these days.

A middle aged woman on a step ladder washing windows over-reached to get at the very top of the glass, threw the ladder out of balance and came down with a crash, breaking her right leg at the knee. Result, weeks of suffering and a probable stiffened member, to say nothing of the expense in dollars and cents. Another woman reached for the dishpan hanging in the cellarway, lost her balance, and fell down the stairs, breaking both wrists.

Such an innocent thing as a shoe string may become a trap for the unwary, if not properly fastened. The death of a young woman, and a broken hip for an older one resulted recently in both instances from tripping on an untied shoe lace. Sickness in one case sent grandma hastily down stairs for a simple remedy for a child. Slipping on a pair of shoes which were left untied in her hurry, one foot caught in the hanging string and she plunged down the stairs, with the above result.

An obstinate top on a fruit can refused to budge and a man's strength was called to assist in removing it. The modern Samson in his effort to loosen the metal twisted away the whole upper part of the glass, resulting in a badly lacerated hand. Such an accident would not have been possible with the up-to-date clamp fasteners. Possibly the lesson taught, if there be one, is, throw away the aggravating old-time jars and buy new-fashioned and better ones. Men are often guilty of gross carelessness in the care of animals, which, when unruly maim and kill. The gentle bull is an example of the danger of taking chances with animals of that kind. The vicious one is watched lest the caretaker be attacked unawares, but it is the one supposed to be kind, which brings down the greatest number of victims.

A young farmer chastising a horse in its stall for some supposedly good and sufficient reason according to him own thinking, stood behind the animal and grasped its tail in his hand while he administered the punishment. It was a gentle horse but in its fright it kicked with both feet, striking its owner in the abdomen, resulting in death.

Is it too much to say that half the accidents are preventable? Overmuch caution makes life miserable, perhaps, by hindering one from even really feeling free and unrestricted, but a moderate degree of thoughtfulness in matters occurring every day would save a great deal of suffering.

THANKSGIVING OFFERINGS FOR THE FRENCH.

Americans consume sugar at the rate of seven and a half pounds a month per person. The French have been on an allowance of less than two pounds a month, and must go without any unless we can help. We have enough to carry us at our present rate of consumption until the first of the year, when the new crop comes from Cuba. The French shortage will occur during the months of November and December. Can we cut our customary allowance one-third and share with those who will otherwise have none of this human necessity? Can you lead a neighborhood sugar-saving movement? Organize the neighborhood into a sugar-saving circle and run a tally bulletin of the numbers of pounds saved. Get your town paper to manage this part of the campaign. Get the help of the schools, churches and societies. Less candy, less sweet drinks, less sugar on oat meal, less cake and pie, less frosting for the next two months—then we can make a worthy Thanksgiving offering from America to the people of Lafayette.

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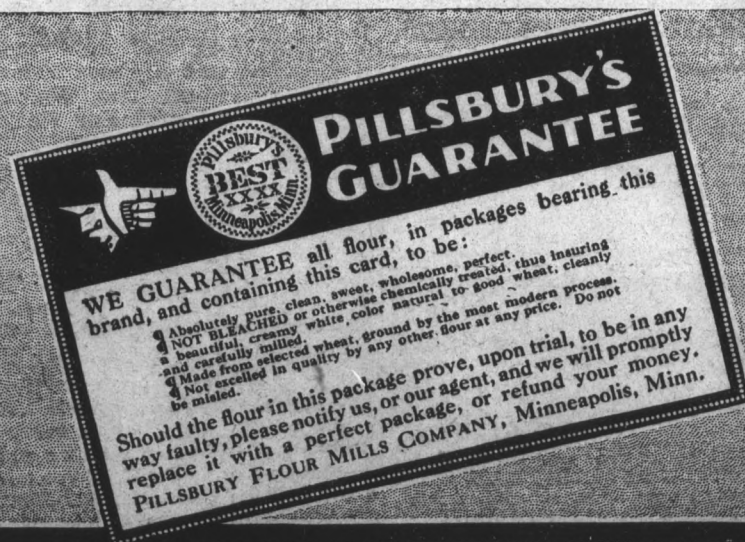
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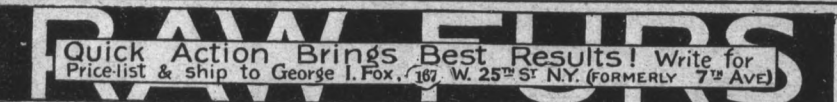
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Fruit and Vegetable Market

In the following review jobbing prices and shipments are given for the United States for the period October 30-November 6 inclusive.

Potato Market Slumps.

The general cold weather in northern producing sections has caused considerable damage to uncovered and undug stock, and as a result many frosted potatoes are appearing on the markets of the country. Prices at shipping points, as well as jobbing prices, declined generally this past week, although better feeling was registered in some of the eastern markets the last few days. F. O. B. prices at Presque Isle, Maine, continue on the down grade. Green Mountains, bulk per 11 pecks going at \$3.25 to \$3.50 and practically no demand. Growers are holding on and refusing to sell at offered prices, and as a result together with the poor weather, shipments from Maine fell off about 100 cars for the week. Shipments from Wisconsin were lighter by about 250 cars, although the F. O. B. demand was fair, the Round Whites selling bulk per 100 lbs. at \$1.50 to \$1.70. At Moorehead, Minn., Red River Ohios are going F. O. B. from \$1 to \$1.05, a decline over last week. Jobbing prices were weak, Maine stock going from \$3.20 to \$3.50 per 120-lb. sack. Minnesota White varieties are jobbing at \$1.35 to \$1.65 in sacks.

Apple Market Continues Steady.

Apple shipments and prices have held up well, with steady demand at market centers. F. O. B. prices at Spokane, Washington, advanced somewhat, extra fancy boxed Jonathans going at \$1.35 to \$1.70 with comparatively few sales, owing to shortage of cars. All rollers are reported selling at a premium of 25 to 30 cents. Romes and Winesaps moved at a little bigger figure. Some frozen stock is reported at St. Joseph, Mo. New York shipments compared well with those of last week. Extra fancy boxed Jonathans are jobbing from \$1.75 to \$2.75, mostly at \$2 to \$2.25. Good barreled stock is moving from \$4.50 to \$7.

Onion Market Declining.

The onion movement has been draggy this past week, with prices declining and shipments comparatively light. Massachusetts shipments dropped off over 100 cars, with but 64 cars rolled for the week. California held up well with 172 cars shipped. The F. O. B. demand for Massachusetts stock is decidedly limited, 100-lb. sacks of Yellow Globes declining to \$3 to \$3.25. Shipments from Indiana are limited on account of weather with prices low, Yellow Globes selling at \$1.35 to \$1.40 per bushel in bulk. Connecticut Valley Yellow Globes sold in jobbing way at \$2.50 to \$3.25, whereas last week they were going at \$3.25 to \$3.50. Ohio and stock jobbed at \$3 to \$3.75, while California Australian Browns sold in 100-lb. sacks at mostly \$2.50 to \$3.25.

Cabbage Market Weaker.

The F. O. B. cabbage market at Rochester, N. Y., took a big slump during the past week, Domestic going from \$16 to \$22 bulk per ton, with practically no demand. F. O. B. cabbage prices in Rochester have been on the down grade for two weeks or more. Holland Seed, F. O. B. Colorado, is selling at \$1.25 per 100-lb., bulk. Jobbing prices are likewise declining. New York Domestic sold from \$30 to \$45 bulk per ton the first of the week dropping to \$25 to \$35 the last of the week. Holland Seed from Wisconsin showed the same trend and is moving at similar prices. The shipments from Colorado dropped from 221 cars a week ago to 42 cars this week. Colorado stock is jobbing from \$1.25 to \$1.80 per 100 lbs. Celery Shipments Increase from New York State.

Nearly 150 cars of celery were shipped from New York as compared with 83 cars last week. Six and eight-dozen crates in the rough sold F. O. B. Rochester from \$2.75 to \$3. New York celery jobbed at \$3 to \$4, showing a wide range in quality and condition. There was an active jobbing market for good Michigan celery, with prices ruling at 80c to \$1.25 per dozen bunches on the Chicago market. Four to six dozen crates sold mostly at \$1.25 to \$1.50 in a jobbing way, 8's at \$3 to \$3.50, and 10's at \$3.75 to \$4.

Grape Market Unsteady.

Cold weather in northern cities weakened the grape market somewhat, with a consequent slow movement and limited demand. A total of 1970 cars was shipped during the week as compared with 2306 during the previous week. California and New York continue the heaviest shippers. The F. O. B. market at Westfield, N. Y., was unsteady and reports indicate that most grapes remaining unpicked have been frosted. Jobbing prices declined slightly. Six-pound climax baskets from New York sold from 20 to 25c, declining to 14 to 23c last of week. Four-quart baskets are selling from 15 to 25c.

INFLUENCE OF GOOD ROADS ON COST MARKETING.

The amount of energy expended in getting products to market depends on the character of roads over which the products are taken. In this connection a very interesting experiment has recently been concluded in California to determine just how much a horse pulls when he draws a ton.

A good draught team was used for this purpose. The horses weighed 1600 pounds each. They were hitched to an ordinary farm wagon, and pulled a load of 6000 pounds over different kinds of roads. The wagon was a standard farm wagon with steel axles of equal length, wheels thirty-eight and forty-six inches in diameter, and four-inch tires.

A recording dynamometer, known as the Iowa type, was used to register the tractive force of the team. This instrument makes a record of the resistance on a strip of paper under a recording pencil, and after the test, the total pull of the team can be read off in pounds. The record of the test is as follows:

On a concrete road, unsurfaced, in excellent condition, the total pull on the load was eighty-three pounds, or 27.6 pounds per ton.

On a concrete road with three-eighth inch surface of asphaltic oil and screenings, road in excellent condition, the total pull was 147.6 pounds or 49.2 pounds per ton.

On the ordinary macadam road in excellent condition, the total pull was 193 pounds, or 64.3 pounds per ton.

For a graveled road, compact, and in good condition, the total pull was 225 pounds, or seventy-five pounds per ton.

An earth road, firm, with one and a half inches of fine, loose dust, the total pull was 275 pounds, or ninety-two pounds per ton.

An earth road, with mud four to six inches deep, but soil firm underneath, the total pull was 654 pounds, or 218 pounds per ton.

On graveled road, before the gravel had been compacted, but when it was in ordinary loose condition after it had been placed upon the road, the total pull was 789 pounds, or 263 pounds per ton.

The above shows very well what great advantages good roads have as far as the hauling properties of a team are concerned.

E. B. HOUSE.

The Hartford Farmers' Cooperative Company, which recently took over the Finley elevator at Hartford, Van Buren county, will conduct a general business with the public, dealing in grain, beans, flour, feed, wool, coal, live stock and poultry.

Farmers' Clubs

Associational Topic for January.—“What can our Club do to help the State Association the coming year?”

PREPARE FOR THE ANNUAL MEETING.

Every Farmers' Club in the state should send one, and preferably two, delegates to the annual meeting of the State Association of Farmers' Clubs, to be held in the Capitol Building at Lansing, on December 4-5. The program for this meeting, which is an excellent one, was published in the issue of last week. In addition to this excellent program the Round Table session and the conference of local Club workers are features of great interest to every local Club which can be profited by only through the report of the delegates sent to the meeting from the several Clubs. There is no question about the profit accruing to the local organization from participation in the annual meeting. There is special reason for participation in this year's meeting on account of its being a quarter century anniversary of the organization of the State Association. Let every local Club live up to its opportunity and obligation and have one or more delegates at the meeting.

CLUB DISCUSSIONS.

The Food Situation.—At a recent meeting of the Howell Farmers' Club, held at the home of Mr. and Mrs. J. S. Brown, a goodly number of our lady members were present, also several visitors. The gentlemen members present were few, owing to the cooperative association meeting at the court house being held at the same hour. The meeting was called to order by the president, and the exercises were opened with a patriotic selection given on the phonograph. At the conclusion of this part of the program, Mrs. Claude Burkhardt rendered a very pathetic reading entitled, “A Vision of War,” after which the Hon. James N. McBride, State Director of Markets, gave a very timely and instructive address upon the food situation and the remuneration of agriculture. In part he said that this nation has never known what it was to face an empty bread basket. He compared the methods used in this country of planning, raising and caring for agricultural products, with those of Germany, and pled for the adoption of the more efficient ones. He also compared the remuneration of those engaged in agriculture with those employed in other callings. He claimed that the farmer was a capitalist as well as a laborer and therefore was entitled to pay for his time as business manager as well as laborer. He also argued that in fixing prices of agricultural products, the interest on the investment should be considered as well as all other expenses, such as taxes, insurance and deterioration of the farm plant. He also said that the day has gone by when the farmer will submit to other business men fixing the price upon his products. If he cannot have something to say in regard to the amount he shall receive for his labor, he will not engage in the business, and especially does this apply to the younger generation. J. F. Reiman, of Flint, was present and also took part in the discussion. He maintained that the farmer was a recipient of several items which the city dweller did not have and which he was pleased to term intangible income, such as rent for the farm house, the privilege of a wood lot and garden, all of which contributed greatly to the farmer's resources and lessened the worry which his city cousins were obliged to meet. Personally, he said, the price of coal or the difficulties encountered in securing it did not affect him, as he was fortunate in having a wood supply on his farm. It was also thought that in the event of a shortage of food the farmer occupied an advantageous position, as he was nearer the source of supply. Miss Frances Huntington was the next speaker and gave a somewhat detailed address upon the objects and plan of work of the Red Cross. She was also asked quite a number of questions in regard to the work, which showed that many were very much interested in the subject.

Grange.

Our Motto:—“The farmer is of more consequence than the farm, and should be first improved.”

STATE GRANGE OFFICERS.

Master—John C. Ketcham, Hastings.
Overseer—C. H. Bramble, Tecumseh.
Lecturer—Dora H. Stockman, Lansing.
Secretary—Jennie Buell, Ann Arbor.
Treasurer—Frank Coward, Bronson.
Executive Committee.—Jas. Helme, Adrian; Geo. B. Horton, Fruit Ridge; J. W. Hutchins, Hanover; W. F. Taylor, Shelby; Wm. H. Welsh, Sault Ste Marie; N. P. Hull, Dimondale; Burr Lincoln, Harbor Beach.

SOUTH BOSTON GRANGE FAIR.

The South Boston Grange Fair, held for the benefit of the Red Cross, on October 26, was without exception the biggest event of the kind ever pulled off in Ionia county. It was to have been held during the afternoon and evening, but in the morning it began raining, not gentle showers, but a downpour, which continued until about 5:00 p. m. It then cleared away and was pleasant, but the roads were undecidable. At six o'clock the crowd began to gather, laden with the fruit of their labor, until about 300 were present.

The display of grain, vegetables, garden produce, canned fruit, fancy work, school exhibits, poultry, pretty babies, fat babies, handsome men, beautiful girls, etc., etc., was magnificent and was far beyond any county fair exhibition held here for many years. It did not look much like starvation for South Boston people.

The splendid display of baked goods was beyond description and surely food conservation was farthest from the thought of those who gazed upon the scene. It was very difficult for the judges to make decisions as everything was A No. 1, South Boston being noted for its famous cooks. We feel that special mention should be made of the blue ribbon cakes made by Mrs. W. M. Obierne.

They were eight in number, four of which were decorated with patriotic inscriptions, miniature flags and Red Cross emblems. They not only won first premiums, but established a championship for this maker.

Berlin Center Grange won premiums for the largest delegation present. Mr. and Mrs. Spangler, of Buffalo, N. Y., for coming farthest to attend the fair. Several guests were present from Grand Rapids. Premiums amounting to \$200 were given by local people, merchants of Ionia, Lowell, Saranac, Clarksville and Grand Rapids.

All available goods entered were used towards furnishing the chicken-pie supper which was served. All excess supply of baked goods were sold at auction, also all products with consent of exhibitors, except where wanted by donors of premiums. After supper a short program was given. The proceeds of the evening amounted to \$102, about \$75 net for the Red Cross. This community has made good response to the patriotic cause, having previously raised \$410, and has a well organized branch of the Red Cross society, who meet one day of each week to do the work.

The estimated value of the goods entered was \$1,000.

The “half has not been told,” but space will not allow. Suffice to say, much credit is due Mrs. W. M. Obierne, the lecturer of South Boston Grange, who so skillfully planned the whole affair, and to the Master, John Freeman, and members, for their untiring efforts, and to the merchants, who by their cooperation, made the success complete.—Mrs. Myrtle Taylor.

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Markets.

GRAINS AND SEEDS

November 13, 1917.

WHEAT.—The wheat movement is moderate with the mills ready to take all offerings. A year ago No. 2 red wheat sold locally at \$1.89½ per bushel. Present Detroit prices are: No. 2 red \$2.17; No. 2 white \$2.15; No. 2 mixed \$2.15 per bushel.

CORN.—This trade is stronger with old corn scarce and the new crop coming to market slowly. The conviction is gaining that the quantity of frosted and immature corn has been underestimated. The fixing of hog prices is also a bullish factor in the trade. A year ago the local trade paid \$1.08 for No. 3 corn. Last week's Detroit quotations were:

	No. 3 Mixed.	No. 3 Yellow.
Wednesday	2.20	2.21
Thursday	2.23	2.24
Friday	2.23	2.24
Saturday	2.23	2.24
Monday	2.25	2.26
Tuesday	2.25	2.26

Chicago.—December corn \$1.20½ per bu; January \$1.17½; May \$1.15½.

OATS.—Knowledge of large government purchases of oats and an unusually heavy domestic consumption gave this trade an upward push on Monday. Farmers are marketing slowly. A year ago the local quotation for standard oats was 60c. Last week's Detroit prices were:

	Standard.	No. 3 White.
Wednesday	63	62½
Thursday	63	62½
Friday	63	62½
Saturday	64	63½
Monday	66	65½
Tuesday	67½	67

Chicago.—December oats 63½c per bu; May 63½c.

RYE.—Inactive with cash No. 2 quoted at \$1.77.

BEANS.—Food administration will cooperate to secure for bean producers a price compensatory with cost of production. No movement at present. Local quotation for cash beans \$7.80. In Chicago the deal is steady with ample offerings. Michigan pea beans, hand-picked \$8@8.25; red kidneys \$8@8.15. At Greenville \$8 is offered farmers.

SEEDS.—Prime red clover, cash and March \$16; alsike \$14.20; timothy at \$3.75.

FLOUR AND FEEDS

FLOUR.—Jobbing lots in one-eighth paper sacks are selling on the Detroit market per 196 lbs., as follows: Best patent \$11.50; seconds \$11.40; straight \$11.10; spring patent \$12.10; rye flour \$11.20 per bbl.

FEED.—In 100-lb. sacks jobbing lots are: Bran \$36; standard middlings \$39; fine middlings \$42; cracked corn \$84; coarse corn meal \$77; corn and oat chop \$60 per ton.

HAY.—In carlots at Detroit: No. 1 timothy \$13.50@14; standard timothy \$22.50@23; No. 2 timothy \$21.50@22; light mixed \$22.50@23; No. 1 clover \$17@19.

Pittsburg.—No. 1 timothy \$29.50@30 per ton; No. 2 timothy \$28@29; No. 1 light mixed \$28@29; No. 1 clover mixed \$29.50@30; No. 1 clover \$29.50@30.

STRAW.—In carlots on the track at Detroit: Rye straw \$9.50@10; wheat and oat straw \$8.50@9.

DAIRY PRODUCTS

BUTTER.—Butter is in good demand and steady. Fresh creamery firsts at 41½@42c; fresh creamery extras 42½@43c.

Chicago.—The feeling is firm for top grades, other grades easy. Creamery extras are quoted at 43½@44c; extra firsts 42½@43c; packing stock 34c.

POULTRY PRODUCTS

POULTRY.—(Live).—Poultry is dull and only the best are wanted. Offerings include a great lot of poor poultry, for which demand is lacking. Best spring chickens 18@19c; hens 16@20c; ducks 23@24c; geese 20@21c; turkeys 27@28c. Dressed poultry 1@2c higher than live.

Chicago.—Trade generally is good, all kinds selling well, except poor thin fowls. Fowls sell at 16½@17c; spring chickens 20c; ducks 20c; geese 19@20c; turkeys, good 23c.

EGGS.—The demand for fresh eggs is well sustained. Fresh firsts were quoted at 40@44c per dozen.

Chicago.—Market higher and strictly new-laid are in good demand. Fresh

Michigan firsts sell for 41@42c; ordinary firsts 38@39c; miscellaneous lots, cases included 39@41c.

FRUITS—VEGETABLES

POTATOES.—Markets.—There were practically 50 cars on tracks at Detroit Monday morning. Round whites in jobbing lots \$2.30@2.35 per cwt., \$1.40 per bushel. At Cleveland Michigan round whites 10-pk. sacks \$3.75@4 for best. At New York do. per 180 lbs. \$4.25@4.50. At Cincinnati do. \$2.33@2.45 per cwt. At Chicago \$2 per cwt. The Pittsburgh trade is paying \$2.50@2.65 for Michigan round whites.

Shipping point information.—Farmers at Greenville, Mich., are getting \$1.80@1.85 per cwt; at Grand Rapids the price for round whites is \$2.13@2.30 sacked and \$1.83@2 in bulk. In Maine farmers are getting \$2.12@2.42; in Minnesota \$1.65@1.75; in Wisconsin \$1.50@1.60; in New York state \$1.25@1.30 per bushel, or \$2.25 per cwt. Michigan is now the heaviest shippers of the tubers.

ONIONS.—Markets.—At Detroit yellows are selling at \$3.75@4 per 100-lb. sack; at Cleveland \$3@3.25; New York \$3.20@3.25; Cincinnati \$3.50; at Chicago \$2@2.50, and \$1.50@1.75 per 70-lb. sack. In New York state the movement from producing points is insufficient to quote. The Indiana stock is in storages and shippers' hands.

APPLES.—Markets.—At Detroit the prices range from \$4.50@5 for Wealthys to \$7 for Spies. At Cleveland Spies are \$5.75; Baldwins \$6; Jonathans \$7, all good stock. New York market weaker; Wealthys \$4@4.50; McIntosh \$5@6; Baldwins \$4@4.50. Pittsburgh, fancy Baldwins, Spies, Jonathans \$5.50. Chicago, Market firm, movement good. Fancy Jonathans \$6.25@6.50; Baldwins \$5@5.50; Ben Davis \$3.50@3.75.

CABBAGE.—Wisconsin farmers are receiving from \$12@20 per ton. In New York state the price to producers is \$15@20 per ton.

CELERY.—Growers in the Kalamazoo district are receiving 13@15c per dozen with crates, through the association, while buyers are paying 11@12c per dozen in the rough.

WOOL

In spite of all effort to keep wool prices down, the market continues very firm. Government buying is an important bullish feature of the trade. A fair quantity of fleeces are being sold. Michigan unwashed delaines are quoted in Boston at 72@73c; do. combing 73@77c; do. clothing 56@64c.

GRAND RAPIDS

The mills are paying \$2.09 for red wheat, government test; \$2.10 for No. 2 yellow corn; \$1.65 for rye; \$1.25 for barley; 62c for oats. Dry onions bring \$1.40@1.75 and potatoes \$1.20@1.35 on the city market. The car situation continues acute and many potatoes are going into storage. The bean movement is light and much damage to the crop is reported through wet weather.

DETROIT CITY MARKET

Although offerings were in smaller volume, prices are being maintained. Potatoes \$1.40@1.50; cabbage 60c@\$1; onions \$1.75@2; carrots 75c; apples \$1@2.50; pears \$1@2; hens 90c@\$1 each; loose hay selling around \$20 per ton.

LIVE STOCK

BUFFALO.

November 12, 1917.

Receipts here today as follows: Cattle 6,500; hogs 11,200; sheep 7,000; calves 900.

With 6,500 cattle here today, consisting mostly of medium and common grades, the trade was very slow and lower on everything excepting a few strictly good butcher cattle which sold about steady. The shipping cattle, medium butcher steers, cows, heifers and canners were 10@25c lower. There was a good demand for the best grades of stockers and feeders and they sold steady, but the medium and off-colored kinds were very draggy and the ones we could not get the farmers to take hold of had to go for cutters to the killers, ranging from \$6.25@6.75. What good bulls were here sold strong, with other grades about steady.

We had about 12,000 hogs on sale today, a light supply for this time of the year. Market was about a dime lower than the close of Saturday but trading fairly active and about everything sold. A few selected hogs sold from \$18@18.15, with the bulk from \$17.75@17.90; pigs and lights \$17@17.25; roughs \$16.25@16.75; stags \$14@15. Present prices look plenty high

to operate on and while we do not look for much change we think it would be advisable to buy hogs for lower markets.

With a moderate run of lambs today our market opened up active and prices steady with the close of last week. About all sold and we look for about steady prices last of the week.

We quote: Lambs \$16.85@17; cull to common \$12@16; yearlings \$12.50@14; wethers \$11.50@11.75; ewes \$10.50@11; bucks \$7@9; best calves \$14.75@15; common and light \$11@14; heavy \$10@13; grassers \$6@7.

CHICAGO.

November 12, 1917.

Cattle. Hogs. Sheep. Receipts today. 23,000 40,000 20,000 Same day 1916. 37,902 52,487 32,413 Last week. 95,819 124,405 71,447 Same wk 1916. 66,812 203,188 100,012

While some kinds of cattle moved off slowly today, sales were largely 15@25c higher, with a much smaller Monday supply than usual, some prime heavy cows bringing \$10. Hogs were largely 5c lower early, with a better market as the day advanced, the best selling at \$17.55. Hogs marketed last week averaged 207 lbs. Lambs were about a dime lower. Today's cattle supply included about 7,000 northern ranglers.

Cattle were marketed liberally last week. The excessive offerings brought about average reductions in prices of 50c@1.25. Native steers \$9@13.50; steers that graded well \$13.60 and upward; choice to extra class \$15.80@16.75, and a few lots taken at \$17 and \$17.25 early in the week; medium grade steers \$11.50 and over, with the plain, light steers at \$9.50 and upward; inferior little steers \$5.25@6.25; good to prime yearlings \$13.50@16.50; other youngsters sold down to \$10@11 for ordinary kinds. Butcher stock averaged 40@50c lower at \$6@9.65 for cows and \$5@12.25 for heifers; cutters \$4.90@5.85; canners \$4.25@4.85 and bulls at \$5.25@9.75. Calves have had an outlet at \$5.50@13.25. Stockers sold usually at a range of \$6@9.75, while feeders were purchased in most instances for \$8@11.50. Prime feeders which averaged over 1200 lbs. sold up to \$12.

The hog market improved when the food administration fixed a minimum price of \$15.50 per 100 lbs., which practically guarantees to make hog production profitable. This minimum price will remain in force indefinitely. Hog receipts last week showed fair gains over the previous week, but were very far smaller than a year ago. At the close sales took place at \$16.35@17.60, comparing with \$15.75@17.55 a week earlier, the common and middling grades showing the principal advance. Prime weighty butcher lots went the highest. Pigs closed at \$12.50@16.30, and feeding pigs brought \$15.50@16.25.

Supplies of sheep and lambs showed a marked falling off in volume last week, yet little change took place in values, and some feeding grades went a little lower. Prices closed the week as follows: Lambs \$12@16.65; feeding lambs \$13@16.25; yearlings \$11.75@14.25; wethers \$11.25@13; ewes \$6@11; feeding ewes \$7@10.50; breeding ewes \$11.50@17; bucks \$7@9.

GOVERNMENT CROP REPORT.

A summary of preliminary estimates of crop production for the state of Michigan and for the United States, as compiled by the Bureau of Crop Estimates, U. S. Dept. of Agriculture.

Corn.—Michigan.—Production this year 37,800,000 bushels; last year (December estimate) 45,375,000 bushels.

United States.—This year 3,190,000,000 bushels; last year (December estimate) 2,583,241,000 bushels.

Only a very small percentage matured and much is not fit to husk or crib. About forty per cent of Michigan's acreage went into silos, a larger percentage than usual.

Wheat.—State.—This year 14,127,000 bushels; last year (December estimate) 13,600,000 bushels.

United States.—This year 659,797,000 bushels; last year (December estimate) 639,886,000 bushels.

Oats.—State.—This year 60,252,000 bushels; last year (December estimate) 42,690,000 bushels.

United States.—This year 1,580,714,000 bushels; last year (December estimate) 1,251,992,000 bushels.

Barley.—State.—This year 3,304,000 bushels; last year (December estimate) 2,450,000 bushels.

United States.—This year 201,659,000 bushels; last year (December estimate) 180,927,000 bushels.

Rye.—State.—This year 5,183,000 bushels; last year (December estimate) 4,648,000 bushels.

United States.—This year 56,044,000 bushels; last year (December estimate) 47,383,000 bushels.

Potatoes.—State.—This year 35,900,000 bushels; last year (December estimate) 15,360,000 bushels.

United States.—This year 440,000,000 bushels; last year (December estimate) 285,437,000 bushels.

All Hay.—State.—This year 3,757,000 tons; last year (December estimate) 4,423,000 tons.

United States.—This year 91,715,000 tons; last years (December estimate) 109,786,000 tons.

Apples.—(Agricultural Crop).—State.—This year 1,720,000 barrels of three bushels; last year (December estimate) 4,160,000 barrels.

United States.—This year 59,200,000 barrels of three bushels; last year (December estimate) 67,415,000 barrels.

Peaches.—State.—This year 744,000 bushels; last year (December estimate) 2,010,000 bushels.

United States.—This year 42,606,000 bushels; production last year (December estimate) 36,939,000 bushels.

Beans.—State.—This year 4,000,000 bushels; last year (December estimate) 3,102,000 bushels.

Five States.—This year 16,000,000 bushels; last year (December estimate) 8,846,000 bushels.

Sugar Beets.—State.—November 1 forecast 763,000 tons; production last year (December estimate) 503,000 tons.

United States.—November 1 forecast 7,620,000 tons; production last year (December estimate) 5,920,000 tons.

Prices.—The first price given below is the average on November 1 this year, and the second the average on November 1 last year.

State.—Wheat 206 and 163c per bu; corn 186 and 92; oats 58 and 49; potatoes 112 and 143; hay \$14 and \$9.60 per ton; eggs 40 and 32c per dozen.

IMPORTANT SHORTHORN SALE.

One of the best offerings of Scotch and Scotch-topped Shorthorns offered in Michigan in recent years will be sold at the Fairfield Stock Farm, two and three-quarters of a mile southeast of Elsie, Mich., on November 19.

Most of the offering is young cattle just beginning their usefulness. Twenty-eight head are under three years of age. Twelve aged cows are either heavy with calf or with a calf at side and re-bred. Six excellent two-year-old heifers were sired by King Secret and Scottish Dalmeny.

The twelve yearling open heifers are from Fandango the Avondale herd bull, Royal Silver, Thaxton's Secret 2d and King Secret. The young bulls are a good lot and are fit to head pure-bred herds.

Mr. Peters also offers six Registered Percheron mares, and a splendid yearling stallion.

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THIS IS THE LAST EDITION.

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

DETROIT LIVE STOCK MARKET.

Thursday's Market.

November 15, 1917.
Cattle.

Receipts 2086. Good grades 10@15c higher than last week; common dull. Best heavy steers \$10@11.50; best handy weight butcher steers \$8.50@9.75; mixed steers and heifers \$7.50@8; handy light butchers \$6.50@7.25; light butchers \$5.50@6.50; best cows \$7.50@8; butcher cows \$5.75@6.25; common cows \$5@5.50; canners \$4@4.75; best heavy bulls \$7.50@8; bologna bulls \$6.50@7.25; stock bulls \$5.50@6.50; feeders \$7.50@8; stockers \$5.75@7.50; milkers and springers \$5@5.10.

Sandel, S. B. & G. sold Kamman B. Co. 2 steers av 750 at \$7.14 do av 821 at \$8.20, 2 do av 775 at \$8.50; to Newton P. Co. 5 butchers av 590 at \$5.15 do av 700 at \$6.50, 4 do av 712 at \$6.25, 4 cows av 850 at \$5.1 bull wgh 1400 at \$8.75, 31 steers av 975 at \$9.50; to Sullivan P. Co. 2 cows av 1100 at \$6.50; to Baker 9 butchers av 700 at \$6.75; to Walk 4 do av 770 at \$5.75, 10 do av 650 at \$6; to Harmer 6 do av 680 at \$5.50; to Applebaum 7 do av 684 at \$5.75, 1 steer wgh 900 at \$7.75, 4 cows av 907 at \$5; to Sullivan P. Co. 11 steers av 1163 at \$8.35, 6 cows av 975 at \$6.50, 4 do av 800 at \$6.50, 17 butchers av 590 at \$6, 6 cows av 966 at \$5.40, 4 steers av 870 at \$7.50; to Converse & B. 12 canners av 925 at \$4.50, 2 do av 635 at \$4.50, 6 do av 825 at \$4.50, 7 stockers av 647 at \$5; to Goodgold 11 butchers av 524 at \$5.75, 11 do av 734 at \$6.50, 12 do av 683 at \$7.50; to Brown 15 feeders av 733 at \$6.85; to Mason B. Co. 1 bull wgh 1370 at \$7; to Baker 9 stockers av 680 at \$6; to Bray 3 canners av 910 at \$4.50, 1 do wgh 930 at \$5.25.

Erwin, S. & J. sold Newton P. Co. 7 butchers av 617 at \$6.35, 1 cow wgh 1280 at \$5.75, 1 do wgh 930 at \$4.75, 2 do av 1420 at \$5.50; to Mason B. Co. 9 butchers av 680 at \$7; to Bray 1 cow wgh 1180 at \$5.25, 2 do av 950 at \$4.75, 4 canners av 900 at \$4.60, 12 do av 470 at \$4.50, 14 do av 560 at \$5, 5 do av 598 at \$5.50; to Thompson 1 steer wgh 1160 at \$8, 7 do av 714 at \$7; to Shipiro 9 butchers av 564 at \$6.25; to Sullivan P. Co. 1 cow wgh 950 at \$6, 8 steers av 906 at \$7.35, 13 butchers av 922 at \$7.50, 26 do av 834 at \$7.50; to Thompson 5 do av 880 at \$7.50, 1 cow wgh 1120 at \$6; to Mich. B. Co. 2 do av 1085 at \$6.50, 6 butchers av 650 at \$6.50, 11 do av 645 at \$6.50, 29 do av 800 at \$7.75; to Converse 35 canners av 869 at \$4.75; to Prescott 30 stockers av 602 at \$5.50; to Breitenbeck 11 steers av 776 at \$7.40; to Thompson 9 do av 822 at \$7.50; to Sullivan P. Co. 18 do av 903 at \$11.50; to Shipiro 5 do av 896 at \$7.50; to Kammon B. Co. 21 do av 880 at \$8.25.

Veal Calves.

Receipts 634. Market steady. Best \$13@13.50; common and heavy \$5.50@7; culs \$9@11.

Bishop, B. & H. sold Newton P. Co. 2 av 150 at \$10, 3 av 165 at \$13.75, 6 av 125 at \$11; to Sullivan P. Co. 2 av 415 at \$6.50, 6 av 250 at \$7.50; to Thompson 12 av 165 at \$13.75; to Mich. B. Co. 11 av 150 at \$13.50; to Nagle P. Co. 3 av 140 at \$11, 27 av 135 at \$13; to Hammond, S. & Co. 8 av 140 at \$13, 26 av 160 at \$12.50, 11 av 150 at \$13, 11 av 115 at \$12; to Sullivan P. Co. 14 av 140 at \$13, 22 av 135 at \$12.75, 3 av 160 at \$13.50, 20 av 125 at \$12.50; to McGuire 34 av 155 at \$13, 88 av 150 at \$13.

Sheep and Lambs.

Receipts 5026. Market strong. Best lambs \$16@16.25; fair lambs \$15.25@15.50; light to common lambs \$14@14.50; fair to good sheep \$9.50@10; culs and common \$6@8.

McMullen, K. & J. sold Thompson 15 lambs av 50 at \$14, 36 do av 55 at \$14.60; to White 11 sheep av 100 at \$8; to Sullivan P. Co. 46 do av 90 at \$7.75, 13 do av 115 at \$8; to Nagle P. Co. 77 lambs av 70 at \$15.60, 79 do av 75 at \$15.75, 34 do av 73 at \$15.50, 10 do av 82 at \$15.50, 6 sheep av 120 at \$8; to Sullivan P. Co. 36 yearlings av 95 at \$11, 6 sheep av 115 at \$8.50, 5 lambs av 40 at \$12.50; to Hammond, S. & Co. 53 lambs av 55 at \$14; to Sullivan P. Co. 5 do av 60 at \$14.50, 18 sheep av 100 at \$8; to Nagle P. Co. 20 lambs av 80 at \$15.50, 27 do av 80 at \$15.75, 15 do av 80 at \$15.60, 3 yearlings av 100 at \$14, 17 lambs av 90 at \$15; to Thompson 5 do av 55 at \$15.

Hogs.

Receipts 7788. Pigs 25@50c higher at \$16@16.50; mixed grades steady at \$16.75@17.25.

Veterinary.

CONDUCTED BY W. C. FAIR, V. S.

Actinomycosis—Lump Jaw.—Last spring we turned our cattle on low land pasture, with about 100 other cattle; recently we noticed that some of them were suffering from lump jaw. Is this disease contagious? What causes it? Is it unlawful to sell cattle affected with this disease? What can be done to cure lump jaw? S. K. Brown City, Mich.—Actinomycosis is not a contagious disease, but is an infectious disease, due to a specific fungus. It is, of course, unlawful to sell cattle suffering from this or any other infectious disease, unless you inform the purchaser of what ails the cattle. The United States and local meat inspectors often pass as fit for food carcasses which are slightly diseased, but condemn the diseased part of the body. The cause of the infection is a thread-like fungus. This fungus grows on various kinds of grasses, but particularly on the awns and glumes of barley and on grasses which grow on river bottom land, which overflows. Superficial cases can frequently be cured by cutting out the diseased tissue, or apply tincture iodine daily and give 1 dr. doses of potassium iodide in feed or drinking water two or three times a day. Bone enlargements are usually incurable.

Fistula.—Last spring while plowing, my mare bruised withers and an abscess formed which our local Vet. lanced, allowing quite a quantity of pus to run out. I purchased a good syringe and followed his directions, but shoulder required lancing a second time. Now the opposite side is swelling and the other wound has not yet healed. What do you advise me to do? O. DeV., Grass Lake, Mich.—Doubtless your Vet. will be obliged to do some more cutting in order to allow perfect drainage to abscess. When this is done you will find little trouble in taking care of the wound, and besides it will heal rapidly. As you doubtless know, it is quite difficult to heal an abscess or cure a fistula where the pus pockets. By injecting the abscess with one part carbolic acid and thirty parts water once or twice a day and occasionally swabbing out abscess with tincture iodine you may be able to heal sore. Paint swollen side with tincture iodine three times a week.

Stringhalt.—I have a three-year-old colt which jerks up one hind leg occasionally, and I have been told that he has stringhalt, others tell me he is weak in hind legs. W. Y., Romeo, Mich.—Your colt suffers from stringhalt, an ailment which is considered incurable; however, if you will have your Vet. perform the operation called Peroneal Tenotomy for Stringhalt, it will perhaps relieve your colt from jerking up hind leg. The writer has performed this operation frequently on such cases with fairly satisfactory results. The operation is simple, can be performed without casting the horse, especially if cocaine is used.

Small Siftast.—I would like to know what to do for one of my work horses that is troubled with small hard bunches about the size of a bean on portion of shoulder where collar rests. Some of these pimples open and discharge pus, others are quite hard. I am inclined to believe that the cause is impure blood, because his collar fits perfectly. W. L., Holland, Mich.—Give your horse 3 drs. of Donovan's solution of arsenic at a dose in feed or drinking water three times a day and it will have the effect of correcting his blood trouble. Also, apply one part tincture iodine and four parts spirits of camphor to sores on shoulder once a day. It is considered good treatment to paint only the bunches with tincture iodine occasionally. The collar or sweat pad should be kept clean.

Drying a Milch Cow.—I have two cows which I wish to dry up in order to fatten for the fall market; both cows were fresh February last, but are now not profitable to keep for dairy purposes. When fresh they gave from 18 to 20 pounds of milk each per day; now they average 12 to 14. Both are running in good pasture, also are fed one pound of cottonseed meal each per day. J. E. R., Decatur, Mich.—Give each of your cows one pound of epsom salts in three pints of tepid water as a drench, one dose only. Stable them and feed them only a limited supply of timothy hay. Also give them 1 dr. of camphor gum in 4 ozs. of either olive oil or linseed oil twice a day. Milk only a portion of the milk out of udder twice a day for a few days, then only once a day. Cows that are not fed milk producing food soon go dry.

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For particulars write H. A. Martin,
Gotham, Wis.

Galloway Sale

Thursday, Dec. 6th, 9 A. M.
For catalog write R. W. Brown,
Carrollton, Mo.

Aberdeen-Angus Sale

Wednesday, Dec. 5th, 1 P. M.
For particulars write Chas. Gray,
Union Stock Yards, Chicago

Shorthorn Sale

Thursday, Dec. 6th, 1 P. M.
For catalog write F. W. Harding,
Union Stock Yards, Chicago

Hereford Sale

Friday, Dec. 7th, 1 P. M.
For catalog write R. J. Kinzer,
1012 Baltimore Ave., Kansas City, Mo.

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Big Type Poland Chinas.

We are offering a few Spring Boars by that Great Thous and Pound Grand Champion Boar, HILLCREST WONDER, from sows by our Great Herd sire, HILLCREST DEFENDER, some of them great herd leaders. We have five gilts by HILLCREST COMMANDER, July 15th farrow, that will make crackerjack brood sows at \$25 each, for quick sale. HILLCREST FARM, Kalamazoo, Michigan.

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WALNUT Alley—Big Type P. C. Boars ready to go. Gilts will be bred for Apr. farrow to a great boar from Iowa. Let me tell you about them, or come and see for yourself. A. D. GREGORY, Ionia, Mich.

LARGE STRAIN P. C. nothing for sale until after Dec. 1st. H. O. SWANZ, Schoolcraft, Mich.

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Registered Hampshires, spring boars and gilts ready to ship, book your order now. JOHN W. SNYDER, R. 4, St. Johns, Mich.

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IT PAYS TO BUY PURE BRED SHEEP OF PARSONS The Sheepman of the East. I sell and ship everywhere and pay express charges. Write for club offer and price list. Oxford, Shropshires and Felled-Delaines. PARSONS, Grand Lodge, Mich. R. 9

Shropshire Ram Lambs and one three year old flock header for sale. ARMSTRONG BROS., R. 3, Fowlerville, Mich.

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Prices reasonable.

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Some of those good ram lambs left. Also a few aged ewes. W. B. McQUILLIAN, Howell, Mich.

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Registered Oxford Ram and Ram lambs. Also Berkshire hogs. CHASE STOCK FARM, R. 1, Marlette, Mich.

FOR sale—Choice, registered Oxford Ram lambs from imported stock of England and Canada. Maple Grove Stock Farm, David Murphy & Son, Cass City, Mich.

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NOV 22, 1917.

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200 head to select from. Special prices on colts for August and September. Write Dept. E. The SHADYSIDE Farms, North Benton, Ohio.



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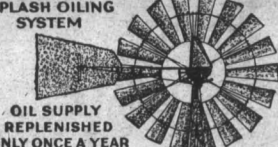
Quickest to heat; strongest draft; adjustable grates; ashes removed without disturbing fire; keeps fire 24 hrs. **Absolutely Safe;** pays for itself in 2 months with 4 Wood, Steel or Concrete Tanks of any size. Most reliable, practical, efficient and durable Tank Heater manufactured.

Purchased 3 of your Tank Heaters last winter, worked very satisfactorily and are well worth their cost. Every Stockman should use one. (Signed) W. H. FEW, Professor of Animal Husbandry, Iowa State College, Ames, Iowa

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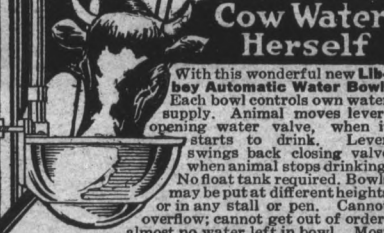
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Best leather uppers. Thick felt insoles. No metal touches you. Warm, comfortable, easy to walk in. Keep feet in good condition and prevent sickness. Best by test for all work in any weather.

MONEY BACK if shoes do not meet with your approval. Write for **FREE** catalog which shows styles, gives prices and tells how to order. A postal brings it. **OVERLAND SHOE CO., Dept. 45 B, Racine, Wis.**

What Will the Bull Turn Out to Be?

By EDGAR L. VINCENT

IN the course of my life on the farm I think I have made as many mistakes in the choice of the bulls I used in my dairy as in any other part of my farm work; and still, I have no doubt other farmers have made just as many proportionally. In fact, there is no spot or place, it seems to me, where we are more apt to go wrong than in this very thing of selecting a sire to head our dairies. It is such an important matter, too, that no man can determine what it has cost our farming community to raise, use and suffer from inferior bulls.

It is not my purpose to go over the list of my failures in this direction. The story would be too depressing. We all have had quite similar experiences, so that what is true of one man may almost be said to be true of all the rest of us. There is an old saying that "misery likes company." There is such a thing as having it put on too thick, however. So let us pass all that by just now and see what can be done to make up, so far as possible, for the errors of the past and ensure a better quality in our bulls for the future. The need of this is certainly greater just now than at any time in the past. A Macedonian cry goes up from every part of the world for help in meeting the world's needs for milk, butter, cheese and meat products. Meatless days when there should be no such times are urged upon the people everywhere. We are taught that we can and must get along with less milk. Cheese is almost an unknown article of food in many homes. The effect of these deprivations on the health and well-being of the people may never be known. It certainly is time to consider seriously what can be done to improve these conditions; and upon the bulls we use will depend in great part our success along this line.

Objects to the Immature Bull.

One thing that comes to me very clearly, as I stand at the close of an experience of more than a quarter of a century, is that we are too apt to use young and immature bulls. Thousands of bulls are put into hard service when they are not more than a year and a half old; and often when yearlings this is done. Everybody knows that no bull can be fully matured at that age. He has not attained his growth. He may be large for his age, but he certainly is not ready for such service as we give him. No bull should be entered for service before he is two years old.

But having reached that age, shall we take it for granted that he is therefore qualified by reason of his parentage and manner of growing to take the important place given him? In other words, what will his stock be? That we may prevent, so far as possible, years of disappointment and loss, I believe there should be on every farm where any number of cows are kept, two bulls, one well developed and of known reputation as a getter of good stock. This bull should be used while we are determining what the young bull will turn out to be. He may be used for all except a small number of the herd, these being served by the younger bull. When we know that the young bull is all right and a sure winner, we may let the old bull pass on. Not before that.

If I had done this it would have saved me years of bitter experience. I remember one thoroughbred bull I had upon which I placed great dependence. When he came to be old enough for use we found that he was not worth a dollar. Something was wrong with his organs of reproduction. We never got a single calf from him. He was a fine looking animal, but a failure. Such an experience surely is a warning never to place implicit trust in a young bull. I had to depend on other sources for

my service that year and the next, for I could not at that time lay my hands on a bull of known good quality.

Hold Fast to the Good Sires.

As a rule, we are in too big a hurry to let the old bulls go. It may be they show some signs of being cross. We are afraid of them, not so much on our own account as because we fear some child or other member of the family may be hurt. So we sell him, often on nothing more definite than suspicion. A bit of precaution would save us much loss. I saw an old bull some years ago that was very old, but still in active service. He was kept in chains all the time, with a ring in his nose into the bargain. He had a good, kind look in his eyes, but the owner did not want to take any chances on him. And he certainly did get fine stock. He was a big bull, of fine proportions and fully developed in every respect. For a good many years after he was gone the effect of his service was seen in the herds of the community where the farmers used him.

Community Service.

Another thing I am coming more and more to believe, and that is that a number of farmers will do well to join their forces in buying two or three bulls for community service. By putting their money together, better bulls can be purchased than any one man might feel able to procure. One other good thing would result from such a union of forces and that is a uniformity of breed in the neighborhood. One of the great sources of envy and jealousy and discontent among farmers is where, on different farms breeds of cows are not the same. One man has one kind, another another kind. The milk may go to a common creamery where the pay depends on the test. One man receives for his milk from, say ten cows, \$150 a month, on a test of four per cent milk. His neighbor with the same number of cows never reaches four per cent in his test, and gets \$25 less per month. He naturally feels as if he is not being fairly treated. If all the cows of a neighborhood were alike in breed, much of this dissatisfaction would be done away with. Other advantages from a community dairying may be seen that cannot here be pointed out. But I am fully persuaded that the idea of a number of choice bulls purchased and maintained on the cooperative plan would be the means of greatly improving the welfare of those who invested their money and effort that way. There would be more interest on the part of all. Old rivalries and petty jealousies would disappear and more money would be made by everybody concerned.

Give the Sire Better Care.

Not to multiply words, this is my final thought. We ought to take better care of our bulls than we do. On how many farms is the bull held in the estimation that he should be? How often is he kept in dark and frequently unclean quarters, fed with things that are not calculated to make him the best he might be and generally neglected? This does not look as though we realized that there is no more valuable creature on the farm or appreciated at anything like full value the service the bull is expected to render. The bull ought to have nice, light quarters, kept scrupulously clean. He should be fed to maintain health and bodily vigor, without which he cannot do the work assigned to him properly. He should be treated kindly. The yelping of a dog at his heels, even, ought not to be tolerated. To make sure that no mistake may be made when the bull is subject to the excitement which always surrounds service, a ring and pole should be used. Plenty of exercise ought to be given every day. It never hurts any animal to work some. Were these simple suggestions to be

adopted and followed for a few years, we would see a general uplifting of the dairy interests of this country. Many problems now unsolved would be brought to a solution.

DAIRY INDUSTRY ON A SECURE BASIS.

It is universally recognized that the welfare and increase of dairying is of vital importance in the world's crisis we are now in the midst of, as the dairy cow supplies us with most vitally necessary human food. That many dairy cows have been recently slaughtered, owing to the scarcity of farm labor, the high cost of cattle feed, the high price paid for beef animals, and the comparatively inadequate price paid for dairy products, is also well known. How far these conditions have affected the pure-bred dairy cattle has quite frequently been asked. It can be answered, as far as the Jersey breed is concerned, by a report recently made to the directors of the American Jersey Cattle Club. The fiscal year of this club begins April 1, and since that date there has been an increase in Jersey registrations of forty-four per cent, an increase in transfers of ownership of nine per cent, an increase in year's authenticated milk and butter-fat tests of five and one-half per cent, and an increase in gross income of forty-four per cent.

MICHIGAN CROP REPORT.

Wheat.—The condition of growing wheat as compared with an average per cent is 84 in the state, 83 in the southern counties, 81 in the central counties, 89 in the northern counties and 93 in the upper peninsula. The total number of bushels of wheat marketed by farmers in October at 75 flouring mills is 150,315 and at 75 elevators and to grain dealers 127,536 or a total of 277,851 bushels. Of this amount 182,718 bushels were marketed in the southern four tiers of counties, 62,772 in the central counties and 32,361 in the northern counties and upper peninsula.

The estimated total number of bushels of wheat marketed in the three months, August-October, is 1,350,000. One hundred mills, elevators and grain dealers report no wheat marketed in October.

Corn.—The estimated average yield per acre of merchantable corn in bushels is 15.11 in the state, 13.15 in the southern counties, 13.58 in the central counties, 13.16 in the northern counties and 9.17 in the upper peninsula.

Clover Seed.—Per cent of acreage harvested as compared with average years is 58 in the state, 59 in the southern counties, 49 in the central counties, 71 in the northern counties and 68 in the upper peninsula.

Beans.—The final estimated average yield per acre in bushels is 6.89 in the state, 6.85 in the southern counties, 7.04 in the central counties, 6.72 in the northern counties and 8.13 in the upper peninsula.

Potatoes.—The estimated average yield per acre, in bushels is 98.41 in the state, 102.85 in the southern counties, 85.93 in the central counties, 87.95 in the northern counties and 143.53 in the upper peninsula.

Commercial Fertilizers.—The per cent of farmers who have used commercial fertilizers on their wheat this fall is 42 in the state, 49 in the southern counties, 38 in the central counties, 17 in the northern counties and seven in the upper peninsula.

Live Stock.—The average condition, in the state, of horses is 96, of cattle 92, of sheep 97 and of swine 93.

Grain and seed threshed in Michigan up to and including October 6, 1917, as per returns of threshermen, is as follows:

	Acres.	Bushels.	Yield per acre Bu.
Wheat	661,335	11,940,859	18.06
Rye	281,569	3,960,594	14.07
Oats	997,201	36,105,208	36.21
Barley	106,972	2,856,998	26.71
Buckw'ht	6,567	68,081	10.37
Peas	7,892	83,985	10.64
Tim. seed	1,278	6,666	5.22
Clover Seed:			
June	513	974	1.90
Mam'th	1,708	3,701	2.17
Alsike	3,004	9,880	3.29
Beans:			
White	772	5,813	7.53
Red kidney	3	14	4.67
Br'n sweets	17	129	7.59



Jolie Topsy De Kol, H. F. 149723
Age 5-11-12 (City of Cleveland, Owner)
Semi-Official Year Test
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Every breeder knows Ajax Flakes (made exclusively by us for years.) Conditions forced us to withdraw it from the market except as one of the ingredients of Unicorn. You will find Unicorn equally efficient as your ration or ration base.

If you have good cows that you want to make even better

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With an average cow we guarantee a reduction in the feed cost of you milk. Give them a chance - if fed right with Unicorn Dairy Ration they will surprise you.

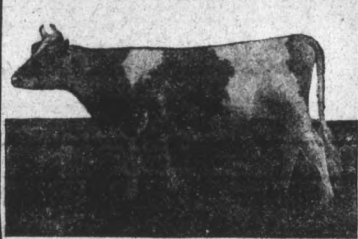
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Abbie of Riverside,
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14201 lbs. Milk 5.72% 813 lbs. Fat



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Fish meal at \$7 a ton less than beef scrap proved to be a good high-protein feed, which can be used to advantage to replace beef scrap. The fish meal

did not in any way affect the flavor or quality of the eggs.

General-purpose fowls allowed to select their own mash constituents ate a dry mash containing about sixty-three per cent corn meal, nineteen per cent beef scrap, nine per cent bran, and nine per cent middlings. Leghorns ate a mash of about sixty-six per cent corn meal, twenty-six per cent beef scrap, and four per cent each of bran and middlings. No better results were obtained by this method of feeding than where the ground grains were mixed together in a mash.

Good mashes, as indicated by these experiments, may be made of sixty-six per cent corn meal, twenty-six per cent beef scrap, and four per cent each of bran and middlings, or two pounds of corn meal and one pound each of bran, middlings, and beef scrap, with a scratch feed in each ration of equal parts by weight of cracked corn, wheat and oats, which is fed so that the hens receive about equal parts of scratch feed and of mash.

The Cost of Egg Producing Feeds

Starting with six pens of thirty pullets each, the test was enlarged to include sixteen pens containing 366 fowls. Most of the pens were made up of thirty standard-bred pullets, bred and reared under the same conditions and selected for vigor, standard shape, and color. Some flocks consisted of fowls of one breed while others contained more than one kind of pure-bred fowls of the general-purpose type. Pens of cross-bred pullets also were used.

With the exception of three flocks which were confined to good-sized yards, all the fowls were allowed free range over several acres of rough land. Detailed records were kept of the feed used, the weight of the eggs, and careful observations were made of the conditions which affect egg production, such as molting and broodiness. The test was conducted on the experiment farm of the Bureau of Animal Industry, at Beltsville, Maryland. Summarizing the results of the tests, the specialists draw these conclusions:

Conditions of Test.

The average egg yield for the first laying year in all pens was 131 eggs, and the highest pen average yield was 169.5 eggs. In the second year the average egg yield of all pens was 92.7 eggs, which decreased to 78.2 eggs in the third laying year.

The average value of eggs over feed cost the first laying year was \$2.56 per hen, falling to \$1.41 the second year, and to \$0.79 the third year. The highest average value in any pen was \$3.41.

Amount of Food Consumed.
The general-purpose fowls consumed annually seventy-two pounds of feed which cost \$1.31, while the Leghorns ate 55 pounds, which cost eighty-seven cents.

Good results were obtained with rations, both with and without oats. The use of this grain added variety to the ration without increasing the cost.

Fowls not fed any scrap or other animal protein laid only ninety eggs during their pullet year, compared with 137 eggs from the beef-scrap pens, and eighty-four compared with eighty-three in their second year. The eggs of the no beef scrap pens cost about 2.2 cents per dozen more to produce the first laying year, but these costs were about equal during the second year. The fowls not fed beef scrap laid very poorly in winter, thus materially reducing the value of their eggs.

Cottonseed meal used in place of beef scrap as a high-protein feed in the ration produced brown or greenish spots on the yolks of the eggs, especially in warm weather, making a considerable proportion of them unfit for market. Eggs were produced more cheaply and at a considerably greater profit on the beef-scrap ration.

Present conditions point to a continued advance in the price of poultry products sufficient to justify greatly increased hatchings the coming season in spite of the high price of feed. Prices for poultry products of all kinds have advanced steadily with the advancing cost of feeds, so that the margin between the cost of production and the farm selling price is as great or greater than usual.

The Leghorns on free range gave a considerably greater egg yield than those confined to a fair-sized yard. This difference was less marked in the general-purpose hens.

Green Feeds.
Sprouted oats fed as green feed to hens confined to yards cost about ten cents per hen a year and one cent per dozen eggs, not including any charges for labor and equipment. The hens ate on an average in one year about 1.3 pounds of oyster shell and 0.7 of a pound of grit, which together cost about one cent per hen.

The Leghorns did not lay as well in the winter as the general-purpose breeds, especially during their second year, but the Leghorns produced eggs about three cents per dozen cheaper during their first year, 6.4 cents cheaper in their second year, and 9.8 cents cheaper in their third year than the general-purpose breeds. One pen of Leghorn pullets produced eggs in their first year at a feed cost of 6.7 cents per dozen, while the value of the eggs per hen for the year was \$3.41 over cost of feed.

The average weight of a dozen eggs from the general-purpose fowls during their pullet year was 1.53 pounds, 1.60 during their second year, and 1.63 during their third laying year. The eggs from the Leghorns averaged 1.45 pounds during their pullet year, and 1.49 during their second and third years.

Pullets Lay Best.
The egg production of the general-purpose fowls decreased thirty-two per cent in their second laying year. The decrease was considerably less in the Leghorns, their two-year average egg production exceeding that of the general-purpose breeds by nineteen eggs. The decrease in production from the second to the third year was only four per cent with the Leghorns, compared with thirteen per cent in the general-purpose breeds.

The cheapest eggs are produced in the spring, during April, May and June, while the greatest costs occur in October, November and December. The lowest monthly feed cost of a dozen eggs in any of these experiments was four cents, while in some cases no eggs at all were produced during the month.

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Stock always for sale. May Rose Strain—Herd Tub-
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GUERNSEYS, must reduce herd, so offer a few choice
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REG. Guernsey bull 2 years old, prize winner, a few
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These animals are all very
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100 Registered Holsteins 100

For Sale—Nicely marked 7 mos. old bull. Sire
Dutchland Colantha Winona Lad No. 114067, Grand
Champion Bull at Michigan State Fair 1917. Dam
a 19.2 lb. Sr. 2 yr. old. She produced in first four
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R. Bruce McPherson, Howell, Mich.

REG. HOLSTEINS: Herd headed by Albina Bette
Butter Boy No. 93124. Dam's record at 6 yrs. butter
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HOLSTEIN BULL CALF. Fine individual, four
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"Milk production is an inherited ability. Good cows
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Here is a young bull with inherited ability, and rare
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Butter 7 Days	33.62
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His Sire's Sire's three nearest Dams average 38.87 (including a junior three and senior

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Almost 30 lbs. Price low for this quality.

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From heavy producers all will average

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Herd Sire

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Registered Holstein cows & bull calves fine individu-

als cows safe in calf satisfaction guaranteed.

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Holton, Mich.

Reference: Old State Bank, Fremont, Mich.

Flint Maplecrest Boy sire in service

His sire is Maplecrest Korndyke Pengerveld, his 3

Nearest Dams each over 30 lbs. of butter in 7 days.

His dam and grand dam both made over 1232 lbs. of

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Gluck Vasser Bell, 30.57 lbs. of butter in 7 days and 120

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We have Bull Calves from 2 weeks to 8 months old for

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Write & tell us the kind of a bull you want.

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For Sale Holstein Bull Calf

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G. son of the well known Heng. DeKol. Calf's sire's dam

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sire's dam is 31.94 7 da. Dam's dam 16 lb. at 24 mo. Dam

is average 54 lb. da. at two milkings, as 3 yr., is tuber-

culin tested and has 20 lb. sister, calf ¼ white. Price

right. NATE TODD, Clarksville, Mich.

REG. Holstein Bull Calf. The last one until winter.

a good one with A. R. O. backing. Write for ped-

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FOR SALE One registered Holstein bull calf. Sire's

twenty nearest dams have 7 da. records av. 25.53 lb.

butter. Dam to be tested. A finely marked, growthy

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FOR SALE, Reg. Holstein bull calf born Sept. 15.

Half white, in show form. College Sire, A. R. O. dam

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2 CHOICE Holstein bulls nearly old enough for

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grand-dam and great-grand-dam's semi-official records

average 342 lbs. butter. Dam of calf 15 lbs. butter 7 days

as senior 2 yr. old, average per cent fat 4.3. No. 2 Sired

by 23 lb. bull and out of a 14 lb. junior 2 yr. old.

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Holstein Bull Calves from a 30 lb. 6.53 8 Sire. Dam

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We have Friend Hengerveld De Kol Butter Boy
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Consisting of 90 Head Registered Holstein
Cattle. One of the finest herds of central Mich-
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Both sexes either polled or horned. E. H. O.
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His four nearest dams average over 600 lbs. of butter
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Ready for service. Raleigh—St. Lambert breeding.
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FOR SALE 2 yr. old bull out of a R. of M. dam record
539.8 lb. butter in one yr. sire Majesty's Wonder a
R. of M. sire with 10 daughters in the R. of M.
Write FRED A. BRENNAN Sec., St. Clair Co.
Jersey Cattle Club, Capac, Mich.

FOR SALE—Maple Lane R. of M. Jersey Herd R. of M.
cows and their daughters all records 500 and 600 lbs.
For sale bulls and bull calves out of the cows.
IRVIN FOX, Allegan, Mich.

The Wildwood Jersey Farm

offers for sale choice young bulls from R. of M. dams,
good enough to head any herd. We invite inspection.
ALVIN BALDEN, Capac, Mich.

FOR SALE

Registered Jersey bulls,
ready for service.
SMITH and PARKER, R. 4, Howell, Mich.

Shorthorn Cattle of both Sex for Sale

W. W. KNAPP, Howell, Michigan.

FOR SALE—Reg. Short Horn Bulls by Maxwalton
F. Monarch 2nd, a son of Avondale, from 1 to 12 mos.
old. John Schmidt, Reed City, R. No. 5, Michigan.

BIDWELL SHORTHORNS

For Beef and Milk.

5 Bulls ready for service, 15 months to 2 years, for
sale; also good Scotch-topped cows and heifers. Mod-
ern, sanitary equipment. One hour from Toledo,
Ohio. N. Y. O. R. Y. Visitors Welcome. Write us.

BIDWELL STOCK FARM

Box B, Tecumseh, Michigan.

Shorthorns—Dairy or beef bred. Breeding stock all
ages for sale at farmers prices. C. W. Grum,
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SHORTHORNS Maple Ridge Herd, Estab-
lished 1872. No stock for
sale. J. E. Tanawell, Mason, Michigan.

Shorthorns for sale, 5 bulls Scotch top 10 to 14 mos.,

3 roan, 1 white, 1 red, price \$150. to \$250. 1 son of Max-

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Bates Shorthorns the original milk strain young

bulls 8 mos. old for sale. Price

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Registered Shorthorn Bulls 12 to 16 mos.

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Shropshire sheep. W. J. Leaster, Belding, Mich.

Milking Shorthorns—Bull calf 5 mos., by a Grand-

son of General Clay, dam by a son of General Clay,

\$150. A few females. S. E. BOOTH, Morrice, Mich.

Registered Shorthorn calves sired by Diamond King

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WM. J. BELL, Rose City, Mich.

For Sale Shorthorns Bulls 6 mo. to 2 years old

from good milking cows.

R. R. Clyde Station, H. J. DeGarmo, R. 6, Milford, Mich.

Shorthorns both sexes, herd cata-

logue mailed free.

CHARLES R. HORRIS, Hart, Mich.

SHORTHORNS Butterfly Sultan, half brother to

International Sr. Champion, in service. For good

bulls, cows, and heifers. W. B. McQuillan, Howell, Mich.

Cattle For Sale

2 Loads feeders and two loads yearling steers. Also

2 can show you any number 1, 2 and 3 years old from

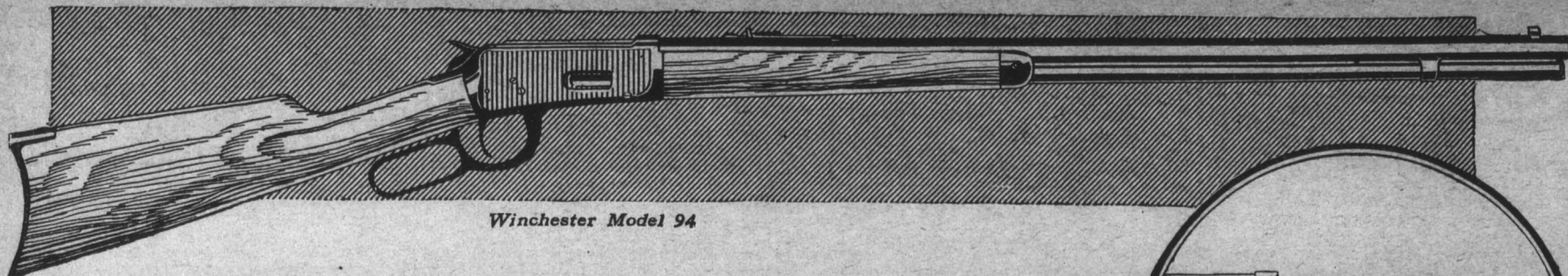
600 to 1200 lbs. Isaac Shanstun, Fairfield, Iowa, R. 3.

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SWIGARTDALE

BERKSHIRES

We are offering a few very desirable
gilts and boar pigs. All will be of good
size for breeding and service by Dec-
ember 1st. Though we have not pushed
them they have made about 1 lb. per
day for their age.
We do not claim to have the cheapest



Why Sportsmen choose the "94"

The Winchester Model 94 repeating rifle is chosen by more sportsmen than any other because of its wide variety of uses.

The Model 94, as nearly as any rifle on the market, is an all-'round rifle.

Deer hunters choose it because it is a sure game-getter within the range that most shots at deer come.

Campers and canoe hunters take it because it is accurate even for birds, makes very little noise, and will stand all sorts of rough handling.

New shooters prefer it because of its lightness and very slight recoil.

Farmers demand it because they can get it in the exact caliber they need, at a low price, and can buy the ammunition for it anywhere that firearms are sold.

Because of this wide adaptability the Winchester Model 94 is the gun for the one-gun hunter; but for the same reason it is also a great favorite with sportsmen who own many guns.

The Winchester Model 94 is furnished in a great variety of styles, in five different popular calibers, (.25-35 and .30 Winchester, .32 Winchester Special, .32-40 and .38-55 cartridges), and in an extra lightweight model (weight about 7½ lbs.). For the high power cartridges this rifle is fitted with a nickel steel barrel.

The barrel is the gun

Men who know guns realize that the accuracy and durability of a

rifle lie in the barrel. On the quality of the barrel depends the quality of the gun. There is absolutely no difference in the standard of quality of the barrels on the highest and lowest priced Winchester guns. With Winchester the barrel is the gun and the single standard of quality has been attained only by the most unremitting attention to the boring, finishing and testing of the barrel.

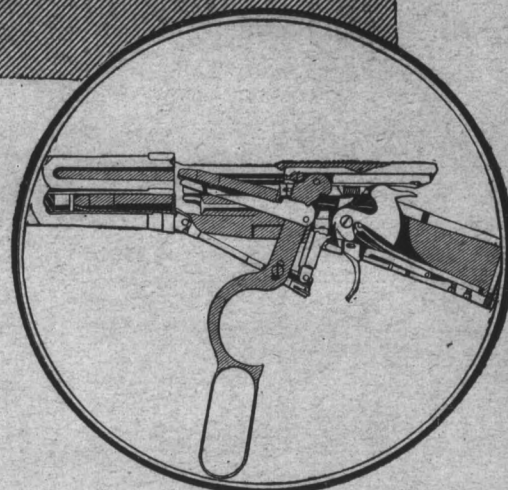
The Winchester barrel

The barrel of the Winchester Model 94 has been bored to micrometer measurements for the cartridge it is meant to shoot. In rifling the barrel, the exact twist that is necessary to produce the best results with a given cartridge has been mathematically calculated and is verified by exhaustive practical tests before leaving the factory.

A bullet fired from a Winchester barrel spins point on with unerring accuracy to the limit of its range. The Bennett Process, used exclusively by Winchester, gives the Winchester barrel a distinctive blue finish that, with proper care, will last a lifetime.

What  means

This mark on the barrel means *Viewed and Proved Winchester*. This stamp stands for Winchester's guarantee of quality, with 50 years



Strong, smooth action, few working parts of the Model 94

of the best gun-making reputation behind it.

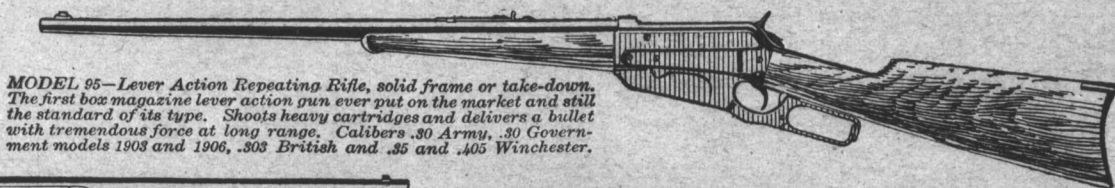
Every rifle that bears the name "Winchester" and that is marked with the Winchester Viewed and Proved stamp has been fired many times for accuracy and smooth action, and with excess loads for strength. At every stage of Winchester manufacture, machine production is supplemented by human craftsmanship. It is a *test and adjustment process*.

It is this thoughtful care in manufacturing that has produced in the Model 94 a rifle of unsurpassed game-getting qualities and that has made it the favorite with hunters the world over.

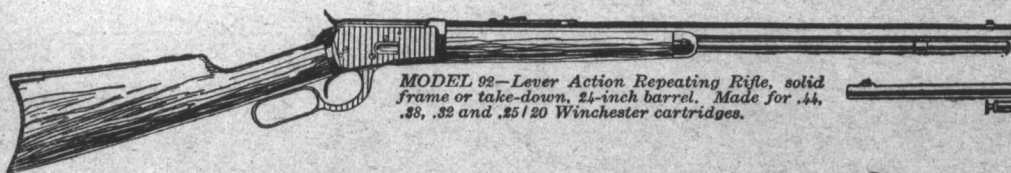
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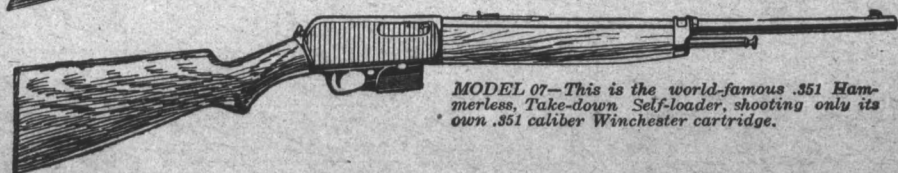
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MODEL 92—Lever Action Repeating Rifle, solid frame or take-down, 24-inch barrel. Made for .44, .38, .32 and .25/20 Winchester cartridges.



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MODEL 10—Hammerless Take-down Self-loading rifle. Shoots only its own Winchester .401 caliber cartridge. No rifle made equals the Model 10 for delivering five as powerful blows in as few seconds.

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