

MICHIGAN FARMER



DETROIT MICHIGAN, SATURDAY DECEMBER 20TH 1913.

DOLLARS vs. CENTS.

¶ MONEY TALKS, and in a universal language understood by all mankind, but some are vastly more familiar with and proficient in the use of this language than others.

¶ There is an old maxim which illustrates a peculiar fact about money, "A cent held close to the eye will hide a dollar just a little farther away,"—a dollar which might otherwise be seen and secured. There is something in this old maxim. It is the sum of human experience in the language of money. But when we prove it by actual demonstration, we are in the A, B, C class of the language.

¶ There is another old maxim which declares that "A dollar saved is a dollar earned." But no man ever attained a competence by saving all he could of the dollars he earned without investing them wisely. There is a great difference between a mere expenditure and an investment of money. Most of us think of saving only in small figures, generally a matter of cents, and of investment in a larger way, as involving dollars. But we often miss a golden opportunity by "Despising the day of small things," so far as investments are concerned.

¶ Now, Mr. Reader, if you knew that by making a judicious investment of a few cents, you could make—or save—several dollars, perhaps as many dollars as you invested cents, you'd do it at once, wouldn't you? Yes, if you thought there was an even chance that you might make such a profit—or saving—you'd do it. You are too far advanced in the language of money to miss such an opportunity, once it is brought to your attention, and we want to bring just such an opportunity to your attention right now.

¶ There are lots of little "leaks" in the conduct of the average farm, and it doesn't take long to lose a dollar—or many dollars—through any one of them. If you can stop just one of those leaks, it will save dollars pretty fast, faster many times than you can earn them. Or if you can improve your methods of doing things, of growing or marketing your crops, of breeding or feeding your live stock, of conserving and adding to the fertility of your soil, you will be earning dollars faster with your head than you ever could with your hands.

¶ About 70 years ago our predecessors recognized this need of your progenitors, and began the business of collecting, classifying and disseminating helpful knowledge gained from the experience of others, to the farmers of Michigan through the Michigan Farmer. Agricultural experience was of a sterner sort in those days, and of scientific research there was little or none. Since then our agriculture has developed marvelously, and the teachings of experience and applied science are far more necessary to economic success. The Michigan Farmer has grown too—in everything but subscription price, which has grown less—and for the small investment of 50 cents now offers you not only a classified exchange of practical experience and a glossary of the latest scientific knowledge on agricultural problems peculiar to Michigan, but also a variety of direct personal service, which in itself may be made to return dollars for the cents which you invest in a year's subscription.

¶ Whether you are a general farmer, a live stock breeder, a dairyman, a fruit grower or only a poultry keeper, you will find carefully selected scientific knowledge and contributions of practical

experience in each issue, classified for your convenience. And the selections are made with a particular view to your needs, because the Michigan Farmer is what its name implies, a trade paper for Michigan farmers, and the only one of its kind.

¶ No matter what line of farming you follow, you produce products to sell. Heretofore farm papers have confined their efforts to the disseminating of knowledge and the recounting of experiences which would help their readers only in the matter of production. But in modern business the selling end is considered quite as important as the producing end, and farming is no exception in this regard. Recognizing that fact in advance of its contemporaries, the Michigan Farmer last year established its new department of Farm Commerce, which is devoted especially to the dissemination of useful knowledge, and the interchange of practical experiences in the marketing of farm products, both through established channels, direct to consumers and in a co-operative way. This new department, together with the reliable market reports in which we take especial pride, and the crop reports and news items from a large number of other states as well as Michigan, is designed to keep the reader so closely in touch with crop and market conditions, as to save him dollars for the cents which he invests in the Michigan Farmer in the marketing of the products of his farm.

¶ Another new feature recently established in connection with our Practical Science Department is the making of free milk and cream tests for any subscriber. One subscriber recently stated that this proffered personal service was in itself worth dollars to the dairymen of his community for the cents invested in subscriptions to the Michigan Farmer, if they never had any tests made, as it constitutes an insurance of honest tests by buyers of milk and cream who know their patrons can have authentic tests made at the Michigan Farmer Laboratories. It will be worth more dollars to those who avail themselves of the service, or any other practical or scientific service that can be rendered through this department, which is an exclusive Michigan Farmer feature.

¶ There are other personal service features as well. Just submit your special problem and you will get a personal answer from some one with the practical experience or scientific knowledge essential to its correct solution, whether it is of sufficient general interest to warrant publication or not. Isn't all this worth dollars for the cents, (only 50 cents) you will invest in next year's subscription to the Michigan Farmer? Even the free service rendered through our Veterinary department might easily be that.

¶ And we haven't mentioned our magazine section, now made a part of each issue, nor our Woman's Department, or our Grange and Farmers' Clubs columns in which you will be interested if you belong to these organizations. These will prove valuable and appreciated features, especially to the ladies and children, but this is a money talk, not a sentimental discussion. We want you to let a few cents of your money talk for you, and to you during the coming year. Send 50 cents today for the Michigan Farmer, and it will talk each week for 52 weeks—money talks too, every one of them, which will save you dollars for the cents invested.

How I Made My Corn Crop.

By GRANT WINTERS.

While the boy and girl club movement is only just started in Michigan, the members of a few boys' corn clubs previously organized participated in a corn-growing contest this year, and the winner in this contest will go to Washington to participate in the annual meeting of winners in these contests to be held Dec. 11-18. When it was determined that a Michigan boy would participate in this educational trip the Michigan Farmer asked Dr. Mumford, State Leader of Farm Management work in Michigan, to send for publication an account of the record made by the winning boy as soon as same was available, together with a copy of the boy's story on how he grew the crop, which counts 20 points in the score on which prizes are awarded. In a recent communication Dr. Mumford states that Grant Winters, of Antrim county, aged 14 years, has been declared the winner in the Michigan contest. His yield of corn on the acre grown was 87.07 bushels of shelled corn, and his score in the contest was 91.62 out of a possible 100. One other contestant, Roy Winters, also of Antrim county, got a higher yield on his acre (88.54 bushels of shelled corn) but as yield counted only 30 points the winner overcame this handicap on the other points, which were as follows: Best showing of profit on investment, 30 points; best exhibit of 10 ears at county, district or state fair, 20 points; best written history or account entitled, "How I made my corn crop," 20 points. The winner's account of how he made his crop follows, and on his return from Washington an account of his trip, from his own pen, will be published in our Magazine Section:

I SELECTED an acre of land as near the house as I could get, on account of the crows. They are very troublesome. My father planted three acres of corn and they pulled it mostly all up and then he filled in the vacant hills and they pulled it up again and then he had to plant the ground to beans. They bothered mine some. The land had been cropped for some time and it was not very good corn land. It had grown millet the year before.

Preparation of Seed Bed.

I plowed my land about the first of May and dragged it to keep the moisture. I then marked it out and put six tons of manure on my ground in the furrows that I plowed out with the plow and horses. I did not have enough to put broadcast. Of course, this took some more time to do that way. I would not advise you to do this way; if you could get plenty to spread on all the land it would not be so expensive. The soil was plowed back again. This process got it in good shape. I smoothed it down with a float and then I marked it again for planting. I set out stakes so as not to lose the lines.

Fertilizer.

As I have said I used barnyard manure and no commercial fertilizer; I did not have the money to buy it.

Seed.

Seed corn could not be found near my home that would promise good, so I worked a day for my uncle and earned a dollar and sent to Petoskey, a place 50 miles north of my home, and got Murdock's yellow dent, a variety that adapts itself to a change in locality. I did not test. It came shelled and they guaranteed 90 per cent test and it grew good and I had a good stand. But another year I will not have to send away for my seed as I have it saved from the standing corn.

Planting.

I planted May 28. I wanted to plant earlier but the weather was cold and wet. I had worked too hard for good seed corn to plant it and let it rot. I marked my ground in the row and then planted from 16 to 18 inches apart in the row and then three grains in the hill. After it came up and got large enough to tell the best stalk I thinned it to one stalk in a hill. If this is done at the right time you will not have many poor ears in your field. I missed two rows in thinning and I had a lot of nubbins on the two rows.

Cultivation.

As soon as I got it planted I went over it with the spike harrow. I finished at night and I got up at four o'clock in the morning to keep the crows off until I could get it dragged before I went to school. Then after awhile I dragged it again and then I cultivated seven times. First I cultivated deep to loosen up the soil and let the roots get a start and then I did not go so deep but used a sweep cultivator all summer, and went twice in a row three times. Then I hoed it. I learned a lesson when I hoed it the last time. I was trying to get out a little bunch of quack grass and I cut off some brace roots and it blew down and my father showed me my mistake. Then, of course, the corn fell over after the ears got heavy on it. But I learned a lesson and the weeds did not live in my corn field. I cultivated it as long as I could to keep it growing and ripening up. I did not go very close so as not to hurt the roots. I only went once in a row.

Harvesting.

I cut my corn and shocked it up into 66 shocks. I changed work with my father for it was hard work to tie it up good, as I am not a very large boy for my age. The frost did not hurt the fodder. I helped dig potatoes and pick apples and he helped me husk. I have selected several bushels of good seed corn while husking and will have it for sale in the

spring for the farmers who neglected to save their seed corn. I have saved the fodder and sold it to my papa for \$15. I had 110 bushels of corn and I am going to be a corn club boy another year and try not to make so many mistakes.

SAGINAW COUNTY SCHOOL FAIR AND FARM BUREAU EXHIBIT.

Along in the spring of 1913 County School Commissioner Tefft first entertained the idea of having some kind of a school fair or exhibition in the fall. This matter did not take a very definite form at that time, but announcement was made in the schools and through the farm bureau, that an opportunity would be given the school children to exhibit what they grew or made, or what they selected from the crops on their fathers' farms.

Nothing was positively assured for prizes, and all the inducement offered the children to undertake the work was that ribbons would be given for the first and second premiums. It was further stated that if any money was available from gate receipts, or other sources, after expenses were paid, it would be apportioned among the prize winners. As soon as school opened in the fall assurances came from every part of the county that the parents and children were taking great interest in the fair. Accordingly plans were perfected for holding the same at Riverside Park, a beautiful spot on the banks of the Tittabawassee river near Saginaw. The dates chosen were Friday and Saturday, October 3-4.

Those responsible for the success of the fair hoped that two or three thousand people might attend. It was thought that that many might be expected if the weather was fair. To get as many children as possible interested, they were admitted free and adults were charged ten cents. There were no charges for making exhibits. Opportunity was given local merchants and manufacturers to display their goods, and arrangements were made with concerns handling modern school apparatus and sanitary equipment to demonstrate the same. All of these commercial exhibits were interesting and instructive, but two or three merit special mention because they contributed largely to the pleasure of the occasion. One of these was an extensive and very attractive exhibit of dahlias and gladioli by a local firm, and the others were by music dealers of the city, who furnished music.

The attendance and number of entries surpassed all expectation. No fewer than 5,000 people were present on the two days. And if anybody was disappointed because they came they certainly did not make it known. A more wholesomely happy crowd would be hard to find. There was not a single objectionable feature on the grounds. Permission was granted a local vaudeville company to give a clean show in the casino, but there was so much else to see that the company fared very badly indeed, scarcely making expenses. Experience has proven the wisdom of eliminating this feature, since people come to see the fair and are not interested in theaters.

The program of entertainment and races which had been arranged, delighted the people. Songs and folk dances by pupils of some of the country schools, and races by the tots of the kindergarten, all won applause. The present Superintendent of Public Instruction, then Deputy Superintendent, Fred L. Keeler, and Prof. W. H. French, of M. A. C., spoke interestingly on educational topics. They had the close attention of the people. These special exercises did not take a very long time and visitors turned their footsteps in the direction of the buildings which sheltered the agricultural exhibits and the school work. Here they lingered, to examine and ask questions.

Even a general description of this chief part of the fair, which would do justice to all that was to be seen there, would be too lengthy for consideration here, but mention will be made of some features of it which seem of greatest significance. Nearly 500 premiums or honorable mention cards were given. The corn show, which contained a large number of entries, was ably judged by Prof. Grover, of the M. A. C. Other farm products and samples of school work were judged by local people. After corn, potatoes were next in point of quality and quantity, although there was a splendid display of fruit that attracted much attention. The city school gardens furnished a variety of very fine vegetables, and some novelties, among them being cotton plant, flax and home-grown peanuts. In fact, the purpose of this fair as an educational institution was well carried out, as there were a good many unusual and interesting things shown. Maps, drawings, paintings, nature study work, needle work and manual training exhibits of more than usual merit were entered. There was so much in this department and all of it of such excellence, that it was indeed a task for the judges to place the awards fairly. It was no disgrace to lose in such company.

It is impossible to measure the results of this effort. It was undertaken as an experiment to determine the feeling of the people with reference to it. So ready was their response that there now exists no question as to the demand for such an exhibit. Everybody who had anything to do with it agrees that it was a glowing success. Exhibitors, visitors and managers express themselves as well pleased. Assurances from all parts of the county, from people who did not exhibit this year, indicate that probably more than twice as many people will take part in the next fair. Children are taking a greater interest in the agricultural work.

The experience of the first year indicates where improvement can be made. For instance, a complete classification will be made, which will make the task of judging much easier and also help the exhibitors to decide what to enter. The purpose of the fair as an educational institution is kept prominently in mind. Encouragement is given the children to employ their time through the summer in raising something to exhibit. This is accomplished by offering special prizes for an account of their "project." No provision was made at the first school fair for poultry or other farm stock, although a half dozen entries were made. The interest in this department proves the wisdom of making it a prominent feature next year. In fact there are many suggestions which will be carried out, to make the school fair the biggest and best event of the school year.

Saginaw Co. EARL P. ROBINSON.

SOIL AND FERTILIZER QUESTIONS.

Applying Lime in Winter.

Have just finished plowing six acres, which I will seed to alfalfa next spring. Have tested the soil and find that it needs lime. One of my neighbors and myself are thinking of getting a carload of lime. We want to get the lime and draw it home this winter. Would there be any waste by drawing and spreading on ground in winter where it has been fall-plowed? If not practical to spread in winter would like to haul and pile in field. Which would be the better way? How much limestone would you advise putting on per acre?

Mason Co.

M. D. Y.

As long as your land is fall-plowed it would be perfectly safe to draw the lime and spread it on the land. It would hardly be advisable to draw the lime and spread it on the land and then plow it under, because the lime leaches down into the sub-soil soon enough without plowing it down. Put the lime on the surface. But unless the land should wash this winter so that some of the soil and lime would be washed off from the field you will lose nothing by applying it. It will be just as well to apply it during the winter time as it would be to wait until spring.

How Much Lime to Apply.

The amount of lime to apply for alfalfa is something that has not yet been determined, and, of course, it cannot be determined with any degree of accuracy because one does not know how badly the soils need lime. Some soils don't need any lime at all. They have a clay sub-soil that is full of lime, and there is no need of applying more. On the other hand, there are other soils that are deficient in lime, they are acid in reaction. Now alfalfa needs quite a little bit of lime as a fertilizer; besides, it needs an alkaline soil; that is, the soil should have an alkaline reaction instead of an acid re-

action. If your soil is acid you should not only apply lime enough to correct the acidity but leave some in the ground for future use of the plant and for the correction of the acidity as it is produced along from the decaying of organic matter. Possibly 500 lbs. of finely ground limestone to the acre would correct the acidity. It might take 1,000 lbs. Then 500 lbs. more might do for the alfalfa for a year or two. It depends on how long you intend to leave this alfalfa. It undoubtedly would pay you to put on at least a ton of ground limestone per acre, and if you intend to leave the alfalfa down several years probably while you are at it you had better put on two tons per acre. Governor Hoard advises four and five tons per acre, and Joe Wing says that there is no danger of getting on any too much.

Mix the Fertilizer with the Soil.

We see in your issue of the 22nd that you advise J. W. W., of Lenawee county, to sow his fertilizer two to three weeks before he plants his corn; now do you advise using a fertilizer distributor or a fertilizer grain drill and put the fertilizer in the ground?

Washtenaw Co.

SUBSCRIBER.

If the fertilizer is applied with a fertilizer distributor on top of the ground the land should be harrowed soon afterwards to mix the fertilizer with the soil. Of course, if it is put on with a fertilizer drill it is mixed with the soil at once. But the idea in all cases where the fertilizer is applied several days or a few weeks before the crop is planted, it is put on and then the field is fitted, that is, harrowed and cultivated and prepared for the crop. In this way the fertilizer is distributed all through the soil so that the plants can get it when they need it. In many instances we do not get results with fertilizer simply because of the poor distribution in the soil. Even and thorough distribution is one of the prime factors in getting results with commercial fertilizer. Applying it so that it can be dissolved in the soil moisture is very important, because plants only get their food out of a solution; that is, the food must be first dissolved in the soil moisture before the plants can use it. In other words, the plants need soup. Probably plants never have indigestion, for it is said that if animals would chew their food until it is made into soup in the mouth before it is swallowed there would never be any such thing as indigestion. Undoubtedly most Americans do not give plenty of time to eating; they are in too big a hurry.

Value of Muck as a Manure for Sandy Land.

I have considerable muck land which I am draining with open ditches. My up land is a sandy loam. I am drawing the muck from ditch banks onto up land (after it has been plowed) at the rate of 40 loads per acre, spreading it as it is drawn. In spring will disk several times and plant to corn. What is the value of a load of muck as a fertilizer as compared to a load of barnyard manure, and what kind of commercial fertilizer should I use? In your opinion will the above be a profitable investment? Would like to hear from other parties who have used muck on sandy soil.

Mecosta Co.

P. D. Q.

Ordinary muck contains about as much nitrogen as barnyard manure, but the nitrogen is very inert in form. Most all muck has acid reaction. It has been water-soaked so long that the nitrogen is in a very unavailable form and it is very low in phosphoric acid and potash. Barnyard manure contains millions of bacteria which when applied are added to the soil, and they at once go to work to change the organic matter of the soil into such a form that the plants can use it. Muck has no bacteria to speak of, and if it has bacteria they certainly haven't the properties of converting organic matter into available plant form. Now it would be extremely difficult to say what the value of this muck would be compared to barnyard manure. Possibly it is worth half as much as barnyard manure, yet I doubt it. Yet there is no question but what if this muck were mixed with sandy soil it would improve the mechanical condition of the sandy soil, and of course it does add some available plant food. This muck if it had been weathered, frozen and thawed, subject to the action of the elements for six months or a year, would be more available, and by mixing it with the sand of course it will have this action and the nitrogen will become available. If it is necessary to haul away the muck that is thrown out of the open drain to get it out of the way, undoubtedly it will pay to put it on this sandy land. On the other hand, if it is thrown back and leveled off, it might be worth more on the muck land than it would in the sand. It is a question whether it would pay to haul it and distribute it over the sand.

COLON C. LILLIE.

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VARIATION OF MILK TEST.

Will a cow test more when fed on dry feed than she will when given silage, or is there no change in test?

Lapeer Co. J. C. F.

A change of feed makes no difference in the per cent of butter-fat which the cow puts into her milk. The richness of the milk is the individuality of the cow and you can't change it by changing the feed. If this could be done then people would feed Holstein cows a ration so that they would give milk just as rich as Jerseys or Guernseys. Different individuals of the same breed of cows give milk of different richness. For instance, two Jersey cows standing side by side in the same barn and fed the same ration, cared for in exactly the same way, give different tests. One of them will give 4.2 per cent milk, while the other will give 6.5 per cent milk, so that feed, speaking generally, has nothing to do with the test. It might be that if you would change the feed from dry feed to corn silage all at once that temporarily there would be a change and the cow would give either richer or poorer milk, possibly poorer milk, but if the change is made gradually there would be no variation in the milk test. But when the cow is used to the corn silage ration and gets back to her limit, she should give the same per cent of butter-fat that she did ordinarily.

CULL BEANS FOR COWS AND HOGS.

I can buy cull beans, kiln-dried last year's beans or this year's stock, for \$15 per ton. I have been using some and I mix two bags of oats to one of beans. What would you add to that for milch cows? Have silage, dry cornstalks, some bean straw and mixed hay to feed. Won't not that be good feed for pigs to mix some corn and grind? I can get brewers' grains and buttermilk to mix with it.

St. Clair Co. M. D. B.

If you can get your cows to eat as much of this mixture of beans and oats as they require I don't think you will need any other kind of grain at all. I don't think you can better this ration so far as balancing up a ration for your cows is concerned. Usually cows don't like bean meal very well and they refuse to eat any considerable quantity of it, but if you have got your cows so that they will eat the bean meal, and it is largely a matter of habit more than anything else, I am satisfied that they will do well on it. There isn't any reason why cows should not relish bean meal just as well as pea meal. The only reason is because they have never had any of it to eat and it is a new thing. If you can gradually get them to like bean meal and will mix two bags of oats to one bag of beans and grind them I don't believe you can get any better grain feed. It isn't necessary to buy any cottonseed meal or gluten feed or any other kind of feed to balance this ration. With silage, cornstalks, and mixed hay to feed for roughage, and this grain, you ought to get as good results as you could with any ration that you could compound. Good dairy cows ought to have three-fourths of a pound, or perhaps a pound, of this grain mixture for every pound of butter-fat that they produce in a week. For instance, if a cow produced 10 lbs. of butter-fat in a week then she ought to have 10 lbs. of grain mixture a day, and this, divided into two feeds, feeding her five pounds in the morning and five pounds at night. If they only give a very little milk and produce only a small amount of butter-fat then feed grain accordingly.

Beans are a good feed for growing hogs but the trouble of it is, the average hog won't eat bean meal or raw beans. The beans must be cooked and then they will eat them and relish them. This may be largely a matter of habit with the pigs also. Perhaps you can get your pigs so that they will eat raw bean meal. I tried bean meal to feed pigs last winter. They will pick out every other portion of the grain in the ration and leave the bean meal in the trough. They didn't seem to like it at all—they wouldn't eat it. Perhaps if we had starved them to it we might have succeeded. But I didn't like to do this because I wanted them to gain. But if you had a feed boiler so that you could boil these beans thoroughly and then mix your other grain with them you wouldn't need any other protein. You wouldn't have to buy and brewers' grains

or gluten feed or anything of that sort because there is a sufficient amount of protein in the beans to make growth with the hogs. However, if you can get buttermilk to mix with the boiled beans and the other grains you would be fortunate indeed. There is nothing better than corn to feed with buttermilk and beans. Such a compound makes a splendid food for hogs. You can usually buy buttermilk at a price that makes a cheap food, and hogs will do better with buttermilk or skim-milk in the slop than they will without. It is natural food for them.

SWEET CORN FOR SILAGE.

I had a talk with a man from a dairy neighborhood and he advised sweet corn, Country Gentleman, or some other large sweet corn, for silage. As it is all sweet to the ground and other corn has a large pithy stock, much bulk and no substance, his arguments seems reasonable. He says he can grow four times as much to the acre and therefore keep four times as many cows. He has two silos, one for corn and one for alfalfa, and feeds corn morning and night and alfalfa at noon, and next week alfalfa morning and night and corn at noon, and does not feed grain.

Charlevoix Co. J. J.

My firm opinion is that your friend from a dairy neighborhood is exaggerating the virtues of sweet corn for silage. In the first place, I never could raise as many tons of sweet corn to the acre as I could dent corn. I have tried it several times. I never could get as good a germination with sweet corn seed as I could with dent corn, and therefore could not get as good a stand, and I never could get as vigorous a growth of sweet corn as I could of dent corn. Years ago I made silage out of sweet corn and I didn't like it as well, nor the cows didn't like it as well, as the silage made out of dent corn. There is so much sugar in sweet corn that when you ensile it there is so much acid generated by the fermentation that you have got a sour silage. It is all right and they will do pretty well on it, but they don't like it as well as they do nice pure dent corn silage. State experiment stations have had this same experience with silage made from sweet corn. You can put it down as a fact, that sweet corn doesn't make as high-grade silage as good dent corn will. You can put it down as another fact that you can't, on the average, raise as many tons of silage to the acre with sweet corn as you can with dent corn.

Alfalfa and corn silage will make a balanced ration so far as food nutrients are concerned, but you can't get as good results from an entirely bulky ration like this as you can where you feed less of the bulk and a little grain. Animals will do better if a part of their ration is a concentrated ration.

A BALANCED RATION WITHOUT CLOVER HAY.

I am a reader of the Michigan Farmer, and would like your advice in regard to balanced ration for milch cows. I have small Jersey cows and am feeding good ripe corn silage, all they will eat, and ground oats and corn, three bags of oats to one of shelled corn, and 100 lbs. of bran. I feed cornstalks for roughage. Is cob meal of any value for feeding stock?

Lenawee Co. G. S.

If you had clover or alfalfa hay so that you could feed it once a day with the ration you mention, I would say that you had almost a perfect ration. Without either of these feeds I should judge that the ration is a little bit deficient in protein. Just simply cornstalks for roughage is really not enough variety for cows to do their best. Cornstalks are a good feed and ought to be used, of course, but where you have nothing else for roughage only cornstalks, they get rather monotonous to the cow. She don't like them so well as she would if you had cornstalks once a day and clover hay once a day. It is a good deal like asking yourself to eat potatoes and salt pork three times a day. You could do it and do well upon it, but it is not as appetizing as where you have a variety. But a grain ration composed of three bags of oats and one bag of shelled corn and 100 lbs. of wheat bran is a good grain ration. It is hard to beat. If you only had clover hay once a day I would say that you could not improve this ration. But without the clover hay you need more protein and I would advise the purchase of either cottonseed meal, gluten feed, oil meal, or brewers' grain and feed a slight amount of this, say a pound a day to each cow. If you can get cull beans and coax your cows to eat bean meal you would have a cheaper ration than one containing the products above mentioned. If the cows will eat the beans, and I think they will after a little coaxing, they will do well upon them. They are a good food.

There is practically no feeding value in

corn cob meal. If you are going to feed corn alone as a grain ration, I should say that it would pay to grind the cob and all because it will give more bulk to the grain. Corn meal alone is a heavy, soggy grain. It is not bulky enough. There isn't bulk enough to it for good feeding. It ought to be mixed with bran or with oats, but if you have no oats or bran and want to feed the corn alone then I think it would pay to grind cob and all because it will lighten up the food and will keep it from setting in masses in the animal's stomach, and I think you will get better digestion and assimilation and get more out of the corn, but as long as you have oats and bran to feed with the corn meal I should say that the corn cob would be absolutely worthless in the food.

WEIGHT OF SILAGE—WHAT GRAIN TO BUY.

About how many tons of silage is there in our silo? Its diameter is ten feet and at the time of filling, about the middle of September it contained about 28 ft. of silage. It has settled three or four feet. We have not opened the silo yet and expect of course, that some is spoiled. Our corn got quite dry before we got our silo up. We had a good stream of water running in the blower continually while filling, also two and part of the time three men in the silo with distributor. Is 40 or 50 lbs. of silage per day a good liberal amount for a cow? We have clover hay, bean fodder and wheat straw for roughage and as we have got to buy grain, what would you advise with this combination? Most of our neighbors use cottonseed meal at \$32 per ton.

Allegan Co. L. L. N.

On the average it is figured that a cubic foot of silage will weigh 40 lbs. A cubic foot will weigh more in a large silo than in a small one. For instance, in a ten-foot silo you can't get the ensilage to settle as well as you can in a larger one, there is proportionally more friction on the sides. But figuring the silage 20 feet deep in this silo and figuring 40 lbs. to the cubic foot there would be about 30 or 35 tons of silage. If it is ten feet in diameter there would be about 85 square feet in the surface and this, multiplied by the depth of 20 would give 1,660 cubic feet of silage, and 40 lbs. to the cubic foot would make 66,400 lbs., or between 30 and 35 tons. If you had covered the top of the silage after it was smoothed off, with about a half-inch deep of common salt you would not have had any loss at all.

Undoubtedly your neighbors are right in feeding cottonseed meal in connection with the corn silage and the ordinary roughage. There is no source of digestible protein as cheap as that contained in cottonseed meal. If you don't feed too much cottonseed meal it is a splendid food. I have said a great many times that I wouldn't want to feed over two pounds of cottonseed meal per day per cow, but I know that down south they feed much more than this and seem to have no injurious results. From my experience and observation I would stick to the rule to feed two pounds of cottonseed meal a day and then if you want to add more grain, feed wheat bran, and if you have got good dairy cows you can feed enough grain in this proportion so that each cow is getting three-fourths of a pound of grain to every pound of butter-fat produced in a week, or a pound of grain to every three or four pounds of milk produced in a day.

COWS ABORTING.

Have two cows that have aborted. Would you advise me to sell them or can they be cured?

Kent Co. G. H. T.

After cows have aborted two or three times they become immune and will not abort again. Sometimes, however, they fail to breed. One is not sure from two cases of abortion that you have contagious abortion, but it is suspicious. Many cows abort from various causes, others have contagious abortion. If you have contagious abortion the only remedy I know of is disinfection thoroughly and persistently. Disinfect the cows every day, the stables and everything. Irrigate the cows after abortion, with permanganate of potash, etc. Consult your local veterinarian.

It is an unfortunate fact that so many cattle feeders have been marketing their holdings much too soon, many shipments having been made long before the cattle were properly finished. In many cases the cattle should have been kept on feed fully 60 days longer. Fortunately for stockmen, the autumn was unusually mild and pleasant, and this went a long way in counteracting the dearthness of feed, as the cattle required much less corn than in other years, so that a big saving of corn resulted. Where stockmen have the corn, and also have hogs to follow the cattle, they should make their cattle at least reasonably fat before marketing them.

Live Stock.

THE INTERNATIONAL.

The Grand Champion Steer.

The grand champion fat steer at this year's International was a grade Angus of wonderful quality and finish, as will be readily seen from the accompanying cut. He was bred by his exhibitor, J. D. McGregor, of Brandon, Manitoba, who also won last year's grand championship with a half-brother of this steer, as well as the reserve championship with this steer. Glencarnock Victor 2nd was sired by Golden Gleam and out of the same dam as Glencarnock Victor, last year's champion, his granddam being an ordinary red nurse cow. Three facts are worthy of special comment in connection with the victory of this steer. First among these is that he is a winner that "came back", and with high honors. Second, he was finished without the use of corn, being fattened on feeds grown in Northwestern Canada, barley and oats being the principal grains used. Third, he was fed by a 17-year-old boy, Harry Bowman, who had cared for him since he was a calf and whom the steer's owner would not permit to be deprived of the privilege of caring for him to the finish. In the work of feeding the boy was advised by a competent herdsman but was himself largely responsible for the finish in which the steer was shown. Barley, cooked or ground with oats, was the principal grain ration fed, with a little ground flax or oil meal added. Turnips, green oats and successive sowings of pasture with sheaf oats and barley and prairie hay as the roughage in the ration made up the feeds which contributed to the carrying over and finishing of this great steer. While entered as a senior yearling Glencarnock Victor was two years old at the date of the show, and tipped the scales at 1,470 lbs. He was so pre-eminently good that the Scotch judge, J. R. Campbell, deliberated but a few minutes as between the champions by ages before making the award.

Glencarnock Victor 2nd was not sold at auction as is the usual custom with International winners. Instead he will be taken back to Canada and used for educational purposes on a demonstration train, after which he will be slaughtered and his carcass used at a great barbecue which will be given at Brandon by the successful exhibitor.

The reserve champion was Bright Boy, a fine Hereford calf, bred and fed by Jas. Price, of LaCrosse, Wisconsin.

The Breeding Classes.

This department of the show was a magnificent spectacle, with a larger number of entries than usual, and of a quality and finish which afforded patrons a liberal education in the matter of type and finish desirable in the several breeds.

In the cattle exhibits the Shorthorns were, as usual, the most numerous. This breed also furnished the ringside sensation of the show in the great bull, Ringmaster, exhibited by White & Smith, of Minnesota, who again defeated all comers for the grand championship of the breed, this being the fourth purple ribbon which he has won in open competition at the International. Although now past five years old, he "came back" in the pink of condition and was again an easy winner. The exhibits of dairy Shorthorns also attracted much attention and with the organization of a national breed association by the patrons of this type they seem bound to become a more prominent factor in future shows of this deservedly popular breed.

The Angus breed was second in point of numbers and the entries were of such uniformly good quality as to attract universal attention.

Herefords came next with a large and attractive exhibit, and there was a good representation of Galloways, Polled Durhams and Red Polls.

The exhibit of breeding sheep was not large in some departments, but the popular mutton breeds were much in evidence and the exhibits were fully up to the high International standard of quality.

The breeding swine classes were well filled, especially by the lard and general purpose breeds, with a good representation of the bacon breeds.

The Michigan exhibits showed up well in all these departments and their failure to land championship honors was no discredit in the company in which they appeared.

The Horse Show was easily the best

ever put up in America, in the opinion of competent judges. The Percherons led in point of number as usual, with a large and about even representation of Clydes, Shires and Belgians, and several stables of Suffolks.

NATIONAL BREED MEETINGS HELD AT THE INTERNATIONAL.

American Berkshire Association.

The annual meeting was held on Tuesday, December 2, at the Stock Yards Inn. Dr. V. Hawkins, of Fawn Grove, Pa., and Wyman Lovejoy, of Roscoe, Ill., were elected as directors. The officers will remain the same as last year until the first directors' meeting, at which all routine business will be transacted. An increase of about 20 per cent over 1912 has occurred in the business of the Association.

Continental Dorset Club.

The annual meeting was held in the Record Building, at the Stock Yards, on Tuesday evening, December 2. Officers elected for the ensuing year were as follows: President, Harry Wheeler, Elburn, Ill.; vice-president, H. H. Cherry, Xenia, Ohio; second vice-president, S. S. Schaeffer, Newcastle, Pa.; secretary-treasurer, J. E. Wing, Mechanicsburg, Ohio. Hereafter flock books will be sold at cost in-

sion of ways and means for improving the organization. Officers elected were: President, Geo. R. Crouch, Lafayette, Ind.; vice-president, Eli Sprunger, Saginaw, Mich.; secretary-treasurer, J. D. Connor, Jr., Wabash, Ind. Directors, A. L. Wilson, Creston, Ohio, and Henry Wolf, Wabash, Ind. Treasurer's report showed a balance of \$6,754 on hand. National Lincoln Sheep Breeders' Association.

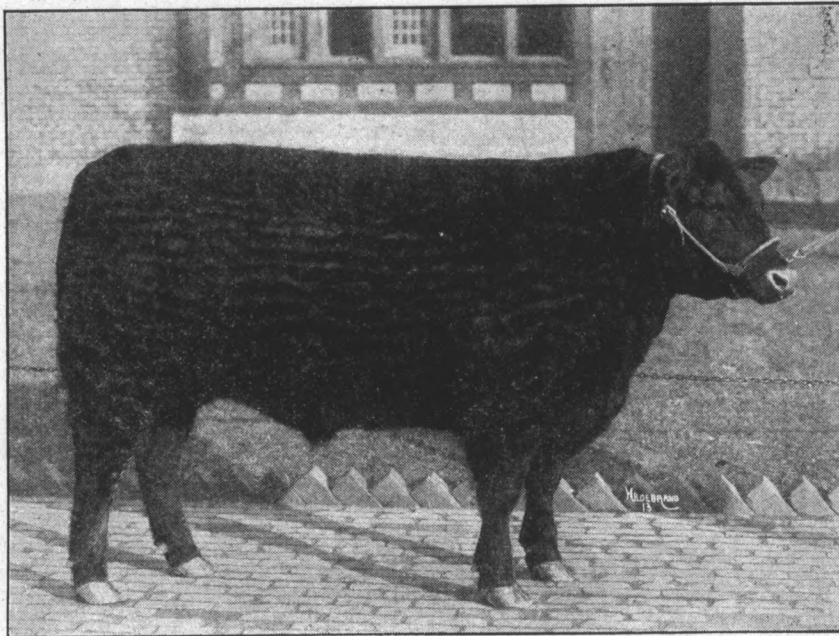
There was a large attendance of members at the annual meeting held at the Stock Yards, Wednesday, December 3. Following a general discussion of the future prospects, the following officers were elected: President, F. H. Niel, Lucan, Ont.; vice-president, David Coupar, Marlette, Mich.; secretary-treasurer, Bert Smith, Charlotte, Mich. Directors, J. T. Lethbridge, Alliance, Ont., and C. J. Fielder, De Graff, Ohio.

American Rambouillet Sheep Breeders' Association.

At the annual meeting held Wednesday evening, December 3, many breeders indulged in a general discussion and elected officers as follows: President, R. A. Jackson, Dayton, Wash.; vice-president, F. S. King, Laramie, Wyo.; secretary, Dwight Lincoln, Milford Centre, Ohio; treasurer, E. L. Davis, Flint, Mich. Directors, F. R. Cook, Belle Fourche, South Dakota; John E. Webb, Southport, Ind., and L. W. Shaw, Pattersburg, Ohio.

White Swine Breeders' Congress of America.

A love feast at which the several Chester White record associations participated was held following the meeting of the



Glencarnock Victor 2nd., Grand Champion Fat Steer at the International.

stead of giving them to members. An increase of 235 members over 1912 was reported.

Percheron Society of America.

At the annual meeting President Nave stated that the membership had increased 709 during the year. Present membership being 5,540. A total of 9,754 certificates of pedigree were recorded during the fiscal year. This number is 378 less than last year, but surpasses all previous years with the one exception. Of the animals recorded, 7,819 were American bred and 1,395 imported. Transfers numbering 6,452 were issued during the year.

American Aberdeen-Angus Association.

Nearly 100 breeders were present at the Thirtieth Annual Meeting held at Chicago International week. It developed at this meeting that there is considerable interest in the making of a dairy class for Angus cattle. There was a lively discussion on the subject, but no action was taken. Directors elected were: L. H. Lamar, Storm Lake, Ia.; Rev. J. C. White, Perry, Ia., and Wm. W. Wilson, Muncie, Ind. Officers elected were, John D. Evans, president, Sugar Grove, Ill.; Chas. Gray, secretary, Stock Yards, Chicago; C. J. Marlin, treasurer, Jefferson, Iowa.

American Galloway Breeders' Association.

An optimistic discussion of the breed occurred at the annual meeting held on Wednesday evening, December 3, by the large attendance of members present. Three directors were elected as follows: V. W. Straub, Avoca, Nebr.; O. H. Swigert, South Bend, Ind., and J. F. Meserve, Ellis, Kans. The officers will be chosen at a directors' meeting to be held later.

American Belgian Horse Association.

The American Association, importers and breeders of Belgian horses, was held Wednesday evening, December 3. A feature of the meeting was a lively discus-

Congress, the purpose being to better the breed and bring about harmony among breeders. A universal score card which will doubtless be adopted by all the Chester White Associations was arranged by the more than 200 breeders in attendance. Officers elected were: I. T. Cummings, Xenia, Ohio, president; C. R. Doty, Charleston, Ill., vice-president; F. J. Wade, Weston, Ohio, secretary; J. N. Bradshaw, Lamar, Ill., treasurer.

American Hampshire Sheep Breeders' Association.

Nothing of importance except election of officers occurred at the annual meeting December 3. The breeders present were enthusiastic at the results of the year. The treasurer's report showed a balance of \$2,378 on hand. Officers elected were: President, F. J. Hagenbarth, Spencer, Idaho; vice-president, W. C. Cavan, Chicago, Ill.; second vice-president, E. M. Benham, Canandaigua, N. Y.; third vice-president, John Nash, Tipton, Ind.; secretary-treasurer, C. A. Tyler, Coldwater, Mich.

American Shorthorn Breeders' Association.

At the annual meeting held at the Congress Hotel, at Chicago, Wednesday evening, December 3, two directors were re-elected as follows: James Brown, of Chicago, Ill., and J. H. Prather, Williamsville, Ill. Frank Schofield, of Hillsboro, Texas, was the new member elected. Officers will be chosen by the directors at a future meeting. Reports of the condition of the Association were most gratifying, showing a substantial increase in business during the last year, while the Association is in better financial condition than ever before.

O. I. C. Breeders' Association.

A brief meeting of this association resulted in the choice of the following officers. (Continued on page 571).



To get all the strength and power out of a horse, he must be able to plant his feet firmly and without fear.

Red Tip Calks

will hold a horse up on any street however slippery; they give him added strength, courage and self reliance. They are so made that they wear sharper with use and can be renewed when necessary, in a few minutes.

No horse owner can afford to be without them. Get

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THE BEST LINIMENT

OR PAIN KILLER FOR THE HUMAN BODY

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IT HAS NO EQUAL

For the Human Body
—It is penetrating, soothing and healing, and for all Old Sores, Bruises, or Wounds, Felons, Exterior Cancers, Boils, Corns and Bunions, CAUSTIC BALSAM has no equal as a Liniment.

We would say to all who buy it that it does not contain a particle of poisonous substance and therefore no harm can result from its external use. Persistent, thorough use will cure many old or chronic ailments and it can be used on any case that requires an outward application with perfect safety.

A Perfectly Safe and Reliable Remedy for
Sore Throat
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Sore Lungs
Rheumatism
and
all Stiff Joints

REMOVES THE SORENESS—STRENGTHENS MUSCLES
Cornhill, Tex.—"One bottle Caustic Balsam did my rheumatism more good than \$120.00 paid in doctor's bills."
OTTO A. BEYER.
Price \$1.50 per bottle. Sold by druggists, or sent by express prepaid. Write for Booklet R.
The LAWRENCE-WILLIAMS COMPANY, Cleveland, O.



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Grant, Iowa, March 8, 1913.
Troy Chemical Co., Binghamton, N. Y.
Your excellent book pleased us so much that I am asking you to send us 8 more copies for our Agricultural class. Thanks.
A. W. PHILLIPS, Prin.
Univ. of California, Berkeley, March 11, 1913.
Troy Chemical Co., Binghamton, N. Y.: I wish to thank you for the Save-The-Horse Book, which contains many valuable suggestions and good advice for horse owners.
Very truly yours, F. L. GRIFFIN.

WE ORIGINATED the plan of treating horses Under Signed Contract to Return Money if Remedy fails. You risk nothing by writing; it will cost you nothing for advice and there will be no string to it.

OUR LATEST Save-The-Horse BOOK is our 18 Years' Discoveries—Treating Every Kind Ringbone—Thorpin—SPAVIN—and ALL—Shoulder, Knee, Ankle, Hoof and Tendon Disease—Tells How to Test for Spavin; how to locate and treat 58 forms of LAMENESS—Illustrated.

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ELECTRIC Steel Wheels

Save YOUR Back

Don't rut roads or fields. Send today for free illustrated catalog of wheels and wagons.
Electric Wheel Co., 35 Elm St., Quincy, Ill.

Best Conditioner
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Death to Heaves

"Guaranteed or Money Back."
Coughs, Distemper, Indigestion.
NEWTON'S Large for Heaves.
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ICE PLOWS

6 sizes, prices \$10.72 to \$16.90.
every plow warranted. Sent on trial. Also tools. Catalog.
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Poultry and Bees.

AN ESSENTIAL IN POULTRY RAISING.

We are given to believe that poultry culture is a complex and precarious business, and to the beginner, the reading of all the diseases and troubles fowls are heir to would cause discouragement, if it were not for the bolstered tales of success. When we look at a machine which seems almost human in its work, we wonder at its complexity, but when we study it in detail, we find that it is composed of simple parts, with each part having a simple thing to do. So with poultry culture, when we analyze it we find it composed of simple things. With these simple things given attention, poultry raising becomes a well managed and successful affair. It is a matter of attention given these simple component parts which makes the business complex or not.

One of the main things which needs attention, especially at this time of the year, is the matter of dryness. If everything else is given attention and this matter neglected, success with poultry will be uphill business. The reason for the importance of this matter of dampness and dryness is not often readily seen. Many of us have the idea that the coop should be dry, but we do not know why, and because of this we are not as particular to keep conditions with reference to this matter in as good shape as we might.

There are few places where conditions are as favorable for the development of bacteria, the cause of disease, as the chicken coop. There is always plenty of dirt in a coop, no matter how clean it is kept. The excrements which are easily productive of bacteria are found in the litter in which the food is thrown. It is therefore very essential that we keep conditions so that they are unfavorable for the development of the germs. Two things are essential for the development of bacteria, moisture and heat. If either of these is lacking, the bacteria cannot thrive. Depending on the kind of germ, some develop with a minimum of heat, and others will start with a small amount of moisture.

The matter of heat cannot be controlled very well; even if it could be, the temperature would have to be kept quite low, in fact, too low for the well-being of the fowls, to prevent the growth of the germ. The matter of moisture, however, can be controlled, and the health and comfort of the fowl be improved by its control. There are various conditions which will cause dampness in the chicken coop. One of the most common ones at this time of the year is the closed coop in which there is little ventilation. The lack of ventilation makes it impossible for the moisture exuded from the fowls to escape, therefore it condenses and freezes on the walls of the coop. Conditions inside such coops are so cold and damp that the body is fairly chilled to the bone, and the vitality of the fowl is lowered in the endeavor to keep warm. These conditions are also favorable for the development of bacteria, especially when the weather moderates a little. The writer has often remedied such conditions by knocking out some of the window lights and putting in a muslin curtain. The damper the coop, the greater the amount of space for muslin windows necessary to rectify the conditions. It is surprising the great difference such a change will make. A great improvement in the condition of the fowls will be noticed, and often this change alone will start the hens laying. Care should be taken to put muslin in the windows on only one side of the coop, otherwise there may be a draught through it. It is advisable to have three sides to the coop tight and to get all the ventilation from the fourth, the south side being preferable.

Floors are often a source of dampness. When this is the case, it is hard to keep the litter dry, and it is very important to have it so to keep the fowls in health. The floors should have proper insulation from the dampness of the ground. Cinders or sand make good foundations for floors on this account. Many poultrymen have set their coops on posts a few feet from the ground to keep the floor dry. The constant circulation of air under the coop makes this possible. The laying of some good roofing paper on the floor or between a double floor will keep draughts from coming through. To make it still better, the overlaps should be cemented,

especially if the roofing paper is put on top of the floor. Even if on top of the floor, this paper will last for a very long time, as there is very little wear on it when it is covered with litter.

Where attention is given to keep conditions dry in the coop it is not as necessary to clean out the litter as often as ordinarily, as the droppings will dry quickly and dry droppings are not a very great source of trouble. Under dry conditions the fowls will be able to withstand the cold more readily, because, as everybody knows, damp cold is more penetrating than dry cold, even with the thermometer higher in case of the former. This matter should not be overlooked if good results are to be obtained. It is well to remember that the object to be attained is to get ventilation without draught, and warmth without moisture.

THE BEEKEEPERS' CONVENTION.

From the humming and buzzing that was going on at the convention rooms in the Y. M. C. A. building in Detroit, it was apparent that the members of the Michigan Affiliated Beekeepers' Association were deeply interested in discussions of the various phases of the subject dear to their heart. Like the bees, they went right at it in a spirited but good natured way.

This meeting, which was held December 10-11, was opened by a very excellent address by the president. He reviewed some of the work of last year, especially with what was accomplished in a legislative way. The new foul brood law which was passed recently has been a matter of good feeling among the bee men. The president, Mr. Morse, also strongly urged that the association work for a larger membership. He said that more of the 16,000 beekeepers of the state ought to have active interest in the association. The report of the secretary which followed, showed that the society was in a good financial condition but it also showed that the society could be a power for greater good if the membership was larger. It is to the advantage of every man to belong to associations of his occupation; to this the beekeeper is no exception.

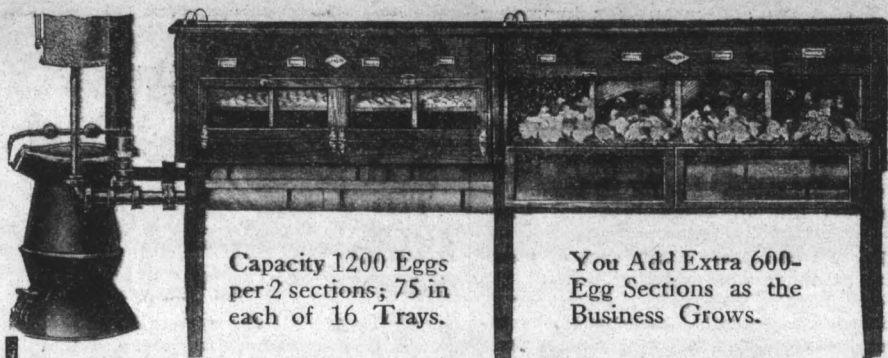
The first talk given was by Leonard Griggs, of Flint, Mich. His subject was the broad one of the production and sale of honey, and during his talk he gave many items of value. Among the things he suggested was the leaving of space between the frames and the walls of the hives. To accomplish this he puts nine frames into a ten-frame hive, using division boards in place of the missing frame. This will cause the bees to go to the supers from the edges instead of crowding through the middle as usual.

Prof. R. H. Pettit, of the Agricultural College, gave a talk and showed slides on the relation of the beekeeper to the fruit grower. He spoke of the value of the bee to the fruit grower in its work of assisting pollination and also mentioned the bad effect the spraying of fruit trees while in blossom had on the bees. The slides showed the bees working on fruit and other blossoms.

(Continued next week.)

FOR NEXT WEEK.

"The Hen's Place on the Farm," the first of a series of ten articles on poultry culture, will appear in next week's issue of the Michigan Farmer.



Capacity 1200 Eggs
per 2 sections; 75 in
each of 16 Trays.

You Add Extra 600-
Egg Sections as the
Business Grows.

\$1056 Profit in 126 Days in a 6600-Egg Machine; \$1584 in 189 Days

By Hatching Eggs for Other People
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Add to that the extra profit in hatching stronger, sturdier chicks to sell or to raise yourself, and you will understand why some Poultry Raising Farmers make more money from Poultry than they do from their Fruits, Grain, Hay or Dairy.

The Government reports show that poultry and eggs sell for more money than the wheat crop does. Every farmer cannot be a big grower of wheat but he can be a big producer of poultry and eggs and Baby Chicks with a

CANDEE INCUBATOR Hot Water Sectional—Automatic

All that is needed is a clean cellar or basement. Each outfit comes in sections all built so that any handy man can set it up in a few hours. There is no danger from fire because the heater burns coal—safe as a kitchen range. Oil lamps are done away with. It takes five minutes to put coal on night and morning, at a cost of a few cents a day. Each 300-egg compartment is a separate machine with its own automatic thermostat regulator. Besides, there is an automatic regulator on the heater. This Uniform Hot Water Heat hatches stronger, sturdier chicks. It does not destroy oxygen as lamp heat does.

Any boy or girl or farmer's wife who has an hour or so a day can run the entire system. You can start with two sections and add extra sections as your business grows.

There are thousands of Candee Incubators, ranging from 1200-Egg capacity, to 20,400-egg capacity, in use in this country. Nearly all of these systems hatch eggs for other people. There is room in every farming community for a custom hatchery. There is big demand for Baby Chicks.

If you are the one who is interested, write us. We will send you a book that tells you how to start a Custom Hatchery Business. Write today. You can start early with this outfit.

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YOUR MONEY WILL NET 5%

if invested with this Society. Interest paid semi-annually. Let us have your name and address and we will tell you of the advantages offered by this Society which has been doing business for over twenty years.

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BARRED ROCK COCKERELS—\$2.00 each, two for \$3.00, pullets \$1.00 each.
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BARRED ROCK COCKERELS—\$3 each, two for \$5. Large, farm raised. Winners for 10 years. J. A. Barnum, Union City, Mich.

Barred Rock Cockerels, Hens and Pullets.
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WHITE ROCKS—Cooks and cockerels, Halbach strain, big bone and vigorous. Free range, \$2 to \$5 each. F. J. GROAT, East Lansing, Mich.

S. C. WHITE LEGHORN COCKERELS
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PURE BRED BUFF ROCK COCKERELS—For Sale. Price \$1.25. O. W. LEMM, Montague, Mich.

Practical Science.

FATE OF TUBERCLE BACILLI OUTSIDE THE ANIMAL BODY.

Biology of the Tubercle Bacillus.

1. There are four recognized types of tubercle bacilli; human, bovine, avian, and a type that affects cold-blooded animals. Only the first two types have any important part in the infection of man.

2. The beaded appearance of these germs led the early investigators to a belief in spore-formation. This is now known not to occur. The fatty content of the bacilli varies from 10 to 42 per cent, which is five times as much as is found in any other micro-organism. It appears that this fatty material has little or nothing to do with the duration of their viability.

3. The tubercle bacillus does not secrete a soluble toxin, but that poisons are formed is well known. It has been shown by various investigators that tubercles can be produced in test animals by the injection of dead cultures. Tubercles thus produced may be mistaken for those produced by living germs.

4. A clear criterion of death is necessary in reporting results on the duration of life of the tubercle bacillus. This fact many investigators have disregarded.

5. The tubercle bacillus may be classed with the nonspore-bearing organisms as to viability; but in this class it is one of the most resistant, especially as to drying and to the antagonism of decay organisms in water and foul matter.

The Action of Sunlight, Dessication and Foul Material upon Tubercle Bacilli.

6. The action of sunlight upon bacteria was first studied by Downes and Blunt in 1877. Numerous investigators have continued this study to the present day. One of the most important facts brought out is that bacteria when directly exposed to the sun are killed in a few minutes. This is due to the effect of the ultra violet light. The ultra violet rays are now cheaply produced artificially by the mercury vapor lamp. This lamp is destined to play an important part in sterilization and disinfection.

7. It is shown by the results of all the investigators that tubercle bacilli when exposed directly to the sun are killed in a few minutes to a few hours. The time of killing is less at higher altitudes; but it is ten to fifteen times longer in diffused light.

8. Tuberculous sputum reduced to dust and inhaled by test animals causes tuberculosis. A much less amount is necessary to produce tuberculosis by inhalation than by ingestion. This, however, must not be taken to indicate that inhalation plays a more important part than ingestion as a cause of tuberculosis. The more important method depends upon the opportunity of infection from each. Investigators do not agree on this question. At present both inhalation and ingestion should be considered dangerous sources of tuberculous infection.

9. The Mills-Reincke phenomenon, which has been given a mathematical equivalent by Hazen's theorem, viz., "Where one death from typhoid fever has been avoided by the use of better water, a certain number of deaths, probably two or three, from other causes have been avoided," has been found by Sedgwick and MacNutt to be sound and conservative. Their studies show that tuberculosis has decreased in certain cities of Massachusetts, which decrease is evidently due, in part, to the improvement of their water supply.

10. It is reported in the literature that tubercle bacilli live for a very long time, several months to more than a year, in water and other material.

11. In experiments to determine the time that tubercle bacilli live in various conditions the chief difficulty is the "index of death" for these germs. This is true since cultivation of the tubercle bacilli from contaminated material is not feasible, and since the dead germs produce, in test animals, tubercles indistinguishable by microscopic appearance from those produced by live tubercle bacilli.

Action of Sunlight and Dessication upon Bacteria.

12. Pure cultures of nonspore-bearing organisms and the vegetative cells of spore-bearing germs when exposed to direct sunlight in thin smears are killed in from one-half to six minutes; the human, the bovine, and avian types of tubercle bacilli exposed in the same way are killed in from one to four minutes.

13. When exposed to dessication in a dark, well-ventilated place, the nonspore-bearing organisms and the vegetative cells of spore-bearing organisms died in one to four days; the spores of *B. subtilis* and *B. vulgatus* used as controls were not killed in 35 days; the human type and bovine type of tubercle bacilli exposed at the same time and under the same conditions were dead within four and eight days respectively.

Tubercle Bacilli in Cow Manure.

14. Pure culture of bovine tubercle bacilli mixed in cow manure and exposed in a two-inch layer in a pasture field in the sunshine remained alive and virulent for two months.

15. As would be expected, these germs exposed in cow manure retained their virulence longer in the shade than in the sunshine, as shown both by the greater severity of the disease produced in the guinea pigs inoculated on the same day with the germs exposed in the sunshine, and by the greater length of time that the guinea pigs which were inoculated with the germs exposed in the sunshine remained alive.

16. Tubercle bacilli in the manure of a naturally infected cow exposed in the same manner as the artificially infected manure were dead within two weeks after exposure.

Tubercle Bacilli in Garden Soil and in Running Water.

17. Tubercle bacilli in garden soil and in a dead tuberculous guinea pig buried in garden soil were alive on the 213th and 71st days respectively, and dead on the 230th and 99th days, after first exposed.

18. Tubercle bacilli live for more than a year in running water. A watering trough harboring these germs may be a dangerous source of infection to cattle. The better disposition of dead tuberculous animals is to destroy by burning. Tubercle bacilli in drinking water is one of the possible sources of infection for man. Infection is not prevented by dilution, since clumps containing a great number of these organisms may be inclosed in mucoid material which prevents their separation and destruction.

Effect of Cold Upon Tubercle Bacilli.

19. Tubercle bacilli in market butter placed in cold storage live for more than ten months, which is a longer time than such butter is usually kept in storage.—Summary of facts published in Illinois Bulletin No. 161, by Chas. F. Briscoe.

WATER REQUIREMENTS OF PLANTS.

Briggs and Shantz, of The Bureau of Plant Industry, Washington, D. C., have carried on investigations in the water requirements of different crops at Akron, Col., and at Amarillo and Dalhart, Texas, in 1910 and 1911.

The results of these experiments are given in Bulletin No. 284, Bureau of Plant Industry. The average of these experiments are as follows: Pounds of water required to produce a pound of dry matter (whole plant), millet 275; sorghum 306; pig weed 275; tumble weed 277; Russian thistle 336; corn 369; sugar beet, 377; rape 441; potatoes 448; wheat 507; barley 539; buckwheat 578; oats 614; sweet clover 709; field peas 800; alfalfa 1,068.

The pounds of water required to produce a pound of grain was as follows: Sorghum 790; millet 923; buckwheat 1,037; barley 1,244; wheat 1,357; oats 1,680. It required 166 pounds of water to produce a pound of potato tuber and 110 to produce a pound of sugar beet root.

The water that would suffice for producing a 50-bushel crop of oats, according to these figures, should be sufficient for producing 2,500 lbs. of alfalfa. The 50-bushel oats will contain 171 lbs. of digestible protein, while the 2,500 lbs. of alfalfa will contain 277 lbs. of digestible protein. Of digestible carbohydrates and fat the 50 bushels of oats contain 942 lbs., while the 2,500 lbs. of alfalfa would have 1,012 lbs. The alfalfa with its larger root system, and especially if the plants are not too thick, will be able to draw moisture from more soil than can the oat plant, and will therefore be able to produce more than the 2,500 lbs. of alfalfa to the 50 bushels of oats. In fact, it will likely be nearer two tons, which would contain 444 lbs. of digestible protein and 1,620 lbs. of digestible fat and carbohydrates.

Straight Talk on Plows—No. 2

The first part of your plow to wear out is the Share. No other part of a Plow is of so much importance in the matter of draft, as the Share.

Until a few years ago all plow shares were practically alike. They were bought in the open market—three-ply steel—one soft layer sandwiched between two hard layers—all welded together. When new and hard they held a good cutting edge, but when the temper was drawn to re-sharpen them, it could not be put back without expensive ovens and a refrigerating plant. Then, too, they were easily broken—requiring a new Share.

A few years ago a steel manufacturer of Chicago discovered a process for making soft-center steel from one layer instead of three, which can be safely re-tempered any number of times.

By a secret process known to and used only by the one manufacturer (now the Moline Plow Co.) the outside surface—one-third through from each side—is as hard as the hardest steel, yet the center is soft and fibrous.

This makes a Steel Share tougher than the steel plate used on U. S. battleships—a steel which will stand jars and strains that would break ordinary three-ply steel into fragments. It makes a steel share which can be successfully re-tempered any number of times by the Farmer or his Blacksmith.

These wonderful Shares are

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Repeated blows with a heavy hammer fail to break ACME Shares.



One blow with a light hammer breaks other Shares.

Any Farmer can keep an ACME Share as hard and sharp as new—keep a keen cutting edge on it, as long as the share lasts—and with a bonafide guarantee that the Share will not break in the field or when re-tempering.

The factory which manufactures them, together with its secret process, is owned by the Moline Plow Co., and it is now devoted exclusively to making ACME Steel Shares and Moldboards for Moline Plows.

More than one million farmers are today using ACME Steel Shares and Moline Plows.

They are using them because they find them easier on their teams—do not have to be sharpened as frequently as others—have perfect scouring qualities and cost no more than others.

You should demand ACME Shares, and insist on your blacksmith hardening them after sharpening.

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WE GUARANTEE to stop THE MICHIGAN FARMER immediately upon expiration of time subscribed for, and we will pay all expenses for defending any suit, brought against any subscriber to The Michigan Farmer by the publisher of any farm paper, which has been sent after the time ordered has expired, providing due notice is sent to us, before suit is started.

DETROIT, DEC. 20, 1913.

CURRENT COMMENT.

While the ethical and benevolent character of the Christmas spirit is eternal; its symbolism will naturally adapt itself to changing conditions.

In previous years our cover designs for the issue of Christmas week, have been accompanied by more or less of effort to give something of the very obscure origin and uncertain history of Santa Claus—that jolly rotund Teutonic figure of ancient folk lore, that comes to us with the smell of the pine and the holly, out of the snowy woods of northern Europe.

To our ancestors of centuries ago, it was consistent imagery to the credulity of youth, for this rubicund representative of benevolence, to come down the capacious chimneys of the wide fireplaces, with his Christmas pack; but to modern conditions of house warming with base-burner stoves or furnaces for hot air or steam or gas, and carefully locked doors and fastened windows, Santa's ticket of general admission seems to have elapsed and to the child mind, his working method had become a brain-teasing enigma.

But lo! The clock of progress strikes an important hour in the annals of the great Republic and behold—The Parcel Post.

Santa Claus becomes elevated to the dignity of a great director general of Christmas giving, his proper sphere, and the myriad messengers of the Post Office Department acknowledge his sovereignty and loyally co-operate in carrying out his directions.

The twinkling eyed, snowy bearded patron Saint of Childhood is now secure upon his throne in the center of Toyland whence he has but to visit the post office with his treasures carefully wrapped and addressed.

No longer puzzled, the little one may close his eyes and with his faith undisturbed and peacefully dream of the joy of Christmas morning.

While the United States mail has been liberally used heretofore for the

delivery of small Christmas gifts, its use will be greatly extended this year, on account of it being the first Christmas season since the inauguration of the new parcel post. This enormous Christmas business will tax the parcel post service to its utmost and in order to facilitate the handling of this large amount of package mail, it is quite important that those who make use of it, co-operate with the postal authorities by carefully following out the parcel post regulations in the matter of packing Christmas parcels for shipment. To the end that patrons may be properly advised with regard to these regulations applying to Christmas packages, some suggestions on the preparation of Christmas gifts intended for transmission by mail have been issued by the

postmasters of Detroit and Grand Rapids post offices for circulation throughout the state. We give a synopsis of the more important suggestions as follows:

Parcels should be of sufficient strength to withstand the pressure of other mail included in the sacks in which they are shipped, and the weight of other sacks of mail which may be piled upon them. In case of umbrellas, canes, etc., these articles should be fastened between boards slightly longer and wider than the articles themselves. Any article likely to be injured should be crated in wood or boxed in heavy corrugated pasteboard boxes. Care should be taken that the combined length and girth should not exceed 72 inches. Any article with sharp points, corners or edges should have same well protected to prevent damage to other mail or injury to employees. Articles of glass, crockery, or any commodity easily breakable, should be carefully packed in boxes of sufficient strength, with excelsior or other packing material to prevent the contents from coming into contact with any portion of the box, and all such packages should be marked "Fragile."

In the sending of Christmas gifts, the regulations permit beside the name and address of the sender, which is required, inscriptions such as "Merry Christmas," "Please do not open until Christmas," etc., on the outside of the parcel in such a manner as not to interfere with the address. Written matter in the nature of a personal communication cannot, however, be enclosed, else it will subject the entire package to the first-class postage rate. Photographs, printed books and other printed matter are not mailable by parcel post, but as third-class matter, and any parcel containing two classes of matter is chargeable at the higher rate. Patrons are cautioned against the use of Xmas "stickers" in a careless manner. If Xmas or other stamps or stickers, other than postage stamps, are used on the address side of the package, same is rendered unavailable. Where Xmas stickers are used, care should also be taken not to seal parcels therewith, as this would render them unavailable at the parcel post rate and necessitate their being returned or held for postage. In order to insure delivery by Christmas, matter should be mailed by parcel post without further delay, as it should reach the office of destination two or three days prior to Christmas to insure delivery before that date.

The state fire marshal has issued a circular calling the attention of the people of Michigan to a few Christmas "Don't's." These are of such a pertinent nature as to merit general consideration. Briefly summarized, the fire marshal's circular is a warning against carelessness in the handling of Christmas decorations, particularly the more inflammable sort which preferably should not be selected for decorative purposes. After reciting a number of pertinent comments with regard to the decorations of the Christmas tree, and advising the piling of the presents around the tree rather than putting them on it, he adds two "don't's" not usually included in this list, which are, however, practical and to the point: "Don't fail to have a pail of water handy," and "Don't lose your head, if there is a fire."

The annual visit to Washington of boys who have won championships in corn club work in their various states is of greater interest to Michigan people at this time than ever before, because a Michigan boy has participated in that trip during the past week. In another column of this issue appears an account of his championship winning, and his description of the methods by which his winning crop was grown. When one reads of a record of production like that made by Grant Winters in a Michigan county which has not generally been appreciated as being strictly in the corn belt, he cannot but be impressed to some extent with the educational possibilities of contests of this kind.

The figures with regard to the profit showing in the Michigan champion's crop have just been received from Washington, and are very creditable indeed, compared with those made by other contestants, the profit showing being \$53.65 on the acre. As an illustration of the educational value of this work, however, the contestants from the southern states afford a better example, they having been in the work much longer. In this connection, it is interesting to note that the winning record from the southern states made by Walter Lee Dunson, of Alabama, has again broken the record for not only amount of production, but for the econ-

omy in production as well. This boy raised 232.7 bushels of shelled corn on a single acre at a cost of 19.9 cents per bushel. His nearest competitor was J. Jones Polk, of Mississippi, with 214.9 bushels per acre and a per bushel cost of 21.4 cents, while J. Ray Cameron, of North Carolina, secured a yield of 190.4 bushels per acre at a per bushel cost of 33.25 cents.

It will thus be seen that the corn club boys are making big records all over the country in the production of corn, and that many of them are making low cost records at the same time. The reduction of cost in production is quite as important a factor in the making of profit as increasing the yield, and where both are accomplished at one and the same time, the object lesson afforded the community and the country is most important and cannot but stimulate a more earnest study of these two factors in successful agriculture by the community at large, to say nothing of the effect upon the successful contestants and their contemporaries in the work, who will strive for a better record each ensuing year.

Not only has the first year's experience with the parcel post service demonstrated the wisdom of those who for so many years labored diligently to secure its establishment, but that experience has also shown that the service can be extended beyond the original limitations made by Congress, and this in face of the fact that the people, generally, have hardly begun to take advantage of the system. Even before the first six months had passed it was found that the department could extend the limit and lower the rates in the first and second zones, and now Postmaster General Buieson has issued an order which authorizes the acceptance of parcels of greater weight by postal agents and lowers the rates in all zones outside of the second zone. The following order shows the changes made:

On and after January 1, 1914, the limit of weight of parcels of fourth-class mail for delivery within the first and second zones shall be increased from 20 to 50 pounds and in the third, fourth, fifth, sixth, seventh and eighth zones from 11 to 20 pounds.

The rate of postage on parcels exceeding four ounces in weight in the third, fourth, fifth and sixth zones shall be as follows:

Third Zone.—Six cents for the first pound and two cents for each additional pound or fraction thereof.

Fourth Zone.—Seven cents for the first pound and four cents for each additional pound or fraction thereof.

Fifth Zone.—Eight cents for the first pound and six cents for each additional pound or fraction thereof.

Sixth Zone.—Nine cents for the first pound and eight cents for each additional pound or fraction thereof.

All regulations or parts of regulations in conflict herewith are hereby rescinded.

This change is certain to increase the amount of business done by the parcel post division of the department, and should be greeted by the rural classes, since it makes the service more available to them as a channel for marketing some of the more concentrated products of the farm, as butter, cream, eggs, honey, syrup, etc. The greater the amount of good carried the lower the rates can be made, so that the patronage of the public will be the determining factor in the future usefulness of the plan.

DISHONESTY IN ADVERTISING.

Many of the states have enacted laws against dishonest advertising, to protect the public. It seems strange to us that it has been found necessary to prevent by law some publishers from publishing advertisements known to be dishonest.

If every publisher had followed the practice of the Michigan Farmer, in never admitting the advertising of anyone whom we did not investigate and find reason to believe to be absolutely reliable, there would have been no necessity for such a law. No man may use the columns of this paper and not do just as he agrees to.

If you restrict your dealings to the advertisers in this paper, you need not worry about dishonesty in advertising.

GET BETTER SERVICE.

By sending your renewal now we can give it better and prompter attention than during the rush about January 1. Send 50 cents for one year, \$1.00 for two years, \$1.25 for three years or \$2.00 for five years.

HAPPENINGS OF THE WEEK.

National.

A general review of the effect of the Underwood-Simmons tariff law on imports into this country shows that the food supply of the country has been greatly broadened. In spite of this fact, however, Secretary of Commerce Redfield has observed that retail prices of food remain at recent high levels.

Former President Taft advocated a new Latin-American policy for this country in an address recently delivered in New York. He proposed that the United States invite the countries of Brazil, Argentina and Chili, to assist this country in upholding the Monroe doctrine. This policy, he declares, would place the great South American nations on an equality with the United States. Three things would be gained by this attitude. It would relieve this country from part of the burden, would give assurance of its disinterestedness, and would add weight to the declaration of the policy among European nations.

Michigan is greatly interested in the hearing on the seamen's bill now before Congress. The bill is framed to make traveling by water safer. In doing this, however, it is claimed by transportation companies that the restrictions placed upon the construction of boats are so sweeping as to make it impossible for American companies to compete with foreign companies. Inasmuch as the bill will affect traffic upon the Great Lakes a large representation of shipping interests from Detroit and other lake ports are in Washington urging certain changes in the present provisions of the measure.

In order to prevent violence in the strike zone of Upper Michigan, Judge O'Brien of the Circuit Court, issued an order for all strikers to surrender their arms and ammunition, and to refrain from acts of violence. The unions were also notified that there must be no parading. These precautions have been taken because of fear of an outbreak that would overtax the powers of the local police force.

Other labor unions of Philadelphia are considering the proposition of striking in sympathy with the garment workers, who have been out on strike for 23 weeks. Plans for a general strike will include 160,000 workers and will go into effect December 29, in the event that the strike is ordered.

In the event that no further landslides occur it is now stated by the officials of the Panama canal commission that the canal can be opened to traffic sometime in January. A channel 17 feet deep and 90 feet wide has already been completed through the Curucacha slide.

Foreign.

Much interest is manifested in the report from Paris that Dr. Bose, of the University of Montpellier, has isolated the germ causing cancer. The germ is described as belonging to the protozoan type and is found principally in water. Dr. Bose has been studying cancerous tumors for more than twenty years.

The situation in Mexico has not improved, in fact, matters appear to assume a more complicated condition. Recent atrocious acts by rebels have caused Secretary of State Bryan to send a special representative of the United States to the commander of the rebel troops to make a protest. This action is considered a help to the federal forces. President Huerta in a private report asserts that his position is now much stronger than it has been at any time since he was placed in authority. His reason for not putting down the rebellion sooner is that when he assumed command of the federal forces he was confronted with an empty treasury. During the past ten months, he has sought to strengthen the country's financial resources, in which effort he claims to have been tolerably successful. He also declares that there will soon be 700,000 troops in the field to put down the rebel armies. These reports, of course, cannot be given the fullest credit; they may possibly be the last effort to retain control of the government.

On Friday last, when federal and rebel forces were fighting at Tampico, Rear Admiral Fletcher, commander of the American naval forces in Mexican waters threatened to open fire upon both forces unless they ceased fighting; the order was immediately obeyed. The reason for interference was that the fight greatly endangered foreigners who were then in the city and could not leave.

England is having trouble in India. An armed revolt started in southern India largely because of the restrictions that are placed upon Indians immigrating to other English possessions. Restrictions on Indians migrating to Africa are chiefly responsible for the present dilemma. Announcement also that Canada will legislate to prevent immigration from India has further aroused the resentment of the Asiatics.

It appears that a crisis is near in the Italian parliament over the issue which has been raised on the question as to whether the Pope or the Italian government has temporal sovereignty over the Vatican. The situation will probably be less intense because of the fact that Pope Pius will shortly issue a document stating that the Vatican is prepared to abandon its claim of temporal sovereignty, provided international guarantees are given that the Pope's position will be respected.

An investigation by the Ontario government into the recent calamities on Lake Huron during the storm of November 9, has resulted in the following suggestions being made: That all lake vessels be provided with wireless telegraph instruments, that more effective and stringent methods be adopted by vessel owners to keep a proper list of all persons on vessels, that lights and fog signals be improved, etc.

Magazine Section

LITERATURE
POETRY
HISTORY and
INFORMATION

MICHIGAN FARMER
AND LIVE STOCK JOURNAL
PUBLISHED WEEKLY
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The FARM BOY
and GIRL
SCIENTIFIC and
MECHANICAL

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

From Forest to Christmas Parlor.

By FELIX J. KOCH.

NOT so very many years ago a movement was begun to rob childhood of the Santa Claus story—to tell the children just who brings the trees, and when and by whom these are trimmed or decorated. Immediately from this there sprang up in the minds of those unfortunate children who should so soon be made subject to iconoclasm, the query, "Then what's the use in a tree, after all?" The amalgamated Christmas-tree growers of the country saw that in the logic behind the question, so natural to the average intelligent child, lay the ruin of their business, and so they set the ball rolling toward a counter movement which has permitted the Yule-tide myth to persist. Wherefore, the Christmas tree is still with us.

Wonderful, indeed, is the traffic in Christmas trees. Like only the fireworks industry, perhaps, which flourishes very nearly for a single day's benefit only, the Christmas-tree grower, or the Christmas-tree planter, (for Christmas trees bring such good prices now that planting has become an industry worth considering) believes in big sales at small profits. He must get his trees down to a price allowing the wholesale nurseryman to make a profit, the corner grocery to make a profit, and, possibly, the boys who buy and then hawk the trees down the avenue to make pocket-money from the traffic.

At some of the principal distributing points consignments of as many as twenty carloads are received early in December. Think of the concentrated happiness, the child laughter, the surprise and the merriment that such quantities of trees imply.

The jobbers tell us that a large proportion of the trees come from Maine, New Hampshire and eastern Canada, notably Nova Scotia. Wild trees, they say, still rank the best, having by far the better color and really looking more natural. Then, too, price is a consideration, for even the freight on them doesn't equal the cost of labor on the planted trees. A wild tree that brings a dollar, retail, would, if planted and grown on the tree-farm, have to sell at \$1.25. Down in Ohio there is a good-sized Christmas-tree farm,

but these groves seem to be growing scarcer. Sometimes a farm will have as many as 5,000 trees in a patch, and there are whole lanes of Norway spruce, the white Canadian spruce, the Scotch, the Austrian, or the American white pine to meet the vagaries of taste among customers, while the silver hemlock is also

Arriving in May, the trees will be planted about June. After that they are transplanted three or four times before cutting for market, it being found that they grow much better through this practice. With good care the trees will grow six to eight inches a year. When from six to a dozen feet in height, these trees are cut. They



Hunting for Trinkets—the Height of Holiday Pleasure.

given certain area. Fifteen years of Christmas-tree raising, in one instance, has resulted in four fine acres of trees. As to profits, the trees sell at anywhere from 50 cents to \$5, though the average price paid, the country over, is a dollar. Nurserymen of note, who raise the trees in quantities, sometimes import much of their finest parent stock from France. Brought here, planting is done upon a clayey subsoil, rather than the sandy loam which persons recalling the

evergreens of the Michigan forests are prone to favor.

Ramble up and down the broad alleys of trees with the Christmas-tree grower and his comments will teach interesting lessons of the traffic. Yonder, and he points to where the frost-skimmed ground separates lines of trees, are two rows of exceptionally fine pines. The call for these is limited and so prices rise, and for these big fellows he'll get seven dollars apiece. That other patch consists of trees just over from France, two or three years old when they came. There was 20 per cent duty on them, and this will figure in their ultimate sale price. On arrival here the trees will be kept for a week or ten days in the shade, then, gradually, they are brought out into the light. Having come over in boxes, it is often found that the trees have sprouted enroute and careful pruning is then quite necessary.

should hold their needles for from four to five weeks thereafter.

During odd moments, on the tree farms, employees cut the blocks for the trees, these usually accompanying them in the shipment. Certain seasons find but little else to do, since there is no particular insect bothering the trees and they require but little attention until the cutting season.

One who has looked into the history of the Christmas tree in this country tells us that it was the German settlers of Pennsylvania who first brought the Christmas tree to America and who used it for decades before the staid Quakers, inspired by their children's descriptions of the neighbors' trees, saw fit to adopt it. These German emigrants, of course, cut down their own trees in the forests, taking either pine or hemlock, as fancy might dictate.

Contrast with this beginning the fact that today not less than 450,000 trees, meaning about 150 carloads, are sold at wholesale in New York city alone each year. What would old Mark Carr, the woodsman who plied his axe among the foothills of the Catskills and who was the first to introduce evergreens as an article of trade to this end, say to that? Carr, it seems, had read somewhere of celebrations in the near-by city at which boughs and wreaths were used in place of the trees of

the Fatherland. He came to the conclusion that the young firs covering the mountain-sides around his home could be made a source of income at no greater cost than the labor of chopping and of transporting, and, since the season for trees came at a time when he hadn't much to do and time hung heavy on his hands, it is related that he loaded two of his ox-sleds with some healthy young conifers and drove with these, over rough roads and through a deep snow, to the river at Catskill. There he shipped the trees by rail to New York. Arriving there himself, he rented a strip of sidewalk at the corner of Greenwich and Vesey streets. Quickly, indeed, the trees were sold, and this at mighty good prices.

It is further related that this pioneer in the business remained a few days sight-seeing in the metropolis and then went home, well satisfied with his venture. The next year he was back at the same old stand, with still greater stock, and since then rivals innumerable have sprung up and the trade has become one representing thousands of dollars. One authority on the traffic estimates that today the Catskills alone supply not less than 250,000 Christmas trees each Yule-tide.

Another story, touching the development of the industry, is interesting. Some twenty years after Carr's venture, some duck hunters off the coast of Maine noticed the quantities of these trees here. It occurred to them to buy these and so inaugurate a great trade from that state, which has continued with unabating prosperity ever since. To such broad extent has that trade developed that the coast of Maine has been almost stripped of its firs, and tree-takers are now forced to go a goodly ways inland. Today perhaps two-thirds of the trees of the Empire State and all of New England hail from the forests of Maine. Most of these are brought in by schooner and are from six to twenty feet in height.

Owners of Christmas-tree land net no little profit at this season. An acre of fir-land, it is stated, will give sometimes 5,000 trees. Allowing, say, \$10 per acre for stumpage, \$30 for labor and carriage, and \$50 for freight, the trees do not cost, according to this reckoning, 2c each, de-



Where Christmas Trees Line the Roadway.



A Cherished Tree, Two Days After Christmas.

livered in New York or Boston, where they bring anywhere from 20c to \$5. Of this the Maine farmer receives from a dime to 40c as his share, and so, for 40c, the dealer receives a perfectly straight, symmetrical tree about 15 feet in height.

Up in Maine, as early as November, thousands of persons are annually engaged in foresting this once valueless tree, so that today the industry means a value of \$150,000 to that state alone. Prior to the growth of the industry these fir-lands were practically worthless and exempt

from taxation. You could buy a township of 20,000 acres for \$100. Now men give \$15 to \$25 per acre for the land just to get the Christmas trees. The choppers get to work early, for a fall of snow enhances the difficulty, particularly since the snow is liable to melt and freeze, making the branches too brittle to transport. The work, therefore, is hurried and the trees are piled at roadsides in the forests, where they keep fresh six weeks or more, until the time comes for shipping out to whatever section is desired."

Little Drop-the-Handkerchief.

A Christmas Fable—By Howard C. Kegley.

CLASPING in one of her chubby fists a handkerchief, in the corner of which was tied a five-cent piece which she had earned, a little girl emerged from a comfortable-looking home and dashed down the street. She was going to the candy store to spend her money for sweets. Yes, she had earned the money, and her mother had told her that she might spend it for candy.

With a glad heart she hurried along the street, now walking, now running, every now and then pausing for a moment to look into a shop window and admire the beautiful Christmas toys which were on display. She had intended to buy her candy at the little store on the corner, but it was a beautiful day, and as she skipped along she became filled with the joy of living and decided to venture farther into the city and buy her sweets at one of the palatial candy shops where her father often bought bon-bons for her mother when they were on their way to the theatre.

At length she slackened her pace and went sauntering along the pavement, chewing one corner of her handkerchief, smiling out of the corner of her eye at a couple of "newsies" who were threatening to fight on the street corner, and wallowing in the glories of the gladsome day.

In the course of a five-minute walk she came to the public park, where a cosmopolitan crowd basked in the sunshine and argued vast and unfathomable questions. At length she approached the most distant seat in the park and noticed that upon it there was seated a man who seemed to be very downcast. As she drew nearer she recognized the individual. He was the poet who lived in the loft of a tenement building several blocks from her home.

Right well she knew the poet, for he was a man of great understanding among children. He was a person of great sorrow, and therefore he was able to read the hearts of those with whom he came in contact, and speak some word of consolation to them. He looked on the joyous side of life rather than upon the financial side of it, and it was a common belief, among the children of the neighborhood in which he lived, that he subsisted on crusts of bread, and scrawled his beautiful thoughts upon scraps of paper which he picked up in the market place and carried to his dingy attic. The little girl had often heard her mother speak about the poet's poverty, and she knew something of his gladsome spirit, for he had often walked a short distance with her while she was on her way to school, or else paused in front of her house, as she played in the yard, to make some pretty remark about her golden locks of hair or to recite to her some beautiful child rhyme which he wove from the little joys and sorrows of the children who lived 'round about him.

This day, as she saw him sitting upon the park bench, she fancied that his face looked unusually sad. Indeed it did, for he had completed a poem which he thought would be sure to sell to some magazine, only to find that his purse did not contain the necessary amount of money to pay the postage on the manuscript. Thus it happened that the poet sat upon the park bench that beautiful morning, and wondered at the ways of the world, with sadness in his heart.

As the little girl drew nearer, the poet arose from the park bench and strolled aimlessly down the gravel path toward his unplastered room in the tenement. His face was the very picture of disappointment.

The little girl, being younger and more active, soon passed him as he wandered along the path, and as she hippety-hopped along an impulse came to her.

She clenched her fist upon the five-cent piece that was tied in the corner of her handkerchief, and then she bit her lips until they ached. She was wondering if

she couldn't get along without the candy that she had set out to buy and trying to convince herself that the poet, perhaps, needed the money worse than the candy merchant needed it. She was several yards ahead of the man; he was gazing at the ground over which he was walking, and no one was near.

"I'll do it!" the little girl told herself. At the same time she dropped her handkerchief in the path and fled as rapidly as her little feet would carry her.

When she reached the end of the park she paused behind a tree and looked back. The poet had found the handkerchief and he was looking at the corners of it to see if it bore any initial. It did not. She was happy because of that fact.

After pondering over his find for some moments the poet turned and hurried back along the path in the direction of the busiest street in the city, and the little girl, thinking he had gone in search of a bakery, turned her footsteps homeward, with a song in her heart.

The poet did not spend the money for bread. Instead he hurried to the post office and mailed his precious manuscript to the editor of a great magazine. Days followed, during which he subsisted upon crusts and penny cakes, but it was not an unusual thing for him to do. He had been doing that very thing for years. But of late it was unusually hard for him to be in straightened circumstances, because Christmas was drawing near, and he longed to enjoy some of the dainty holiday puddings and cakes that were to be seen in the shop windows throughout the city.

At length Christmas morning came. It was beautiful. The air was cool and crisp, and everywhere there seemed to be an ideal Christmas spirit in the atmosphere. But up in his lonesome loft the poet was downcast and restless. It seemed so unfair that all the world should be seemingly intoxicated with holiday cheer, while he, up in his poorly-ventilated attic, had neither crusts nor cakes, nor Christmas cheer.

Sorrowing in his heart, the poet descended the filthy stairs of the tenement, thinking to go out into the heart of the city and lose himself and his sadness in the gladsome Yuletide. As he reached the door at the foot of the stairs he unconsciously opened the mail box to see what it contained, for it seemed to be literally filled with neatly wrapped packages all tied with Christmas ribbons and covered with Red Cross seals. There were several letters in the box, also, and as he fondled them and wished that they were his, his eyes suddenly fell upon one which was addressed to him.

With frantic fingers he tore open the envelope and drew forth its contents. Wonder of wonders! He could not believe his eyes, and he believed that they were deceiving him. It could not be real; he thought that he was in a dream, but he wasn't. It was a reality. He was gazing at a brief note from the editor of a great magazine, which read as follows: "We are delighted over the beautiful poem with which you have favored us. I take pleasure in handing you herewith a check for it, at the same time wishing you a very Merry Christmas and a happy and prosperous New Year."

With the precious check clenched in one hand the poet hurried down the street. Little he knew where he was going, and little he cared. He only knew that he was on his way to a shop where he could purchase bread and pies and cakes and pudding and candies and nuts, and what not.

When he had filled himself with the good things that he had bought, and had settled back to reflect upon the joy of it all, the poet's mind drifted back over the things that had transpired in the weeks that had just passed. He felt a longing to do some generous act to show the world that he was thankful for the blessings he received. So he arose and took himself into the busy streets again, and he fared

among the shops for more than an hour, feasting his eyes upon the many beautiful gifts that the rich could afford, and spending his money here and there for things to please the little folks. At last he emerged from the shopping district and returned to his loft.

Upon whom should he bestow the little gifts that he had purchased? He was acquainted with many of the little girls and boys who lived in his neighborhood, but he didn't know any of them by name, and so he concluded that it would make no difference who received the gifts. But, as he gazed upon the array of presents which he had purchased, he observed that they were only suitable for little girls.

So it happened that, as the shades of evening fell, the poet fared forth. After walking a short distance along the street he crossed the corner of a yard, hurried up the steps to a house, deposited at the front door a handkerchief with which were wrapped up two dolls, a lot of candies, nuts and little trinkets. The poet was gone as suddenly as he had appeared.

As there was only one little girl in the family that lived in the house it was easy to guess who the presents were for. One corner of the handkerchief, too, was frayed out, where a little girl had once chewed it.

Thus it happened that a little girl, who cast her bread upon the waters, saw it return to her after many days, bringing with it not only happiness and cheer for her, but fame and fortune for another who was a child at heart.

And that is how a certain little girl in Greater New York came to be known as Little Drop-the-Handkerchief.

A "TRUE GENTLEMAN'S" XMAS.

BY L. D. STEARNS.

It was Christmas. The first snow of the season lay soft and white over the earth. The merry jingle of sleigh bells filled the air, mingled with gay laughter and happy cries of "Merry Christmas! Merry Christmas!"

John Lane stood by the window looking dolefully out over it all. He had meant to be quite manly all day, for down in his boy heart he was a very true little gentleman, and he knew his mother could not afford to make Christmas this year. But it was the first time in all his nine years of life that Christmas Day had not been filled to the brim with everything a boy could wish, and when he had found only a parcel with mittens and a pair of stockings, a big lump had somehow gotten into his throat and it had stayed there ever since.

Then, suddenly, he seemed once again to hear his father's voice, as he had heard it many times in the past: "Son, I'm leaving mother to you. Be a true gentleman, always."

At the same instant his mother spoke. "Laddie," said she, "we've got each other, even if we haven't much of a Christmas today."

He wheeled, the dawning light of manhood filling his eyes. "Ma," he cried, "let's change my mittens, and get some for you instead. Men don't mind bare hands."

Mrs. Lane gave him a bright smile. "Perhaps," she said, "I'll be able to get some, too, next week."

She opened the oven door and peeped in. "It's a dandy roast, son," she laughed, "even if it isn't turkey, or goose. We can have all we want, and some left over for tomorrow. And there's a couple of onions, and lots of potatoes, besides."

Up the street came a big boy, whistling, shovel in hand. John watched him an instant, then a daring idea came to him. Why could he not get his mother mittens?

His eyes grew bright, and his cheeks red. Turning, he clapped his cap on his head, buttoned his coat to the chin, and tied his tippet about his neck. "I'm going out, Ma," he called over his shoulder, and hurried into the sharp, frosty air.

His coat was pretty thin, and he shivered a little. But a man shouldn't mind.

When he came to the great house on the hill he went boldly up and rang the bell. "Please," he asked of the old lady who opened the door, "might I finish shoveling your paths? They're only partly done, I see."

The woman gave him a sharp look. "Who sent you?" she asked, and her voice, somehow, made John think of the long, shining icicles hanging just above his head. "I thought everyone knew I didn't want boys bothering here."

He lifted his boyish head high. His bright eyes met hers fearlessly. "No one sent me," he declared sturdily, touching his shabby cap, "and I didn't know. I

have to take care of my mother, you see. Her hands got pretty cold when she's out, and I thought p'raps I might get her some mittens if I worked hard."

"Humph!" she said. Then: "It's Christmas. I should say you'd best stay at home with her today."

The thin, pinched face of the boy sobered. "We can't have Christmas at our house," he declared, "only just a dinner what's going to be prime." He stepped closer. "Lots of potatoes, and two whole onions," he confided, "and a great roast of pork."

"Well," she replied ungraciously, "I haven't even a Christmas dinner."

Quick dismay sprang to the bright eyes. It was such a big house. But nothing in it! How dreadful it must be!

"Be a true gentleman always."

It seemed to John as if the words were spoken in his very ear. His young form stiffened. Reaching up, he touched his worn cap once more. "I'll do 'em for nothing, 'cause you're a lady, like my mother," he declared gallantly, "and then I'll come and take you back to dinner with us. Ma always says what we share we never miss. May I have a shovel, please?"

Without speaking, she pointed to a shovel and closed the door.

When he rang, half an hour later, she came out, dressed for the street, and walked slowly along by his side.

He threw open the door for her to enter when they reached home; then turned to his mother. "Ma," he explained, "I brought her 'cause she hadn't anything, at all."

Before Mrs. Lane could reply a heavy step sounded outside and someone knocked.

The old lady opened the door. "Put it on the table, Pat," she ordered the big Irishman who stood there, a broad smile lighting his honest face, as, depositing a big basket, he hurried out.

Old Mrs. Goldhurst lifted the lid, the rich silk of her gown rustling crisply as she moved. "No matter how much one may chance to have," she remarked slowly, "it doesn't make a Christmas dinner if one has to eat it alone."

She lifted out cakes, jellies and pies, a great turkey, crisp and brown, and package after package, the contents of which John could not even guess. "He's earned them," she remarked with a nod.

Then, both hands outstretched, she stepped forward. "I'm a lonely old woman," she said to the wondering mother, "and I'd like to eat dinner with the woman whose son is the truest gentleman I know." She turned to John. "After dinner, we'll talk business, she added. "Pat's getting old. We need a manly young lad to do chores morning and night; and—" her voice wasn't in the least like icicles now—"we'll treat you right."

A BOY'S CHRISTMAS.

BY CORA A. MATSON DOLSON.

"Just who planned it, I don't know—Mamma read it somewhere, though—One that wrote it can't know much 'Bout a boy, to give him such, Such a Christmas present—My! Towels, loops to hang 'em by, And six wash-cloths, trimmed with braid. Mamma says she read it made Boys remember to be nice—S'pose they'd wash their faces twice 'Fore each meal, and scrub 'em dry, With these things a-hanging by! But the roller-towel'd be, I think, good enough for me. Hardly seems like Christmas, though, With these towel gifts to show; Wonder if the other boys Got such things instead of toys! Gee, but I've got skates and ball—Guess 'tis Christmas, after all!"

SANTA CLAUS, 1913.

BY CHAS. E. JENNEY.

Old Santa's come forth from his grotto; "Up-to-date" is quite clearly his motto; No jingling of bells, But a horn hoarsely tells That he drives an eight-cylinder auto.

"Left the reindeer for power more tireless; Dined on venison cooked by the fireless; Have a stock quite complete, Every last wish to meet From the millions of orders by wireless."

"Yes, the country up there is quite dreary, Though a bear that I met seemed quite cheery As I came by the Pole; He had just swallowed whole All the records of Cook and of Peary."

"This climbing of chimneys is tiresome; When airships get cheaper I'll hire some, And as I float by, With presents piled high, Right into each flue I will fire some."

He stops with a stare at the Isthmus; Says he, "This is getting abysmal; I must trade my machine For a new sub-marine When I come to this crossing next Christmas."



Peggy's Christmas Turns Out Uncommonly.

By ALTA LAWSON LITTELL.

IT'S the handsomest one we ever had," Peggy Ryan exclaimed rapturously, stepping back to survey the gaily decked Christmas tree on which she had just adjusted a shining red ball. "Don't you think so, Jack?"

"Aw, you say that every year," her brother Jack answered disgustedly. He was sitting on the floor, hands clasped about his drawn-up knees, on which his chin comfortably rested. "How do I remember whether it is the best we ever had? Girls are always saying things are the handsomest and dearest and sweetest," he continued with masculine contempt. "Do let that ball alone, Peg. You've changed it ten times now."

"Well, anyhow, we aren't always trying to pretend we don't care when inside we're tickled to death, as boys do," said Peggy, ignoring the last of Jack's remark and changing the ball to a different twig for the eleventh time. "You know, Jack Ryan, you are just as tickled over this tree as I am, and you just sit there and pretend you don't care, the way father did when the men came up and asked him to run for supervisor. It is the handsomest tree we ever had," she repeated emphatically, "the very handsomest. And all that bothers me is, we haven't a soul to share it with. Every family in this neighborhood is just as well off as we are. The neighbors are all going to have Christmas trees and there isn't one poor person to be kind to. Unless it is Jo Konarz, the Hungarian boy," she added reflectively.

"Don't you worry about Jo Konarz," said Jack. "He'll have a better Christmas than you and I will. Over in his country they begin to celebrate Christmas way back in November sometime, and they're going to have the grand wind-up tonight, Jo told me."

"Oh, what are they going to do?" Peggy asked excitedly. "I always supposed Hungarians were half heathen. Isn't it funny to think that those foreigners we sort of looked down on when they came here last fall are a lot like us?"

"They're going to burn the Yule log tonight," said Jack. "Over in their country the men cut down an oak tree on Christmas eve and the women and girls go out and fix it up with red silk and things. Then as the father comes in with the tree they hold lighted candles each side the door and throw corn over him. Then he puts the log in the fireplace," continued Jack, tossing a holly leaf into his own fireplace as he spoke, "sprinkles corn and wine on it, and then he sets fire to it. They put out the fire before the log all burns up, and lay little pieces that are left in the boughs of the fruit trees to make them grow. Jo and his father are out cutting the log now, and his mother is trimming a Christmas tree. The rest aren't to see it till morning."

"I wonder what Bud Simmons's grandfather would think if he knew a foreigner was burning a Christmas log in the fireplace he built," mused Peggy. "What if some Hungarian or Swede should burn one in ours next year?" and she gave the fire a poke. "But it's interesting to know what the children in other countries do Christmas eve," she continued. "Now in Germany they don't help trim the tree as we've done. The father and mother trim it with candles and stars and tinsel and shiny apples and funny cakes, and they put the presents around on the table. Then on Christmas eve along comes a Christkind to give them presents if they've been good, and a funny old fellow, dressed up in skins, follows to give them cakes and candy if they can say their prayers, and a beating if they can't."

"You read that in that book Miss Goodrich brought to school," Jack said provokingly. "I read something more. I read that Christmas wasn't really Christ's birthday at all, but just an old heathen holiday. Nobody knows when Jesus really was born, and the Christians just said Christmas day should be December 25 because the Romans had a feast for the sun on that day. Then the Christians could tell the heathen around them that they must worship Jesus that day instead of the sun."

"I didn't see that," Peggy answered

slowly. "So it isn't really Jesus' birthday at all. Well, I don't care what that books said, I shall always feel it is His birthday anyway. I think it is a beautiful day and I'm glad the Christians took it away from the sun. I'm glad of another thing, mother," she added, turning to Mrs. Ryan who had just come into the room. "I'm glad you never taught us that Santa Claus was real. Jessie Brown just found out yesterday that he isn't, and do you know what she said to me this morning? She said she'd never like Christmas any more now that she knew Santa Claus was just her father in his overcoat turned wrong side out. I'd hate to have all my Christmases spoiled in that way."

Mrs. Ryan kissed the face turned up to her. "It is too bad," she agreed, "but I think Jessie will feel better when she gets the furs I saw her mother buying for her last week."

"I know I would," said Peggy, giving her mother a shrewd look. "Do you know what I'd give you on this tree if I could, Mumsey dear?" she continued. "I'd give you a woman to help you in the kitchen. That's what you need more than anything else, for you are just working your precious self to skin and bones for your selfish family."

"Well, so long as you can't give me a grown-up helper suppose you give me a half-sized one and start her to picking up this room," answered Mrs. Ryan. Jack unwound himself, yawning, and lazily began to help Peggy pick up the bits of string, kernels of pop corn and leaves of holly which they had scattered about the room in their efforts at decorating. "Then we'll all go to bed and be fresh for morning," added Mrs. Ryan.

"There's a pretty story I read somewhere," said Peggy, stooping over for the

with—I was just telling Jack we have so much and no one poor to share it."

"You're always thinking up some outlandish thing, Peggoty," said Jack. "Come on down to earth and we'll carry this stuff out to the kitchen stove. Here, I'll take the lamp. You'll get to dreaming about a starving babe and drop it before we get to the kitchen." Jack took the lamp from Peggy's hand and started from the room.

"What was that?" Peggy asked suddenly as they reached the hall. "I thought I heard a baby cry."

"Oh, come on," jeered Jack, "you'll be hearing animals talk next, like they do in Ireland on Christmas eve. Wake up, Peg. You live in the United States. Come on to the kitchen and burn up that stuff."

"There, I knew I heard someone," said Peggy at the sound of a knock. And, dropping strings, pop corn, paper and holly in a heap she darted to open the door. Jack stood spellbound, for there on the porch stood a woman with a bundle in her arms, from which came the muffled cry of a baby.

"Come right in," Peggy urged excitedly. "I'll call mother. Go right in that room. Oh, mother," she called, as she threw open the living-room door, "here's the child now, just when I was talking about it."

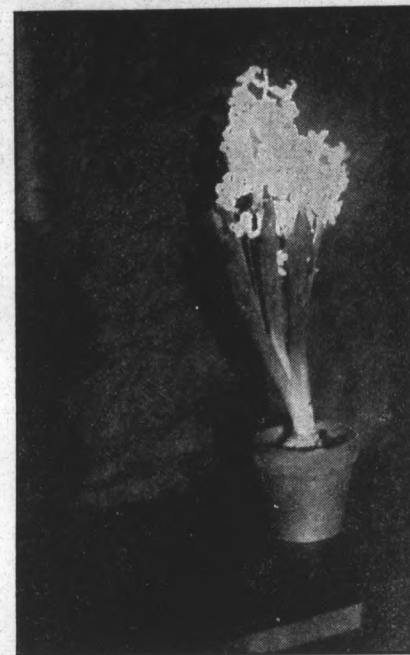
The woman paused bewildered in the lighted hall, quite taken aback by Peggy's incoherent welcome. Mrs. Ryan came forward quietly. "Come in where it is warm," she said kindly to the tired-looking stranger, "and Peggy, dear, hadn't you better pick up the things you dropped and take care of them?" She drew the woman into the warm living-room, and Peggy and Jack, understanding that they were to leave their mother alone to find out the meaning of the stranger's visit, departed for the kitchen.

"Oh, it's just like in books," Peggy said ecstatically. "Something really has happened instead of just the ordinary common Christmases. She's dropped right down from the clouds so we could have someone to share Christmas with."

"Huh," grunted Jack, "more likely she's walked up the road from the interurban, looking for someone she knows out here and has just stopped to ask the way. Why can't you be sensible, Peggy? What do you suppose she thought of you pranc-

A CHRISTMAS HYACINTH.

BY SUSAN M. KANE.



A pot of flowers is a charming gift for Christmas. The bulb in this picture cost 7c. These perfect blossom shoots appeared three weeks after being brought into the light. A card bearing the following verse, the pot daintily wrapped in white tissue paper and tied with a bit of ribbon delighted both giver and recipient last year.

Ah, little hyacinth, no sweeter thing
In all the world could one be getting.
Fragrance from all your tiny bells will ring.

And tell, for days, I fondly you've been petting.
Gave light and heat, and water ne'er forgetting.

Till from the hard brown bulb you used to be,
God's gift of beauty sprang, with its green setting.

And to my friend a Christmas joy you'll be,
She'll love you—a gift from God and me!

longer," said Peggy. "What in the world can they be talking about, Jack?"

Even Jack, who had pretended indifference, began to admit his interest.

"Maybe the place she started for is so far she wants to stay all night," he hazarded.

"No, that's not it," said Peggy. "If it had been, mother would have settled it without calling in father. I'm getting to find out. If mother doesn't want me she can send me away again. I simply can't stand it any longer," and Peggy darted down the hall and, softly opening the door, crept into the room and to her mother's side.

"And so I took the baby and left the city," the girl was saying, for now that her wraps had fallen off in the heated room, Peggy saw she was scarcely more than a girl. "There wasn't much chance for me there, and if you'll keep me, I'll work my fingers to the bone to please you, ma'am."

"It's the helper I wished for you, mother," whispered Peggy, eagerly clutching her mother's sleeve.

She watched her father's face as her mother's eyes sought his. "Inasmuch," he began huskily; then, "I think she had better stay."

TWO WAYS OF GIVING.

BY IRMA T. SOPER.

There was once a man who had much to say about the things he had given away at Xmas time. And, about the cost, he ranted so much you would think 'twas lost—the money he'd spent at the Xmas time, when all should be happy and joy bells chime.

"Last year," he said, "I gave John a chair. 'Twas leather and oak, and a gorgeous affair. Just 'thank you' he wrote; but he never came near. I think that his brain must be quite out of gear."

To a niece he had sent a fine watch and a chain, and met with the same old "thank you" again. So it went. To his servants he gave each a bill, and gifts to his neighbors just over the hill. But whatever the present—a chair or a book—they all said, "I'd rather get one pleasant look."

And the man simply wondered, and wondered some more, why they were not grateful, the rich and the poor. Poor fellow! He never had looked in the glass or he'd known why such state of things came to pass. For so sour and so crabbed and cranky was he that a smile on his features not once could you see. He needed, to change him, some comfort and



"Do let the ball alone, Peg."

last elusive holly leaf, "about a little child coming to a German house just at nightfall one Christmas eve. It was crying piteously and the hausfrau, who hadn't much to eat herself, took it in and divided her bite with it. Just as the child swallowed the last mouthful the room was suddenly as bright as day and the woman saw that it was really the Christ-child she had fed. Wouldn't it be nice if things like that really did happen? Maybe we wouldn't really see the child change, but if there was someone we could divide

ing around there in the hall talking about 'the child'?"

"Well, it came so right on top of what I had been thinking about that I couldn't help getting excited. If she just came to ask the way, she's staying a long time," Peggy replied.

Ten minutes passed, and still there was no sound of the woman's leaving the house. Then Mrs. Ryan called Mr. Ryan into the room and the children heard the murmur of voices.

"I'll surely burst if this keeps up much

cheer, and smiles and kind greetings from friends far and near. But, never a one of them thought it worth while. "He's cranky with us and at him we'll not smile."

Now, in the same town dwelt a quite different man, who worked and who played on the opposite plan. For, so cheery and happy and whistling was he, that all who came near him were glad as could be. At Xmas he said, "I've no money to spare, no gifts can I purchase, but good cheer I'll share." So he smiled at the rich, and he smiled at the poor; a kind word for all who might come by his door. And a bright "Merry Xmas" and "Happy New Year" greeted children and grown folks on days dark or clear. He helped many troubles, eased many a care, and where. Then when someone asked why so sunny was he, he said: "I'm so happy I just have to be."

So you, from this jingle, a lesson may sift: There's more in the giving than lies in the gift.

AN UNEXPECTED SWAP.

BY WARREN ICHLER.

The three of us were tramping along the dusty road to Little Bear creek in charge of John Ashe, our guide and friend of many seasons of bass fishing, when a buggy, drawn by a fat, plodding bay mare, rattled past us.

In the buggy sat two white-haired but vigorous looking old men, and as they passed we noticed that both leaned far out of the buggy to call a cordial greeting to John.

"John, who are those men?" I asked, idly curious. "They look almost like brothers and certainly seem intimate enough to be brothers. I've seen them together several times in the last few days."

John turned to me and said severely, "Have you bin comin' up to Little Bear for ten seasons an' not heard of Billy Haworth an' Job Hawley? Well, well, an' the wife sayin' I'm gittin' to talk so much that I'm scarin' all the bass out uh Little Bear."

"Howsomever," he continued, "I'll tell ye this much; there was a time not so very long ago when them two old men wouldn't no more a' rode with each other than they'd a' rode with th' Old Boy himself. Th' one on this side, as they passed us, wuz old Job Hawley. He owns th' hundred an' sixty (diagonally) across the section from me, an' old Billy Haworth owns th' quarter section right across th' road from him on th' south."

Having delivered this information John trudged on in gloomy silence, but our experience with him had taught us that sooner or later a tale of two old men would be forthcoming, and that, unless John had changed mightily, the story would be interesting.

"John," said the lawyer, winking at me as he spoke, "Ain't you going to tell us about the trouble between those two old men and how they managed to settle it?"

"Talkin' an' walkin' don't go well together," answered John oracularly, "special if you got a lot uh wadin' to do like we have. Seein' as you seem to want to git me started, I'll tell you all about it this evenin' if I don't fergit."

We all knew that the story was assured by this, for old John never missed a chance to relate any choice bit of neighborhood gossip, saving himself from the failings of other gossips by emphasizing, in his dry way, the humorous side of every incident.

Accordingly, that evening, as we lay stretched on the grass of his dooryard after a thoroughly satisfying day with nature and the carico bass, it required very little urging to get John fairly started.

"You see it wuz this way," he began, pulling hard on his corn-cob pipe to help his memory, "Old Billy an' Job wuz some kind uh forty-second cousins an' lived neighborin' there on them two places fer near thirty years until about even or eight years ago when the trouble between 'em started."

"Old Billy decided one year that a big ditch was what he needed to drain his land, an' accordingly he gits up a petition an' lays th' matter before the supervisors in th' reg'lar way."

"Now, uh course, the only way he could run this ditch was through old Job's farm an' on down to Big Bear creek. I ain't goin' to say whether old Billy was right or not, but anyway old Job made a most awful ruction about th' ditch, claiming it wouldn't benefit nobody an' so wuz a useless expense to th' taxpayers an' so on, an' he finally caps the climax by gittin' an' an' injunction an' stoppin' th' hull perceedin's."

"Naterly Billy Haworth was pretty sore, an' him an' Job had some words that nobody heard but their wives, an' first off anyone knew, Old Job an' Billy wasn't visitin' back an' forth ner speakin' when they met."

"Well, you know how folks is in a neighborhood quarrel an' this'n wasn't no exception. Some sided with Billy an' some with Job, an' between th' friends of Job comin' to him an' tellin' him what Billy had said, an' Billy's friends tellin' him what Job had threatened, I guess that perticler quarrel was pretty well hashed over." John paused and refilled and lighted his pipe.

"Go on, John," urged the lawyer, impatiently. "How did they settle it?"

"Hold on now, Mr. Lawyer," chuckled John, "I'm comin' to that an' you ain't got me on th' witness stand, nohow, you know." The lawyer subsided under the indignant glances of the rest of us.

"Well's I was sayin'," John continued, having secured a good light, "Th' neighborhood busy-bodies all had their say—now Sairy," (this to his wife who was looking at him sharply) "you needn't look at me, fer all th' sayin' I done was here at home to you—an' things had apparently settled down agin'. Th' case was decided in favor uh old Job, an' old Billy went out th' courthouse that day vowin' it'd be a long time before he ever broke silence with Job Hawley."

"Things drug along an' drug along that way fer five years, till last April Fool's day, an' might a been draggin' along that way yit but fer some uh Lem Curtin's foolishness."

"Guess you never any of you met Lem Curtin, but anyway he works a little farm over on 'tother side uh Little Bear an' was born with nothin' but jokes an' foolishness in his noodle, leastways that's all that ever comes out."

"You boys must git John started sometime tellin' about how Lem pitched up a bumble-bees' nest to John in the hay mow one hay harvest," interrupted Mrs. Ashe.

"Now, Sairy," said her husband somewhat sheepishly, "I'm tellin' 'em another story, an' anyway I fixed Mr. Lem good an' plenty for that piece of smartness," he concluded irreverently.

"Well, anyways," he went on, "all this what I'm a comin' to happened one April Fool's day; it'll be two years come next April."

"Fool's day come on Saturday that year an' that was pie fer Lem Curtin an' his gang uh hoodlums, fer everybody roun' here goes to town Saturdays an' so he had 'em all in a bunch, so to speak, to work on."

"Well, 'mongst other things they done was changing th' patch over Harve Slocum's blind eye to this good one while he was sittin' sleepin' alongside the grocery store with more'n his usual load uh hard cider. Th' pore old feller like to went crazy when he woke up, thinkin' fer a minit er so that he'd gone blind."

"Well 'bout three or four in th' afternoon, when folks was beginnin' to git ready to go home, Lem thinks up th' biggest joke of all."

"'Wouldn't it be fun, fellers,' he says, 'to swap horses fer Uncle Billy Haworth an' Uncle Job?'"

"Well, some of 'em was fer doin' it an' some was kinder scared of it, but in th' end Lem had his way."

"But how'll we do it," one of th' boys ast. "Someone'll see us an' tell."

"Easy as pie," says Lem. "I'll git in Uncle Billy's buggy an' give out that he ast me to take th' old mare down to git shod. One of you fellows do th' same with Uncle Job's rig an' we'll swap them two old mares in no time down behind th' grist mill!"

"Well, 'twas easy enough, as it turned out, an' nobody 'spicioned anything, fer th' two mares was full sisters an' looked just alike. That was one of 'em, Uncle Billy's old Kate, that you seen him drivin' in th' mornin', an' Uncle Job's Betsy is a sure match fer her anywhere."

"Uncle Billy's Kate was a good enough old mare without no faults an' kind as they make 'em; but old Betsy was mean tempered an' would 'casion'ly balk, though Job had 'bout cured her by lettin' her have her own way most uh th' time an' puttin' dirt in her mouth when she got stubborn. But, course, Uncle Billy didn't know that trick."

"Sairy had walked across th' fields an' gone to town with Uncle Billy that afternoon, 's I was busy with th' oats ground an' couldn't leave. So she rode home with Uncle Billy an' Mrs. Haworth, an' naterly seen all what happened."

"You know how 'tis with horses. Sometimes they'll balk like sin fer one man"

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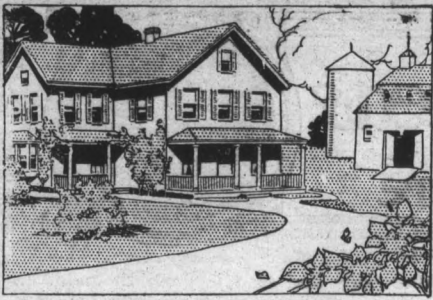
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FAMILY CHRISTMAS GREETINGS.

BY R. L. K. W.

While Christmas bells now loudly ringing
Proclaim "Good will on earth to men,"
By bonds of kinship, strong and clinging,
We gather 'round this hearth again;
Here, words of love, though oft unspoken,
Are plainly stamped upon each face;
Here, each presents his good will token,
And each accepts with modest grace.

Though some of us, grown old and hoary,
Have met on Christmas many a year,
It still retains its pristine glory,
So full of love, good will and cheer.
And while the bells are gladly telling
Of "Peace on earth, good will to men,"
Our hearts responsively are swelling
With thoughts that baffle tongue or pen.

But mid our greeting and well wishing
A shadow falls, our peace to mar,
For some are counted 'mong the missing
Who seek their fortunes from afar;
While here, we find, are seats vacated
By those for whom our hearts still yearn
With love and longings unabated.
Nor may we look for their return.

Still, let not gloomy clouds of sorrow
Bedim the pleasures of the day,
While hope bespeaks a brighter morrow,
With earthly shadows swept away.
We trust the time is not far distant
When we in perfect peace will meet,
And, true to Christian faith insistent,
Our circle will be made complete.

THE VALUE OF A SMILE.

BY ORIN E. CROOKER.

At the entrance of a certain hospital a sign greets the eye which reads, "If you can't smile, don't go in." No one better than physicians and nurses know the power of optimism and cheerfulness in the sickroom. Better often than medicine

is the hopeful attitude and uplifting spirit of those who bring sunshine and cheer to the physically afflicted.

The hospital ward, however, is not the only place in which a smile is potent for good results. It is a passport in all the relationships of life and upon every highway of the world's affairs. It will pilot one past many barriers which will not yield to the sour-faced individual. It will open the way to many a favor and release the bolts of many a prejudice. There are few who are not touched by the magic of a cheerful countenance.

Someone has said, "Who is beyond the ministry of a kindly smile? It is a tonic to the discouraged. It cheers the aged who find life unspeakably lonely. As King Arthur's court was built by music, so the happier life we all hunger for here on earth is built in large part by the cheerful faces we see, as we bear the load appointed for us."

Smile! The world will return your gift with interest and thank you into the bargain for your cheerful spirit.

EVERYDAY EPIGRAMS.

BY CARL S. LOWDEN.

You've got to think before you accomplish anything.

Nothing is easier than fault-finding—but don't do it!

It is useless to lock the stable after the horse is stolen.

An emotion turned inward gnaws at the soul.

Each failure should be a stepping stone to success.

Persistent effort in the right direction never goes unrewarded.

an' never try it 'tall on another one. Well, old Betsy hadn't been up to any of her tricks in quite a spell I guess, but Lem had hitched her up pretty tight when she was ust to free harness an' a free rein, an' she started fer home in a pretty bad temper, I reckon.

"Then, too, Uncle Billy had a habit uh twitchin' an' jerkin' at th' lines, an' old Betsy wasn't used to that, so I reckon that it wasn't no wonder that she finally balked an' stood set as a stone right at th' corner back uh my place here.

"Uncle Billy never carried no gad fer old Kate, an' besides it was so new fer him that he was all busted up over it.

"I can't imagine what's got inter old Kate," says he, gettin' out an' lookin' over th' harness careful like. 'I'd take oath I never hitched up so tight, but I reckon Tom has been foolin' with this set uh harness again.' Tom was his nephew that stayed with him.

"He fooled around an' done all he knew to start old Betsy; but she naterly didn't understand it when he called her Kate, an' was enjoyin' balkin' anyway, since she wasn't havin' no clods stuck in her mouth.

"Sairy an' Mis' Haworth was fer gittin' out an' walkin' home, but Uncle Billy said he'd git goin' again in a minut er so, an' just 'bout that time here comes Uncle Job drivin' old Kate, bound fer home, too.

"Th' road's awful narrow back there, you know, an' Uncle Billy was right in th' middle of it, so Job just naterly had to stop an' wait on him.

"At first he wouldn't say nothin', just kinder set there grinnin', an' Uncle Billy, seein' it, begun to git madder an' madder.

"At last Job couldn't hold in no longer an' leaned out an' says, sarcastic like, 'How much longer are you goin' to continue obstructin' the public highway, Bill Haworth?'

"'Bout as long's you continue obstructin' that ditch, I reckon', returns Uncle Billy, tryin' to lead old Betsy to one side.

"It was gittin' a little dusk by that time an' both of 'em was wantin' to git home. Besides, Uncle Billy was pretty sore over Job's ketchin' him in such a fix.

"This is a nice state uh things," says Job, real slow an' scornful, 'when folks is held up on th' public road by old busy-bodies that can't handle their own horses.'

"Mis' Hawley tried to say somethin' to calm him down but he was havin' too much fun with Uncle Billy fer that.

"Seems's I ain't holdin' up nobody but them that obstructs justice an' I ain't worryin' 's much 's I might,' answers Uncle Billy.

"They was some more words passed, with Mis' Haworth an' Mis' Hawley an' Sairy, too, tryin' to calm them two old roosters down, but 'twasn't no sort of use, an' at some perticler cuttin' remark

uh Job's Uncle Billy's patience give clean out.

"Doggone you, Job Hawley', he yells, 'I kin lick you on less ground than you stand on if you are five years older'n I am.'

"Old Job commenced climbin' out uh his rig, with his wife tryin' to hold him in, an' Sairy an' Mis' Haworth was screamin' to beat time. I reckon the' was some excitement fer a few minnits.

"Before them two old men could git more than good an' squared off at each other though, who should come drivin' up but Lem Curtin hisself.

"What's goin' on here?' he ast, not bein' able to git past fer their blockin' the road.

"Then he seen what th' trouble was an' he just roared an' hee-hawed.

"I will say fer him, though, that he got down an' stopped them two old codgers from makin' an' everlastin' spectacle uh themselves an' fin'ly, between spasms, he managed to tell about his joke an' git them two old fellers to swappin' horses back agin.

"After they found out what th' trouble was it didn't take long fer Job an' Billy to git straightened out, fer Uncle Job soon stopped Betsy's balkin' streak; but Lem had to git in his rig an' drive off pretty fast to keep both them old men from mobbin' him. As 'twas, they both swore they'd have th' law on him.

"Somehow er other them two old men found themselves agreein' with each other in abusin' Lem, an' talkin' to each other in swappin' their horses back, an' Mis' Haworth an' Sairy an' Mis' Hawley was havin' a real good visit together.

"They didn't say nothin' more after they got hitched up right, but th' next mornin' Job came sidlin' into Uncle Billy's yard an' says: 'Billy, I been thinkin' things over last night an' that ditch is a good thing, even if 'tis mighty expensive. I'm goin' up an' git that permanent injunction withdrawn if I kin.'

"Uncle Billy had been thinkin' things over, too, I reckon, fer he stuck out his hand an' says: 'Let it stand, Job, let it stand. Th' drain I got now is good enough an' we hadn't oughter let such things come between old neighbors.'

"Job shook han's an' was goin' away when he turned 'roun' and says, 'Mother an' me's expectin' you an' Mis' Haworth over to supper this evenin'; remember were not goin' to take no fer an answer.'

"Settled out of court," remarked the lawyer as John refilled his pipe.

BOOK NOTICE.

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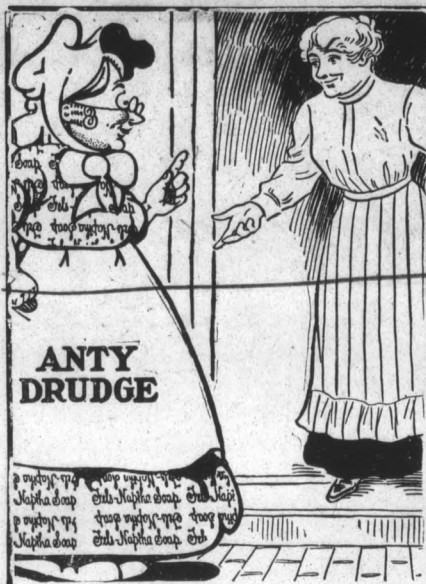
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Mrs. Cornfield: "Good afternoon, Anty. Come in. I was just having a laugh to myself remembering what Tom read to me this morning while I finished my washing. It was about an old rooster leaning up against a tree, saying to himself 'Only an egg yesterday, and a feather duster tomorrow.' I remember that's just about as hopeless as I used to feel before you told me about Fels-Naptha Soap—but I'm a different woman now!"

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Fels-Naptha makes dirt disappear, takes out all kinds of stains, even stubborn blood stains. For your weekly wash put clothes to soak with Fels-Naptha Soap in cool or lukewarm water for 30 minutes; then rub them lightly, rinse and they will be hanging on the line in less than half the time it used to take.

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Better buy it by the box or carton.

Fels & Co., Philadelphia.



Man Should Be A Social Animal.

It is not good for man to live alone," wrote a wise man centuries ago. Irrespective of what we think about the inspiration of the words, we must all admit that the writer hit it off exactly right. It is not good for man to live alone, nor for woman, nor for families. Man is a gregarious animal, and when he ceases to be sociable and shuts himself up within himself, he at once gets into trouble.

God never intended us to live as so many American families do nowadays, so hard put to it to make both ends meet that when the day's work is over we are too tired, or too grouchy, to have anything to say to our fellows. We can't very well get along without the work under the existing trust rule and reign of high prices, but surely we can inject a little more beauty into life by at least making an effort to be friendly. And our reward will come in the form of renewed strength and inspiration to take up the battle on the morrow.

Living alone gets us too much into the habit of introspection. We arrive at evening tired and out of sorts. Instead of refreshing ourselves with a bath and clean clothes and dropping into one of the neighbor's for a half hour or an hour's chat, we slump down into a chair, wearing the same garments we donned in the morning, and begin to grumble, audibly or to ourselves, about the innate perversity of things mundane. Everything is wrong. The crops don't promise to turn out well, the market is poor, help unreliable and hard to get, the roads bad, taxes certain, and nothing good under the sun.

Granted all these things are true, does

it make them a bit different for us to grumble about them? Not a particle. Worrying and complaints never altered a wrong. Worse than that, much brooding over our troubles only unnerves us and makes us that much less fit to meet our problems and solve them.

Instead of shutting ourselves up at home and turning our woes over and over in our minds, how much better to get out and see how other folk fare. If we look about us and talk to our friends we will always find that we are not alone in our misery. And though it always seems a sneaking sort of consolation to me, it is certainly a fact that misery loves company. It eases up your load a great deal, to find that the other fellow is squaring his shoulders to carry a similar package. And the way he meets his problems will furnish you with ideas and courage to tackle your own. Get into the other fellow's life if you want your own to be easier, and not alone for that, but that you may make him happier, too.

Personally, I have always despised a whiner or a quitter. We all have our own problems to solve, our own obstacles to surmount, and it is by making ourselves master of the situation that we develop character. Yet how many, instead of meeting the issue squarely and cheerfully, get behind somebody else, or else do the task with complaints and bitterness of spirit.

Invariably, it is the unsocial churl who sidesteps. The chap who is cheery and big-hearted will shoulder his load uncomplainingly. He can see that the other fellow has his problem, too.

DEBORAH.

"DAY OF THE JOY OF GIVING."

BY SUSAN KANE.

Here and there the tree-clad hills that walled the valley down which we were driving showed bits of gold and ruby. Nearer at hand were a few signs of decay in the russet-brown of the ferns and low growth. We ran along a river that leaped the ragged rocks in its bed and with a swirl of its laughing waters sought the sea. And the sea was before us, broad, peaceful, glorified in the light of the wonders of a setting sun into which we were racing. Hill was answering to hill, giving up its light at the call of the sun. The colors began to mingle, the quiet shadows came and the hum of the engine murmured with the voice of the stream as we billowed into the dimming reaches of the road.

It was then my companion's voice, like a discordant tone in an otherwise beautiful harmony, reached my ears, and this is what she said: "Oh, dear! The crispness in the air makes me think of Christmas, and Christmas is a nightmare to me!"

The loveliest of festivals; the tenderest, most human, and best of all our holidays! Yet there are those who have so garbled the spirit of the hallowed and gracious time, that even in the midst of the retirement of a glorious day, they could entertain sordid thoughts of the obligations we impose upon ourselves at the Christmas season.

We are at a time of transition in many reforms for the uplift of all the people. In most of these movements there is the necessity to leave old age and create the new, to bring about the right condition. Christmas is not the day of the joy of taking, that means selfishness, and the whole Christmas structure would have crumbled ages ago had it been built around that. Christmas giving and not the day, has become a nuisance to some of us, a nightmare to many. A reform in Christmas giving has begun, is needed, but it must come through a backward movement, back to the time when it was a "Day of the joy of giving—that means love."

"The gift without the giver is bare," and the giver is not represented in tokens the contemplated purchase and presentation of which cause a nightmare of worry

and harassment. If the offense of passing out such inconceivable refuse labeled Christmas gifts remained alone with the givers, they might suffer for their sins without wholly marring the beauty of the sacred time. More often, those who receive are embarrassed, for they feel that presents of like or greater value are expected in return, that they are pressed to spend when they cannot afford the money for such purposes. So the bargain counter is sought, the attic is searched; things are brought out which were received last Christmas for which they had no possible use and the exchange is made.

To open the purse and buy gewgaws for one, a score, or 50 persons is not Christmas giving in the finest and highest sense of the term. It is making of the season one of waste, a lottery, a rivalry in light-minded conduct. But there are good gifts and the best are those made by the fingers that toil, gifts into which we have put our heart and soul, making them an expression of our thought and our love. Such gifts go to those who touch our lives; to those whom we wish to remember with a gracious thoughtfulness; to those into whose lives we wish to take a gleam of the light of the true Christmas spirit.

God's gift to the world of His only begotten Son on Christmas day was His expression of love. And it is only love-gifts that will make our Christmastide a season of joy to be anticipated and remembered, a time of "Peace on earth, good will to men."

NOVEL CHRISTMAS GIFTS.

BY L. M. THORNTON.

When the dry goods stores have their sales of toweling remember that Christmas time is not so very far away, and among the most serviceable of home-made gifts are those in which dainty towels play an important part.

From the unbleached toweling, the kind with a blue or red stripe, make a wash day apron that will be as unique as it is useful. Measure a length of the toweling that will extend from the waist to the knees of the one to whom it is to be given and to this length add enough to turn up for six or seven inches, the turned up portion forming a pocket for clothespins.

Hem the lower edge turn up on the outside, forming the pocket, and stitch on

either edge and also through the middle. This makes really three pockets but the pins can be easily gotten when thus distributed and will not all be to one side, to the inconvenience of the wearer. Gather the top and stitch it firmly to strings of heavy linen in the same color as the apron, or to ribbons of the same color as the stripes.

HOME QUERIES.

Household Editor:—Is there any way of removing the cream separator oil from my kitchen floor? Several boards where the separator stood have become saturated with the oil, making a very unsightly spot. The floor is of hard maple.—C. C. F.

Who has had similar trouble?—Ed.

Household Editor:—At what hour would you give a party for boys and girls of 12 to 14 years of age? My daughter wants to give an evening party, and I think she is too young. She is 13.—Anxious Mother.

Boys and girls of the age you mention should be tucked away in bed by 9:30 at the very latest every night. I should think you might better give the party Saturday afternoon, when the young folks can spend a part of the time out of doors. Or compromise by having them come directly from school Friday. Serve them a good substantial supper, then games until 8:30 and home. Midweek evening parties are responsible for most of the school failures.

Household Editor:—My little girl, seven years old, has to walk a mile and a half through the snow to school. Can you suggest an outfit to help keep her warm?—Mrs. M.

Dress her in comfortable fitting wool underwear, with wool dresses and bloomers to match the dress. Bloomers instead of petticoats are much warmer and more sensible for little girls her age.

Household Editor:—I have two children, two and four years old. They have played outdoors all summer and fall and now it is cold they still want to go out. But they just stay a out a few minutes and get cold and then want to come in, and as soon as they get warm they want to be bundled up and go out again. It seems to me I am all the time taking off coats and rubbers and putting them on again. My mother says to keep them in all the time, but it seems as though they would be better to get the air. What would you advise?—M. K.

It may console you to know that you are only one of several hundred thousand mothers worried by the same problem. With children the age of yours it does seem that a mother can waste an entire morning with "bundling up" children. I should think the best thing to do would be to keep the children in until the sun is well up, say 10 or 10:30 a. m., then wrap them up warmly in good wool clothes with warm leggings and overshoes and send them out in the sun for an hour and a half. They could stand this on all but the coldest days. Then after the afternoon nap, let them out again while the sun is nice. While they are indoors have them play in a well-ventilated room, or you could leave their wraps on and send them into a room with the windows wide open. An easy way to ventilate is to cut boards four inches wide of a length to just fit into the window. Raise the lower sash, place this board under it and draw the window down to touch the board. This leaves a crack between the upper and the lower sash where the air can enter.

Household Editor:—At what age would you let a child have tea and coffee?—Young Mother.

I should never let a child have tea and coffee at any age. They do not need the stimulant. Instead, give them good pure milk and a cup of cocoa occasionally in cold weather. Cocoa contains a stimulant, as do tea and coffee but it does not seem so harmful.

Home-made Insect Powder.

Please repeat the proportions to be used in making the insect powder described in your poultry columns some months ago. The ingredients, as I remember them, were plaster of paris, gasoline and carbolic acid.

Ingham Co. S. A. C.
The recipe referred to calls for 2½ lbs. plaster of paris, ¾ pt. gasoline and ¼ pt. crude carbolic acid. Mix the ingredients thoroughly and when sufficiently dry work the mixture through a fine sieve.

COLDS AND HOW TO CURE THEM.

BY ANNA RUTHERFORD.

At this season of the year when the temperature is variable and the mercury is often precipitated with great suddenness, it is not at all uncommon to hear people complain of having caught cold. What is good for, or what will cure a cold? is a common question and one that the sufferer from this disagreeable complaint is always prone to ask. In reply to it I would suggest the old adage, "prevention is better than cure." For, though there are many ways to ameliorate unpleasant symptoms and aid towards recovery, unless a cold is checked in its incipency it must "run its course." So I will repeat, prevention is better than cure, and is certainly easier. Keep the body comfortable, do not oppress by too heavy clothing, and do not under-dress.

Vanity is the cause of many colds. Young girls—and women of full mature years, for that matter, love to hold on to their sheer summer garments and reveal bare arms and necks regardless of chilly dampness and biting blasts. And not only ordinary colds but many a case of 'grippe and even consumption is developed in this way. Reason and personal comfort are always one's safest guides.

Some people are so methodical that they never vary their rules. They are governed by the season, not the weather. I know a man of this type whose overcoat goes in the packing chest in April and is not brought out again until November no matter how the mercury varies. Just so, many house-keepers begin to pack away their blankets and quilts when the first balmy spring breezes begin to blow and they remain packed all summer. It is always well to have sufficient wraps and bed-covering within convenient reach at all times.

Now the best thing to do when one realizes that one is taking cold is to get the body thoroughly warm. A cold is simply a congested condition of the nasal organs and bronchial tubes or some other internal portion of the body and you want to promote capillary circulation, draw the blood to the surface. This is the secret of dispelling a cold. Then eat sparingly, avoiding all meats and rich, heavy foods. Over-eating, clogging the system, is of itself, a prolific source of colds. There is not a grain of wisdom in the old saying, "stuff a cold and starve a fever," but plenty of cold water is good for both. Have your room well ventilated, without draughts, and take plenty of rest. At bedtime take a dose of quinine and cover so warmly that you will perspire freely during the night. Then do not cool off but rub dry before getting out of bed. Repeat the quinine and sweating next night if necessary.

Brisk massage of the tip of the nose will often prevent development of a cold if done at the very outset.

Another remedy, said to be most effective if used in time, is half a teaspoonful of bread soda and half a teaspoonful of aromatic spirits of ammonia in half a cup of boiling water. Take at bed time.

Comparative immunity from colds and hardness of constitution may be acquired by having plenty of fresh air in the sleeping rooms at all times, engaging in hearty out-door exercise and sports, and gradually accustoming the body to cold baths. And these are especially effective if begun in childhood or early life.

THE HIGH COST OF LIVING.

BY V. T. W.

To beat the meat trust every farmer should grow his own meat.

Perhaps it will do no harm to tell how we do it at our house. We kill yearling beef, and sell more or less, according to our needs. We can some of the fresh beef and corn the greater part of the rest. We do not make the brine very strong, the meat is just right to cook without freshening, and to the brine we add three or four pounds of sugar, preferably brown. Saltpetre should be used sparingly as it makes the meat hard. Better leave it out than get in too much. Pour the brine on boiling hot.

Late in the winter we dry a portion and, as it grows warmer weather we begin canning what is left. We cook until perfectly done and can in Mason jars. Stored in a cool place it will keep quite a long time and is very good.

Our pork is also salted just enough to be good, and to the brine for a barrel of pork we add a quart of good cooking molasses.

Soak the meat over night in a weak brine, poured on hot. It is sometimes

necessary to pour the brine off and scald it over.

In the spring, we take a large barrel and with pieces of wire bent like a painter's hook we hang pieces of meat all around the inside of the barrel, not allowing them to touch each other. We then put two or three inches of ashes in an old pail, on which we put a few live coals and a few cobs, set in the barrel and cover all with a cloth, and over that, boards. We do this every day till cured to suit. Do not leave close to a building. If kept dry the meat can be left in the barrel till used up. It is well to build a smoke under it once in a while.

Or take cooking molasses, stir quite thick with black pepper and paint the smoked meat with it. We have kept meat this way until September and the only reason it didn't keep longer was, there wasn't any to keep. Lean pork can be canned if one cares to do so, and makes a change from salt pork.

People always say our meat is so good. The sugar for beef and molasses for pork makes all the difference in the world. All farmers raise chickens, and it seems to me that by using a little forethought, yes, and a little hard work, there is no need of the farmer making the trip to town and paying a big price for cold storage or embalmed meat.

WINTER PLANTS GROWN IN WATER.

BY DR. L. K. HIRSHBERG.

To grow plants without soil is a pleasant winter diversion and a means by which green things may be had without the trouble and dirt of an ordinary window box. Moreover, the soilless garden is more or less novel and far more interesting than potted plants.

Go, first, to a florist and buy a few bulbs, not too many to begin with, if you are an amateur gardener. Chinese lily bulbs cost \$1.40 a dozen or thereabouts; white paper narcissus bulbs may be had for about 40 cents a dozen, and other sorts are even cheaper. Roman hyacinths may be had for almost any price, but the best Dutch bulbs cost 10 and 12 cents apiece.

For the hyacinths the tall, prettily-shaped glasses made just for the purpose are most attractive. If you prefer, however, you can use a flat glass bowl for your garden and plant a number of bulbs in it among small stones and pebbles. A little sand may be needed to hold the bulbs upright until they get started.

The Chinese lily is the best of all flowers for the amateur water gardener. It does not require starting in the dark, as most bulbs do, and it will come into bloom in 40 days. Cover the bottom of a glass bowl with pebbles and set the bulbs among them, having first taken off the hardest layer of dried brown skin. Fill the bowl with water until it half submerges the bulbs. From time to time, as the water becomes muddy and impure, pour in fresh water, flooding out the water in the bowl.

Do not tip the bowl or try to pour out the water, or you will disturb the roots and hinder the growth of the plant. Gently dip out the water after flooding the bowl, so that the dish is filled just half way up the bulbs.

The glass in which hyacinth bulbs are grown should be of clear glass, so that the growth of the roots may be watched from day to day. This is one of the most interesting parts of growing plants in water. Plant the hyacinth bulbs in the glasses so that the root surface of the bulb just touches the water and set it in a cool, dark place until the roots are fully grown and small sprouts are put forth at the top. This will take from six weeks to two months. Then bring the plants out gradually to the light. Do not place them in the direct sunlight until they have become accustomed to the light.

In buying bulbs for water growth, tell the florist that they are to be grown in water and he can help you choose those specific varieties that will bloom best and quickest in water.

SHORT CUTS TO HOUSEKEEPING.

If you are using new can covers for fruit, always rub them several times on the bottom of a butter crock, as there is often a sharp edge which will cut your rubber.—Mrs. S.

Always keep the inside of your coffee pot bright to insure good coffee. Boil it out occasionally with soap, water and wood ashes and scour thoroughly.—Mrs. J. J. O'C.

The secret of making good ginger snaps is to use boiling water when mixing, then cover the dough and let it stand several hours before baking.—M. A. P.

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Without sending a cent you can use this wonderful, economical light 10 days free, then return at our expense if not satisfied. Gives powerful white incandescent light, burns over 50 hours on one gallon kerosene (coal oil). No odor, smoke or noise, simple, clean, won't explode. Guaranteed. We want one person in each locality to refer customers to. Write for 10-DAY FREE TRIAL. AGENTS OFFER—agents' wholesale prices and learn how to get ONE FREE. WANTED: Make money evenings and spare time. One farmer cleared over \$500 in 6 weeks. Exclusive territory given.

MANTLE LAMP CO., 528 Aladdin Bldg., Chicago, Illinois

\$2.95
20 YEAR GUARANTEE

Full 7 Jeweled
Genuine seven jeweled Railroad watch worth \$15 to anyone who requires an absolutely reliable timekeeper and a watch that will last a lifetime. Locomotive on dial, stamped and guaranteed seven jeweled, bequest halting, patent regulator, quick train. Fitted in heavy or medium weight solid case—silver, steel or porcelain, both case and works absolutely guaranteed for 20 years. To advertise our business, make new friends and introduce our great catalogue of Elgin watches we will send this elegant watch to any address by mail postpaid for ONLY \$2.95. Send this advertisement with \$2.95 and watch will be sent to you by return mail postpaid. Satisfaction guaranteed or money refunded. Send \$2.95 today. Address **R. E. CHALMERS & CO., 538 So. Dearborn St., CHICAGO.**

For Only 10 Cents

We will send you the following set of
Christmas Post Cards, Seals, Tags, Etc.

postpaid. The beautiful postcards can be sent to friends to whom you give no presents while the other articles will greatly add to the beauty of the gifts you give:

- 100 Santa Claus and Maple Leaf Seals
- 12 Beautiful Colored Christmas Stamps
- 27 Assorted Christmas Tags and Cards
- 20 Christmas and New Year Post Cards
- 159 Pieces in all.

This assortment if purchased separately would cost you about \$1.00. In fact the sets actually cost us twice as much as we are now asking for them, but they take up room we need for other purposes and we must sell them all now even though we lose money. You can order as many sets as you wish. Special—3 Sets for 25c.

ONLY 10 CENTS WHILE THEY LAST.

Send your order to
THE MICHIGAN FARMER, Detroit, Mich.

\$9.50 CHRISTMAS OFFER \$9.50

Our Annual Christmas Combination
Feather Bed, Feather Pillows, Pair of Blankets & Bolster
Greatest bargain ever offered. Feather Bed weight 40 lbs., covered in 8 oz. A.C.A. ticking; pair of 6 lb. pillows, same grade; pair full size blankets and large, 6 lb. bolster. This combination would cost you at a retail store \$17.50. All goods guaranteed. Satisfaction or money back. Cash with order. Agents wanted. Catalog free. Reference: Broadway National Bank

PURITY BEDDING CO., Box 244 U. Nashville, Tenn.

Choice Fish

Now being caught in large quantities daily. Our price list is free. It will cost you just 1c. to send a postal card asking for it. You can't make a better investment.

WISCONSIN FISHING CO.
Department Y, Green Bay, Wis.

IF YOU STAMMER
attend no stammering school till you get my large FREE book and special rate. Largest and best school in the world curing by natural method. Write today. 150 Wells Millard, Pres., North-Western School, Inc., 875 First Street, Milwaukee, Wis.

Sew Anything
THE A.W.I. FOR ALL
\$1.00 Postpaid
Leather, canvas, shoes, harness, saddles, buggy tops, etc. Any material, any thickness. Myers' wonderful Sewing Awl makes lockstitch, neat, quick, easy. See that real! It keeps the tension right. AGENTS WANTED. Big money. C. A. MYERS CO., 6324 University Ave., Chicago, Ill.

WANTED.

At once a few men, who are hustlers, for soliciting. No experience necessary. The work is dignified, healthful and instructive. In writing give references and also state whether you have a horse and buggy of your own. Address **BOX J. F., Care Michigan Farmer, Detroit**

Woman with baby wishes situation in the country.
Apply Mrs. Calkins, care Woman's Hospital, Detroit.

WANTED—Men and women for Government positions. Examinations soon. I conducted Government Examinations. Trial examination free. Write, OZMENT, 17 R. St. Louis.

Farm Commerce.

Your Methods and Your Markets.

AFTER selecting suitable varieties of fruit and vegetables to meet the exacting demands of the quality market the next problem confronting the grower is that of beating the other fellow in early production, to be first on the market with quality produce. In these days the grower needs both practical and scientific knowledge of the requirements of his crops from start to finish. A few days' time in the ripening of the crop often means a big difference in the prices obtained for it in the market.

Starvation is a common cause of a fruit crop failure. A large crop of choice fruit cannot be obtained without a normal healthy growth of the tree or plant. Healthy trees and plants that are provided with liberal quantities of plant food, especially phosphorus and potassium, will usually withstand and outgrow attacks of disease and produce fruit earlier than growing under less favorable conditions.

The selling of grapes, peaches, pears, plums, cherries, and other perishable fruits to hotels and groceries is more satisfactory than attempting to reach the exclusive family trade. Excellent opportunities for this direct trade with groceries may be found in small cities, and in the suburbs and finest residential districts of large cities. By meeting the groceryman, studying the class of fruit he is selling and making a special effort to meet his wants from day to day, it is possible to get him interested in pushing your products with his best customers and in that way work off about what you produce. The groceryman will be found the best customer for the grower of quality fruit who has the desired quantities to deliver two or three times each week throughout the season. By putting up the fruit in neat and attractive packages, of the size best suited to his trade, it lightens his work of going to market and sorting over his stock and he will be glad to have a regular supply of quality fruit to offer his customers.

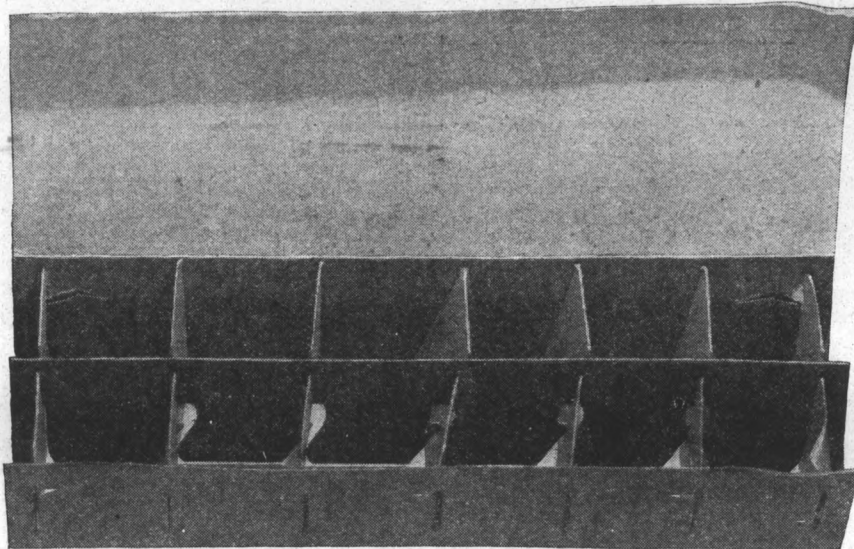
As a rule, the big hotels pay better prices than the grocerymen, but their daily demands vary to such an extent that they prefer to deal with commission men, who are well equipped to furnish them with varying quantities from day to day. In the case, however, of dessert apples, bagged grapes and fruit that can be held in storage and delivered to them regularly throughout the fall and winter, the hotels will be found very desirable customers and are often willing to pay a fixed price regardless of market conditions. If the grower is able to store his fall and winter fruits and deliver them as wanted he will find the hotel trade very profitable. Many a grower, within easy distance of first-class groceries and hotels, is producing fruit and vegetables that would be welcomed by these buyers, if he would study their needs and standards and put up his stuff in a way to meet their demands. And many a grower on the very outskirts of a small city is selling his choice fruit and vegetables to traveling buyers, when it would be easy to obtain better prices from private families, groceries and hotels right in his own city. Once these standards of quality and methods of reaching the trade are mastered and met, the possibilities for sales go far beyond his regular customers. For every groceryman, hotel-owner and well-to-do family is seeking high and low for quality products.

The grower of quality fruits and vegetables should avoid the public market. The old-fashioned public market is a dumping ground for every grower who is producing cull, trashy stuff. When you haul quality products to the public market the prices are, in a measure, governed by the prices of these inferior products. If the grower has a surplus of rather inferior stuff it may pay him to haul it to a public market and get what he can out of it. The grocery, hotel or private family trade is far more desirable, besides it opens up a trade among the better class of customers who are ready to pay a good price for something that meets their demands.

Earliness an Important Element.

In quality vegetables, perhaps, more than in quality fruits, the question of early maturity is within a grower's control. I know a man who has been experimenting for seven years to perfect a high yielding strain of early maturing sweet

corn that would mature early enough to be put on the market a few days ahead of the regular crop. For the past three years he has disposed of his entire crop among hotels and restaurants here in Buffalo. Another grower has made a remarkable success with early peas and string beans. In the case of early corn, peas and beans, a few days' time makes a big difference in the prices obtained; in some instances a difference of more than 100 per cent. By careful selection of seed and scientific methods of culture these men obtain almost fabulous prices for their peas, beans and sweet corn. Another successful truck grower in Niagara county, N. Y., has succeeded in beating out the other fellows in muskmelons. By selecting seed from the choicest, early maturing melons, starting his plants under glass and putting them out under individual hot-houses—small boxes covered with glass to protect them from cold weather and insects—he is able to market his finest-flavored, home-grown muskmelon in neat and attractive baskets containing one-half dozen quality melons at \$1 per basket. His groceryman takes special pride in furnishing his most select trade with these melons, and handles all that he can raise during the early part of the season. By the time the other fellow's muskmelons are fit to sell he has cleaned up several hundred dollars from his crop. This year he started out to beat them on early tomatoes and succeeded in selling a large part of his crop at from five to seven cents per pound before his neighbors began to harvest their crops. By the time prices had dropped down to a dollar a bushel he had about cleaned up his early plantings. Such results are not wonderful, neither are they the result of chance nor accident;



Experience shows the above style of Egg Container to be Superior to the Ordinary Kind for Shipping Eggs that are apt to be Roughly Handled.

but they are the result of making a close study of the quality market and exercising clever and judicious management in meeting the demands for choice, early maturing vegetables.

Select Seeds with Care.

The question of seeds is very important to the grower of quality vegetables. The price he pays for seeds is a very small item compared to the value of the work they are doing, that is, it is a very small part of the expense of the crop, and for that reason the man who is growing quality vegetables must have the very best seeds. As a rule, the men who have achieved the greatest success with one or two early maturing crops have raised their own seed. In fact, it is the only way one can intensify the early maturing habit and obtain uniform results. The question of plant food is an equally important one; the cost of a few loads of manure or a few hundred pounds of fertilizer is a very small item compared with the results it will produce. The same thing applies to the labor question; a few days' extra labor being nothing compared with the expense of the crop.

During the past few months the interest in direct selling has been greatly stimulated by the parcel post, and, perhaps, it eventually may prove a great aid in reducing the high cost of living and enable the grower to obtain a larger portion of

the consumer's dollar, however, the problem of educating the city customers to pay cash for their produce must be worked out before growers will ship their produce to the city and take chances of making satisfactory collections. I know of some growers who have had rather disheartening results dealing with private families in the city and I would not advise the average grower to go after this class of trade. As a rule, business men, who have a commercial rating, are desirable customers, especially for winter produce to put into their cellars. It is much better to sell the smaller fruits and vegetables to the groceryman or hotel and get the cash than to be compelled to write several letters, make a few personal calls, and in the end find that some of your customers have moved to other parts of the city, or to some other city.

A whole lot of the farm to family advice that has been published by the agricultural papers during the past year has been written by persons who have made only a superficial study of the marketing problems in a big city. They have not considered the fact that the family demand for fruits and vegetables has, in a great measure, been supplanted by the restaurant and hotel demand. Thousands of fairly well-to-do families do comparatively no regular home-cooking. Perhaps they have a light breakfast, the man gets his noonday luncheon at a restaurant, and

for the evening dinner the wife depends upon the delicatessen shop, or they go out together and buy a square meal at a hotel or restaurant. These changes in the way of living in the big cities have greatly changed the demands for food products. People who formerly bought fruit and vegetables by the bushel at the public market now buy the same products by the quart or peck at the grocery store or depend upon canned goods from the delicatessen shop. All of these things have greatly changed the marketing problems.

In sections where good roads have been constructed the motor truck is proving an efficient aid in solving the marketing problem. It enables the grower to deliver his fruits and vegetables to city customers as cheaply and quickly as they could hire them hauled from the city markets or freight depots to their homes or business places. The grower of quality fruits and vegetables cannot afford to keep his teams on the road at a cost of from \$5 to \$6 per day when the same work can be performed with a motor truck at a greatly reduced cost. In many sections of the country the motor truck is enabling farmers who live twenty and thirty miles from large cities to make regular trips two or three times a week to deliver their produce to their city customers.

New York.

W. MILTON KELLY.

What Losses Occur in Marketing Eggs?

MUCH loss results from the present methods of handling eggs, and because of this loss we are anxious to secure definite information as to where it occurs and what the cause, or causes, may be.

It is very probable that if the methods used in handling eggs by the thousands of Michigan farmers are brought together and compared, that the extent of the loss may be learned and ways of overcoming it discovered. With this idea in mind the following 18 questions have been formulated which, when answered, will bring

4. How often do you replace the chaff in nests?
5. Do you allow hens the freedom of your premises, or are they confined in a poultry yard?
6. Do you allow roosters to run with the hens when the eggs are not used for setting purposes?
7. How often do you gather eggs, especially in warm weather?
8. What do you do with eggs from nests that have been hidden away by the hens?
9. Under what conditions do you hold eggs while waiting to be marketed? How long do you usually hold them?
10. Do you know how to candle eggs, and do you candle them before marketing?
11. Do you grade eggs before marketing? If so are they graded according to size only, or size and color and shape?
12. What do you do with dirty, cracked and abnormal sized eggs?
13. How do you market your eggs? (To grocerymen, egg dealers, hucksters, commission men or to consumers direct)?
14. Do dealers take your eggs as they come, or do they candle them and pay for the good ones only?
15. Do your dealers offer more for large clean eggs than they do for small dirty ones? If so how much?
16. If you ship eggs by express, do you have complaints of breakage? How do you pack eggs for such shipments?
17. Have you sent eggs by parcel post? What was your success and how did you pack the eggs?
18. Have you tried to secure private customers to take your eggs? What method or methods did you try and with what success?

SENSIBLE CO-OPERATION.

An effective way in which agents may co-operate with each other is well illustrated in the arrangements of County Agent H. P. Miller, of Portage county, Ohio, co-operating with District Supervisor W. M. Cook, who is doing county agent work in Green county in the same state. Portage county is one of the leading potato producing counties of the state, while Green county farmers do not produce sufficient potatoes for their own use.

Through a co-operative plan worked out by Messrs. Miller and Cook, three cars of potatoes have already been shipped direct from Portage county farmers to Green county farmers. Through this arrangement Green county farmers are not only saving from 10 to 20 cents per bushel on the potatoes purchased, but Portage county farmers have received more money for the potatoes so handled than they could have secured from local dealers. This feature of county agent work is capable of much development, and suggests a rational aid to the solution of the "high cost of living."

NOTICE TO NEW SUBSCRIBERS.

Those who are taking The Farmer for the first time should understand that they can have samples of milk and cream tested free of charge at the Michigan Farmer Laboratories, 674 Woodward avenue, Detroit. Follow these directions: Thoroughly mix milk or cream by pouring it three or four times from one can to another, immediately take large enough sample to fill a four-ounce wide-mouthed bottle, insert bottle in mailing tube and send by parcel post to the above address.

1. Do you keep grade or mongrel hens?
2. Do you keep all pure-bred hens?
3. How often do you clean your poultry house?

Crop and Market Notes.

Michigan.

Gratiot Co., Dec. 8.—Mild weather has prevailed and much fall-plowing done up to and including the 6th. Sunday the 7th, the ground froze. There is plenty of corn in the field at this date. All other work is well rounded up for winter, and it is considered the close of a very profitable year. Corn seems to be the crop in greatest demand in the market. It sells at 52c for 56 lbs. shelled. Bean market dull at \$1.65; hogs 7c; potatoes 50c; eggs 32c; butter 22@26c.

Emmett Co.—That the season may not have been a highly successful one with each individual farmer, is surely no fault of the season. True, the season did start in rather unfavorably, with its prevailing low temperature, but later on this drawback was quite largely eliminated by the fine, warm, favorable weather that came on the last days of June, and prevailed throughout the remainder of the season, and, in fact, is with us yet. There was sufficient precipitation to afford moisture for the full development of most crops, at least, in most instances, and especially where the services of an efficient dust mulch was made use of. To be sure, there was a deficiency of rain to afford ample moisture for the development of the early potato crop, but taking the season as a whole, conditions were pretty favorable for the farmer. One thing is sure, we can not expect them to be improved upon, as a general thing. Farmers fall plowed until late and did other work that could not be done under ordinary conditions. Farmers are marketing potatoes, and some hay and other farm products at these prices: Hay, loose \$14@15; potatoes 45c; beef 9@10c; pork 8½@9c; dairy butter 28c; eggs 32@34c. Dry wood is selling around \$2.75.

Hillsdale Co., Dec. 4.—Farmers in this section are better prepared for winter, so far as getting their work done is concerned, than for many years. More fall plowing is being done than has been done before in a long time. A light corn crop which it did not take so long to harvest, and favorable weather, explain the foregoing statements. Wheat is looking fine; better in fact, than in several years. Generally speaking, the year 1913 has not been a successful one for the farmers of this section. The unprecedented drought which lasted through to summer months and into the autumn, was the principal factor in making the year unsuccessful. Because of this drought, there was no good crop. All crops were light, some less than half the normal yield. Because of the light crops, farmers are disposing of but little grain of any kind. Most of the fall shipments of hogs have been disposed of at around 7c. Many chickens have gone on the market in the past few weeks at around 10c. Local quotations for butter is 28@30c; eggs 35c. Western lambs in considerable numbers, are being fed in some parts of the county.

Northern Isabella and Southern Clare Co.'s, Dec. 1.—Damp, disagreeable weather, with more or less rain prevails. Farmers are doing more fall plowing this fall than any fall since the country was cleared up. Fall pastures are fine and all kinds of stock looking good. Farmers are holding their beans for higher prices. Not much hay being sold. President Wilson said 1913 would be a prosperous year, and I think the average farmer here has no complaint. No. 2 red wheat 88c; No. 1 white wheat 88c; rye 58c; oats 37c; beans \$1.65; mammoth clover seed \$7.50; hay, baled, \$10@13; cream 29c; eggs 28c; fowl 8c; chickens 8c; ducks 11c; geese 8c; turkeys 16c; potatoes 50c; butter 27c; hogs, per cwt. \$9; beef \$8@10; mutton \$7; veal \$11; hides 9c.

Mecosta Co., Dec. 5.—Farmers have had an ideal fall to get their work done. Many of them are doing some plowing now. Crops have been very good here this year, especially potatoes and corn. Potatoes have been marketed quite freely at from 50@60c per bu. Though there are quite a quantity still in the farmers' hands. Practically no corn sold yet. Stock going in for the winter in good condition. As a whole the farmers have had one of the very best seasons ever experienced in this section.

New Jersey.

Monmouth Co., Dec. 5.—Weather unusually warm for December. Corn about all husked. The principal products being marketed are pork at 11@12c; poultry 18@25c; milk 4½c net. Very little corn is being sold at 60c per bu. Corn ripened very poorly, causing much mouldy corn and soft cob. 1913 can hardly be called a successful year for the farmers of this section.

New York.

Niagara Co., Dec. 10.—Flour is low and feed is high. Beans have been brisk, but have fallen; white beans \$1.90; red \$2.65, with outlook poor. General farming this year has been good, with good prices and fair crops; fruit good except apples, which were small crop with prices high. Prunes were abundant and sold at high prices. Cherries, plums and pears exceptionally large crops with low prices. Cabbage \$15 on track; hay \$11@12; poultry 9@13c; beef high, fat steers, live weight 5@6c; calves 10c; young cows, \$50@125; Jerseys \$80@150.

Pennsylvania.

Erie Co., Dec. 8.—Weather and roads have been fine until yesterday. Big snow storm on now. Considerable fall plowing has been done. Farmers have had quite a successful season. Prices very good. Veal \$10 per cwt alive; poultry 12c; pork 7c; eggs 40c; butter 35c; hay \$10; straw \$5; oats 45c; potatoes 75c; apples \$1; cows \$50@100; horses very high also. Farm work very well advanced.

Chester Co., Dec. 8.—This has been a very poor year for the farmer, as far as the crops are concerned, all of them, wheat, oats, corn, hay and potatoes fell short of an average crop. But the farmers of this county depend largely on the milk cow for their cash returns from

the farm and having had plenty of good pasture all summer and the crops being sufficient for feeding purposes during the winter, with milk bringing a fair price, the past season cannot be termed as an entirely unsuccessful one, although it has not been as good as 1912. Some few farmers have corn for sale at 65@70c per bu; potatoes 80c; not much hay for sale. Corn fodder 3c per bundle. The average price of milk for the year will net the farmer from 4@4½c per qt.

Montgomery Co., Dec. 6.—Buck and Montgomery counties had exceptionally fine weather until today. The past season has been successful. The farmers have an ample supply of feed and stock on hand for the coming winter. Profits are not as large as usual as there are too many middlemen to get a profit from what the farmer produces and consumes. Eggs 45c; creamery butter 43c; milk \$1.70; chickens, dressed 18c; wheat \$1; rye 75c; veal calves \$1.05; choice Timothy hay 70c; meadow 50c per cwt.

Lancaster Co., Dec. 8.—Farmers have had a success in crops, except tobacco. That is a half crop this year. They are now selling country butter at 35c; eggs 40c; chickens, live 12@14c; dressed turkeys 25@35c; ducks 14@17c; geese 14@18c; potatoes 75@80c; hogs, dressed 11c; calves, live weight 9@10c; tobacco now selling slow at 9@10c per lb; good fillers, seconds 2@3c.

Crawford Co., Dec. 10.—Had a heavy storm which began the 8th and lasted until the 10th. Much colder. Crops are nearly all stored; new seedling looks promising. Much wheat and rye have been sown in this section and looks fine. The season of 1913 in general has been a prosperous year. Cows are selling for \$50@75 a head. Milk is \$1.80 per cwt; apples 50c@1 per bu; eggs 40@45c; butter 35c; cheese 16@20c; wheat 99c; corn 72c; oats 43c; rye \$1.

Ohio.

Wayne Co., Dec. 8.—The weather for the past three weeks has been warm and damp, changing to colder weather on the 7th. Early sown wheat is looking fine; late sown is a good stand but very small. New seedlings looking good. Corn was a fair crop, yielding fairly well; nearly all in the crib at present writing. Milk cows scarce and high. Hogs quite plentiful but high in price; quite a number of auction sales for this time of the year. Everything selling well. Milch cows are selling from \$60@100; horses bringing somewhat less than last spring, ranging in price from \$50@225. Farmers have disposed of most of their surplus hay at a good price, ranging from \$12@14 per ton. Wheat selling at 98c; corn 35c per basket; oats 42c; eggs 36c; butter 35c.

Hancock Co., Dec. 8.—Damp, rainy weather retarded husking with machine. Cold spell starting in. About one-fourth of corn to husk yet. Wheat and rye look fine. Grass looks good. Some fall plowing has been done. Many hogs going to market at \$7.25 per cwt. Although some hogs being lost from cholera this was a very successful year for farmers. All crops but oats yielded above the average. Very little corn sold. Wheat, new 92c; corn 55c; oats 37c; rye 55c; clover seed \$7.25@8; eggs 35c; butter 26c; potatoes 75c; hay \$10@12.

Darke Co., Dec. 8.—Have been having ideal weather for the farmers. The corn shredders are around in every direction. Farmers are busy gathering the golden grain. With a week's nice weather corn husking will be a thing of the past. Corn not a full crop, but of good quality. Crop was cut in half by the drought in August and September. Hogs are all doing well. Wheat and rye doing fine, and if winter is not too severe, will promise a good crop. Potatoes were half a crop, now worth \$1 per bu. Corn 68c; oats 42c; poultry 9c; butter 35c; hogs 7½c; one-third of the 1913 tobacco crop is under contract at a reasonable price.

Harri-on Co., Dec. 12.—We are now having real winter weather and stock of all kinds are consuming feed for the first time this winter. This has been a very good year for farmers in this county. Potatoes were the nearest to a failure, other crops were fairly good, and the farmers seem to be prosperous and happy. Some cattle, hogs and sheep going to market at good prices. Turkeys are nearly all marketed at 16@17c. Sawmills are cleaning up the last of the timber in this county, and a good big oak tree will soon be a curiosity. Some farmers are planting catalpa and locust for post wood. Quite a lot of changes being made in the roads in order to get better grades over the hills of this country. Some concrete roads being built, and everyone seems to be awakened to the fact that we need better roads, and it looks as though we were going to have them.

Indiana.

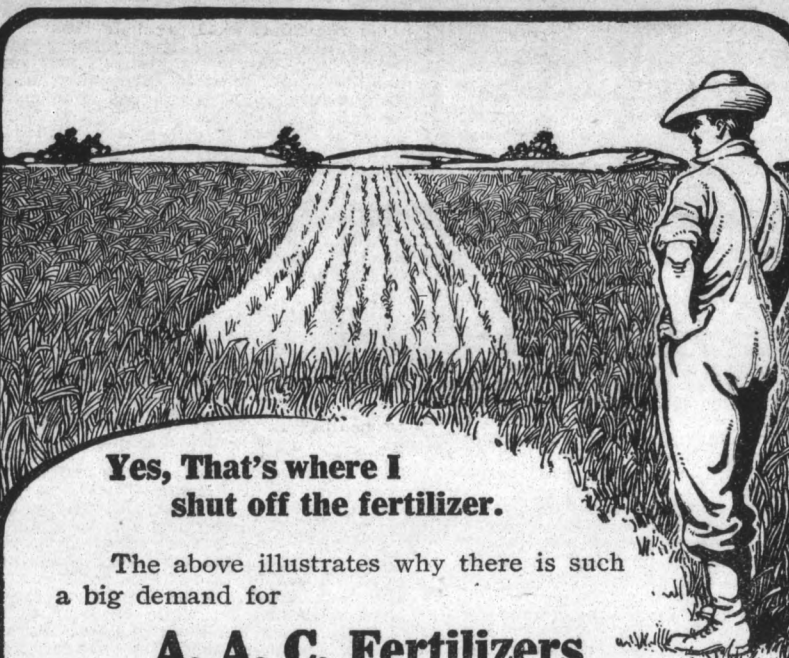
Elkhart Co., Dec. 7.—Farmers through husking corn, and are doing chores and cutting wood. The year has been a fairly prosperous one, crops have been fair and prices high. The usual acreage of wheat was sown, and is looking good. Farmers have plenty of feed and are keeping a large amount of stock. A large amount of corn is being sold at 55c; wheat 90c; rye 60c; potatoes 75c; eggs 34c; butter 30c. Good roads are being agitated among the farmers.

Illinois.

Perry Co., Dec. 1.—We have had plenty of rain for the last week, the ground is full of water now. The sky was clear this morning, warm enough to do without (Continued on page 570).

COMING NEXT WEEK.

Whether directly interested in co-operative enterprises or not, we need to be informed on the fundamentals of such institutions. In next week's issue of the Michigan Farmer will appear the first of a series of articles on Agriculture Co-operation, outlined by Prof. Hibbard, of Wisconsin University. The co-operative method of distributing goods is becoming popular. Look for the message in next week's issue.



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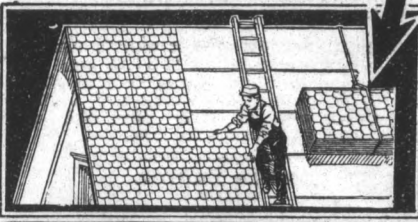
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NOTICE—At the annual meeting to be held in the City of Hastings on January 23, 1914, to commence at ten o'clock A. M., the members of the Michigan Mutual Tornado, Cyclone and Windstorm Insurance Company will vote on amendments of sections 5 and 7 of the charter of the said company. **D. W. ROGERS, Sec.** Dated at Hastings, Mich., Dec. 9, 1913.

When writing advertisers please mention The Michigan Farmer.

Markets.

GRAINS AND SEEDS.

December 16, 1913.

Wheat.—Since a week ago there has been a slight easing up of the tone in wheat circles, and prices are now ruling on a lower basis. This is the first reaction of moment since the grain started its upward flight a couple of weeks ago. The situation does not appear so very alarming to holders of the grain since news seems to support the contention of the bulls that prices should rule rather above present figures than below. Farmers have sold spring wheat liberally on both sides of the boundary line so that there is estimated to be proportionately less of the crop in their hands than ever before at this season. Then, too, primary receipts in the winter wheat sections are below those of a year ago, and the decrease in the visible supply amounts to practically three millions of bushels. Argentine is also complaining of unfavorable weather, while other producing countries have nothing to add to the argument of the bears. The bears are, however, making much of the excellent condition of the new winter wheat crop which is now in unusually good shape, and also of an unexpected bearish government report. Notwithstanding this fact, reports are at hand from Missouri, Illinois, and Indiana, stating that the plant is over-large and that the root system is small because of excessive moisture, conditions which will make winter-killing more probable. One year ago the price for No. 2 red wheat was \$1.05½ per bu. Local quotations for the past week were:

	No. 2 Red.	No. 1 White.	Dec.	May.
Wednesday	1.01½	1.01½	1.01½	1.06½
Thursday	1.01½	1.01½	1.01½	1.06½
Friday	1.00½	1.00½	1.00½	1.05½
Saturday	1.00	1.00	1.00	1.05
Monday	99½	99½	99½	1.05
Tuesday	99½	99½	99½	1.05

Chicago, (Dec. 16).—No. 2 red wheat, 92¼c; Dec., 88¾c; May, 92¼c per bu.

Corn.—The past proved a bearish week in the corn trade, values generally dropping a cent and a half. The depression was largely accredited to reports that farmers were delivering new corn in large quantities in those sections where the yield was normal this year. In spite of this fact, however, the visible supply is scarcely larger than a week ago, indicating that the offerings are quickly absorbed by the unusually wide buying circle. Many sections where feeding is extensive and where the corn crop is usually adequate to meet local demands, will go to make outside purchases necessary this year. It is to be expected that where farmers must have money that they will be tempted to sell corn at the present high figures, and it is but natural to expect that dealers will take advantage of the heavy offerings to bear values when they are buyers and not sellers. In some sections come reports that the farmers are preparing to hold the grain until next spring. One year ago the price for No. 3 corn was 48¾c. per bu. Local quotations are as follows:

	No. 2 Mixed.	No. 2 Yellow.
Wednesday	70	72
Thursday	70	72
Friday	69½	71½
Saturday	69	71
Monday	68½	70½
Tuesday	68½	70½

Chicago, (Dec. 16).—No. 2 corn, 72¼c; Dec., 70¼c; May, 70¼c per bu.

Oats.—This cereal has suffered a fractional decline in values, the result largely of the influence of the other two grains. The visible supply has decreased over one and one-half million bushels and there is a fairly lively demand for the grain, taking the country as a whole. Feeders are using a more liberal portion of oats because of the price. One year ago the selling price for standard oats was 37c per bu. Quotations for the past week are:

	No. 3 Standard.	White.
Wednesday	44	43½
Thursday	44	43½
Friday	43¾	43¼
Saturday	43¾	43¼
Monday	43¾	42¾
Tuesday	43¾	42¾

Chicago, (Dec. 16).—No. 3 white oats, 41¼@42¼c; Dec., 39¾c; May, 42¼c per bushel.

Beans.—The reports from farmers indicate that bean values are on about a \$1.75 basis at country elevators. The local board of trade quotes immediate and November shipments at \$1.75; January \$1.80 per bu. Chicago reports a small trade at steady prices for all except red kidneys which show a light advance. Pea beans, hand-picked, choice, are quoted at \$2.15; common \$1.75@2; red kidneys, choice, \$2.80 per bu.

Rye.—This cereal rises higher. No. 2 is quoted at 57c per bu.

Barley.—At Chicago barley is quoted at 52@75c per bu., while Milwaukee quotes the malting grades at from 58@76c.

Cloverseed.—Values are steady except for alsike which shows an advance here and a decline at Toledo. Prime spot is quoted at Detroit at \$9.40 per bu; Dec., \$9.40; March, \$9.50. Prime alsike steady at \$11.25 per bu. At Toledo, December is quoted at \$9.47 and prime alsike at \$11.10.

FLOUR AND FEEDS.

Flour.—Jobbing lots in ¼ paper sacks are selling on the Detroit market per 196 lbs. as follows: Best patent, \$5.30; sec-

ond, \$4.80; straight, \$4.50; spring patent, \$5.55; rye flour, \$4.60 per bbl.

Feed.—In 100-lb. sacks, jobbing lots: Bran, \$23; coarse middlings, \$27; fine middlings, \$27; cracked corn, \$31; coarse corn meal \$30; corn and oat chop \$25.50 per ton.

Hay.—All grades are steady with last week. Prices: Carlots on the track at Detroit are: No. 1 timothy \$16@16.50; standard \$15@15.50; No. 2 \$14.50@15; light mixed \$15@15.50; No. 1 mixed \$13.50@14. Chicago.—The better grades rule higher with a firm demand. Lower grades are steady. Choice timothy quoted at \$18.50 @19.50 per ton; No. 1, \$17@18; No. 2, \$14@15.

Straw.—Detroit.—Oat and wheat straw is higher. Rye, \$8@8.50; oat straw, \$7.50 @8; wheat straw, \$7@7.50 per ton.

Chicago.—Quotable as follows: Rye, \$7.50@8; oat, \$7@7.50; wheat, \$6.50@7.

DAIRY AND POULTRY PRODUCTS.

Butter.—The local market continues firm for better grades which are scarce. Prices are about steady. Quotations are: Extra creamery 34c per lb; firsts 31c; dairy 21c; packing stock 18c per lb.

Chicago.—The butter market is very quiet except on the very best grade product. For this there is a good demand and low supply. Prices on good grades have advanced 2c, while on poor butter the price has declined. Quotations are: Extra creamery 35@35½c; extra firsts 34@34½c; firsts 25½@29c; seconds 22@22½c; lades 20@21½c; packing stock 20 @20½c per lb.

Elgin.—Market firm at 35c per lb. which is a 1c advance over last week.

New York.—Prices for the best grades slightly higher; for poor stuff lower. Quotations are: Creamery extras 36@37c; firsts 28@34c; seconds 24@27c; packing stock 19@19½c as to quality.

Eggs.—The local egg market is steady. Mild weather is bringing larger receipts of fresh stock. Prices lower. Current receipts of fresh stock is quotable at 32c per dozen.

Chicago.—Market is steady with little change in prices. Consumption not what it ought to be. Receipts of fresh eggs still running light. Refrigerator stock liberally offered with demand light. Quotations: Miscellaneous lots, cases included, 26@31c according to quality; ordinary firsts 28@29½c; firsts 31@31½c; refrigerator stock steady at 26@27c for April firsts.

New York.—Market rather weak. Prices considerably lower for which the increase of the fresh supply is accountable. Quotations are: Fresh gathered extras 33@34c; extra firsts 35c; firsts 33@34c.

Poultry.—The local poultry market is active and prices on all stock except chickens are higher. Quotations: Live—Springs, 13½@14c; hens 14@14½c; No. 2 hens 9@10c; old roosters 9@10c; turkeys 20@23c; geese 14@15c; ducks 16@17c.

Chicago.—Trade good at steady prices. Turkeys, geese and ducks are slightly higher. Thin, poor stock of any kind is hard to sell. Quotations on live are: Turkeys, good weight, 16c; others 12c; fowls, general run 12½c; spring chickens 12c; ducks 14c; geese 13c.

Cheese.—Market is steady with values slightly lower. Wholesale lots, Michigan flats 15@16c; New York flats 16½@17c; brick cream 16@16½c; limburger 14@15c.

Veal.—Colder weather has steadied the market. Prices slightly higher on fancy veal. Quotations: Fancy 13½@14c per lb; common 10@11c.

Chicago.—Market quiet. Supply is meeting demand. Prices are unchanged. Quoted as follows: Good to choice, 90@110 lbs., 13½@14c; fair to good, 60@90 lbs., 11½@13½c.

FRUITS AND VEGETABLES.

Apples.—Prices firm and market active. Quotations: Snow \$4@4.50; Spy \$4.50@5; Greening, \$3.50@4.50; King, \$4.50@4.75; Steele Red, \$5@5.50 per bbl; No. 2, \$2.25@2.75 per bbl. At Chicago prices rule firmer under a moderate demand. Values for country packed rule from \$3.50 @5.50 per bbl. No. 1 Jonathan's selling best; Spies are \$3.75@4.25; Baldwins are \$3.50@4.

Potatoes.—The local market is steady. Demand is fair. Quotations: In bulk 60 @65c per bu; in sacks 70@75c per bu for carlots. At Chicago prices are without important change. Buyers take hold of fancy lots and there was a fair trade of the cheapest stock; medium grades were hard to sell. Michigan stock is held at 60@69c.

Cabbage.—Steady at last week's figures. Good quality quoted at \$2@2.25 per bbl. The demand is fair at Chicago with offerings light; prices on white are higher. Quotations rule at \$1.75 per bbl. for white, and \$1.75@2.50 for red.

GRAND RAPIDS.

The potato movement continues slow, with buying price around 45c at loading stations in Cadillac territory. Many tubers are being held in storage for a higher market. Much hay is being moved by farmers during the pleasant weather, the price paid here for timothy, loose in loads, ranging from \$16@19, or \$3@4 higher than a year ago. Dressed hogs are lower than last week, the price paid being around 10c. In live poultry fowls are quoted at 10½@11c; turkeys 16c; ducks 10c; geese 8c. Wheat is worth 97c; oats 40c; corn 75c; beans \$1.60.

PRICES ON DETROIT EASTERN MARKET.

The Eastern market was not large on Tuesday morning, and business was easier than for some time past. The reason is accredited largely to the prevailing moderate weather. Because of it produce can be moved as readily as in the fall and

thus the trade is kept fairly well supplied. Apples are in a strong position and are ruling from 90c for Ben Davis to \$1.50 for the hand-picked Steele Reds. Potatoes have taken a slump and are now going around 75c for good stock. Cabbage ranges from 65@85c per bu; carrots 75c; parsnips 75c; onions \$1.25@1.50; celery 30c bunch. Hay is not moving rapidly with the better grades of loose quoted around \$18 per ton. Pork was quoted at \$10.50 per cwt.

THE LIVE STOCK MARKETS.

December 15, 1913.

Buffalo.

(Special Report of Dunning & Stevens, New York Central Stock Yards, East Buffalo, New York).

Receipts of stock here today: Cattle, 290 cars; hogs, 150 double decks; sheep and lambs, 120 cars; calves, 700 head.

With around 300 cars of cattle on this market here today and 30,000 reported at Chicago, our market on all grades of fat cattle is 25c per cwt. lower, and on good grades of heavy weight cattle from 35@50c per cwt. lower.

We quote: Best 1350 to 1450-lb. steers, natives, \$8.25@8.60; best 1200 to 1300-lb. do, \$8@8.25; best 1100 to 1200-lb. do, \$7.25 @7.75; coarse and plain weighty steers, natives, \$6.90@7.35; best Canada steers, 1350 to 1450, \$8@8.50; do 1150 to 1250, \$7 @7.50; choice handy steers, 1000 to 1100, \$7.75@8.25; fair to good steers, 1000 to 1100, \$7@7.50; best cows, \$6.50@7; butcher cows, \$5.25@5.75; cutters, \$4.25@4.75; trimmers, \$3.25@3.75; very common old rams, \$2.75@3.25; best heifers, \$7.15@7.60; heavy prime fancy heifers, \$7.50@8; medium butcher heifers, \$6@6.50; light do, \$5.25@5.85; choice heifers, \$7@7.50; best feeding steers, dehorned, \$7.10@7.25; fair to good do, \$6.35@6.50; fancy stock steers \$6.25; best do, \$5.60@6; common light do, \$5.10@5.25; best heavy bulls, \$6.60@7; best butcher bulls, \$6.35@6.75; bologna bulls, \$5.60@6; stock bulls, common to good, \$4.85@5.75; best milkers and springers, \$7.50@100; medium to good, \$50@70.

Our hog trade was extremely dull and strong 10c lower on all grades except pigs owing to liberal supply both here and at other points. A general one-price market for everything outside of pigs, bulk selling at \$7.90. Pigs and lights up to 8c; roughs \$7@7.25; stags \$6@7; late trade was dull and quite a number going over unsold, mostly yarded too late to sell.

The market was active today on handy lambs and sheep, dull on heavy. Prices 15@25c lower than the close of last week. Choice lambs selling at \$7.75@7.85. Close steady. Look for shade higher prices. We quote: Choice lambs, \$7.80@7.85; cull to fair, \$5.50@7.75; yearlings, \$6@6.50; bucks, \$3.50@3.75; wethers \$5@5.25; handy ewes \$4.60@4.75; heavy do, \$4.50@4.60; cull sheep, \$3.50@3.75; veals, choice to extra, \$11.50@12; fair to good \$10@11.25; heavy calves \$5.50@8.

Chicago.

December 15, 1913.

Cattle, Hogs, Sheep. Receipts today 35,000 55,000 45,000 Same day last year, 37,114 35,103 58,957 Receipts last week, 64,821 221,184 152,964 Same week last year, 62,697 169,449 140,048

This week opens with an extra large cattle supply, following a week of excessive runs, and the general market is 10 @15c lower, choice yearlings excepted. A carload of choice yearlings brought \$9.65, and a sale was made of two cars of exceptionally prime Iowa-fed 1,025-lb. yearlings at \$10, a new record-breaker for the season. Hogs opened about 5c lower, but the break was pretty nearly recovered later on good buying. The sales took place at \$7.45@7.90. Hogs marketed last week averaged 215 lbs., comparing with 222 lbs. one year ago, 213 lbs. two years ago, 225 lbs. three years ago and 216 lbs. four years ago. Sheep and yearlings went at generally steady prices, but lambs were about 25c lower, the best going at \$8.

Cattle opened largely 10@15c higher on Monday last week, with a brisk general demand and a fairly large run, but weakened later in the week, the Wednesday receipts being liberal, rallying on Thursday on a light supply. The bulk of the beef steers disposed of during the week brought \$7.75@8.90, with fair transactions on the two big days at \$9@9.60, prime yearlings going at \$9@9.50 and the better class of heavy steers at \$8.60@9.25. The cheaper class of light-weight steers sold at \$6.50@7.50, fair to medium lots bringing \$7.60@8.20 and a pretty good kind \$8.25@8.50. Butcher cows and heifers opened Monday 10@15c higher, but suffered large declines later in the week, the demand falling off materially. Sales were at a range of \$4.80@8.50 for ordinary to prime lots, with occasional small sales of prime yearling heifers at \$8.75@9. Canners sold at \$3.25@4.25, cutters at \$4.30@4.75 and bulls at \$4.75@7.75. Stockers and feeders had a fair sale, the former going at \$5@7.50, only prime little yearlings selling anywhere near the top figures, while feeders that carried much weight sold usually at \$6.40 @7.50 and a few as high as \$7.65. Stock and feeding cows and heifers had a fair sale at \$4.85@6.75. Calves sold freely on a basis of \$5@8 for coarse to good heavy weights and at \$9.50@11.50 for fair to prime light vealers. For milk cows there was a slow demand at \$60@90 per head, buyers getting them frequently at lower prices, while ordinary cows had to go for beef. The recent colder weather proved a help to the sale of beef, but a greater fall in temperature was needed to make the consumption really large. The close of the week saw beef steers largely a dime higher than a week ago and cows largely 15@20c lower.

Hogs were marketed here and elsewhere with great liberality last week, the dearthness of corn evidently acting as a spur to early shipments in many instances, for an unduly large percentage

of the offerings continued to comprise underweights and mere pigs. There was a good local eastern shipping demand most of the time, and the market showed considerable rallying power, prices reacting after declines. Much the strongest demand centered in the choicer class of heavy lard hogs, which made up much the smallest proportion of the daily runs, and they sold at a generous premium, while the packers were very apt to neglect the good 180 to 220-lb. mixed offerings, which were in liberal supply. The lighter hogs had to go at a large discount, as has been the rule for many weeks, and light-weight pigs sold lowest of all. While hogs have been selling much below the high time of the year, they are still bringing better figures than in most former years. The week's close saw hogs selling at \$7.45@7.92½, comparing with \$7.30@7.90 a week earlier, pigs closing at \$6@7.50 and throwout packing sows at \$7.10@7.50.

Sheep and lambs have been doing very much better for their owners ever since the range shipping season closed, thereby stopping this former vigorous outside competition, and fat lambs of desirable size have sold especially well, going at the highest prices recorded in a long time. As usual, choice lambs sold far higher than anything else in the live mutton line, with fat little yearlings on the lamb order selling next best. The one unfavorable feature of the market was the tendency of sheepmen to ship in excessive supplies, this forcing some reactions in prices, particularly for the less desirable flocks. The small percentage of feeders offered caused these to go at full values, however, there being a strong demand at the highest prices of the season. Some two-year-old feeding wethers brought \$4.85 and some yearling feeders \$5.85, new high records. Closing sales of the week were made of lambs at \$5.50@8.25 for inferior to prime, with feeder lambs scarce and firm at \$6.35@7. The top for prime Christmas lambs stood 25c higher than any sales of the preceding week and was as high as any sales since July. Yearlings sold at \$5.75@7.15, according to weight, wethers at \$5@5.85, ewes at \$3@4.85 and bucks at \$3.25@4.

CROP AND MARKET NOTES.

(Continued from page 569).

fire with the doors and windows open. Wheat, rye and grass are doing fine, except on very wet land. Stock peas \$1.50 per bu; wheat \$1; corn 80c; oats 45c; potatoes (northern) \$1 per bu; hay \$15@20; butter 25c; eggs 38c; sweet potatoes 50c. I think from what I can find out, farming was not an unqualified success in this county this year, as farmers have but little to sell, and some will have to buy feed before spring.

LaSalle Co., Dec. 1.—Breeder's Sales Company recently organized here with great enthusiasm, by a number of influential stock breeders and horsemen of this vicinity. There is every prospect of success for this new enterprise. Speaking in a general sense, 1913 has been a very good season. Farmers have disposed of their corn and wheat or are holding them for better prices. All kinds of fowl selling well. Turkeys 18@20c; retailing at 25c and up. Roads in bad condition, due to a week of rainy weather.

Missouri.

Lafayette Co., Dec. 9.—This year has been a successful year for the farmers in this section, although the drought has done considerable damage. Wheat was good; corn a half crop; clover good. Good timothy hay is very scarce. Pastures were good in spring and late fall. The drought has killed some bluegrass in this section. The farmers have plenty of roughage for cattle. I think the hog rush is over in this county. Old corn sells at 75@80c per bu. New corn at 65@70c. Hogs at \$7 per cwt; butter at 35c; eggs at 32c; buttermilk can be had at the creamery for 5c for 8 gals.

Vernon Co., Dec. 8.—Weather fine, with some stock on pasture yet. Plenty of green vegetables in the gardens. Most all fall plowing done. The past season has been a bad season for the farmer, owing to the drought, with the exception of turkeys, which were a good crop. They are worth 15½c; chickens 10c; butter 20c; eggs 32c; corn 85c; oats 48c; wheat \$1; hay \$16; hogs 7c; cattle 4@6c.

Kansas.

Dickinson Co., Dec. 8.—We have had two weeks of continual wet weather and heavy rains, but it is still quite warm. Wheat and late sown alfalfa look fine. No corn to husk; shipped in is selling at 74c. Some cattle are being fed rough feed plentiful. The year 1913 has been a prosperous year for Kansas farmers, with the exception of corn, which was a failure in nearly all parts of the state. Produce high; butter 30c; eggs 34c; chickens 11c. Prairie hay was short but there is enough alfalfa to take its place.

Nebraska.

Hitchcock Co., Dec. 6.—The month of November was very nice. Warm and fine weather for the farmers to finish up fall work, but the first week of December brought the reverse with rough misty, rainy weather, ending with snow. This has been the most moisture that as fallen this time of year for some years back. Wheat is in fine shape with the ground thoroughly soaked. It was very dry all through May, June, July, and therefore was not very successful for farmers as the small grain crop was cut very short and corn was a failure except in some places, though enough was raised so as not to cause the farmers to buy feed or seed. Scarcely any grain is sold now. Wheat 71c top; corn, shipped in 73c; barley 50c.

South Dakota.

Deuel Co.—Weather fine; no frost, no snow; plowing nearly done; some plowing new ground in fine shape for spring work; cattle and hogs doing fine; barley down to 45c a bu; not much corn for sale.

THIS IS THE FIRST EDITION.

In the first edition the Detroit Live Stock Markets are reports of last week; all other markets are right up to date. Thursday's Detroit Live Stock markets are given in the last edition. The first edition is mailed Thursday, the last edition Friday morning. The first edition is mailed to those who care more to get the paper early than they do for Thursday's Detroit Live Stock market report. You may have any edition desired. Subscribers may change from one edition to another by dropping us a card to that effect.

DETROIT LIVE STOCK MARKETS.

Thursday's Market.

December 11, 1913.

Cattle.

Receipts, 1990. Canners and bulls steady; all others 25c lower than last week; milch cows \$3@5 lower.

We quote: Best steers and heifers, \$8 @9; steers and heifers, 1000 to 1200, \$7 @7.75; do 800 to 1000, \$7@7.50; do that are fat, 600 to 800, \$6.25@6.75; do 500 to 700, \$5.50@6.50; choice fat cows, \$6@6.25; good fat cows, \$5.50@5.75; common cows, \$4.50 @5; canners, \$3@4; choice heavy bulls, \$6.25@6.50; fair to good bolognas, bulls, \$5.50@6; stock bulls, \$5@5.50; choice feeding steers, 800 to 1000, \$6.75@7; fair do, 800 to 1000, \$6.25@6.75; choice stockers, 500 to 700, \$6.50@6.75; fair do, 500 to 700, \$6@6.25; stock heifers, \$5.50@6; milkers, large, young, medium age, \$75@80; common milkers, \$40@50.

Bishop, B. & H. sold Parker, W. & Co. 27 butchers av 800 at \$6, 10 do av 977 at \$7, 28 do av 686 at \$6.50, 22 do av 620 at \$6, 5 cows av 1034 at \$4.75, 26 steers av 1103 at \$8.25, 6 cows av 855 at \$4; to Strong 2 stockers av 650 at \$5.85; to Sullivan P. Co. 7 cows av 947 at \$5.25, 5 do av 928 at \$4.25, 13 butchers av 784 at \$6.60; to Mason B. Co. 5 cows av 1026 at \$5.25; to Thompson Bros. 3 do av 910 at \$4, 1 do weighing 1150 at \$5; to Newton B. Co. 11 do av 1107 at \$5.75, 4 do av 905 at \$5.25, 9 steers av 900 at \$7.25; to Applebaum 4 heifers av 505 at \$5.40; to Rattkowsky 6 cows av 1120 at \$5.35, 4 do av 1260 at \$6.60, 2 do av 1210 at \$6; to Howe 20 feeders av 807 at \$6.70, 4 do av 790 at \$6.70; to Weecher 15 steers av 1017 at \$7.60; to LaBoe 3 feeders av 850 at \$6.75; to Goose 5 cows av 960 at \$4.80; to Mich. B. Co. 26 steers av 1015 at \$7.50, 22 do av 1085 at \$7.40, 2 cows av 1210 at \$6, 1 do weighing 960 at \$5; to Hammond, S. & Co. 2 cows av 1165 at \$6.25, 1 do weighing 1100 at \$5.50, 3 bulls av 1457 at \$6.25, 2 do av 930 at \$5.75, 12 steers av 900 at \$7.20; to Mich. B. Co. 1 bull weighing 1160 at \$6.50, 3 cows av 1073 at \$5.25; to Sullivan P. Co. 4 butchers av 815 at \$6.25, 2 cows av 1185 at \$6.

Spicer & R. sold Sullivan P. Co. 2 cows av 815 at \$4.25, 3 do av 913 at \$6, 1 bull weighing 1550 at \$6.50; to Hammond, S. & Co. 1 do weighing 1550 at \$6.25, 1 do weighing 1660 at \$6.35; to LaBoe 6 feeders av 808 at \$6.75; to Strong 3 stockers av 600 at \$6; to Francis 3 do av 470 at \$6; to Sullivan P. Co. 3 cows av 1073 at \$6.75, 5 do av 1014 at \$4.50, 1 steer weighing 1050 at \$7.50, 4 do av 915 at \$6; to Hirschleman 14 butchers av 928 at \$6.60; to Mich. B. Co. 15 do av 900 at \$6.60; to Rattkowsky 4 cows av 980 at \$4.85; to Hammond, S. & Co. 3 do av 793 at \$3.75; to Sullivan P. Co. 2 do av 990 at \$5.75, 3 steers av 833 at \$6.75, 2 cows av 820 at \$3.90, 1 steer weighing 600 at \$6.25; to Watts 2 cows av 1025 at \$5.75, 3 heifers av 800 at \$6.75.

Haley & M. sold Newton B. Co. 1 heifer weighing 760 at \$6.75, 1 bull weighing 730 at \$6, 14 steers av 870 at \$7.50; to Kull 3 butchers av 703 at \$5.80, 5 do av 674 at \$6; to Rasmick 4 cows av 905 at \$5; to Hirschleman 9 steers av 730 at \$6.40; to Sullivan P. Co. 2 cows av 945 at \$5.85, 3 do av 1157 at \$5.85, 1 do weighing 880 at \$4, 2 do av 1210 at \$5.85; to Applebaum 2 cows av 1125 at \$4.50; to Bowersox 4 stockers av 627 at \$6.25, 12 do av 653 at \$6.40; to Kamman B. Co. 4 cows av 845 at \$5.30, 10 steers av 936 at \$7; to Rattkowsky 9 cows av 1090 at \$5.70; to Mich. B. Co. 11 butchers av 833 at \$6.75, 1 cow weighing 1200 at \$5.85; to Bowersox 8 feeders av 762 at \$6.50; to Kamman B. Co. 4 cows av 845 at \$5.30, 10 steers av 936 at \$7; to Rattkowsky 9 cows av 1090 at \$5.70; to Mich. B. Co. 11 butchers av 833 at \$6.75, 1 cow weighing 1200 at \$5.85; to Goose 4 cows av 1030 at \$4.50; to Bowersox 2 stockers av 675 at \$6.65; to Thompson Bros. 1 steer weighing 930 at \$8.

Roe Com. Co. sold Mich. B. Co. 7 butchers av 640 at \$6.15, 7 do av 741 at \$6.25, 1 bull weighing 790 at \$5.50, 5 cows av 1000 at \$5.60, 3 do av 1107 at \$5.50, 7 butchers av 630 at \$6; to LaBoe 5 stockers av 632 at \$6; to Strong 6 do av 626 at \$6, 14 do av 547 at \$6, 5 do av 582 at \$6; to Bresnahan 2 heifers av 615 at \$5.25, 2 do av 610 at \$5.25; to Rattkowsky 3 cows av 960 at \$5, 4 butchers av 422 at \$5.50; to Hammond, S. & Co. 1 bull weighing 1190 at \$5.75; to Sullivan P. Co. 13 butchers av 861 at \$6.65, 2 steers av 895 at \$7, 2 butchers av 790 at \$6.60; to Mich. B. Co. 6 cows av 1070 at \$5.75, 3 heifers av 760 at \$6, 1 do weighing 1090 at \$7.75; to Goose 2 cows av 1150 at \$6.25; to Hammond, S. & Co. 4 steers av 917 at \$7.20, 5 cows av 1060 at \$5.60; to Newton, B. Co. 2 butchers av 865 at \$6.50; to Thompson B. Co. 7 do av 347 at \$5.50, 2 cows av 735 at \$4.

Veal Calves.

Receipts, 474. Market strong. Best \$11@11.50; others \$8@10.50.

Roe Com. Co. sold Nagle P. Co. 2 av 145 at \$11; to Rattkowsky 4 av 200 at \$5.50; to Sullivan P. Co. 3 av 165 at \$11, 1 weighing 140 at \$9, 1 weighing 110 at \$10.

Haley & M. sold Nagle P. Co. 1 weighing 130 at \$11; to Parker, W. & Co. 7 av 175 at \$11, 4 av 150 at \$11, 2 av 140 at \$11, 2 av 125 at \$11.

Spicer & R. sold Parker, W. & Co. 3 av 160 at \$11.50, 9 av 155 at \$10.80; to Newton B. Co. 2 av 185 at \$11; to Parker, W.

& Co. 3 av 275 at \$7.50, 1 weighing 100 at \$10, 7 av 145 at \$11, 5 av 125 at \$11.

Sheep and Lambs.

Receipts, 8036. Market steady to strong. Best lambs, \$7.75@7.90; fair to good do, \$7.25@7.50; light to common do, \$6.50@7; yearlings, \$6@6.50; fair to good sheep, \$4 @4.50; culls and common, \$3@3.50.

Roe Com. Co. sold Levy & Son 111 lambs av 75 at \$7.85; to Mich. B. Co. 51 do av 55 at \$7, 7 do av 65 at \$7.50, 3 sheep av 95 at \$4.25, 14 do av 105 at \$4.25; to Barlage 10 lambs av 35 at \$5, 32 do av 60 at \$7.10, 62 sheep av 85 at \$4.25; to Mich. B. Co. 40 lambs av 60 at \$5.50.

Bishop, B. & H. sold Swift & Co. 212 lambs av 86 at \$7.75, 29 do av 80 at \$7.65, 136 do av 85 at \$7.75, 45 do av 85 at \$7.65; to Sullivan P. Co. 30 sheep av 95 at \$4.25, 9 do av 105 at \$3.75, 111 lambs av 55 at \$6.75, 51 sheep av 110 at \$4, 67 do av 125 at \$4.50, 8 lambs av 75 at \$7; to Parker, W. & Co. 16 do av 55 at \$7, 49 do av 80 at \$7.50; to Levy & Son 211 sheep av 115 at \$4.50, 36 lambs av 78 at \$7.85, 20 do av 80 at \$7.75; to Thompson Bros. 21 sheep av 97 at \$4, 21 do av 95 at \$3.50; to Hammond, S. & Co. 16 lambs av 65 at \$6.75, 10 do av 61 at \$6.85, 119 do av 78 at \$7.80, 36 do av 75 at \$7.80, 11 do av 68 at \$6.75; to Sullivan P. Co. 19 do av 55 at \$6.65, 16 do av 60 at \$6.85; to Thompson Bros. 12 do av 70 at \$7.35; to Kull 31 do av 50 at \$6.25; to Hammond, S. & Co. 15 do av 85 at \$7.85; to Mich. B. Co. 64 do av 75 at \$7.75, 33 sheep av 95 at \$4, 103 lambs av 75 at \$7.75; to Sullivan P. Co. 23 do av 50 at \$6.50; to Hammond, S. & Co. 40 do av 85 at \$7.90, 49 do av 70 at \$7.65; to Nagle P. Co. 104 do av 75 at \$7.75, 90 do av 80 at \$7.65, 46 do av 80 at \$7.85, 100 do av 78 at \$7.85; to Hammond, S. & Co. 14 do av 65 at \$6.85.

Hogs.

Receipts, 7619. None sold up to noon; bidding as follows:

Range of prices: Light to good butchers, \$7.65@7.70; pigs, \$7.60; mixed, \$7.65; heavy, \$7.65@7.70.

Haley & M. sold Hammond, S. & Co. 460 av 200 at \$7.70, 450 av 180 at \$7.65.

Bishop, B. & H. sold Parker, W. & Co. 1010 av 210 at \$7.70, 3500 av 180 at \$7.65, 515 av 160 at \$7.60.

Roe Com. Co. sold Sullivan P. Co. 280 av 200 at \$7.70, 270 av 180 at \$7.60.

Friday's Market.

December 12, 1913.

Cattle.

Receipts this week, 2344; last week, 1658; market dull.

We quote: Best steers and heifers, \$8.75; steers and heifers, 1000 to 1200, \$7 @7.65; do 800 to 1000, \$7@7.50; steers and heifers that are fat, 600 to 800, \$6@6.50; do 500 to 700, \$5.25@6; choice fat cows, \$6; good do, \$5.50@5.75; common do, \$4.50 @5; canners, \$3@4; choice heavy bulls, \$6.25@6.50; fair to good bolognas, bulls, \$5.50@6; stock bulls, \$5@5.25; choice feeding steers, 800 to 1000, \$6.25@6.75; choice stockers, 500 to 700, \$6.50@6.75; fair do, 500 to 700, \$6@6.25 stock heifers, \$5.50@6; milkers, large, young, medium age, \$75 @80; common milkers, \$40@50.

Veal Calves.

Receipts this week, 625; last week, 728; market steady. Best, \$11@11.50; others, \$8@10.50.

Sheep and Lambs.

Receipts this week, 1005; last week 9199; market easy and 10c lower than on Thursday. Best lambs, \$7.75; fair to good lambs, \$7.25@7.50; light to common lambs, \$6.50@6.75; yearlings, \$6@6.40; fair to good sheep, \$4@4.50; culls and common, \$2.50@3.50.

Hogs.

Receipts this week, 10,822; last week, 12,720; market steady.

Range of prices: Light to good butchers, \$7.65@7.70; pigs, \$7.70; mixed, \$7.65; heavy, \$7.65@7.70.

NATIONAL BREED MEETINGS HELD AT THE INTERNATIONAL.

(Continued from page 557).

At the annual meeting of the Duroc Association, officers were elected as follows: President, Henry W. Matern, of Lostant, Ill.; secretary, R. J. Evans; treasurer, Ora Jackson.

Dairy Shorthorn Association.

At a meeting of this new organization held Wednesday, Dec. 3, the following officers were elected: President, G. H. Davison, Millbrook, N. J.; vice-president, S. D. May, Granville, Center, Pa.; secretary-treasurer, C. B. Wade, Orangeville, Ohio. Directors, one year, D. F. McLaughlin, South Dakota; W. H. Otis, Colorado Springs, Col.; Wm. Grace, Barrington, Ill.; two years, F. McMartin, Claremont, Minn.; F. Holland, Milton, Iowa; S. H. Davison, three years, Geo. Taylor, Shelburne, Mass.; L. D. May and C. B. Wade.

Red Polled Cattle Club of America.

At the annual meeting of this club, held Wednesday, Dec. 3, Secretary Martin's report showed an increase in receipts over 1912 of \$1,900. Officers were elected as follows: President, Charles Kraft; vice-president, Adolph A. Arp; secretary, Harley A. Martin; treasurer, W. S. Hill; directors, Chas. Graff, Jos. Kestel and A. P. Arp.

At the annual meeting of this association in the Record Building, Dec. 2, the following officers were elected for the ensuing year: President, D. C. Lewis, Camp Point, Ill.; vice-president, F. Poirson, Ft. Wayne, Ind.; second vice-president, J. R. Allen, Draper, Utah; secretary-treasurer, F. W. Harding, Waukesha, Wisconsin.

American Oxford-Down Record Association.

The annual meeting was held in the Record Building, Thursday evening, Dec. 4. One of the features of this meeting was a discussion of the dog question, and J. C. Williamson, of Ohio, was appointed to confer with other Record Associations relating to the matter of securing protective legislation in the various states. Officers were elected as follows: President, Henry Arkell, Teeswater, Ont.; vice-president, R. J. Stone, Stonington, Ill.; secretary-treasurer, W. A. Shaffer, Hamilton, Ohio; directors, C. C. Croxen, Atalissa, Iowa; J. C. Williamson, Xenia, Ohio.

GRAND CHAMPIONSHIP AWARDS AT THE INTERNATIONAL.

Carlot Grand Championships.

Cattle.—Fat steers, Escher & Ryan, Irwin, Ia., on Angus yearlings; feeders, A. A. Neale, Montrose, Col., on Shorthorn yearlings.

Sheep.—Knollin & Finch, Soda Springs, Idaho, on western lambs.

Hogs.—I. D. King, Burlington, Kas., on Berkshires.

Individual Grand Championships.

Steer.—J. D. McGregor, Brandon, Manitoba, on Glenacree Victor 2nd, grade Angus, senior yearling.

Wether.—J. & D. J. Campbell, Woodville, Ont., on Shropshire yearlings.

Barrow and Pen Barrows.—John Frances & Sons, New Lenox, Ill., on Poland Chinas.

Breeding Championships.—Cattle.

Shorthorns.—Grand champion bull, White & Smith, St. Cloud, Minn., on Ringmaster; grain champion cow, Anoka Farms, Waukesha, Wis., on Maxwellton Missie.

Aberdeen-Angus.—Grand champion bull, W. A. McHenry, Denison, Iowa, on Erwin C.; grand champion cow, same on Blackcap.

Herefords.—Grand champion bull, W. J. Davis, Jackson, Miss., on Point Comfort, 14th; cow, Warren McCray, Kentland, Ind., on Perfection Lass.

Polled Durhams.—Bull, J. H. Miller, Peru, Ind., on Sultan's Creed; cow, same on Syph of Miami.

Galloways.—Bull, C. S. Hetchner, Claridon, Iowa; cow, G. E. Clark, Topeka, Kas., on Datsy Dimple.

Red Polled.—Senior champion bull, Geo. Inichen & Sons, Geneva, Ind.

Sheep.

Shropshire.—Ram and ewe, Iroquois Farm, Cooperstown, N. Y.

Cotswold.—Ram, E. F. Park, Burford, Ont.; ewe, Anoka Farms, Waukesha, Wis.

Dorset.—Ram and ewe, W. H. Miner, Chazy, N. Y.

Lincoln.—Ram and ewe, H. M. Lee, Highgate, Ont.

Hampshire.—Ram, Walnut Hill Farm, Donerail, Ky.; ewe, W. W. Arnold, Galesville, Ill.

Southdown.—Ram and ewe, Chas. Leet & Sons, Mantua, O.

Cheviot.—Ram, G. W. Parnell, Wingate, Ind.; ewe, R. & W. Postle, Camp Chase, Ohio.

Swine.

Berkshire.—Boar, Eimendorf Farm, Lexington, Ky.; sow, W. E. Spicer, Bushnell, Ill.

Chester-White.—Boar, Thomas Kent, Walnut, Ia.; sow, J. W. Brendel, Zionsville, Pa.

Poland-China.—Boar and sow, J. E. Meharry, Tolono, Ill.

Yorkshire.—Boar, F. M. Buck, LaPorte, Indiana.

Hampshire.—Boar and sow, Saltone Stock Farm, Greensburg, Ind.

Horses.

Percherons.—Grand champion stallion, J. Crouch & Sons, Lafayette, Ind., on Idelfonse; mare, same on Lapalisse; American bred stallion, Burgess Stock Farm, Wenona, Ill., on Sultan; mare, Dunhams, Wayne, Ill., on Mirabella.

Clydesdale.—Senior champion stallion, Conyngham Bros., Wilkesbarre, Pa., on Fyvie Baron; mare, Fairholme Farm, New Market, N. J., on Harvester Baroness.

Shire.—Grand champion stallion, Burgess Stock Farm, on Brocadden Hereford; mare, Geo. McCray, Fithian, Ill.

Suffolk.—Grand champion stallion, Hawthorne Farm, Ill., on Westside Chieftain, mare, same on Geneva.

PURE-BRED CATTLE SALES AT THE INTERNATIONAL.

At the Hereford sale held Dec. 5, 46 head sold for \$25,380, averaging \$561.50, the top being \$2,200 for the senior bull calf Standard II. The 26 bulls sold averaged \$626.70.

The International Shorthorn sale held Dec. 4, resulted in 42 head being sold at an average of \$426.80. Maxwellton Roan Lady topped the sale at \$1,275, while Michael Wagner's Ohio-bred heifer, Mary Abbottsbum 9th, brought \$1,000.

Fifty-two head of Angus sold for \$14,160, averaging \$272.30 at the American Association sale held Dec. 3. The young show bull, Kemp, went at \$2,005.

Stock Farm to Lease on Shares

800 acre farm in Alcona County, Mich., together with stock, horses, cattle, sheep, hogs; to lease from 3 to 5 years ON SHARES. Man having agricultural college experience preferred. H. K. Gustin, Alpena, Mich.

35 BUSHEL PER ACRE
was the yield of WHEAT

160 ACRES IN WESTERN CANADA FREE

on many farms in Western Canada in 1913, some yields being reported as high as 50 bushels per acre. As high as 100 bushels were recorded in some districts for oats, 50 bushels for barley and from 10 to 20 bushels for flax. J. Keys arrived in the country 5 years ago from Denmark, with very little means. He homesteaded, worked hard, is now the owner of 320 acres of land, in 1913 had a crop of 200 acres, which will realize him about \$4,000. His wheat weighed 63 lbs. to the bushel and averaged over 35 bushels to the acre. Thousands of similar instances might be related of the homesteaders in Manitoba, Saskatchewan and Alberta. The crop of 1913 was an abundant one everywhere in Western Canada. Ask for descriptive literature and reduced railway rates. Apply to Superintendent of Immigration, Ottawa, Canada, or Canadian Government Agent.

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WANTED—Improved farms and wild lands. Best system for quick results. Full particulars and magazine free. Don't pay big commissions. Western Sales Agency, Minneapolis, Minn.

FOR SALE CHEAP—Best dairy and stock farm in Oakland Co., 190 a., 58 a. in meadow, 25 a. woods, 1/2 mile to shipping station, school and church. Large house and ample buildings. 2 1/2 miles from Pontiac, 23 miles from Detroit. For full particulars address, C. F. Bradford, Route 6, Box 49, Pontiac, Mich.

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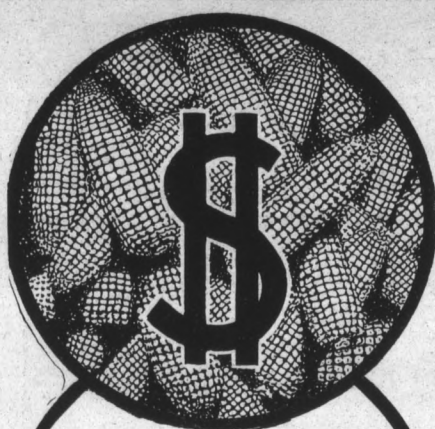
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Tree Growth and Production

That there is a relation between tree growth and the production of fruit is commonly known to fruit growers. It is known that heavy production and vigorous growth do not go together. We have evidences of it in most every orchard where we find the smaller trees—ages being equal—bearing the most fruit. We can find numerous cases where a difference in soil conditions will make a difference in the growth and productiveness of trees of the same varieties. On the lighter soil, the trees will invariably make the least growth and bear the most fruit. The writer has seen instances where there was a difference of five years or more in the coming into bearing of trees of the same variety, the difference being mainly due to a difference in soil conditions.

We can also note this relation when we compare varieties. When we note the vigorousness of the growth and the productiveness of a variety and compare it with that of some other variety of opposite tendencies, we have good illustrations of this relation. The Northern Spy is typical of the varieties which make large and vigorous trees. It is known for its slowness in coming into bearing. The Wagner apple is typical of the opposite kind. It is known for its early and constant productiveness, and for the small growth of tree it makes. Very often we see small stunted Wagner trees which are apparently bearing themselves to death. Between these two extremes we have all the other varieties, and in all of them we can quite accurately judge both the early and the constant productiveness by the size of the tree the variety makes, and vice versa.

The reason for this relation between growth and productiveness is a thing which few know. Many think that the production of fruit is a drain on the vitality of the tree and therefore it cannot make the growth it should. We also hear others say that the reason some varieties bear every other year is because they have to rest up one year to regain vitality lost from bearing a heavy crop the year before. Both of these statements are partly right. If the proper plant food is not made available for the tree to make its proper balance of growth and production, the tree will likely suffer if from over-production, and if from over-growth, the fruit grower's pocketbook and patience are the things likely to suffer. A balanced ration is an essential for the well-being of fruit trees as well as for animals, but what is a balanced ration for one variety may not be one for another. A suggestion as to the manner in which fruit buds are developed would probably give light on this matter. In spring when the buds are first formed, they are all leaf buds. Some time in July some of these change to fruit buds. This process of changing from leaf to fruit bud is continued until some time in October. It is early in July that the terminal buds of the new growths are supposed to form, and the rest of the season is spent in ripening up the newly made wood. Under conditions where a vigorous growth is encouraged, this ripening process does not go on as well as usual, and where there has been a large growth, few of the buds change to fruit buds. This will account for the fact that the fruit buds are most always found on the shorter growths and spurs of the tree. It is natural, then, that anything which will check the growth of the trees will make likely the formation of fruit buds. A demonstration of this can be made by tying a wire tightly around a limb so that it will constrict the sap in a year or so, or by girdling the limb by taking off a narrow strip of bark. The limb so treated will set to more fruit buds, but it will not grow as much as the others.

The value of the knowledge of the relation between growth and production is easily apparent. When setting young trees, the growth characteristics of the varieties should be taken into consideration. Some varieties set fruit buds too easily, while others lack in this respect. Very often this will assist us in the selection of varieties when we know the character of the soil of the proposed orchard site. For instance, it would not be advisable to set a Northern Spy in a rich soil, as it would spend years in wood production before it would give signs of bearing. On the other hand, it would be just as great a mistake to set a Wagner on light soil, as it would literally bear itself to death. The Spy and other varieties which make large growth, want the lighter soils, while the Wagner and varieties with small growth will need the heavier for best results. On the proper soils the Wagner will overcome its

habit of overbearing and will become a fair-sized tree, and the Spy will come into bearing so that the present generation may reap some of the benefits of its fruit.

The matter of soil fertility and cultivation can also be used to control tree growth. If the trees are growing too much and are on a soil fairly retentive of moisture, leaving the orchard in sod may tend to check the growth and bring the trees into bearing. On the other hand, when trees are overbearing, good cultivation with the addition of fertilizer or the use of legume cover crops, such as vetch and clover, will undoubtedly do much to encourage the trees to grow and to produce more normal crops.

Pruning may also be used to increase wood growth or fruit production, as may seem necessary. In general, a liberal cutting out of the smaller growths and spurs will check production, and to favor production these should be left and the larger limbs should be cut out. Articles which will appear later will take up the matter of pruning in more detail.

Girdling may be used to bring trees into bearing, but it is a method which may be harmful to the tree, and does not always give the desired results. Other methods as suggested above, should be tried first, then, if necessary, girdling should be used as a last resort.

ANNUAL STATE HORTICULTURAL MEETING.

(Continued from last week.)

The Thursday morning session was opened with a talk by Prof. Eustace on the practical control of orchard troubles. Prof. Eustace gave a very valuable talk on this subject. He explained the need of spraying on time and of doing thorough work, and took up the various fruit troubles under their proper headings, insects, fungus troubles, bacterial diseases, and physiological troubles. Special stress was also laid on proper spraying for the apple scab, and the cause of poor results was explained. Prof. Eustace stated that it was necessary to get there with the spray before the scab attacked the fruit. After the scab became established it worked under the skin and spraying did very little good. Bacterial troubles could be controlled to a great extent by giving them proper and immediate attention. The physiological troubles, however, we have no cure for.

Mr. W. S. Palmer, of Kalkaska, gave a very able paper on the essentials of commercial vegetable growing. Mr. Palmer has had considerable experience in this line of work. We hope to have articles from his pen on this subject.

Mr. O. K. White, the popular field agent of the horticultural department of the Agricultural College, told us why some fruit growers did not get better results. At the opening of his talk he said that if he told the real truth he would undoubtedly have brickbats coming his way. He laid special emphasis on thoroughness and stated that few really knew what that word meant. He took up the various diseases and insects and gave hints on spraying for them to get better results.

Mr. Eben Mumford, who has charge of the farm management work in this state, spoke on "What the Farm Management Movement can do for the Fruit Grower." In his very able talk Dr. Mumford gave some interesting facts regarding the horticultural interests of the state. He stated that the fruit growers were better organized than any other branch of farming in the state. The industry has increased 152 per cent in the ten years from 1899 to 1909 and now was estimated as a \$10,000,000 industry. He said that the two main factors in the advancement of the world were the discovery of knowledge and its dissemination. The dissemination was the greatest problem; even with all of the agencies of giving knowledge to the world it was not disseminated as thoroughly as it should be. The work of the Farm Management Department was to help in this work of dissemination. Agriculture is a local problem and therefore the rule-of-thumb method of farming would be a failure. The county farm advisor is well situated to help on local problems.

For the afternoon session Mr. Farnsworth and Mr. Case had similar subjects but treated them in different ways. Both spoke on marketing fruits. Mr. Farnsworth spoke of the importance of good roads in marketing fruit and he urged that farmers take active part in the good roads, even if from a selfish standpoint. He valued the location of a farm worth \$200 an acre in the marketing of fruit. He believed in organization and urged hon-

esty in packing. He valued advertising and said that it would pay more to get in the tree tops and make a noise than to whisper down a well.

Mr. Case said that when the fruit was packed and aboard the cars, only one-half of the problems of the fruit growing business were solved. He found that the home market was the best until it was fully supplied and he suggested that the grower look for some of the nearby markets which were good ones, but often neglected because of the habit of sending the produce to the large distributing centers. By figures he showed that often more than half of the price the grower got for his fruit was used in various charges in getting it from the farm to the retailer. He said that dishonesty never paid, but that keeping the consumer in mind when preparing the fruit for shipment would pay a big profit and build up a reputation. He believed in co-operation but said that it was to be successful one man would have to be sole dictator of the association. Mr. Case dictates the price to be paid for his fruit and every week he sends a postal card with the price for the week stated, to retailers who are his consumers. He mentioned the value of advertising and said that good orchard views on post cards put in the fruit packages had been good advertisements for him.

Mr. R. E. Hanley closed one of the strongest programs that the state society has had for some time. Mr. Hanley is from Chicago, where he has charge of the Chicago branch of the North American Fruit Exchange. He explained the plan of the Exchange, which offers selling service to local co-operative societies. He said that Michigan was less organized for marketing than other fruit states. He stated briefly the essentials of a successful local marketing society and laid emphasis on the importance of having a competent man as manager of such an organization.

JONATHAN APPLE.

This variety is one of the comparatively new ones which has made for itself a prominent place in the list of popular varieties. In many cases it is pressing hard the older kinds for eminence. It is an ideal apple for a high-class trade because it has good flavor, color and appearance. Combined with these qualities it has a texture which also makes it valuable for culinary purposes.

It is one of the early winter varieties which is good to eat at harvesting time, and its keeping qualities make it good until into February. It is one of the varieties which is likely to shrivel in storage and when not properly stored it will often develop dark sunken spots on the surface which will seriously injure the appearance of the fruit. This is not the Baldwin spot as many think, but the Baldwin spot there is no known cause for it.

The tree is a moderate but quite vigorous grower, the growth being rather slender. The character of the growth is such that often the limbs will break down under a heavy crop. To rectify this fault an occasional heading back of the main limbs is advisable.

Under favorable conditions the tree comes into bearing at about six years of age, and will generally bear heavy crops biennially. On the lighter soils where the trees are likely to overbear the fruit is often small. Thorough thinning and liberal fertilizing will generally increase the size of the fruit in such cases.

Although New York is the state in which the variety originated, the southwestern states grow it at its best. Missouri is undoubtedly the best Jonathan state in the country. This is undoubtedly due to the fact that the prevailing soil condition are favorable to the development of the variety. Very good Jonathans can, however, be grown in the lower peninsula of this state, where the soil is fairly fertile. The variety needs a fertile soil to encourage a stockier growth of tree, and an increase in the size of the fruit.

The variety originated on the farm of Philip Rick, at Woodstock, N. Y., about the year 1826. Judge J. Buel, of Albany, did much to give it prominence by bringing its good qualities to the attention of the best growers of his time. At first it was disseminated under various names, New Spitzenburg being one of the most prominent. This name was given it because of its similarity to the Esopus Spitzenburg apple. Finally the name given it by Judge Buel, the Jonathan, was accepted by the variety experts of that time. This name was given it in honor of Jonathan Hasbrouck who first called his attention to the variety. Brother Jonathan is a name often given it now.

Veterinary.

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

Advice through this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also name and address of writer. Initials only will be published. Many queries are answered that apply to the same ailments. If this column is watched carefully you will probably find the desired information in a reply that has been made to someone else. When reply by mail is requested, it becomes private practice, and a fee of \$1.00 must accompany the letter.

Thrush.—I bought a mare lately that has thrush in one hind foot. B. E. B., Reading, Mich.—Keep the foot dry, clean, and apply calomel twice a day.

Periodic Ophthalmia.—I have a colt 18 months old that has been troubled with sore eyes for the past nine or ten months. His eyes appear to be all right part of the time and seldom more than one eye is sore at same time. A. M. H., Clyde, Mich.—Your colt suffers from periodic ophthalmia and is perhaps incurable. When eyes are sore foment them with hot water, apply a saturated solution of boric acid and give a dessertspoonful of Donovan's solution at a dose two or three times a day. A bright light usually irritates sore eyes.

Mare Out of Condition.—We have a mare with a good appetite, is fairly well fed, which fails to lay on flesh. Have given her tobacco, ashes and salt for worms and when she works perspires freely. J. R., Grant, Mich.—Her teeth may require floating. Increase her grain ration and give her ½ oz. Fowler's solution, 1 dr. fluid extract nux vomica and a teaspoonful of ground wormseed at a dose in feed two or three times a day.

Stomach Worms—Rheumatism.—I wish you would tell me of a remedy for stomach worms in horses; also what to give a stiff cow. R. W., Harbor Beach, Mich.—Give your horse a teaspoonful of turpentine mixed with one-half pound of sugar and molasses twice a day for a few days. Give your cow a tablespoonful of powdered nitrate of potash in feed twice a day. Rub her sore joints with camphorated oil twice a day.

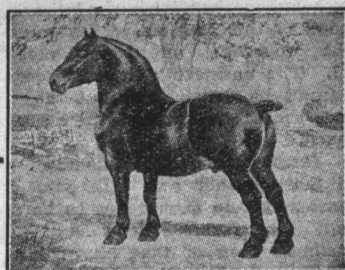
Mange—Sows Have Lice.—I have a three-year-old colt that has itch, but is in fairly good flesh. What had I better apply to kill lice on cows? F. C. H., New Baltimore, Mich.—Give your colt a teaspoonful of Fowler's solution and a teaspoonful of powdered nitrate of potash at a dose two or three times a day. Apply one part coal tar disinfectant and 30 parts water to skin three times a week. The colt should be well groomed. To kill lice on cows, drop 5 ozs. of crushed stavesacre seed in a gallon of boiling water; let it simmer for two or three hours, then strain and fill with water to original one gallon, then apply every two or three days and you will soon kill all the lice. But, remember your stable should be cleaned and sprayed or white-washed with lice-killing mixture.

Chorea.—I have a three-year-old colt which had distemper last spring and partially recovered. The colt staggers when he walks and has been in this condition for several months; has a good appetite but does not grow. Our local Vet. calls this a case of locomotor ataxia. F. R., Saginaw county, Mich.—Your colt suffers from chorea which occasionally proves as a sequel to distemper in horses, but very frequently in dogs. In the horse it seems to arise as an original lesion. Locomotor ataxia, "Tabes Dorsalis," usually develops as a result from exposure to storms, especially if the horse is not in good condition and it may occur in old horses and debilitated ones. This disease usually develops somewhat slowly and gives rise to an unsteady gait behind. There is no cure for either one of these ailments; however, you might try giving 1 dr. doses of ground nux vomica, 1 dr. doses of iodide potassium two or three times a day.

Nervousness.—For the past three years my eight-year-old brood mare seems to eject urine occasionally without any very good and apparent cause. On account of this ailment, her tail and hind quarters are always soiled. F. C., West Branch, Mich.—Your mare is incurable; she suffers from weakness of sphincter muscle at neck of bladder which should keep bladder closed. Give her 1 dr. ground nux vomica at a dose in feed two or three times a day.

Mare Never Lays Down in Stable.—I recently purchased a mare and not knowing much about horses, I would like for you to tell me why she never lays down in stable. Her stall is wide and roomy, kept clean and well bedded. Mrs. W. H., South Haven, Mich.—A horse that is able to lie down and get up without assistance out doors, will often lie down in barn if placed in a box stall. I have owned horses that would never lie down in a single stall and have had horses that got cast and were unable to get up in a narrow stall; this seemed to frighten them from laying down again in narrow single stalls.

Muco-enteritis—Bone Spavin.—One of our hogs died and I would like to know cause of death. It took sick, vomited, purged and died about 20 hours later. The stomach and bowels were inflamed, but no stoppage. I also have a mare eight years old, with enlarged hock joint which I am told is a bone spavin. W. E. M., White Cloud, Mich.—Your hog died the result of inflammation of bowel and could not have been saved. Give your horse rest and apply one part red iodide mercury and eight parts cerate of cantharides to hock joint every week or ten days. Or, you can safely apply any one of the spavin or ringbone remedies that are regularly advertised in this paper.



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REG. CLYDEDALE BROOD MARE, 6 years old and stud colt 17 months old, weight 1300 lbs. W. M. P. PULLING & SON, Parma, Michigan.

For Sale—Reg. Percherons—1 stallion coming 2, one 6-mo. old, 1 two-yr.-old mare and two weanling fillies. J. M. Hicks & Sons, R. 2, St. Johns, Mich.

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AYRSHIRES—One of the foremost dairy breeds. Bull calves for sale. Write for description. Michigan School of the Deaf, Flint, Mich.

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POLAND CHINAS—Either sex, all ages. Something good at a low price. **P. D. LONG, R. No. 8, Grand Rapids, Michigan.**

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Large Yorkshires—Pigs farrowed in August from prize winning stock, for sale. **JONES & LUTZ, Oak Grove, Michigan.**

MULEFOOT HOGS FOR SALE, Both Sexes, all ages. **C. F. BACON, Milan, Michigan.**

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THE ASSOCIATIONAL MEETING.

(Continued from last week).

Wednesday Afternoon Session.

The first address of the afternoon was given by Miss Eureka Bannister, of Grand Rapids, the subject being "The School Teacher." Miss Bannister's address was of a nature to add to her hearers' appreciation of the school teacher as a valuable factor in the life of every community. We shall undertake in the not far distant future to publish at least a synopsis of Miss Bannister's address.

The second member was an address by Cary A. Rowland, of the Charleston Township Farmers' Club, on the subject of "Junior Clubs." As Mr. Rowland was recently selected by the State Board of Agriculture to take charge of the organization of Junior Agricultural Clubs in Michigan, his address is of more than ordinary interest at this time. He defined as the purpose of the Junior Clubs to first increase production, and referred to the work done in North Dakota, where an average of 67 bushels per acre was produced by the boys' corn club; second, to improve the boys and girls through the development of business habits and the faculty of initiative by inspiring in them an increased interest in the farm and by bringing them into direct touch with the sources of agricultural information, such as the United States Department of Agriculture and the Michigan Agricultural College, and third by training them for co-operation in a larger field. Touching upon the nature of the work to be done by these Clubs, Mr. Rowland referred to the boys' corn clubs and the girls' canning clubs as developed in other sections of the country, and related something of the benefits which have accrued from the conduct of this kind of work in the south. In speaking of the relation of parents to these clubs, he emphasized the need of encouragement in the work. The first factor in interesting the boys and girls in this work is getting them to enroll in the clubs; next, the necessity for close study and application to secure best results; and last, but not least, is the formulation of a report of the work accomplished. In closing his address Mr. Rowland described the nature of the local organizations which would be effected and the exhibits which would be made a feature of each year's work. As a means of accomplishing the best results in this kind of organization, he advocated the bringing together of the school and the home in one common effort to introduce efficient methods. Mr. Rowland's earnestness speaks well for the future success of the boy and girl club movement in Michigan.

In this connection it will be of interest to every Club member to know that the State Association of Farmers' Clubs has taken steps in the direction of making the Farmers' Club organization prominent in this kind of work during the ensuing year. Mention has been made in this department of the boys' corn club and show conducted under the auspices of the Ingham County Farmers' Club, which was so good that some of the exhibits will be shown at the National Corn Exposition this winter. The idea of having more such work done in connection with other Clubs during the ensuing year was advocated, and it was decided by the executive committee of the State Association to make an exhibit at the next annual meeting of the best exhibits selected from the shows of this character held by local organizations next year, in order that the character of the work done and the nature of the results accomplished may be brought prominently to the attention of the delegates present from the local Clubs throughout the state.

The last number on the Wednesday afternoon program was an address on "The Country Church," by Rev. W. S. Steensma, of East Lansing, who expressed the most practical of modern thought on this topic, and advocated an increased sphere of usefulness for the country church in every rural community. We shall attempt in a future issue to give a synopsis

of Mr. Steensma's practical ideas upon this great question which awaits a practical solution for the highest good of the rural communities of Michigan and the country.

A pleasure not anticipated from reading the published program was enjoyed by the delegates present at this session, in an address by Governor Ferris, who spoke with his usual earnestness and eloquence. After relating his early experience in farm life, and drawing from the subsequent history of the farm upon which he was born, some economic lessons which were given a practical application, Governor Ferris turned his attention to the educational recommendations included in the resolutions adopted by the Association at its morning session. Here he was on ground particularly familiar to him, and criticised in no uncertain terms the attitude of the committee which reported the resolutions in question, and of the members who acquiesced in its adoption by the Association, backing up his criticisms by arguments which were the result of his wide experience in educational work, and observation of past and present educational methods in which the modern trend of education was vigorously defended. In closing his address, Governor Ferris spoke in more poetic vein, declaring that he would count it a blessing if some misfortune should compel him to spend the rest of his life on a forty-acre farm where he could himself work the soil in close communion with nature; where he could plow for the joy of plowing; where he could have time to study the stars and become better acquainted with the great world of nature.

Wednesday Evening Session.

The music for this session was furnished by the Industrial School boys, and was one of the appreciated features of the evening's entertainment. Next followed the treasurer's report, which showed a total receipts of \$349.76 for the year, and a total expenditure of \$179.46, leaving a cash balance in the treasury of \$170.30.

"The Building of a Virile Race," was the topic assigned on the program to Hon. H. C. Glasner, of Nashville, author of the much discussed Glasner Bill which was before the Legislature last winter. Mr. Glasner was unable to be present, but Mrs. Glasner filled this number on the program most acceptably, giving a masterly address which compelled close attention of the delegates, and showed that she had been a most thorough student of that modern science, Eugenics.

Mrs. C. A. Matthews, of the Essex Farmers' Club, gave one of her always appreciated recitations, and was compelled to respond to an encore.

The paper prepared by Miss Nora Braun, of the Webster Farmers' Club, entitled, "The Rural Help Problem," and read by Mrs. E. N. Ball, was a comprehensive discussion of this vexed question, which will be summarized in a future issue.

FARMERS' CLUBS IN MINNESOTA.

(Continued).

Again returning to the matter of roads, the farmers of the state are not paying enough attention to the use of the state and county road funds. The farmers are merely criticising the state highway commission and county commissioners while the automobile clubs are at work with these people trying to get the state and county funds spent where they will be the most used by auto traffic. If the farmers, through their clubs, would make known to the county commissioners what roads in their community they would like improved, they would be very likely to get the desired improvements. As it is now, the commissioners do not know the wishes of the majority of the taxpayers of their county. Road-dragging can also be taken up by Clubs. If a group of farmers would drag their roads, each man taking a certain piece of road, they would be assured of good roads in their community, at least, and then if they, as a Club, would work for a road-dragging law such as Iowa has, the roads of the state might be improved eventually.

Another very important feature of this Club work is looking after the markets, both for selling the farm produce and for buying farm supplies. This brings in the subject of co-operation, which will be discussed more fully in another article. However, the general spirit of co-operation must be developed in these Club meetings or in some other way, before co-operative work can be successful in a community. A farmer must learn to co-operate with his neighbor before he can expect to co-operate with a man in the next county or in another part of the state. And, too, there must be a better

feeling between the farmer and the business man of this country. They must be brought together on some common ground. The business men are necessary and cannot be driven out, but they can be made more efficient and their number decreased.

The farmer and the business man should get together and talk over their problems and help each other to be more efficient. The farmers near Duluth and the business men of that city came together several times last winter in an effort to help each other. They have discussed the problems of buying and selling and are trying to get on common ground where they can work together and reduce the cost of business so as to benefit both parties. They are succeeding well and a much better feeling exists now than ever before. We feel that the next great improvement along agricultural lines will be caused by co-operation for efficiency in production and marketing.

Many Clubs have held contests and fairs during the last year as part of their work. Among these were corn, small grain, vegetable, clover, and alfalfa contests, and contests for the women and girls. Some of the Clubs had regular industrial fairs where premiums were offered for corn, all kinds of grain, vegetables, fruit, cooking, and art work.

In some cases the money was raised to finance the fair by holding socials and giving entertainments during the year. At other fairs the exhibits entered were sold by the board to raise money to pay the premiums. At others no premiums were offered but everyone interested brought exhibits. For one industrial fair \$200 was raised at socials and entertainments given in the schoolhouses during the year.

Many a fair is made the basis for gathering an exhibit to be placed as a Club exhibit at the county fair. Most of the western and northern county fair boards offered prizes for Farmers' Club exhibits this year. One paid as much as \$60 for the best Club exhibit. Another offers a silver cup for the best exhibit. The cup becomes the property of the Club which wins it three years in succession. Another offers \$40 for every Club exhibit scoring 450 points out of a possible 600, and an additional prize of \$10 for the one scoring highest, and \$5 for the next highest. Fairs offering prizes have drawn good collections of exhibits, some rivaling the county exhibits at the state fair. No one can learn good farm products until he has exhibited at some fair or contest and very few people become much interested in producing good products or take pride in their products unless they have a chance to exhibit in competition with their neighbors.

We have tried in this article to give an idea of the work these Farmers' Clubs can do and their influence on their members. We firmly believe that there is no other force working for agricultural development which can do as much towards bettering the people socially, educationally, and financially as these Farmers' Clubs.

CLUB DISCUSSIONS.

A Thanksgiving Meeting.—November 20 found the roads in a very bad condition, yet about 80 members and visitors of the Hickory Farmers' Club overcame that difficulty and arrived at the farm home of Mr. and Mrs. Arthur Soukin in time to do justice to the bountiful Thanksgiving dinner served under the supervision of Mrs. Albert Howell. After a social hour the program was opened with the song, "Beauty for Ashes," followed by prayer. The secretary then read the report of the previous meeting. Mrs. B. B. Reavey favored us with the recitation entitled, "The Lost Hymn," which was highly appreciated by all. Mr. Mout Moshier had a paper on "Mother." Tears came into the eyes of many, as the paper contained many beautiful thoughts. Mrs. Albert Howell soon had us all laughing as she read "The City Man in the Country," illustrating very nicely the ideas some of our city neighbors might form in connection with work on the farm. Robert P. Reavey discussed the topic, "Can the farmer dictate prices?" saying, in part, that farmers should raise enough of one kind of crop to bring several buyers from various points to compete in prices and that the farmers should hold for reasonably good prices, but that they must hold together in order to do so. Mrs. McLaughlin read, "Why men so seldom fall ill," picturing his wife's attention and worries in such an instance. William Edgar and son, Elton, gave some very fine music. The Business Men's Association of Caro had sent L. G. Seely as a delegate to the Club to say that the men of Caro wished to make Caro an ideal place for the farmer to trade. He gave their plan of getting into closer fellowship with their farm neighbors. It is their plan to secure an expert from the Agricultural College to come into the county to study the soil and its condition to find what crops are best adapted to such soil. Club adjourned to meet the third Thursday in

December, which will be the Christmas meeting, to be held at the home of Mr. and Mrs. David Summerville near Akron. —Mrs. R. L. Robinson, Cor. Sec.

Hold Annual Meeting.—The Somerset Farmers' Club was very pleasantly entertained at the home of Mr. and Mrs. Hopkins Brooks, Saturday, Nov. 29. After an intermission of three months owing to sickness and removal of those to entertain. Notwithstanding the inclemency of the weather 35 or more were in attendance. After a social hour the company were invited to the dining-room where a real Thanksgiving feast was spread. After dinner the president, Mr. Harry Lombard, called the meeting to order and a business session was held. A rising vote of thanks was given our secretary, Mrs. M. Carney, for her faithfulness and untiring efforts of the past two years for the success of the Club. Mr. and Mrs. M. Walworth invited the Club to meet at their home December 27. The program was omitted owing to the lateness of the hour. Election of officers for 1914 resulted as follows: President, Mr. Harry Lombard; recording secretary, Mrs. Blanche Westcott; corresponding secretary, Mrs. Zoia White; treasurer, Mr. John Calhoun.

An Interesting Meeting.—The Indianfields Farmers' Club held a very interesting meeting on Nov. 20, at the home of Mr. and Mrs. David Andrews. At the noon hour a bountiful Thanksgiving dinner was served by Mrs. Charles Pierce. The social hour seemed all too short, for it is crowded full of enjoyment, as the members are so loyal and kindly disposed to each other, and all seem prompt in attendance. President Wm. Eldridge called the Club to order. Jas. Paul was elected delegate to the State Association of Farmers' Clubs. W. P. Bush gave a very instructive talk on the advisability of the several Clubs uniting for the purpose of hiring a county agriculturist. After some excellent musical numbers, James Paul read, "The Original Thanksgiving." As the hour was late, the remainder of the program was not given. The question box was of especial interest, as usual. —Margaret Arnold, Cor. Sec.

Discuss Co-operation.—The Hadley and Elba Farmers' Club held its meeting at Ferndale with Mr. and Mrs. Rial Simons, Nov. 20. President B. L. Smith called the meeting to order and Mr. and Mrs. W. E. Ivory were elected delegates to the State Association. Mr. Frank Smith resigned as trustee of the traveling library and C. A. Davenport was elected in his stead with Mrs. Davenport as librarian. Edith Mills gave a very appropriate reading and was followed by C. S. Riley with an exceedingly interesting and instructive paper on co-operative buying and selling, that created a spirited discussion. Program and music committees were appointed for the Farmers' Institute. —Mrs. C. P. Johnson, Cor. Sec.

Planning for Next Year's Fair.—The Thornapple Farmers' Club held the banner meeting of the year, December 4, at the commodious home of Dr. and Mrs. Amos Hanlon. The weather man favored us with a perfect day, more like May than December, and a good-sized company attended the meeting. The losing side in the contest for new members served an oyster dinner to 84 persons. It was the annual meeting of the Club, and the following officers were elected: President, E. J. McNaughton; secretary, Miss Annabel Campbell; treasurer, Mrs. H. C. Helrigel. A short literary and musical program was followed by an interesting talk by Mr. E. J. McNaughton on "Benefactors." His line of talk referred to the improved methods of farming and the introduction of better live stock as the benefactors of the farming community. All farmers cannot make a success of one particular line of farming, but each should follow that for which his land is best adapted, and for which he has the most ability. The retiring president had just returned from the State Association more enthused than ever over our organization. Already plans are being discussed for a fair, to be held next fall. —Mrs. Metta Morgan.

Elect New Officers.—The Wise Farmers' Club met with Mr. and Mrs. W. J. Jennings in November. With a full house and a fine day. After a good dinner the Club was called to order by Ex-President J. H. Seely. After the opening exercises, the men's topic, "Does the silo pay for the average farmer?" was opened by John Buckborough, who claimed that every farmer who kept cows should have a silo, but that a great many farmers made a mistake in building too large silos instead of building two silos. Fred Phillips did not favor the silo, said he preferred to feed his milch cows good, clean feed, not sour fermented corn, to make good butter. The next question was for the ladies. "Do the women earn one-half of the income of the farm?" Question opened by Mrs. J. H. Seely and followed by a well prepared paper by Mrs. Ruth McIntosh and a half dozen ladies, and when they were through the men began to think they had not done much. The December meeting will be held with Mr. and Mrs. J. H. Seely; January with Mr. and Mrs. T. A. Badgley.

Think the Cow a Money Maker.—The Deerfield Farmers' Club met at the home of the Hall Brothers for dinner Nov. 22. After dinner an excellent program was rendered. "Is the cow a paying proposition?" was discussed by J. F. Lutz, Douglas Glaspie, Fred Hall, Albert Cameron and our president, Frank Eaton. It was decided that the cow is a money-maker, if you have the right cow; one that is a producer, not a boarder. The question box, which was conducted by Chas. Leonard, brought many lively and interesting discussions. Mr. and Mrs. Fred Hall were elected as delegates to the State Association. —Mrs. J. F. Lutz, Secretary.

Great Meeting of Michigan Patrons

State Grange at Flint takes Prominent Place in long list of Annual Grange Gatherings.

An auspicious beginning of the fifth decade of Grange history in Michigan very fittingly describes last week's great meeting of patrons at Flint. Probably no one of the forty annual gatherings which preceded it proved more generally pleasing or satisfactory. The entire four days were brimming full of business and pleasure so deftly intermingled as to lighten the arduous duties of the delegates and to leave little room for monotony. A large proportion of the delegates were new and inexperienced in State Grange procedure, while a number of the officers, including the State Master, had not yet completed the first year of what gives promise of being a most successful administration. Notwithstanding these conditions, the work of the various sessions, with their multiplicity of details which are only fully appreciated by those familiar with these annual gatherings, moved with a smoothness and precision which marked this meeting as well nigh a record-making one. The pre-arranged schedule was more nearly adhered to than in any other State Grange meeting of the past decade, with the result that the really important work of the meeting was performed with deliberation and the conclusions of the body upon matters of public interest were, for the most part, only arrived at after careful consideration and discussion in committee rooms and upon the floor of the convention.

The delegate body was not materially larger than that of several which have preceded it, about 415 delegates, representing practically every county in the state, being present. The visiting privilege was well embraced, mostly by patrons of Genesee and surrounding counties, the attendance at some sessions running well above the thousand mark. The city of Flint ably supported Genesee's enterprising patrons in supplying many little details in the line of accommodations which facilitated the work of the delegates, heightened the pleasure of visitors and greatly contributed to the success of the meeting generally. The new Masonic Temple, in which all of the sessions were held, accommodated the attendance very comfortably, besides affording excellent quarters for the State Lecturer's department and for a number of the committees. The delegates' appreciation of hospitalities extended was fittingly expressed in resolutions adopted during the closing hours of the meeting.

Miscellaneous Features.

Mention of a number of features which figured prominently in the four days' proceedings seems desirable before beginning a detailed report of the meeting. First, it may be said that the custom of giving up Tuesday evening of State Grange week to a public meeting has annually become more and more popular. For several years an unsuccessful effort has been made to secure a speaker of state or national prominence for this occasion. This year the desires of the executive committee in this direction materialized, and the reception given this innovation by the delegates and by the general public would seem to insure its continuance. The public meeting at Flint on Tuesday evening was characterized by Master Ketcham as "Governors' night," the distinguished guests being Gov. Eberhart, of Minnesota, and our own Gov. Ferris. Flint's formal welcome to the State Grange was extended at this time by Hon. D. D. Aitken, the response on behalf of the Grange being made by C. H. Bramble. Gov. Eberhart was then introduced and discussed, at some length, "Some Problems of Country Life." His solution of country life problems involved the introduction of agricultural and industrial training into the rural schools and the conversion of these schools into civic and social centers. He strongly favored the centralization of rural schools, declaring that experience in his own state has shown this to be essential. As an adjunct to the centralized school he would have a plot of ground on which to conduct agricultural experiments, and would make every teacher in such school a leader in the organization of social and study clubs, parents' organizations, etc. He declared that in many sections at present there is no place to meet and no one to lead in organization work, while the assembly room of a centralized school is large enough to accommodate an entire community and easily suited to any kind of entertainment purposes. He advocated having the state extend aid to such schools as a means of insuring a high standard

of efficiency, non-compliance with regulations in the selection of teachers and providing of equipment being followed by forfeiture of such state aid. Minnesota has about 70 such schools and many more demanded. The employment of county agricultural agents was also favored by the speaker, his idea being that state and county should co-operate in this line of endeavor, this being the plan in vogue in Minnesota, the state and county dividing the expense equally. Where states are indifferent or averse to giving aid, however, he believes that the federal government should take a hand, although his observation has been that better results have been secured where the agents were employed under the direction of the agricultural college and schools of a state than otherwise. Of the merits of the county agent system he said: "The agent comes in personal contact with all farmers throughout the year and is a guide and advisor in all matters pertaining to intensive agriculture. He should be the means of securing more and better graded stock, and in several counties of Minnesota he has been the means of securing as high as eight or nine carloads of such stock, which has been purchased in the first instance by bankers and business men of the town and turned over to the farmers at actual cost." He held, further, that a secondary benefit from centralized schools and agricultural organizations is secured through their influence upon the highway problem.

Gov. Ferris paid tribute to the Grange as a recognized force in the improvement of rural conditions and took a broad and wholesome view of the great question of co-operation, when he said: "The Grange has done much in the way of bettering the social life. Your work has counted. You have already, if you never do another stroke of work, one of the brightest pages in American history. Organization is one of the fundamental requirements for success in this country today. Organization is necessary along all lines of

The nominees were Former Master Hull, T. H. McNaughton, of Kent county, and Burr Lincoln, of Huron county.

The contest over the location of next year's meeting was an unusually good-natured one, and interest in the invitation speeches was heightened by the appearance of President Hutchins, of the University, in behalf of Ann Arbor. Muskegon and Battle Creek were the other contenders, the choice of the delegates falling upon the last named by a narrow margin. The vote this year was made an advisory one, the executive committee, in case of difficulty in making satisfactory arrangements, being empowered to open negotiations with the second-choice city.

Another feature of the meeting which will long be remembered by all present was the very impressive memorial hour observed on Thursday afternoon. With appropriate music, beautiful flowers and tender words the Grange paid its last tribute to those who have passed away within the year. Former Master Horton delivered the oration in memory of "Father" Kelley, founder of the Order, and Hon. John K. Campbell, former member of State Grange executive committee, while Chaplain Woodman spoke for the less distinguished dead.

Master Ketcham's Address.

In his annual address the State Master sought to impress upon the delegates the necessity for careful, considerate and consistent action upon public questions, to the end that the Grange may still more strongly intrench itself in the confidence and esteem of the agricultural public. The present healthy condition of the Order was referred to and the inauguration of joint Pomona meetings, which were held in 20 counties during the past year, was commended. The influence which the Grange exerted in shaping state legislation last winter was regarded an encouraging portent of the organization's growing usefulness. The major portion of the address was devoted to the presentation of three very live subjects, viz., parcel post, good roads and rural credits, and the sections covering these subjects are given in full.

The new parcel post law, for which the Grange has labored in season and out, has now been in effect 11 months and

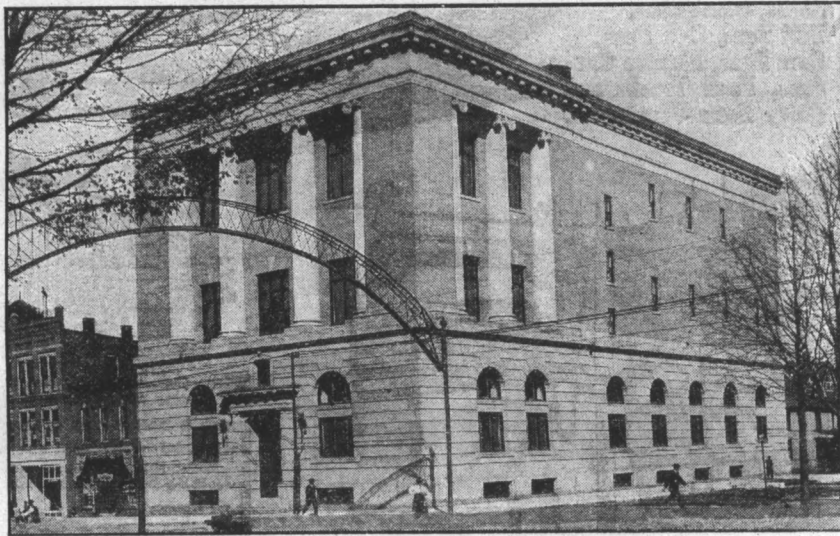
present law which puts the power of adjusting parcel post rates and weights in the hands of the Postmaster General, subject to approval by the Interstate Commerce Commission.

Good Roads.

No subject before this session of the State Grange should receive more thorough consideration than the report of the committee on good roads. The mere announcement of this subject is enough to provoke lively discussion and sometimes bitter controversy in almost every county of Michigan. We are distinctly wide awake upon the question. Over \$700,000 will be spent this year by the State Highway Department and over four and one-fourth millions will be spent by counties and townships in the construction and maintenance of roads. This seems to be a very impressive showing, and yet Michigan by no means leads in road construction. The intense interest taken by all classes of our citizens in the matter of road building is bringing to the forefront several matters in which the Grange will be expected to take a prominent part. In the campaign for good roads there are of course two widely divergent views as to the place where they shall be built. One view favors the "center to center" road or, in the language of one who has made light of Michigan's road building, "roads that begin somewhere and end somewhere." The other view favors the building of "farm to market" roads. One is designed principally for pleasure and the other for business. Here assuredly we should have "business before pleasure." Shall we not speak out our convictions emphatically at this point? A second phase of the road question to which I invite your attention is the matter of federal aid. Here, as above, the same divergent views are held. "Scenic boulevards" and "memorial highways" are the dream of one group of enthusiasts, while the improvement of the post roads is advocated by the other group. Under the "general welfare" clause of the constitution it is hard to see why our statemen have so long deferred action upon this vital matter. Rivers and harbors (real and imaginary) have been improved and re-improved until it is said that the total so expended in Michigan alone has reached the splendid sum of forty-five millions since we came into the union. If such expenditure in whole or in part is logical and sensible, how can one consistently oppose the appropriation of money by federal government for the construction and improvement of the primary channels of trade—the farm-to-market road. By all means let us have federal aid for roads but let us have a hand in its distribution. The third point in this good road movement worthy of careful thought is the matter of permanence in the work. In our zeal we have given this question too little consideration. We have half assumed that when a good road was built that our work was complete. Waste, high cost of administration, extravagance and inexperience have given much trouble. Are we ready to jump into such extensive public improvements until we have grown up a greater number of capable, experienced men? It is easy to go crazy about even a worthy work. Is it timely for the Grange to sound a note of conservatism here? We believe it is. "Half speed ahead, please!"

Rural Credits.

Good roads and rural credits are well said to be the most important subjects in connection with the economic side of agriculture and it is therefore deemed important to follow the road discussion with a brief statement of the matter of rural credit. Until comparatively recent times the term credits has not been modified by the adjectives rural or city. But the strong agitation upon all phases of farm life has brought out the fact that there is a marked difference between the two, and that real progress in agriculture can not be made under a system of credits fitted especially for the commercial life of the city. Careful students of our agricultural conditions freely assert that our present course is shaped toward the landlord and tenantry system of the old world and they urge us to get hold of the situation before such an un-American condition fastens itself firmly upon us. Farm tenancy has increased from 25.6 per cent in 1880 to 37.1 per cent in 1910 and the increase since 1910 has been even more marked. Further than this, the number of farm homes mortgaged in 1910 was 33.6 per cent of the whole. Add to these the startling fact that for the whole country the average interest rate on farm loans is over eight per cent and we have abundant justification for speedy and effective action. To improve the chances of the tenants on 37.1 per cent of our farms and to lighten the burden of mortgage indebtedness on another 33.3 per cent is certainly a praiseworthy undertaking, but when we consider that these two classes make up 70 per cent of the farm residents, and that the very stress of their condition tends toward a policy of soil depletion, the problem becomes at once a matter of concern for all, since the ultimate source of food supply is placed in jeopardy. Various plans have been proposed to remedy these threatening conditions, and commissions have studied European organizations which are meeting old country needs successfully, but the demand seems, at present, to be for a system distinctly American, free from opportunities for capitalistic exploitation and from the long-drawn-out, slow-growing, old-country systems suited to conditions of peasantry. Public sentiment has developed sufficiently to bring this important question to the earnest attention of the President and Congress and this is therefore the time to act. It is accordingly recommended that the committee on resolutions give this question all the consideration possible and suggest in its report some method of bringing about a campaign of education throughout the state.



Flint's New Masonic Temple in which the Sessions of State Grange were Held.

endeavor. Labor is organized and well it should be organized; capital is organized and it should be organized; the farmer is organized and he should be. But do not lose sight of the fact that the organizing of capital simply to help capital, or labor to help labor, or the farmer to help himself is not the thing. Remember you are not merely organized to fight one another but to give co-operation for better things." He also went on record as favoring the consolidation of rural schools and, while not finding fault with introduction of vocational training, he held that more of it should be given in the home.

An unusually large class—165 in number—took the sixth or State Grange degree on Thursday evening, this work being preceded by the conferring of the fifth degree upon a class of 60 candidates. On the previous evening the delegates witnessed the exemplification of the first and second degrees by a well drilled team from Perry Grange, of Shiawassee county. Another subordinate which contributed much to the success and pleasure of the various sessions is Fairfield Grange, of Lenawee county, its male quartet, styled the "Comical Four," making a decided hit.

The election this year consumed little time, the delegates simply having to ratify the Grange primary nominations for three places on the executive committee.

the results of its operation have far exceeded the expectations of its most earnest advocates. The effect on transportation rates has been almost revolutionary in many localities. Instances without number could be cited showing the popularity of the new law, but they would be superfluous since its advantages have been demonstrated graphically to all who have made use of it. In this connection it is a matter of common report that the use of the parcel post by the very people who have fought hardest for it, is a matter of distinct disappointment to the post office department and it is earnestly recommended that this phase of the subject be given careful consideration by the proper committee. Undoubtedly the increase in weight limit and the decrease in rates effective July 1, 1913, in the first two zones has improved this condition somewhat. If the reported increase of the weight limit to 50 pounds, and a corresponding decrease in rates, shall be made, we can see no reason why there is not then at hand for the farmers a practical and profitable means of working out the high-cost-of-living problem. Inasmuch as the whole question of the authority of the Postmaster General to lower rates and increase weights has been the subject of sharp controversy, we further recommend that the proper committee take the question under advisement and bring to this body a clear and unequivocal declaration of the position which the Grange should take in this important matter. It is hard to see why the mere question of prerogative should stand in the way of progress, and as I view the question we should strongly support the

7
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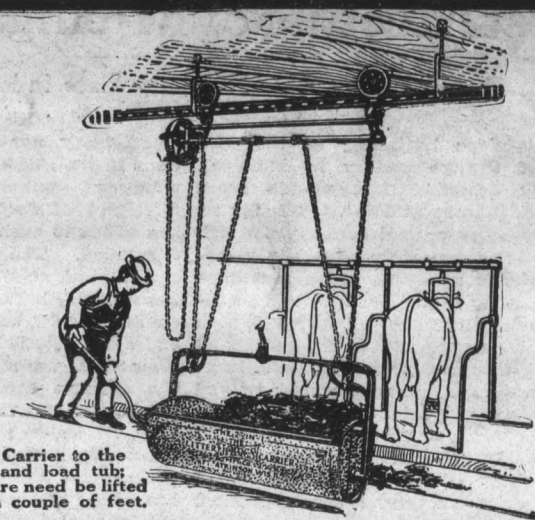
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Rigid and Rod Track Combined

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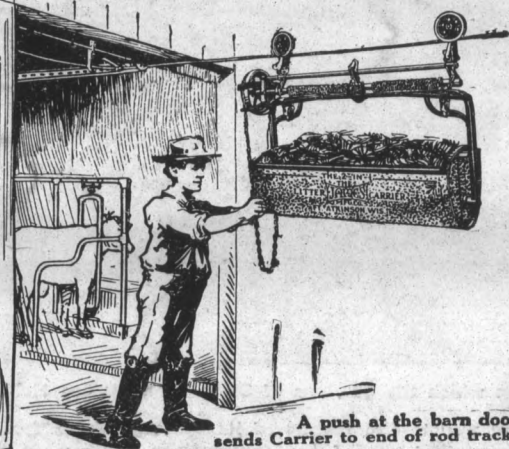
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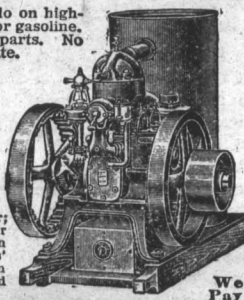
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