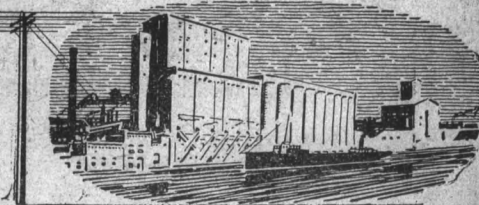


The Michigan **BUSINESS FARMER**



An Independent
Farm Magazine Owned and
Edited in Michigan



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Merry Xmas



"Will a Gasoline Tax Solve the Highway Problem," *by Horatio Earle.*

"Creeping Jenny,"

A Complete Christmas Story, by Kate Douglas Wiggin.

"Dr. Friday Sets the Price of Milk at \$3 for December."

"Historical Background of Michigan Agriculture," *by L. D. Chase.*

"The Hunted Woman,"

A continuation of the story by James Oliver Curwood.

"Complete Plans for Building a Lime Spreader."

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Will Gasoline Tax Solve the Highway Problem?

Horatio S. Earle, "Good-Roads" Earle, the Pioneer Fighter for Improved Highways in Michigan says,
"A One Mill Tax on Property is More Equitable"

HOW shall we maintain the highway budget? By a one mill tax on all property of the State of Michigan. Then the Highway Department will not have to go to every session of the Legislature and beg for money. We take care of the University of Michigan in that way to educate the rich; and then you propose to exempt the rich from paying taxes on their property to build and repair the roads that make it easy to get to church, school, library, and last, but not least, to your neighbor's sitting room and dinner table.

If there be those who do not want to pay taxes on their property then let them sell or give it away.

Every specific tax is a robbery; it exempts some from paying their share of the cost of running the state, and it robs others to do it for them. The corporation tax robs the small corporation, and to that extent exempts the large corporation. If Henry Ford paid the same rate of corporation tax that the small corporation does, he would pay ten times as much as he now has to pay, so the Legislature that enacted that law was working for Henry Ford, but was not on his payroll.

Toll roads again proposed, instead of collecting at the toll gate, collect at the gasoline tank; going back to pioneer times. One man centuries ago won fame for himself by leading the Israelites out of the wilderness; now we have a plan to lead us back into the toll road woods. There is not one iota of justice in a gasoline tax, for instance: take the man who works for Henry Ford and who will use one gallon a day; he will pay one cent tax, while Henry Ford who will possibly use five gallons per day and pay five cents tax. Yet Henry Ford is worth one million times as much as the man who pays one-fifth as much taxes to maintain the highway budget as does Henry Ford. This is nothing less than class legislation, taxing the poor and exempting the rich.

A gasoline tax collecting department will have to be instituted where scores of political proteges, who are not wanted at home will secure positions at the expense of the poor who have to pay them greater salaries than the poor get for their services. I cannot blame those who are working for the gasoline tax, for they know that it will relieve some manufacturers of Michigan and place the burden which they should be willing to share onto the automobile industry. I say this burden would be placed on the industry, because whatever hurts your customer in the end hurts the producer.

I do not say this for my own personal benefit, for I own sufficient property in the State, so that it would be much to the benefit of my own pocketbook to place a tax of ten cents per gallon on gasoline and so reduce the taxes which I have to pay, and which I am willing to pay on my own property. But you say the poor farmer is the one whom we are trying to relieve; that is your excuse, but not the real reason, and you know it. I am a farmer and I own five times as much farm land as does the average farmer, and I pay fifty times as much taxes as the average farmer pays, yet I protest against robbing the poor to relieve me of my just share of the expense of running the State, and I consider the roads as second only to the schools of the State. I do not favor relieving me of my share of the taxes and make the men pay them who work for me. I'll pay my own.

Ninety per cent of the automobiles

"My pocket book says put 10 cents a gallon tax on gasoline: but my sense of justice says put a one mill tax on my property to maintain the highway budget."—Horatio S. Earle.

of the City of Detroit do ninety per cent of their running on Detroit pavements, toward the building and repairing of which the State does not contribute one dollar; yet you propose to tax them for wearing out the roads.

Seventy-five per cent of the truck hauling of the state is done over city pavements; yet you propose to tax them for wearing out the roads. Who is making the most money on the load that is being hauled by the truck, the truckman, or the producer and the consumer?

I am always looking for woodchucks in the affairs of Government, and I can see the railroad woodchuck in this proposition, using the farmer as an excuse to make hauling more expensive so that they can get back the short hauling to do, which they never did and never will handle to the satisfaction of the shippers.

They contend that the roads being built by the taxpayers and given to the truckman over which to haul without cost is a hardship for the poor farmers, when they mean themselves; but they never say a word about how that every town through which their railroad runs bonded for enough to build the railroad thru that town; they think that was so long ago that it has been forgotten. But if they can get exorbitant taxes levied onto the truck industry, created by robber freight rates, and—"the people be damned" policy of

Wm. H. Vanderbilt, that their rates will be satisfactory.

One in every three of the adult population of Michigan owns some kind of an automobile, and let me predict that the old saying "the goblins'll get you if you don't watch out" will be changed to read "the automobile will get you if you enact a gasoline tax," and if you do they will elect the next Legislature and the next Governor, and they will repeal the gasoline tax, and place a one mill tax on the statute books of the State which will give to the State Highway Department six million yearly, and which, with the automobile license money, will be sufficient, with the National aid, which we will get to take care of the highway budget without turmoil every two years about it.

"Let well enough alone," is what I think the State better do, put no more taxes onto the automobileists who are already paying five per cent, or double the tax on anything else except booze, and the bootlegger collects that and invests it in real estate and you propose to exempt him from paying back some of the profits he has made. It would be as sensible to tax the school marm for the expense of running the schools, as to tax the men who work for me, running my businesses, and the truck owner is working for me when he is hauling my product to the consumer. Who is making the most money,

—the truck man or me? Exempt the cement manufacturer and tax the truck owner who hauls the cement to the road. Exempt the gravel producer and tax the truck owner who hauls the gravel to the road. Which of these is the best able to pay the taxes to maintain the highway budget?

Remember that the most costly roads to build are those built of concrete (Portland cement concrete, or asphalt concrete) and the least expensive to repair; also, that one sharp-shod horse going over these kinds of roads does more damage than one thousand automobiles; yet you say we are going to tax the ones that wear out the roads. In reality you are exempting the horse owner and taxing the city's automobiles, the widow's washing machine, the farmer's pumping system, the farmer's tractor, the clothes-cleaning establishments, motor boats, aeroplanes, and hundreds of other things that never touch the roads.

Away! Away with all this foolishness! Place a one-mill tax on all real estate and personal property of the State and maintain the highway budget. I challenge the gasoline tax advocates to go to the legislature and ask them to submit two propositions to the voters at the April election: One—the gasoline tax. The other,—a one-mill tax on all property of the State to maintain the highway budget, and, as goes election, so goes Earle.

Editor's Note—This is not a "private fight," anyone can get in who will furnish facts. This support of improved highways is a big issue and The Business Farmer will continue to print both sides, so that the farmer may decide for himself.

Dr. Friday Sets the Price of Milk at \$3 for December

DR DAVID FRIDAY, president of the Michigan Agricultural College, at East Lansing on last Friday handed down his decision as to the price which distributors in the Detroit area should pay the producer for his milk during the month of December and thus raised the price to the consumer one cent per quart.

Under the ruling made by Dr. Friday, producers will receive an increase of 40c a hundred pounds and distributors are authorized to add the increase to the retail price, advancing the retail price from 13 to 14 cents a quart. The producers who have been receiving \$2.60 a hundred pounds, demanded \$3.20, and Dr. Friday's decision gives them \$3, an increase of 40 cents a hundred pounds.

Offered to Give \$2.75

When representatives of the producers and distributors gathered in Detroit last Wednesday to agree on the price, the producers said that increased costs made an advance in the wholesale price necessary, and asked that the price be raised to \$3.20. The distributors refused to agree to this demand, and offered to pay \$2.75, and not raise the price of milk to the consumer.

The producers rejected the increase offered, insisted upon the \$3.20 price, and named a committee composed of N. P. Hull, of Lansing, president of the Michigan Milk Pro-

ducers' Association, and C. E. Gittins, attorney, of Detroit, to meet with the committee of distributors composed of W. J. Kennedy, of the Detroit Creamery Company, and Lee Henry, of the John Schlaff Creamery Company, Detroit, to settle the controversy.

Dr. Friday Chosen

The two committees could not agree, and Dr. Friday was unanimously chosen as arbiter, with authority to fix the price.

Dr. Friday, in reporting his decision, said that all dairy commodities have increased in price, and cited the fact that the retail price of milk recently has been increased to 14 cents a quart in New York, Cleveland and other large cities. A shortage of milk, which always prevails at this season of the year, was given by Dr. Friday as the chief reason for authorizing the increase.

"There is no question but that the farmers are entitled to more money for the milk," Dr. Friday said. "They have it coming. The question is whether the dealers can pay the increase without raising the retail price."

"They claim they can't. There is no way of knowing whether the spread between their price to the farmer and the price to the consumer is too great without an investigation of the business and an examination of their books. Pending such an in-

vestigation, I favored the increase. It seemed the only way to give the farmer more money.

"There are 46 quarts in each 100 pounds of milk. The increase of 1 cent will yield 46 cents. Of this the farmer will receive 40 cents, and the driver of the milk wagon 6 cents.

Boost is Justified

"Because of the increase in the Detroit demand, and the normal shortage at this time of the year, the boost in price is justified on strictly economic grounds."

"If the spread between the farmers' price and that paid by the consumer is too great, then the increased retail price is unfair. The dealers and farmers plan to investigate this, and Prof. King and myself may do the job. Prof. King, a graduate of the University of Michigan, fixed the milk price for Philadelphia."

"If we do it, and we find the price too high, then it will be decreased the first of the year."

Dr. Friday estimates that the boost of 1 cent a quart will mean \$90,000 to the farmers for December.

The Business Farmer believes that Dr. Friday made a manifestly fair decision in view of the fact that the milk price in other cities of equal magnitude has been set at 14c for the month of December. We assume that he means by this that the producers in the New York, Cleveland and other large city areas are receiving \$3 per hundred for their milk which costs the consumer 14c a quart, if not, then there would be just cause for dissatisfaction on the part of our milk producers.

"The Truth About Henry Ford"

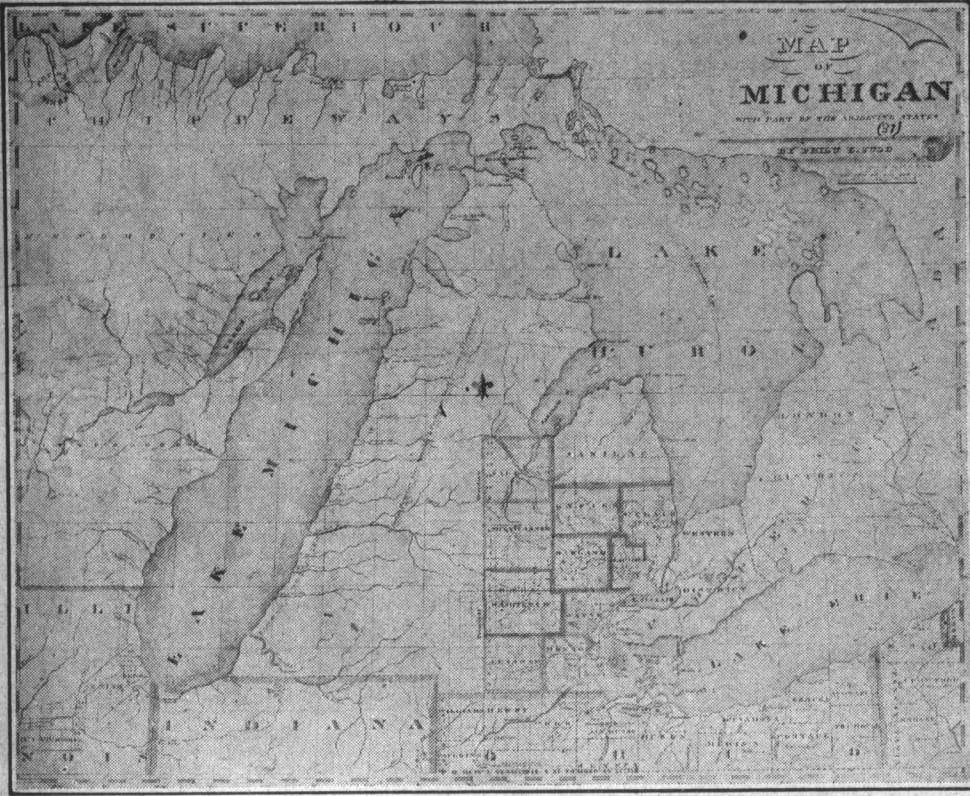
The Complete and Authentic Life History of Michigan's most interesting citizen begins in our next issue—see page 8.

Historical Background of Michigan Agriculture

First Publication of a Short, Clean, Historical Outline of Rural Life in Michigan

By PROF. L. A. CHASE

Head of Department of History, Northern State Normal School,
Marquette, Michigan.



Reproduction of an old map, of Michigan Territory in 1824, when only the counties of Monroe, Lenawee, Wayne, Washtenaw, Macomb, Oakland, Shiawassee, St. Clair, Lapeer, Saginaw and Sanilac had been surveyed. Note the surveyor's curious conception of the balance of Michigan and Chippeways (the Upper Peninsula.) Photographed at the Michigan State Library, Lansing, especially for the Business Farmer.

MICHIGAN agriculture and rural life began in an environment of forest, lake and stream, of climatic and soil conditions, that have deeply influenced the course of their development from first to last. Much of the southern portion of the state bore a forest cover of hardwoods—beech, maple, elm, oak, hickory, ash and other characteristic trees of this latitude—while to the northward, especially beyond the line of Saginaw Bay and Grand River, was the great pinery of the state, dominating the sandy ridges and occasionally taking possession of areas of clay where, by all rules, the species had no right to be. Still farther north, in the Upper Peninsula, hardwoods and pines alternated and sometimes commingled, even to the Lake Superior shore. The first farmers of the state had the option of taking possession of land on one of the rather numerous small prairies, or "oak openings" which were characteristic features of the South Michigan landscape, due, chiefly, it is believed to the practice among the Indians of periodically burning over considerable tracts to drive out the game. Some settlers, however, were attracted to the areas densely forest-covered, on a theory that, where such a splendid growth of trees had taken place, there the soil must be superior in quality; and after a generation or so, only forested lands were left and must be entered upon and cleared if farms were to replace the forest primeval.

The pioneer fiercely assailed the forest since it stood between him and those products of the soil upon which his existence mainly depended. With axe and flame the warfare was waged year after year, and the forest slowly but surely receded and became only a memory save where the farm woodlot preserved it in miniature for such services as it might render or just for sentiment's sake. The passing of the great forest is not pleasant to think upon, yet the forest had to go if agriculture and a vigorous rural life were to exist in Michigan.

Nevertheless, the pioneer's welfare was closely associated with the forest. The forest yielded building material and fuel. It restrained the fierce blasts of winter. It tempered the heat of summer. It steadied the flow of streams and gave logs and timbers for the construction of mill-dams that would afford power for the operation of grist-mills to grind the farmers grain and saw-mills that turned logs into lumber. Many articles of household use and many implements used on the farm came mainly out of the forest. Short logs, hollowed out,

served as sap-buckets and other containers, and longer logs similarly treated made troughs and conduits. Two wooden rods joined by a thong made a flail that threshed the farmer's grain, while handles of all sorts were almost ready made on demand. Stools, and tables, beds and whatever furniture the rude conditions of pioneering required, with little fashioning, were derived from the same source. The farm-house itself, rose log upon log, with floors of puncheons and roofs of shakes, with doors hung on wooden hinges and fastened with a wooden latch, with wooden chimney chinked with clay—the whole building held together with wooden pegs and pins, without a nail, a bolt or screw or anything else wrought of metal,—the gift of the forest. A little searching in the forest revealed some shape of branch or tree-trunk that, with little improvement, would serve as neck-yoke or whiffle-tree, an "A"-drag or plow-beam, well-pole or sled-runner. A disc cut from the end of a well-rounded log on occasion served as wagon-wheel and the entire log as a land-roller. With some skill, staves for barrels, buckets and kegs, with the hoops that were to bind them together, were wrought at home on winter evenings. The

characteristic excellence of each species of tree were known and determined the uses to which each was put. If the forest gave the pioneer farmer of Michigan a battle for existence that the prairie farmer was able to avoid, the forest also rendered many indispensable services, for even the people of the western prairie were glad to import at considerable expense forest products from Michigan, but they lacked the convenience of having a forest close by to draw upon for their necessities.

The forest also provided food in many forms. The sugar maple thrives in all sections of the state—close to

animals fit for food, abounded in the forest—even to a greater extent, it is claimed, in the second-growth of the forest than in the forest primeval because of the better cover thereby afforded. The red-deer, the rabbit and squirrel, the partridge, pigeon and wild turkey, water fowl and fish in profusion were available to the frontier settler of Michigan; while his domestic stock got nutriment from the same source. In time of drought the brush was good to browse upon and in winter the tops of felled trees were quite as serviceable. Pigs were fed on the mast of the forest floor, although it is said that they did not always fatten thereon. It used to be said in Lenawee County that these mast-fed pigs were so thin that it became necessary to tie knots in their tails to keep them from slipping out between the rails of the fences. All in all, the forest, vast and lonely, even threatening and appalling as it seemed to be, conferred upon the early farmers of Michigan many favors, if also many days of toil.

Forest Fires of Value

Even in its ashes it bestowed its benefits. They stimulated the productivity of the soil for a time, and they yielded lye and salaratus use-

ful in the manufacture of soap and in cookery. The forest afforded work to part time farmers, needing an immediate money income from employment as a lumberman or from the sale of forest products, and its presence led to the establishment of wood-using factories for the manufacture within the state of agricultural machinery and implements. Between forest and farm in Michigan, there has always been a very intimate relationship. The forest litter deposited on the surface of the land gave humus to the soil, at points otherwise too light and sandy to be favorable to vegetation, and the removal of this litter and humus by fire has been doubtless a potent cause in rendering certain portions of the state unfit for agriculture. The abundant vegetation partly decomposed, collected in the water courses and in the beds of lakes, gave the state those areas of muck and peat lands that have strongly influenced agriculture in particular portions of Michigan.

Natural Waterways

The waterways were also of some importance in early agriculture. There are occasional references to farm products going by river to market in sections where road or railroad transportation was not yet available, and even now there are isolated farming communities along the shores of the Great Lakes, which make use of boats rather than wagon or car for getting their marketable commodities to outside shipping points. In the pioneer period, swamps and marshes often proved formidable obstacles for interior travel and communication, and because of them, we frequently come upon accounts of the manifold trials and tribulations which beset all those whose business would not permit them to remain at home. In distance and in traveling-time mills and markets were usually far away and often the better part of a week was required in making the return journey. Oxen very likely hauled the loads of wheat and flour, of lumber and such human freight as chose to ride under conditions, where to walk or go forward on horseback might be the lesser of the two evils. Streams were for the most part unbridged and fords were worth knowing about.

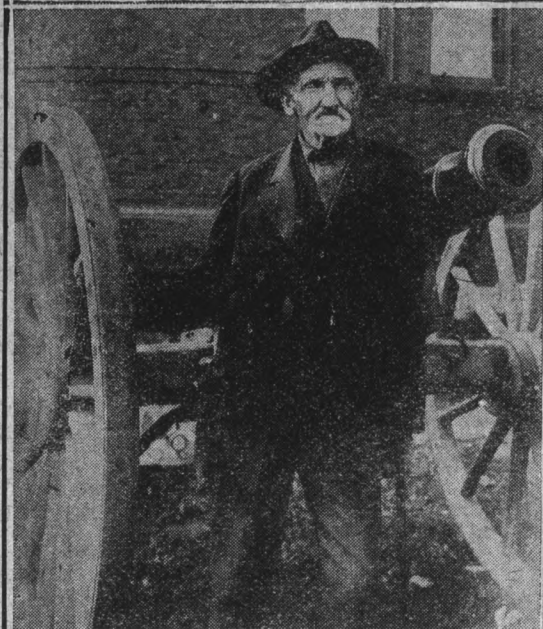
The marshlands begat mosquitoes which were troublesome enough on their own account, but they also

(Continued on page 16)



Typical pioneer clearing in heavy timber, 1824. "The farm-house itself, rose log upon log, with floors of puncheons and roofs of shakes, with doors hung on wooden hinges and fastened with a wooden latch, with wooden chimney chinked with clay—the whole building held together with wooden pegs and pins, without a nail, a bolt or screw or anything else wrought of metal,—the gift of the forest." And the house was only a small part of what the pioneer received from the forest.

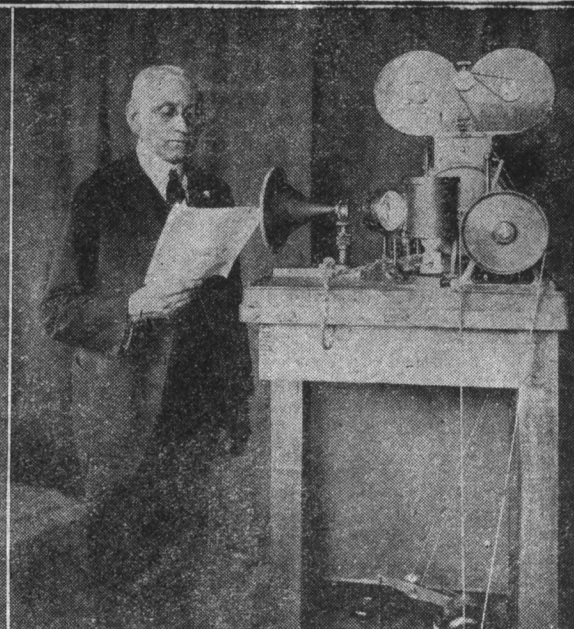
PICTURES FROM FAR AND NEAR



Discovers cannon on which he carved his initials during Civil War. Frederick W. Call of Eastport, Maine, 78 year old Civil veteran, carved his initials on a cannon over 55 years ago. He never expected to see the cannon again but one of the relics of the Rebellion was donated to Eastport and he discovered his initials on it.



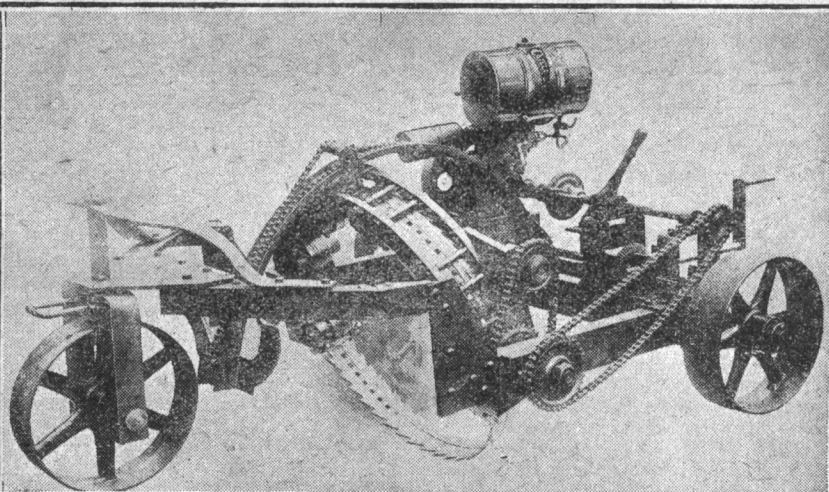
The domino lady of Vienna. Every few weeks Vienna offers a new beauty for the world's approval. This time it is Mlle. Anslag who rules society of Vienna with a smile. Mlle. is not only beautiful, her friends declare, but charming and winsome as well. One look at her picture is enough to convince anyone that they are right.



Have your voice photographed. Charles A. Hoxie of the General Electric Co., is shown here with his new invention with which the human voice can be photographed and reproduced, not as a picture, but as the actual sound of the voice itself. It is known as the Palo-Photo-Phone and will be used to make talking movies a successful reality.



This lady makes toys from tin cans. Miss Dora Forster of New York City, probably has the world's most curious hobby as well as perhaps the most charming one. A jewelry worker by trade she has applied the skill gained at her delicate work in fashioning queer toys of every imaginable design from clocks to tiny locomotives complete in every particular, out of discarded cans and other receptacles of pliable metal. Her work has been so out of the ordinary that it has caused considerable comment at several large art exhibits. She is making a clock above.



A new idea in plowing. Lytle S. Adams of Webster Groves, Mo., is the inventor of a new tractor-drawn device that stirs the ground to a depth of 16 inches and makes possible its preparation for seeding at an incredible speed. The new type of plow substitutes for the straight cutting movement of the old fashioned plow, the rotary movement of the auger. The difference is comparable to that of trying to pull a circular saw through a log by main strength and letting that saw make its way through easily by revolving and cutting its own path.



War's greatest hero receives \$10,000 gift. Through the kindness and charity of the theatre going public in and around New York, Sgt. Samuel Woodfill, greatest hero of the World War, who came to New York to take part in Armistice Day exercises, was presented with a gift of \$10,000 in cash, insurance and a paid up mortgage on his home, at the Palace Theatre, New York, where he attended a Memorial service.



"Gen. Blucher" buried with military honors. True he was only a dog, but "Gen. Blucher" was one of the outstanding heroes of the World War. The war veteran survived shot and shell only to die from the scratch of a stick. The dog, a surrendered German, and later a member of the American forces at Verdun, is being mourned by the men of the 27th New York Division as a "friend and soldier." The police dog was the pet of the 106th field Artillery and for four years the companion of Captain Henry G. Montgomery. He was buried with all military honors.



Makes love to image of wife who left him. Louis Vitale a shoemaker of West End, Boston, Mass., sits all day in his shop, singing and pegging away at his bench, and seated directly opposite him in a chair, fully clothed, is an image of his erring wife, who deserted him seven years ago. On that image which he fashioned with his own hands, he has lavished the love and affection of a devoted husband, hoping that some day she will return.

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"CREEPING JENNY" BY KATE DOUGLAS WIGGINS

Author of "Rebecca of Sunnybrook Farm"

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JENNY LANE lived in a shabby little farmhouse on the BZack Nippin' Road that led from Riverboro to Moderation Village. The house was small and compact and as neat as wax inside, for there Jenny was Master of her fate and Captain of her soul.

Outside, alas, things were different. There was only the shell of a former stable; the shed was tumbling down, and, when rain descended in anything worse than gentle showers, Jenny's "indoors" looked like a syndicate of milk pans, the leaks were so many and the dripping of water continuous.

It had been that way for three years, ever since the autumn that her mother had died; and her father, who had followed his wife in everything, followed her to the grave a month later.

His last words to his daughter had been: "I'm sorry to leave you alone, Jenny, but I'd feel better if only I'd left you shingled. Your mother and me was laying up and laying up ever since we got married. We bought the house and field, paid off the mortgage and gave you good schooling. We are furnished up as well as most o' the neighbors, but when your mother's health got slim and my strength begun to fail, we couldn't seem to get any farther than meat, drink and clothes for the three of us. The buildings couldn't be kept up, that was the long and short of it."

"I know, I know, Father. Haven't I seen how hard you tried?"

"Now I'm on my death-bed," said the old man. "There's money enough in the bank to buy the shingles, but God knows whether you can afford to hire a man to put 'em on, labor's so scarce and so high."

"Don't worry, Father! I don't want your last days troubled with fears about me and the roof. I'm twenty-two and I can earn my living somehow, somewhere!"

"Tisn't so easy to earn your living and keep your buildings shingled too!" sighed her father.

"Maybe not, but I'll do it, in the course of time!" said Jenny stoutly. "I've heard enough, all my life, about shingles; also about clapboards and paint. There isn't a young man in the neighborhood that I'd want to go to church with, but if one of them ever chance to ask me to have him, I'd say, 'Shingle the house and I'll say yes!'"

The girl's father smiled in spite of his pain as he whispered: "Don't be too easy when it comes to bargainin', Jenny! Stipulate first quality cedar shingles, him to buy 'em as well as put 'em on! You're worth it!"

"I shall never have a chance to 'stipulate,'" thought Jenny, as she went to the kitchen to make gruel; and, as a matter of fact, although Jenny was good to look upon, and had an acre of timber land that would bring in something fifteen years later, no lovelorn swain had offered to take her and her leaky house for better, for worse.

Later on there were other reasons why Jenny had no opportunity to "stipulate." The anxious and dreary months went on relentlessly after her father's death, when new misfortunes descended upon her—an accident—unskillful treatment, too long delayed—finally, the loss of a foot—a crutch—eternal lameness. No wonder, as she dragged herself about the house and little garden before she had had time to accustom herself to her infirmity, that Riverboro sympathetically called her "Creeping Jenny." Her nearest neighbor, Mrs. Day, a widow, lived within easy walking distance (it seemed longer when you limped!), and the village itself was only a quarter of a mile away, so she did not lack of an occasional call, the offer of an errand or message, and often a drive to church, made wretched by the difficulty of mounting and descending the wagon, with the added mortification of limping into a rear pew.

Still she kept things together, sewing, crocheting, knitting, sending braided and drawn-in rugs to Boston, selling the butter from the

one cow's milk and the hay from the eight-acre field.

She got "Pollyanna" from the village library and read it faithfully, but she was rebellious and it did her no good. She allowed to herself grudgingly that if she had lost a hand instead of a foot she couldn't have earned her living; but she never got to the point of being grateful that it was a foot, not a hand; she was unregenerate and wanted both.

It was late November now, and even at the end of the month there was a hint of Indian summer in the air, though a soft rain had been falling for many hours. Jenny's side door stood open; there was a pale flicker of sun now and then and she was in the pantry wondering if she could venture to take away some of the milk-pans that dotted the kitchen floor, all of them a third full of drippings from the ceiling.

She heard the swinging of the garden gate and a knock made her take her crutch and limp to the kitchen door.

A good-looking young man, fairly well clad, with his left sleeve hanging in a strange sort of stiffness, raised a shabby felt hat with his right hand and asked:

"Is this Miss Jenny Tane?"

"Yes, sir."

"They told me at the station you were minus a man and might have a few days' work for me."

"Everybody in Riverboro is minus a man, and everybody needs a little

I've been kind of 'adventuring' till I got my peace legs on."

"You couldn't have come to a worse place than Riverboro. There hasn't been an adventure here in a hundred years."

"I don't know about that! I've only been in town half an hour and I've seen a water farm and a lady that runs it to the Queen's taste!"

Jenny laughed again; the sweetest, most tuneful laugh in the world; one that she seldom used nowadays, but had kept over from her long-ago youth. What a droll stranger! and how much more interesting he would be in the intervals of sawing and splitting wood, than old George Gibson.

It is too ridiculous that you should have seen the milk pans and noticed the shingles. I am going to have the roof fixed next spring if I live. Father saved up money for the stock, but—but, I had to use it in a long illness."

"Yes, yes!" interrupted the stranger. "It beats all how that runs through life! You save up money for shingles and then you can't get enough more to put 'em on."

"I'm nearly ready for the second time," Jenny's tone was cheerful and incisive, "but I don't think I have quite enough to pay for labor. Besides, you couldn't, I mean you wouldn't—shingle—could you?"

"Sure I would, and could! You're strong on the subjunctive, aren't you! You've noticed I'm handicapped (I don't have to invent a word, it's all right for my case!). But just you wait and see what I

onds will have to do," she said, with some embarrassment.

"O. K. I've had nothing but 'seconds' all my life. Sometimes I wonder I didn't have a second wife."

"Why didn't you?" The question suddenly popped out of Jenny's mouth without any warning.

"Because I never had a first! Ha! ha!" (He certainly was the most unusual man she had ever met and the most informal on the occasion of a first call. She felt as if she'd been to high-school and singing-school and dancing-school with him.)

The stranger rose from his chair. "I'll 'lime' the 'seconds' for you myself to save expense. Want me to get them for you, since I know a shingle when I see it and maybe you don't? I'll go in to the village, get a boarding place, and come back after lunch for a half-day's work."

"Thank you—that will be very kind."

"I'll pick up the milk pans and empty 'em for you, first. Poor old things! They don't know they're going out of business! Let me look at your ladder, please. A man that works with a woman's farming implements ought to carry a big life insurance!"

Jenny laughed again, joyously. Then, entirely forgetting decorum, she wiped her eyes with her apron and said, "If I only knew what your wages were going to be I'd raise them, you are so funny! The ladder is in the shed. I think it's all right."

He looked about the shed in amazement at its cleanliness and order. "Holy Moses!" he thought, "does that little creature sweep and scrub this place and pile up this wood and kindling, skipping about on a crutch? And us great husky lubbers getting 'order of merit' for doing our duty by the country. Wonder if Miss Jenny Lane's had any medals handed out to her? She can have mine when I get well enough acquainted to give it to her."

Jenny followed him out to the shed.

"Is the ladder quite safe?" she asked.

"Safe as a meeting-house."

"Then, as you go to the village, you'll see twin boys hanging over the gate at the next house. Mrs. Day's. Ask the red-haired freckled one (his name is Alfonso) if he'll come up this afternoon and help you, for five cent. He'll hold the ladder, pick up the shingles or commit any crime if you just tell him that Jenny'll have fresh doughnuts for you and him at supper-time. Don't ask Alfonso, the dark-haired twin; he doesn't like work and doesn't like doughnuts."

"Well," said the stranger, wiping his hand on a potato sack, "I wasn't in the Salvation Army belt when they were distributing doughnuts to the boys and my mouth is fairly watering for one. My name's Rufus Holt, of Lawrence, Kansas." Here he held out his hand which Jenny took, stunned by the suddenness of his action. "I'm your hired man till this roof is fixed. You look to me like a grand little boss. I'll be back in an hour and I hope I don't get Alfonso and Alfonso mixed!"

"Creeping Jenny" has a method all its own of making its way upward and onward, silently, smoothly under and over, betwixt and between obstacles. The slender little green vine climbs, not so much with strength, as with swiftness and grace, and accomplishes its growth in a miraculously short space of time. You can leave your garden rake against the barn door some warm night, and next morning Jenny will have crept up to the top of the handle, leaned over and flung down a few fragrant blossoms here and there just to give you a hint of Nature's magic.

By a like process and another sort of magic, Jenny Lane crept into Rufus Holt's heart, which was a big lonesome one, howling with emptiness, at the time he began shingling her house. They came to know more of each other as the days went by. He and she, with Alfonso, ate luncheon together on the shed bench so

Here is a Complete Christmas Short Story

SO good that you ought to read it some evening when the whole family can gather around the hearth and enjoy it together. It will help you to catch step once more with the Christmas Spirit and make you enjoy it more than ever this year.

There are lots of "Creeping Jennies," perhaps not with the same physical misfortune, but with handicaps just as great, hearts just as big and maybe heavier, "right in the corner where you are!" Let's find a "Creeping Jenny" and give her a Merry Christmas!

help. There's plenty to do her for I live alone, but I have a little money to spend on keeping up the place."

The young man glanced in the door with a boyish sort of informality and asked: "Do you keep a dairy farm?"

Jenny laughed outright, and kept on laughing as she answered: "No wonder you asked, but I shouldn't set milk on the floor and it's water in the pans. It's a water farm!"

The laughter was mutual now, and the audacious youth, moving to the lower step and glancing upward, said: "I see you're a little shy on shingles?"

"Just a trifle, but I'm long on milk pans!"

"They told me you were a first-class farmer, but—er—a little handicapped on the outside work."

Jenny leaned against the door-frame and stroked her crutch with a smile.

"Footcapped would be a better word," she said. "Are you a stranger in Riverboro? Won't you rest a moment? Make your way through the milk pans to the rocking chair. I do need a little help in getting my winter wood in."

"You'll require a lot of wood unless you get a tight roof over your head," said the stranger. "I'm a Western farmer's son, or at least I was; but my mother and father died while I was in France and I'm alone in the world."

"France?" echoed Jenny, with a new glance in her eye and a new tone in her voice.

"Yes, but we'll cut that out! I landed in Boston, and ever since

can do with the substitute presented me by the U. S. A.! I'm going to have something more stylish later on, but I don't believe it will serve me any better; you see it's only my left arm!"

Jenny stopped her ears.

"Don't tell me you've read 'Pollyanna' and are glad it isn't you right?"

"Sure I'm glad! Who wouldn't be? Who's Pollyanna?"

"She's a girl in a book who's always glad that things aren't any worse."

"All right for Polly! More power to her elbow! Now I'm by no means dead broke and I've got back-pay coming to me from Washington, when they get around to it. But I want to train myself to work at anything that comes. If I can't make good I'll go to a vocational school, but I want to harden myself first."

"My roof in November would be a good place for that!" said Jenny contemplatively. "What wages do you ask?"

"Half of what the other men get around here, because I'm not a skilled worker at present. Now if you've got a ladder on the premises I can get up and tear off the old shingles while you negotiate for the new ones. Going to buy first quality cedars?"

Jenny grew red and then white, for memory flashed back, and by an odd trick she remembered her father's injunction to "stipulate," a word that was to be used in far more romantic circumstances.

"Can't manage first quality; sec-



that the day's labor need not be delayed by a trip to the village for Rufus. (At least that is what he said, and she said, and Alfinso said, and Mrs. Day said, and nobody doubted it but the post-mistress.)

Alfinso, whose pay had now been increased to ten cents a day, was the most faithful of "gooseberries," but even he sometimes wandered away to the wood-pile to work on a motor that he was constructing, to be used in connection with the power of an old alarm clock.

At such time Rufus and Jenny would walk together before she gathered up the dishes. She allowed him a pipe, and when she attempted to rise and go to the kitchen he would say: "Take your 'nooning,' Miss Jenny, same as the rest of us. The minute you drop your housework you take out your needle."

"I've had to be busy to keep from thinking, these last two years," she said quietly arranging the knives and forks for clearing away. "Now I'm afraid of getting idle, for what with company to lunch, the sound of hammer or saw all day, and the smell of paint all night, it seems as if Boston couldn't be any gayer than my little house."

Rufus liked to watch the dimple come and go in Jenny's cheek, a dimple that had enjoyed little use till lately; he also admired the whiteness of her neck that rose out of the long eyelashes that too often lay on her cheek and hid her brown eyes. He often tried to say something that would bring a quick upward glance full of fun or understanding. As for his talk, no words can tell what it was to the girl who had spent hundreds of long, silent, lonely days, feeling her youth slipping by, a tragedy without a single witness.

"Where were you last Christmas, Miss Jenny Wren?" Rufus asked between pipe-puffs, after lunching gloriously on shoulder-of-mutton stew. (He had always called her Miss Jenny Wren after the first week.)

"Here of course!" she said smiling. "I was born here, lived here and probably will die here. All the rooms but the kitchen had icicles hanging from the ceilings and window frames. The parlor looked like that famous cave in Kentucky with stalactites in the roof. There had been a bilzzard on the twenty-third and I couldn't go to the church Christmas tree. It was nearly as bad the Christmas before. I've never celebrated Christmas Day, except to plant a little hemlock twig in a flower pot and hang Mother's and Father's pictures on it."

"Jehosaphat!" ejaculated Rufus. "It wasn't so bad as that in the trenches where I was. Plenty of company—of one sort and another. I declare women always have the hardest of it in this old world, somehow. Trenches and over-the-tops were exciting compared to what you've gone through. They were life! A man generally has life and adventure with his hard knocks; but women are always saving, scrimping, doing without, suffering, nursing, burying, paying other people's burdens. Rotten luck, being a woman!" and he knocked the ashes from his pipe furiously.

"I never thought of it that way," said Jenny serenely. "I have my one burden, but it's my own, nobody else's!"

"Say, if I'm hereabouts to help, suppose you give a kind of a housewarming this year; some sort of a make-shift Christmas and show off the shingles! Hey?"

"Who would come?" cried Jenny. "And how would I compete with the church Christmas? Besides you are going to Boston."

"I haven't decided about Boston yet." (Jenny's heart leaped in her mouth and stopped her breath.) "As for the company, Mrs. Day could come, Alfinso and Alfonso (hateful little beggar, Alfonso!), Mrs. Strout, who boards me; and there's the station master that advised me to come to you for a job, and the man I bought the shingles of, and the store-keeper we owe for nails—that's quite a good crowd! You put in a few lady friends and I believe we could frame up a party that would make Boston look dull. What's the matter with the parson? Why couldn't he come. You're in his parish, aren't you?"

Jenny swayed to and fro with



mirth. The point of view was to fresh, so young, so unlike Riverboro. "You don't know how funny you are!" she exclaimed. "The minister calls twice a year, but always in summer."

"Tell him to make it once and come Christmas Eve!" said Rufus, imperturbably. "Tell him your leaks are stopped and you'll show him a wounded soldier who did the shingling. Feature me, don't you know? Tell him you'll have my Medal of Honor on the marble-top table."

"You've never shown it to me," said Jenny, softly.

"It's in Boston with my best clothes. Besides I've told you all about it. There happened to be a lot of fellows about when I was up against a hard job and they told on me. The boys didn't all have that luck or the U. S. A. couldn't have turned out medals enough to go around. Now it's time to work again. You think about that Christmas party before I buy my ticket to Boston. I'm going to patch up that bad place by the chimney," and Rufus went out the shed door and mounted the ladder.

Oh! the terrors of that high ladder and that sloping roof to Jenny, from the very beginning! With a white, knit cape over her shoulders and a white scarf tied around her head, she used to limp to some unseen point of advantage and watch Rufus with her heart in her mouth, lest he should slip and lose his hold. Sometimes he would catch her at her post, and looking down, think that her face looked like a love-apple, all pinky red and creamy white. And the warm glow of having someone down below caring a little whether he slipped—he, Rufus Holt, a down-and-outer!

He never did make a misstep, for he was a very demon of ingenuity and skill in using his one arm.

"Brave, clever, good, big-hearted!" sang Jenny's heart from the ground.

"Plucky, cheery, sweet and sound!" sang the heart of Rufus from the roof—but neither of them said anything in words.

Mrs. Day said considerable, but she liked Jenny Lane and stood up for her when the postmistress said there was more in that shingling business that met the eye.

"I don't see anything wrong in it," Mrs. Day maintained stoutly. "Jenny's roof would have fallen in on her if she hadn't shingled this fall. It looks like Providence to me."

"He's so slow at it that it looks like courting to me," observed the postmistress while scanning the morning's postcards to see if anything interesting was likely to happen in the neighborhood.

"Alfinso thinks the world of Mr. Holt, and he's getting ten cents a day now. It's true Alfonso takes three of it away from him every night. He says five is due to him because he's a twin, but he only takes three cents because he don't do any work."

"Alfonso's goin' to make a good business man when he grows up," said the postmistress.

It was half-past four in the afternoon but in the short December days it was nearly as dark as mid-night.

A cheerful fire enapp'd in Jenny's highly-polished kitchen stove. The yellow-painted floor with its braided rugs reflected the light of the kerosene lamp, the cat was asleep in the rocking-chair with the cretonne cushion, and Jenny sat by the table making out a crochet pattern from a magazine in front of her. She had changed into her afternoon dress of brown cashmere with pongee collar and cuffs and apron, so that she looked more than ever like Jenny Wren, Rufus Holt thought, as he came in from the tool-house with a lantern.

"Alfinso is splitting and piling his kindling," he said. "He wants me to wait and go long home with him. Alfonso told him there's a ghost between here and the corner. Grao-

lous! Can any parlor in the world beat a kitchen for comfort when it's rigged out and kept like yours! No, puss, I wouldn't have you move for the world, even if you offered to! I'll take a wooden chair!"

"The cat is spoiled," said Jenny. "And you look tired. You ought not to be doing rough work or you won't get to be yourself again."

"I'm myself, right enough; in fact I never was so much myself since I was born. I'm not tired; the sight of you and this kitchen rests me clean through to the bone."

Jenny changed color, but studied the crochet pattern with renewed care.

"I don't miss my arm any more," Rufus continued, playing with her thread. "I've learned to do without it. I never thought I should, but I have with the help from a lady friend. I never was bitter about it like some. When you come to think of it, Miss Jenny Wren, it's wonderful how Almighty God has given us two of a kind in most things—on the outside, anyway. As to the inside furniture, the doctors have shown us how to get along without most of that. If we'd been started out with one eye, one ear, one arm and one leg, where would we have been nowadays?"

"We've only one nose and one mouth," objected Jenny.

"And how would we have looked with two?" laughed Rufus. "But that's not to the point. The house is finished, Jenny Wren, and what would you think of buying a few second-hand boards and letting me make the cowshed more comfortable for winter?"

This moment had to come. Jenny had been reading it for days. There was a pause, then: "I'm going to sell the cow," she stammered.

Rufus looked surprised. "Are you troubled about the price of feed, or afraid the winter work will be too much for you?" That's why I'd like to make a better place for her and patch up the piece of shed you have to walk through to get to her—after I leave. It's a wonderful season but it's the eighteenth of December and snow must be coming along soon."

There was another moment of silence, then Jenny spoke recklessly. "You see, Mr. Holt, we've gone on from one thing to another for three weeks, because the leaky roof ruined the house in so many ways, and there's never been a man to help, since father died. We've patched the flooring, put in new door sills and weather strips on the windows, papered the sitting-room and plastered the kitchen ceiling—and all the time I've known I was goin' too far. I paid you fifteen dollars the first week, but it wasn't half what you earned and you gave me back three for lunches. Then you wouldn't take the last two-weeks' wages because I was buying bricks and lumber and you said we could settle up when the work was finished. . . I can't let it run on, Mr. Holt, I can't! I'm not in want; I've something in the bank and my hay-field more than pays for my winter fuel; but I have to be careful, and the house is so nice and cozy now it would be self-indulgent to do more. I'd better sell the cow. You're as kind and generous as you can be, but you are a stranger after all, and I have no claim on you."

Rufus gave her a long, searching look.

"You honestly feel I'm a stranger, do you?"

"Well, I—I don't exactly feel that you are, I only know it. My mind tells me so."

"It's funny!" said Rufus. "Now—I feel like a partner, not a stranger."

Jenny clutched at the saving word. "You have been the best of partners," she acknowledged, straightforwardly.

"Oh, no! Not the best! I'm capable of being a heap better partner than I have been. Now stop crocheting, listen to me, and don't speak

till I get through. . . In the first place, do you like me?"

Jenny flared at this. "Why do you ask a question like that? You know that nobody could help liking you! You know you're as sunshiny and thoughtful as you can be, and as for being interesting and funny and unlike anybody else in the world, you know well enough you're that; so why do you ask such foolish questions only to hear yourself praised?"

Rufus made a sudden movement and then subsided again into his chair.

"That's satisfactory, so far as it goes," he said calmly. "Though it doesn't go far enough to suit me. There are things I've got to say to you, and when they're over, we need never speak of them again. I haven't any home, nor any people but a married brother in Kansas, whose wife and four children I've never see. He always worked the farm and it fell to him as was right. I got a little money from my father, earned more at my trade in Chicago and saved it. Then I went across with the other boys. You don't really know anything about me except what I tell you, but I've got a clean record to show the neighbors, and I swear to God there's nothing wrong with me except that I've got one arm instead of two. When I came down this road from the station three weeks ago I took a good look at you, skimming around with your crutch, and swinging your right foot off the ground."

"Don't!" cried Jenny, covering her eyes.

Rufus put his big hand over her little ones and wiped the tears away with her crochet work. "I've got to show how I feel about you, and then I'll ask what you think of me," he explained. "I said to myself that day: 'Here's a chance to help somebody that's had to bear what I have.' They told me at the station you needed some work done, so I just plunged in, made good, and got the job. But I had no idea of falling in love with you, Jenny; that's your fault not mine. I want to marry you but I don't know how you feel about it."

"I don't want to be pitied and married just to be helped," said Jenny stubbornly. "After my accident I just made up my mind I would never marry."

"Why?" asked Rufus. "You know why," Jenny answered.

"Then the reason you don't want to marry me shows me that I had no right to ask you, isn't that so?"

"No, it isn't; it's different with a woman. Besides, I do want to marry you, but I won't."

Rufus moved a little nearer. "Jenny, we've each got a minus sign against us—there's no getting over that; but Holy Moses! you're hung all over so thick with plus signs that your minus doesn't show up at all! Your face, your eyes, your hair, your voice, your disposition, your spunk, your common sense—all plus! The trouble is with me. There would be times when a girl might blush if she had a one-armed husband!"

"Blush? If she did she ought to be struck by lightning!" and Jenny's eyes flashed.

Rufus caught her hands. "Jenny, Jenny, be true with me, speak straight out! Do I seem a little short of a full man? How do you see me in your secret heart?"

Jenny rose to her feet under a kind of spell that made him rise to meet her. She leaned against him and said: "I see you whole, and strong and precious and splendid, Rufus!"

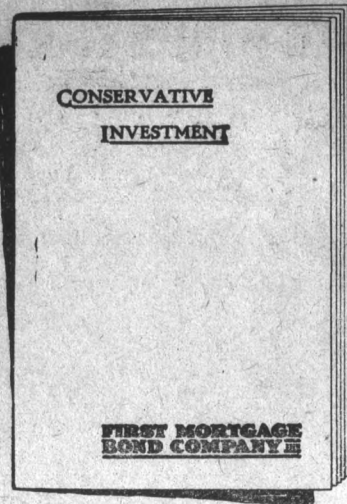
Rufus held her close, drying his secret tears on her hair.

"Oh, you little brick!" he whispered. "You darling, winsome little brick! Would you mind kissing me?"

"Not in the least!" she answered, and was proceeding to do it with all her heart when Alfinso entered with a huge armful of kindling, which he dropped into the woodbox with such force that the house shook.

"Alfinso, you dropped something. I heard you distinctly." Rufus was cool and collected as he put Jenny back in her chair. "Now I've some news for you. Jenny and I are going to be married on Christmas Eve and your family are invited. Will

(Continued on page 23)



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Current Agricultural News

DOELLE ATTENDS CONFERENCE ON GRAIN RUST

JAMES NICOL of Grand Haven, president of the State Farm Bureau Federation; J. A. Doelle, state commissioner of agriculture, and Walter F. Ruddy, state leader of the federal barberry eradication forces, represented Michigan at the second annual meeting of the Conference for the Prevention of Grain Rust, held on Nov. 14 at St. Paul.

They were among the 75 delegates from thirteen north central states to vote unanimously for the resolution urging Congress to appropriate \$500,000 for the continuation of the war on the common barberry bush next year and recommend that the various spring wheat states participate in the campaign in proportion to the seriousness of their individual rust problems.

NEW PLAN FOR SOLVING AGRICULTURAL PROBLEMS

THE Commodity Council Plan is the name given to a new way of handling certain of the big agricultural problems by the United States Department of Agriculture. In the past different phases of a crop situation, for instance, have been handled separately by the various bureaus and offices. The new plan which recently has been put into operation brings all the various persons interested in the problem together into a council where each may present his views and where a definite inclusive policy may be decided upon.

Already councils have been called to discuss the cotton and potato situations and recommendations have been made for action that would be beneficial in view of present conditions. Department men who are specialists in the culture of the crops, in soils, diseases, pests, grading, and marketing each contributed to the final recommendations. From time other commodity councils will be called to take up problems that are troubling the producers of various other crops and live stock.

CLEMENCEAU TO ADDRESS FARMERS

GEORGES CLEMENCEAU, the "Tiger" of France, will address the opening session of the fourth annual convention of the American Farm Bureau Federation in Chicago on December 11. France's war premier declares that he will arrange his itinerary in order to meet the potent body of public opinion represented in the world's largest body of organized farmers—the American Farm Bureau.

Mr. Clemenceau will speak on the topic, "The Farmer as a World Citizen." It is expected that he will develop the international aspect of the farmer's problems. How the American farmer may develop a freer market for his huge surpluses in the nations of Europe will be explained by the distinguished President of the Peace Conference.

SUGAR CARDS REAPPEAR IN GERMANY

ON December 1, sugar cards, discontinued some two years ago, were reintroduced in Germany and factories deliver sugar only to authorized wholesale dealers who in turn distribute it to the retailers of specified districts. Only the organized wholesale trade and the cooperatively organized consumers will be permitted to traffic in sugar and all dealings are subject to rigid control.

ENDORSE LAND CERTIFICATION

FULL endorsement of the Land Certification of the State Department of Agriculture was given by a conference of real estate dealers, railroad agents, and development bureau secretaries, at a meeting held in Lansing on November 27, where the plan was discussed in detail. The chief elements of the proposed legislation involved the creation of a list of certified dealers. They will agree to deal exclusively in lands surveyed under the direction of the State Department of Agriculture

at their own expense and lands will be classified as agricultural and non-agricultural, to be sold on the basis of this survey. The idea of land certification was developed to engender the confidence of the prospective settler in Michigan's good farm lands and to make it difficult to sell what is manifestly non-agricultural land for agricultural purposes. The certification plan involves a penalty of felony for violation.

A COOPERATIVE CREAMERY WITH NEARLY A THOUSAND PATRONS

ONE of the largest cooperative creamery organizations in the United States, is the claim made by J. R. Murphy, Manager of the Danish Creamery Association, Fresno, California, in his last annual report to the stockholders. The association has nearly one thousand patrons scattered over a territory of fifty miles wide by one hundred miles long. Twenty-five trucks are required to haul the cream to the two plants. More than 8,000 pounds of butter made daily and, as every pound brings a premium of one cent because of the "Danish Creamery" brand under which it is sold, the "velvet" amounts to more than \$80 a day for a year of 365 days—\$30,000 a year. Not only do the Danish Creamery patrons get the one cent a pound premium but they get a royalty of 65c a thousand pounds on high grade butter manufactured by affiliated creameries and sold through a central marketing agency under the Danish creamery brand. The association was organized in 1895 and the same butter maker has been employed for seventeen years.

AUSTRIANS LIKE AMERICAN HONEY

A GOOD market in Austria awaits American exporters of honey, says Consul Foster, Vienna, in the report to the Department of Commerce. The preferred varieties are dark-colored strained honey of acacia and linden flavors, packed in glass jars containing about one quart, one pint, or one-half pint. The Austrian Republic can not produce enough to supply its need. From July 1 the retail price of honey rose from 18 cents per kilogram to 54 cents per kilogram on September 30.

FOURTH WEEK OF EGG LAYING CONTEST

THE first four weekly period of the International Egg Laying Contest at East Lansing ended November 28th, with the White Leghorns finishing in advance but giving the honors for the last week's production to the heavy birds. Several birds are showing some moult particularly among the lighter breeds. Three birds have put in a perfect week's work with 7 eggs each. Mr. Shaw's pen from South Haven had a narrow escape when it topped the list for the first month with a production of 166 eggs with E. D. Taylor's pen from Kalamazoo just one egg behind. Third place is held by Hansen's pen from Oregon with 154 eggs and the Hollywood Poultry Farm from Washington tying with Thompson's pen for fourth place with 144 eggs.

In the Barred Rock class Dennison's pen No. 9 has an easy lead with 133 eggs. Brummer's Poultry Farm is second with 123 and also second for the week with 43 eggs. Kent's pen from New York is only one egg behind Brummer's for the week and is third to date with a total of 114 eggs. Christopher's pen No. 16 is fourth with 110 eggs. In the Wyandotte class Evergreen Poultry Farm finishes one egg ahead of Sinks pen which has been leading up to this week. They also claim the honor for high pen for the week. Murphy's pen is third with 99 eggs and Hollis fourth with 95.

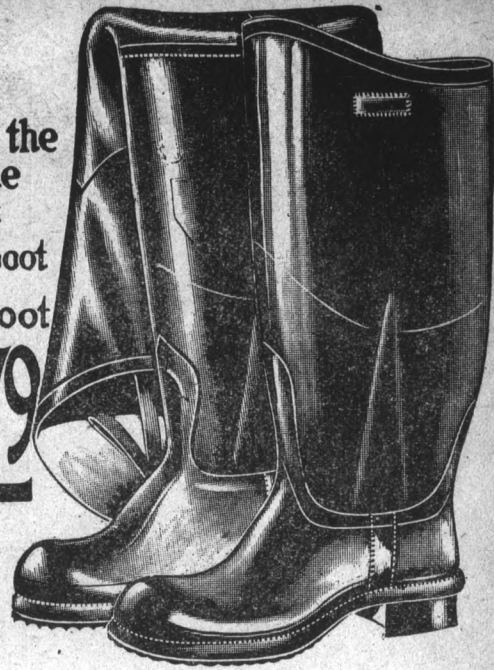
Van Raalte heads the Ancona class with 76 eggs to date. Dunning's Reds have a comfortable lead finishing with 110 eggs to date. The College Reds hold second and Mrs. Travis's pen third with a production of 83 eggs.

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Men! We don't hesitate to say that this price is positively without equal. Don't send any money—we will send them to you and you be the judge. If you are not more than satisfied and surprised with the big saving, send them back and you are not out one cent. A post card or letter brings you these wonderful all pure gum rubber arctics. When they arrive pay postman this remarkably low price plus postage.

67-2120—Sizes 8 to 13 (SOCKS FREE) \$2.39

Prices slashed regardless of cost or high quality. These long wearing leather top overs have soft black full grain leather tops, attached to pure gum rubber overs. Save fully \$1 to \$1.50. Just send postcard or letter—no money. A great bargain.
67-246—Men's, 8 inch top, sizes 6 to 12.....\$2.95
67-242—Men's 12 inch top, sizes 6 to 12.....3.45
67-243—Men's, 16 inch top, sizes 6 to 12.....3.85

Wonderful boots made from pure, fresh gum rubber and easily worth \$5.50 to \$6 today. This will give you an idea of the sensational bargains which the Chase Shoe Company of Minneapolis, Minn., is giving during this "out they go" clearance sale. This price is unequalled anywhere in America today for this quality. Heavy double soles. Friction lined. Full fitting. Rush your order and don't send a cent.

67-2730—Men's, Short Boot, sizes 6 to 12 \$2.79
67-2750—Men's, Hip Boots, sizes 8 to 12 2.79



Warm felt

Don't confuse this wonderful 9 inch hi-cut with the ordinary, inferior "pressed felt" shoe. This hi-cut is made from pre-shrunk wool that will outwear several pairs of the cheaper grade. Has extra wide leather back stay and heavy gray felt sole and heel. Absolutely a \$4.50 value. SOCKS GIVEN FREE! Send no money. Pay postman \$1.95 plus postage.
67-8390—Sizes 7 to 12 (Socks Free) \$1.95



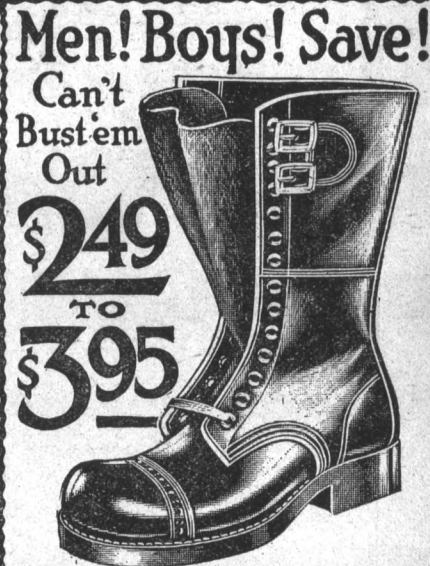
U.S. Army Field Shoe—Made for Rough Wear

Men—if you have ever seen or worn this regular issue U. S. Army shoe you'll know that there isn't another shoe made that can stand half the wear and give more comfort than this shoe will give. It is built as solid as a big city skyscraper. The soles are extra long wearing and the heels have lightweight steel plates. A \$6 quality shoe at half price.
67-1005—Sizes 8 1/2 to 12 \$2.95



Never has Such Quality been Sold at Such a Low Price

We claim these shoes are not duplicated anywhere else in the country and we are anxious to prove it to you at our own risk. You must actually see and examine them to realize why Chase quality is superior. Blucher style work shoe from heavy, smooth grain finished leather. Solid leather insoles. Double outsole of natural oak leather. Solid leather heels.
67-5000—Sizes 6 to 12 \$1.98



Men! Boys! Save! Can't Bust 'em Out

Think of it—you can buy these heavy tan grain leather 12 inch hi-cuts at a reduction in price amounting to fully 25%. Have two, full heavy soles. Dirt excluding bellow tongue. Wide roomy last. Send your order—no money—you take no risk.
67-9710—Men's, sizes 6 to 12.....\$3.95
67-8130—Boys', sizes 1 to 5 1/2.....2.98
67-8250—Boys', sizes 9 to 13 1/2.....2.49



Cut Prices! Women's and Children's

At the remarkably low prices you will rush your order to avoid disappointment. They are the biggest bargain in women's and children's arctics which we have offered in several seasons. Fine, warm cashmerette tops. Stylish four buckle model. Will fit any shoe.
67-2170—Women's sizes 3 to 8.....\$2.89
67-2172—Misses', sizes 11 to 12.....2.65
67-2173—Child's, sizes 6 to 10 1/2.....2.35



We are offering a limited quantity of these very popular winter shoes for women at this extremely low price. It reminds you of the lowest prices you have ever seen. Soft, smooth black leather vamps. Good wearing felt tops, warm lined. Strong leather soles and low rubber heels. Take advantage of this reduced price. Send your order today, sure.
67-4001—Sizes 3 to 8.....\$1.95

Stop! Look! Buy! Save! Here's How to Keep Warm



Yes—this price is actually less than half—of course our quantity is limited and to share in this great value we advise you to hurry your order. Genuine all wool Khaki color U. S. Army blankets. Size about 66x84 inches. Each blanket is stamped U.S. Manufacture, to sell for double our price.
67-2005—Each \$2.95



Felt Slippers Big Value
F 410
SIZES 3 to 8
87¢ State Color Wanted
This is the rubber you want for the many cold wet winter days. Besides keeping your feet nice and warm, they will protect your shoes from wet and slush. Black fleece lined Jersey cloth uppers.
\$1.50 Value. Fit medium and low heel shoes.
(Sizes 3 to 8)
67-1570 77¢

This is a record low price. Slippers of this quality sell everywhere for 25c to 50c more per pair. Fine, warm felt. Durable, soft cushion leather sole. Silk ribbon trimmed. Silk pom-pom. A bargain you'll always remember. PURPLE, OLD ROSE, AMERICAN BEAUTY, DARK ORCHARD.
67-410—Sizes 3 to 8 .. 87¢



Women's Alaska Rubber
SIZES 3 to 8
77¢

SEND NO MONEY — JUST YOUR ORDER
CHASE SHOE COMPANY,
Dept No. 67 MINNEAPOLIS, MINN.

Aspirin

Say "Bayer" and Insist!



Unless you see the name "Bayer" on package or on tablets you are not getting the genuine Bayer product prescribed by physicians over twenty-two years and proved safe by millions for

Colds	Headache
Toothache	Lumbago
Earache	Rheumatism
Neuralgia	Pain, Pain

Accept "Bayer Tablets of Aspirin" only. Each unbroken package contains proper directions. Handy boxes of twelve tablets cost few cents. Druggists also sell bottles of 24 and 100. Aspirin is the trade mark of Bayer Manufacture of Monoacetic-acidester of Salicylic acid. (1)

Are you interested

in knowing more about the work done and results obtained by the proper use of commercial fertilizers? Experiment Stations and farmers everywhere have for years been studying the question.

Twenty-five years of this work have given abundant proof that large profit may be obtained from the proper use of nitrogen.

Nitrate of Soda

furnishes this nitrogen in the cheapest and most available form which gives immediate and lasting results.

A new series of Bulletins with valuable information on the growing of all crops is now being issued. They will be published at intervals over a period of a year or more and should be in every farm library. A post card with your address asking for my Bulletin Service will bring them to you free of cost.

Dr. William S. Myers, Director
Chilean Nitrate Committee
25 Madison Avenue New York

New 300 Candle Power Lamp



Make \$60 to \$100 a Week
Introducing this wonderful new lamp. Gives soft, brilliant light, restful to eyes, ideal illumination. Burns Kerosene or Gasoline. Clean, odorless, economical. Burns 90% air, 10% fuel. Absolutely safe. Lights with match. 100 times brighter than wick lamps. Patented. Greatest improvement of age. Table lamps, hanging lamps, lanterns. Work all or spare time. You simply take orders. We deliver by Parcel Post and do collecting. Commissions paid same day you take orders. No experience necessary. Get started at once. Big season now on. Write today for catalog and special agents offer.

AGENTS FREE

THE AKRON LAMP CO.
2042 1/2 Ave. Bldg., Akron, O.

My Engine Will Do the Work of 6



Write now for facts about this wonder engine. Same engine gives 1 1/2 to 6 H.P. Gasoline or kerosene, portable, light and free from vibration. No cranking. Pumps, saws, grinds and does all chores. Plenty of power for every purpose. Easy to operate.

Low Factory Price—Special Offer
Price now lower than before war. Tremendous value. Write at once for catalog and special offer on this amazing engine.

THE EDWARDS MOTOR CO.

734 Main St., Springfield, O.



AN AD IN THE
MICHIGAN BUSINESS FARMER
WILL SELL IT!

Farmers Service Bureau

(A Clearing Department for farmers' every day troubles. Prompt, careful attention given to all complaints or requests for information addressed to this department. We are here to serve you. All inquiries must be accompanied by full name and address. Name not used if so requested.)

RIGHT OF TEACHER TO PUNISH CHILD

The teacher in our district keeps the children in at recess and noon for offense. To-day she gave them 18 minutes to learn the words of a song. Some of them could not sing it so she gave them no recess and only 25 minutes lunch time. One boy has stayed in since Sept. 28 to Nov. 15 and she said he'll have till the 30th because he would not apologize for some little thing. For whispering they stay in eight days and the same for listening, or talking to them at recess. Our school director said she has no right to do so. Is this so or not and can she make them stay after school or four o'clock for being tardy?—P. G., Ludington, Michigan.

The statute remains silent with reference to the type of punishment that may be ministered by the teacher. The law does not give the school board any authority to make and enforce suitable rules governing the external affairs of the school. You will find this provision in section 17 given on page 37 of the General School Laws for 1921. The Supreme Court has rendered a decision that the teacher has delegated parental control over the children while under her jurisdiction and that she has authority to administer any reasonable punishment.

Conditions might arise where in the teacher's judgement the appropriate type of punishment would be to keep a child in at recess or after school. It seems to me that the character of the offenses as well as the temperament of the child should govern in determining the punishment. If a child is tardy on account of having played along the road, it might seem advisable to ask him to stay after school and make up the time. In this case, the child has the alternative of escaping the punishment by being on time.

No teacher would have a right to treat a child in a brutal manner or in such a way as to cause permanent physical injury. The type of punishment that might be adapted to one individual child would not be suited to another, so one must know the individual child and as I see it no general rule can be given with reference to this matter.—B. J. Ford, Department of Public Instruction.

MORTGAGE AGAINST HOGS

A year ago last July or August I bought two hogs. Since then I have killed the hogs and find that there was a mortgage against the hogs. I paid for them and still have in my possession bill of sale signed by the party in the presence of a lawyer. Will you please tell me if I am compelled to pay for the hogs again?—F. C. M., Curran, Michigan.

—If the mortgage was properly filed you would be liable for the value of the hogs not exceeding the amount of the mortgage. You might be able to make the mortgagor pay for selling you the mortgaged property, unless the bill of sale you received contained the statement that the sale was subject to the mortgage.—Legal Editor.

COST OF TILING 160 ACRES OF MUCK

Can you give me some idea of cost of tiling 160 acres of muck land. Have direct outlet into dredge ditch. Muck not deep, eighty acres spotted with clay and sandy loam.—H. A. S. Capac, Michigan.

—Ordinarily, muck land which is underlaid with clay will require practically the same sort of drainage as clay land because after the muck has been drained it will settle and work into the clay so there will be practically not much left after a few years of cultivation. I would suggest that this be drained about 4 rods apart. If, however, you have 2 feet of muck it might be drained 5 rods apart. The tile should be laid at least 3 feet deep and better 3 1/2 feet if you have 2 feet of muck because the muck will settle at least

a foot leaving your tile only 2 1/2 feet underground. I am assuming that the tile in this case will be laid in the clay subsoil. If the tile are spaced 4 rods apart it will take approximately 600 tile per acre.

If soft clay tile are used, they will probably cost delivered at your station about \$35 per thousand. The glazed tile would cost around \$45 per thousand. This would mean that it will cost for tile—\$21 to \$27 per acre. The digging should be done around 50 cents a rod, which will cost \$20 per acre where the tile are spaced 4 rods apart. I am assuming in making these calculations that you wish this farm thoroughly drained so that it will be suitable for nearly all kinds of crops, especially cultivated crops. If the muck land is merely intended for hay it might be possible to get satisfactory drainage by spacing the tile drains 10 rods apart. The upland will cost practically the same as the low land when tiled 4 rods apart. The drains on high ground, however, should not be put more than 2 1/2 feet deep.—O. E. Robey, Extension Specialist in Drainage, M. A. C.

SECURE COPY OF RULES

I bought a boiler and it had been used. It was a portable boiler but the wheels have been taken off. It is ten miles from where I wish to use it. I have been told I must have the boiler inspected before I move or use it. If so, to whom must I apply for inspection? I wish to run a small saw for cutting lumber on my farm.—E. J. B., Petoskey, Michigan.

—A law was passed in 1917 providing for the appointment of a board of boiler inspectors. I do not know who was appointed. I think that if you would write Hon. C. J. DeLand, Secretary of State, and ask him for the rules of the board authorized by Act 174, of the Public Acts of 1917, he may be able to send it to you or tell you where you can get it.—Legal Editor.

WHAT RENTER MUST DO

If owner of farm rents his farm to B and the owner has all the tools and horses and lets renter use them for nothing, also the feed for horses, and all seed for farm, and this farm rented one half of crops to renter and half to owner, does the owner have to take care of his part? For instance we have to haul our potatoes ourselves, and have to husk and haul corn. We dug and picked our potatoes ourselves. Does the renter have to do this for us?—P. J., Boyne City, Michigan.

—What the renter is to do is usually placed in the lease and if so incorporated it would control; but if the lease simply provides that renter is to do all the work I would be of the opinion he would have to husk the corn, dig potatoes and haul potatoes, and all the work the owner would have to do if he did not rent the farm.—Legal Editor.

CANNOT REMOVE FAMILY FROM NEIGHBORHOOD

In our community we have a very undesirable colored family. They uphold their children in all kinds of stealing, window breaking and such. They allow their children to have firearms and threaten other children as they wish. What are the steps necessary to have them move from the country? Who should I go and see? Mrs. A. P., Flushing, Michigan.

—You would have to proceed against them the same as other children. You would need to make a complaint for any of the things you enumerate and if the children are old enough have them punished. If they are not old enough have the police officer, truant officer, or sheriff's office take charge of the matter. The better way would be for such persons as are interested to place the matter before the prosecuting attorney or county agent and ask them to assist you. You would have no right to ask them to be removed from the

community. You have no right to unload your burdens upon some other community but endeavor to have them obey the law in your community.—Legal Editor.

SPEED OF TRUCKS ON HIGHWAY

I would like to know the law concerning the speed of loaded and empty trucks.—H. D. B., North Branch, Mich.

—I call your attention to Section 14, of Act 132 of the Public Acts of 1917, which limits the rate of speed of motor trucks according to the size of the tire in the following manner:

2 inch tire, single 20 miles per hour, double 18 miles per hour; 2 1/2 inch tire, single 20 miles per hour, double 18 miles per hour; 3 inch tire, single 20 miles, double 18 miles; 3 1/2 inch tire, single 20 miles, double 16 miles; 4 inch tire, single 18 miles, double 14 miles; 5 inch tire, single 16 miles, double 13 miles; 6 inch tire, single 14 miles, double 12 miles; 7 inch tire, single 12 miles, double 10 miles.

The above is the only specific limitation placed on the rate of speed of trucks and trailers aside from the general limitation of all motor vehicles, which is a maximum speed of 35 miles per hour.—State Highway Dept.

CANCELLED CHECK IS RECEIPT

Six years ago I left Iowa for Michigan, paying all debts except one to a doctor for \$6.50. I later paid it and received check back, after that the doctor tried to get another payment through another company. Can he collect it?—H. H., Rudyard, Michigan.

—If you paid the doctor in full by check and have the returned check endorsed by him you would not be obliged to pay the debt again. The cancelled check is evidence of the payment.—Legal Editor.

NEIGHBOR NOT OBLIGED TO DRAIN OFF WATER

In case water drains out my grain does my neighbor have to take care of the water in case there is no other run for the water but through his farm, and there is lots of fall?—N. N. F., Glennis, Michigan.

—You would be obliged to take all the water that comes upon your farm just as it would come in a state of nature. Your neighbor would have no right to gather the water in ditches and cast it upon your farm in unusual quantities nor at unusual times. Neither would you have the right to ditch your farm and throw the water from your farm onto your neighbor below in unusual quantities or at unusual times. You can fill in any sags on your farm without harm to your neighbor below but you would not have the right to ditch. The only way to get such draining is to have a public ditch constructed into which you may drain your farm and others to the same.—Legal Editor.

WHO PAYS THRESH BILLS?

Who should pay the threshing bill in this case? I as second party, rented a farm for one year, first party to furnish everything to carry on farming, and I do all the manual labor and give first party two thirds and the first party keeps all the straw.—F. O., Sherman, Mich.

—I would say that in order to answer the above question more detail should be given, thus making it clear what the status is.

The customary rule is to divide expenses such as threshing in the same proportion as receipts. In this case the landlord would stand two-thirds of the threshing bill. However, as he is securing all the straw there should be an adjustment for his share of the straw. Such items as these should be agreed upon when the contract is made, thus avoiding misunderstandings later.—F. T. Riddell, Farm Management Demonstrator, M. A. C.

HOW TO FILE CLAIM

On July 28th 1922 I had a valuable cow killed by a train two miles north of Homer on Lansing branch of N. Y. Central. She got through the company's fence and was killed on their ground. The section boss filled out a blank and he had me get appraisers to sign it. The station

agent said that was all that was necessary. Now I find this was not a claim but simply a report for the section boss to keep. I have just written the Chicago claim agent. Am I on the right course?—E. S. C., Homer, Michigan.

—I would make out a claim for the damage caused you and keep a copy and file a copy with the claim agent of the railroad at your nearest station and if not paid soon I would employ a lawyer to assist me in collecting it. I have known railroad companies to delay and annoy a claimant to discourage the making of claims. It would be fair to allow them some time to investigate their liability but it is unreasonable to take months and even over one year to compensate a person if the company is liable for the damage. The railroad company is not necessarily liable just from the mere fact the cow was killed on their track. I would believe that you would be money ahead if you employed some one who knew how to get the damage if you are entitled to it.—Legal Editor.

MAKING VINEGAR

Would you please tell me, does any kind of apples make vinegar, or is there anything you put into cider to make good vinegar?—Reader.

—All kinds of apples do not make good cider. However any apple that produces a juice with a sufficient amount of sugar present to make a four per cent alcohol will make vinegar.

We furnish a vinegar yeast culture at the rate of twenty-five cents each for the purpose of starting the alcoholic fermentation, the first step of the vinegar making process. We likewise furnish a vinegar bacteria culture for the purpose of controlling the acetic acid fermentation. These cultures are sufficient for one barrel two-thirds full of vinegar stock.—K. L. Tweed, Res. Asst in Bacteriology, M. A. C.

SELL SUBJECT TO MORTGAGE

If C sells his farm to B and takes mortgage on the farm, can B sell it to C and oblige A to leave mortgage on farm without A agreeing to such? Mortgage is due in five years from date.—D. M., Hudsonville, Michigan.

—B may sell the farm at any time subject to the mortgage. A cannot require the payment of the mortgage until it is due regardless of who owns the farm.—Legal Editor.

PURCHASER OF WHEAT LIABLE

My neighbor bought wheat from me a year ago last September. I asked him to pay for same in two weeks. I sold the grain as it was, uncleaned, for the market price then. He has not yet paid me. I also sold it under condition, if I got a higher price for my wheat when I sold the balance I had, he was to pay me that price. Since selling him the wheat the price raised to \$1.30, and that is what I sold the balance for. I have no papers to show for any of this. Could I make him pay interest on this money since he agreed to pay me in full?—Mrs. M. B., Merrill, Mich.

—The purchaser of the wheat would be liable for interest if he did not pay for it at the date agreed upon.—Legal Editor.

NOT LIABLE FOR DAMAGES

If a man hired to work on a farm by the day, month, or year should accidentally or through his carelessness be injured, is the man whom he is employed by liable for damages under the Compensation Law of Michigan?—J. W. K., Orleans, Mich.

—Section 5424 of the C. L. 1915 is as follows:

"The provisions of Section 1, shall not apply to actions to recover damages for personal injuries sustained by household domestic servants and farm laborers."—Legal Editor.

MIGHT RECOVER MONEY

If a son sends for his mother to live here and buys half the house and he and she live together, and the mother does the biggest share, furnishes house with almost everything, does all the work, he was to

provide help and didn't do so for ten years and now wants to get rid of her after using her money, could he do it and wouldn't he have to pay her for his board and use of things, his washing, mending for ten years. He owes \$100 interest on money. Could that be collected, how much could she collect a week if any and could she for ten years?—Mrs. M. H. M., Akron, Mich.

—The mother might recover for anything the son has promised to pay; but services rendered by the mother and son living together is presumed to be gratuitous. The promise to pay or do certain things may be enforced one against another. Section 5191 and following provides that a child may be compelled to support and care for a parent and the poor board may enforce it.—Legal Editor.

DOES FLY BITE?

Am writing you in regard to an argument which arose between two persons, as to whether flies (the common house fly) bites or not. I am very anxious to learn what you can

tell me on this subject. If they do not bite why does it seem as if they do?—Miss E. G., Kewadin, Mich.

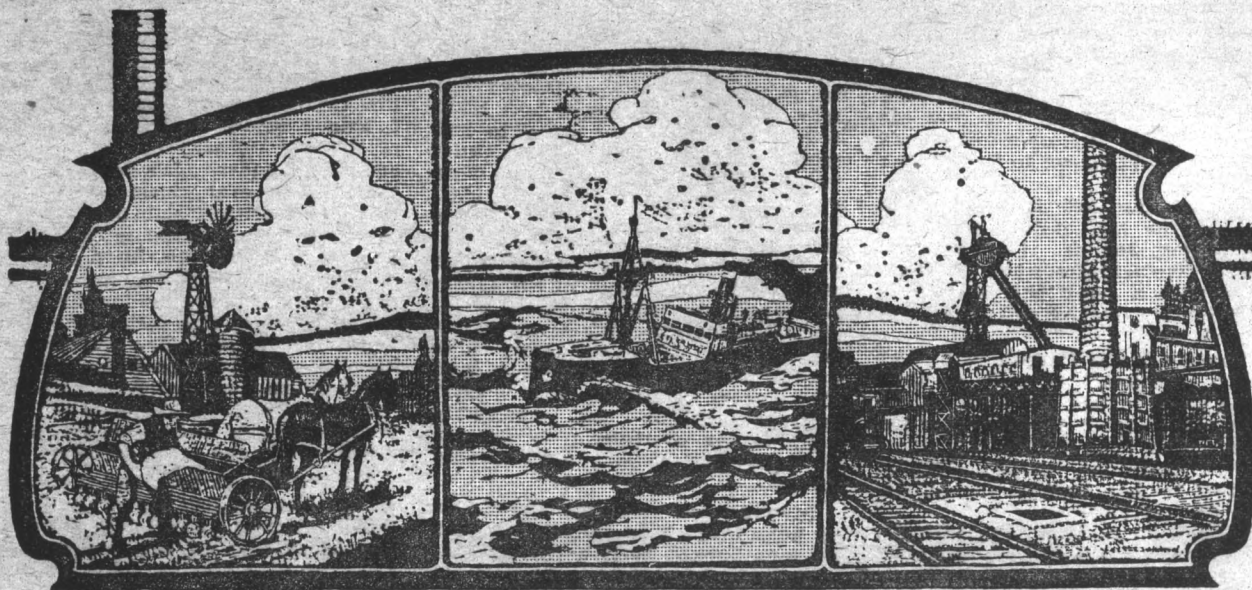
—As to whether the common house fly bites or not, I quote from "Flies and Diseases" by Graham Smith: "The common house fly is called *Musca Domestica*. *Stomoxys Calcitrans*, the stable fly or biting house fly, is about the same size as the house fly and is very frequently mistaken for it. It is more stoutly built and may be distinguished by the appearance of its proboscis which is modified into an awl-like structure adapted for piercing and sucking. It is commonly mistaken for the common house fly which is, therefore, often accused of biting."—Michigan Department of Health.

CHILD WOULD GET NOTHING

I am married and have four nice children. The oldest girl, 8 years old, now, is not my husband's right child. Her father died when she was three weeks old. When she was a year old, I married again. She goes to school now and uses her

step father's name. He has no papers to show she can use his name. I and my second husband own a nice farm and have a joint deed. In case I should die, would this child get as much as the rest of them, and has she just as much right as the rest, or would it be better if my husband would adopt her as his own, or doesn't it matter so long as she uses his name?—A. H. M., Saginaw, Michigan.

—If you should die first and the farm is in the joint name of yourself and husband the child by your first husband would inherit nothing from the farm. It would all belong to your husband. He could give the child what he wanted to but the law would give it nothing unless he adopts the child by legal adoption. The mere keeping the child and treating it as his own would give no right of inheritance but if he would adopt the child it would then share equally with the other children in his property as well as yours. It would be better to have a legal adoption made out.—Legal Editor.



ASK FOR POTASH

The present conditions in the business of the farmer and in the fertilizer industry call for serious thought. Both are going through a readjustment period, with its hardships and doubts.

The farmer may well ask whether he is using the most profitable fertilizer. The fertilizer salesman may well inquire whether he is selling the kind that will do the farmer the most good, and lead to larger sales in the future.

During the war America could not get Potash, and the use of acid phosphate increased. Central Europe could not get phosphates, and the use of Potash Salts increased. Today plenty of Potash can be had at less than pre-war prices. Now is the right time to restore the balance by using more Potash in the fertilizer formulas than the average amount used before, 5 to 10 per cent.

Crops take from the soil very much more Potash than phosphoric acid. On any soil where Potash has been profitable it is not unreasonable now to use at least as much Potash as phosphoric acid. Ask the fertilizer agent for prices on this kind of goods, and rebuild your soil while Potash is cheap.

Recently it has been shown that a lack of available magnesia causes serious injury to important crops on some soils. German Kainit and Manure Salts furnish this soluble magnesia without extra cost.

SOIL & CROP SERVICE, POTASH SYNDICATE

H. A. HUSTON, Manager

42 Broadway

New York City

Ask for POTASH—Buy POTASH—Use POTASH

**POTASH
PAYS**

(Continued from Nov. 25 issue)

HE smiled at the amazement which had gathered in his face. A soft light shone in her eyes. "I guess Mrs. Otto has been like a mother to that poor little boy," she explained. "When you and Mr. Stevens went up to buy the outfit this morning Jimmy ran over to tell her the news. We were all there—at breakfast. He was so excited he could scarcely breathe. But it came out, and he ran back to camp before you came because he thought you wouldn't want me to know. Wasn't that funny? He told me so when I walked a little way up the path with him."

"The little reprobate!" chuckled Aldous. "He's the best publicity man I ever had, Lady Gray. I did want you to know about this, and I wanted it to come to you in just this way, so that I wouldn't be compelled to tell you myself of the big and noble act I have done. It was my hope and desire that you, thru someone else, would learn of it, and come to understand me more fully what a generous and splendid biped I am. I even plotted to give this child of Stevens' a silver dollar if he would get the news to you in some one of his innocent ways. He's done it. And he couldn't have done it better—even for a dollar. Ah, here we are at the cabin. Will you excuse me while I pick up a few things that I want to take on to Tete Jaune with me?"

Between the two trees close to the cabin he had built a seat, and here he left Joanne. He was gone scarcely five minutes when he reappeared with a small pack-sack over his shoulders, locked the door, and rejoined her.

"You see it isn't much of a task for me to move," he said, as they turned back in the direction of the Ottos'. "I'll wash the dishes when I come back next October."

"Five months!" gasped Joanne, counting on her fingers. "John Aldous, do you mean?"

"I do," he nodded emphatically. "I frequently leave dishes unwashed for quite a spell at a time. That's the one unpleasant thing about this sort of life—washing dishes. It's not so bad in the rainy season, but it's fierce during a dry spell. When it rains I put the dishes out on a flat rock, dirty side up, and the good Lord does the scrubbing."

He looked at Joanne, face and eyes aglow with the happiness that was sweeping in a mighty tumult within him. Half an hour had worked transformation in Joanne. There was no longer a trace of anguish or of fear in her eyes. Their purity and limpid beauty made him think of the rock violets that grew high up in the mountains. Her lips and cheeks were flushed, and the soft pressure of her hand again resting on his arm filled him with the exquisite thrill of possession and joy. He did not speak of Tete Jaune again until they reached the Otto tent-house, and then only to assure her that he would call for her half an hour before the train was ready to leave.

As soon as possible after that he went to the telegraph office and sent a long message to McDonald. Among other things he told him to prepare their cabin for a lady guest. He knew this would shock the old mountain wanderer, but he also knew that Donald would follow his instructions in spite of whatever alarm he might have. There were other women at Tete Jaune, the wives of men he knew, to whom he might have taken Joanne. Under the conditions, however, he believed his own cabin would be her best refuge, at least for a day or so. In that time he could take someone into his confidence, probably Blackton and his wife. In fact, as he thought the circumstances over, he saw the necessity of confiding in the Blacktons that very night.

He left the station, growing a bit nervous. Was it right to take Joanne to his cabin at all? He had a tremendous desire to do so, chiefly on account of Quade. The cabin was a quarter of a mile in the bush, and he was positive if Joanne was there that Quade, and perhaps Culver Rann, would come nosing about. This would give him the opportunity of putting into execution a plan which he had already arranged for

The Hunted Woman

By James Oliver Curwood

Michigan's Own and America's Foremost Author of the Great Northwest

(Copyright by James Oliver Curwood)

SYNOPSIS

JOANNE GRAY is one of the passengers on the train that connects "The Horde" with the civilized world. For eighteen hours she has been riding steadily bound for Tete Jaune Cache, the home of "The Horde", where she has no friends and all will be strange to her. The train stops at a town composed of several tents and learning that the train will not leave for two hours she goes in search of food and a bath. She is directed to "Bill's Shack" and it is here where she meets Bill Quade, who not only owns and operates "Bill's Shack" but is also leader of the lawless men of the town. Quade says he has a room she can rent and that he will show it to her. As they pass the room a newcomer enters the doorway leading off the street. The newcomer is John Aldous, a well known novelist. He sees the strange girl enter the place and believes she has made a mistake and as he stands in the doorway his eyes rest upon the curtained doorway through which the girl and Quade have passed. In but a moment the girl steps out her face flaming and Quade follows her apologetically. He starts to offer the girl some money but before he can do so Aldous steps to the girls side and floors Quade with a terrific blow. Aldous hurries the girl away from the scene to the home of friends. He then asks the girl to be his guest at supper in his cabin. She accepts. Joanne tells Aldous she is going to Tete Jaune to find her husband, Mortimer FitzHugh. Aldous decides to go with her to protect her from Quade and his partner at Tete Jaune, Culver Rann. Aldous believes FitzHugh is dead and locates a friend who declares he has seen the grave.

himself and old McDonald. On the other hand, was this arrangement fair to Joanne, even though it gave him the chance to square up accounts with Quade?

He stopped abruptly, and faced the station. All at once there swept upon him a realization of how blind he had been, and what a fool he had almost made of himself. Blackton was one of the contractors who were working miracles in the mountains. He was a friend who would fight for him if necessary. Mrs. Blackton, who preferred to be on the firing line with her husband than in her luxurious city home, was the leader of all that was decent and womanly in Tete Jaune. Why not have these friends meet them at the train and take Joanne direct to their house? Such recognition and friendship would mean everything to Joanne. To take her to his cabin would mean—

Inwardly he swore at himself as he hurried back to the station, and his face burned hotly as he thought of the chance of such a blunder on his part would have given Quade and Culver Rann to circulate the stories with which they layed their scoundrelly game. He sent another longer telegram. This time it was to Blackton.

He ate dinner with Stevens, who had his new outfit ready for the mountains. It was two o'clock before he brought Joanne to the station. She was dressed now as he had first seen her when she entered Quade's place. A veil covered her face. Through the gray film of it he caught the soft warm glow of her eyes and the shimmer of gold-brown tendrils of her hair. And he knew why she wore that veil. It set his heart beating swiftly—the fact that she was trying to hide from all eyes but his own a beauty so pure and wonderful that it made her uncomfortable when under the staring gaze of the Horde.

The hand that rested on his arm pressed closer to his side as they walked up the station platform, and under his breath he laughed softly and joyously as he felt the thrill of it. He spoke no word. Not until they were in their seat in the coach did Joanne look at him after that pressure of her hand, and then she did not speak. But in the veiled glow of her eyes there was something that told him she understood—a light that was wonderfully gentle and sweet. And yet, without words, she asked him to keep within his soul the things that were pounding madly there for speech.

As the train rolled on and the babble of voices about them joined the crunching rumble of the wheels, he wanted to lean close to her and tell her how the few hours had changed the world for him. And then, for a moment, her eyes turned to him again, and he knew that it would be a sacrilege to give voice to things he wanted to say. For many minutes he was silent, gazing with her upon the wild panorama of mountain beauty as it drifted past the car window. A loud voice two seats ahead of them proclaimed that they were about to make Templeton's Curve. This man was talking to his companion.

"They shot up a hundred thousand pounds of black powder and

dynamite to make way for two hundred feet of steel on that curve," he explained in a voice heard all over the car. "They say you could hear the explosion fifty miles away. Jack Templeton was near-sighted, an' he didn't see a rock coming down on him that was half as big as a house. I helped scrape up what was left of 'im an' we planted him at this end of the curve. It's been Templeton's Curve ever since. You'll see his grave—with a slab over it!"

It was there almost as he spoke, marked by a white-painted cross in a circle of whitewashed stones. John Aldous felt a sudden shiver pass thru his companion. She turned from the window. Through her veil he saw her lips tighten. Until he left the car half an hour later the man in the second seat ahead talked of Templeton's grave and a dozen other graves along the right of way.

He was a rock-hog, and a specialist on the subject of graves. Inwardly Aldous cursed him roundly. He cursed him all the way to Tete Jaune, for to him he attributed the change that had again come over Joanne.

This change she could only partly conceal from him under her veil. She asked him many questions about Tete Jaune and the Blacktons, and tried to take an interest in the scenery they were passing. In spite of this he could see that she was becoming more and more nervous as they progressed toward the end of their journey. He felt the slow dampening of his own joy, the deadening clutch of yesterday at his heart. Twice she lifted her veil for a moment and he saw she was pale and the tense lines had gathered about her mouth again. There was something almost haggard in her look the second time.

In the early dusk of evening they arrived at Tete Jaune. Aldous waited until the car had emptied itself before he rose from his seat. Joanne's hand clutched his arm as they walked down the aisle. He felt the fierce pressure of her fingers in his flesh. On the car platform they paused for a moment, and he felt her throbbing beside him. She had taken her hand from his arm, and he turned suddenly. She had raised her veil. Her face was dead white. And she was staring out over the sea of faces under them in a strange questing way, and her breath came from between her slightly parted lips as if she had been running. Amazed for the moment, John Aldous did not move. Somewhere in that crowd Joanne expected to find a face she knew! The truth struck him dumb—made him inert and lifeless. He, too, stared as if in a trance. And then, suddenly, every drop of blood in his body blazed into fierce life.

In the glow of one of the station lamps stood a group of men. The faces of all were turned toward them. One he recognized—a bloated, leering face grinning devilishly at them. It was Quade!

A low, frightened cry broke from Joanne's lips, and he knew that she too, had seen him. But it was not Quade that she had looked for. It was not his face that she had expected to see nor because of him that she had lifted her veil for the mob!

He stepped down from the car and gave her his hand. Her fingers

clutched his convulsively. And they were cold as the fingers of the dead.

CHAPTER X

A moment later some one came through the crowd, and called Aldous by name. It was Blackton. His thin, genial face with its little spiked moustache rose above the sea of heads about him, and as he came he grinned a welcome.

"A beastly mob!" he exclaimed, as he gripped his friend's hand. "I'm sorry I couldn't bring my wife nearer than the back platform."

Aldous turned to Joanne. He was still half in a daze. His heart was choking him with its swift and excited beating. Even as he introduced her to Blackton the voice kept crying in his brain that she had expected to find someone in this crowd whom she knew. For a space it was as if the Joanne whom he had known had slipped away from him. She had told him about the grave, but this other she had kept from him. Something that was almost anger surged up in him. His face bore marks of the strain as he watched her greet Blackton. In an instant, it seemed to him, she had regained a part of her composure. Blackton saw nothing but the haggard lines about her eyes and the deep pallor in her face, which he ascribed to fatigue.

"You're tired, Miss Gray," he said. "It's a killing ride up from Miette these days. If we can get through this mob we'll have supper in fifteen minutes!"

With a word to Aldous he began worming his long, lean body ahead of them. An instant Joanne's face was very close to Aldous' so close that he felt her breath, and a tendril of her hair touched his lips. In that instant her eyes looked into his steadily, and he felt rush over him a sudden shame. If she was seeking and expecting, it was to him more than ever that she was now looking for protection. The haunting trouble in her eyes, their entreaty, their shining faith in him told him that, and he was glad that she had not seen his sudden fear and suspicion. She clung more closely to him as they followed Blackton. Her little fingers held his arm as if she were afraid some force might tear him from her. He saw that she was looking quickly at the faces about them with that same questing mystery in her search.

At the thin outer edge of the crowd Blackton dropped back beside them. A few steps more and they came to the end of the platform, where a buckboard was waiting in the dim light of one of the station lamps. Blackton introduced Joanne, and assisted her into the seat beside his wife.

"We'll leave you ladies to become acquainted while we rustle the baggage," he said. "Got the checks, Aldous?"

Joanne had given Aldous two checks on the train, and he handed them to Blackton. Together they made their way to the baggage-room.

"Thought Miss Gray would have some luggage, so I had one of my men come with another team," he explained. "We won't have to wait. I'll give him the checks."

Before they returned to the buckboard, Aldous halted his friend.

"I couldn't say much in that telegram," he said. "If Miss Gray wasn't tired and unstrung I'd let her explain. I want you to tell Mrs. Blackton that she has come to Tete Jaune on a rather unpleasant mission, old man. Nothing less than to attend to the grave of a—near relative."

"I regret that—I regret it very much," replied Blackton, flinging away the match he had lighted without touching his cigar. "I had guessed that something was wrong. She's welcome at our place, Aldous—for as long as she remains in Tete Jaune. Perhaps I knew this relative. If I can assist you or—her—"

"He died before the steel came," said Aldous. "FitzHugh was his name. Old Donald and I are going to take her to the grave. Miss Gray is an old friend of mine," he lied boldly. "We want to start at dawn. Will that be too much trouble for you and your wife?"

(Continued on page 23.)

UPPER PENINSULA NOTES

Sound Death Knell for Scrub Cows

A CAMPAIGN to eliminate 3,000 inefficient cows throughout the upper peninsula of Michigan will begin January 1st of next year. The actual work will be carried on largely through the medium of the cow testing association which have already been organized in Dickinson, Gogebic, Iron, Delta and Marquette counties.

The scrubs will be replaced with high-producing grade animals, having an average record of 8,000 pounds of milk annually. The county agents say this is vital, in view of the fact that the average milk production, per cow, in the state of Michigan today is but 4,000 pounds.

To Place Certified Seed

Another feature of the ensuing year's program will be the placing of 50,000 certified seed potatoes among the farmers of the upper peninsula of Michigan.

Most of the certified tubers will be procured from the upper Michigan territory, and re-distributed to a picked group of farmers. The two types to be emphasized in the campaign are the Petosky Russet and the Green Mountain. J. W. Weston, potato expert for the Michigan Agricultural College, will be directly in charge of this campaign.

"We are going to try to inculcate into the minds of the farmers that it is not more potatoes, but better potatoes, that we want in upper Michigan," Mr. Weston declared.

Other Features

Poultry culling is another agricultural phase in upper Michigan which will receive the attention of the agriculture college, in the near future. An effort will be made, during the ensuing year, to cull out every non-producing hen in the upper peninsula, replacing the inefficient birds with producers, wherever possible. E. C. Forman, of the Michigan Agricultural College will direct the work.

Next year's schedule also calls for fruit tree pruning and spraying demonstrations. In addition, crop tests for better varieties will be carried on in every county in the peninsula, and the effort will also be made to promote the more general planting of clover and alfalfa, in place of much of the timothy now grown.

More handicraft, pig and poultry clubs are also included in the program. Considerable interest has already been aroused in this work which has been carried on, among the boys and girls of upper Michigan during the past year, by A. G. Kottunen, leader of boys' and girls' clubs for upper Michigan.

To Encourage Dairying

It was announced during the county agents meeting that the agricultural college will, in the near future, detail a dairy expert to the upper Michigan territory. It will be his sole duty to encourage advanced dairying, largely through the medium of pure-bred live-stock. His first duty will be the organization of cow-testing associations in the counties which have not, as yet, taken up this work.

LAND CLEARING PROGRAM

A DEFINITE program for the land clearing campaign throughout the Upper Peninsula of Michigan has been arranged by Harry F. Livingston, Land Clearing Specialist for the Michigan Agricultural College, according to a recent announcement from the office of the M. A. C. Extension Department at Marquette.

In order that the peninsula may be more efficiently served in this campaign, Mr. Livingston has divided this section into two districts. A. J. MacAdams, who was in charge of the dynamite work with the land clearing train which conducted thirty eight schools of instruction in upper Michigan this year, will direct the work in the western half of the peninsula. George Amundson, who accompanied Cloverland's Land Clearing Train, will direct the activities in the eastern section of the peninsula.

The winter campaign calls for a series of meetings in both districts

with the view of determining the individual problems of each section.

"The fact that this year we will be able to conduct at least ten meetings in every county makes it possible for the land clearing forces to bring their information nearer to the farmer" declared Mr. Livingston in discussing the program for the ensuing year. "The carload system of buying explosives will be discussed at these meetings and it is confidently expected that all explosives which the farmers of upper Michigan will use during the ensuing year will be obtained for them in carload quantity. This means a saving to the farmer of from 25 per cent to 40 per cent of the usual costs for explosives."

Plans for the 1923 land clearing are also under way. According to Mr. Livingston, the schools during the coming year will differ from those held during 1922 in that the train will consist of a caravan of trucks rather than railway trains. This system, it is believed, will be a decided improvement over the railway system, permitting a more ready access to the districts in which the schools will be held, and will eliminate the necessity of the train being limited entirely to the rights of way. Both MacAdams and Amundson are experienced in the land clearing work, the former being a graduate from the University of Wisconsin and considered one of the best dynamite men in the country; and the latter

recognized for his work in Ashland county, Wisconsin, two years ago, where he directed similar activities with remarkable results.

Regarding the actual results achieved this year thus far, with Upper Michigan's land clearing campaign, there is every indication, according to Mr. Livingston, that the 60,000 cleared acres which he predicted at the opening of the session will be achieved.

OREGON MANUFACTURERS BOOST FARM COOPERATIVES

THE Oregon Chamber of Commerce has broken the record for manufacturers' organizations by declaring for cooperative marketing. With the spectacle before them of bankruptcy, starvation, and an actual dwindling of the farm population at an alarming rate, the Chamber of Commerce has established a fund of \$150,000 to be used in support of the existing cooperative institutions and to aid in developing others.

The Oregon grain and fruit marketing cooperatives, which are famous throughout the country for their efficient service, have done much to cut out the middleman's profit on grain selling and to give the farmer the benefit of his toil. Prosperous farmers mean a prosperous state, and it is a hopeful sign that the business men of Oregon have at last come to realize that cooperation by safeguarding the interests of the farmer also benefits them.

COURT AGAIN DECLARES M. S. F. B. DUES COLLECTIBLE

MICHIGAN State Farm Bureau membership dues for 1920, 1921 and 1922 have again been declared legally collectible by the courts. Verdict in favor of the State Farm Bureau was given by a jury at Centerville, St. Joseph county, Nov. 13 after 30 minutes deliberation following a three days battle in Justice Ashley's court, remarkable in the fact that five of Southern Michigan's most prominent attorneys were interested in the case.

The Bureau sued to collect \$20 delinquent dues owed by John E. Davis of Constantine. The Farm Bureau attorneys won their case on the straight collectibility of the membership checks and the services rendered by the Farm Bureau in the three year period just closing. The Farm Bureau charged in open court that interests hostile to the Farm Bureau are stirring up delinquent membership dues suits in an effort to discredit the Farm Bureau organization. It is believed that the Centerville case may be appealed, an event which may be regarded as significant of the Farm Bureau charges.

Messrs Harry Howard of Kalamazoo, Glenn Cowell of Coldwater and J. P. Sloan of Centerville were the attorneys for the Farm Bureau. Elmer Palmer of Coldwater and Geo. Arnold of Three Rivers represented the defendants.



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RADIO DEPARTMENT

EDITED BY J. HERBERT FERRIS

RADIO EDITOR WILL COME TO YOUR NEIGHBORHOOD

THERE are many farmers who needs radio in their business of being business farmers not only for the financial returns to them but for the really good things they will receive through it, bringing pleasure to their families and to the sick as well as the hired help. It will help keep the family at home, it will ease the burden of caring for the sick and will bring the church, school, state and government departments right to the very door of those that can not or could not go to these very same places.

We know of the interest in radio among the farmers and to assist them and take one more step to prove that we are "The Farm Paper of Service" the radio editor will spend an evening with any group of farmers and their families in the state at their request giving them an evening of entertainment by radio and at the same time demonstrate to them the "workings" of the set. And the only cost to them will be the travelling expenses, board and lodging for the night.

If Grangers, Farm Bureau, Gleaners, Farmers' Clubs or any collective group of farmers will arrange for a hall and will pay the actual traveling expenses and supply him with board and lodging for one night the radio editor will give a demonstration that from the amusement point alone will be worth many times the cost. Please write us at least one month in advance of date you desire to hold the meeting so arrangements can be made. And in case the editor is all ready engaged for some other gathering we will have ample time to advise you. Also give all the information possible in your first letter so that we may give you an intelligent reply at once.—Editor.

REGENERATIVE RECEIVING SET

IN describing a regenerative receiving set, it is well to understand what is meant by regenerative, and what the advantage of such a set really is to the user and whether it is better than a plain receiving set. In describing such a set we will make our language as simple as possible and not technical.

To generate means to make or create and to re-generate means to remake or make over again or create over again that which has already been made or created. Then a regenerative receiving set would be one that made over again the same signal that it first received, and this is exactly what such a set does. In doing this we not only get the original signals that we receive but by having them repeated by the same set into and thru itself we get the signals much louder, and so we can either receive messages from a greater distance or we will receive them louder.

A plain receiving set will operate on a crystal or vacuum tube detector, but a regenerative set requires a vacuum tube detector and unless you intend to make such detector or buy one, do not go to the trouble or expense of making a regenerative set as you will not be able to use it.

The very fact that in this set one re-generates his signals, means that the adjustment is a little more difficult than with an ordinary set, but when patience and a little practice have made you familiar with your set you will get results that you can not possibly get otherwise. Right here let us again emphasize and a good ground.

Mr. Frank H. Jones of Tuinucum, Cuba, has heard 16 different broadcasting stations that were over 1,000 miles away, and 4 of these were over 1,500 miles away, this was done with a vacuum tube detector and a regenerative receiver. This shows what can be done but does not mean that you or I will do just exactly as well, but with care we should do half as well and if we can do half as well as Mr. Jones did we will hear all the news, music and market reports that we wish to hear.

To make a regenerative receiving set the following articles will be needed, the screws binding posts,

etc., you can get anywhere and in some cases do without, all depending upon how fancilly you mount your set or whether you just assemble your different parts all on a plain table top where they can all be seen.

One (1) Vario-coupler, having a range between 150 to 500 meters.

Two (2) variometers, having the same range as the vario-coupler. (The wave length range can vary somewhat as each maker has a slightly different wave length range for his own instrument.)

Ten (10) brass contact points.

One (1) rotary switch lever.)

These two items go with the vario-coupler, and are only needed if you buy the vario-coupler unmounted.

A board to mount them on a panel for looks and a table or shelf to set them on completes the regenerative receiver.

Now to assemble them you must be careful, follow each wire connection thru, and then make the connection. Study the chart of symbols given in one of our articles so that you are sure all connections are correct and then you will know that you can receive messages from long distances.

One of the variometers we call the "grid variometer" and the other variometer we call the "plate variometer" this is because we use one of these variometers to tune the plate circuit of the vacuum tube detector and the other to tune the grid circuit of the same detector.

In making a drawing we often run our lines which represent wires very close together and very straight, making sharp turns and looking as tho it would be difficult to actually run wires just so. It is better not to have connecting wires run parallel more than necessary, and so far as being straight or turning at right angles the best method is to make all connections as short as possible, letting no wires touch that cross over each other and if possible where connections are shown between 3 or more points using one wire for all and not several wires, letting the wire run from one point to the other, pass under the screw, and on to the next.

One can make the vario-couplers and variometers, but such good ones are now on the market and cost from \$3.00 to \$6.00 each that much better results can be had with less labor if you will purchase these parts. A complete regenerative receiver (without detector) costs on the market today from \$25 to \$75 and by buying the three parts one can be made that will do just as good work, for \$10 to \$20.

Major Armstrong, the inventor of the regenerative circuits has just perfected another circuit which he and with this circuit using 2 vacuum tubes and the necessary parts, he can get signals as loud as can be had on one tube with regenerative

receiver and 8 steps of amplifiers. This will mean that in the course of another few years we will be enabled to hear all the stations over the entire world without much difficulty. But don't wait for this to come as you are going to miss much this coming winter and spring that will mean dollars and pleasure to you if you are not listening-in to the many voices in the air right now or as soon as you can make or buy a receiving set.

How to make a variometer and vario-coupler will be described shortly, but first we must cover one and two-step amplifiers, and then we will take up the making of the different items that some will want to make and not buy.

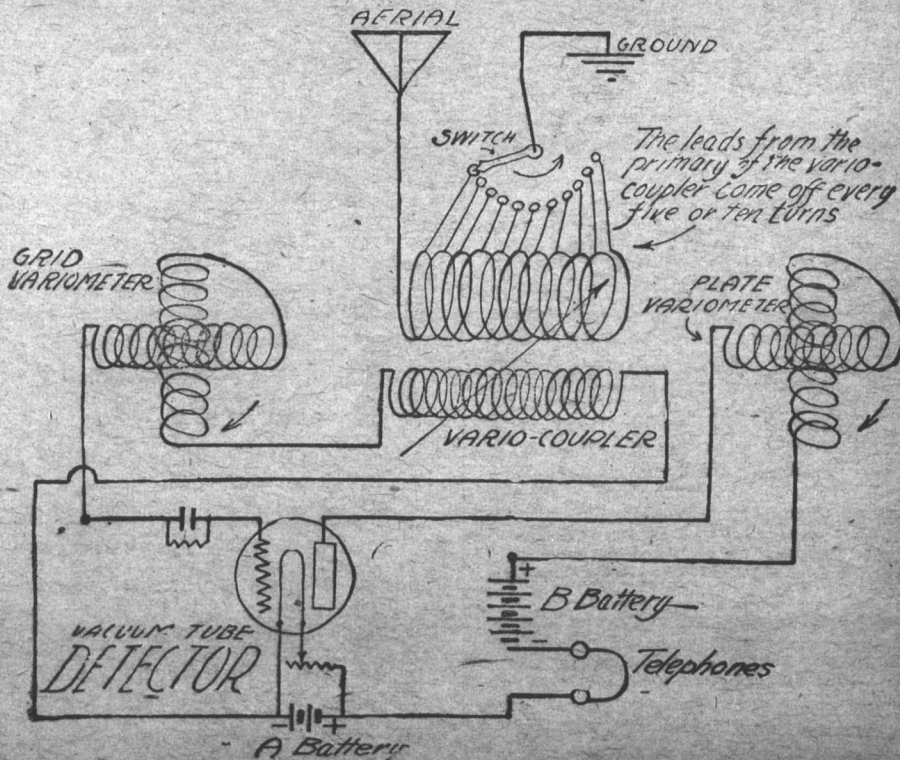
Right here I want to emphasize the fact that to obtain the most out of radio in our rural communities and in the farm home, it must be done by co-operation.

In the home the entire family will wish to hear the music and entertainments and father the market reports, and to son will be given the "job" of making a receiving set and expect him to produce from some old wire, a wooden box and some odds and ends a dandy receiving set, and if he fails the whole family will say that there is nothing to radio. But if you will help, mother with a little butter and egg money, sister with a little of her berry picking money and brother and father with a little of the pork or potato or corn money you can buy a set that will bring the best of the world's music to you, the latest news, weather and market reports and keep you right in touch with the big things of life. Something that will do you good, entertain you and your friends and keep your children at home.

In the community, the church, the Grange, the Gleaners, the Masons or any organization should get together and get a radio set that will be of benefit to the whole community in this way the expense can be reduced to each individual and yet enjoyed by all. Have you wanted to hear the President of the United States talk to you? Then go to your lodge, club or church and hear him. He talks over the wireless now and then.

Get together in this, you can enjoy it collectively really better than individually and why not share or help share with your neighbor part of the good things that you can have so simply and at such a little expense.

In shipping some Bartlett pears and Damson plums this fall I watched the Chicago markets as given by KYW, the Westinghouse station at Chicago, and the net profits on two shipments, above what most of my neighbors received, paid for my receiving set. This shows what can be done, not on fruit alone but on live stock, or dressed meats, grain or anything that the farmers raise or ship.



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FUR DEPARTMENT

EDITED BY A. R. HARDING

America's Foremost Author and Trapper

QUESTIONS ANSWERED

HARVESTING THE FUR CROP (Continued from Nov. 25th Issue)

MUSKRAT are still the most plentiful of the Michigan fur bearers and at prices ruling the past three seasons value of the catch is much more than that of either skunk or mink. Muskrat breed twice each season—some say three times. Muskrat furs are used imitate seal and other high-priced furs.

Early in the season muskrat are rather easily caught, yet after a few have been taken, they become somewhat shy of uncovered traps. Many trappers use rubber boots, wading along the shore, claiming that their tracks scare the rats when conspicuous, in the mud, along the shore. If a boat can be used it is best, as sets can be made where otherwise they could not.

Traps of the No. 1 and No. 115X, long spring type, and No. 1 of the Blake and Jump, Kangaroo, Oneida and Coil spring, or under spring type, are correct sizes to use. Some experienced trappers, however, use larger traps, claiming that they drown quicker. The trap, regardless of size, should be staked as far out in the water as chain will permit, and the trap set near shore in about two or three inches of water. Where the paths are leading from one lake, pond or swamp to another, or paths, leading up the bank, no bait is required. Bait should be used with sets made where there is but little sign. Corn, apple, potato, pumpkin and parsnip are all muskrat bait. Corn shelled and scattered about the trap or the other baits cut up and placed a foot or so beyond the trap will usually entice the animal to trap.

Bunches of cat tail and other weeds or grass showing where muskrat have been feeding are fair places to set. Boards and logs placed near houses sometimes make good places to set as muskrat enjoy resting and eating on them. Traps baited at such places are pretty sure to catch.

Some believe that muskrat gnaw their feet and legs off when caught. Such is not the case. If caught in a stiff spring trap breaking the bone, they are very apt to get away by twisting about. The flesh and hide of the front foot and leg is tender. The hind foot and leg is larger and tougher and for this reason it is best to make the catch by the hind leg when possible. It is for this purpose that traps should be set about three or four inches deep. In swimming to shore or feeding places the front feet are apt to pass over the trap.

The weasel which turns white during the winter months for some years has been selling, according to size, from about 25 cents to \$1.00 or more for very best, largest and pure white. The smallest size trap will easily hold this animal so that the No. 0 is much used. Weasel will be found along old stone fences, hedges, brush piles, etc. They are easily trapped and sets at small "cubbies" are probably as good a method for catching as any. They are fond of flesh and the bloodier the better. Keep this in mind when setting and baiting for this animal.

There is no open season on beaver until 1925 so no need to explain methods of trapping this fur bearer. There are now very few martens in the state so that trapping methods about all of the fur bearers, other than otter, has been explained. Otter are now quite scarce throughout the state yet there are some in all of the Upper Peninsula and an occasional one still in several parts of the Lower Peninsula. Some eight years ago when trout fishing I chanced upon an otter slide in Gogebec County. I wrote a trapper friend, then in that county, and he caught three near and at the slide that season.

Otter are great rovers and may wander from a certain locality ten, fifteen or more miles and be away for weeks. Otter are very shy animals and frequent streams that are brushy and as little used by man

(Continued on page 23)



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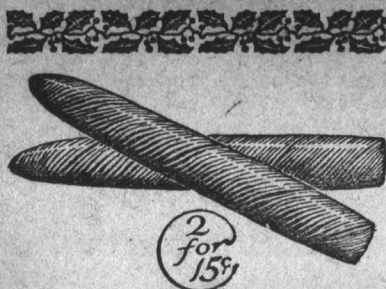
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On Page 105

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HISTORICAL BACKGROUND OF MICHIGAN AGRICULTURE

(Continued from page 4)

conveyed malaria, commonly called the "shakes" or "ague," which none escaped and which sapped the vitality of the pioneer and gave a bad reputation to the country which produced it. The pioneer, untaught by modern science, did not associate malaria with the mosquito, but he was aware that it lurked about the damp, water-soaked low-lands, and he surmised it had something to do with the "miasma" that afflicted the atmosphere in such regions. Early Michigan, because of the conditions that are here described, got a rather bad reputation in the East, and it was early officially declared that very little of the territory was fit for human habitation. The difficulties were exaggerated, but even so, establishing a farming community in the primeval wilderness was hard enough at best. The forest, dense and lofty which crowded round the settler's clearing, impeded air-drainage and hence favored unseasonable frosts, particularly in low places. It isolated farmstead from farmstead and made life lonely in the extreme, so that the settler sought every occasion for breaking away and seeking the company of his fellows even at great distances from home. The battle with the trees, and after them the stumps—some of them enormous in size and well-nigh indestructible, was grueling labor for both man and beast at a time when high explosives, mechanical stump-pullers and tractors were not yet at the disposal of the pioneer, as they are today. If accident or disease prostrated the settler, hospital care did not exist; the medical care was difficult to secure—sometimes appalling so. Such amusements as there were, must be also home-made, and were all the more eagerly engaged in for being obtained with difficulty. They were spelling-downs and debating at the school-house, husking and quilting bees, raisings and camp-meetings. They helped to lighten up the hardships and trials of pioneering, but one seldom finds in the recollections of pioneer life by those who shared it, any longing for the return of the "good old days" which did not leave many impressions save those of toil and privation.

The Indians

The first farmers of Michigan were the Indians. A number of Algonquin tribes dwelt within the borders of the territory now comprised in Michigan—Chippewas in the north, with Ottawas and Menominees in close proximity to them, and with the Chippewas and Pottawatomies mainly in the south. The Indian "garden-beds" attracted the notice of the early settlers, although just what these were, is still a matter of some doubt. In Michigan the signs of these "garden-beds" have been mostly obliterated. They are better preserved in the neighboring state of Wisconsin. In a small way Michigan Indians grew Indian or "squaw" corn, with some vegetables, such as pumpkins. This primitive Indian corn—small kernels each surrounded in its own particular husk, clustered together as a small ear, that would now be called a "nubbing"—is still occasionally grown largely for curiosity's sake, although it is thought that it may have some value for breeding purposes because of its quick maturity. As one should expect, Indian agriculture, was unmethodical and of slight importance, as the pioneers testify and as is indicated by the frequent famines from which the Indians suffered. Forest and stream were the normal sources of the Indian's food, and while game was his chief article of diet, he produced maple-sugar in large quantities apparently, although the manner of its manufacture did not recommend it to the nicer palates of the whites. The lakes and marshes carried wild rice in both peninsulas, but this was not very nutritious, and the red man was prone to swap his winter's store for a drink of rum. Even yet implements of stone or copper are occasionally dug up in various portions of the state that presumably once served some agricultural purpose for the Indian, particularly the Indian's squaw. The man of the family was not eager for labor of this sort.

The first white farmers in Michigan were the French. The French also were more at home in the forest or on the water courses than in the tilled field; but their farmsteads did appear close together, chiefly in the southeastern corner of Michigan usually reaching from the waterside of Lake Erie or Lake St. Clair, or the rivers flowing into these lakes, and well back into the country. The water frontage was narrow—often less than sixty rods,—thus bringing these sociable folk into close neighborliness and giving everyone a chance at the watery thoroughfare that abutted on the farm.

These French people were from Canada and presumably were brought hither at first mainly by the fur trade. In this trade Mackinac, Sault Ste. Marie and Detroit were points of major importance, but trading posts appeared at strategic points in the interior, one of the best known being that of Campeau on the Saginaw River. The trade was at times very profitable, and efforts were made to control it as a monopoly both on the part of the French and English. For many years the fur trade was very much more important than agriculture, and its history remains full of interest and romance; and, although it is now carried on in a fashion quite unlike the ways of Henry, of Campeau, of Johnson, of Williams, and other well-remembered traders of the golden age of the trade—French English and American,—the Michigan fur trade is still of considerable importance, the annual catch being still estimated at one million dollars in value or more.

Easterners Come to Michigan

If the French were the first farmers that settled in the state, they were greatly out-numbered after the completion of the Erie Canal, by the people from New England and New York, who made their way by this new waterway in very large numbers to Michigan. The Erie Canal was finished and opened for traffic in 1825. Five years later there dwelt within the present limits of Michigan less than 30,000 people, which still included a considerable number of French descent. Ten years later there were about 212,000 inhabitants in Michigan,—largely of Yankee stock—aggressive, ambitious, restless, and mainly agricultural. Reaching Michigan mainly by boat, they pushed into the interior. From Detroit, Monroe or Toledo, filling up first the counties of Wayne, Washtenaw and Oakland, and then moving on into the valley of the Grand, the St. Joseph and the Kalamazoo, and other streams, taking up such lands as the surface indications suggested were suitable for farming, and placing their villages where water-power or transportation possibilities indicated a good site. These New Englanders and New Yorkers were mainly of British descent, were trained in the democracy of the town meeting, were Protestant and Puritanical, while the French were Roman Catholic and not accustomed to self-government or much interested in it. Just as their ancestors in New England and western New York had reared their dwellings on the frontier, exposed to the hardships of pioneering and exposed to the hazards that lurked in the forest close by from the assaults of wild men and wild beasts, so these American pioneers of Michigan built their frontier cabins and cleared their fields without taking much account of trials, dangers or the lonely circumstances of their existence, but they were fit instruments for home-building and commonwealth building. We are not surprised that with their coming came a demand for greater self-government and that this demand carried Michigan into the Union as a state in 1837.

With the influx of eastern Americans, there came shortly immigrants from the old world many of whom took to agriculture. Germans arrived very early apparently chiefly from the Rhineland—industrious, thrifty, hardworking. They began to arrive even before the Revolution of 1848 drove many out in search of greater liberty. Land was dear in Germany and for many, quite unattainable. It was cheap in Michigan and probably better in quality in the southern counties. It would cost perhaps \$200 or more per acre in the Fatherland, while such good

land in Michigan sold for \$1.25 an acre. The raw material for building a wilderness home was cheap, if anything, too abundant. Some of these German farmers settled in religious communities, such as the Mennonites and Moravians. Soon the Dutch from Holland in the late '40's sought new homes by the Lake Michigan shore in consequence of religious difficulties which had arisen in the mother country. Then came Scandinavians, Bohemians, and other European stocks—all good material out of which to build a hardy rural life; and there was even a considerable settlement of negro farmers in the south—composed of freed or escaped slaves. Mining attracted Finns to the Lake Superior country, and many of these later became farmers, and as farmers, the Finns constitute one of the most important racial elements in the northern peninsula today. They are not numerous outside of these counties which border on Lake Superior. Scandinavians, Germans, French and other European stocks also have established themselves in the agricultural northland.

The Surveying

The land of Michigan, out of which 196,447 farms of the state have been carved, at the outset belonged to the Indians, who, as we have seen, made very little use of it for agriculture. The United States got possession of this land through treaties with the Indians, such as that in 1807 which ceded territory in the region of Detroit, the treaty of 1819 ceding the Saginaw region, of 1821 ceding the land south of the Grand River, of 1836 ceding the northern portion of the Lower Peninsula and the eastern portion of the Upper Peninsula. Before farms could be located and described, it was necessary to survey them. The surveys were carried out by the General Land Office of the United States. This survey was begun in Michigan in 1826. In accordance with the plan of land surveys adopted by the old Confederation Congress in 1785, a base line and meridian line was run east and west, and north and south throughout the state. Townships were laid out six miles square and numbered with reference to their relationship to the baseline and meridian line. The townships were divided into thirty-six sections and numbered—the section in the northeast corner being number 1. Quarterposts were set equidistant from the section corners. Local surveyors could then run the boundary lines of farms being located with reference to their position in the section (as "the northeast one-fourth," commonly written "NE 1/4"). It is true that there are not a few farms in Michigan still described by the antiquated and inaccurate method of "meets and bounds," but the official United States Surveys are regarded as the preferable form of description.

When land was surveyed it could be purchased at the United States Land Office of the district. Land offices were located at various points in Michigan, but as much of the land owned by the United States was disposed of, all land office business was eventually centered at Marquette where is now the only U. S. land office in the state, quite capable of handling all the business connected with the some 73,000 acres of land which the United States still holds in Michigan. Considerable tracts of land were also given by the United States to the state, in aid of education and internal improvements—for the construction of canals, roads and railroads; and a part of these grants now form a portion of the farm lands of the state. After the passage of the United States homestead law of 1862, individuals could acquire free lands on homestead entry, and the state itself now holds considerable tracts of land also subject to homestead entry. Much of such lands were acquired by the state because of the failure of owners to pay taxes assessed against them, and presumably these lands are still dear at any price and are not desirable for farming purposes even if acquired without a money payment. It is one of the problems in which the state ought to be interested, just what should be done with the lands which the state and the United States still possess.

(Continued in an early issue.)

MICHIGAN CROPS

SOWING ALFALFA

I am thinking about sowing a piece of alfalfa next spring. Have never had any experience with alfalfa but have been advised I can sow with oats. Please give me any information you have regarding the planting of this crop. Also what do you think of orchard grass for pasture? —E. K., Clare County, Mich.

—Alfalfa requires a well prepared seed bed, plentifully supplied with lime and having good drainage. Many farmers are having success sowing alfalfa with oats as a companion crop, although as a rule barley is a better crop to use in place of oats, as it is not so leafy and does not make such a heavy drain on the water content of the soil. In any case you should not use over one bushel of oats or barley to the acre, and if it is the first time alfalfa has been sown it would be better to use only two or three pecks. You should have the land fall plowed for the best success with alfalfa seeded with oats or barley.

The seed bed should be good and firm. If the land is very weedy, or if it has not been fall plowed it would probably be better to cultivate thoroughly until the first of June and then seed the alfalfa alone some time during that month.

For the best success with alfalfa in Michigan a hardy variety such as Grimm, Baltic, or Cossack should be used, and in any case northern-grown seed.

Orchard grass has a wide adaptability but is not to be considered in preference to our other common pasture grasses as a general rule, except on light land or hilly. It grows rather coarse on rich land but on rough infertile land it does not make such a luxuriant growth and it makes a useful mixture for pasture on this type of soil. It is a perennial and I think should be used

more on some of our rough land as a part of a permanent pasture mixture.—J. W. N.

PEAT HAS LOW FERTILIZER VALUE

PEAT, in recent years widely advertised as a fertilizer is not to be compared with stable manure or with mineral fertilizers as a means of increasing crop production. This is the essence of a statement that has just been made by the United States Department of Agriculture as a result of many investigations on the subject.

Special processes, such as the "bacterization" of peat, occasionally are alleged to give it unusual fertilizing powers, but tests have not substantiated these claims. An English investigator of few years ago reported good results with the use of "bacterized" peat, but experience in this country has not supported his theory. No laboratory process for the "bacterization" of peat has been discovered which materially improves it for fertilizer.

The peat or "humus" that has been marketed in this country as a fertilizer or plant stimulant has shown a decided lack of uniformity, but this is to be expected when it is known that peat deposits are the slow accumulations of layers of plant material of different kinds. The rather high percentage of nitrogen occasionally found in peat and muck is due not to the presence of available nitrogen, but the accumulation of nitrogeous material that is not available for the use of plants, the more soluble substances having been lost. A well decomposed layer of peat has in it very little available plant food of any kind.

Some kinds of peat are very useful for stable litter and for composting. While peat is too bulky and too poor in available plant food to serve as a substitute for manure or mineral fertilizers, certain kinds of peat appear to be suitable in the growing of specialized crops or as potting soil in greenhouses. In the manufacture of mixed fertilizers the use of peat as a conditioner, as well as a filler, appears to have been satisfactory to the mixer. Several varieties of peat and muck soil are farmed, frequently showing high productivity for many kinds of truck crops or as grass land. Any peat deposits, however, are agriculturally unsatisfactory, and some peats contain substances distinctly injurious to plants.

Exports of corn during each of the first three months of 1922 were larger than during any month of 1921 according to the United States Department of Agriculture.



Uncle Rube Spinach Says:

IT'S ALL OVER NOW!

JEST a little bit ago Paris said skirts must go down—they must be longer. For a short time actresses an' a few others wore 'em longer. Some of the young fashion women put 'em down to the shoe bottoms an' reformers an' ol' ladies, ol' maids without any reason for wearin' 'em short, all hollered 'at it wuz good 'an glorious—at our women would be clothed agin in a proper form. It looked like things wuz goin' to be—but how long did it last? You know it wuz short-lived—very short—our young women who have every good reason for wearin' their skirts short ain't goin' to hide the reasons by wearin' 'em long.

An' when you stop to think of the comfort of the short ones—no matter what other reasons they may have, then do you blame 'em for wantin' 'em short?

Now you nor I think for a moment that young women wear short skirts to advertise what they've got. We can tell by size'n 'em up 'bout what's there—it's 'cause they want comfort in walkin', in gettin' onto street cars—for a hundred different things—never to let the world know they have nice calves—cause

the world knows that already.

But the ol' fogies—the reformers, the ol' maids will continue to holler 'bout the short skirts—they are immodest, disgraceful an' every thing. An' yet did you ever notice that the reformers, ol' maids, widows an' even ol' women follow the styles as closely as the bobbe' haired flappers or any other style followers?

An' the young men are no better. Watch 'em an' see—every style—clothes, cut of hair, mustache, eye-brows—anything, you'll find 'em in it. An' if fashion said for the young men to powder their nose they'd do it—yes they'd powder their face an' wear short pants an' be monkeys if fashion said so.

And do you know it took 'bout a million years 'cordin' to Darwin's theory for man to elevate from the monkey but it takes a woman about three minutes to put him back in the class from which Darwin sees he sprung.

Oh, well, fashion has her victims—women has hers—men, well I guess they have 'bout what they can get—never gettin' much of any place—jest ploddin' along—an' I guess at's 'bout all. Cordially yours
UNCLE RUBE.

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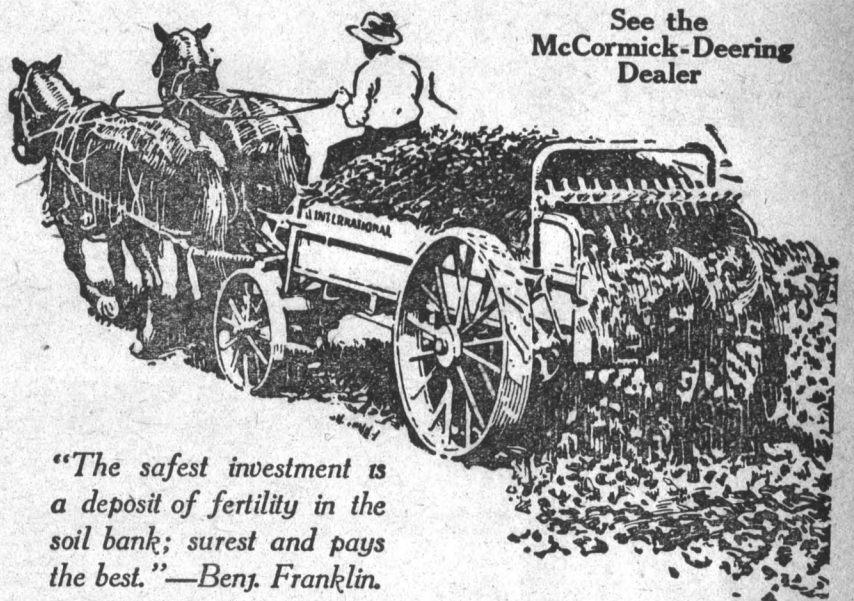
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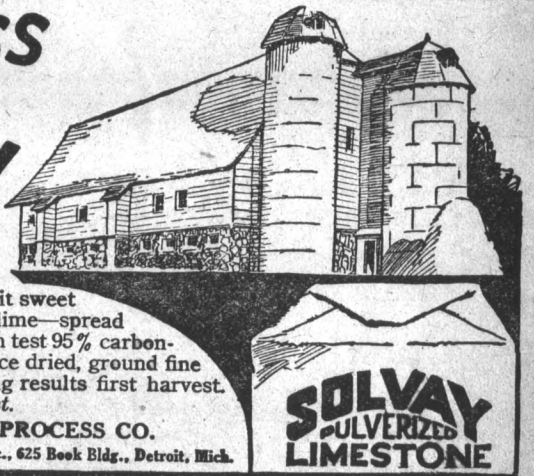
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FARMERS ATTENTION

We are in the market for Red Clover either medium or June. Please send us samples of your offerings. We feel sure we can quote you an attractive price.

STIOUX CITY SEED CO.
Millington, Michigan

WHEN WRITING TO ADVERTISERS PLEASE MENTION MICHIGAN BUSINESS FARMER

The Michigan BUSINESS FARMER

SATURDAY, DECEMBER 9, 1922

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Milton Grinnell.....Managing Editor
Grace Nellis Jenney.....Farm Home Editor
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RELIABLE ADVERTISERS

We will not knowingly accept the advertising of any person or firm who we do not believe to be thoroughly honest and reliable. Should any reader have any cause for complaint against any advertiser in these columns, the publisher would appreciate an immediate letter bringing all facts to light. In every case when writing say: "I saw your advertisement in The Michigan Business Farmer." It will guarantee honest dealing.

Entered as second-class matter, at post-office, Mt. Clemens, Mich.

"The Farm Paper of Service"

A NEW FEATURE ADDED

THE Business Farmer is proud indeed to present on page 29 of this issue the first complete Agricultural and Business Review in detail, ever to our knowledge printed in an American farm paper. It is presented by special arrangement with the Department of Research of the American Farm Bureau and is but another department of service which that worthy organization is extending to the farming business.

This page summary will be found to contain the comparisons on every line of business or production in which the business farmer is interested. It boils down into the smallest possible space, information which could be spread into volumes. It answers in actual figures and by comparisons with the previous month, previous year and pre-war years, practically every conceivable question that may arise in your study of farm markets or market conditions.

We hope every earnest farmer will study this page and thus learn to use it. It will appear regularly in the last issue of every month and will, we believe, further prove that The Business Farmer is what its readers have come to call it: "The Farm Paper of Service!"

A MILK-FED MELON

THE Detroit Creamery Company cut a big fat, juicy melon the other day. It was a melon which the dairymen helped to grow but they didn't share in its distribution. The melon was a 50 per cent stock dividend to all stockholders of record December 8th. Every person who owned ten shares of the stock now has fifteen without the investment of a single additional penny.

To be able to cut a melon in times when so many business enterprises, including farming, are struggling for a bare existence is a distinct tribute to the business sagacity of the melon cutters. It may at the same time be a perfectly legal and moral operation. In this particular case it represents inordinate profits which under more equitable conditions would have gone in part to the dairymen who produced the milk from the sale of which the profits accrued.

These profits were earned by entirely approved methods. The creamery company paid the farmers the price which had previously been agreed upon. No farmer was coerced into selling his product at that price and no advantage presumably was taken of him in the matter of weight and test. The milk was sold to the consumer at a price previously advertised, and all presumably containing the legal amount of butter-fat. At no stage in the distribution of this milk was there a single transaction, so far as the average eye is able to perceive, which would not meet with the requirements of the most exacting statutes.

The secret of this company's profit-making lies in the fact that the company controlled every large item of cost entering into the purchase and sale of the product. It told the farmer what it would pay him for his milk. It told its wagon drivers and factory help what it would pay them for their labor. It told the consumer what he would have to pay for the product when set down at his door-step. All the way from cow to con-

sumer that product was virtually under the control of the creamery corporation.

Why? Lack of competition. If there were actual competition in the creamery business in Michigan the Detroit Creamery Company would not be able to pay out a \$2,000,000 stock dividend and annual cash dividends of 12 and 14 per cent. They would have to bargain with farmers for their product or the farmers might sell it to their competitors at a better price. But the Detroit Creamery Company has successfully met all competition and therefore controls the supply and the market in the Detroit area and to a certain extent outside that area.

The Business Farmer has always believed that the farmers themselves should furnish the competition so badly needed in the Detroit area. This melon slicing job has not caused us to change our mind.

PAINTING THE LILY

IN discussing the milk price, W. L. Watson, secretary of the Detroit Milk Bottle Exchange, said: "We do not want to raise the price of milk to the public just before Christmas holiday season when it would work a real hardship. A little while ago the farmers flooded us with milk. Now they are a little short with the supply and we think they are holding it back to force an increase in price. We have only the interest of the public at heart. We do not want higher milk prices."

That was a nice little speech to be sure. All who read it in the Detroit daily papers must have instantly said, "Those wicked farmers are trying to starve us with their high prices. If it wasn't for the creamery companies there's no telling where milk prices would go." But the poor ignorant consumer doesn't know that the dairymen haven't declared a dividend in a "dog's age," while the big creamery companies declare 'em every three months.

TAX EXEMPT?

JOHN DUVAL DODGE, son of the late John Dodge, one of the millionaire brothers who built their fortunes in a few years out of the manufacture of automobiles, is protesting against the payment of any personal tax. An amount, said at the time to have been two millions of dollars, was handed the young Dodge just about a year ago and since that time he has been in the public eye more or less frequently. Now he does not claim that he spent the two million, but rather that he has invested it all in tax-exempt bonds and federal certificates of indebtedness.

Tax-exempt bonds are just about as fool-proof a form of investment as any one could ever hope to own. It seems a little strange to some of us, however, that industry and sweaty labor should continue to be taxed beyond all reason, when retired capitalists or fat estates can boast of tax-exempt securities, which good year and bad, bring in a golden stream of profit, to their owners. We do not boast of being economists, but we wonder if this seeming injustice is necessary. There must be another way out and the man who finds it need not be called a "radical" either!

OUR NAVAL RESERVE IS THE KEY

RIGHT now the thing that is "rocking-the-boat" at Washington is the ship subsidy. Our experiment in ship-owning has been mighty expensive and now various plans are brought forth to solve the problem. Most everyone agrees, however, that it would be a shame to lose the investment we have made or to see the American flag again a strange sight at sea. There is such a thing as "putting-up-a-good-front," even if it does cost something.

The Business Farmer would like to suggest a plan that, so far, we have seen no sponsors for, yet for the life of us, it seems practical, and economical. It is the coordination of the navy with the merchant marine. It would make every man in the pay of the United States navy from Admiral to Seaman, second class, a worker on the merchant ships which fly the American flag. Whether the government operated these ships or they were operated by private corporations, on one of the plans suggested, would be immaterial. The important thing would be that in times of peace we would have a great many thousand navy men actually at sea operating our merchant ships in every port in the world, yet ready for instant call in case of trouble.

It would give every man on an American merchant ship a rating in the Naval Reserve of the United States Navy, and he would be partly

paid by the navy. This would equalize the wages paid by the ship operator (whether government or private) in competition with the lower wages paid on English, German and French ships. There are literally hundreds of thousands of young men in this country, between 18 and 25, who would be anxious and willing to serve, say, a two year enlistment in the navy of their country, if they were assured that after a very brief land training, they would go to sea immediately as ordinary seamen, on merchant ships visiting the foreign ports of the world.

A rotation could easily be arranged whereby both officers and men would have certain months of actual naval training on battleships and with guns, but the greater part of their time would be spent at sea and in the actual operation of ships which is, after all, the most important consideration when war comes.

The situation today is; that we have a great "standing" navy, including single battleships with crews of a thousand or more men, "standing-by," like firemen in a firehouse, waiting for the alarm. That is alright, but when war comes, this great body of men is only a skeleton of the number actually needed for naval service. So smooth working organizations are broken up into hundreds of units, while volunteer "gobs" are hurriedly enlisted, most of whom have never felt salt-water under their feet. On the other hand, today, we have a great merchant marine with hundreds of ships of every size, from the giant "Leviathan" down, which some say unless the ship subsidy bill is passed, must lie at their wharves while the commerce of the greatest nation in the world is carried on ships that fly the flags of foreign nations.

Cannot these two great similar propositions be welded into one?

At an actual saving, it would seem possible for the United States of America to make her naval strength greater through efficiency and her merchant marine the envy of the rest of the world.

Can it be that we are the first to suggest this seemingly apparent solution?

WHO CAN AFFORD WAR?

BEFORE the war, the national debt of the United States was \$1,038,546,000 and today is \$23,922,000,000. France's national debt was \$6,346,129,000, now it is \$23,350,000,000, while Great Britians has increased from \$2,485,-\$18,000 before the war to \$37,910,000,000 today! That is the price these nations paid for war.

The total monetary loss, alone, of all the nations in the World War, mounts up to a figure that is simply inconceivable, it staggers even the imagination. Some of this money the winners expect to gouge out of the losers. How much? Your guess is as good as anyone else's. Probably it is going to bring about a combination which will include Russia; they will say, "rather than pay what we cannot pay, we will fight you again!" It is a shame that wars can be fought on credit. If it were a case of "pay as you enter," there is not a nation on the face of this earth that could get by the conductor.

And that would be a blessing to all people!

"Stop my paper on expiration" says F. C. Lee, Thompsonville, "Potatoes are 15c here!" Yes, friend Lee, and they probably would always be 15c, if it were not for serious minded men and loyal farmers who know that the way to right a wrong is to fight it out. The ostrich sticks its head in the sand when surrounded by danger! The human ostrich among farmers harangues his wife, says all farm organizations are run by grafters and stops his farm paper! Thus having cut off the three sources from which aid would come, he goes back where he belongs, which is not in the farming business.

If you farmers are not satisfied with the appointment of James Couzens, as senator to fill the unexpired term of Truman Newberry, it is because they do not know the man nor his record. We believe that before a year from date the Senator from Michigan will have made an enviable record in the senate and that among his best friends at home will be our farmers.

With 17 out of 24 farm products advanced in price over a month previous, as shown in the Agricultural & Business Situation, on page 29 of this issue, it would appear that the farmer can begin to catch a glimpse of the silver lining, for which we have all been looking, hoping and praying!

You who have wanted to read the Truth about Henry Ford, will be delighted with our announcement in this issue that we have secured the rights to reprint this famous book exclusively in The Business Farmer beginning next issue.

FOR BETTER ROADS BUT TAXES ARE HIGH ENOUGH NOW

I THINK H. L. V., Ottawa County is right about the gasoline tax as there are a great many men that have cars that do not pay any tax, only their license, and they travel the roads more than the average taxpayer because they have nothing to keep them at home.

The dealers of every county should pay to the county a certain per cent, say 50, to go direct to the county roads and the rest to the state to be divided equally among the counties for the state roads.

I am for better roads but just now the taxes are about high enough. The license is all right as it is.

Most of the tractors and engines sold now use coal oil so the farmer would not be taxed for them. What do you say?—M. B. D., Isabelle County, Michigan.

FORD FOR PRESIDENT

I WANT to write a little verse, I hope you'll print it too, And so impress the universe With us poor farmer's view. The M. B. F. is everywhere And everybody reads it So if a little space you'll spare To give our views to them as needs it.

We want Mr. Henry Ford In the Presidential chair And we'll thank you Business Farmer

If you'll help us put him there. Now if you think this verse is snappy Enough to put in print You'll make us very happy And we'll say you done your stint. Next presidential election get out and vote

Ever last woman and man And please remember you'll get our goat

If you make him an also-ran. Now Mr. Harding, he's all right A good man in the chair But Henry wants to get in the fight

And we want to help him there. We'll back Mr. Harding right to the end,

He's a mighty good man, I'll swear. But Henry's been the working man's friend

And we want him in the chair. —Fred Packer, R. 1, Fosters, Mich.

ARE WE ECONOMICALLY BLIND

IN your issue of October 28th is a communication from Luman Klink, Eaton County, headed "Let's Fix Our Price."

Brother Klink, in common with most farmers realize there is something that makes farming unprofitable that is beyond the power of the individual farmer to remedy. In other words the farmers' problem has become social. The Editor's answer to the effect that education and cooperation would eventually solve the farmers' economic difficulties is sound. Cooperation worth while must be preceded by and accompanied with education.

A number sufficiently large to make cooperation powerful enough to emancipate the farmer from economic serfdom must be of one mind. They must know what is wrong; and why it is so; and what it is necessary to do to set it right.

The question naturally arises as to where the farmers are to secure the educational essential to their industrial emancipation. Those who purport to be leaders of thought among the farmers should first secure the information called education; and as a result of that education formulate a program sufficiently extensive, the carrying out of which would enable the farmers to remove every parasite off their backs. And I hereby request the Editor of "The Michigan Business Farmer" to at once start educating himself in economics so that he can outline a program that will solidify the farmers of the nation.

Farmers have been led by the economically blind long enough. How can the farmers whose lives are devoted to physical toil do the necessary mental work incident to a sound program if such mental work is too difficult for the editors of our farm journals and the professors of our agricultural colleges?

Last evening I listened to a lecture by a man with a national reputation as an orator. A portion of his ad-



What the Neighbors Say



dress was devoted to the deplorable condition of the forty per cent of our population engaged in farming, for which condition he attributed high freight rates. Most of us are old enough to remember when freight rates were low and we have not forgotten that the condition of the farmers was relatively the same then as now. Any economist knows that if farm products were carried on the railroads free of all charge that the farmers under existing conditions would not benefit thereby.

Last Labor Day I listened to an address by an M. A. C. professor in which he recommended the improving of the dairy cattle as a means of making farming more profitable. Of course we will agree that the improvement of anything is very desirable; but any economist knows that if every cow in this country was as good as the one now having the highest record, that such a desirable condition would only result in the lowering of the price of butterfat to about the point of production, and would not, under existing conditions, benefit the farmers of the country one farthing.

The study of social economy has taught me that the "fixing" of the price of farm products by the farmer would only result in increasing the cost of other commodities to a point that would more than offset the additional amount the farmer received as a result of his price "fixing."

Farmers are wealth producers who are tricked into surrendering a large portion of their wealth to those who produce nothing of value. The trick consists of making the farmers believe that they can profit by a profit system. Farmers not being economists are unable to see that since they pay more profit on the commodities they buy than they receive on what they sell that the so-called profit they receive is more than wiped out by the profit they pay, hence farmers in general do not on the

average make any profit. I am aware that any one who points out that the profit system is what keeps the farmer poor is at once labeled as a socialist. But the only sure test by which one can tell any progressive thinker from a socialist is by asking him to state his remedy.

The socialist will tell you that the remedy lies in voting the socialist ticket. The writer is of the opinion that intelligent cooperation based on an understanding of social economy will emancipate the wealth producers of the nation. If I am right then the Socialist Party is not needed. If I am wrong there are no doubt a number of your numerous readers that can set me right. I am a student of economy that is anxious to get further enlightenment; and for that reason I am anxious to have the Editor and others to point out the faults in my position. Let us have a real educational debate in these columns.

I am working on a program to be based on a scientific understanding of social economy that will point the way to industrial emancipation for the wealth producing class; and I am anxious for the assistance of the Editor and readers of "The Michigan Business Farmer."—Joseph Warnock, Presque Isle, Michigan.

The editor has an open mind and is anxious to receive all suggestions for the improvement of agriculture. He is conceited enough to believe that he is already qualified to "outline a program" which if carried out would benefit agriculture, but he refrains from offering a guarantee that this program would "solidify the farmers of the nation." Just now there are all kinds of brands of self-styled "farm-leaders," each of whom has his pet solution for the agricultural problem. But there are really few of sound business judgement and versed in economics who are at heart in sympathy with the farmers' problems. It has been my observation that an academic training is of

little value unless one's sympathies are with the work which one undertakes. Before we can "solidify" the farmers on any program we must first "solidify" those who think they represent the farmer. And this is not an easy thing to do. For they hold many divergent opinions, and each is jealous of the other. We find too many so-called "economists" disagreeing among themselves as to which is the best way to proceed to raise agriculture to the plane of other lines of business. The great problem today as always is to get the farmers thinking and acting in unison, for as you say any program for improving their status must have their loyal support. You have offered a number of interesting suggestions. Let us hear from you again. —Editor.

PUBLISHER'S DESK

Dear Mr. Slocum: I am a reader of M. B. F. and have taken it for years and like it better as it grows older. I have 2½ shares of stock in the Whitney Tractor Company and you will see by the enclosed circulars from E. McNeal & Co., stock brokers in Chicago, that they offer me 100 shares of Mid-Continent Development Company stock for payment of \$10 conversion costs, plus \$2 conversion expense. It is an oil company you will see by the circulars attached. Tell me what to do.—W. V. K., Tuscola County.

If, as you say the stock in Whitney Tractor Company is no longer of value, then the scheme to get you to convert it into an oil stock by the payment of further cash, is only a trick, and we would not advise you to put any good money after bad.

Mrs. H. E. W., Oakland county, sends me the literature of a company who wants her to paint art-pillows for them at her home and for which they promise to pay her liberally. I have replied to her as follows:

"If the Omaha Tapestry Paint Company, LaGrange, Indiana, have a fair and square proposition they certainly do not indicate it in the guarantee which they make.

"The guarantee on their order blank amounts to nothing, and after they have received your \$6.00, we doubt very much if you could get any considerable part of it back were you dissatisfied.

"Any company that was really anxious to get people to work for them at home would be glad to send you the work without cost to you, and it is pretty safe to look carefully into any proposition as a money making scheme for home employment which requires you to send money in advance to get that employment.

"We are giving this company an opportunity to give us the names and addresses of some of their satisfied employees in Michigan."

Although my letter to the company was written November twentieth, no reply has been received to date.

"Kindly advise me, if the Auto Knitter Hosiery Co. Inc., of Buffalo, N. Y. is good and reliable, I intend to buy an Auto Knitter from that company for \$50.00 spot cash, then they would give me a contract for 5 years for making socks on that machine. They agree to buy all the socks I can make in 5 years and they guarantee to pay \$1.50 per dozen pairs of socks, they furnish the yarn. Would you please write me if it would be a good idea to buy this Auto Knitter and work in spare time to make some money?"

We would advise you to send no money to any knitter company. This matter has been brought up many times and we have yet to find anyone who is satisfactorily making money at home by the method which they advertise.

Until they can prove to us that the plan is practical, we will not allow them to advertise in our columns, and we do not have very much respect for any publication which does.

Recently they sent us the addresses of some users in Michigan to whom we wrote and two out of three offered their machines for sale. If you still want to buy one, we will send you their addresses.

Special Announcement!



THE MICHIGAN BUSINESS FARMER will continue to publish every other Saturday, maintaining all departments and the full editorial service, which has made it invaluable to its readers, until a general readjustment of agricultural conditions is apparent.

We believe there is not an active farmer who will not approve of this policy to protect the only paper now owned and edited in Michigan.

During this indefinite period, we will accept new or renewal subscriptions at One Dollar for Two Years (\$1 for 2 years), or \$1 for Two One Year subscriptions, one of which must be a new subscriber. A net saving to our readers of 50%, which will be our contribution to a lowered cost of living for the farmers of Michigan and the nearby states.

You, who have watched The Michigan Business Farmer climb in five years to a position where it reaches nearly 70,000 farm homes, will welcome this opportunity to renew your subscription at a saving and multiply its strength to help you by acquainting your friends and neighbors with this new subscription offer.

Can we count on you to add one more name before the New Year?

Remember, our sole purpose is to be of genuine service, independent of any party, corporation or political aspirants control and the kind of farmers we call Business Farmers, will stand by us, because they cannot be "hood-winked!"

John W. Brown
Publisher.

(We acknowledge every remittance received with a receipt by first class mail)

THE MICHIGAN BUSINESS FARMER,
Mt. Clemens, Michigan

(1) For \$1 enclosed you will enter or renew my subscription for 2 years:

My Name _____ R. F. D. No. _____

P. O. _____ State _____

(If you are renewing kindly send address label from recent issue)

(2) For \$1 enclosed renew my own subscription as above 1 year and add the following new subscribers name paid-in-full for 1 year:

New Name _____ R. F. D. No. _____

P. O. _____ State _____

If you wish Christmas card sent New Subscriber mark X here ()

THE BIRTHDAY OF THE MAN JESUS

THE humble birth in a far country, centuries ago, a man called Jesus remains today the most significant event in the history of men. Whatever the measure and shade of one's honest belief, whether or not we must regard him as Messiah—the Christ or the carpenter—we face the inescapable fact that this man in three brief years of active ministry exerted a profounder influence on the subsequent life of the world than any other figure in its records.

Though there be hundreds of thousands little interested in either the practical or abstract affairs of religion, they cannot escape reckoning with the fundamentals of ethics and the basis of Christian behavior. They cannot gainsay the measureless value of character. Surrounded by a "cloud of witnesses" they must recognize the immense significance to the world of Him whom St. Paul called the "author and finisher of our faith." For it was this Nazarene carpenter who taught the world the supremacy of character, who gave to the relationship of men the glorified theory and practice of ethics, who exemplified before the world the idea of sacrifice and service.

By the hard scoffers of his time this man Jesus was accused of having imperialistic ambitions, of having designs upon earthly kingdoms. The world learned later that He sought rather to introduce the kingdom of God to the ungoverned souls of men. He did not seek to drive men into new earthly social and governmental alignments. He sought to realize in us all the latent forces of personality that we might come into the appreciation of a greater kingdom than earth can offer—the kingdom of the soul.

It is our custom to give complete approval to the agencies of human betterment. We accept the immense values of social service, of church, of Red Cross, of school and hospital. These things but exemplify the philosophy of the man whose birthday we commemorate. We give gifts at Christmas time because the custom is remindful of the life and works of One who gave all for others. Christmas is no mere holiday. It is the day on which we turn to give our most impressive recognition to the great fundamentals of life. Without Christmas and its significance life is a dreary endurance. The illuminating fact of the Galilean lights up the face of the world. It attaches meaning to an everlasting struggle.

"I am come," said Jesus, "that they might have life and that they might have it abundantly." He came, and life was clothed with new meaning. It was fraught with new abundance.

Whatever good impulse flows from the human heart today and tomorrow and the next day, whatever kindly word is said, whatever God-like thing is done, be sure indeed that Jesus of Nazareth is passing this way.—Clipped.

THE TALE OF A CHRISTMAS PUDDING

MY Cousin Mary Agnes told me this sad tale, Mary and John told her, it happened to them personally, (as a friend of mine always says for emphasis) so it is well vouched for. Also Mary Agnes tasted the pudding or at least she tried to but that is getting ahead of the tale.

Mary and John earn the butter for their bread and the clothes for their backs by the highly respected but not over-paid art of setting their mental ramblings down on paper and selling what does not reach the waste-basket.

They live in a cosy little apartment and when they do not dine out they dine at home, sometimes alone and often with a member of the Press Club for good company. Each Christmas it had been their custom to go into a bakery and at some expense buy a delicious Christmas pudding with which to induce the proper holiday spirit and to help celebrate the day.

This year of which I speak, Mary saw in a well known Women's or Ladies' Journal a recipe for a wonderful Christmas pudding, it made her mouth water to read about it, just full of candied peels, of sugared plums of nuts and raisins, all



The Farm Home A Department for the Women

Edited by MRS. GRACE NELLIS JENN

galore. A bright idea came to her, why not make the Christmas pudding? It would undoubtedly be bigger and better and cheaper too which was to be considered for many were the demands upon the modest surplus put aside for Christmas giving, as they had hearts that were ever touched by the appeal of those not so well off in worldly comforts as themselves.

The very next day, in high spirits they gathered together all the ingredients for that pudding. To be sure the materials seemed to cost a good deal, just how much they did not care to figure it might detract a little from the pleasure they were going to have. It was borne in upon them that while the pudding might not be cheaper, it must be better and certainly would be bigger anyone with even a grain of sense could see that, so with gay hearts they set about, that evening, after dinner, to put those products of many climes together. Dear inexperienced John was splendid help, if he hadn't been, Mary certainly would have given up in despair, for that pudding like the one on the old women's nose, grew in bulk and weight until, like her, they wanted to wish it away. Certainly it would be BIGGER, it filled every kettle, in its place, every pot and every pan, they almost requisitioned the coffee-pot for the last sticky bit. At twelve o'clock two exhausted litterateurs sought their beds vowing that they were never born to be bakers.

The day before Christmas Mary Agnes blew in and was coaxed to remain for dinner, they would sample the Pudding and anticipate the joys of tomorrow and of many days to come, by the appearance of the pantry shelf. The simple repast was enjoyed to the utmost, then came the pudding reposing in a wreath of holly, looking as innocent as you please. Ah! appearances are deceiving, even in puddings, for it sat there stolidly and solidly and utterly refused to be divided, one could almost hear it say "In unity there is strength." At last it was decided to remove it to the kitchen where one might vent his feelings on that resistant mass by taking the hatchet to it. The janitor had one and it was sharp, one felt its keen edge with joy. John's prowess at golf came in handy, the cut was made, imagine their consternation when out from that break their flowed a stream, a rich brown sticky fluid carrying with it . . . but why any more painful detail? Now for the soap suds and the mop and for calm and quiet reflection after by the cheerful, blazing hearth. Who wanted the pudding any way?

Said Mary Agnes, "That pudding is like society, it is hard to break thru the upper crust, and when you do, you find little inside but dough." That is not quite the end of the tale, for Mary and John happened to know the editor of that Journal

and they decided to remember him with a bit of Christmas joy in the shape of a pudding. . . . The acknowledgement of the gift came shortly in a letter the terms of which could be best expressed by an eloquent dash or two.

There may be a moral to this tale. It can be said that while writers can produce pi(e)—they would best not tamper with a pudding.

Now if you have ever worked in a printing-office you will understand this reference.



CHRISTMAS CENTER PIECE



A SIMPLE yet effective, centerpiece for the Christmas dinner-table, that will suit the fancy of the season, is arranged on a circular piece of wood. The cover from a large candy-pail is just the right size; this you can get for the asking. Make, near the edge, two small perforations, on each side. Wind a piece of wire, about twenty inches long, with red ribbon, and then with holly. The artificial

kind, which is such a good imitation of the real holly, will do even better, for the wire stems can be easily bent in any way desired. Cover the board with a doily, then shape the decorated wire in the form of an arch, and insert each end in a perforation, bending the wire beneath to hold it firmly in place; hang three Christmas bells at the top; conceal the edges of the board with a thick wreath of holly, and in the center of this place a small gift for each guest.

To complete the effectiveness of this little scheme of decoration there should be four tall red candles in brass or glass sticks, ornamented with sprays of holly, and if the table is a large round one there might be an individual candle at each place. Have the dinner-cards bell-shape, with sprigs of holly, and the Christmas greeting in red and green, and on each napkin place a crisp dinner roll; fold the napkin over cornucopia-shape and lay a bit of holly on top.

Another delightful centerpiece for the family dinner-table, especially pleasing to the children, is a real Yule cake; the top and sides are covered thickly with a glistening white icing, and there are small red Christmas candies scattered all over it. The cake is placed on a candle-board with a wreath of holly and lighted candles arranged around it. At the end of the meal the candles may be removed, and the cake cut and served with some light frozen dessert.

CHRISTMAS CONTRIBUTIONS FROM OUR FRIENDS

I am a reader of The Business Farmer and receive lots of help from The Women's Department. I wonder

er how many of the readers make their Christmas presents. I am making some now. I always begin early so as not to be rushed at the last minute. I think it would be nice for each one of us to send ideas to our page. I am making a cute corset bag of terry-cloth with the lazy-daisy stitch. I outline the stitch in pink. It makes a very useful gift. I am also making some very pretty aprons out of cretonne and linen. One can make gifts so cheaply. I will make Christmas candies for any one who wants to buy. Chocolate fudge at 40 cents a pound, plain fudge at 30 cents and taffy at 25 cents post paid. My letter is getting long so I will close.—Mrs. O. D. Miner, Summit City, Mich.

New Ideas

Buy jewel-cloth and run colored threads, san-silk or silk floss in the open work. It will make a pretty and effective lunch-cloth or bureau scarf or cover for card tables. French gingham in fine checks is much used as borders for guest towels. It may be put on the ends doubled, and hemmed very neatly by hand.—A Reader of your page.

"Aunt Eliza's Fruit Cake

I have enjoyed "our department" so much, but have never contributed to it before. altho' I have often wanted to. I'm sure many readers feel the same way, but the duties of the home are many where there are little folks and before we know it the paper has come again and we have forgotten the old request and found a new one. I see that a lady wants a fruit cake recipe and I have a dandy, so will be glad to pass it along. Will watch for the sisters reply to that bread query because I'm having the same trouble and can't locate the cause.

Cream one cup of butter with two cups of sugar, add four well beaten eggs, 1 cup molasses, one cup sour cream, one pound of raisins, seeded and chopped, one half pound of currants, one quarter pound citron, or mixed peel, 1 teaspoon of soda in the flour, spices to taste, and three and one half cups of flour. Bake in a moderate oven. Cream is absolutely essential to the goodness of this cake which when it is good, is good.

It is nice made into loaf tins and kept in a suitable place for Thanksgiving and Christmas.—Mrs. Paul Foster.

Christmas Fruit Cakes

I am sending you a couple of recipes for fruit cakes which we find very good.

Fruit Cake (Christmas)

3 lbs. raisins, 3 lbs. currants, 1 lb. citron, 1 lb. butter, 1 lb. brown sugar, 1-2 lb. lemon peel, 3 cups flour, 8 eggs, 1 teacup molasses, 1 teacup coffee clear, 1 wineglass brandy (we always leave out), 2 teaspoons cinnamon, 1 teaspoon cloves, 1 teaspoon allspice, 1-2 teaspoon mace, 1 teaspoon soda dissolved in hot water put in last, add 1-2 lb. blanched almonds.

White Fruit Cake

3 eggs beaten separately, 1-4 cup butter, 1-2 cup white sugar, 1-4 cup milk, 1 cup flour, 2 teaspoons baking powder, 1-4 lb. citron peel, 1 lb. raisins (not necessary white), 1-2 lb. candied cherries, 1-4 lb. blanched almonds, 1 teaspoon vanilla extract, 1 teaspoon lemon extract, 1 teaspoon almond extract (less of these will do.)—Canadian Subscriber.

Christmas Hopes

I hope when Christmas comes around,
You'll be there to enjoy it.
And if you have a thot remorse
I hope you'll not employ it.
I hope your gifts will be enjoyed
Mid laughter gay and jolly,
I hope your heart will lighted be
As in your house with holly,
I hope that many gifts you'll get,
Bedecked with cards and ribbon—
And when that roasted turkey comes
I hope you'll have your bib on.
I hope these joys will fill your heart
Right up from top to bottom.
And if unknoted ropes, I've left
I hope that you will knot 'em.
But pray, my friend, remember Him
To whom is dedicated
This day of joy and gaiety,
This day of hearts inflated.

—By John N. Jenney.

CORRESPONDENTS' COLUMN
Recipe Wanted

Why don't we housewives help make our page interesting by sending in more recipes?

I will give you my favorite cookie recipe.

2 cups granulated sugar, 1 cup of lard, 3 eggs, one cup of sour cream, 1 tps. soda, 1 tps. baking-powder, flour enough to roll out not too stiff.

Now will any one send in a recipe for ginger-snaps like the ones you buy in stores? I have tried several recipes but they are right.

I have a brown silk dress which is stained from perspiration; can the stains be removed? Could it be done successfully? Any help will be much appreciated.—Mrs. J. W.

A teaspoonful of powdered borax dissolved in a pint of hot water and applied with absorbent cotton will remove perspiration stains unless the stains are too deep set. The silk would undoubtedly dye all right but perspiration rots silk and the

less. They make nice Christmas presents. Just mark the hand on paper. I knit them on steel needles. I have answered several questions on our page and always try to do my bit. Do you know whether the lady who wanted pumpkin seeds wants any more? I hope I have not asked too much of you.—Celia Brennen.

Bread Made From New Flour

There are many ways to make bread. But new flour must be dried. I always have success by putting a sack by the stove and stirring it often. Take enough for your bread in the morning, put in a dish set in the oven, stir often, do not let heat through but warm until ready to use. To prepare yeast, soak 1 yeast cake in half cup warm water, 1 teaspoon sugar, 1 of salt. When dissolved add warm potato water with some mashed potatoes. Keep your yeast a buzzing in a 2-quart glass can so you may see it work for at least 4 hours. Then it will be ripe enough to make bread, in any

AIDS TO GOOD DRESSING

For Simplicity, Service and Style

Address orders to Mrs. Jenney, Pattern Department, M. B. F.

Catalog 15c—Pattern 12c



A Pretty Frock for "Service or Porch"

4180. Chintz and unbleached muslin were combined to make the style here illustrated. The model is also good for cotton crepe, saten, and percale. The girdle may be omitted, and the fullness held in place with a girde or belt. This pattern is cut in 4 Sizes: Small, 34-36, Medium 38-40, Large, 42-44; Extra Large, 46-48 inches bust measure.

A medium size requires 4 5-8 yards of 32 inch material. To make the waist of contrasting material will require 1 3-4 yard. The width of the skirt at the foot is 2 1-2 yards.

An Ideal House Dress

4179. The simplicity of this model is its best feature. The pleasing fullness above the bust, and equally comfortable allowance on the sides at the hips, are practical points that will appeal to the women who like neatness and comfort in her house-dresses. The sleeve in short length is attractive and comfortable. The long sleeve may be turned up for convenience in working. This pattern is cut in 6 Sizes: 34, 38, 36, 3, 40, 42 and 44 inches bust measure. A 38 inch size requires 4 5-8 yards of 32 inch material. The width at the foot is 2 1-8 yards.



A Smart Version of A Popular Style

4156. Kasha cloth or Canton crepe would be suitable for this model. It has simple lines. The plait fullness at the sides gives additional width to the skirt. This is a model that is easy to develop. The pattern is cut in 3 Sizes: 16, 18, and 20 years. It requires 4 1-2 yards of 40 inch material for the 18 year Size. The width of the dress at the foot with plaits extended is about 2 1-2 yards.

A Model for Service and Protection

4163. The "easy to make" apron model is nice in unbleached muslin with facings of contrasting material, or, in gangham, chintz or percale. The side seams are free below the hips, but if preferred may be closed their entire length. The pattern is cut in 4 Sizes: Small 34-36; Medium 38-40; Large 42-44; Extra Large 46-48 inches bust measure. A medium size requires 4 3-4 yards of 27 inch material.



place where the silk is stained would be very apt to go to pieces. Has any one any suggestions to offer.

Pentecostal Hymn Book Wanted

I like the M. B. F. very much especially the ladies page. Will you kindly ask the readers of our page if any one has the old Pentecostal hymn book No. 1, 2, 3, 4, combined. I will gladly pay for it. Also thinking many would like home-made mittens. I will knit men's for \$1.00, ladies for 75 cents and childrens for 50 cents and furnish the yarn. I can have them ready in a week or

way you choose. You may stir in a little flour at night. Let it set until morning. Then set the sponge. Always keep it covered tight and keep it warm. Be sure to let the sponge get good and light, then mix stiff so it will not stick, rub on lard cover tight. When twice its size mix down again. When its twice its size mix in loaves, when twice the size, bake until done. I have baked many barrels of flour. I can give many ways for good bread but the main thing is to have ripe yeast—let it have a good start with good flour you need not worry but your home new flour. It must be dried a little, the more aged the flour is the better.—Cora. E. Tracy.

Obstacle in Nose

I do enjoy our page and want to tell you something to help out the mothers. I have eight children ranging in age from eight months to twenty-one years, and one trouble with small children I have found is their tendency to put foreign articles in their nose. Just place the child's hands tightly over his ears covering them with your own hands. Ask him to open his mouth widely and then blow forcibly into the open mouth. Out comes the offending button, kernel of corn or whatever it may be.—Mrs. Chas. H. Sieb.

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A GOOD RECIPE FOR PARKER HOUSE ROLLS

2 cups scalded milk, 3 tablespoons butter, 2 tablespoons sugar, 1 teaspoon salt, 1 yeast cake dissolved in 1/4 cup lukewarm water, Lily White Flour. Add butter, sugar, and salt to milk; when lukewarm, add dissolved yeast cake and three cups of flour. Beat thoroughly, cover, and let rise until light; cut down, and add enough flour to knead (it will take about two and one-half cups.) Let rise again, toss on slightly floured board, knead, pat, and roll out to one-third inch thickness. Shape with biscuit-cutter, first dipped in flour. Dip the handle of a case knife in flour, and with it make a crease through the middle of each piece; brush over one-half of each piece with melted butter, fold, and press edges together. Place in greased pan, one inch apart, cover, let rise, and bake in hot oven twelve to fifteen minutes.

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IS YOUR FARM FOR SALE?
AN AD IN M. B. F. WILL SELL IT.

DEAR Nieces and Nephews:—This issue of the M. B. F. is the Christmas issue and I am using considerable space on our page for a fine Christmas story. It is very interesting and contains a lesson. Let's not be a "Curiosity Carmella." Many times we are and do not know it but if you will watch yourself carefully you can avoid being one. People do not like "Curiosity Carmellas" so if you would have many friends do not pry into other people's business.

We have some stories about Christmas by our boys and girls for our page and will print more next issue. No one so far has guessed what the prize will be for the best Christmas story.

I once read a quotation that the thoughts of Christmas bring to my mind. It is, "The fact that you remember means more than the gifts you give." Remember all your friends this Christmas. Although you may only send Christmas cards it will show them that you remember.—UNCLE NED.

OUL BOYS AND GIRLS

Dear Uncle Ned—May I join your merry circle? I enjoy reading the M. B. F. very much. I read about your contest in the paper so I thought I would try to win a Christmas present. I think it is something useful because Uncle Ned would not give anything that wasn't useful.

It was Christmas night when the sun began to lower that Tommy hung up his stocking to see what Santa would bring him. As his mother and father were poor Tommy didn't expect much. It was 8 o'clock when Tommy went to bed and he was not thinking of his presents but was thinking of his dear mother and father. It was near midnight when Tommy thought he heard footsteps out on the roof, and sure enough he heard something coming down the chimney and Tommy heard him by the mantle-piece. Tommy knew then it was dear old Santa and then he heard Santa return to the roof. He did not sleep at all, and at daybreak Tommy went down and to his delight Santa had brought just what Tommy wanted himself and for his dear mama and papa. Then everybody was merry and happy. I will close from your niece, Margaret Mills, R. 1, Herron, Michigan.

Hello Uncle Ned and Cousins—I am a farmer girl and go to school. I am 11 years old and in the fifth grade. I will guess the present will be a school outfit. I will write a Christmas story.

Once upon a time there was a boy who's name was Jean. He had no mother and he lived with his aunt. She was cruel to him. He only had one slice of dry bread to eat. It was just the night before Christmas when Jean went to church and the rich people talked about how they were going to get lots of toys and soon the people were ready to go home and when Jean was going down the church stairs there he saw a little boy. His hair was like gold and he was barefooted. Jean had no stockings only his wooden shoes so he put one of his shoes on his foot. When he got home his aunt said, "Where is your other shoe?" Jean told her all about it. Then his aunt said, "You will only have one shoe if you don't get the other. So Jean went to sleep. In the morning when he awoke he looked at the fireplace and what do you think he saw? Some toys and a pair of new shoes were among the toys.

Good luck to Uncle Ned and cousins. Good-bye.—Margaret Surjan, R. No. 1, Rhodes, Michigan.

Dear Uncle Ned—I am not busy at the present time so I will write you a letter. I received the leatherette pencil case and am thanking you ever so much for it. I am finding it very useful and appreciate it very much. I am nine years old and live on a 120-acre farm. My eyes are blue and my hair is light brown, and I am about four and a half feet tall. I like to go to school and I am in the third grade. I also have a little dog for a pet, named "Toodles." I enjoy hunting and fishing during my vacation. I have a little air

The Children's Hour

GRIP PUZZLE

BY WALTER WELLMAN



Jack has been told that he is late in getting his garden started, and his mother has sent him to the seed store and instructed him to buy every kind of garden seed which can be spelled with the letters on the grip. He is told that he can use a letter more than once, if necessary, in the name of a seed, although no letter appears more than once on the grip. What seeds can he buy?

gun which I got for my birthday and I shot a squirrel with it the second day after I got it. Well my letter is getting rather long so I will close, thanking you ever so much for the leatherette pencil case, I remain your nephew, Harold Pernie, Ossineke, Michigan.

Dear Uncle Ned—How are you these days? We have had quite bad weather these last few days. We have about ten inches of snow. I am a boy twelve years old and in the fifth grade. We have had a very good fall this year. I wrote to the M. B. F. once before. I wish some of the boys and girls would write to me. We have four horses, fifty-eight head of cattle and some chickens and one dog and four cats. I have three brothers and three sisters. I live about a half a mile from school. We have nine pupils in our school. I live on a four hundred and four

acre farm. From your friend John Hann, Franklinville, N. Y.

Dear Uncle Ned—I will write a few lines as I have been reading the children's page in the Business Farmer and like the letters very much. We live on an 80-acre farm and I have for pets a dog, two cats and a rooster. My dog's name is Doodie Bug and my uncle and aunt keep him for me because I live too close to school, he would go with me every day. I am here from Texas and brought my dog with me. I have been here nearly two years and we will make our home in Michigan. I like this place just fine and like to play in the snow. Am in the 4th and 5th grade and like my teacher just fine. As this is my first letter will make it short and hope to hear from some of the other boys and girls as I enjoy reading their letters. Your little niece, Vera Richardson, R. 1, Greenville, Michigan.

CURIOSITY CARMELLA

"DO you know what they used to do to people who are always peeking and prying?" said Carmella's oldest sister Jane. "They'd hang them up by their coat collars under a waterspout in the eaves and let them get good and wet."

She had caught her little sister opening a package from the store. Of course there was nothing special in the package, only a pair of shoes, but this wasn't the first time, and every year around Christmas time when the air was full of secrets, Carmella was at her worst. I blush to say it, but her mother had to have a padlock put on the old sea-chest in which the presents were hidden until the Day. When the postman would blow his whistle Carmella was the first to fly to the door, and My! how she would hang around and crane her neck while people opened their letters! But if a parcel or package came poor Carmella's curiosity would be come almost a frenzy and unless the owner came quick and took the package away, a little hole was apt to appear in a corner, or the string would come loose.

"I hate secrets," Carmella would say. "What's the use in keeping presents until Christmas? I'd rather have mine now."

So one year her mother gave her her presents as they arrived and when Christmas Day came there was

no surprise for the little girl and she didn't enjoy herself a bit. Besides it was found that Carmella was just as curious about other people's gifts as about her own.

"Well this year, you're not to have a thing until Christmas Day," said her mother, "and that settles it."

"If you don't stop nosying into everything," said her father, "you'll get your nose into something hot some day."

But Carmella only smiled to herself and thought: "They don't like it because I'm so clever at finding things out."

And that's what she told her sister Jane.

It had gotten so bad that her next-to-the-oldest sister Betty and her brother Paul asked the postman not to give any parcels to Carmella but to wait and give them to some other member of the family.

"Hah!" thought Carmella. "They think they can keep things from me, but I'll fool them."

One day as Christmas drew nearer and nearer Carmella heard pounding in the workshop.

"What's that? What's that?" she questioned. "I didn't know anybody was making anything."

She ran down to the shop and tried the door. It was locked and Paul's voice cried: "Please go 'way, this is a private job."

Instead of going, as she should have, knowing that Christmas was

coming and the air was full of secrets, Carmella tipped around the workshop and finally found a crack in the boards and there she plastered her eye. What she saw filled her with curiosity. There was Paul making a curious box. It wasn't the kind of box one would ever expect to get as a present. It was made of rough wood and stood on legs and Paul seemed to be making a cover for it.

"It's too small for a woodbox and too large for a sewing box," she thought. "Hum! Here's a mystery. Well, I'll soon find out."

"Carmella," cried a voice behind her. "What are you doing?"

"Nothing, Mother," she replied. "Well, you come into the house and mind your own business," said mother, with a knowing look. Mother was so hard to fool.

The box puzzled Carmella more and more. She just couldn't figure out what Paul was making it for and she felt she couldn't wait until Christmas, which seemed ages away. So she decided to make up to Paul and coax him to tell her. Paul must have wondered what had got into his small sister that made her so obliging. She helped him do his work and let him use her silver pencil. But when she popped the question about the box Paul only grinned and said:

"Wait and you'll find out, kiddo," and not another word could she get out of him.

"You'd better tell me," warned Carmella, "cause I'll find out any way."

"Help yourself," replied her brother.

"Now, Paul," she coaxed, "won't you tell me this much? Whose it for?"

"For myself," he answered.

"For yourself!" exclaimed Carmella. "That's nice! Giving Christmas presents to yourself."

"Well, old Santa's going to put something inside, see?" he said.

This made it worse than ever, especially as he simply wouldn't say another word, yes or no.

"Well, it can't be rabbits or anything like that," said Carmella, "there's no opening for them to go in and out and no windows. It isn't a tool box."

She certainly would have grown thin worrying over it if she had stopped eating so much, but unfortunately her appetite was good and so she heard the postman's whistle. Down stairs she raced and was just in time to see Betty receive a small box from him and lay it on the hall table.

Carmella crouched on the stairs and waited until Betty had gone. Then she hurried down and picked up the little package. It was the oddest one she had ever seen. Tiny and light it was and over one end was a bit of wire screening. What in the world could it contain? She shook it and listened. She thought she heard a queer noise.

"I'll just poke the netting and maybe it will move and I can see inside," she said, although she knew the package was addressed to her brother Paul.

She pressed the netting quite hard, and sure enough, it gave way. With a look of triumph she raised the box up and was about to peer inside when something flew out and lit right on the end of her nose. The next instant she was shrieking deafening shrieks. Betty, Jane, Paul and her mother all hastened to her.

"My-nose!" screamed Carmella.

"Stung!" exclaimed Paul. "Look, she's opened the box of bees that man in New York promised to send me to start my hive with. Gee, I hope the Queen Bee is all right." And he began to cover the box with his handkerchief.

"Ha ha!" cried Betty. "Dad said to stop nosying!"

"Never mind," said mother. "I think Carmella has learned her lesson and it's mean to taunt people."

She gently led the little girl away and put soda on her aching nose, but alas! it was many a day before Carmella cared to show that nose. It swelled and swelled and grew red and purple, and really, although I felt sorry for her when I saw her I could hardly keep from laughing, she looked so comical.

"I-I could of learnt my lesson without getting stung on the nose!" she sighed.

HEALTH HINTS

OR
HOW TO CURE YOURSELF
BY

DR. T. N. ROGERS

NASAL CATARRH

A simple home remedy is a weak solution of common salt in warm water snuffed up the nostrils night and morning. This will cure many cases. A good formula is the following: Baking soda, one-half teaspoonful; powdered borax, same quantity; glycerine, 4 tablespoonsful; listerine, 2 tablespoonsful; water, 6 tablespoonsful. Use with atomizer or snuff up the nostrils 3 times a day. Avoid colds.

Book Review

(Books reviewed under this heading may be secured through The Michigan Business Farmer, and will be promptly shipped by parcel post on receipt of publisher's price stated.)

The Country Beyond, by James Oliver Curwood—The writer of this latest popular selling novel is so well known to our readers who read "Nomads of the North" and are now following "The Hunted Woman," that all we need remark is that the new work sets a high-water mark. The real hero of "The Country Beyond" is an Airedale terrier, but there is enough human romance and adventure to make you want to stay up all the rest of the night to read it as we did! (Cosmopolitan, \$2.)

"CREEPING JENNY"

(Continued from page 7)

you take care of the house while I go to Boston and get all my papers and passports and certificates and army records and honorable discharges and pedigrees, and draw my back pay—because I am a stranger in Riverboro and I want to get into society. Why don't you speak? Aren't you surprised?"

"I would 'a' been," said the boy, "cept that Alfonso and the post-mistress both said it would turn out that way; but Mother stood up for Jenny; she said it wouldn't."

"That's what all the women will have said," said Rufus.

"Well, all the men will say I jumped at you, so accounts will be square!" and Jenny smiled triumphantly back at Rufus, all blushes and confusion, her heart beating like a wild bird in her breast. "Go, Rufus, please," she said in a low tone, "and take Alfonso. I want to be alone with myself and get used to—happiness."

He bent over her and kissed her cheek while Alfonso went for his muffler and mittens.

"Good-by! I'll bring back the ring; don't forget the party. We won't stint refreshments. I'll give the twins a dollar to bring you little trees and evergreens for garlands, and we'll make a brave showing of the house. Isn't it lucky there'll be a full moon on the shingles? No doubt about the minister now! He'll have to come in the performance of his duty. Oh! my dear, my dear, God is being very good to me!"

"Good to us," whispered Creeping Jenny, putting her lips softly and shyly against his sleeve.

INVENTS NEW LAMP

Said to be Whiter and Cheaper
Light than Electric or Gas

Washington—Patents have been granted by the government to a lighting engineer by the name of Johnson, on a new lamp burning ordinary kerosene oil. This lamp produces a vapor from the oil which makes a blue flame that incandesces a mantle and thus creates a very strong, soft pure white light. As it consumes only 5% oil mixed with 4% air, it is exceedingly economical. Said to be very simple to operate, odorless, noiseless and dangerless.

One of these new lamps may be secured on 10 days free trial by writing to Mr. F. H. Johnson, 609 W. Lake Street, Chicago, Ill. He also wants local distributors and has a very unique selling plan to offer to agents. He is even offering to give one free to the first user in each locality who will help introduce this new light.—Adv.

HARVESTING THE FUR CROP
(Continued from page 15)

and farm animals as possible. If an otter slide, landing or playground can be located you stand a chance of making a catch. Some set at foot of slide in several inches of water. The best place, however, if it can be located, is where the animal leaves the water to go upon the bank. Here the animal is apt to get caught by a front foot, whereas the set is at the foot of the slide, the trap is apt to be knocked off by the body and no secure hold obtained.

It takes a strong trap for this wiry animal. The No. 2, double spring, is strong enough, but there is a special otter trap with teeth and one powerful spring that is really better. This trap does not take so much room, being easier to conceal. A rock or piece of iron should be fastened to one end of a wire, then passed through the ring and staked at edge of water. If the otter is caught it will make for deep water and is apt to be drowned.

Otter are great wanderers, as already mentioned, and may pass up or down a stream only a few times during the entire trapping season. Streams where otter traveled previous years are very apt to be used by otter the present season if any within miles—sometimes they travel as much as fifty miles according to old trappers.

If otter are using a small stream, only a few feet wide, drive stakes across only a couple of inches apart, except where the most favorable place for the otter to go through is, leaving about eight inches where the trap is set. This same set can be used on all small streams for mink, coon or muskrat but of course opening should be only about six inches and trap not so large, yet if otter ever frequent the stream it might be advisable to use a good strong trap.

"THE HUNTED WOMAN"

(Continued from page 12)

"No trouble at all," declared Blackton. "We've got a Chinese cook who's more like an owl than a human. How will a four o'clock breakfast suit you?"

"Splendidly!"

As they went on the contractor said:

"I carried your word to McDonald. Hunted him down out in the bush. He is very anxious to see you. He said he would not be at the depot, but that you must not fail him. He's kept strangely under cover of late. Curious old ghosh, isn't he?"

"The strangest man in the mountains," said Aldous "And, when you come to know him, the most lovable. We're going North together."

This time it was Blackton who stopped, with a hand on his companion's arm. A short distance from them they could see the buckboard in the light of the station lamp.

"Has old Donald written you lately?" he asked.

"No. He says he hasn't written a letter in twenty years."

Blackton hesitated.

"Then you haven't heard of his—accident?"

The strange look in the contractor's face as he lighted a cigar made John Aldous catch him sharply by the arm.

"What do you mean?"

"He was shot. I happened to be in Dr. Brady's office when he dragged himself in, late at night. Doc got the bullet out of his shoulder. It wasn't a bad wound. The old man swore it was an accident, and asked us to say nothing about it. We haven't. But I've been wondering. Old Donald said he was careless with his own pistol. But the fact is, Aldous—he was shot from behind!"

"The deuce you say!"

"There was no perforation except from behind. In some way the bullet had spent itself before it reached him. Otherwise it would have killed him."

For a moment Aldous stared in speechless amazement into Blackton's face.

"When did this happen?" he asked then.

(Continued in Dec. 23rd issue)

For Sale—A 3-year-old female billie goat. Ralph Avitable, Leberly Street—New Haven, Conn., Register.

White-of-Egg

in Calumet a Vital Element

Most Baking Powders Lack

Don't use a leavener that does not contain white-of-egg. When you do you take chances—you run the risk of spoiling your bakings.

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The Economy BAKING POWDER

contains a small amount of white-of-egg. This makes it possible for representatives of the company to test it frequently for leavening strength—right on the dealer's counter. Nothing but absolutely fresh stock is permitted to remain on the dealers' shelves. It must always be up to the high Calumet standard.



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A pound can of Calumet contains full 16 ounces. Some baking powders come in 12 ounce instead of 16 ounce cans. Be sure you get a pound when you want it.



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Wilderness
Girl
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Make \$13 More Per Cow

Free Book for Dairy Farmers Tells How to Cut Out Waste; Gives Valuable Building Hints

Do you know that the manure produced by one cow in twelve months contains fertilizing elements valued at \$39? And do you know that one-third, or \$13 of this amount is lost in the course of a year through improper handling? By providing a simple easy-to-build pit outside the barn, this loss can be prevented.



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A Remarkable Home Treatment Given by One Who Had It

In the year 1893 I was attacked by Muscular and Sub-Acute Rheumatism. I suffered as only those who are thus afflicted know for over three years. I tried remedy after remedy, but such relief as I obtained was only temporary. Finally, I found a treatment that cured me completely and such a pitiful condition has never returned. I have given it to a number who were terribly afflicted, even bedridden, some of them seventy to eighty years old, and the results were the same as in my own case. I want every sufferer from any form of muscular and sub-acute (swelling at the joints) rheumatism to try the great value of my improved "Home Treatment" for its remarkable healing power. Don't send a cent; simply mail your name and address, and I will send it free to try. After you have used it, and it has proven itself to be that long-looked for means of getting rid of such forms of rheumatism, you may send the price of it. One Dollar, but understand I do not want your money unless you are perfectly satisfied to send it. Isn't that fair? Why suffer any longer, when relief is thus offered you free. Don't delay. Write today.

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I was badly ruptured while lifting a trunk several years ago. Doctors said my only hope of cure was an operation. Trusses did me no good. Finally I got hold of something that quickly and completely cured me. Years have passed and the rupture has never returned, although I am doing hard work as a carpenter. There was no operation, no lost time, no trouble. I have nothing to sell, but will give full information about how you may find a complete cure without operation, if you write to me, Eugene M. Pullen, Carpenter, 210J Marceline Avenue, Manassas, N. J. Better cut out this notice and show it to any others who are ruptured—you may save a life or at least stop the misery of rupture and the worry and danger of an operation.

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OTTAWA

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FARM MECHANICS

HYDRATED LIME IN MASON WORK

Please inform me as to the use of hydrated lime in building brick chimneys, plastering, stone work, etc., as a substitute for stone lime. Does it form a strong bond with good sand for brick work and endure the heat and cold of chimney tops? —J. E. G., Rapid City, Michigan.

—Wish to say that hydrated lime which is stone lime reduced to a powder by the process of limiting the amount of water which is used generally and using mechanical process to ground the lime and take out the impurities, this being substituted generally for stone lime. It may be used in any work in masonry that stone lime is used. In many ways it is considered more satisfactory principally because it is more standard and does not contain impurities, powdered stone is sometimes slack in the wall causing spots and other defects.

For use in chimney work, the addition of cement to the mortar produces a stronger mortar than lime and I think it is being used generally for this work. Cement alone cannot be used satisfactorily because it works too short and tends to roll up under the trowel, lime gives cement mortar smoothness and also water tightness.—H. H. Musselman, Prof. of Farm Mechanics, M. A. C.

HOW TO REDUCE VOLTAGE

Would you please publish in the Business Farmer what material I would need and how to assemble an instrument for reducing a 32 volt direct current to an 6 or 8 volt direct current.—C. L. S., Reed City, Mich.

The reduction of the voltage can be accomplished by a small transformer in the lamp socket, the transformer although miniature in design is constructed a sany other of its kind, and is designed to reduce the current to 6 or 8 volts for pressure. The transformer socket fits into the regular socket feature and the small bulb fits into the transformer socket, the transformer socket can be purchased from practically any manufacturer of lighting equipment.—Floyd E. Fogle, Ass't. Professor of Farm Mechanics, M. A. C.

A NEW LIME SPREADER

A NUMBER of inquiries have come to the Farm Mechanic Section of the Station asking for information on a simple lime spreader. The need for an inexpensive machine of this kind is apparent when it is noted that the use of lime is not general and that many farmers who wish to use it in an experimental way on comparatively small acreages, do not feel that the expenditure for a commercial spreader would be justified.

The spreader which is shown in the accompanying cut and herein described was designed, built, and tried at this Station and has proved of such promise that its use is given over to Michigan farmers. Under the conditions for which it has been tried it has done excellent work. It is possible that some conditions may be found for which it may not be adapted in its present form. It is felt, however, that the publication of plans should not be delayed, and which may be found necessary will suggest themselves as needed.

The machine has been tested with pulverized limestone, both dry and damp. If lumpy material is to be used it should be shoveled through a screen of poultry netting or close mesh fencing placed over the top of the hopper. The mesh of this screen should have not more than 1½-inch openings.

The spreader is designed to be attached to the rear end of the wagon box and operated by a rocker arm dropping from peg to peg on a disc attached to and turning with the rear wheels of the wagon. The rocker arm moves a board under the hopper which serves as an agitator. The jarring action of the rocker arm on the agitator and box serve to feed down the lime. Both wheel disc and hopper are easily detachable from wagon by loosening four nuts and can be transferred from one wagon to another if necessary.

If this is done it is well to have the reach adjustment the same on each. The wagon box should extend about 18 inches back of the rear axle, and when the hopper is hung on the top of the box the height of the top of the box should be from 24 inches to 30 inches above the axle. This rocker arm may be adjusted for different heights of box, but where the spreader is to be used on two wagons it is preferable to have the boxes the same height above and distance back of the rear axle.

Where the soil is firm enough so that a load of lime may be drawn over it, the box may be hung on the loaded wagon and the lime spread by shoveling directly into the spreader. In case the spreading is to be done over plowed ground it will be found impracticable to draw the full load. In this case and where the lime is in storage or piles, only enough is shoveled into the empty wagon carrying the spreader to go once around the field or some other convenient distance.

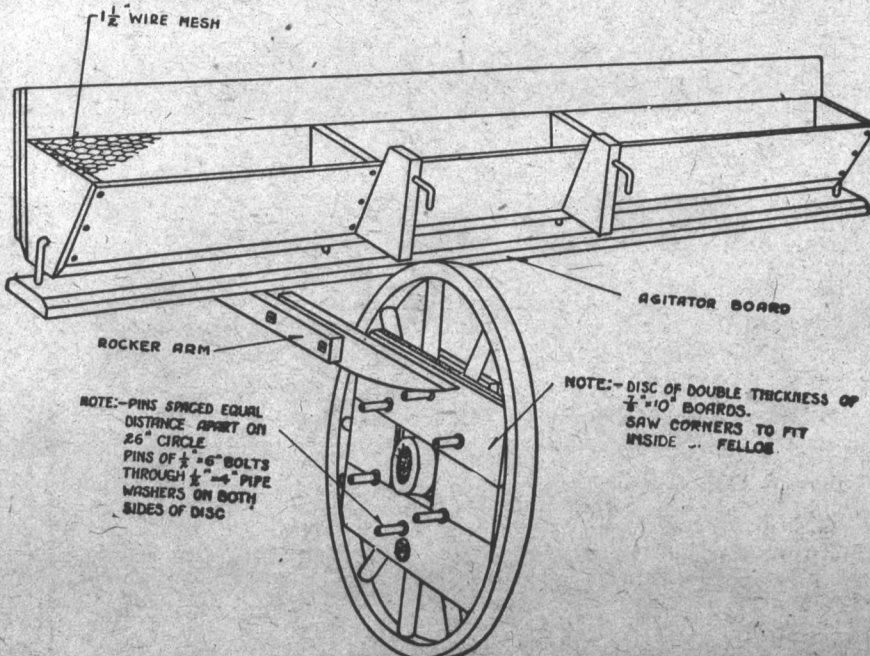
It will not be found practicable to spread pulverized lime in a high wind. A moderate wind will not greatly affect the evenness of spread.

If extremely hard and lumpy material is to be handled it is suggested that the lower or cutting edges of the hopper sides be faced with a strap of iron or heavy galvanized sheet metal to take the wear. This facing should be wide enough to attach securely to the box and extend below it one-quarter to one-half inch to making a cutting edge. The construction of the spreader is comparatively easy and should not require more than a day's time. The material needed includes proper sizes of lumber, the agitator hanger, and six bolts. The bolts, which are all alike, may be made by a blacksmith. Or these hanger bolts may be made by cutting the heads from long bolts of the right size angles, which is all that is required. Extreme accuracy is not required in the dimensions, but the side pieces, and especially the agitator board, should be reasonably straight and true.

Two other points should be noted: that the lower edges of the hopper boards are dressed to a chisel-like edge, the point being about one-quarter inch thick; and that the top of the agitator board is beveled to make an even flow of material over the edge.

To determine amount sown per acre, tests were made with pulverized limestone over different types of ground with finely ground lime. The amount spread is determined by the adjustment of the nuts on the hanger bolts which carry the agitator. In the following table is shown the opening between hopper and agitator board necessary to give approximate amounts shown.

Opening Between Hopper and Board	Weight Spread per Acre	Distance Traveled to Spread 100 Pounds
¾ inches.....	730 lbs.	1793 ft.
1¼ inches.....	2,200 lbs.	594 ft.
1½ inches.....	3,800 lbs.	344 ft.



This shows the general plan of hopper and arrangement of rocker arm.

For amounts over 3,000 lbs. per acre the flat side of the agitator board should be turned up. The calibration figures follow for this adjustment:

Opening Between Hopper and Board	Weight Spread per Acre	Distance Traveled to Spread 100 Pounds
1¾ inches.....	2,475 lbs.	527 ft.
2 inches.....	4,770 lbs.	274 ft.
2¼ inches.....	6,700 lbs.	195 ft.

The diameter of the wheel on wagon used was 44 inches. Where disc is attached to a wheel of different size the amounts would be less with a larger wheel and more with a smaller wheel.

Probably a more satisfactory way to determine amount spread per acre is to start with hopper level full and run out a 7-inch depth of lime, with the feed set at some figure selected from above table, say 1¼-inch. A depth of 7-inch spread in a distance of 40 rods would represent closely one ton per acre. At the same rate 10 rods would represent ¼ ton or 500 lbs. per acre. If the same amount were spread in 20 rods double the amount or 2 tons per acre would be the amount sown. Two or three trials will serve to determine the desired setting.

Since the cuts describing this spreader have been made the design has been changed by reducing the length of the hopper to 8 feet 3 inches or ½ rod inside measurements. By cutting in a known amount of lime, say 200 lbs., and noting the distance required to spread this amount, the amount spread per acre can be easily calculated.

Example—Weight of lime put in hopper, 200 lbs.

Distance traveled to spread 200 lbs.—40 rods.

Area spread equals ½ x 40 equals 20 sq. rods or ⅓ A.

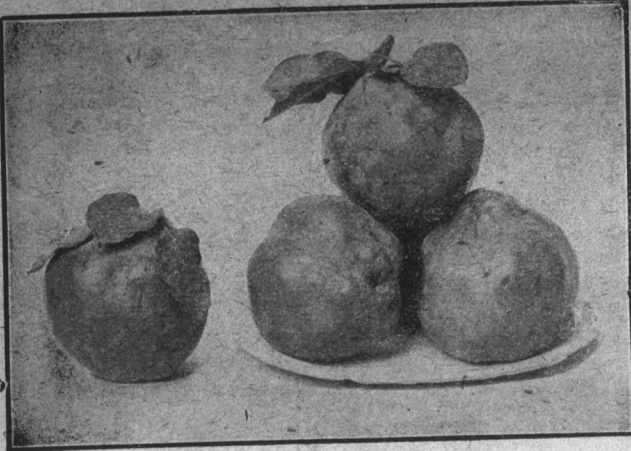
200 lbs. on ⅓ A. equals 1,600 lbs. per A.

Shortening the hopper also requires but one division in the hopper and 3 hangers for the agitator board. It has also been found that if 2-in. x 4-in. blocks having holes for the hanger bolts are fastened to the agitator board the wear of the hanger bolts on the agitator board will be reduced and more positive action of the agitator board will result.—H. H. Musselman, Dept. of Farm Mechanics, M. A. C.

The Netherlands was the largest market, except Canada, for American corn in 1921, having received 17,843,464 bushels, according to the United States Department of Agriculture. The next largest markets, in order of receipts, were United Kingdom, Germany, and Mexico.

Plenty of fresh air during winter is to be desired for the poultry flock, but be sure to avoid drafts.

The friends of Gus Holmgren, the city treasurer, desire to make it known that they wish to secure a second term for Mr. Holmgren for the reason that he is incapacitated for work of any kind and is very much in need of the assistance the position would give him.—Iron Ore.



Fruit and Orchard

Edited by
Frank D. Wells

PLANTING AN ORCHARD

THE good prices for fruit have induced many to turn their attention to the orchard. Not only is this true of land owners, but also of city dwellers who wish to retire from their present occupations and are looking to the orchard as an interesting vocation as well as a profitable investment. It is those who are unaccustomed to the soil who are most eagerly searching for information and certainly they need it before undertaking anything as complex as orchard growing. For fruit-growing is by no means a simple matter, though it may look easy enough to plant a tree and wait for it to produce fruit.

In locating an orchard it is of the first importance that drainage be considered. It is not enough that the trees will grow. Apples, for example, will grow on a wet soil, yet never produce fruit enough to pay for the time and labor of cultivation. Wet land and such as has a subsoil of quicksand is not desirable. A clay subsoil may be underdrained, but even then it will hardly be on an equal footing with land well-drained by nature. Better use such land for other purposes.

Atmospheric drainage is another point which should not be overlooked. There are some lands beside bodies of water that are protected against sudden and severe changes of temperature, but such areas are in the aggregate, not large. In the vast interior regions dependence must be placed on elevation. Land should be selected that has a lower area around it. There are thousands of acres of such lands throughout southern Michigan which ought to be covered with orchards, while other thousands of acres of low land now in orchard might better be utilized for other purposes.

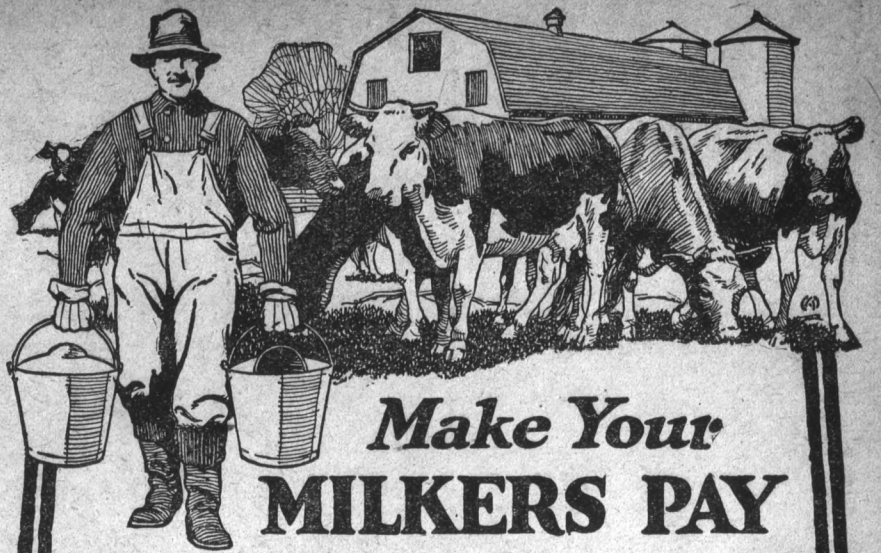
All kinds of soil are not of equal

value. Sandy land will grow trees quickly. They will bear at an early age and are soon ready to die. Such orchards do not endure a severe winter as well as those on the heavier soils. Yet such orchards may be profitable for a brief time. The soil also plays an important part in the selection of varieties.

The different kinds of fruits are not equally adapted to soils and locations. Peaches are confined to narrower limitations than any of the other orchard trees. They really belong to the sub-tropical regions and in the district of the Great Lakes they are far north of their native land, though it is here that they reach perfection in quality. They do best in a gravelly loam, but even a heavy clay is good if there is good atmospheric and water drainage. Wet soil the peach will not tolerate. Cherries are adapted to a wide range and so are plums, though the former prefers the lighter soils, while the latter is partial to heavy land. Pears and apples are rather shortlived on light land, though that is not always the case.

In the majority of cases it is safest to trust to a clay loam, when such a choice can be made. However, good results can be obtained from sandy land if it can be kept well fed, while thorough cultivation will do for correcting the natural disadvantage of a heavy clay. Some of the best apple and peach orchards in Southern Michigan are on a soil usually considered too heavy for orchard purposes.

Now comes the market and on this depends the value of the orchard. It is the consumer who ultimately decides what kind of fruit should be grown and the grower who knows what the prospective customers will want, or at least can make a good guess at it, is the one who will succeed. (Cont'd on page 27)



Make Your MILKERS PAY

Every cow in your herd can be made to produce up to her full capacity

—if you look well to her ration, her health, her appetite and her digestion.

Balance the ration. Feed bran, oats and corn, or their equivalent, cottonseed or linseed meal, clover hay, alfalfa, silage—pasture in season.

Remember, the better the appetite the greater the food consumption, the greater the milk production.

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(Courtesy Horseshoe 'World')

GATHER around, brother horseshoe pitchers, and allow us to introduce to you Mr. Frank Lundin, of New London, Iowa, the champion horseshoe pitcher of America. Mr. Lundin won his crown at the 1922 National Tournament at the Iowa State Fair, Des Moines, Iowa, playing one whole week and losing only one game. Mr. Frank Jackson, 1921 champion finished second. The next tournament to be held of national importance will be put on at St. Petersburg, Fla., during the latter part of February. That city is spending \$10,000 on new pitching courts and it is expected that the February meet will prove a great success.—Horseshoe Editor.

The New Improved Walsh No-Buckle Harness

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NO RINGS TO WEAR

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BARGAIN—\$45 buys registered Holstein Bull delivered your station. For particulars address **EARL PETERS, No. Bradley, Mich.**

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We have two splendid white yearling bulls by Imp. Newton Champion, also some young cows and heifers that we are offering for sale. Write for particulars to

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SHORTHORNS AND POLAND CHINAS—NOTHING for sale at present. Are holding for public sale Nov. 15th. Write for catalogues.
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WE HAVE SOME FINE YOUNG ANGUS BULLS from International Grand Champion Stock at reasonable prices. **E. H. KERR & CO., Addison, Mich.**

REGISTERED PUREBRED ANGUS HERD Bull for sale at a reasonable price.
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SPECIAL PRICE ON BULLS, RANGING IN age from 8 to 11 months, until Jan. 1st, 1923.
RUSSELL BROS., Merrill, Mich.

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SECURE YOUR NEXT BULL FROM ONE with both A. R. Sire and Dam. I have what you want. I also offer a few choice females.
A. M. SMITH, Lake City, Mich.

GUERNSEY BULL Bred Heifer, Yearling Heifer, Heifer calf. Best of breeding. From good producers. Price right. Write **G. A. WIGENT, Watervliet, Mich.**

GUERNSEY BULL GOOD BREEDING. HERD just tested for tuberculosis. No reactors.
STEVE STAMPLER, Fife Lake, Mich.

AYRSHIRES

FOR SALE—REGISTERED AYRSHIRE bulls and bull calves, heifers and heifer calves. Also some choice cows.
FINDLAY BROS. R. B. Vassar, Mich.

HEREFORDS

BUYING, FEEDING AND SELLING FAT CATTLE at present, is too much like **GAMBLING**

All experience proves Baby-Beef growing **THE BETTER WAY**

GROW HEREFORD BABY BEEVES

Our Contractors are guaranteed top prices by Detroit Packing Co. Commission Yardage. Feed and all other expenses, except transportation—only; are cut out. Our plan opens the way to profitable beef-making, by Michigan Farmers. In no other way can as much money per cow be earned, with so little labor. If you have no beef-bred cows, we have them on hand or listed. Study our plan and be convinced. Come, wire or write. Right NOW.

T. F. B. SOTHAM & SONS

(Cattle Business Established 1835)
Phone 250 Saint Clair, Michigan

FOR SALE—HEREFORDS—A FEW CHOICE bull calves. Sired by Wyoming 9th. International Winner. Write or come at once. We are the oldest breeders of Herefords in the U. S.
CRAPPO FARM, Swartz Creek, Mich.

RIVERVIEW HEREFORDS—FOR SALE Bulls, also few females. **WM. C. DICKEN, Smyrna, Mich.**

RED POLLED

RED POLLED CATTLE—A few choice bulls and heifers for sale.
ROYSTAN STOCK FARM,
Will Cattle, R. R. 1, West Branch Michigan

RED POLLED CATTLE—Both sex Oxford Yorkshire Hogs. **E. S. CARR, Homer, Mich.**

FOR SALE—OUR RED POLLED HERD BULL, Cosy Ella Laddie, and a few heifer calves.
PIERCE BROS., Eaton Rapids, Mich. R. 1.

JERSEYS

REG. JERSEYS, POGIS-99th OF H. F. AND Majesty breeding. Young stock for sale. Herd fully accredited by State and Federal Government. Write or visit for prices and description.
GUY C. WILBUR, Belding, Mich.

FOR SALE—YEARLING JERSEY BULLS Shople 19th Tormentor breeding.
J. E. MORRIS, Farmington, Mich.

SWINE

DUROCS

FELLOW BREEDERS AND FARMERS wouldn't you like a real 20th century Duroc Jersey boar, sired by (Fanny's Top Col) world's junior champion 1920 and (Foust's Top Col) International grand champion 1920. The dam (Scissors) sow of Chas. Wenger's last Feb. sale, and the top sow of Ira Jackson's great sale last Feb. The sow that everybody wanted sired by (Walt's Joe Orion) by (Joe Orion II.) Dam (Orion King Lady) by (Orion Cherry King). Also a choice lot by (Liberty Orion) the first prize and grand champion of our Allegan Co. fair 1921 and 1922, with Pathfinder dams. Write or come to the **GUN PLAIN STOCK FARM** Clyde A. Kershaw, owner Plainwell, Mich.

DUROC JERSEYS

REGISTERED SPRING GILTS A nice assortment to select from at Farm Prices
TWIN BROOK FARM
GEO. DOHM, Mgr. WASHINGTON, MICH.

DUROC JERSEYS

NELLS LITTER; Sired by LIVINGSTONS PRIDE farrowed July 24. These pigs cannot be beat. Nell has farrowed 59 pigs in four litters. PRODUCTION is the big word of today, better get a boar out of this litter, and start on production. **LAPHAM FARMS, Pinckney, Mich.**

SENSATION MARSI Our new herd boar. Reserve grand champion National Swine Show 1922. We are taking orders for gilts and sows for spring farrow bred to this wonderful boar.
SCHAFER BROS., Route 4, Oxford, Mich.

DUROC JERSEY BOARS READY FOR SERVICE. Sired by Fannie's Joe Orion \$25 each. Will ship C. O. D. Write us now.
H. E. LIVERMORE & SON, Romeo, Mich.

DUROCS—POPULAR BLOOD LINES—SEND your wants to **OCEANA CO. DUROC JERSEY** HOG ASS'N. V. Lidgard Sec., Hesperia, Michigan.

PEACH HILL FARM offers choice weanling Duroc pigs, either sex. Priced very reasonable. Write us.
INWOOD BROS., Romeo, Mich.

HILL CREST DUROCS; SOWS AND GILTS, both bred and open, also service boars. **NEWTON & BLANK,** Four miles straight south of Middleton, Grafton Co., Mich.

FOR SALE—FOUR CHOICE DUROC JERSEYS boars from Agriculture College herd. Just right for December service. Prices reasonable.
HUGH REID, Clifford, Mich.

DUROC BOARS OF SENSATION AND PATH-finder, blood lines including the undefeated under year boar of the state and junior champion of State Fair. **MICHIGANA FARM, Pavilion, Mich.**

POLAND CHINA

SELL REGISTERED SPOTTED POLAND China Pigs, 7 months old. Boars \$25, Gils \$20. Dr. Erwin Meyer, Drayton Plains, Mich., Box 43.

DAIRY and LIVESTOCK

BEEF PRODUCTION COMING BACK

CONDITIONS at Glenwood Farm are similar to those all over the country. Bull sales have been slow for the last couple of years which leaves us at present writing with a great many bulls on hand, even though prices have been greatly reduced.

Tight money caused the Western Cattle men to sell feeders last year at very low figures and farmers who had been raising their own, decided to abandon the plan and buy western cattle instead. Many did not realize that a reaction was bound to come, as soon as money became easier, as tight money had two effects. It made cattle temporarily cheaper because everybody was selling more than his custom, to raise needed cash, and it made cattle scarce in the long run.

By another year if the new Congress carries out the program announced by the progressive Republicans and Democrats for easier money and credits, farmers will be sorry that their grade dairy herds are not bred to Angus bulls, as it will be impossible to buy the feeders at all. Now is the time to buy an Angus bull, while he can be purchased at a reasonable figure and while conditions are such as to assure a heavy demand for his get in nine months.

At Glenwood Farm, besides the pure bred Angus herd, we have a herd of 30 grade dairy cows, mostly Holsteins. This year every one of these cows is being mated with line bred Daddie, as we know from long experience that the calves from this mating, will top the Buffalo market, when sold for prime beef. Some of the pure bred Angus will also be sold for beef, but the grades will make the most money, because they are cheaper to raise. Cross breeding adds vigor and produces rapid growth. The pure bred is stronger than the grade, so we know that the calf will have the tendency to fatten, inherited from the pure bred sire; while the mother has the tendency to give plenty of milk, also inherited from a pure bred advanced Holstein sire.

Challenger, International Grand Champion Steer, 1903 was the calf of a grade Holstein cow mated with a very beefy line bred bull, such as we are offering the farmers at the present time at very moderate prices.

LIME AND PHOSPHORUS ARE VITAL TO DAIRY ANIMAL

LIME and phosphorus, although small quantities in feeds, have a great deal to do with milk production and building up the body of the unborn calf. If the cow does not have enough of these elements in her ration she will draw on the supply in her body for a time, and heavy producers commonly do this. Therefore, says the United States Department of Agriculture, it is a good practice to feed cows well when they are running low in milk yield and when they are dry, so that they may store up these elements as well as others in their bodies for use when the large demand is made.

The common view is that cows need only enough feed for maintenance, but experiments carried on by the department show that this is not true. The cow is a milk manufacturing plant, and, like many factories she must have a reserve supply of materials to draw on when heavy demands are made. A cow that has been well fed when dry and has stored up this reserve is able to produce more on full feed than a cow that has given only a maintenance ration during that resting period. In this way a cow can utilize her capacity the year round although she may not be giving milk all the time.

In keeping up the necessary lime and phosphorus supply it is well to keep in mind the fact that certain feeds are richer than others in these elements. The feeds which contain the most are the legume hays, which include cowpea, soy bean, the clovers, and some others. Of those mentioned cowpea hay contains the most lime, and the others are named

here in order of their richness in lime. The lime content of hay depends to a great extent on its quality. Leafy alfalfa hay contains more lime than coarse stemmy hay, and the same is probably true of other hays.

The common dairy feeds that contain the most phosphorus are wheat bran, cottonseed meal, standard wheat middlings, and linseed meal, in the order given. Less common feeds that are high in phosphorus are, in order, sesame-oil cake, rice polish, buckwheat middlings, rice bran, sunflower-seed cake, rapeseed cake, buckwheat bran, and malt sprouts.

No grain or other concentrates mentioned anywhere near so much lime as the legume hays; and no kind of roughage contains phosphorus in quantities comparable to those found in the concentrates mentioned above. Grasshays, corn silage, and corn products with the possible exception of those made from the germs are low in both lime and phosphorus.

TREATING SHEEP FOR STOMACH WORMS, FEATURE OF UNITED STATES EXHIBIT

"THE Story of the Stomach Worm," is the title of a demonstration and exhibit shown by the United States Department of Agriculture at the International Live Stock Exposition, Chicago, December 2 to 9. For several years the department has been testing methods for the prevention of injury and loss by this parasite, which is one of the most serious pests of farm sheep. Following a careful study of the life history of the stomach worm, a practical and inexpensive treatment has been found that will prevent stomach-worm injury.

In its exhibit experts of the department demonstrated with a pen of wormy sheep the method of giving this treatment, known as the blue-stone treatment. The simple apparatus necessary, and the proper solution to use, was also shown to those interested.

Stomach worms are particularly destructive to young lambs, causing stunted growth and losses sufficient to wipe out all profit from sheep raising. By proper use of the blue-stone treatment losses from stomach worms are prevented, at small cost and lambs thrive and reach market size at an early age. If the sheep man will acquaint himself with the principal points in the life of this worm, and apply the bluestone treatment at the proper time, most of the losses caused by the stomach worm will cease.

VETERINARY DEPARTMENT

CHRONIC LAMINITIS

"I have a five year old mare, who got in a cornfield and ate too much new corn and now has the foundlers. Her front legs seem to pain her as she lifts them up all the time. What can I do for her? The local veterinarian did not help her.—M. F., Caro, Michigan.

—From the history given in this case I am of the opinion the mare is suffering from chronic laminitis, a disease that is incurable. Moderate cases can be remedied somewhat by proper shoeing. No doubt your veterinarian did all he could in this case to prevent the disease from becoming chronic, a thing that is liable to happen in any case of laminitis or foundlers. Better consult your veterinarian as to proper shoeing of the animal if this is advisable. It is necessary to make an examination of the feet before giving advice as to shoeing.—John P. Hutton, Associate Professor of Surgery and Medicine, M. A. C.

WIND PUFF

Is there any cure for wind puff on a horse's leg? The horse is sound in every way, as far as is known. Also have a sow that after calving last spring became poor and stiff in her limbs. She ate fairly well but soon became so poor and helpless we killed her. We did not milk

her for three months. On investigating her inwards found them covered with dark spots or lumps. Was the cow diseased or could she have injured herself during calving?—C. F., Conklin, Michigan.

—The term "wind puff" is usually applied to an enlargement of the bursae located at the lateral part and just above the fetlock joint of the horse. If there is no lameness connected with the blemish, it is very questionable if it would be advisable to treat. Rest, absorbent applications and bandages would be indicated. However, when the animal is returned to work the blemish is prone to return. In case of lameness, I would advise securing the services of a qualified, graduate veterinarian.

Regarding the disease of the cow, from the meagre description of conditions found it would be impossible to say what the trouble was but possibly was not caused by injury during freshening.

FROM MICHIGAN BREEDERS

MAKES SEVERAL GOOD SALES

Mr. Wm. C. Dicken, proprietor of Riverview Hereford Farm of Smyrna, Michigan, and breeder of both Polled and Horned Hereford cattle dropped us a friendly letter the other day. In it he advised that he had made several sales during the past year. One was a cow sold to C. W. DeGrew of Belding; another a bull to A. T. Laux and C. E. Bowen, Smyrna; bull to Richard Conzins, Muir, bull to Seth C. Partridge, Greenville; bull to J. E. Stauffer, Alto, Michigan. Mr. Dicken also advises that Mr. Chas Lampkin of Lowell has just purchased a carload of grade Hereford Calves at Kansas City, Missouri which he will keep to breed. "The first of their kind to be shipped into this section for that purpose," says Mr. Dicken.

REPORTS TWO SALES

"Last week we sold a young bull, 12 months old, weighing 960 pounds, to Guy R. Bill of Snover and also a six-months-old calf, weighing 620 pounds, to R. M. Watts of Melvor, Michigan," writes L. C. Kelley and Son, Shorthorn breeders living near Plymouth, Michigan, in a letter dated November 22.

SOLD FINE BOAR

After having read your article in your issue of November 11th regarding the purchase of the Duroc-Jersey boar by Schaffer Bros., I wish to tell you of a Duroc-Jersey boar that I sold to Miland Young of Wheeler on November 7th. He was farrowed on February 4th 1922, and at the age of 248 days weighed 397 pounds. He was sired by Barnes' Fancy King No. 215475 whose line of breeding runs strongly to both Ira Jackson's and Brookwater's stock.

Mr. Young is the proud owner of 20 spring gilts that he intends to breed to this boar for early spring farrow.—W. U. Barnes, Wheeler, Michigan.

PLANTING AN ORCHARD

(Continued from page 26)

Customers who come to the orchard for fruit are rapidly being educated to prefer flavor to the other qualities. Every year the demand for such fruit is improving and promises to continue to do so. Good roads and automobiles make 50 or 60 miles to an orchard merely a pleasure trip. A location within that distance of a large city may well be considered as within the territory of the home market. Varieties judiciously selected so as to give a succession will enable one to dispose of a large crop.

Perishable fruits that must be sent to a distant market should be chosen for their shipping qualities, which usually requires a sacrifice of flavor. The Elberta peach is a good example. It can be shipped like a rubber ball, so the greater part of the peaches are shipped are of this variety. But would our peach growers ever offer it to another?

Cherries are limited to a few varieties. Besides the Early Richmond for first and the Montmorency to follow, there are not many grown in Southern Michigan for market, though the English Morrill should receive some attention, since it

ripens a month later than the others. In the Traverse Bay region it is a favorite.

Among the plums the Burbank has been extensively planted. It has proved the most satisfactory of the Japanese varieties, but the fruit grower may now ask himself whether or not it is best to set out this tree. It bears early and produces heavy crops. The fruit is ripe before the Domestics, and it is attractive in appearance, but will customers tolerate it if they can get Lombards, Cages or any one of a dozen European varieties? By the time a plum orchard, planted now, begins to bear, will not customers have learned to discriminate?

The pear, what can be said about that? At present the blight makes it about the most uncertain of fruits. As soon as that difficulty is overcome it should be a promising fruit.

The apple is in a class by itself. Near the large cities there is a good demand for summer and fall fruit, picked green, but it is a market depending largely on the good road and the automobile. The outlook for fall fruit which has to be shipped far is poor. Winter fruits should have a good future. Experienced growers advise limiting the planting to four or five varieties and these such as are suitable to the locality. A variety good in one place may be poor in another.

THE CERTIFICATION OF NURSERY STOCK

OWING to the number of fruit trees furnished by nurseries which prove untrue to name, the certification of nursery stock by some trustworthy organization has been suggested, one plan proposed being the examination of bearing trees while in fruit and certifying of the scions to be used in propagating.

This method of certifying the scions would be helpful if the practice could be country wide, but the certification is confined to Michigan, it will not be beneficial since less than ten per cent of the trees planted in this state are grown in Michigan nurseries, and even though planters wish to secure trees grown from certified scions, they will not be able to obtain them. We fear also that the certifying of the scions will not always secure for the planters trees that are true to name. The mistakes made in varieties are either the result of errors made by the honest nurseryman, and of errors or the fraudulent filling of orders by dishonest nurserymen.

Michigan nurserymen as a class compare favorably so far as honesty is concerned with the men in any other line, but we have known of nurserymen in Michigan as well as in other states, who apparently do not hesitate if they do not have the varieties ordered, to put in other kinds of which they have a surplus, labeling them according to the order. These men are not likely to change their methods and would be most active in calling attention to their certified stock. It would be an easy matter for them to secure a few certified scions and their catalog and other literature could be so worded that the public would think that they had certified stock only.

Each year there is an increased tendency for Michigan nurserymen to obtain their fruit trees from nurseries in New York, Connecticut, Pennsylvania, Maryland, Ohio, Indiana, Illinois, Iowa, Missouri and other States and even those who formerly grew large numbers of fruit trees now depend largely upon other nurseries for their supply except perhaps of peach trees, and give their haps of peach trees, and give their mental trees and shrubs.

In Massachusetts, they have attempted in a small way the actual certification of fruit trees. A metal tag with the name of the variety is fastened to each tree by running a small wire through a branch and sealing it. There is no opportunity for fraud when the individual trees are marked in this way.

It is quite feasible with the most varieties and would be reasonably safe with all sorts if certified scions are used. As carried on in Massachusetts the actual cost of certifying the trees is three cents each. In Michigan the benefit would be limited by the comparatively small number of trees in the nurseries.—L. R. Taft, State Horticulturist.



One Week each Month and note the difference

You CAN get more milk from your cows—now, and all through the winter and spring. Read how—and why—then act.

Late fall, winter and spring months are a severe strain on the milch cow's system. Winter feeds are harder to assimilate and turn into milk than green pasturage. The digestive and milk-making organs become run down. Less milk and lowered vitality results.

BUT—you can easily maintain vitality at summer level and decidedly increase the milk flow by a one-week-a-month use of Kow-Kare. This famous medicine for cows tones up the genital and digestive organs—enables them to throw off disease and make milk faster.

Thousands of dairymen follow this plan and find the very slight cost of the treatment repaid a hundred fold. Only a tablespoonful of Kow-Kare morning and night is required—and only one week out of the month.

If disease does creep into the herd, Kow-Kare goes to this origin of the trouble and acts promptly. For Barrenness, Retained Afterbirth, Abortion, Scours, Milk Fever, Bunches, Loss of Appetite, etc., Kow-Kare has been the standard remedy the country over for twenty-five years.

Make a test of this more-milk plan—try it on part of your herd and convince yourself. Your feed dealer, general store or druggist will supply you—large size Kow-Kare \$1.25; medium size 65c. If your dealer is not supplied, we mail, postpaid.

Write for valuable free book, "The Home Cow Doctor."

DAIRY ASSOCIATION CO., Inc.
Lyndonville, Vt.

HAMPSHIRE

A CHANCE TO GET SOME REAL HAMPSHIRE. Boar pigs, sired by Gen. Pershing Again, Gilt Edge Tipton, Messenger All Over 10th. Gen. Pershing 2nd., and other great boars. Write for list and prices. DETROIT CREAMERY HOG FARM, Route 7, Mt. Clemens, Mich.

HAMPSHIRE—SPRING BOARS AND BRED gilts from 25 sows to select from. Place your order now or you may be too late. 10th year. JOHN W. SNYDER, R. 4, St. Johns, Mich.

O. I. C.

O. I. C. PIGS OF NICE THRIFTY AUG. AND Sept. farrow, 40 lbs. or more; from large prolific mothers, average 14 pigs to litter. Choice pig either sex, \$15.00. O. I. C. Order now. Prompt shipment. Pedigree with each pig. MAPLE VALLEY STOCK FARM, North Adams, Mich.

O I C'S 25 LAST SPRING BOARS, GILTS not akin; fine big growthy stock. Recorded free. One-half mile west of depot. Citizen Phone. OTTO B. SHULTZ, Nashville, Mich.

REGISTERED O. I. C. SERVICE BOARS AND Bred Gilts, priced to sell. J. R. VAN ETEN, Clifford, Mich.

SHEEP

REGISTERED SHROPSHIRE YEARLING rams and ram lambs of exceptional quality and size. Priced to sell. Flock established 1890. C. LEMEN, Dexter, Mich.

SHROPSHIRE—10 REGISTERED EWES. Choice wooly Rams. DAN BROOHER, Ewart, R. 4, Mich.

STRONG robust one and two yr. old Wool-Mutton Shropshire rams priced right. Tell us what you want. Maplewood Stock Farm, Allegan, Mich.

OXFORDS RAMS ALL AGES—GUARANTEED breeders and to please. A few ewes also 10 ewe lambs. Wm. Van Sickle, Deckerville, Mich., R. 2.

PET STOCK

FOR SALE—1 YEARLING, 2 SUCKLINGS Shetland Ponies, Reg. Hampshire, 6 bred ewes, 8 ewe lambs. A bargain. HARRY W. GARMAN, & SONS, Mendon, R. 3, Mich.

PUREBRED SCOTCH COLLIES, SABLE AND white or the beautiful black and white. From heel-drivers. \$10 and up. SILVERCREST KENNELS, Gladwin, Mich.

Complete Dispersion Sale of Holstein-Friesian Herd

6 1-2 miles west of Lake Odessa, Mich., Dec. 14, 1922, beginning at 2 p.m.

25-Pure Bred Registered Females-25
2-Pure Bred Registered Males-2

Twin heifer calves whose Dam is a 27th. cow and their Sire a 30th. bull. This herd was tested Nov. 13th under State law and passed as free from all infection.

A number of these cows have been recently tested for production records. Following are some of the results of seven day tests:

	Milk	Butter
Cow No. 159575—12 years old	761.2lbs.	26.474lbs.
Cow No. 206121—10 years old	532.2lbs.	24.070lbs.
Cow No. 427844—6 years old	464.7lbs.	21.105lbs.
Cow No. 506145—4 years old	623.7lbs.	27.121lbs.
Cow No. 538236—4 years old	502.2lbs.	23.712lbs.
Cow No. 612617—2 years old	446.6lbs.	24.155lbs.

Fifteen of these females will be recently freshened at the time of sale.

This is an estate settlement sale and every animal will be sold to the highest bidder. Shelter tent in case of bad weather. The 160 acre farm will also be sold at auction at this sale. A good dairy farm as the records will show.

Terms for stock—Cash or good approved notes with interest at 7%. Notes drawn payable in eleven months.

Terms for farm must be either cash or securities readily converted into cash. For catalogs address, TONY McCAUL, Clarksville, Mich.

McCAUL & CHEESEBROUGH, Owners.

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Advertisements inserted under this heading at 30c per agate line, per issue. Commercial Baby Chick advertisements 45c per agate line. Write out what you have to offer and send it in. We will put it in type, send proof and quote rates by return mail. Address The Michigan Business Farmer, Advertising Department, Mt. Clemens, Michigan.

POULTRY

We yet have a few hundred Pullets in Leghorns, Barred Rocks, White Wyandottes and Orpingtons. The most of these Pullets are near laying age and should be put into winter laying quarters soon. If you want a flock of winter layers, write us now.

Also Cockerels, Bronze Turkeys, Toulouse Geese and Pekin Ducks.

STATE FARM ASSOCIATION
Kalamazoo, Mich.

PULLETS, HENS AND COCKERELS

S. C. White Leghorns and S. C. and R. C. Black Minorcas. Must make room before cold weather. About ready to lay.

LAPHAM FARMS, Pinckney, Mich.

S. C. ANCONA COCKERELS HATCHED FROM H. Cecil Sheppards very best. Only a few, order early \$3.00 to \$5.00.

H. CECIL SMITH, Rapid City, Mich., R. 2.

S. C. RHODE ISLAND WHITES. THOROUGHbred cockerels and pullets for sale.

JNO. A. HARTGERINK, Zeeland, Mich.

LEGHORNS

LEGHORNS

S. C. Buff Leghorn Hens, Pullets and Cockerels. Hens and pullets \$2.50 each; cockerels \$3.00 to \$5.00 each. Show birds a matter of correspondence. LAPHAM FARMS, Pinckney, Mich.

COCKERELS AND PULLETS. S. C. W. LEGHORN, Town Barron strain, 250 egg utility line, April hatched, \$1.35 C. O. D.

CECIL W. BOVEE, North Star, Mich.

FOR SALE May hatched S. C. White Leghorn Pullets also Rose and Single Comb Rhode Island Red Pullets. VALLEY RIDGE POULTRY FARM, Bloomingdale, Mich.

S. C. BUFF LEGHORNS AND BUFF ROCK COCKERELS also a few yearling yearling Brown Leghorn hens at farmers prices.

E. B. HOLLENBECK, Athens, Mich.

FOR SALE—R. C. BROWN LEGHORN COCKERELS the big kind. These are extra good. \$2.00 each, one or more. E. HIMEBAUGH, 422 Marshall St., Coldwater, Mich.

BUFF LEGHORNS—SINGLE COMB. Early Hatched Cockerels.

J. W. WEBSTER, Bath, Michigan

RHODE ISLAND REDS

RHODE ISLAND REDS, TOMPKINS STRAIN Both combs. Stock for sale after September 15th.

WM. H. FROHM, New Baltimore, Mich. R. 1.

ROSE COMB R. I. REDS, WHITTAKER'S strain. Cockerels (April hatch) \$2.00. Satisfaction guaranteed. HAMPTON & SONS, Bangor, Mich.

WHITTAKER'S R. I. REDS, 200 SINGLE Comb red pullets each, \$2.50 to \$5.00 each. Also both Rose and Single Comb cocks and cockerels. Write for catalog. Interlakes Farm, Box 4, Lawrence, Mich.

ORPINGTONS

BLACK ORPINGTON COCKERELS

M. P. HERBERT, Jonesville, Mich.

PLYMOUTH ROCK

BUFF ROCK COCKERELS—BIG HUSKY, healthy, uniform color, the result of years of careful breeding.

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THOMPSON STRAIN BARRED ROCKS—DARK Pullets \$1.50. Light and dark cockerels \$3.00.

MRS. FRED KLOMP, St. Charles, Mich.

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FOR SALE—150 WHITE WYANDOTTE Cockerels and pullets. All from my prize winning stock of very best American White Wyandottes laying strain. They win for me. They will win for you.

C. W. CASE, Rochester, Michigan

CHOICE WHITE WYANDOTTE COCKERELS Pure bred laying strain, April hatch, reasonable.

E. M. CONNOR, Jackson, Mich., R. D. 5.

WHITE WYANDOTTES—MARTIN STRAIN Michigan State Fair winners, 1922. Cockerels and pullets, \$3 to \$7.

WAYNE CHIPMAN, Washington, Mich., Route 2.

FOR SALE—HIGH GRADE WHITE WYANDOTTES and R. C. Rhode Island Red cockerels—\$3.00 each until January 1.

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TURKEYS—DUCKS—GEESSE

White Holland Turkeys. Large Healthy Stock with size and quality. Grand gobblers \$11.00, \$14.00. Females \$9.00. Order now and get the pick.

A. F. STEGENGA, Lyons, Mich.

We specialize in White Holland Turkeys and have birds of best breeding to offer of Northern Grown Stock. Toms \$10 to \$12. Hens \$8 to \$9. Birds will be well crated and satisfaction guaranteed.

Foot's Turkey Farm, Garden, Delta Co., Mich.

NICE LARGE HEALTHY PUREBRED WHITE Holland Turkeys, for sale. Write for prices.

MRS. EDNA DRIVER, R. 3, Fowlerville, Mich.

PUREBRED BRONZE TURKEYS FOR SALE

F. E. KINLEY, St. Johns, Mich., R. 2.

BEAUTIFUL PUREBRED MAMMOTH BRONZE Gobblers, large and vigorous. You will make no mistake when buying from me. \$10.

THOMAS ROZEBOOM, Muskegon, Mich., R. 4.

BOURBON RED TURKEYS READY FOR shipment, for prices, etc., address

R. W. ROBOTHAM, Hesperia, Mich.

FOR SALE—GIANT BRONZE TURKEYS FROM Michigan's best strains. Large healthy birds.

LAVERNE BROWNELL, R. 1, Belmont, Mich.

PURE BRED MAMMOTH BRONZE TURKEYS Champion strain. Large and vigorous.

MRS. B. SMATTS, East Jordan, Mich., R. 1.



Poultry for Profit

CHICKEN POX OR ROUP

I have been losing quite a number of chickens. Their heads swell up on one side, and in a few days it breaks open and kills them. This seems to be only in the half grown chickens. Their heads look yellow and pale looking. They have a large well ventilated coop, and are fed corn, oats, buckwheat and sour milk. Would the sick ones hinder my selling the healthy ones?—F. B., Michigan.

—The symptoms described by you would indicate that the chicks are affected with a form of either Chicken Pox or Roup. A positive diagnosis could not be made, however unless the birds were sent to the College and a post mortem made. We have noted this trouble is liable to occur where chicks have been late hatched and over crowded especially when they are not encouraged to roost while young. The other birds in the flock are marketable although in all probabilities they would be rather light in weight if this condition is very prevalent. We would suggest that you eliminate all diseased specimens and feed the balance of the flock a moist mash containing equal parts by weight of bran, middlings, corn meal, and ground oats plus ten per cent meat scrap. This mash should be fed once a day. A scratch feed of cracked corn, and wheat should be given both in the morning and in the evening with a heavier feed at night.—E. C. Foreman, Department of Poultry Husbandry, M. A. C.

EXAMINATION REQUIRED

I have a nice flock of Plymouth Rock chickens, been doing well every year, but this summer, have lost lots of them and keep on losing them. They don't look sick at all that I notice, but find some dead under the roost, I open them, all the same trouble. The liver is spotted yellow and rotten. They have good feed, lots of sour milk and fresh water all of the time. Please tell us what should be done, I am afraid I will lose the rest of them.—J. D. Levering, Michigan.

—The disease spoken of cannot be diagnosed without an examination of a diseased bird or the carcasses of the birds which have recently died. The spotted liver may be found in blackhead, tuberculosis, or even other diseases. The best way of settling this question is to examine some of the fresh tissues from the diseased birds.—H. J. Stafseth, Res. Asso. in Bacteriology, M. A. C.

OVER \$45,000,000 LOSS YEARLY FROM BAD EGGS

FEW people understand that eggs are almost as perishable as meat or milk. They belong to the same class of food, but just because they are enclosed in a hard shell, people think they will stand almost any kind of treatment.

Government experts estimate a loss of over \$45,000,000 every year from bad eggs. This loss can be largely prevented by better handling and marketing.

Five per cent of the eggs in the United States are lost through shrinkage. The shell of an egg is porous, so that the developing chick can get air during the incubation period.

Seventy-four per cent of an egg is water. Whenever an egg is in a temperature above freezing, this shell. The higher the temperature and the more circulation of air there is, the faster the evaporation takes place. Eggs grow stale in warm poultry houses, in hot kitchens on the farm, or in the cupboards of the consumer. Egg dealers count that three stale eggs are equal to a rotten egg and pay accordingly.

Gather your eggs daily and keep them in a cool place. Market them as often as possible—at least once a week—better twice a week.

Blood rings cause a loss of 5 per cent of the eggs produced in the water is evaporating through the

United States. This point was covered in the discussion of the preceding chart.

Two and one-half per cent of the 3 on the market are rotten. Black rot, the rot caused by fertile eggs, has already been discussed. It is the most common rot and, as suggested before, can be prevented by producing infertile eggs.

There are other kinds of rotten eggs. Bacteria gets in to the egg through the porous shell. These bacteria develop, causing various kinds of rot and mold. The tough outer membrane of the egg is practically bacteria proof unless it becomes damp.

Don't let hens nest on the damp ground. Keep the nests clean and dry. Don't wash any eggs you intend to sell. This destroys the inner protective membrane and allows germs to enter. Large egg dealers are sending out printed instructions, "Under no conditions wash eggs."

Two per cent of the eggs produced are broken. Some are broken by you on your way to market, but you are not as responsible as the local packers, the railroads, and the truck drivers of the large cities.

Two per cent of the eggs which come to market are dirty. Customers do not want dirty eggs. The egg dealers count three dirty eggs as the equivalent of one rotten egg, and deduct from the price accordingly.

Keep the nests clean. If eggs get dirty during the muddy weather in the spring, wash them, and use them immediately at home. Washed eggs are as good as any if used at once.

Mold spores enter the egg the same as bacteria. The spores grow and the egg tastes musty and ill flavored. Keep the nests clean and dry, and store the eggs in a cool dry place. Never put them in a musty room or cellar, or pack them in musty cases. There is only a small loss from this cause—one-half of one per cent.

Adding these percentages we find that 17 per cent of all the eggs in the United States are unfit for food. Help to prevent this loss by producing infertile eggs, by keeping the nests clean, by gathering the eggs daily, by storing them in a cool, dry place, and by marketing them often.

HOME PRESERVATION OF EGGS

PRESERVED eggs are as good for nearly all purposes as fresh eggs. If the preservative has been properly made and the eggs are fresh when they are put into it, even experts can hardly distinguish the preserved product from the fresh.

Water glass is one of the best preservatives for home use. Use 1 gallon of water glass to 10 gallons of water. Boil the water, then add the water glass, and mix thoroughly. Use only clean, fresh eggs. Pack in a glass or stone jar, or in a wooden keg. Have at least two inches of the solution above the top layer of eggs. Keep your eggs covered, and store them in the cellar or some other cool place.

Water glass costs from 60 to 75 cents a gallon. One gallon will preserve from 75 to 100 dozen eggs. Do not use the solution a second time.

Lime water can be used instead of water glass. Slake three pints of quick lime in three gallons of water. Add one pint of salt, and stir well. Let the mixture settle and pour off the clear liquid for your preservative.

Preserved eggs must be marked as such, if offered for sale.

"Today we have in the United States one cow for every four people while in Japan there is only one cow to every 1,114 people. Milk is undisputedly the most important food in the development and growth of the human body. Without its use we would soon be a nation of people of small and undersized stature."—Jessie Hoover.

A New Discovery Makes Hens Lay

Any poultry raiser can easily and quickly double his profits by doubling his egg yield through the remarkable discovery of M. B. Smith, a Kansas City chemist.



Working along entirely original lines Mr. Smith discovered why hens lay less in winter than in summer, and perfected a formula that turns loafers

into layers and profit makers. Within five or six days this discovery, which is called Ditto Egg Tablets, will rejuvenate your flock. Your hens will go strutting and cackling about with red combs and full of life and pep. Every nest will yield an egg nearly every day in the week, which means a lot, since eggs are certain to sell for 60 cents or more. This is not guess work as over 100,000 successful poultry raisers testify to the value of Mr. Smith's products.

Although different from anything you ever heard of, Ditto Egg Tablets are easily administered by simply dropping in drinking water.

So confident is Mr. Smith you can double or triple your egg yield, that he offers to send two large \$1 packages of Ditto Egg Tablets (enough for a season) to any reader who will write for them. If you are satisfied they cost only \$1 on this introductory offer, otherwise, nothing.

Send no money—just your name and address to M. B. Smith, 1260 Coca Cola packages will be mailed immediately.

When they arrive, pay the postage only \$1 and postage. Use the tablets 10 days. If you are not getting more eggs or are not satisfied for any reason, simply return unused tablets and your money will be returned immediately without question. A big Kansas City bank guarantees the reliability of this offer. Write today before this introductory offer is withdrawn, as you can sell one package to a friend and thus get your own free.

TURKEYS—DUCKS—GEESSE

BOURBON RED TURKEYS—UNRELATED stock. Order early for low prices. Collier pups for sale. Also Buff Wyandotte Cockerels.

THOS. G. CALLAGHAN, Fenton, Mich.

FINE, LARGE, VIGOROUS, THOROUGHbred Bronze Turkeys. Wish to lessen my flock. For quick sale. Hens \$8.00, Toms \$10.00.

MRS. ROBT. EMERICK, Harrisville, Mich.

MICHIGAN'S BEST GIANT BRONZE TURKEYS Large, vigorous birds of splendid color from world's best strains. Unrelated stock furnished.

N. EVALYN RAMSDALL, Ionia, Mich.

MAMMOTH BRONZE TURKEYS FOR IMMEDIATE shipment. Hens \$6.00, Toms \$8.00.

D. F. MARSHALL, Baulah, Mich.

THOROUGHbred BOURBON RED—TOMS \$10.00, HENS \$8.00.

J. B. HUDDLE, Ceresco, Mich.

PUREBRED BOURBON REDS, LARGE VIGOROUS. Evans strain. Hens \$8, toms \$10.

MARY BEACOM, R. 4, Marquette, Mich.

EARLY HATCHED PURE BRED NARRAGANSETT Turkeys. Hens \$8, Toms \$12.

MRS. C. W. BEEBE, Adrian, R. 7, Mich.

MAMMOTH BRONZE TURKEYS. START right by buying strong, vigorous, pure bred stock. Write for prices.

MRS. PERRY STEBBINS, Saranac, Michigan.

WHITE PEKIN DUCKS AND DRAKES \$2.00 each. S. C. W. Leghorn cockerels from cull flock \$1.50 each. These prices are for immediate delivery F. O. B. Oxford. Also have geese and turkeys. Mrs. Earl De Lano, R. 1, Oxford, Mich.

W. CHINESE GEESSE, PEKIN DUCKS, R. C. Brown Leghorns. Mature and young birds.

MRS. CLAUDIA BETTS, Hillsdale, R. 1, Mich.

FOR SALE CHOICE WHITE PEKIN DUCKS and drakes and mallards.

CEDAR BEND FARM, Okemos, Mich.

HIGHEST PRICES PAID FOR LIVE AND Dressed Poultry. Veal, Eggs, Rabbits. A square deal always. C. E. MCNEILL & CO., 325 W. So. Water St., Chicago, Ill.

Michigan Apple and Potato Show

Grand Rapids, Michigan,
Klingman Building

December 5, 6, 7, 8, 1922

DAY AND NIGHT

During the Meeting of the

Michigan Horticultural Society
and the Michigan Potato Producers' Association

Reduced Fares on all Railroads—ask your agent for application blank.

Admission 25 Cents.

The Agricultural and Business Situation

Revised Monthly by the Department of Research of the American Farm Bureau Federation.

An understanding of the figures on this page as they are revised and presented each month, enables the farmer to see the position of the important factors which indicate the trend of business and prices and give a basis for judgment concerning future agricultural operations.

SUMMARY:

The chief elements in the situation are encouraging in all four groups of factors.

I. PRODUCTION AND TRADE.

Combined crop output in the United States this year is the third largest ever produced, the production for 1915 and 1920 being slightly in excess of 1922.

Pig iron production has made steady and rapid increase since the low point in July, 1921. The output in October this year registered an advance of 205 per cent over July, 1921.

Bank clearings outside of New York City, for October, show 28 per cent increase over October last year. This is mainly due to big crops and reviving trade but can be partially explained by a 9 per cent advance in the general price level.

II. FOREIGN TRADE.

As shown in last month's review, wheat and pork—two of the major farm exports—were going out of the country in unprecedented volume during the last two fiscal years. The ability of Europe to buy is partly explained by the net imports of gold into the United States, of 946 million dollars during the two years ending July 1, 1922, and of estimated foreign investments by American citizens amounting for the two years to 1,633 million dollars. Net imports of gold cannot and should not continue and are not continuing in this volume. Investments in foreign countries may be expected to keep on and increase if the factor of safety grows. Foreign loans extended by American investors in

the fiscal year 1922 were 64 per cent greater than in 1921 indicating increasing confidence in the return of normal conditions abroad.

III. MONEY AND CREDIT.

At the present stage of the business cycle an increase in interest rates and decline in federal reserve ratio are encouraging for they may signify expanding business activity, bringing greater demand for raw materials and shortly thereafter a larger supply of finished products available for consumption. When such changes come during the crop moving period, they may be reflecting mainly a temporary need for money and credit. Both sets of facts are probably true in the present noteworthy advance in commercial interest rates since last month.

IV. PRICES.

The September, 1922, purchasing power figure, based on prices for the year 1913, was 64, which means that farm products at prevailing prices can buy only 64 per cent as much of other commodities as in 1913. If it were possible to compute the November figure a slight increase would probably be shown but at best the gain is small over 62, the low point in farm purchasing power registered in December, 1921.

When volume of production as well as price is taken into consideration, the situation is more encouraging. A study by the Department of Research in August showed the purchasing power of the 1920 crops, total value basis, namely price multiplied by volume, to be 75; the 1921 crops 61; and the 1922 crops, on August forecasts and July prices, 77. November forecasts and prices might raise this last figure slightly. From this showing, which is more significant than the price relationship alone, farmers are about 25 per cent better off this year than last year but are still over 20 per cent below their 1913 position. It should be remembered that this is the third consecutive year the exchange ratio has been unfavorable.

On November 21, compared with a month previous, 17 out of 24 farm products advanced in price, 6 declined and 1 remained unchanged. Compared with a year ago there are 19 advances and 5 declines.

I. Production and Trade

1. Agriculture:

U. S. Production—000,000 omitted.

	1922 Preliminary	1921	Average 1916-1920	1922 Preliminary*
Corn, bu.	2896	3080	2831	102
Wheat, bu.	810	795	799	101
Oats, bu.	1230	1061	1413	87
Barley, bu.	196	151	197	100
Rye, bu.	80	60	68	118
Buckwheat, bu.	13.6	14	14	95
Potatoes, bu.	434	347	373	116
Sweet Potatoes, bu.	110	99	89	124
Hay, all, tons.	109	97	102	197
Cotton, bales	10	8	12	85
Tobacco, lbs.	1330	1075	1378	97
Flaxseed, bu.	12	8	11	110
Rice, bu.	39	37	42	94
Peanut, bu.	56	33	44	129
Pears, bu.	18	11	14	126
Apples, total, bu.	206	98	179	115
Apples, com'l, bbls.	32	21	27	119
Sugar Beets, tons.	5	8	7	75
Kaffirs, bu.	81	115	91	89
Cranberries, bbls.	.5	.3	.4	125
Beans, bu.	13.0	9.1	13.3	98
Onions, bu.	20	14	17	122
Cabbage, tons	1.1	.6	.7	156
Sorghum Sirup, gal.	38	46	40	96
Cloverseed, bu.	1.8	1.4	1.5	120
Peanuts, lbs.	691	816	1043	66
Hops, lbs.	31.5	29	32.1	98

*As percentage of average 1916-1920.

World Production—000,000 omitted.

	1922	1921	Average 1909-13
Wheat, bu. (1)	3,012	3,049	2,890
Rye, bu. (2)	770	771	771
Oats, bu. (3)	3,018	2,742	3,008
Barley, bu. (4)	843	814	882
Potatoes, bu. (5)	3,106	2,430	3,066
Cotton, bales (6)	16	14.1	19.6

(1) Russia and Mexico excluded. (2) 18 countries. (3) 27 countries. (4) 25 countries. (5) 16 countries. (6) 500 pounds net, linters excluded.

2. Mining:

Figures express production as a per cent of normal. In estimating normal production, due allowance is made for seasonal variation and year to year growth.

	Sept., 1922	Aug., 1922	Sept., 1921
Anthracite coal	61	1.9	88
Bituminous coal	71	39	64
Copper	*79	*86	18
Petroleum	*111	112	96

*Preliminary.

3. Manufacturing:

	1922	1921	1920
Wheat flour	123	117	119
Meat	*	109	97
Cotton	110	144	76
Sugar	92	97	92
Pig iron	68	61	34
Steel ingot	74	70	38
Lumber	84	98	74
Wood pulp	*	105	73
Gasoline	*	103	91
Cement	123	121	110

*Not available.

4. Building:

	October, 1922	October, 1921	Ten Months 1922	1921
Contracts awarded in 27 States:				
(F. W. Dodge Co.)				
Number	9,568	8,096	91,479	65,151
Value (000,000 omitted)	\$ 253	\$ 222	\$ 2,887	\$ 1,969

5. Transportation:

	Week Ending Nov. 11, 1922	Same Week Month Ago	Same Week Year Ago	Week Ending Nov. 11, 1922*
Freight Car Loadings:				
Total	953,909	983,470	753,046	127
Grain and grain products	52,501	52,492	34,402	153
Livestock	33,001	39,141	34,269	111
Coal	138,312	196,926	152,309	124
Coke	12,273	10,208	6,450	189
Forest products	60,392	59,727	50,661	119
Ore	39,383	46,362	8,658	455
Merchandise	228,050	226,123	215,439	106
Miscellaneous	334,997	352,491	250,858	134

*As percentage of week year ago.

6. Employment:

	September, 1922	August, 1922	July, 1922
Out of 65 industrial centers employment			
Increased over previous month in	48	39	44
Decreased from previous month in	17	26	21

7. Bank Clearings:

	Oct., 1922	Sept., 1922	Oct., 1921
Units of \$1,000,000,000			
New York City	19.67	17.27	16.03
Outside New York City	16.96	14.78	13.21

8. Mail Order Sales:

	October 1922	October 1921	Ten Months 1922	Ten Months 1921
Montgomery Ward	\$10,288,916	\$ 7,604,031	\$ 69,841,140	\$ 60,950,454
Sears Roebuck	19,933,164	17,378,253	141,212,969	144,747,613

II. Foreign Trade

1. Exports:

	000 omitted		—September—		Nine Months	
Commodity	1922	1921	1922	1921	1922	1921
Grand total, all exports	\$307,451	\$318,402	\$2,685,124	\$3,461,562		
Beef and veal, lbs.	3,069	3,096	23,138	28,529		
Pork, lbs.	57,247	66,405	504,238	617,842		
Lard, lbs.	61,120	104,741	559,700	695,659		
Neutral lard, lbs.	1,598	2,789	14,741	20,515		
Butter, lbs.	1,077	371	9,488	6,632		
Cheese, lbs.	334	530	4,059	10,443		
Hides and skins	226	433	2,899	2,794		
Corn, bu.	9,608	18,600	141,206	104,972		
Meal and flour, bbls.	40	84	493	640		
Wheat, bu.	25,987	30,842	126,130	237,445		
Flour, bbls.	1,301	1,802	10,458	12,984		
Oats, bu.	4,379	224	24,036	2,474		
Meal and rolled, lb.	9,425	8,719	75,649	79,446		
Fruits and nuts	7,301	7,327	43,610	46,171		
Veg. oils and fats	1,035	959	9,875	24,203		
Sugar, lb.	28,824	79,781	1,808,841	785,984		
Leaf tobacco, lb.	33,102	33,008	295,814	403,880		
Cotton, bale	369	522	3,849	4,811		
Wool, lb.	26	80	297	1,607		

2. Imports:

	2022,795	\$179,292	\$2 181,386	\$1,872,696
Grand total, all imports				
Beef and veal, lbs.	10,533	2,066	26,998	22,033
Pork, lbs.	76	56	435	582
Butter, lbs.	89	398	2,735	12,173
Cheese, lbs.	3,037	2,571	26,241	15,535
Hides and skins	50,587	32,806	358,765	268,980
Corn, bu.	2	3	97	156
Wheat, bu.	37	62	1,271	3,081
Oats, bu.	782	81	14,321	19,171
Flour, bbl.	42	4	552	780
Fruits and nuts	3,864	5,268	55,489	48,529
Veg. oils and fats	2,990	3,822	44,079	26,474
Sugar, lbs.	390,150	315,999	8,434,011	4,747,517
Leaf tobacco, lbs.	2,780	2,600	51,556	36,914
Cotton, lbs.	2,506	3,181	113,724	67,091
Wool, lbs.	27,892	14,592	278,527	288,114

3. Prices of Foreign Drafts:

	Nominal Gold Value or Par of Exchange	Nov. 20, 1922	Oct. 16, 1922	Nov. 18, 1921
England	\$4.87 to 12 Sterling	\$4.49	\$4.43	\$3.99
France	19.3c to 1 franc	7.41c	7.52c	7.22c
Germany	23.8c to 1 mark	.015c	.03c	.036c
Belgium	19.3c to 1 franc	6.96c	7.00c	7.00c
Italy	19.3c to 1 lire	4.75c	4.19c	4.16c
Spain	19.3c to 1 peseta	15.38c	15.11c	13.78c
Austria	20.3c to 1 crown	.0014c	.0014c	.037c
Denmark	26.8c to 1 crown	20.18c	19.91c	18.45c
Norway	26.8c to 1 crown	18.33c	18.20c	14.45c
Sweden	26.8c to 1 crown	26.18c	26.72c	23.33c
Holland	40.2c to 1 florin	39.35c	38.93c	35.20c
Argentina	42.5c to 1 peso	36.6c	35.95c	32.87c
Brazil	32.4c to 1 milreis	12.65c	11.55c	12.87c
India	48.7c to 1 rupee	29.95c	28.95c	27.12c
Japan	49.9c to 1 yen	48.35c	48.10c	47.87c
Canada	100 c to 1 dollar	100.00c	100.00c	91.20c

4. Discount Rate of the Bank of England:

	Nov. 15, 1922	Month Ago	Year Ago
3%		3%	5%

III. Money and Credit

1. Gold, Currency and Bank Deposits:

	000,000 omitted	Oct. 1, 1922	Sept. 1, 1922	Oct. 1, 1921
Stocks of monetary gold in the United States	\$ 3,874	\$ 3,859	\$ 3,453	
Total supply of currency in the United States	4,521	4,394	4,665	
Total deposits in National Banks	\$16,599	\$16,321	\$14,561	
Deposits in New York City Banks	\$3,910	\$3,900	\$3,740	

2. Gold Movement:

	Nov. 15, 1922	Oct. 11, 1922	Nov. 1 1921
Ratio of total reserves to deposit and Federal Reserve note liabil- ities combined	75.2%	75.7%	71.8%

3. Federal Reserve Ratio:

	Nov. 15, 1922	Oct. 11, 1922	Nov. 16, 1921
Ratio of total reserves to deposit and Federal Reserve note liabilities combined	75.2%	75.7%	71.8%

4. Interest Rates:

	Oct., 1922	Sept., 1922	Oct. 1921
4-6 mo. commercial paper	4.65%	4.41%	5.94%
60-90 day commercial paper	4.42%	4.19%	5.62%

5. Discount Rates of the Federal Reserve Banks:

	Nov., 1922	Oct., 1922	Nov., 1921
Range of rates for the twelve banks on commercial, agricultural and livestock paper	4-4½%	4-4½%	5-6%

6. Stock and Bond Prices:

	Nov. 10, 1922	Oct. 13, 1922	Nov. 10, 1921
Average price—			
20 Industrial Stocks	97.50	102.60	75.61
20 Railroad Stocks	89.50	92.79	73.51
40 Bonds	89.30	90.63	81.13

7. Business Failures:

	Nov. 9, 1922	Oct. 12, 1922	Nov. 10, 1921
Bradstreets	374	366	404
Duns	387	390	364

IV. Prices

1. Wholesale Prices of Farm Commodities:

	Nov. 21, 1922	Month Ago	Year Ago
Quotations at Chicago except as noted.			
Fat hogs, cwt., average	\$ 7.70	\$ 8.85	\$ 6.70
Beef steers, good native, cwt., av.	9.85	10.40	7.10
Fat lambs, cwt., average	14.45	13.55	8.70
Fat sheep, cwt., average	7.40	6.10	3.70
Wool, Ohio delaine unwashed, lb. (Boston)	.565	.555	.36
Butter, 92 score, lb.	.505	.4425	.445
Cheese, No. 1 twins, lb.	.2425	.229	.20
Eggs, fresh firsts, doz.	.525	.33	.54
Poultry, hens, lb.	.18	.22	.215
Wheat, No. 2 hard, bu.	1.20	1.1825	1.025

MARKET FLASHES

TRADE AND MARKET REVIEW

THE latter part of November showed a slight slackening in business activity and considerably less confidence in the grain markets. At the same time car loadings continued heavy in all lines and the car shortage is still acute.

Many of the potato sections of this and other states are reporting a great deal of difficulty getting a sufficient number of suitable cars to ship out big holdings in warehouses and to this fact is attributed part of the blame for the exceedingly low prices.

We do not see how business can continue the same rate of improvement noted the past several months without a corresponding improvement in agricultural circles. Although the prices of most staple crops have advanced the past ninety days, the farmers themselves have received only a small part of the accruing benefit. Much of the grain crops went into the hands of the dealers early in the season and those who were fore-handed enough to hang onto the grain are reaping nice profits. The condition of the grain farmer is no doubt slightly improved because of the advancing prices of wheat, corn and oats, but the potato farmer is having a bad year of it. He represents a considerable number of farmers and all business is bound to suffer some because of the low price of his product.

The prices of most items of hardware, including stoves, of clothing, shoes, etc., have advanced from 5 to 20 per cent the past thirty days. Cotton has almost doubled in price since last spring, with varying increases in the prices of cotton goods. An up-state merchant recently told us that he would have to pay 5 to 20 per cent more for the same goods today than he paid some months ago. Items which have advanced include shoes, rubbers, underwear, clothing, socks, mackinaws, wool and cotton blankets and most of the dress goods.

The blame for the advancing prices is laid by many to the door of the Fordney tariff law. Even so no one would object to higher prices if all in the same proportion at the same time, and wages also keep up to the level. But that does not happen. Too often we see farm product prices going down while the prices of other commodities go up, but very seldom do we see the reverse.

WHEAT

Little change is noted in wheat prices the last fortnight. Both the Detroit and Chicago markets are about one-half under what they were two weeks ago. In that period prices have fluctuated up and down, with the bulls in control one day and the bears the next. However, to casual observers of the market it would appear that the bulls seem to have the situation well in hand and show little fear of lower prices for some time to come.

Wheat has been moving freely for export from both the United States and Canada, the latter country having already moved about 175,000,000 bushels. Little of this wheat is coming to the United States because of the prohibitive tariff, but instead it is taking the place of American wheat on the English market. So far as practical effects are concerned Canadian wheat might just as well come into the United States as not, as both countries have a large exportable surplus which must eventually find its way abroad.

The Argentine wheat crop is nearing the harvesting period, but reports of bad weather conditions, and prospective low yields offset the usual bearish influence of the crop. Europe is desperately in need of wheat but her purchasing power becomes daily less and inevitably it must soon cease altogether unless drastic measures are taken to stabilize the currency. Germany has been a fairly good customer for American food products since the war, but the mark is depreciating at a terrific rate and the cost of American grain laid down in Germany is well nigh

MARKET SUMMARY

All grain steady with demand slow. Corn shows indications of bullish tendency in near future. Beans firm. Demand for eggs and butter brisk and supplies small. Potatoes in large supply and easy owing to decrease in demand. Active trade in poultry. Market for turkeys quiet. All live stock active with sheep higher in price.

(Note: The above summarized information was received AFTER the balance of the market page was set in type. It contains last minute information up to within one-half hour of going to press.—Editor.)

prohibitive. Before the war a German mark was worth nearly 25 cents in American money. A year and a half ago it was worth one and one-half cents in American money. Today, \$50 will buy a quarter of a million marks. The money of nearly all other nations of the Continent has so depreciated that the people cannot afford to buy the products of other countries with it. And yet, millions of bushels of grain are going across the ocean, and is being paid for some way, and millions more will go.

The mills are active bidders for wheat and that helps keep the price up. Just now there seems to be a slight slump in the market, but we rather expect to see renewed interest in wheat within another week, which is likely to be followed by a dull season over the holidays, after which a second bull movement is not unlikely.

Prices

Detroit—No. 2 red, \$1.33; No. 2 white and No. 2 mixed, \$1.31.

Chicago—No. 2 hard, \$1.18½ @ \$1.19½.

New York—No. 2 red, \$1.32½; No. 2 hard winter, \$1.31½.

Prices one year ago—Detroit, Cash No. 2 red, \$1.25; No. 2 mixed and No. 2 white \$1.22.

CORN

If there has been any change in the tone of corn it has been in favor of the bear side although it is doubtful if the market changed

much in general. The present outlook is that prices will be lower and the market easy in the near future. Expectations of larger receipts are bearing the market and should these expectations be realized undoubtedly prices would decline sharply. Cars were more plentiful last week and farmers showed an inclination to sell freely. Export business has been dull the past fortnight. However there is some demand as houses at seaboard have been disposing of their supplies in spite of reports that Europe was having her needs taken care of by Argentina. Reports have it that Argentina has about sold all of her surplus and that Europe will soon be back in the American market in earnest. If this be true our slump in this market should be short-lived.

Prices

Detroit—No. 2 yellow, 76c; No. 3 yellow, 75c; No. 4 yellow, 74c; No. 5 yellow, 72c.

Chicago—No. 2 mixed, 71½ @ 73c.

New York—No. 2 yellow, 90½; No. 2 mixed, 89½c.

Prices one year ago—Detroit, Old Cash No. 2 yellow at 59c; No. 3 yellow 58c; new yellow Cash No. 3, 56c; No. 4, 54c.

OATS

There is nothing we can say about this market except what we have said before. There is no feature to the market. Oats will continue to act in sympathy with wheat. Country

offerings are light and domestic shipping demand moderate. On the close of last week Chicago reported sales of 30,000 bushels were made to go in store.

Prices

Detroit—No. 2 white, 49½c; No. 3 white, 48c; No. 4 white, 46½c.

Chicago—No. 2 white, 43½c @ 45½c.

New York—No. 2 white 53½c.

Prices one year ago—Detroit, No. 2 white, 38c; No. 3 white, 35 @ 36c; No. 4 white, 30½ @ 33½c.

RYE

Rye followed the trend of other grains during the past fortnight and the present price is slightly under that of two weeks ago. Exporters are bidding for rye but they want it for less than prevailing prices. Last week seaboard reported 100,000 bushels sold for export. We believe this decline to be only temporary and that the market will come back strong in the near future.

Prices

Detroit—Cash No. 2, 89c.

Chicago—Cash No. 2, 83½c.

Prices one year ago—Detroit, Cash No. 2, 87c.

BEANS

The bean market rules steady and firm. Dealers are not getting any more beans than they can readily dispose of. Probably the major part of it is still back on the farms, the holders feeling that prices will be very much higher before the next crop. We rather hold to this view ourselves, but do not think it would be good business for any farmer to hold his entire crop on the strength of that belief.

Prices

Detroit—C. H. P. \$6.75 cwt.

Chicago—C. H. P. \$8.50 cwt.

Prices one year ago—Detroit, C. H. P. \$4.20 cwt.

POTATOES

No improvement in the potato market. Prices have taken another drop since our last issue and a great many bushels are still offered in excess of what the market can absorb readily. Farmers living in the vicinity of the large cities have been particularly ready sellers, their spuds commanding from 40 to 60 cents a bushel, depending upon the locality and the quality of the offerings. This price looks good to the truck farmer when compared with the 18 to 25 cents per bushel which the farmers up-state are offered.

There are as usual many daring prophets who still talk of dollar potatoes before the coming of spring but they haven't much real fact to back up their argument. It is true that thousands of bushels are still in the ground and thousands more have been fed to stock and otherwise utilized outside the marketing channels, and it not altogether impossible that the wastage has offset the usable surplus. But that is a far-fetched conclusion. Nothing but the discovery of a serious error in the government report can, we believe, bring about a substantial increase in potato values. On our part we expect to see better prices even in the face of the government estimate, simply because the majority of farmers who have held their crop this long will not sell at the prevailing low prices until the last hope for better prices has gone glimmering. Sooner or later there must develop a scarcity of potatoes, and it won't have to be much of a scarcity, either, to influence higher prices. With everybody praying for higher potato prices it doesn't require much of an excuse or effort to bring them about.

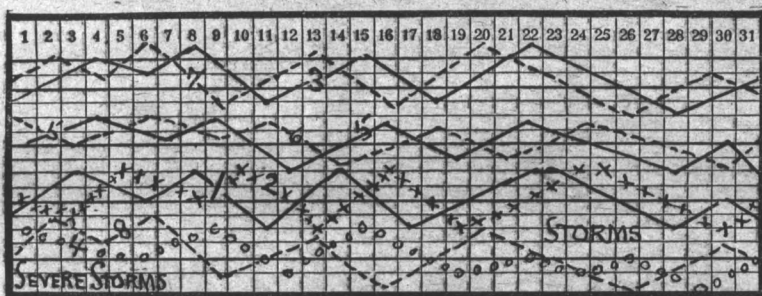
Right in this connection we are sure that our readers will be interested in a letter just received from a subscriber in far-off Colorado. He writes as follows:

"I notice your wail and weeps in your last November issue about potatoes. It is an old Board of Trade saying 'The tail end of a small crop is the big end—while the tail end of a big crop is the small end.' Wouldn't it be a great joke if a big

THE WEATHER FOR NEXT WEEK

As forecasted by W. T. Foster for The Michigan Business Farmer

FOSTER'S WEATHER CHART FOR DEC. 1922



Straight, heavy, horizontal lines represent normal temperatures, which is the average of same days of the year for forty years. Crooked lines above normal lines mean warmer; below, cooler; that marked 1 is for section 1, north of latitude 47, between meridian 90 and Rockies crest—2 for section 2 on my section map is for east of meridian 90, north of latitude 47—3, between latitudes 39 and 47 and between meridian 90 and Rockies crest—4, east of meridian 90, between latitudes 39 and 47—5, south of latitude 39, between meridian 90 and Rockies crest—6, east of meridian 90, south of latitude 39—7, north of latitude 43½, west of Rockies crest—8, south of latitude 43½ to Mexican line and west of Rockies crest.

Washington, December 8, 1922.—The cropweather of North America for 1923 will average much less favorable than that of 1922; the good and bad will not be located as in 1922, because the moisture will not come from the same ocean and therefore the same rules about sea level and elevated cannot be applied for two years. In some seasons the moisture floats high, and best crops are above the 1200-foot level; other seasons it floats low, and the best crops are below 1200 feet. When the moisture comes from the gulf stream the summers and winters are warmer; when it comes from far northern oceans they are colder.

Forecast for Michigan: Highest temperatures 9 and 15, lowest 12 and 19; average warmer than usual; not much moisture 9 to 19.

The conflicts of the forces that operate the machinery of the solar system are eternal and fierce; it is not a harmonious family; like the race, it is divided into groups that war on each other, and these wars are brought to our notice, sometimes by unpleasant methods, in our storms and other weather features. It is significantly strange that Homer's writings about the dispositions of planets toward each other. This may be noted in the coming January weather. Saturn will attack earth January 11, and Homer's overlord interferes; that racket in the family will reach our ears through a bad spell of weather. Then January 17, Uranus, to which Homer applied another name, picks a quarrel with Venus, queen of the skies, daughter of the premier of the heavenly host and messenger of peace, between the overlord and the contending armies of Troy. Uranus is very powerful, and before the peace messenger can stop him we will get many a wintry blast as a result of the fierceness of that great family of the milky way.

lot of people in the United States and Europe who do not put away a winter's supply of spuds because there are so many they can't be sold, should be hunting taters at \$3 to \$5 per cwt. in the spring while now the farmers knowing the taters ain't going to be worth nothin', are feeding them to hogs cattle, sheep, chickens or anything that will eat or nose them out of the barnyard, into a mud-hole or manure heap, any way to get them out of the way. I guess there were more spuds left in the fields of Colorado laying on and in the ground to rot than Michigan raised, and heaps enough to feed your county and Detroit sold at 25 cents a sack for hog feed."

Prices

Detroit—92c cwt.
Chicago—83c cwt.
Prices one year ago—Detroit, \$2.04.

HAY

Markets have shown very little activity during the last week and prices in some markets have declined owing to heavy receipts of the poor grades. Good hay is meeting with a steady demand and very little is allowed to accumulate at any of the markets.

Prices

Detroit—No. 1 Timothy \$17@ \$17.50; light standard \$16.50; light mixed \$16.50@ \$17.

Chicago—No. 1 light clover mixed \$19@ \$20; No. 1 Timothy \$21@ \$23; No. 1 clover \$19@ \$20.

Prices one year ago—Detroit, No. 1 Timothy at \$19@ \$20; standard and light mixed \$18@ \$19; No. 2 Timothy \$17@ \$18; No. 1 clover mixed \$16@ \$17.

WEEKLY MARKETGRAM

U. S. Bureau of Agricultural Economics

Washington, D. C. for the week ending December 2, 1922.

Live Stock and Meats—Compared with a week ago Chicago hog prices ranged from 10 to 20 cents higher. Native beef steers largely 75 cents higher, western grassers mostly 50 cents higher. Beef cows and heifers steady to 25 cents higher. Canners and cutters weak to 10 cents lower. Bulls strong to 15 cents; Veal calves unevenly 50 cents to \$1.25 higher. On December 2 Chicago hog prices were 15 to 20 cents lower than Fridays average. Cattle, sheep and lamb practically unchanged. Dec. 2, Chicago prices: Hogs, top \$8.35; Bulk of sales \$7.90-\$8.25; Medium and good beef steers \$7.25-\$13.50; Butcher cows and heifers \$3.60-\$10.75; Feeder steers \$5.25-\$7.75; Light and medium weight veal calves \$8.50-\$9.50; Fat lambs \$13.25-\$15.50 Feeding lambs \$12.25-\$14.25; Yearlings \$9.50-\$13.50; Fat Ewes \$4.50-\$7.75. Stocker and feeder shipments from 12 important markets during the week ending Nov. 24 were: Cattle and calves 138,489; Sheep 135,098. In eastern wholesale fresh meat markets, beef was steady to \$2 higher, with lamb steady to \$2 lower. Veal steady to \$1 higher on better grades; Mutton ranged from \$1 lower to \$1 higher on better grades with pork loins steady to \$1 lower. December prices good grade meats. Beef \$14-\$17; Veal \$13-\$17; Lamb \$23-\$27; Mutton \$11-\$17; Light pork loins \$17-\$20; Heavy hams \$13-\$18.

Feed: Mill feed market inactive;

Offerings fair, demand light. Good inquiry from Texas and southeast. High protein feeds weak and offered at \$1-\$1.50 below mill prices by the sellers. Production good especially of corn feeds. Receipts and movement fair. Supplies in the dealers hands are ample for present need. Quoted December 1, Bran \$22.75, Flour middlings \$25.50, Rye middlings \$21.50 Minneapolis; 36 per cent cottonseed meal \$42.75 Memphis, \$43.50 Atlanta; White hominy feed \$29 St. Louis, \$30 Chicago; 34 per cent linseed meal \$49.50 Minneapolis, \$51 Buffalo; Gluten feed \$38.35 Chicago.

Fruits and Vegetables: Potatoes generally steady in consuming markets, steady at eastern shipping points, slightly weaker at northern points. Cabbage still continues to strengthen Danish stock up \$4-\$9 per ton. New York Baldwin apples firm in city markets and at shipping points. Northwestern boxed stock weaker. Yellow onions up 25-75 cents per 100 pounds. Prices reported December 2: Eastern round white potatoes sacked and bulk \$1.25-\$1.50 per 100 pounds in leading markets, 30-95 cents f.o.b. shipping points. Northern stock mostly 90 cents-\$1.15 in midwestern cities, 60-70c f.o.b. New York Danish type cabbage \$20-\$27 per ton bulk in consuming centers, \$12-\$16 f.o.b. Northern Danish \$15-\$16 in Chicago. New York Baldwin apples \$4.50-\$5.50 per barrel in leading markets \$3.75-\$4 f.o.b. shipping points. New York and Michigan Rhode Island Greenings \$5-\$5.50 in Chicago. Virginia York Imperials \$3.50-\$4.25 in eastern markets. Northwestern extra fancy boxed Jonathans \$1.50-\$2.25. Middlewestern yellow onions \$2-\$2.75 per 100 pound sack in leading markets, New York stock \$2.25-\$2.50 in New York City.

Diary Products—Butter markets steady. Supplies light, demand good, but rumors of possible imports partly responsible for unsettled feeling, especially at New York where prices declined 1/2c on the first. Markets are out of line with each other as Chicago is now higher than New York. Closing prices 92 score butter: New York 53c; Chicago 54c; Boston 52c. Cheese markets steady to firm but trading quiet following sharp advances averaging about 1 1/2c on Wisconsin cheese boards Monday. These advances are supported to some extent by decreasing production and fairly good demand even at the high prices. Cheese prices at Wisconsin Primary markets December 1: Twins 26 1/2c; Daisies 27 1/4c; Longhorns 26 1/4c; Square Prints 27 1/2c.

MISCELLANEOUS MARKET QUOTATIONS

BUTTER—Best creamery, in tubs, 45@48c per lb.

EGGS—Fresh, current receipts, 48@50c; fresh, candled and graded, 50@53c; refrigerator firsts, 26@30c per dozen.

APPLES—Greenings, \$1.25@1.50; Spy, \$2@2.50; Jonathan, \$1.75@2.25; other varieties, \$1@1.50 per bushel; western boxes, \$2@3.

POPCORN—4 1/2 @ 5c; Little Buster, 7 1/2 @ 8c per lb.

ONIONS—\$2@2.25 per sack of 100 lbs; Spanish, \$2.15@2.25 per crate.

DRESSED HOGS—90 to 100 lbs, 11@12c; 130 to 160 lbs, 10c; heavy 6@8c per lb.

DRESSED CALVES—Choice, 15@16c; medium, 12@14c; large, 5@10c per lb.

LIVE POULTRY—Best springs, 29c; leghorns, 15c; large fat hens, 21@22c; medium hens, 18c; small hens, 14c; old roosters, 15c; geese, 20c; large ducks, 20c; small ducks, 17@18c; turkeys, 35@40c per lb.

WOOL—Fine and fine medium staple, 52@53c; 1/2 blood staple, 51@53c; 1/2 blood clothing, 48@49c; 3/4 blood wool, 47@48c; 1/2 blood 44@45c; low 1/4 blood, 35@37c; braid, 30@32c.

WOOL MARKET

The slight easiness in fine wools last week was accentuated by the quiet trading recently, the Thanksgiving holiday being a factor, and fine and fine medium wools are quoted 1c off, while the coarser wools, though quiet, maintain a very firm tone at unchanged prices.

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