

Mr. Gilmore

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\$1.00 A YEAR
\$2.75 5 YEARS.

STARTING RIGHT IN POULTRY RAISING.

THE time of year has arrived for farmers who are dissatisfied with their fowls, and discouraged at results obtained, to make a fresh start in poultry. Likewise the individual who is without a knowledge of the game but desires to enter upon the production of poultry with a view to profit should take his first step at this season. This first step consists in selecting and purchasing foundation stock, and the main reason for doing this at this time is that such stock is cheaper now, all things considered, than at any other season. Breeders are more anxious to dispose of breeding fowls prior to the opening of winter than will be the case after the holidays, and naturally are much more reasonable in their figures, for the very good reasons that, with them, housing space is at a premium at this season, the risk of loss from disease is greatest in large flocks, and feed and labor are required to carry breeding stock in considerable numbers through the winter. Invariably, too, the farmer who desires new stock, or the novice who is just beginning, will find it an easier matter to secure strong, vigorous fowls now than in the spring, since not all poultrymen are so situated as to be able to give their surplus breeders the room and care so essential to the health of next season's crop of chicks. Therefore, whether new in poultry raising or simply taking a fresh start by introducing new blood or, perhaps, a new breed, begin right by securing breeders this fall. Not only will this give you an opportunity to get acquainted with them during the winter when your time is least valuable, but if proper food and care are given you will have better fowls when spring comes than it will be possible to buy then for the money which you have invested in them.

The individual who has not made a success of poultry in the past has some understanding and appreciation of the obstacles to be overcome and the pitfalls to be avoided. And, in general, I believe that the novice appreciates the advantage in beginning right. While it is possible to offer suggestions and prescribe methods which will assist him in guarding against some of the most serious and disheartening mistakes, but advice alone, no matter how clearly details are described, will not enable him to avoid making errors. Experience is the only source of information touching some of the important details in successful poultry keeping.

To start right the novice should start small—with a trio or a pen of fowls. Until one has gained enough poultry knowledge to properly care for and manage fowls, it is a serious mistake to attempt to handle them on a large scale. There are too many trivial details to be learned, each seemingly small, but all essential to success, and these can be learned better with a few fowls than with many, and at less expense and risk. The time to enlarge your operations is when

you have gained confidence and knowledge from practical experience. The novice should begin with one variety and stay by that until he has learned all the complications of its care and breeding. Then, if he desires more than one kind, he can add another, and, later, another can be added until his desire for variety is satisfied. But he will find that one variety will give him food for reflection and an endless amount of study, and in attaining the highest success with it

he will discover that he has undertaken a harder task than he anticipated. Undoubtedly he will find that many first-class breeders are better satisfied to breed one variety than to breed many varieties and most breeders are contented with a few varieties at the most. This advice as to varieties applies to the average farm, since it is a serious mistake to attempt growing more than one kind of poultry where the poultry is given the run of the premises, which is the prac-

tice upon most farms at the present. Having decided to begin with a few fowls of one kind, with the determination to stick to that variety, it is essential that the beginner start with the right variety. But here the only sensible advice is that he make his own selection, after careful consideration, being governed largely by his own personal likes in regard to color and shape, of course not forgetting the practical end in view or, in other words, the purpose for which the fowls are being kept.

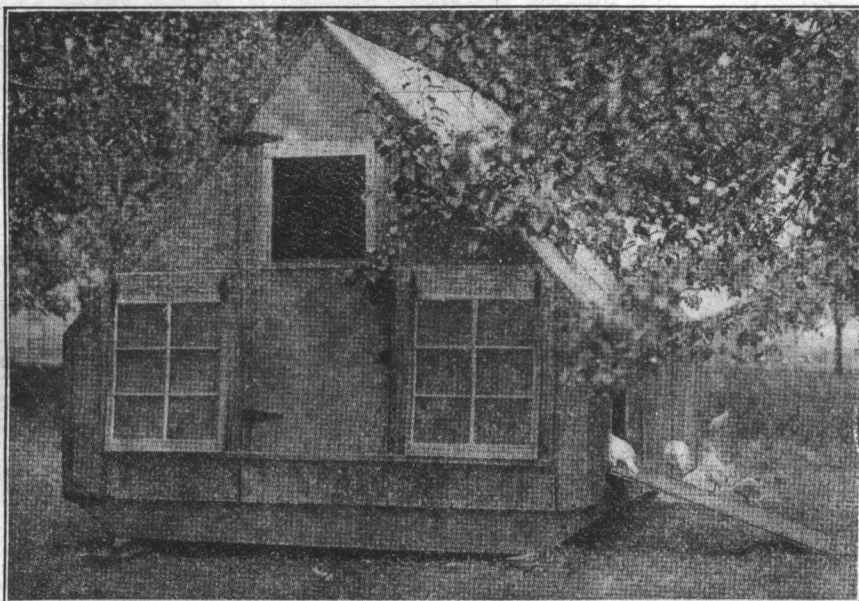
Having chosen the variety, it is time to plan for the house in which the breeders are kept. Here make a wise start and study carefully before you build. Success depends largely upon how fowls are housed. There is an almost endless amount of literature on this subject, and this source of information should not be overlooked. Finally you want a house that will provide warmth, light and pure air and it must not be expensive, although it pays better to spend an extra dollar in construction than two extra dollars in care. The factor of labor may be so small at first as to seem of little consequence, but the man who is taking the pains to start right in poultry does not expect always to keep a few, and, where many are kept, labor is quite an item.

For the benefit of the man who is beginning, or taking a fresh start, with a trio or a pen of fowls, I will describe a cheap but practical little house that will serve his purpose until more knowledge is gained or larger quarters are required. The ease with which this house can be built commends it to those who are not carpenters or who do not have the time and money necessary to the erection of a more elaborate building. It is a modification of the open-front type of house and is sufficiently roomy to properly accommodate a small breeding pen.

Secure two piano boxes of exactly the same size, remembering that piano boxes used by different manufacturers differ slightly in size. Remove the back and top from each box, place the boxes back

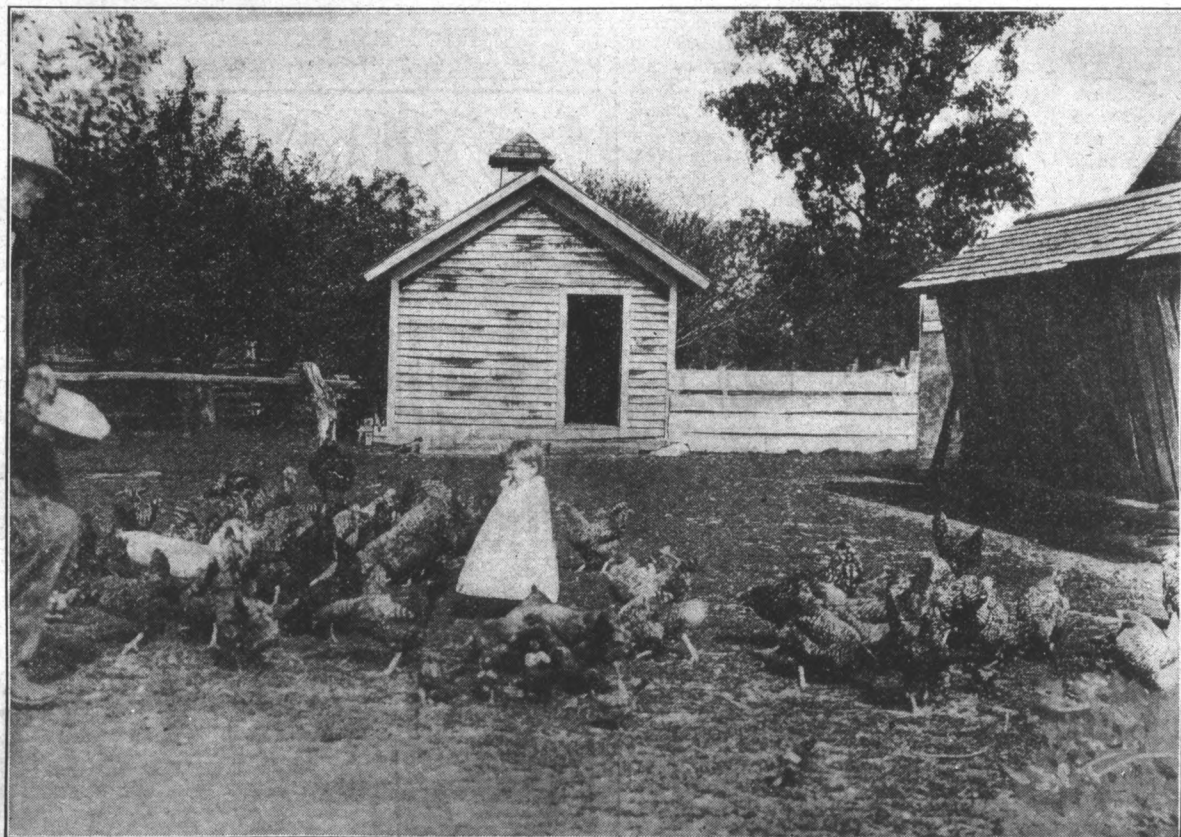
to back and fasten them together securely. The backs which you have removed will furnish material for the roof, the dropping boards and the frame for the door. When thus far completed cover the entire affair, except the door, with some kind of prepared roofing material. This will give you a house that will keep out cold and wet, and your fowls will be healthy and active, providing care and judgment are used as to the matter of cleanliness. The door is covered with poultry netting, and a canvas curtain is provided for covering this aperture in severe weather. However, only about three months in the year need the canvas be used, even at night, as the more fresh air the better after the fowls become accustomed to this mode of housing. This little building will make you an excellent brooder house later on in your work and will be

(Continued page 447.)



A Style of Portable Colony House Suited to Many Purposes.

Farmers who give their fowls the attention they deserve find the portable colony house handy, adaptable and inexpensive. Above is shown a type of colony house which the Indiana experiment station is using with satisfactory results. The building is 8 ft. square and 6½ ft. from floor to comb of roof. A little house of this kind, placed in a sheltered location, can be used for housing a breeding flock in winter; in spring it is a good building in which to place outdoor or cold brooders and in this capacity will accommodate several hundred chicks; as the chicks grow the brooders may be removed and the chicks allowed to use the house as a summer shelter, perches being put in for their convenience as soon as required; at the proper time the males may be culled out and the pullets removed to the winter layers' quarters, by which time the selection and segregation of breeders for the following year should again command attention.



Studying the Farm Flock with the Prospects for Another, and More Satisfactory, Season in Mind.

FARM MANAGEMENT.

Farm management has been made the subject for discussion in several farm papers of late and has received more or less consideration from a number of contributors, each of whom, writing from his peculiar standpoint of location, involving both specialized and general farming, have created an interest in the matter deserving particular attention.

In farming, as in handling all kinds of commercial enterprises, the failures, when compared with the successes, hold the scale of balance and show that somewhere the management has been lax, and invites an adjustment to better principles. It may be that the farmer, like the orator, artist or musician, is born rather than made. Some men seem endowed with diversity of talents qualifying them to succeed in whatever they undertake. In almost all such cases, however, it will be found that their success depends upon their strict adherence to business principles. Sometimes a commercial man from the city who is entirely ignorant of farm methods, will purchase a farm and make a success of it that will put to shame those that have spent all their lives in the shadow of agriculture. Such men have usually learned principles of economy, supported by strict adherence to business methods, in keeping tally with all of the minor, as well as with the more important, affairs of their commercial business. When they go on the farm they carry their system of accounting with them and know at all times just where they stand. A tab is kept on each and every expenditure and it is known by a glance at their books, just what their financial basis is. But with the average farmer there is a slackness along these lines; he either keeps no books, or if he does, it is in a slipshod kind of manner, that at the end of the year affords him but little information as to the condition of his affairs.

What the American farmer needs is to return to a more economical adjustment of his business principles, and gain a more intricate knowledge of the working of his capital and labor. All investment of capital in land, buildings, stock and machinery, should show a return of five per cent to the investor, and no farmer should be satisfied with less than \$2.00 per day for his labor. This is not excessive when compared with labor in commercial enterprises. Perhaps there is no better way of estimating the profit made by farmers, than by securing bulletins from state colleges and from the Department of Agriculture at Washington. By referring to some of these reporting the result of surveys in some of the more important agricultural counties, and districts of agriculture, the average profits are learned. It is assured that five per cent can be obtained on money placed at interest and that this must be reckoned before the profits from labor can be estimated. There are many farmers who are making a living and some may be saving a competency, who are laboring without pay. Where a man is enabled, by the help of his family, to perform practically all of the labor on his farm, and is out of debt, the farm may be run, and the products may not show a profit above the interest on the investment, and yet, the farmer and his family may live and keep out of debt. This assumes that the farmer has a house to live in and the products of his farm to live on, in addition to the money saved.

Farm management embraces so great a diversity of conditions of climate and soil, as well as diversity of crops grown and the temperament and judgment of the farmer himself, that it is difficult to fit all cases with similar advice. The judgment of each and every farmer must therefore rest with himself in regard to the particular features of his particular farm. Even in the same neighborhood or, as is sometimes the case, in the same field, there may be a difference in the kind or quality of soil, that will require different treatment, all parts not being equally adapted to growing the same crops. Adjacent to the home of the writer, there is a field of this character, embracing at least three different kinds and qualities of soil. The greater part is a gravel loam underlaid with gravel, while at one corner there is a plat of two or three acres that is a light-colored tenacious clay. Along one side an adjoining muck swamp, crops over embracing an acre or more. The upper or gravel soil dries quickly and can be worked soon after the heaviest rain, while the clay and muck hold water and are not fit to plow until late in the spring and even then, their cultivation is, in most

years, labor lost. The entire field has been hard run, everything having been taken off and but little returned, until the crops received no longer paid for the use of the land and labor. Now this field is a fair sample of thousands of farms that are lacking in proper management, and what will apply here will apply elsewhere under similar conditions.

What this field needs is tiling in both clay and muck, which will change the character of both. Then the whole field will need a general renovation, which will require time to put it in even fair condition. What it needs most is humus and the quickest way to obtain this, in the absence of barnyard manure, is by green crops plowed under. Clover is of first consideration, but this land in its present state will not support clover until it is given something to feed upon. Two years ago the writer obtained a strip of this field in May, it having been sown to oats. It was too late to hope to get a stand of clover, but it was sown and came up well. Dry weather followed and the whole of it perished. Last year it was covered with stable manure at the rate of 20 tons per acre, and planted to potatoes. In August after the potatoes were harvested, as an experiment I sowed clover seed on a small plot, first giving it a good sprinkling of wood ashes. This seed came up thick and made good growth before winter. It wintered well and had gotten a good start in the spring when it was plowed under.

This proves that clover will grow on this land if given proper conditions. The past summer the field was in grass, making possibly half a ton to the acre.

There were spots in it of considerable extent, both on the gravel and clay, that were given up entirely to sorrel. Making a test of my own, I collected soil from these spots, both from the clay and gravel. The litmus paper showed no indication of acidity, or but little, on the gravel, but turned quite red when tested on the clay, as was the case with the soil taken from the muck. This proves that wherever sorrel grows the soil is not necessarily acid.

Now had I the control of this field, I should endeavor to get it in clover as quickly as possible. I should tile the clay and muck and I believe I should do as I remember seeing a German do once on a poor field, sow it to buckwheat and plow this under in August and top-dress either with wood ashes or with a complete fertilizer and sow to clover without a nurse crop, first having put the land in the best possible condition. There is no crop that I know of that will put land in temporary condition better than buckwheat, making the stiffest clay amenable. After a stand of clover had been obtained I should pasture it lightly, which would give some return for the time and money spent, but would plow it under, taking off one, or not more than two, crops, and get it down in clover again as soon as possible. This may look like an expensive process, but it is certainly better than to continue to farm in the old way, further depleting the fertility of the soil.

It is expensive to retain an unproductive soil, made so by injudicious cropping, but there is nothing else to do, than pay the penalty which nature's law has imposed, and then keep nearer to her requirements in the future.

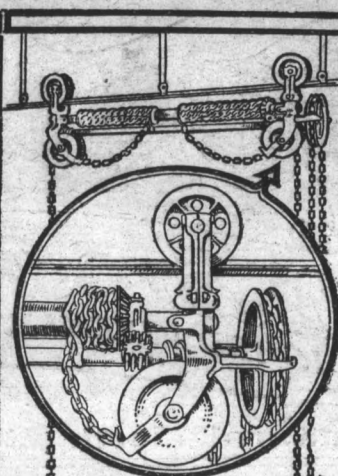
New York.

B. F. MACK.

IT PAYS TO FERTILIZE MEADOWS.

Several years ago when cutting hay next to a patch of wheat in the same field, i. e., there was no fence between, I noticed that the hay adjoining the wheat was much heavier in widths of a drill than elsewhere; in fact, there was so much difference that I began to study out the reason, which explained itself simply enough, for in drilling the wheat the fall before with 250 pounds of 2:8:2 fertilizer per acre, and running the drill out on the meadow, there would be from two to four feet of meadow fertilized, while in going back the drill would not be set in gear until at the edge of the wheat field, consequently every other width of the drill would show a marvelous difference on the grass. This set me to thinking that it would be a good investment to fertilize meadows, and the following fall I fertilized five acres with the same result, raising the disks and drilling the fertilizer over the top, and since then we have been doing so and I am satisfied we harvest from three-quarters to one ton of hay per acre more where we use the fertilizer. The fertilizer can be sown late in the fall before the snow covers the ground, or in the early spring.

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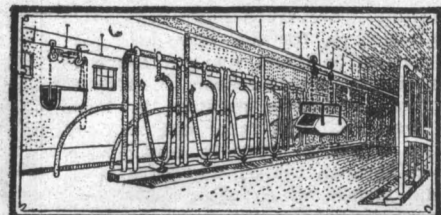
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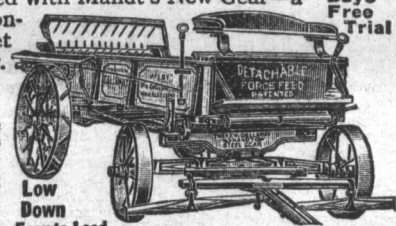
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What would you think of the use of sugar beet tails and partly rotted beets from a sugar factory, as a fertilizer, and what kind of ground would you use it on? Macomb Co. H. C.

This waste material from the beet factories contains some plant food and is certainly of some value as a fertilizer, but whether it is of sufficient value to warrant a man in putting it upon his farm, even though it is given to him, depends largely upon what he has to do and the distance he has to haul it. Sugar beets themselves contain .29 per cent of nitrogen, .08 per cent of phosphoric acid, and .37 per cent of potash. The beet tops contain .42 per cent of nitrogen, .15 per cent of phosphoric acid, and .62 per cent of potash. Now let us compare their analysis with average farm manure of fairly good quality. Such manure would contain .6 per cent of nitrogen, .3 per cent of phosphoric acid, and .45 per cent of potash; so, you see, this refuse is not nearly as valuable as stable manure. If we compare it with a good fair commercial fertilizer, say one that contains two per cent of nitrogen, eight per cent of phosphoric acid, and four per cent of potash, we readily see that its plant food value is very small indeed. It would take eight or nine tons of this material to give the equivalent in ammonia of one ton of fertilizer, while it would take nearly 100 tons of it to be equivalent to the fertilizer in phosphoric acid, and 10 tons of it to be equivalent to the fertilizer in potash. Hence as the nitrogen, phosphoric acid and potash which a fertilizer contains determines its value, this refuse is not very valuable as a plant food, or as a manure. I certainly would not want to haul it a great distance, even though it were given to me.

COLON C. LILLIE.

SEES OPPORTUNITIES ON FARM.

I read in The Farmer of Oct. 26 the article written by the young man from Isabella county. I can certainly sympathize with him, as I have encountered many difficulties in farming, but I do not agree with him. I am a young farmer and, not having the capital, I have not the conveniences to farm it as I would like to. I am not acquainted with the section spoken of, but it takes good farming land to sell for \$100 per acre. I judge it to be a level country, which would naturally suffer in a wet season. It has been very wet here but our land is inclined to be rolling. We had an off year for wheat but we have abundant yields of all other crops, oats yielding as high as 70 and 80 bu. per acre with few fields going below 50 bu. One man had 20 acres of beans which went 28 bu. per acre and he sold the crop direct from the machine for \$2.00 per bu. The corn has all been in the shock for some weeks and all other crops are well secured. As for myself, I cannot complain. I farm a good 40 acres and for two years have rented an 80-acre farm adjoining it which is somewhat run down. My wheat yielded 10 bu. per acre and my oats under 40 bu., but I was fortunate in being able to take advantage of the high stock market by having several head of young cattle and milch cows to turn off, also a good number of hogs, part of which I sold early and caught the market when it was about at the highest point. I have a few good cows left to defray living expenses, and last but not least a flock of 150 good Brown Leghorn hens. I speak of these not as a boast but as an illustration of the advantages in diversified farming. Now I hope the young man will not be discouraged but keep right on next year. He may sing a different tune a year hence. He may be right in some cases but I believe the main reason for the young man going to the city is found in the pleasures and attractions it affords. I know there are good opportunities on the farm, and the country is much in need of the intelligent young man to keep up the new and modern methods which are coming into practice. I believe that in any line of business we should endeavor to cheerfully take the bitter with the sweet. You will feel no worse if you whistle when your wheat yields but 10 bu. per acre or when the oat market is too low to make the crop profitable, but when you sell hogs for 8c per lb. and beans for \$2 or \$2.50 per bu. you can whistle with good grace.

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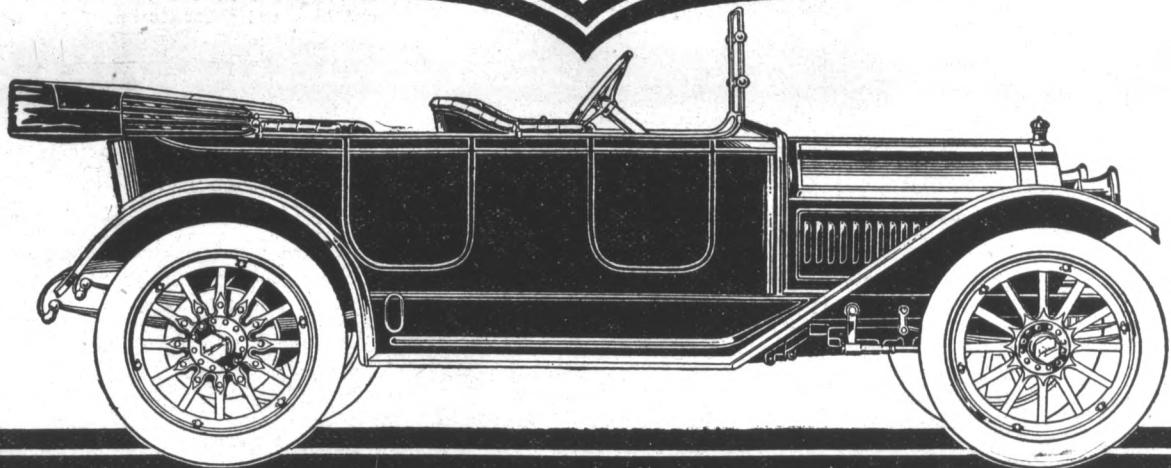
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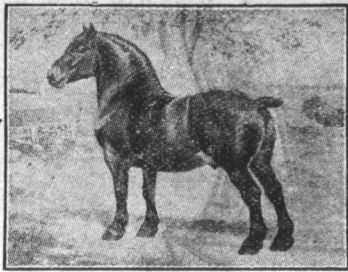
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LIVE STOCK

HOG CHOLERA.

One of the worst enemies with which farmers in this locality have had to contend in recent years, is the hog cholera. For a number of years past, this plague has been at its work of destruction, and although at times it seems to have died out, it is sure to reappear again, perhaps in a new neighborhood not previously affected. Within the last few months, hundreds of dollars' worth of hogs have succumbed to the malady. Two owners who are the heaviest losers, have lost about 100 hogs each, while many smaller droves have been wiped out.

An investigation of the ravages of hog cholera here reveals three facts: First, the disease is no respecter of persons, and attacks the animals of the thrifty as well as of the slovenly farmer. The manner of feeding and caring for the hogs does not seem to make any material difference so far as the inroads of the disease are concerned. Second, when an animal in a drove is once afflicted, the plague makes a clean sweep in spite of every effort to save the remaining animals. Third, no remedy has yet been found adequate to cure an afflicted drove. One man who was a heavy loser this season, did not spare expense in trying to check the progress of the disease in his large drove. For the most part, when cholera makes its presence manifest, the owner of the animals stands by and waits until it has done its work, and after a few months, restocks and commences anew.

From the economic standpoint, the case has two important phases: First, the consequences to the owner of the hogs, and second, the consequences to the community as a whole. From the nature of his business, the farmer is dependent upon weather conditions, and knows that the profits of his year's work may be materially shortened by draughts, storms, premature frosts, and other similar factors. The knowledge of the presence of an insidious disease which may result in heavy financial loss, is trying to the nerves and greatly increases the uncertainties of farming. Many a man who has counted on the money from his hogs for the payment of taxes and other obligations, has been forced to stand by helpless and see the animals melt away before the ravages of cholera.

In its broader aspect, the question is concerned with the welfare of the entire community. In these days of high prices and of scarcity in the meat supply, such a waste as is occasioned by the inroads of hog cholera, must necessarily tend to raise the price still higher and make available animals for butchering more scarce. The discovery of a remedy which would be practicable enough and inexpensive enough to be applied generally by farmers, in the case of cholera, would prove of immeasurable benefit both to the individual and to the general public.

Hillsdale Co. J. A. KAISER.

The hog cholera situation at the present time is one which is not a matter for either congratulation or credit to the farmers of the state. Much has been done in recent years toward providing a scientific means for the control of the hog cholera and in perhaps no state has more effective work been done along this line than has been done in Michigan. It is possibly true that the man who has only a few hogs will gain little by the use of this preventive treatment—for it is essentially a preventive rather than a curative treatment—after the disease has once made its appearance in the herd. If, however, the disease is prevalent in the neighborhood it will pay even a small owner of hogs to immunize his hogs against this disease. But for the man who has a considerable number of hogs, it will certainly pay to stop the ravages of the disease as soon as possible after it has made its appearance by immunizing the well hogs against the disease.

The method of treatment known as the serum-simultaneous method is the one advocated by the Michigan Experiment Station, which for some years has made a specialty of distributing the serum and virus required for this treatment at approximately the cost of producing same. The cost of the treatment will range from 30 to 40 cents each for small pigs to around \$1.00 for a 200-pound hog. That is the cost for material alone and there is, of course, a slight cost for apparatus

with which to administer it, for transportation, etc.

While this may be considered a rather high cost for immunity, yet it is nowhere nearly so expensive as are losses from the disease itself where they occur. It would be the part of wisdom for the farmers in any section of the state where there are known or suspected cases of hog cholera to send at once for circular No. 6, revised, to the Michigan Agricultural College Experiment Station, East Lansing, Mich., which treats fully on this question of hog cholera serum and protection against hog cholera, giving suggestions which will aid in the diagnosis of the disease and describing in detail the method of treatment. There are other serums made which may not give so long a degree of immunity but which are of unquestionable value in the control of this disease, this method being mentioned because it is the one recommended by the Division of Bacteriology and Hygiene of the Experiment Station, the acting head of which is also state veterinarian.

If every owner of swine in the state who lives in a community where cholera has manifested itself would act upon this suggestion and write for the above circular, following out the line of preventive treatment therein described, the present serious outbreak of hog cholera would soon be a thing of the past and the quarantine against the shipment of hogs for other than immediate slaughter which is now in force would be quickly raised by the live stock sanitary commission. This is not a matter for deliberation but for action to the end that this most destructive and costly of our live stock diseases may be kept in check.—Eds.

FEEDERS' PROBLEMS.

Shock Corn for Live Stock.

I have a field of sowed corn of the Southern variety. It is very large and heavily-eared and quite badly infested with the corn ear worm. I expect to husk out the large ears. Will the nubbins cut up in the dry fodder be injurious to stock?

Van Buren Co.

H. W. H.

There is no reason why the corn fed as suggested in this inquiry should be injurious to live stock. The more corn cut up with the fodder the better feed it will make, although, of course, it will replace to some extent, the other grain in the ration. The writer has made a practice of feeding considerable shocked corn, without husking at all, for many years with very satisfactory results. The infestation of insects would not make the feed harmful. This corn, however, will not keep well if cut up early in the season, as a large quantity of the immature corn needs to be very thoroughly cured out in the shock before cutting up and placing in the mow, or should be cut in small amounts and fed out before it molds.

LIVE STOCK NOTES.

The recent sensational declines in hog prices came as a good deal of a surprise to most people, following the long period of advancing prices, although about this time of the year it is customary to see breaks in the market. The big packing interests were evidently determined to smash prices on the first opportunity, as they strongly desired to lay in winter stocks of cured meats and lard on a much reduced basis of values, and their chance came when the eastern shipping demand for hogs became insignificant in volume, the eastern packing plants receiving plenty of hogs from their home territory. When the downward movement started, prices were extraordinarily high, and even now they are high when compared with most former years. As is always the case at such times, many farmers have become alarmed and have hastened to get their holdings marketed without delay, being afraid that by waiting they will be compelled to accept further sharp reductions. Undoubtedly, the course of the market from now on will be governed largely by the volume of the receipts and the size of the eastern shipping demand.

Ontario cattle have been going to Buffalo and Jersey City in good numbers because of low prices at Toronto and Montreal. Cattle selling at \$6.50 in Toronto have brought \$9.50 in Buffalo.

Michigan Live Stock Breeder Dead.

It is with regret that we chronicle the death of Mr. E. D. Bishop, of Lake Odessa, known to many of our readers as one of Michigan's successful breeders of pure-bred live stock. Mr. Bishop was born at Lancaster, Pa., Oct. 6, 1847, and passed away Oct. 25, 1912, being afflicted with Bright's disease which caused his health to fail rapidly during the past summer. He came to Michigan in 1867 and for 25 years had been an enthusiastic breeder of pure-bred swine and poultry. About four years ago he became interested in Holstein cattle and possessed a fine herd of pure-breds at the time of his death. He leaves, to mourn their loss, a wife, three daughters and six grandchildren.

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LESSONS FROM MARKET REPORTS.

A short time since it was my privilege to listen to the discussions of the market situation from the standpoint of the speculators in live stock. There was a meeting of men who are engaged in the business of buying and shipping to market and I was curious to know just how they looked at the situation as far as the farmers are concerned. I must report that the trend of discussion was not along the hopeful and encouraging lines. They were bemoaning the conditions which make it difficult for the speculators to make money much, if any, faster than when live stock was selling at much lower prices.

Among other things mentioned that make it hard for the speculator is the fact that farmers are better posted in market values than in former years. Instead of the dealer having an opportunity to go to market, sell his stock and return to instruct the farmers as to values, the Michigan Farmer carries the market report to the farmers, and they can know the exact value of their stock before the buyer can get to them. In former years, before the rural mail delivery system was established, the dealer could hurry back from an advancing market and buy

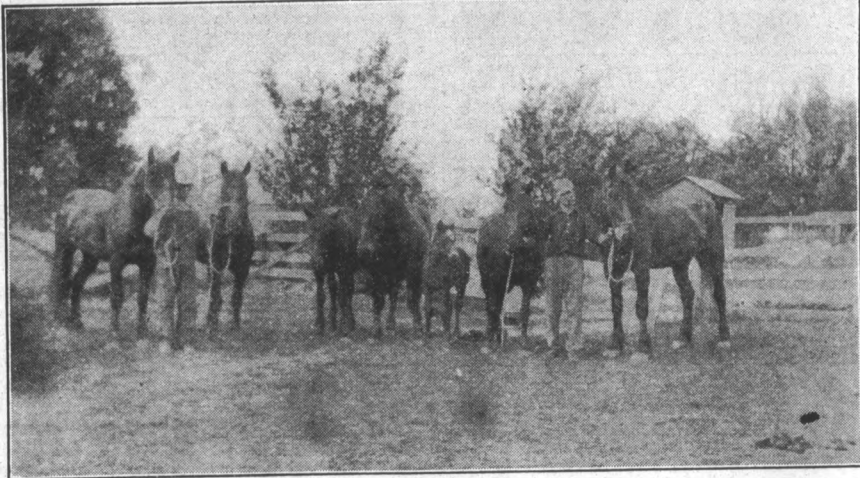
made them fit for market by the time they were eight months of age. As the growth and weight can be made cheaper while the animal is young and growing, than is possible when nearing maturity, it is easily seen that there is a double advantage in crowding animals along while young.

It is worth the while to study and learn the lessons that can be learned from the market reports published in such agricultural papers as The Michigan Farmer. It is the only sure means by which the farmer can inform himself in regard to the best methods of producing his animals cheaply, and securing the correct values for them when he sells.

Oakland Co. N. A. CLAPP.

LIVE STOCK NOTES.

Montana range cattle shipments this year will fall 50,000 head below last year, when shipments aggregated close to 206,000 head. Comparatively few of these cattle went to western markets this year, this being due to the high prices offered in eastern markets and also because Pacific Coast markets were able to obtain cattle supplies from Oregon and California. D. W. Raymond, secretary of the Montana state board of stock commissioners, says it will be from five to ten years before there will be an increase of



The Stock of Horses on Farm of Kellogg Bros., Livingston County.

up much of the stock ready for market before the farmer would get his paper from the post office and learn of the advance in values. Instead of being able to secure a large margin in the shape of profits on the stock raised and sold by the farmers, the dealers must content themselves with moderate margins of profits, or be obliged to quit the business. It was repeatedly stated that the dealers can not make as much, during the year, by his efforts and putting up with losses and hardships, as can the farmers on a moderate sized farm.

Quality and Prices.

When discussing quality and prices the agricultural press came in for more criticism. Instead of the farmer believing, as did our forefathers, that good quality in live stock depended upon the fat distributed over the system, they have been instructed in the art of making good animals that sell for the highest prices on a cheap class of feeds. Corn alone is not considered an absolute essential in fitting stock for market. As valuable as corn is as a feed for live stock, there are other feeds that are not as expensive to produce that enables the farmers to raise and sell animals of as good quality and in many respects better, than that where corn is the almost exclusive feed.

To illustrate an important point in quality, the case of the steers that were brought from Alberta, Canada, that had never had a morsel of corn, but were raised on clover, peas, barley and oats, and yet sold in the Chicago market for \$10.50 per hundred on foot. This instance corroborates the statements I have often made in these columns, that young animals can utilize a large amount of feeds, rich in protein, and produce meat of better quality, and better adapted to the requirements of the consumers, than can be produced on feeds alone that are rich in carbohydrates. Muscle, which is meat, is produced while the animal is growing. The quality of meat that brings the high prices, is made by a distribution of fat in the muscles while the animal is growing. Fat stored up after an animal has arrived at, or near the years of maturity, is laid up internally and in patches on the outer surface.

Another fact in regard to quality and market prices was emphasized. Fat hogs made up from mature animals, have been selling for about 55 cents per hundred less than hogs that had been grown on clovers and grain in a manner which

any size in the cattle herds of that state, because there are relatively few breeding cattle left in the country. He declares that the drouth two years ago in the middle western states forced growers of that region to throw everything on the market because they had nothing with which to feed them. A year ago there was a drouth in Wyoming, the Dakotas and Eastern Montana which forced stockmen there to follow suit. Then came the hard winter, which still further depleted the already decimated herds.

Grass-fed cattle have been moving freely from southwestern pastures to Chicago and Missouri River markets for some time past, and the market offerings have embraced a liberal percentage of such consignments. This has caused a great widening out in prices between the commonest and the choicest cattle, there being scarcely enough of the best class to meet buying orders. Eastern markets have been obtaining large supplies of eastern-fed cattle, as well as plenty of steers that were pastured in Pennsylvania, Ohio and West Virginia, and all this has checked the demand in Chicago for cattle to ship eastward. Recent sales of beef steers at the Chicago yards covered a wide range of \$5.80 per 100 lbs. After the last of the pastured cattle and range grassers are out of the way there will be a great narrowing in the spread in prices. All reports from eastern feeding districts agree that decidedly fewer well-bred cattle will be fattened this winter than usual. This is attributable to the fact that eastern stockmen have refused as a general rule to pay asking prices for good feeder cattle. They are well supplied with corn, hay and roughness, yet they are afraid to pay the prices asked for good cattle in Chicago and other western markets, many farmers preferring to stock up with commoner and lower-priced Virginia cattle. The greater part of the cattle they have purchased this season have averaged around 700 to 800 lbs., and in quality they were far from good. It is reliably reported that the number of cattle fed this winter in the east will fall considerably under that of last year, and all the indications are that eastern consumers of beef will have to depend largely on the western markets during the winter and early months of spring. So far as can be seen now, everything points to extremely high prices for fat beefs for many months ahead, and experts say that at least five years will be needed to restore the beef cattle supply to normal figures.

J. H. Starr, of Missouri, an extensive stock feeder, was in Kansas City recently buying feeding sheep and lambs. In all he has taken out 15,000 head of lambs and wethers and at last accounts he was still buying. He reached the conclusion some time ago that fewer sheep will be fed than last year, and for this reason he looks for a good market. Corn is cheap in his section, costing but 40c per bu., and it grades far better than at this time last year, when sales were made at 65¢/75¢ per bu. Lambs have been costing about 75¢ per head more than a year earlier, while yearlings have cost 25¢/50¢ per head more.

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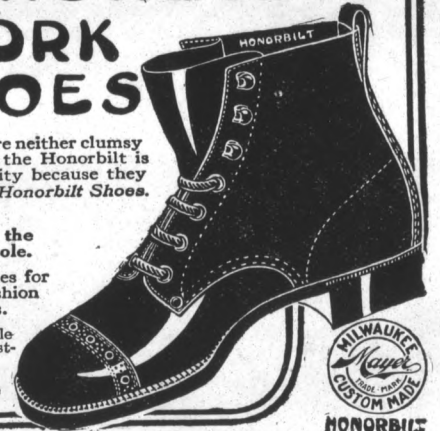
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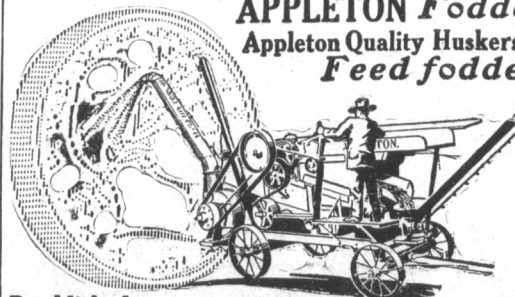
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VETERINARY

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 some one else. When reply by mail is requested, it becomes private practice, and a fee of \$1.00 must accompany the letter.

Distemper—Weakness.—I have a five-year-old horse that had distemper one year ago; since then he has remained thin, has little spirit and, if wounded, the sore is slow in healing; besides, hind legs stock. Horse is fed 4 qts. oats at a meal when worked and runs out on pleasant days when idle. B. M., Moscow, Mich.—Give 1 oz. ground gentian, 1 oz. bicarbonate soda and 1 dr. ground nuxvomica at a dose in feed two or three times a day. He should be well salted and his grain allowance increased.

Barbed Wire Cut.—Some seven weeks ago my 14-year-old horse became tangled in barbed wire, making deep gash on pastern which local Vet. has failed to heal. Wound fills with proud-flesh and we have applied carbolic acid, carbolized oil, blue vitriol, alum and other ointments without producing a good effect. I am now inclined to believe a ringbone is forming. E. B. N., Newport, Mich.—If wound is filled with fungus, it should either be cut off or burned off with hot iron; then apply one part iodoform and 10 parts powdered alum twice daily, covering sore with oakum and light bandage. I do not believe a ringbone is forming, but a fibrous thickening.

Cracked Heels—Stocking.—My young horse's hind legs are covered with sores; I am told he has scratches. He always stocks when allowed to stand in stable over night. C. A. M., Grand Rapids, Mich.—Apply one part oxide of zinc, one part iodoform and eight parts vaseline to sore parts of leg once a day and give a dessertspoonful of Fowler's solution at a dose three times a day; also give a dessertspoonful of powdered nitrate of potash at a dose once a day until stocking ceases.

Indigestion—Rheumatism.—My 10-year-old gelding is growing thin; is stiff and sore, hind quarters most affected. When standing, rests by pulling on halter; has fair appetite, but listless; when bowels move he groans. B. C., Ionia, Mich.—Give horse 2 drs. sodium salicylate, 1 oz. ground gentian, 1 oz. ground ginger and 1 dr. ground nuxvomica at a dose three times a day. He should have good feed and good care.

Worms.—My horses have been troubled with worms for a long time and I have given them three different worm remedies without noticeable results. D. K., Ross, Mich.—Give each horse 1 dr. santonine, 1 oz. ground gentian and 1/2 oz. ground quassia at a dose three times a week for two weeks. If bowels do not act freely, give a pint or two of raw linseed oil when necessary.

Weak Tendons.—Nine-year-old mare is quite lame in left fore leg, caused from weakness of tendons between fetlock and knee; is sore and swollen on each side of leg above fetlock. Will light work harm her? J. P. M., Lubec, Mich.—Give her rest; clip off hair and apply cerate of cantharides once a week. This ointment will blister parts lightly, but will make her well.

Indigestion—Impaction.—I have a colt, seven months old that was weaned two months ago; since then he has not thrived, drinks very little water and bowels are very constive. He runs in pasture daytime and is stable at nights. S. H. D., Bay Port, Mich.—Give colt 4 grs. of quinine and a teaspoonful fluid extract gentian at a dose three times a day and salt him well. To move bowels, give 6 ozs. raw linseed oil at a dose as often as necessary.

Bruised Elbow.—Horse was kicked some four weeks ago; whole trouble appears to be in elbow and causes him to travel very lame. He is a valuable horse, ten years old and healthy. Wound is open and runs continually. I have applied carbolic lotion and poultices of antiplogistine without any effect. Leg is not broken and was not much swollen until a few days ago. Mrs. J. N., Cassopolis, Mich.—Apply equal parts powdered alum, oxide of zinc and boracic acid to wound twice a day. You should keep him quiet, especially if wound is near a joint.

Ringbone.—Eight-year-old horse is lame. I am sure he has ringbone. When he was a colt, 12 months old this ringbone appeared, but it commenced to grow again last summer and I have applied various blisters without avail. Bunch is situated low down on left fore pastern. S. S., Silverwood, Mich.—In my practice I find that where bunch is situated low down it is impossible to relieve the animal of stiffness. This mechanical stiffness causes lameness and peculiarity of gait—the animal limps. Give horse rest and have him fired with pointed iron.

Spinal Disease.—Mare 14 years old commenced to go wrong the latter part of August and has gradually failed since. She has difficulty in lowering head, and reels when walking; is unable to place head low enough to either eat or drink. K. N. R., Niles, Mich.—Give mare 1 dr. potassium iodide and 1 dr. ground nuxvomica at a dose in soft feed three times a day. I believe whole trouble is in spinal cord and it is very doubtful about making a recovery. She should be protected from cold rain storms and her bowels and kidneys kept active.

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Holstein Bulls.—1 Holstein Bull - \$60
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From 3 to 12 months old. All from A.R.O. dams.

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Purebred Registered HOLSTEIN CATTLE The Greatest Dairy Breed Send for FREE Illustrated Booklets Holstein-Friesian, Assn., Box 164, Brattleboro, Vt.

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PRACTICAL SCIENCE.

THE PRINCIPLES OF HUMAN NUTRITION.

BY FLOYD W. ROBISON.

The Organic Foodstuffs.—Energy of the Protein Compounds.

The accepted method of determining the energy of a food product is identical with the method of determining the heat value of coal. A definite amount—say one gram—of the finely powdered substance is burned in a calorimeter which is surrounded with water so that all of the energy given off during the burning of the coal, which energy is in the form of heat, is absorbed by the water and we are thus able to determine the relative amounts of energy in one product as compared with another.

Likewise in the human body the energy value of a foodstuff may be measured just as accurately as it can be measured in a laboratory calorimeter. For this purpose the late Dr. Atwater, of the United States Office of Experiment Stations, devised and constructed what is known as the human respiration calorimeter and this calorimeter has been the instrument which has been the means of furnishing us so much reliable and practical information regarding the energy value of the different foodstuffs.

Nearly all foodstuffs contain in their dried state the organic constituents which are the proteins, carbohydrates and fats, and the inorganic or ash constituents. The organic food constituents are the ones which are capable of yielding energy to the human body. The inorganic constituents, as a rule, take no part in the direct yielding of energy to the body although they do serve to replace some worn out inorganic constituents in various parts of the body.

The Energy Value of Proteins.

When a typical protein body is burned in the calorimeter all of its carbon, hydrogen and oxygen are converted into heat. When, however, protein is burned in the human body the human body does not get a complete combustion of the proteid as is done in the calorimeter, but there is a certain amount which is excreted in the urine which is still capable of further combustion and would be so measured in a calorimeter. This substance is urea, which represents the final product of proteid digestion in the body. The calorimeter, however, converts even the urea into its constituent compound, CO₂ gas being the result of this burning in the calorimeter. Now, when urea is burned in the calorimeter the amount of heat derived therefrom represents exactly the amount of heat which the human body does not derive from proteid. When we burn protein in the calorimeter we find that it yields approximately 5,300 calories or heat units. When we burn the urea which is derived from the digestion of that proteid, we find that this urea yields approximately 1,100 calories or heat units. We therefore say that the net energy yielded to the body by the burning in the body of the proteid is 5,300 calories minus 1,100 calories, or 4,200 calories. We then say, in computing the fuel value of a foodstuff, that we will allow 4,200 calories as the value of the proteid material in the food.

The Energy Value of Carbohydrates.

Let us now turn our attention to the other two main groups of the organic foodstuffs; namely carbohydrates and fats. By carbohydrates we will remember we mean that class of substances which contain carbon, hydrogen, and oxygen alone. There is neither nitrogen nor sulphur in a carbohydrate and the hydrogen and oxygen are always in the same ratio in which they are found in water, that is, two parts of hydrogen and one part of oxygen. The empirical formula for a carbohydrate would be written, carbon, one part; hydrogen, two parts; oxygen, one part; or, as it is written, CH₂O. Now, if a carbohydrate, which as a class is typically represented by such a substance as starch or cane sugar, be burned in a calorimeter, the final products of that burning in the calorimeter will be the same as were the final products of a burning of a proteid in so far as the carbon and hydrogen and the oxygen are concerned—that is, CO₂ gas and H₂O (water), will be formed. Now, if a carbohydrate is burned in the body we find that exactly the same final or end products are formed. In other words, CO₂ and H₂O are the end products of

the digestion of a carbohydrate in the human body and it being true that the end products of this digestion or burning in the body and the burning in the calorimeter are the same, we immediately expect that we may obtain a true value of the energy contributed by the carbohydrates to the body by determining the energy yielded in the calorimeter. As a matter of fact, this is actually the case and we find upon investigation that the carbohydrates when burned in the calorimeter yields 4,200 calories or heat units. In other words, it yields exactly the same amount of energy in the form of heat that the body is able to derive from the utilization of a proteid in the body. Hence we say that as far as heat production is concerned proteins and carbohydrates have the same value.

The Energy Value of Fats.

Now, when we come to study fats we find a different condition of affairs. A fat is similar to a carbohydrate in that it contains nothing except hydrogen, carbon and oxygen. It contains no nitrogen; it contains no sulphur, nor other elemental substances, but whereas, the oxygen and the hydrogen in a carbohydrate were always in the proportion in which they are found in water, that is, two parts hydrogen and one part oxygen, we find that fats are much richer in carbon and hydrogen relatively than they are in oxygen. The meaning of this as far as energy production is concerned, is that the burning of a fat in the body or in the calorimeter yields much more energy than either the proteins or carbohydrates. As a matter of fact, we find by actual experiment that the fats yield approximately two and one-fourth times as much heat per unit weight to the body as do either the carbohydrates or the proteins. A typical example of a fat may be represented by the substance known as stearin. Stearin is composed of C₃H₅(C₁₇H₃₅COO)₃. A perusal of this formula will show that the content of oxygen in this typical fat is comparatively very low indeed.

Heat or Energy Values of Typical Foodstuffs.

We give below the heat equivalents of various substances expressed in calories per gram:

Lard, approximately9,300 calories
Egg albumin, approximately 4,200 calories
Starch, approximately4,200 calories

Were we to judge foodstuffs from the standpoint of heat producing value alone it is very evident that we should grant to the fatty foods a considerable greater value than we grant to the starches or to the proteins. There are other factors, however, which enter in complicating this matter somewhat.

Interchange of Nutrients.

While fats and carbohydrates may interchange in the diet to a more or less extent, on the other hand we find that protein may not be replaced by either of the others. It is true that a fat in a foodstuff may be replaced by proteins. It is likewise true that the carbohydrates in a foodstuff may be replaced by a proteid. The reverse, however in each instance is never true; that a proteid may be replaced by either the carbohydrate or the fat, except that the normal proteid supply of the body is first satisfied. We know definitely, for example, that all animal tissues excepting, of course, accumulations of fat, are essentially protein in their composition; that is, they contain nitrogen. It is very evident, therefore, that any foodstuff which is used to form muscle, etc., in the body must contain a certain amount of proteid material. If an animal were placed upon a diet in which proteid material is excluded, the excretion of nitrogen does not cease but keeps on at a certain minimum rate until the patient is so emaciated that death ensues.

Physiological chemists have attempted at various times to determine the amount of proteid material which it was necessary to have in the daily foodstuff in order to keep the body in protein, or nitrogen, equilibrium. This amount has, by various authors, been placed at approximately 100 grams of true protein material per day if more than 100 grams is taken in the food, then a portion of the proteid is used up by being converted into heat in exactly the same way that carbohydrates and fats are utilized. In certain instances when the vital energy required is low, the amount of proteid may be cut below the 100 gram mark.

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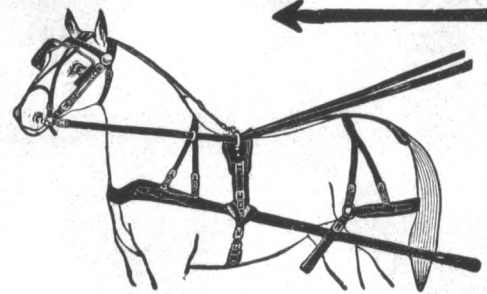
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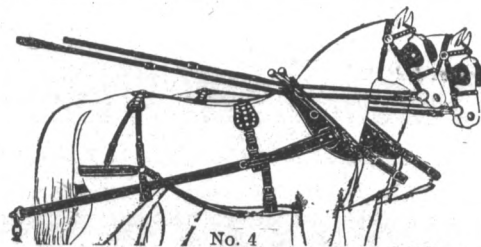
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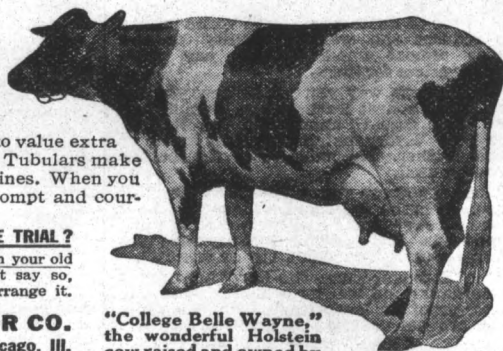
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Champion butter cow of the world.
Semi-Official Yearly Record:
Lbs. of milk 27,404.4
Lbs. of butter fat 1,058.34
Lbs. of butter, 80 percent fat 1,322.925
Average percent fat for year 3.86



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Lbs. of butter fat 962.795
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Average percent fat for year 4.43

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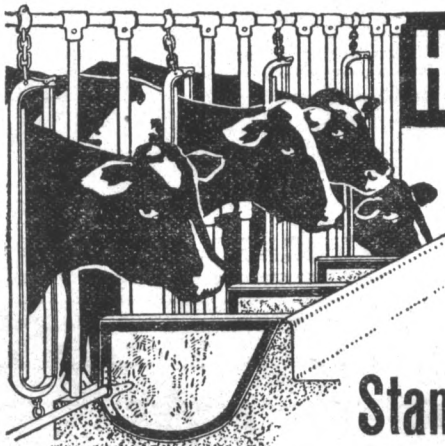
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THE DAIRY

CONDUCTED BY COLON C. LILLIE.

WINTER CARE OF DAIRY CATTLE.

If we secure satisfactory returns from dairy cows during the winter we must provide them with comfortable and sanitary stables. It is poor policy to expose a cow to inclement weather and unsanitary surroundings, and then feed carbohydrates to keep her in a thrifty and vigorous condition, for while she is using her digestive organs to make heat, she cannot use them to digest protein and make milk.

Many dairy farmers have an idea that cow comfort and a warm, stuffy stable are inseparable. This is not so. Cows will keep more comfortable in a stable that is cool and dry than in one that is damp and several degrees warmer in temperature. Poorly ventilated stables, from which almost all of nature's preventative and curative influences are excluded, are nurseries of infectious and contagious diseases. Tuberculosis and contagious abortion have secured their footholds in dairy herds largely through the aid of sunless, foul-aired barns.

Ventilation, light and simplicity are three cardinal factors in stable construction. Pure air and health-giving light and sunshine are cheaper than veterinary bills and medicated dopes. Simplicity in stable construction facilitates the work of keeping them clean and sanitary. Many of the patent stalls and forms of tie-ups have so much rigging and so many crevices for filth and vermin to accumulate that they make it very difficult to keep the stable sanitary. I have used several forms of tie-ups, but find after years of experimenting that the swing stanchion gives better satisfaction than some of the more complicated arrangements. The swing stanchions give liberty, the cows can put their heads on their sides, and, with a device which fastens the stanchion to the frame, that shoves the stanchion ahead or back, so the cows will stand just over the gutter, are cleanly; a bent piece of piping to hold the frame in position, and making a partial partition between the cows, leaves no surplus rigging to collect germs and prevents the cow turning on the platform or stepping on the teats of the cow next her. The standing platform should be adjusted to the length of the cows, so that they will keep clean and not stand with their feet in the gutters, which is productive of much harm during the advanced stages of pregnancy. A good plan is to make the standing platform four feet two inches on one end and gradually coming to four feet eight inches on the other, placing the shorter cows on the shorter end. Eight inches is deep enough for the gutters. This will give ample room for the absorbents and the cows will not be injured in stepping over it when they are turned out in the pasture or yards.

What to cover the side walls and ceiling with is a perplexing question. Matched lumber is nice but expensive. Lath and plaster make an ideal side wall and ceiling. It looks attractive and leaves no cracks and crevices for filth and vermin to gather in. If covered with whitewash it makes the stable very light and sanitary.

Liberal feeding accomplishes wonders in the way of production during the winter season as well as during the warmer weather. It is a fact, that some dairy farmers get a much larger yield of milk in the winter than during the spring and summer when the cows go out to pasture. In an attempt to secure maximum milk yields from dairy cows much depends upon proper feed mixtures. We read and hear a great deal about proper food for milk production. Every farm paper gives us information on food values and in almost all of these papers we have the same practical information on food values. Simmered down to every day use it is this. Have your food ration about six to one to secure maximum milk yields.

Continuous milking is not desirable and every practical dairyman knows it is not profitable. It is not unusual to find a cow that is very difficult to dry off previous to freshening. It is not always a safe method to force a cow to go dry against manifestly natural resistance. If, however, the milk has an unpleasant taste, she may as well be dried off at once, for her milk will not be fit for human food until her next period of freshening. Such a condition, as a rule, does

not occur until a short time before freshening.

It is better to give every cow a few weeks' rest before they are due to drop their next calf. An accurate service record will help us to dry off the cows at the right time. When the right time comes for drying off a cow, the grain ration should gradually be withdrawn. This may of itself cause the milk flow to diminish. If not, omit milking once a day, then milk once in two days, thus extending the milking periods. The udder must be watched and if any hardening or abnormal heat is shown regular milking must be resumed until it regains its normal condition. If the cow continues to secrete milk it must be removed from the udder.

In making up rations for heifers and dry cows we should provide a variety of grains and roughage. Various kinds of feed furnish the elements needed to build up the animal's system and supply the unborn calf with proper nourishment. If the calf is to be raised we simply cannot afford to cut down on the cow's food or compel her to subsist on too narrow a ration. How much to feed and the kinds of grain and roughage to feed must be worked out by the feeder according to the condition of the animals and the supply of available feedstuffs at hand. Some dry cows need nearly as much food as they do when giving milk; others will keep in good condition with plenty of roughage and a very light ration of grain. The dairy cow goes dry that she may build up her system and that of her unborn calf. If she gains in flesh at this period you need not be alarmed, for if she is a good milker, she will convert part of the flesh from her body into milk after she freshens. If she does not do this she is not as good a cow as she ought to be. It is very important that we have dairy heifers and dry cows in a vigorous, flesh-gaining condition before they begin their milking period.

Some may say there is more danger of milk fever if the cows are in good condition. Perhaps there is, but if we have an outfit for treating milk fever, as every dairyman ought to have, we need not let it worry us. As a rule it can be prevented by giving the animal the right kind of care. About one month before calving time, we commence feeding the cow to get her in shape, by leaving out all heat-producing foods and giving her plenty of clover hay, bran and ground oats, which are bulky, rich in mineral elements and food nutrients. I like to feed a moderate amount of silage or roots along with the dry hay and grain, because they are naturally laxative and help to keep the cows in a good, thrifty condition. Heifers and dry cows should not be half starved to prevent milk fever; it is better to take precautions by withholding heavy heat-producing foods for a few weeks before they freshen.

Just after the cow freshens she should have the same feeds she has been given previous to calving. A drink of warm water, some warm whole oats and a bran mash with her clover hay will do for the first day after freshening. A few roots will keep her bowels in good condition. It is safer to continue the clover hay, bran and oats ration for a few days until all danger from milk fever and constipation is over. Then her grain ration may be gradually increased until she gradually regains her normal condition. I like to bring my cows up to their maximum milk yields about four or five weeks after they have freshened.

New York.

W. MILTON KELLY.

DAMPENING THE COW'S UDDER.

Now that the cows are again back in the stables it is important that we give those little attentions that go to make for the comfort of the animals as well as for the bettering of the product that we are producing. Among the practices that aid us in accomplishing the latter end is the one of dampening the cow's udder and flanks before milking her. The purpose of this practice is to cause the dust that may be present on the udders and flanks to adhere more firmly, that it may not fall or be rubbed off into the milk. The moisture does this. Much of the dust is carried away, of course, by the mechanical action of rubbing the cloth or sponge, but what remains is made heavier by the moisture and caused to cling so firmly to the hair and skin of the udder and flanks that it will not be dislodged before the milking is completed, if the dampening is done just before the milker begins his task of milking. If the dampening is done too long before milking the moisture is evaporated and the benefit is partially lost. The udder should not be made wet, as is often done, but merely damp. A pail with water and cloths, or a sponge, are the equipment necessary for this work. This equipment, especially the cloths, should be sterilized frequently to prevent the development of harmful bacteria.

THE INTERNATIONAL DAIRY SHOW.

More than 400 head of high-class dairy animals were exhibited at the second International Dairy Show which closed October 31 at Milwaukee. It is likely that upwards of one thousand head would have been on exhibition but for the unfortunate selection of dates which conflicted with the National Dairy Show at Chicago. The show was splendidly housed in the capacious Auditorium right in the heart of the business district. The cattle were stabled in the basement, and while the ventilation was perhaps not all that could be desired, the exhibitors were unanimous in their praise of the management of the show in contributing so largely to the comfort of the animals. The dairy show at Milwaukee has been conceded to be essentially a Wisconsin show, but many superior herds were shown from other states. Connecticut sent herds of Jerseys, Ayrshires and Guernseys; Iowa sent a herd of Holsteins; Minnesota and Illinois sent herds of Jerseys. Other states sent prominent stockmen and agriculturists who lectured and gave many demonstrations, so that in many respects the Milwaukee show savored of international character.

A liberal prize fund to which many specials and trophies were added, proved attractive to the exhibitors, and those who presented their animals in proper condition were well repaid for their trip to Milwaukee. The show of milk, butter and cheese was of exceptional merit, and in these departments outranked the National Dairy Show at Chicago. Over 200 quarts of milk were entered for competition, coming from all parts of the country; from Winnipeg, Canada, to El Paso, Texas, and from Seattle, Washington, to Portland, Maine. After the judging, this milk was sold for the record price of \$1,000 for the 200 quarts.

In one of the halls was a splendidly arranged exhibit of the agricultural products of the state. This large exhibit, under the supervision of Mr. G. B. Packer, Wisconsin Commissioner of Immigration, was most attractively arranged, and at all hours seemed to be a central magnet for an admiring throng. Second only to this exhibit, was the one presented by the Agricultural Department of the University of Wisconsin, showing many phases of the out-of-door work which is being conducted by that institution.

The Health Department of the city of Milwaukee presented an exhibit of great educational value, consisting of a complete model dairy village, with barns and equipment, receiving and shipping depot, trains, etc. The Dairy Division of the federal government sent numerous large charts and pictures which show the visitor the importance of observing sanitary conditions in all things pertaining to the production of milk, butter and cheese.

The exhibits of dairy machinery, while not large, was of interest to many visitors. A working creamery held the interest of a large number of visitors to whom such an exhibit was altogether new. The international herdsman's judging contest, to which herdsman and sons of breeders were eligible was entered into by about a dozen youths. The winners were: A. P. Marack, Darlington, Wis.; F. R. Weymouth, Waukesha, Wis.; Wm. Erbach, Athens, Wis., and J. R. Palfrey. Quite a surprise was sprung by Wm. Erbach, a boy 15 years of age in winning fourth prize in a contest with older competitors.

A dairymaid's milking contest for girls under fifteen years of age was watched with much interest. The prizes went to the three girls who were successful in extracting the most milk from their cows in periods of three minutes each for three evenings—a total of nine minutes. The first prize was won by Laverne Bruins, of Fairwater, Wis. Little Miss Bruins is 14 years old and succeeded in finishing the contest with a total of 24.8 pounds of milk during the three days' contest.

The Cattle.

Twenty-four herds were exhibited from seven states. In point of numbers the Guernseys led with 109 head; Jerseys, 100 head; Holsteins, 70 head; Brown ons, 41 head. As to quality of the exhibits, the honors belong to the Jerseys, and while many splendid individuals of other breeds were shown, there were a number of exhibitors who did not give enough attention to the necessity of presenting their entries in proper condition.

A dozen or more conventions were held during the show, and there were rendered more enjoyable by a number of bouquets. But a better attendance of dairy farmers would have increased the good resulting from these sessions.—H. T. M.

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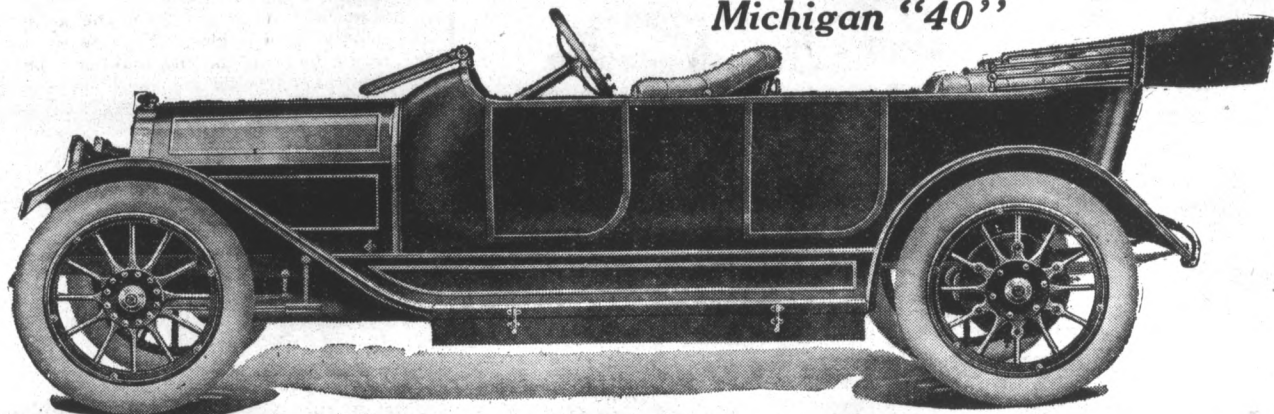
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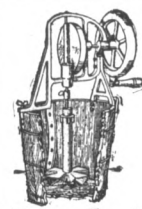
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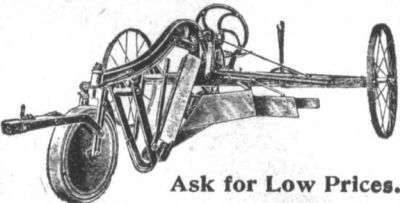
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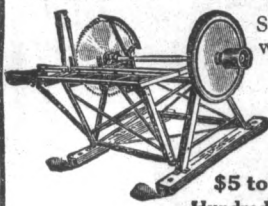
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HORTICULTURE

THE APPLE MARKET.

The present condition of the apple market is undoubtedly receiving serious consideration by all apple growers. It surely would give anyone a dark and dismal feeling when in spring he was anticipating \$2.50 and \$3.00 a barrel, and then, come now to the realization of a \$1.75 a barrel, the buyer's price. This cloudy feeling is further encouraged by the demand of the pickers for more wages, higher prices of barrels and shortage of cars.

Progressive men, however, do not stand around loose-lipped very long. They tighten their belts (they probably will need tightening) and do some contemplating.

So it behooves us apple growers to give the market question, not serious contempt, but serious contemplation. Looking fairly at the question from all sides will do us no harm and may do us some good.

Last year the apple crop in cold storage was estimated at twice that of the year before. It was a bumper crop. But still with such a crop there was only two and one-half pecks for each family of five in this country. How long would two and one-half pecks last in a family of five? Still, those who stored their fruits (growers, anyway), lost money by storing, and consumers were paying fifty cents a peck in many places. When the crop was being harvested last year and most growers getting \$2.50 per barrel gross on South Water street, a big store in Chicago was selling at \$6. This year when \$2.00 is the high price for good stuff consumers in cities in the northern part of this state are paying 35 cents a peck and in some south central cities of Michigan they are paying 10 cents for three apples of the No. 2 grade.

The following conversation is common when consumers visit orchards where good fruit is grown: "Where does all of this nice fruit go?" Answer, "Chicago." Consumer: "Why, we never get anything as good as this." Perhaps the fruit looks much better in the orchard than in the store. Probably they are trying to work the farmer for a liberal quantity to eat. More likely they are telling the truth.

A speaker at the meeting of the International Apple Shippers' Association in Chicago last spring advised the buyers to not buy too heavy, and too soon. He told them to wait until the harvesting was going on and the farmers anxious to do something with their fruit. He said that 5,000 barrels rightly handled would keep the buyer and his family in good living and comfort. Undoubtedly 5,000 barrels in the buyers' hands would buy his family more comfort than the grower could give his family if he had 5,000 barrels; and comfort costs more in the city than it does in the country. It appears that this speaker's advice has been followed and has worked. Undoubtedly the market will improve materially after harvesting is done.

I think that we give the commission man more credit for dishonesty than is due him. There are many commission men who are as honest as a commission man can be. It is a known fact, though, that the consumer pays from a hundred to four hundred per cent more than the wholesale price of fruit. Undoubtedly the retailer should come in for his share of illegitimate profits.

But then, we are all human and the streaks of honesty and dishonesty run about equally through eaters, sellers and producers. Granted the dishonesty in the middle man, he has on one side bad debts and expensive conveniences of delivery, etc., and dishonest labeling and packing on the other. It is known that one grower's fancy will just about equal another's No. 2.

The apple market is only an illustration of what the other food markets are. There are too many dams in the flow of food from the producer to the consumer that draw unearned power therefrom. Continual damning these dams only makes obstructions worse. We can do more by serious regard and study of the question from all sides separate hearsay from fact, diligently work for better conditions and meanwhile make the best of it.

It would be to every farmer's advantage to make a serious study of business and to trace the courses of the channels of trade. The application of system and scientific management to the producing

end would give the producer more time to study the business end.

Van Buren Co. F. A. WILKEN.

GARDEN NOTES FOR NOVEMBER.

An excellent plan for storing celery for winter use is to place it in pits. For convenience in covering the pits should be narrow, from one to one-half foot in width. If there is ample drainage the pit may be located wholly or partly under ground, by first digging a trench of the necessary depth. In digging the celery, some of the roots should be left on with soil adhering, each stalk being pressed firmly into the trench. When the trench is full, place boards over the pit in such a manner as will serve to protect the leaves from being crushed or broken, then cover well with straw and dirt. If the pit can be located in a position where snow banks are accustomed to form, so much the better; not so much dirt will be required to prevent freezing.

Celery may also be stored in cellars. Perhaps as good and convenient a way as any, is to pack it in boxes, before storing. A square of earth should be left adhering to the roots, as in the other instance, and the roots may be kept moist by sprinkling; however, care should be taken that no water gets on the leaves or stalks. The earth on the roots, and moisture, is to preserve crispness in the stalks. For this purpose the pit is superior to the cellar. And permit me to wander from the text, to say: When using celery held over from one meal to another crispness is retained by placing the stalks in a glass jar with cap turned down tight. In this manner they can be held over several days, still retaining their original crispness.

An excellent plan for storing cabbage is to suspend them on poles and cover with earth; they keep better if the soil is not permitted to come in contact with the leaves; a dry atmosphere, that is to say, the absence of excessive moisture, favors the long keeping of this vegetable. It is advised by some that freezing does not materially injure cabbage if this frozen condition is maintained; but this has not been our experience. It is not necessary that cabbage be gathered as early as celery, as light freezes do no harm. Celery should be stored before there has been any freezing of the ground.

Emmett Co. M. N. EDGERTON.

SAN JOSE SCALE NOTES.

One gratifying result of last winter's weather was the havoc it played with the San Jose scale. In some localities this was quite evident. Trees which were badly infested last year came out in the spring so clean of the insect that a live scale was hard to find. Even the fruit this year in these orchards showed few spots.

However, it is not alone the weather that is helping the fruit grower. The punctured shells are evidence that the mortality among the scales is in part due to some agency besides the weather. Several kinds of insects are at work, not only upon the older scales, but upon the young as well. Some of the lady bugs have an appetite for these little crawlers akin to that of a chicken for corn. A fungous disease has also been found among the scales which seems capable of doing its part in the destruction.

All of this is gratifying to the fruit grower. He has some reason to conclude that the worst is over, and that nature is balancing the account against the most destructive enemy with which he at present has to contend. From this time on it may be that the scale will decline until its natural enemies are sufficient to keep it under control, as they are in China, whence the pest came.

But while the scale has been hard hit the time for laying aside the spray pump has not yet arrived. There is scale enough still alive. In some localities the winter was not of so much benefit and the other aids have not yet become of importance. In fact, now is the time to spray and to be thorough about it for the severe check which has been given to the scale by extreme weather conditions will now enable the fruit grower to keep it under control and the opportunity ought not to be lost.

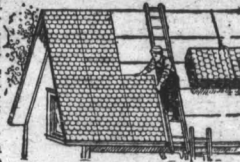
Should we spray in the fall or spring? Well, there is one advantage in fall spraying. The work is done and out of the way before cold weather, so is not on the mind all winter. But spring spraying is more effectual and if the scale is not too abundant the spring application is preferred.

F. D. WELLS.

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DETROIT, NOV. 16, 1912.

CURRENT COMMENT.

On Tuesday of last week the electorate of the country put an end to speculation as to the outcome of the presidential election in a decisive manner. That the result was a decisive one is a matter for congratulation, since any probable effect upon the business of the country is certain to be less marked than would be the case if the election had developed upon Congress, as it was pointed out that it might easily do in a comment published in a recent issue. In fact, there is no good reason why the business of the country should suffer at all, simply as the result of a national election which will be followed by a change in the administration from a partisan standpoint.

On this point the people of the country seem to have been peculiarly sane, during the campaign which has just closed. They refused to get excited regarding the possible or probable outcome, however interested they might be in the success of the candidates whom they favored. Even the bitterness of defeat for those who felt it, has been alleviated by the fact that it was suffered at the hands of an old and honored enemy, rather than of one of the factional elements in the domestic and political squabble which characterized the campaign. There is also evidence of a continued business sanity on the part of the people, now that the contest is over, which we believe will be warranted by the outcome. Let us for a moment study the situation as it is, as a means of reassuring the timid reader who may have been educated to feel a degree of alarm regarding the future.

President-elect Wilson is a man whose educational attainments and training have well fitted him for the high office to which he has been called. In addition he is a man of undoubted high moral standard and integrity of purpose and, we believe, may be depended upon to show a commendable independence of mere political considerations in the administration of his great office. Such an independence he will surely need. Already the hungry politicians, who have found it a long wait between jobs, are planning and scheming to land at the "pie" counter by fair means or foul. But it is only by placing efficiency before political pull in the selection of his subordinates that the President-elect can hope to attain results which will cause his administration to be approved by the people four years hence. Otherwise he may expect the same verdict which has been meted out to those who have preceded him.

But whether the President-elect rises to the occasion in this regard or not can

have little to do with the effect of the change of administration upon business. Such effect, it will be conceded, will be confined to the influence of such tariff legislation as may be enacted with the democratic party in control of both houses of Congress as well as of the presidency. Let us then analyze the tariff situation in a sane and unbiased manner. The industrial history of our country is an open book which permits no denial of the fact that the great bulk of our industries have been built up and prospered wonderfully under the principle and practice of a protective tariff. There has, however, a well defined feeling grown up among our people that the time has arrived when a portion of this protection can be dispensed with in the interest of a lowering of price levels to the consumer. It was in response to this well recognized demand that a plank was written in the republican platform four years ago pledging that party to a revision of the tariff downward. But the people of the country did not accept the resulting Payne-Aldrich tariff bill as a revision downward within their meaning, hence the later move for a tariff board as an aid to the reduction of the tariff schedules on scientific principles, the fatal blunder of the Canadian reciprocity pact on the part of the administration and the passage of hastily considered tariff bills, lowering certain schedules, by democratic congressmen and their allies and their veto by the President.

But with full power will not the democrats go to such extremes with their tariff-for-revenue-only idea as to seriously disturb business? We doubt it greatly. With full power goes full responsibility, and responsibility breeds caution. Nor are the units of the democratic party all of one mind on this question, so that any tariff legislation enacted is certain to be a matter of compromise. We may then, we believe, expect a reasonable degree of consideration with regard to tariff legislation from the incoming administration. Indeed, the tariff plank of their platform was decidedly conservative in tone, and we cannot think they will turn the lessons of the past to naught and disturb the foundations of business by radical and sweeping tariff legislation. Undoubtedly the tariff schedules will be lowered in spots. Public sentiment would have ultimately compelled such reductions at the hands of the republican party. But the greatest danger to business as a result of the election is that a general lack of confidence in the future may develop. Being scared has almost the same effect as being hurt, in a business way, as was demonstrated in the near-panic of 1907 under Roosevelt's administration. But, happily, there is at present no indication of general business timidity. Our country is too great in its resources, and our people are too prosperous in their business life, to become alarmed at shadows, or to stand in their own light for long.

Improved Farm Financing.

In an address recently delivered before the Chicago Bankers' Club, Mr. B. F. Harris, ex-president of the Illinois Bankers' Association and present chairman of the Association Committee on Agriculture and member of the American Bankers' Association Committee on Agriculture and Vocational Education, expresses an opinion on the above subject which should be far reaching owing to the positions in which he has acted as above mentioned. Mr. Harris states that throughout the United States there is a bank on an average to each 3,341 of population, or a total of 28,551 banks. These commercial banks are already doing in rate and volume of business about all they can do in farm financing and no plan can be devised whereby our banks of deposit may be made to carry more than a mere fraction of the coming needs of our new agriculture. He concludes, therefore, that we should rise to the demand and opportunity to provide plans and agencies for the great agricultural financing proposition that impends.

In speaking of the needs of the American farmers along this line, Mr. Harris states that the American farmer has nearly forty billions of dollars invested in his business and produces twenty-five millions of dollars of new wealth every day. He uses hundreds of millions of dollars of bank credit every crop season and as he takes up permanent and conservative soil building methods of agriculture he will ask and deserve billions of dollars in long-time loans to properly carry out that work and put agriculture in the United States where it belongs and is to be.

This financial task, in Mr. Harris' opinion, exceeds that of fifty years ago when a great railroad construction required thousands of millions of dollars. Several dollars per acre in fertilizers to restore or maintain one hundred million acres of worn lands over each five-year period would require upward of a billion dollars; additional labor-saving machinery and equipment required for proper economy and to make up for shortage in farm labor will require upward of two billion dollars more, while the further investment in permanent buildings and five stock will require other billions, and a long-time amortizing mortgage loan system, must be devised to give such methods of agriculture the credit facilities that they will require and deserve.

In the opinion of Mr. Harris, a banker who has studied this question from every angle, it would be easy to provide plans by which loans on this best of securities can be made at a favorable rate and under governmental and state regulations, the best of safeguarding and the size and character of securities so arranged that it would make a very acceptable, popular and liquid investment security. At the same time the farmer could effect his loans more promptly and easy and for much longer time, all of which features would tend to lower the interest rate to a point which would be essentially fair and to the advantage of agriculture, probably to between five and six per cent.

Mr. Harris is of the opinion that, due to our individualistic ideas and the 28,000 banks which we now have, the German system that has been discussed at length in these columns will not fit in with our lives and conditions, but believes rather that state or federal mortgage banks modeled after the French Credit Foncier plan are quite certain to be the plan which this country will adopt. In any event the study of this proposition by a man of Mr. Harris' ability, representing as he does the Bankers' Associations of a great state and nation, would indicate that the need for better credit facilities for the farmers is becoming more apparent to, and better understood by, financial men of the country, and that a plan will ultimately be worked out which will be to the benefit of all concerned, not only affording better credit facilities for the farmers but safer investments for the peoples' savings, and liquid assets for the banks as well.

Consumption of Mutton. Should be Increased.

While for many centuries mutton has been a popular meat in Great Britain, the American public has confined the growth of its tastes in this regard more particularly to lamb mutton. The meat of the full grown sheep, for which the English breeds have become famous as to quality, is not considered a delicacy nor made a staple article of food the same as beef in this country. In fact, our market is so particular in this regard that even lambs finished to a little too heavy a weight are discriminated against to a degree which does not seem at all warranted by reason or good sense. We always notice a wide range in the price between prime and heavy lambs at certain seasons of the year and the more matured mutton of other days is almost a drug upon our markets; yet there is no more toothsome meat than that to be secured from the carcass of a well fattened mature sheep. Our people need an educational campaign conducted among them upon this point, since they are not alone neglecting a source of most excellent and nutritious meat, but at the same time by their badly educated taste are contributing to the high cost of living in an altogether unnecessary way.

Right vs. Duty.

From the unofficial returns of the vote on the constitutional amendment providing for woman suffrage in Michigan it appears that the women of the state have been granted the right of franchise. This, to some, highly cherished right, will fall rather as an onerous duty upon other women of the state. But it is a duty which none should neglect, else any benefit which might otherwise accrue to the commonwealth from the granting of the franchise to women will be more than offset by the possible harm which might result. Unfortunately there will be an ignorant and irresponsible element of women voters, as there are of men. A smaller contingent, perhaps, yet a factor to be reckoned with. Hence the duty incumbent upon the representative home women of the state, whether they have been among those who have sought the ballot or not, is to inform themselves

thoroughly upon all political issues of the day, keep tab on the records of candidates for public office and be prepared to discharge their new duty at the polls in an intelligent and conscientious manner.

A majority of the male voters of the state have signified their willingness to grant the right of franchise to the women of the state. We hope that the great majority of the women of the state may accept the obligation as a duty to be discharged, rather than as a right to be exercised or not at will.

HAPPENINGS FOR THE WEEK.

National.

The general election held November 5 resulted in a national victory for the democratic party. Woodrow Wilson, of New Jersey, was elected president and T. R. Marshall, of Indiana, vice-president of the United States. The electoral college is probably divided as follows: Wilson, 455; Roosevelt, 68; Taft, 8. The democrats also have a large majority in the national house of representatives and they will probably control the Senate, the political complexion of the latter body being a little uncertain, due to the unknown character of the legislatures of some of the states where senators are to be chosen. In Michigan, Mr. Ferris, the democratic candidate, was elected governor, while the latest returns indicate that the republicans have elected the remainder of the state ticket, the hardest fight being for the office of lieutenant-governor, where Ross, the republican candidate, and Gordon, the progressive candidate, had a very close race. Both bodies of the state legislature will be controlled by the republicans unless the official canvass changes the present standing of the candidates. The legislature being republican will probably insure the re-election of William Alden Smith to the United States Senate from Michigan. In the Michigan congressional districts, seven republicans were elected, two progressives and probably three democrats.

A rear end collision between an excursion train and a freight train near Mountz, La., resulted in 14 persons being killed and 90 others injured. The wreck is said to be due to a flagman failing to warn the approaching freight train.

Two American battleships sailed from Philadelphia for the far east to protect American interests endangered by the war.

An experiment is being tried in the Whittier, Colorado, schools by the inauguration of a class in which students are instructed in methods of study. It is believed by those who are fathering the scheme that it is of more vital import to the scholar, that he learn how to study than it is to prepare an ordinary lesson in the regular school text.

It is stated that on Sunday evening the eastern part of North Carolina suffered from an earthquake shock. At Edenton, N. C., the disturbance was so great that people left their homes, running into the streets. At Hartford the shock was also felt. It is not reported whether any serious property damage was done or lives lost.

The American people keenly regret to learn that Hon. James Bryce, Great Britain's ambassador to the United States since 1907 has resigned his post. Mr. Bryce, who is 53 years of age, desires to spend his latter days in literary work. Sir Cecil Spring-Rice has been selected to succeed Mr. Bryce.

President Taft has made it known that during the coming session of Congress he will press for the passage of a workmen's compensation bill and also for the authorization of the Supreme Court of the United States to revise the rules on procedure governing common law cases in federal courts. This latter action will be a complement of the reform recently announced in the federal equity courts.

The trial of the gunman accused of murdering Herman Rosenthal in New York began Monday.

It is estimated that by the next 18 months ten million dollars will have been spent by the United States Steel Corporation in the building of a new steel center at Superior on the Lake Superior shore in the state of Minnesota.

Careful watch over Jackson prison is being maintained upon the theory, substantiated by a number of different findings, that a plot has been arranged by the prisoners to destroy a whole or part of the institution. Detectives are endeavoring to ferret out the plan and the men responsible for it.

The increase in the socialists' vote at the last election is most encouraging to the adherents of that political faith. In 1908 the party polled little over 420,000 votes; in the last election with the returns from a number of states estimated, it is calculated that the vote will exceed 700,000.

An estimate made by the automobile manufacturers of Detroit indicates that for the year 1913 there will be required 330,300 automobiles to satisfy the trade. This will be an increase of 100 per cent over the present year's output.

More than 2,000 laborers are thrown out of employment by the action of the Grand Trunk Railroad system in stopping construction of lines of the Southern New England Railroad Company, which system extends into Rhode Island and Massachusetts.

The official compilings of the batting averages for the several members of the American baseball league show that Tyrus Raymond Cobb, of the Detroit club, has the highest average, his percentage being 410. This is the sixth successive year in which Mr. Cobb has taken this high baseball honor.

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land & Buffalo Navigation Company at the Great Lakes Engineering Works at Wyandotte last Saturday, is the largest sidewheel steamer afloat, it being 500 feet long.

Six steel companies have been notified to appear before a special examiner at Cleveland, Ohio, to give testimony in connection with the cases brought by the government for the dissolution of the United States Steel Corporation.

Foreign.

The struggle between the Turks and the allied forces of Serbia, Montenegro, Bulgaria and Greece reflects the weakness of the Ottoman government and the strength and satisfactory co-operation of the allies. In the past week the allied forces have made rapid progress in the campaign to occupy Constantinople. They are already facing the last of a series of defenses before the city and the Turks are preparing to make a desperate stand at Tchatalji. Points along the line between the two forces are constantly falling into the hands of the Bulgarians. The long series of victories is adding enthusiasm to the spirit of Ottoman's enemy, thus giving them added strength to overcome the depressed Turkish forces. Cholera is reported to have broken out at the front of the Turkish lines and many fatalities have already occurred from the dread disease. The struggle thus far has been strenuous and fully 150,000 lives were wasted in the month's campaign. The only hope of the Ottoman government lies in intervention by the powers. This is a possibility inasmuch as there appears to be a sentiment among the ruling governments of Europe that Turkey should control at least a narrow strip of territory on the European side of the Bosphorus. Action will need to be taken very soon, however, if the intervention is made before the allied troops have captured the Holy City. There is danger that, in the event of its capture, a Holy war would be precipitated between the Christian and Mohammedan faiths.

Charles H. Bryan, United States ambassador to Japan, has resigned his post. The administration was defeated in a test vote in the British House of Commons while balloting upon the amendment to the Irish home rule bill. A meeting of the cabinet was immediately called after the vote, and the probabilities are that an election will be held to elect a new parliament.

NATIONAL CROP STATISTICS.

The Crop Reporting Board of the Bureau of Statistics of the U. S. Department of Agriculture, from the reports of the correspondents and agents of the Bureau, has compiled the following table, showing yield per acre, total production and price of principal crops for the whole country:

country:	Yield Per Acre.			Production (000 omitted).		Price Nov. 1.	
	1912.	1911.	10-yr.	1912.	1911.	1912*	1911*
Crops.							
Corn, bu.	29.3	23.9	26.7	3,169,137	2,531,488	58.4	64.7
Buckwheat, bu.	22.9	21.1	19.3	19,124	17,549	65.5	73.0
Potatoes, bu.	112.3	80.9	94.3	414,289	292,737	45.5	76.3
Flaxseed, bu.	9.9	7.0	8.8	29,755	19,370	133.4	210.6
Wheat, bu.	16.0	12.5	14.0	720,333	621,338	83.8	91.5
Oats, bu.	37.4	24.4	29.5	1,417,172	922,298	33.6	43.8
Barley, bu.	29.7	21.0	25.4	224,619	160,240	53.8	84.9
Rye, bu.	16.9	15.6	16.1	35,422	33,119	68.8	83.1
Hay, tons.....	1.47	1.14	1.43	72,425	54,916	11.80	14.62
* Price of principal crops per ton; other products, cents per bushel.							

*Hay, dollars per ton; other products, cents per bushel.

The percentage of the 1911 crop of corn on farms Nov. 1, 1912, is estimated at 2.6 per cent (64,764,000 bu.), against 4.3 per cent (123,824,000 bu.) of the 1910 crop on farms Nov. 1, 1911, and 3.8 per cent the average of similar estimates of the past ten years.

Apples.—Production, 69.9 per cent of full crop, against 62.4 last year and 51.3, the 10-year average; quality, 83.0, against 78.2 last year and 72.1 in 1910.

Potatoes.—The following table gives yield per acre, total production and Nov. 1 price of potatoes in each of the leading potato producing states:

1 price of potatoes in each of the leading potato producing states:							Price Nov. 1.	
States.	1912.	1911.	10-yr.	Yield Per Acre. Production (000 omitted).		1912	1911	
New York	106	74	90	39,008	27,750	47	74	
Michigan	105	94	90	34,650	31,020	35	52	
Wisconsin	115	116	95	33,465	32,480	31	48	
Pennsylvania	106	56	85	28,090	15,120	51	85	
Minnesota	130	115	91	31,850	25,875	26	49	
Maine	196	180	192	22,932	21,240	41	68	
Colorado	95	35	126	8,075	3,150	50	80	

MICHIGAN CROP REPORT.

Wheat.—The condition of wheat as compared with an average per cent is 90 in the state, 91 in the southern and northern counties, 85 in the central counties and 89 in the upper peninsula. Computing the yield per acre by counties has made a slight difference in the total yield for the state as reported in the October Crop Report.

The total number of bushels of wheat marketed by farmers in October at 94 flouring mills is 131,221 and at 94 elevators and to grain dealers 119,710, or a total of 250,931 bushels. Of this amount 152,538 bushels were marketed in the southern four tiers of counties, 65,839 in the central counties and 32,554 in the northern counties and upper peninsula. The estimated total number of bushels of wheat marketed in the three months August-October is 1,750,000. Eighty-two mills, elevators and grain dealers report no wheat marketed in October.

The estimated average yield of corn in bushels is 31.65 in the state, 33.39 in the southern counties, 25.40 in the central counties, 24.07 in the northern counties and 29.17 in the upper peninsula.

Clover Seed.—The per cent of acreage of clover seed harvested as compared with the previous year is 86 in the state, 87 in the southern counties, 78 in the central counties, 93 in the northern counties and 97 in the upper peninsula. The average yield per acre in bushels is 1.38 in the state, 1.12 in the southern counties, 1.48 in the central counties, 2.34 in the northern counties and 3.25 in the upper peninsula.

Beans.—The final estimated average yield per acre in bushels is 12.91 in the state, 13.05 in the southern counties, 12.71 in the central counties, 13.28 in the northern counties and 15.95 in the upper peninsula.

Potatoes.—The estimated average yield per acre, in bushels is 98.06 in the state, 99.05 in the southern counties, 75.80 in the central counties, 85.36 in the northern counties and 140.47 in the upper peninsula.

Commercial Fertilizers.—The per cent of farmers who have used commercial fertilizer on their wheat this fall is 24 in the state, 31 in the southern counties, 27 in the central counties, four in the northern counties and three in the upper peninsula.

Live Stock.—The average condition in the state of horses and sheep is 96, cattle 97 and swine 95.

Table showing for the state the estimated acreage, total yield and yield per acre of the following farm products for the year 1912:

Farm Products.	Estimated acreage.	Total yield bushels.
Corn	1,629,066	51,555,756
Wheat	519,504	5,254,311
Oats	1,460,190	48,340,103
Barley	85,347	2,021,549
Rye	371,751	4,849,208
Buckwheat	64,598	1,041,005
Potatoes	360,434	35,342,675
Beans	408,007	5,268,631
Peas	68,662	1,085,424
Clover seed	135,747	187,331
Apples	228,313	9,360,833
Peaches	23,257	232,570
Pears	9,089	353,471
Plums	3,720	126,480
Cherries	7,600	258,400
Strawberries	8,051	475,009
Raspberries	8,786	219,650
Sugar beets	83,948	839,480
Hay and forage	2,363,619	3,013,995

CROP AND MARKET NOTES.

Lapeer Co., Oct. 11.—Weather moderating after a heavy rainfall of two days. Farmers can now attend to farm work again, such as husking corn, getting out sugar beets, hauling apples, potatoes, onions, etc., to market, and repairing buildings in preparation for winter. Some are fall plowing, others are ditching and putting in tile. We look for an open winter, for muskrats are building their cottages high and the trees have dropped nearly all their leaves. Wheat that was put in early is looking well. About as much rye put in this fall as wheat. Many report potatoes rotting and growers seem to be selling them pretty close, keeping only a few for their own use, receiving 35c per bushel at the cars. Corn not fit to crib just yet. Apples the cheapest known in five years, many being fed to stock to get rid of them. Stock of all kinds bringing good prices.

Washtenaw Co., Nov. 5.—Weather at this date favorable for farm work and it is being rushed. Potatoes about all dug

and a large part of the crop marketed. Present price 37c. Apples, of which there was an immense crop, about all secured and selling from wagons at 50c per bu. The corn crop also was a large one but the quality is somewhat deficient as it ripened quite unevenly. Also in fields in which it was necessary to plant in there was considerable corn which failed to properly mature. Altogether, the feeding value of the crop will not be above 75 per cent of normal. Very little of it husked as yet, as farmers are in a quandary as to what to do with it; if husked with machine both corn and fodder are likely to be damaged. An immense amount of farm work is yet to be done and mighty few helpers to be had. Beef cattle scarce and high. Hogs more plentiful, with prices a little slow.

CATALOG NOTICE.

"Values of Feeds and Manures" is the title of a folder sent upon request by the D. N. P. Bowsher Co., South Bend, Ind. This contains valuable data for the live stock feeder, including a table giving the digestive nutrients and fertilizing constituents in the various kinds of feeds used upon the farm, which would be of no small assistance in compounding balanced rations for the live stock. Write the above company for a copy of this folder, mentioning the Michigan Farmer.

"Water supply in the Country Home," is the title of a handsomely illustrated booklet published by the Gould Manufacturing Co., Seneca Falls, N. Y. In this booklet the various types of water supplies and equipment therefore are fully illustrated and described and important points for the consideration of the users are brought to the reader's attention. All who have not an adequate supply of running water in their country homes should send for this book.

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Biggest Prices! Best Grading! Cash Quick

Those are the advantages you have in sending your furs to Funsten. We are the largest in the world in our line. The biggest American, Canadian and European buyers are represented at our regular sales. Competition for Funsten Furs is greatest. As we sell furs in large quantities and get more spot cash, we can pay you more cash for your furs than you can get anywhere. We count on large volume of business and small margin of profit. No traveling buyers—do all our business direct with you. We want ten million dollars' worth of furs. We want your shipments—anything—from one skin up.

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Funsten Animal Bait Guaranteed to increase your catch or money back. Beware of imitations. Funsten Animal Bait won Grand Prize at World's Fair in 1904. U. S. Government uses Funsten Baits. One can of Funsten Animal Bait brought one man in St. Michaels, Alaska, \$1,199 clear profit. Costs only \$1 a can. Different kinds for different animals. Whether you are an experienced trapper or just a beginner, we can help you catch more furs—make more money. Write today for free Trapper's Guide, Game Laws and Trapper's Supply Catalog—three books in one—Fun Market Reports, Funsten Safety Fur Shipping Tags, etc. ALL FREE. (3)

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"QUILT"

is not a mere felt or paper. It is twenty-eight times warmer than the common building papers. It is a matted lining, full of dead air spaces, that keeps out the cold in the same way that a bird's feathers do. It costs but 1c a foot, and will pay for itself over and over again in saving fuel and protecting stock and stored fruit or vegetables from cold, and you and your family from discomfort and doctor bills.

Send for a Free Sample and Name of Nearest Agent.

Samuel Cabot, Inc., Manufacturing Chemists, Boston, Mass.
MICHIGAN DISTRIBUTORS: W. P. Williams, Grand Rapids, C. H. Little, Co., Detroit.

Also Cabot's Cresote Shingle Stains
Conserve Wood Preservative

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FARMERS' CLUBS

Address all communications relative to the organization of new Clubs to Mrs. C. P. Johnson, Metamora, Mich.

A MESSAGE TO LOCAL CLUBS.

The annual meeting of the State Association of Farmers' Clubs will be held in Representatives' Hall, Lansing, Dec. 3 and 4, 1912.

Matters of grave importance to the State Association and to local clubs will be discussed, and the executive board earnestly requests full representation from each Club; also that each Club shall take formal action on the proposed amendment to the constitution, so that delegates may vote intelligently and effectively.

Programs have been mailed to the presidents and secretaries of local Clubs, credential and report blanks being included to the latter, and the Associational Secretary wishes to emphasize the fact that her annual report is entirely dependent upon prompt returns from local secretaries. Tomorrow never comes, so kindly attend to it today and oblige your Associational Secretary.

MRS. C. P. JOHNSON, Sec.

A BOYS' CORN CONTEST.

How Ingham County Club Members Are Developing Corn Growers.

The boys' corn contest conducted by the Ingham County Farmers' Club was a great success. It was held Saturday, October 26, at Maccabee Hall in Mason. This contest is the outgrowth of a regular meeting held last February, at which the question of corn clubs was ably discussed by Prof. Shoesmith, of M. A. C. At that time President Ives appointed a special committee consisting of Messrs. Allen and Robb and Mesdames Cheney, Taylor and Green, (the last named was unable to attend the contest on account of sickness), and this committee worked hard in carefully planning every detail. Uniform seed was furnished by the Club; each boy was required to test his seed corn and plant one-eighth of an acre, doing all the work after the field was plowed. He was to write a description of the work, his paper to count 20 per cent, the yield 40 per cent and the best 10 ears 40 per cent, so there was more to be considered than just the corn on display.

The exhibition of corn from each grade was shown by itself, so that the boy from the eighth grade competed only with other boys from that grade, and so on, the seventh, sixth and fifth grades being represented.

There were three sweepstakes prizes, the one for best descriptions being won by Ivan Swift, of the eighth grade; the one for largest yield—20½ bu.—by Harold McCormick, also of the eighth grade, and

the one for best ten ears of corn by Carl Robb, of the fifth grade. The prize in each case was a five-dollar gold piece given by the Farmers' bank. The first prize in the eighth and seventh grades was a scholarship to any short course at M. A. C., good any time within five years, and considered equal to \$25. The first prize in the sixth grade was a scholarship to the eighth grade of the Mason high school. The business men of Mason were much interested and helped with the prizes, those for the fifth grade being: First, a camera; second, a hand cultivator; third, a sweater coat; fourth, a pair of skates. There were four prizes offered in each grade and each contestant who failed to win one of the regular prizes received a book with the compliments of the Club.

It was surely the boys' day, as they were the guests of honor at dinner, after which the picture was taken. The afternoon program had also been prepared with a view to making it of special interest to them. It opened with a talk on "Our Blue Ribbon Boys" by Rev. Frank Gates Ellett. A talk upon corn was given by Prof. Coffeen, of M. A. C., while the selection of seed corn and growth of the crop were handled by his assistants. These, interspersed with music and recitations, and the reading of the papers from each grade by the contestant having the highest mark, and the awarding of the prizes filled an interesting hour. Prof. Coffeen and his assistants came early in the day and ably judged the corn. They declared that among the 260 ears on exhibition there was not a poor ear, although some would undoubtedly make a better selection another time.

The next meeting of the Club will be Woman's Day, with the annual chicken-pie dinner.—Mrs. Tanswell Cor. Sec.

GRANGE

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

AMONG THE LIVE GRANGES.

Volinia Grange Added to Roster.—The farmers of Volinia township, Cass county, held a meeting at their town hall Saturday evening, Oct. 12, for the purpose of organizing a Grange. Good speakers were in attendance and the interest aroused resulted in those present to the number of 40 signifying their willingness to become members of the Grange and help make it a live farm institution in that section. On this occasion it was recalled that back in the sixties the Volinia Farmers' Club was one of the leading farmers' educational institutions of the state, and its deliberations were read by the public with interest. Such men as Milton Gard, Bennett Copley, B. G. Buell, and many others took a deep interest in the progress of advanced farming, and they made it a success for years. These men were the originators of the town fair, the first of the kind ever held in

the state, and for many years this fair flourished, with good stock, farm products and other things pertaining to farm life exhibited annually.

Plymouth Plans Unique School Fair.—Plymouth Grange has invited 13 rural schools to compete in seed gathering, wood work, sewing, and bread making. On Nov. 15 and 16 it will hold a school fair, and award prizes to the successful contestants. The school scoring the most points will receive a new picture for its school room. To meet expenses an admission of ten cents will be asked and a bake and candy sale will help to swell the funds. To add to the attractions there will be a fine display of antiques, and some of our ladies will have in charge a demonstration of that interesting article, "Shall the housewife become a chemist?" which appeared in a recent number of the Michigan Farmer.—Committee.

Morenci Patrons Entertain.—The members of Morenci Grange recently acted as hosts to Lime Creek Grange, their own hall proving inadequate. A short business session was followed by the feast, in which more than 200 participated. Lime Creek members supplied the program which followed, a feature of which was an excellent paper on "Michigan Birds," by Harlow Ingall, in which the good and bad qualities of many of the birds found upon Michigan farms were clearly brought out and the desirability of farmers protecting and befriending the useful species was urged. The taking of several straw ballots furnished a pleasing diversion and the evening closed with both Granges highly pleased with the meeting.

An Effective Equal Suffrage Program was rendered by Harmony Grange, of Wayne county, at its last meeting in October. Roll call was responded to with reasons for the member favoring or opposing the proposition. The chorus sang several suffrage songs and there were two suffrage recitations. The question, "Resolved, That Equal Suffrage is Just and Right," was debated, the judges deciding it in favor of the affirmative. A drill in which 12 ladies carried a pennant inscribed "Votes for Women" was much enjoyed. Uncle Remus, the old colored man, told the little boy a story about "Sis Rabbit and the Ants." But the strongest feature of the program was the closing number—a pantomime entitled, "An Arrogant Injustice." In the first scene a Chinaman received his naturalization papers. The second scene was at the polls on election day. The ever-present politician was giving the usual effusive greetings, along with cigars and his card. The Chinaman and a German were readily permitted to enter the booth, but the young mother leading a future voter by the hand was refused admittance. An old man, whose general appearance showed him to be very poor and far behind the times, and who did not know how to write, was instructed and allowed to vote, but the property-owning woman tried in vain. A dude, whose mind was too much occupied with his personal appearance for anything more weighty, voted, but an old lady who was a mother and a grandmother could not. An ignorant negro passed unquestioned, but two young women, capable of teaching the future voters in the public school were turned back.

COMING EVENTS.

Pomona Meetings.

Kent Co., with Courtland Grange, Wednesday, Nov. 20. D. E. McClure, state speaker.

Ingham Co., with Webberville and Vantown Granges, at farm home of Mr. and Mrs. Hugh Silsbee, Webberville, Friday, Nov. 22. Thanksgiving program.

NO MEDICINE

But Change of Food Gave Final Relief.

Most diseases start in the alimentary canal—stomach and bowels.

A great deal of our stomach and bowel troubles come from eating too much starchy and greasy food.

The stomach does not digest any of the starchy food we eat—white bread, pastry, potatoes, oats, etc.—these things are digested in the small intestines, and if we eat too much, as most of us do, the organs that should digest this kind of food are overcome by excess of work, so that fermentation, indigestion, and a long train of ills result.

Too much fat also is hard to digest and this is changed into acids, sour stomach, belching gas, and a bloated, heavy feeling.

In these conditions a change from indigestible foods to Grape-Nuts will work wonders in not only relieving the distress but in building up a strong digestion, clear brain and steady nerves. A Wash. woman writes:

"About five years ago I suffered with bad stomach—dyspepsia, indigestion, constipation—caused, I know now, from overeating starchy and greasy food.

"I doctored for two years without any benefit. The doctor told me there was no cure for me. I could not eat anything without suffering severe pain in my back and sides, and I became discouraged.

"A friend recommended Grape-Nuts and I began to use it. In less than two weeks I began to feel better and inside of two months I was a well woman and have been ever since.

"I can eat anything I wish with pleasure. We eat Grape-Nuts and cream for breakfast and are very fond of it." Name given by Postum Co., Battle Creek, Mich.

Read the little book, "The Road to Wellville," in pkgs. "There's a reason."

Ever read the above letter? A new one appears from time to time. They are genuine, true, and full of human interest.

A Dainty Rubber

The Niobe has a distinctive style, fit and beauty. It's dressy. Because made of pure rubber and specially reinforced at the heel, this rubber and its companion (the Cupid), members of the "Top Notch Brand" are made for hard service especially at the heel. The

BEACON FALLS

The "Cross" on the instep, makes you sure of high service in wear. They are a balanced rubber, not the ordinary kind.

Get them at your dealer's. If he hasn't them write us his name and we'll send you our free book No. 32

BEACON FALLS RUBBER SHOE CO.

Beacon Falls, Ct.
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"NIOBE"

WODWALBOARD

The modern and most economical building material. Takes place of both lath and plaster. Has smooth surface, can be tinted or painted to suit your taste. It is cold-proof, moisture-proof, fire-proof. It is tough and durable, lasts the life of the house.

Can be used plain or panel effect, in either new buildings or remodeling old. Easy to place, does not require services of an expert. Convenient lengths and widths—easy to fit any space with minimum waste. Write for catalog, samples and name of nearest dealer.

McHENRY-MILLHOUSE MFG. CO.
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Beacon FREE Burner

FITS YOUR OLD LAMP.

100 Candle Power Incandescent pure white light from (kerosene) coal oil. Beats either gas or electricity. COSTS ONLY 1 CENT FOR 6 HOURS. We want one person in each locality to whom we can refer new customers. Take advantage of our Special Offer to secure a Beacon Burner FREE. Write today. AGENTS WANTED.

HOME SUPPLY CO., 62 Home Bldg., Kansas City, Mo.



Participants in the Boys' Corn Contest Held by Ingham County Farmers' Club, at Mason October 26, 1912.

In rear of the 26 contestants are members of the contest committee as follows, reading from left to right: Mrs. W. H. Taylor, Alfred Allen, R. J. Robb and Mrs. W. L. Cheney. Upon table and floor in front of the boys are the exhibits and the various articles awarded as prizes.

POULTRY AND BEES

WINTER EGGS PROFITABLE.

By winter I mean the months of December, January and February, the period during which many hens are not in laying condition and eggs are scarce, consequently very high in price.

The interest on the money invested in the poultry house, etc., for an individual hen per month is an insignificant sum, perhaps one-half cent. It is therefore hardly worth considering. Hens in western New York are worth 75c to \$1 per head. Eggs average, during the three months indicated, about 36c per dozen. The cost of feed for a hen is about 10c per month. A vigorous hen of a productive breed and a good laying strain, should easily average 15 eggs per month; that is, if she gets proper care. It will be observed that this is at least 35 per cent per month on the investment of 75c or \$1.

The reader may be interested in the ration I use and how it is fed. For mash I use equal parts, by weight, of corn meal, wheat bran, wheat middlings or buckwheat middlings and ground oats, with the addition of a little oil meal. For scratch feed I use equal parts, by measure, of wheat, barley and buckwheat. I feed corn on the ear. For green feed I use clover or alfalfa leaves, or both. For a succulent feed, mangels and cabbage, also small potatoes, either boiled or raw.

The hens are kept in well lighted, well ventilated, dry, comfortable quarters. The first feed in the morning consists of scratch feed thrown into deep litter the previous evening after the hens have retired to the roosts. This, when the nights are long, gives them a chance to take food as soon as day breaks. The next feed is of mash, all they will eat readily. It is composed of the ground feeds mentioned, with clover or alfalfa chaff added in liberal quantity. I moisten this enough to make a crumbly mash but not sloppy. During cold weather it is best to warm this, because hens as well as human beings like some warm food. Some mixed grain is given during the forenoon and afternoon. The last meal consists of a fair amount of ear corn, the ears broken in two or three pieces, and fed warm. This leaves the hens in splendid condition to endure a cold winter's night. The mangels and cabbages I fasten along the walls within easy reaching distance. To suspend them with strings and compel hens to jump for them induces the wrong kind of exercise for a laying hen. I supply plenty of pure, cold water. It should neither be warm nor ice cold. I feed about an ounce of good beef scraps or beef scraps and green cut bone per hen two or three times a week and give them skim-milk on days when I do not give beef scraps. I keep oyster shells, sharp grit and charcoal before them all the time.

New York.

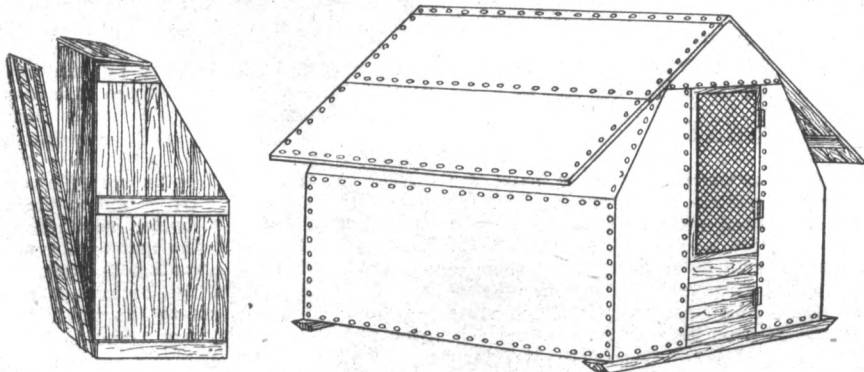
W. D. KORB.

STARTING RIGHT IN POULTRY RAISING.

(Continued from first page).

your work and will be found handy and adaptable to use at almost every stage of the game of poultry raising.

The sketch of this inexpensive piano-



box house which accompanies this article will, I think, make clear to the reader its simplicity.

Finally, the beginner, as well as the man who is developing a new interest in poultry, needs to have reliable sources of information at hand and, to start with, it will be profitable for him to own one or two good books on practical poultry raising. In addition he should have one or more good farm and poultry journals—in fact, these he must have, since they will serve to keep him interested and in

close touch with all of the latest information affecting the poultry industry. Livingston Co. W. B. OPDYCKE.

SIMPLE METHODS OF RENDERING BEESWAX.

Many bee-keepers do not realize the value of old combs, cappings from extractings, and odd bits of wax of all kinds. A pound of refined wax, on an average, is obtained from every three old combs. This finds a ready market at all times at 28 to 32 cents per pound wholesale, and in small lots at a higher price. California, although a big producer of beeswax, buys much at 50 cents per pound to supply the huge demands of its fruit growers who use it for budding and grafting.

Save all bits of wax and render in a good way in order to get the largest amount of marketable wax possible. As winter is the time when most of this is done I will give a simple and easy method.

For rendering cappings the solar wax extractor is excellent if used when cappings are removed. A home-made one will answer if you do not care to purchase one. Have a box covered with a pane of glass which fits tightly. When this is placed in the sun the interior of box becomes a very warm place. An old dripping pan is put in bottom of box and a hole made through one corner of box and pan allows the melting wax to drip and fall into a basin which has been placed beneath. A coarse wire-cloth tray holds cappings up from pan. One end of box is raised six inches to allow wax, as it escapes from the mass, to run down the bottom pan, through the hole and into the basin below.

Refuse, or slumgum as it is called, from the box should be saved, as it still contains wax. Where a man has 75 colonies of bees it will pay him to get a manufactured wax press, for with it a larger per cent of wax is obtained from the refuse. But here is a simple method that can be followed by most farmers and small bee-keepers. Old combs and refuse are put into a burlap sack which, in turn, is put into a large cast-iron kettle or a feed cooker such as is found on many farms. Put a few sticks in bottom of kettle to keep the sack from burning. Enough water is put into kettle to cover sack of wax, and fire is started under kettle. Have the kettle near a tree or post. Fasten a long pole to tree by one end, allowing the other to cross over kettle. A board is placed on top of the sack of refuse in kettle and a heavy stick or block is put upon this and the pole allowed to rest upon it. A heavy weight is then attached to the free end of pole so as to create a constant pressure upon the mass in the kettle. A heavy stone may be placed on top of the board which rests upon the sack, as a substitute for this arrangement, but it does not bring as good results.

As wax melts and escapes from the sack it rises to the top where it is skimmed off with a square-edged pan and put into another receptacle in which it may be remelted by simply putting it on the stove until melted, then removing and allowing to cool slowly.

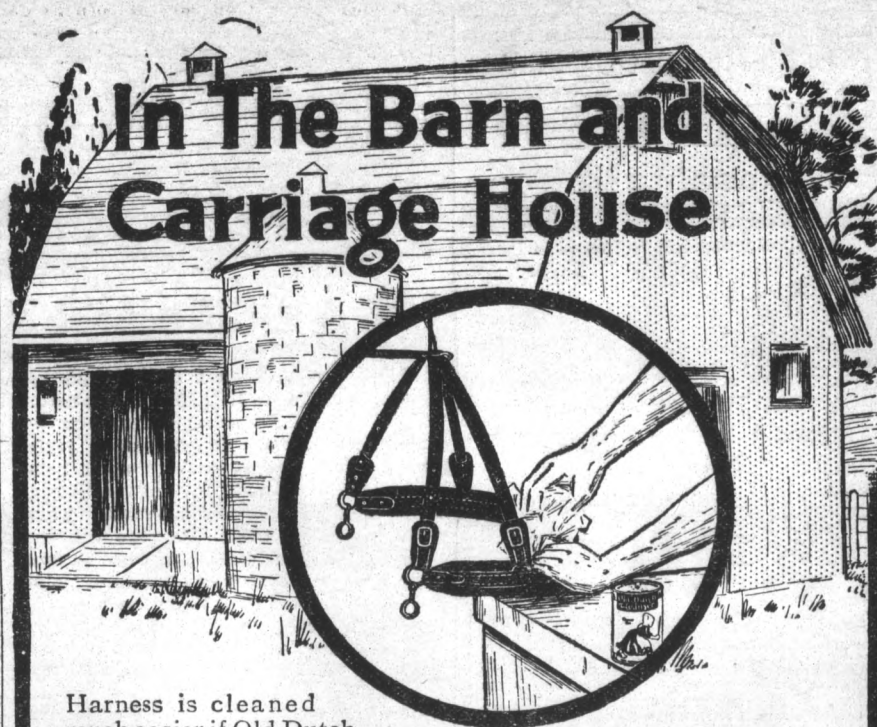
When wax no longer comes to the surface the pole or weight is removed and another process is gone through which removes still more wax. This consists in raising the sack and tying a string close up to slumgum, then letting the mass

boil while you make a squeezer. Two sticks are fastened together at one end by means of a leather hinge, the other ends being used as handles. The sack is then lifted and the squeezer applied. The one who holds the sack keeps twisting and the other keeps squeezing until the slumgum yields no more wax.

Hands or implements may be easily cleaned of wax if wet before coming in contact with it. Gasoline also quickly removes it.

Shiawassee Co.

N. F. GUTE.



Harness is cleaned

much easier if Old Dutch

Cleanser is sprinkled on cloth or brush. It quickly starts greasy accumulations on saddle, hold-backs and traces.

Mildewed discolorations and stains on carriage tops quickly washed away; grain bins and feed boxes thoroughly cleaned.

Keep a supply of Old Dutch Cleanser in the barn and carriage house for daily use.

Many other uses and full directions on large sifter can, 10c

Old Dutch Cleanser

Pull Out the Stumps!

Farm All Your Acres

Land is too high-priced to waste. Crops bring too much money to throw any away. Taxes are too high to get nothing in return. Think what you are losing every year by boarding stumps. Think what your loafer lands robs you of. It doesn't pay to leave the stumps standing. Get a Hercules all Steel Triple Power Stump Puller.

Pull Out An Acre Or More of Stumps a Day

Pull the biggest stump on your place in 5 minutes. Pull three acres without moving machine. The Hercules has greater pull than a locomotive. Has 400% more strength than any other puller—is 60% lighter. Cheaper, safer, surer, more thorough than dynamite. Many special features fully explained in my fine free book.

Send Me Your Name

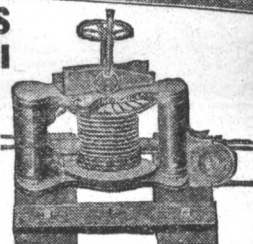
HERCULES MFG. CO.

237 21st St.

Centerville, Iowa



Hercules All Steel Triple-Power Stump Puller



Get my book and money saving special offer. Don't wait! Learn the best and cheapest way to remove the stumps Now! Address B. A. Fuller, Pres.

Raw FURS Raw

Immediate Cash Payment and an honest sort is what we guarantee.

That is why the old trappers and fur dealers ship their furs to us. Our motto is a square deal to all. Send at once for our Price List.

ROSENBERG BROS. & SCHOMBERGER, Dept. A, 97 Jefferson Ave., Detroit, Mich.

EGGS, Etc.—Small consignments from producers in Michigan bring very attractive prices. Returns day of arrival. Refer to Mich. Farmer, Dun's or Bradstreet's. Zenith Butter & Egg Co., 255-59 Greenwich St., New York, N.Y.

COCKERELS THOMPSON'S BARRED ROCKS, YOUNG'S S. C. W. LEGHORNS, ORR BROS., North Branch, Mich.

Barred Rock Cockerels—Big, sturdy fellows, hatched from great layers. Prices reasonable. W. O. Coffman, R. 6, Benton Harbor, Mich.

Crystal White Orpingtons—the great winter layers. Yearling hens, early hatched cockerels and pullets. MRS. WILLIS HOUGH, Pine Crest Farm, Royal Oak, Mich.

S. C. W. Leghorn Cockerels \$1.50 each or \$4 for \$5.00. Snowflake Poultry farm, R. 1, Grand Rapids, Mich.

Silver, Golden and white Wyandottes, a fine lot of young stock. New circular January 1st. Browning's Wyandotte Farm, R. 30, Portland, Mich.

WHITE Wyandottes—25 May and June hatched cockerels weighing from 7 to 8 lbs. from my famous winter laying strain. L. M. OLDS, Ypsilanti, Mich.

WHITE Wyandottes—The most beautiful and useful of American breeds. Send for 1912 circular. A. FRANKLIN SMITH, R. F. D. 9, Ann Arbor, Mich.

S. C. R. I. Reds, Indian Runner Ducks—High class stock for utility or show. Hardy, heavy-laying strain at reasonable prices. Montrean Poultry Farm, Blissfield, Mich.

Prize Winning Barred Rocks, R. I. Reds, Mammoth Pekin and I. Runner ducks. Stock for sale. Eggs \$1.25, \$3 per set. Utility \$5 per 100. EMWOOD FARM, R. R. No. 13, Grand Rapids, Mich.

LILLIE FARMSTEAD POULTRY

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Woman and Her Needs At Home and Elsewhere

ARE NAGGING AND SCOLDING NECESSARY?

ISN'T it a pity that one person can often make a half dozen others so perfectly uncomfortable that life becomes a nightmare instead of a joyful thing? How many mothers spoil home for their entire family by constantly nagging, scolding and finding fault. These estimable ladies think they are the best mothers in the neighborhood because their houses are always clean, their children neatly clad, their table well set and the whole menage spick and span. They look askance at their neighbor whose house is often undusted and children "undarned," and wonder how their own children can be so fond of going to that neighbor's home. The children could tell her it is because the other woman never scolds and everyone can have a comfortable time.

It is so easy for an energetic woman to become a nagger. She simply can't bear to see things slack, and she jumps into the work with an ardor worthy of a better cause. She bakes and brews, sews and darns, sweeps and dusts, and does the multitudinous tasks about the home in an effort to keep everything up to the mark, and she is successful up to a given point. She gets the work done, but it doesn't stay done. Children come in and leave toys about, husband tracks in mud, the baby knocks over a bowl of breakfast food, Johnnie doesn't hang up his cap and Susie climbs a fence and tears her dress. All the order and neatness which are so dear to mother's heart are flown. Instead of taking it philosophically she scolds, because she is annoyed and because she has worked so hard and is so tired she has lost a measure of her self-control and all of her power to judge sanely.

I'll admit that it is provoking to work hard and then have someone seemingly undo our work, but we have to remember that a clean floor is not so essential as clean hearts and lips and happy children, and husband. I do not for a moment think that mothers should let children get a room into disorder and then go away and leave it for someone else to straighten up. What I do mean is, that it is no offense against God and man to leave a book out of place, and that no woman has a right to scold about it. The thing to do is to go after the child who is the culprit, make him put his belongings back, and then sit down in a chair for ten minutes or a half hour according to his age. This impresses him with the fact that it is better to lose a moment from his play to put the things away at first, than to have to be called in and lose a great deal of time later. And he can see the justice of that. He is the offender and he must be brought to time. But no child can see the justice of scolding and scowling, especially if the mother is straightening up the disorder the child made all the time she is scolding. In that case he is just waiting

for a chance to duck out and get away from it all, and of course, he will do the same thing over again. In the other case he has quiet, and time to reflect on the beauty of order.

Of course, if your husband's mother has let him grow up with the habit of leaving his belongings wherever he happens to drop them, that's another story. You can't very well make him sit down in a corner to reflect on his sins, but you can abstain from nagging. And you had better, if you want to keep his love and respect. If his desire to make the work easier for you will not induce him to be tidy in his habits, all the faultfinding you can do will not help matters.

It always seems queer to me that the women who whine the most are the ones who really haven't anything to complain about, while the ones who really have troubles never whimper. Misplaced furniture, coffee stains on a clean cloth, a nicked plate or a scratched chair are really not troubles, they are simply aggravations and the big woman will overlook them. Death, misfortune, disgrace, sickness, loss of health or money, these big things which are really trouble, we usually see borne in silence. But then, we all make more fuss over a tiny sliver in the finger than we do over a broken limb.

The great trouble with women is that they have too restricted a vision. Their work keeps them at home, and after a few years of it they seem to lose the power to look beyond cooking and sewing and see the things in life that really count. Men get out more, they have their political meetings to bring them together, and even about their daily work they are more apt to come in contact with other people. They rub up against outside influences and in so doing learn that their own work is merely a part of a stupendous whole. Women can not see the great whole for looking at their tiny part.

Life is really more than eating and being clothed. Those things are necessities but not matters of first importance. The first thing is to feed the soul, and this can only be done by considering the happiness of others. It is important for mothers to feed their children's bodies wisely, but it is of infinitely more importance to feed their minds and souls. And sharp words and scowls are very poor soul food.

What matter if your boy is loud and rough, so long as he is wholesome and true. He will lose his tomboy ways as he grows older, but bad habits of thought and speech will cling.

Let us all make a covenant with our selves to stop nagging. And to stop today before we have lost the respect and confidence of children and husband, as all naggers surely do sooner or later.

DEBORAH.

majority of the buds will develop into fine blooms. After the flowers are cut the roots may be stored away to be planted out again in the spring. Another method is to cut the buds on generous branches and keep in water as one would an ordinary bouquet. Add a little ammonia, or a pinch of nitrate of soda to the water each time it is changed, which should be at least once a week. Treated in this way, buds that show no hint of color when cut will furnish flowers for a long time if kept away from fire-heat. More than once the writer has had "mums" for Christmas decorations that were brought from the garden as half-grown buds. Marigolds, zinnias, feverfew, and other flowers of the late fall may be treated in the same way and if kept out of sight while developing from buds to blossoms will be appreciated the more when brought forth.

Plants suffer from a burned-out, gas-laden, or dust-filled atmosphere as much as do people and a supply of fresh air, carrying a degree of moisture, and clean foliage with open pores able to make use of both air and moisture, are essentials. Do not be afraid to open outside doors even in very cold weather, but do not keep them open very long at one time when the temperature is at zero, or below. A small plant room where the writer grew from 200 to 300 plants every winter served as vestibule, or hall, and the door facing west was opened many, many times every day. With every opening the rushing wind set every leaf awl, yet no injury ever resulted.

"To turn, or not to turn?—that is the question:—" is a slightly changed form of a well-known quotation, but the question as given is one of importance to the window-gardener, and each must answer it according to the object worked for. If plants are being grown solely for outside appearance the desired effect will be obtained more quickly and effectually by leaving them unturned, but if grown for their decorative effect in the room and for the pleasure of its inmates, frequent turning is necessary. Whenever working among the plants, turn them part way around and the gradual turning keeps them symmetrical in form and beautiful on all sides.

Some growers say that turning plants exhausts their strength and prevents free blooming. While making many tests I have never been able to verify the statement but have come to know that the reason for few blooms is much more apt to be found in the tall, whip-like plants tied to stakes and having but one blooming point. Such plants producing one, two, or possibly three, flowers near the top of the whip are a much too familiar sight, and the one growing them attributes the few flowers to anything but the right cause. Don't let a plant get to this stage. As soon as the main stalk is of good height pinch out the top and force it to throw out side branches. If the main stalk is already too tall cut off enough for a cutting and root it. It is granted, without argument, that this treatment will delay, somewhat, the appearance of blossoms but the reward a little later when all the branches are producing flowers will more than equal the "sixteen to one" of political fame.

Examine the potted bulbs stored away and if there is any sign of mould place them where there is better ventilation. Make sure, too, that the soil is not too wet. Sometimes the roots will strike a hard substance, even the bottom of the pot, in such a way as to lift the bulbs from the soil. If any are found in such condition, reset them firmly in the soil without delay. If the foliage seems to have made a good start make sure that the soil is well filled with roots before bringing to the light, as more bulbs fail to produce perfect blossoms because the forcing process is begun before the roots are strong enough than from any other cause, unless it may be the blasting of buds by keeping the bulbs in a too warm place after bringing them from their storage quarters.

Bulbs potted in September should be ready to come to the light for forcing during November. I wish I could make

FLORAL WORK FOR NOVEMBER.

BY EVA RYMAN-GAILLARD.

THIS is the month when the odds and ends of garden work must be looked after and among the odd jobs that of taking down window-boxes, pulling stakes used as supports for slender plants, or trellises for annual vines and storing them in a dry place, is not the least important. Being left out during one winter shortens the period of usefulness of these things more than would several seasons of legitimate use. Cutting away dead stems and branches from perennials and shrubs; pulling weeds and annuals and making a bon-fire of all sorts of such material will destroy insects and their winter quarters, as well as millions of weed-seeds.

Digging the pit for the hot-bed can be done much more easily now than when the bed will be needed. And preparing and storing the soil ready for covering the manure when needed not only makes the work easier but may mean just the

difference between very early stuff for sale when prices are highest, or later crops at lower prices. This is a good time, too, for a trip to the woods in search of soil to mix with the supply that should be prepared and kept unfrozen ready for an emergency in the window garden. If seed-pods or frost-tinted foliage indicates the home of the wildlings get some roots and bring home. A box-bed of wild flowers blooming in February or earlier will repay one for any trouble taken to secure it. The dried stalks of the cat-tails standing at the edge of swamps are worth gathering for use as "stakes" for carnations or other plants that need support.

Should freezing weather find the hardy chrysanthemums carrying many undeveloped buds lift the roots, with a large clump of earth attached, put into any tub or box and house in some very cool light place. Water as needed and the

every person caring for them keep in mind the conditions under which most of the hardy sorts grow in the open, and make them realize that it is a hopeless task to try to force these flowers that come before the snows are fairly gone to thrive in a place suited to tropical plants. If the bulb order has been delayed it may still be sent as dormant bulbs of nearly all varieties may be secured up to the end of the year and those potted as late as the middle of December have bloomed for me in March, just when the longing for spring brightness is most strong.

Lily-of-the-valley pips may be ordered this month and next and, in fact, are not on the market much before November. They force rapidly and should be in full bloom in from three to five weeks. Pips may be taken from the home garden after the ground is frozen, or before, if the potted pips are left where they will freeze for a time before the forcing process begins.

Here-a-little and there-a-little is the rule of work for the month, both indoors and out, and the closer we watch for the little duties and do them, the better results we will obtain during the winter, and in next year's garden.

THE CARE OF KEROSENE LAMPS.

BY H. L. G.

One of the household chores I have long assumed is the care of the lamps. As this has covered a period of quite a few years, it has suggested several things that have been helpful to me. One of these is the use of sandpaper. We try to get good oil, but the burners will get a coating of brown, varnish-like substance on the edges next the wick which does not rub off readily by merely using a cloth. Every morning or so this scale must be removed or the lamps get to smelling badly. I turn down the wicks, tear off a small piece of the paper about an inch square, and rub off all the scaly deposit, making the brass as bright as new. That done, the lamp cloth is spread over the burner, the wick turned up, and all the burned part pinched off, then turned down nearly level with the burner and rubbed across several times with the lamp cloth. Trimmed in this way it is rarely necessary to use the scissors on the wick to produce a nice blaze. One of the lamps has a perforated cylinder which must be removed before sandpaper is used. As it is so much more difficult to fill this lamp under the faucet without overflowing it, I draw a large bottle of oil, set all the lamps on a table near at hand and fill them at one time, using a small five-cent funnel. By getting all the lamps together, and doing each part of the work on all as I go along, they can all be wiped off together, and the work is soon over.

The chimneys are washed along with the breakfast dishes. If an excess of soot has collected on the glass, it can readily be removed before putting into the dish pan by holding the chimney over the sink and pouring cold water through it. I have tried dry cleaning with paper, but never made good success of it and think it takes longer. I have also tried various suggestions made in the magazines for cleaning the burners by boiling them in one solution or another, but did very little good. When a burner gets too bad to be used longer, it is better to throw it away and get a new one, as the extra expense is not to be compared with the unpleasantness of boiling up an old burner. Old cotton pieces are best for lamp cloths and should be burned after using a week or two.

HUMAN WELFARE QUERIES.

Household Editor:—I have been especially interested in the Household Department. Would you please print a recipe for making grape wine?—Mrs. N. M. N., Emmett.

I have no recipe for making grape wine. Household Editor:—What rights does a husband have over the property of his wife, which was hers before marriage?—M. N.

She has the same rights as before marriage, and her property shall not be liable for her husband's debts, but shall be liable for any debts made by her before her marriage.

Household Editor:—How do you make beef tea?—Milky.

Cut one pound of round steak in small pieces, first removing all fat. Put in a fruit jar with a cup of cold water, let stand ten minutes and then set on folds of paper in a saucepan, pour cold water around it and set where the water will just simmer for an hour. Strain, salt to taste and serve hot.

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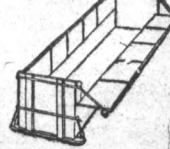
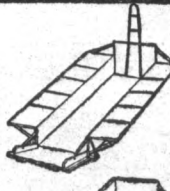
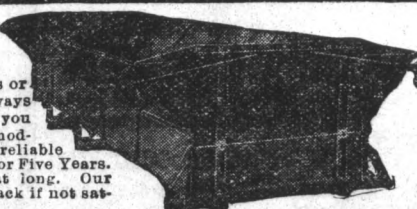
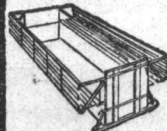
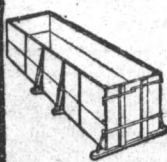
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HOME AND YOUTH

THE PICTURE.

BY MILDRED M. NORTH.

Dear little brother with eyes of brown,
Sweet little sister with dimpled cheek,
Were I an artist of great renown,
Model no fairer I'd care to seek.

Holding her tiny hand in his—
His own as dimpled, almost as fair—
Surely no lover more fond than this
Dear little knight with the shining hair.

Over and over he says to me
"Baby," and "Sister," with shining
eyes,
Laughing her cunning wee toes to see,
Trying to comfort her if she cries.

Fondly he leans o'er the cradle side,
Ten early kisses her velvet cheek.
Were I an artist known far and wide,
Model no fairer I'd need to seek.

THE PRIZE ROOSTER.

BY E. I. FARRINGTON.

Although Robert Reed was in a deep study as he walked rapidly through the narrow streets of Riverside village, he paused when accosted by a well-dressed, rather elderly, man who asked to be told the location of the railroad station. Then he courteously offered to pilot him over the somewhat roundabout way. His new acquaintance was friendly and seemed a bit interested in the boxes which the boy was carrying under his arm, so Robert explained that they were egg boxes, containing newly-laid eggs.

"I thought as much," said his companion, with a smile. "You see, I am interested in poultry, too." Then it was easy for Robert to tell of his efforts to to pay his tuition at a near-by academy, and the difficulty which he experienced in finding a profitable market in the little town. Before the station had been reached, Robert had given his name, and when the elderly gentleman left him it was with a hearty word of thanks and a cheery good-bye.

Less than a week later, the local expressman left an unexpected, prepaid parcel at the little house on the edge of the town where Robert and his mother lived. The boy opened it, with many conjectures as to what it might contain passing through his mind. Few things would have surprised him more than the two settings of large, brown eggs, all of a size, which he found. The only clue to the sender was a pencilled note which read, "You will remember that I said I was interested in poultry, too." That was enough, of course, to recall to the mind of Robert the man whom he had guided to the railroad station. As usually happens in the spring, there were several broody hens in the poultry house, quite ready to settle themselves on a nestful of eggs and stick there for three long weeks. Two motherly old biddies were selected and the gift eggs placed under them that very night.

Eighteen of the twenty-four eggs produced chickens, strong, sturdy balls of down which grew rapidly. Within the first two weeks the mother hen stepped one one and killed it, a hawk got one, a cat another and two simply disappeared. The rest survived the many perils of early chickenhood and developed into handsome snowy White Wyandottes. They were the most attractive chickens Robert ever had seen. Besides being uniform in color and shape, they were stylish in carriage—"real aristocrats," his mother called them—and their feathers were soft and silky. When the boy looked from them to the miscellaneous assortment of hens which composed his old flock, he told himself that never again would he be satisfied with mongrel fowls.

The beautiful white birds began to attract attention. One night Togo, the collie which guarded the premises while his mistress and young master slept, was heard to growl savagely and bound around the house toward the poultry yard. As Robert jumped from bed and began to put on his clothes, the dog barked sharply. Then a pistol shot rang out, followed by a moan from the animal. Robert hurried out of the house just in time to see two dark figures clomb the stone wall and to hear the sound of galloping hoofs. The marauders had escaped after breaking one of Togo's legs with a bullet. They had opened the door of the henhouse when attacked by the dog, and there was no doubt that they had intended to possess themselves of the white birds. After that Robert put a padlock on the door and borrowed a neighbor's dog to stand guard while Togo remained an impatient invalid.

Fall came on and the chickens, now almost full grown, manifested a marvelous capacity for grain. They were half a dozen cockerels among them and Mrs. Reed declared that some of them, handsome though they were, must be served on the family table. It was with little relish that Robert prepared for the sacrifice. The young rooster which he selected, when this decree was announced, was a strong, active bird. With a sudden flap of his wings he freed himself from the boy's grasp and sailed away over the fence, too confused to know in which direction he was flying.

When he descended, it was into a swiftly passing automobile, a large touring car, with two gentlemen on the front seat and young woman back of them. The fluttering rooster fell heavily into the young lady's lap, frightening her into a surprised shriek. Before he could escape, however, she caught him firmly by the legs and began to laugh.

"Here is a bird, Joe, for you to enter at the show," she exclaimed. "Did you order him delivered in this way?"

The man at the wheel reduced the speed of the car and looked around.

"Better throw him overboard," he said. Then, as the young woman started to comply, he cried, "No, hold on." A moment later he had stopped the machine and had the struggling rooster in his hand.

"I think I'll take your suggestion," he exclaimed. "I don't believe there will be a finer cockerel in the show. But where did he come from, anyway?"

Then, to the surprise of Robert, who stood staring down the road, wondering what had become of his animated Sunday dinner, the big car was slowly backed around and came back to the point where he stood. "Say, son," said the man at the wheel, "Is this cockerel yours?"

"I guess it is," replied Robert, somewhat abashed.

"Well, have you any more like it?" was the next question.

"Come and see," answered the boy laconically.

Both men got out, and the young woman, remarking that she was not going to be left behind, got out, too. The driver's seat-mate tucked the amazed rooster under his arm and the little party sought the very modest quarters occupied by Robert's poultry. The White Wyandottes were roaming over a small orchard, looking very white against the half-dead grass. The stranger with the rooster tucked under his arm gave a low whistle.

"Young man," he said to Robert, "I will give you twenty dollars for this cockerel and ten dollars apiece for two pullets, if you will let me take my choice."

Robert gasped, and before he could reply the other man remarked, "Well, you can have them, as long as you spoke first, but I'll take my chances with that cockerel over in the corner at the same price."

"Wait a minute," broke in the young woman, "I want to ask the boy how he happened to have these birds and what he is planning to do with them."

Then there was nothing for Robert to do but explain the whole matter.

"There now," exclaimed the young woman vivaciously, "can't you do better by the boy than that?"

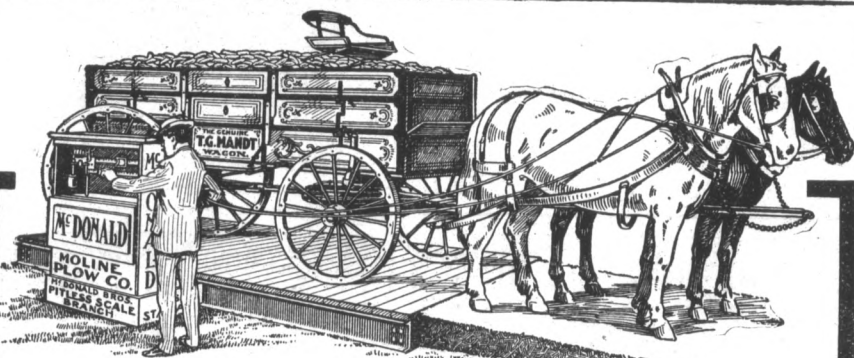
"Of course we can," said the man who had made the first offer and who refused to release the captive rooster tucked under his arm. "We'll take him along and enter the birds in his name."

"Splendid," cried the young woman, "I'm sure they will win."

"I'm agreeable," said the other man, "but, seriously, can you get them entered at this late hour?"

"I'll withdraw some of mine and substitute them," was the reply. "Trust me to manage it, somehow."

When, an hour later, Robert found himself on the softly cushioned rear seat of the big machine speeding toward the city forty miles away, he was scarcely more surprised than the mother, left behind. The experience was a new one for Robert, and he could hardly collect his thoughts sufficiently to answer the questions of the lively little lady at his side. That young woman had become much interested in the boy, however, and as she was quite accustomed to having her own way, he was well provided for when the city was reached and was one of the earliest visitors to the hall where the big poultry show was held. He had never imagined that such a wonderful collection of fowls could be made. There were many kinds he had never even heard of. And such a babel of cackling and crow-



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ing! His friends were greatly amused at the amazement the boy's face expressed, and escorted him all over the big hall. It was long before the section devoted to White Wyandottes was reached, but when it was, no time was lost in locating the three birds which proudly represented Riverside. Robert hardly knew them, for an expert had been given the task of fitting them for exhibition as well as might be in a very short space of time. Their feathers were glistening white and their combs as red as fire.

The judge was passing up the next aisle and so the little party went away to eat luncheon. When they returned, the ribbons had been placed on the coops of the winning birds in the Wyandotte section. A little group of men stood in front of the coop containing Robert's young rooster. "The best bird of the kind," one of them was heard to say, "that I have seen here in five years."

"Who is this Reed, anyhow?" said another.

"Never heard of him," was the reply.

Robert and his companions pressed forward. The ribbon on the bars read "First Cockerel." There was a "Special" ribbon, besides. The young woman clapped her hands. "What did I tell you?" she exclaimed. "Now for the pullets."

The pullets were farther down the aisle. One bore a "first" ribbon, and the other a "third." When she saw the last ribbon, the young woman pouted. "It ought to have been second," she ex-

claimed. Then she laughed and turned to Robert. "It is pretty good, though, as it is, isn't it, boy?" she said. "What about your education now?"

"I'm dazed," said Robert, trying to smile. "One thing I am sure of, though, I owe it all to you."

"Tut, tut," cried his friend; "How about the man who sent you the eggs?"

"Yes, and to him, too." Then, "Why, there he is now."

The man mentioned had seen him and hurried up, with a pleasant smile on his face. He shook hands cordially and bowed to the boy's companions, whom he seemed to know. "Pretty good eggs, were they?" he exclaimed. "Well, I'm glad. Now for a word of advice. Don't sell those birds at any price. You will be able to dispose of the eggs from that trio for money enough to make your education sure. You won't have to peddle them from door to door, either. I'll look in on you at Riverside some day." Then, with a smile, he was gone.

The man of the motor car turned quickly to Robert. "Is he the man who gave you your eggs?"

"Yes," replied the boy.

"Do you know who he is," came the next question.

"No, but I would like to, though."

"Well, he is Stanley Paine, the most famous breeder of White Wyandottes in the world, and a man who has made a fortune selling them. No wonder you are a winner."

BRAMBLE HILL.

BY ROBERT CARLTON BROWN.

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Synopsis of Preceding Chapters.—Nathaniel Edgeworth, eccentric, hard-headed and well-to-do, is passing his declining years upon his 400-acre farm on the outskirts of the village of Turtle Creek. His household consists of Mother Hubbard, housekeeper, and Brigadier General (by courtesy) Hornbill, a fellow veteran; Zeb Waffles, an aged musician who, with his daughter Jerusha, occupies a cottage (rent free) upon the farm, also spends much time with his venerable benefactor. Estrangement and finally death, robbed Nathaniel of his only son some years previous, following which, bitter remorse induced him to grant the means of a liberal education to his sole descendant and grandson, Sidney Edgeworth. In like manner he had befriended his sister's adopted daughter, Susan Dunlap. The story opens with Susan's return from boarding school and her full appreciation of quiet Turtle Creek as she views it from her own motor car. Sidney Edgeworth has completed his course at Harvard and rented an expensive apartment in New York where he is searching for a position as diligently and sincerely as his grandfather's allowance of \$500 per month will permit. Among obstacles encountered are two college chums—Doodle, a typical case of "more money than brains," and Jim, of an altogether better sort, who has found a job in Yonkers. Jim's last night in the big city is made the excuse for an all-night celebration. On their assembling in Sid's quarters in the early morning they find a telegram announcing the death of Nathaniel Edgeworth of Turtle Creek, who, in a heated argument with Brigadier General Hornbill burst a blood-vessel and immediately passed away. After the funeral of his grandfather Sid yearns to get away from Turtle Creek but remains for the reading of his ancestor's will, only to find that the conditions imposed by that document promise to indefinitely delay his return to New York. By the terms of the will Sid inherits the farm at Turtle Creek, and valuable securities in addition provided, that he lives upon the farm, with the exception of two weeks' vacation each year, for a period of four years and during that time acquires, by gift or purchase, an adjoining strip of rough land known as Bramble Hill belonging to the foster father of Susan Dunlap; or, in lieu of acquiring Bramble Hill, he must make the farm earn \$100,000 during the four years. Otherwise, the entire estate reverts to Susan Dunlap. On serious reflection Sid decides to accept the conditions imposed and considers the possibilities in bee-keeping as a start toward his hundred thousand dollars.

Mother Hubbard suggested an occupation by clanging the breakfast bell. Sid chose a clean corner of the towel, dried his face and came back to earth.

Had he been able to live on the fresh country air he would have been happy after breakfast; as it was, he felt the least bit down-hearted. He had dipped a liberal portion of what he thought was hot maple syrup onto his buckwheat cakes and had found on the first taste that the liquid was bacon drippings. There had been lumps in the oatmeal, and Sid had never acquired the habit of bolting boiled potatoes at breakfast as the Swedish hired man and Hornbill did. If he only had a cigarette to consume

in lieu of the meal, he felt that his spirits would again tune up to exultant pitch. But his stock of Utopias had run out and there was nothing to be had on the farm or in the village except a certain villainous black mixture in a blue-gilt package labeled "Chewing and Smoking."

But before searching for the relief of nicotine in an agreeable form Sid felt that he must look into the matter of grapes. Strolling through the back pasture he came to an old split-rail fence covered with vines heavily laden with clusters of green globes. His enthusiasm over the idea grew as he inspected the yield. He sauntered on across fields, making a rough calculation of the crop he could expect. Without knowing it he came out on the main road connecting Turtle Creek with her more splendid sister, Bayview (so-called because there was no bay anywhere about and it was impossible to get a view of anything from the miniature metropolis).

All along the road were hedges loaded with grapes. He had asked Hornbill what was done with them and had learned that they went to waste yearly. From Sid's fresh viewpoint the waste was wicked. Unacquainted as he was with business, he had, nevertheless, ideas of his own and a general understanding that the world, commercial, social and otherwise, depends on supply and demand. He saw here a supply and knew there must be a demand when he recalled the delicious tang of some wild grape and elderberry wine he had drunk down south one Christmas.

A fresh country girl passed in a buggy and Sid suddenly thought of Susan Dunlap, for the girl's hair was a beautiful bronze almost equal to Susan's.

Tired from his walk, he slipped down on the grassy roadside bank and allowed his thoughts to slide back into the pleasant groove of a possible marriage with Susan.

Her picture insisted on coming between him and the vain thought of striving, working, for that hundred thousand. It was such an alluring picture. Comfortable and nice. He had never liked girls much, but he was certain Susan was not like the rest, even on such slight acquaintance. He easily formed again in his mind his ideal. His girl must be a comrade—maybe Miss Dunlap would really be one—and at the same time she must be small and sentimental and cuddly and sweet, and all the rest of the things that go with young love in a bungalow.

His thoughts easily drifted from her to cigarettes. Pleasant pictures need to be framed, wreathed in cigarette smoke. Why the deuce had he overlooked putting in a supply of those cork-tipped Utopias? He couldn't do without them—that is, he never had. It was lucky Nathaniel Edgeworth had made no terms in regard to

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habits. There were still cigarettes to be had in lieu of good meals.

Taking his bearings from the sun he started in the right direction for the village, ambling along at his ease. He stopped to pick a cluster of wild roadside daisies, cool and placid in the early sun, placing them carefully in his buttonhole and remarking aloud, "Walks Afeld with Elbert Hubbard." He gave a little skipping step and considered it rather a decent thought of somebody's to plant the flowers there.

The bouquet added a jauntiness to his bearing; he felt better in spite of the tugging desire for a good cigarette. Where the cut through the Edgeworth property branched off the main road Sid suddenly looked up and saw a bow-window automobile gliding down upon him. He instantly recognized the girl at the wheel with a thrill. She was crisp and captivating in a fresh white summer suit, tasty and college girl cut, correctly edged with black; quite a proper mourning dress.

Sid turned out to the side of the road and started to lift his hat, expecting the machine to whiz by. His blood leaped and he flushed slightly as the car came to an abrupt stop and the girl called to him in a low tone, "Mr. Edgeworth!"

"Oh, hello," said Sid, pulling off his hat and pushing it under one arm as he crossed to the car and waited for her to extend a hand in greeting.

"Awfully hot, isn't it?" she exclaimed, shaking hands with him.

"Awfully early, too," remarked Sid.

"I was quite amazed to see you out at this hour, and already coming back from a walk," she glanced at his dusty shoes.

"The awful stillness out here wakes one up, and I have to walk until I can get a saddle from home."

"Oh, you ride? You'll enjoy it around here. There's a perfectly wonderful bridle path over to Wingra Lake."

"I'm going to ask you to show me the way when I get a saddle," he suggested hesitatingly.

"Oh, that would be jolly. I haven't been in the saddle this summer. It's so much easier to jump into the machine. The path to Wingra is wonderful now, covered with grape vines"—

"Grape vines! Why, that's just what I'm looking for. Tell me the way, I'll walk over there this morning."

"Jump in and I'll take you," she offered with that spirit of rare comradeship which made Sid's nerves jingle pleasantly.

"Why, that'd be fine," he replied, forgetting all about the cigarettes.

"But how do you happen to be interested in grape vines; nobody seems to care at all for wild grapes around here," she continued as he seated himself beside her.

"That's just it. I'm interested in everything, anything that other people have overlooked. I'm going to go into the wine business. Wild grape wine is wonderful if it's made right and it's none too common on the market. I'm going to make it and ship it to Chicago. I'm going to be a merchant prince, a captain of industry or something like that," he glowed.

"How splendid! And I shall be wine-taster for the firm."

"Bully!" he smiled. "I've started Mr. Wattles keeping a beviary already."

"A bee—what?"

"Oh, I don't know what they're called, but they're whatever you call the establishment of a man who keeps a bee," he lucidly explained.

"You are certainly plunging into things; but will the bees and grapes pay?"

"Even if they don't, I'll have enough wine and honey to spend my leisure and old age in luxurious living, and if I keep a cow I can have milk and honey and live like a Greek god."

"You mustn't express any such Bacchanalian views in town here," she warned him. "They'd accuse you of trying to corrupt Ed Humphrey."

"Who's he?"

"The town drunkard; every village of any spirit has had one since Shakespeare's time."

"Then public opinion will keep you from being our wine-taster?"

"I'm afraid so, but you had really better go in for unfertilized grape juice, you know; you'd have to keep your wine for four years or more before it would be worth much."

"Four years! Who could keep wine that long?" exclaimed Sid. "But then, if I bottled a lot this season it ought to be worth good money by then."

"Not a hundred thousand dollars," she smiled a little consciously.

"Oh, no," said Sid, uneasy at the reference to the will. "I'll think it over."

Maybe you're right." He switched abruptly. "There's a telegraph station in Turtle Creek, isn't there?"

Susan Dunlap was busy turning out for a skittish team of horses, but replied presently, "You can send a wire from the depot; but I'll warn you, you had better use a code if you don't want the whole town to know the message."

"I mustn't mention my interest in wild grape wine then?"

"No. Horrible! You'd be branded at once. You'll find Turtle Creek a straight-laced little place; you must be conservative and careful. It's a dull little town and will probably weary you."

"I have found already that it's not without attractions, however," Sid replied, watching the sun play with a fascinating coil of her bronze hair.

She passed over his remark, querying, "You're staying all summer, Mr. Edgeworth?"

"Yes. I can't get away, you know. You heard the will read."

"Yes, it's too bad that you can't come into your property right away," she said in a straight-forward, frank tone that pleased Sid. She went on quickly, quite as pleased as Sid to get past the will.

"I hope you'll like the little crowd here. I suppose as a sort of relation I must take charge of you and introduce you to some of the young people here and in Bayview."

"It's good of you to offer your protection. I do feel lonely. I should like to meet your friends. I'm sure I'll enjoy knowing them, and I want to know right off when I may call on you?"

"Oh, any time," she answered cordially. "Of course, just now, I'm not going to parties or anything; but we'll have plenty of them this fall. There's always quite a social season in Bayview, you know. Oh, very grand!" she smiled, bringing the machine to an abrupt stop and pointing a gloved finger tip toward a tangle of vines. "There are your grapes. I'm sorry I'm going on to Bayview or I'd take you back, but it really is a very short cut to the depot from here."

Sid was reluctant to leave her, but he had no excuse to suggest an invitation to accompany her to Bayview, so he jumped down, thanked her and tried his best to take an interest in the gorgeous grapes. Instead he was thinking of her frank, informal manner and wondering how long he would have to wait before calling on her. It was nice of her to offer her friends; some girls would have been cold and haughty and not cordial enough to consider his forlorn condition and make friends at once on the pleasant assumption that they were related. Cousins by adoption! He smiled to himself at the thought. It wasn't a bad plea.

Striking down the road, forgetful of the grapes, he reached the turn at the Wattles' cottage before he realized, and a quick motion at the front window of the little house attracted his eye just in time for him to catch sight of a haunting, elfine, tanned face with large, earnest eyes peering out at him. The scant window curtain (made of burlap in an honest artistic endeavor) was snatched back to place abruptly and the face disappeared.

"Wonder who the Cinderella is? Oh, I know, it's Jerusha Wattles," thought Sid. "Funny eyes! Kind of get hold of you."

He turned and looked back; the curtain hung motionless.

His progress through town that day was marked by many such curtain jerkings along the line of march, but Sid was so intent on reaching the relief station where he could signal for cigarettes, that he missed most of them, though he couldn't overlook the open stares of the village fathers, killing time and flies beneath the porch roof of the corner store. The reading of Edgeworth's will had set all Turtle Creek agog. It was the sensation of the century. Halley's comet became but a twinkling paste diamond in the glare of it. Even the Bayview Bugle had sent a man down to cover it for the forthcoming issue and the editor himself had written a little article bristling with sly jabs at the apparently simple task before Sidney Edgeworth.

Arrived at the station, Sid picked his way across the hot, gritty, pitch-oozing boards almost as gingerly as Bud had done, and stepped into the waiting-room.

Hermann was alone, wringing out his bandana; he jumped up with a start and stared at the apparition, as though waking from a dream, as Sid entered. Mastering his excitement, he lolled over the window counter quite professionally and queried, "Got your trunk all right, didn't

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yuh? I picked it out by your name on it an' the fact that it was the only trunk that's been dropped off here durin' the week."

"Rather shrewd," remarked Sid appreciatively; "I should never have thought of that. But I relied implicitly on your resourcefulness." He paused. "I wonder if you could direct me to a telegraph blank as easily?"

"Sure, here yuh are," said Hermann, his alacrity due to the unusualness of the demand. Stepping to the open safe nearby he pulled out several faded and dusty yellow forms, laying them elaborately before Sid.

"Want to pay for it or send it collect, night or day message?" He extended the privileges of the house in a very handsome and business-like tone, as though the formula were a matter of daily repetition with him.

"Yes," answered Sid, already scribbling with the stubby pencil proffered by Hermann.

The station agent looked at him in a puzzled, detached manner, officially reading each word as it was written, imitating the post card censorship practiced by every rigidly dutiful mail carrier.

At length Sid had the thing worded to his entire satisfaction and passed it on Hermann's waiting hand. It read:

"Fitzdun Palmer,
The Clendenning,
N. Y. City.

Dear Doodle:—Ship a case of Utopias to me at Turtle Creek, Ill. Immediately. Am quarantined here by grandfather's will. Want something to keep the village mosquitoes away. Will write particulars. Tell Jim I've got a fine business opportunity. There's a bag of gold at the end of every rainbow, but I suppose it takes work to drag it down unless you sit around and wait for it to fall.

"Why, that's considerable over ten words," said Hermann, making a rough calculation. He stood in labored thought for a moment and then looked up with an amazing flash of intelligence. "But I've an idea! There's a brand new thing in telegrams. I've got the blanks, they call it a Night Letter; it's a new wrinkle, shall I send it that way? It's cheaper."

"Send it by freight, if you must," answered Sid absently, "but if Doodle doesn't get that wire by seven o'clock this evening and act at once I'll be down to smoking corn silk."

Hermann gave him another obtuse stare, evidently deciding that argument would avail him nothing, and turned with a heavy sigh to the work of counting words in the telegram.

Other eyes than Hermann's followed Sid's return trip through the main street that day, and many were the conjectures and wagers concerning his pilgrimage to the station, until Hermann locked up hurriedly and rushed over to the patriarchs in front of the general store, to relieve the curiosity they were positively suffering with. From that day on Sidney Edgeworth was revealed in his true form to the villagers, even the lowliest among them being fairly gorged on crumbs from the town's table of gossip.

Wholly unconscious of the sensation his simple act had caused Sid walked on toward the rambling old farm house sunk in the thicket on the outskirts of town. As he turned the abrupt corner entering the Edgeworth estate, he came upon Jerusha Wattles struggling across the road toward the cottage, her slight form bowing back beneath the weight of two milk pails, one in each hand.

At sight of Sidney she tossed her head rather defiantly and scurried on quail-footed, her effort at covering her embarrassment evident. The proud tilt of her head, the toss to her fine sensitive face, fixed Sid's attention so utterly that several seconds elapsed before he rushed forward and insisted on helping her.

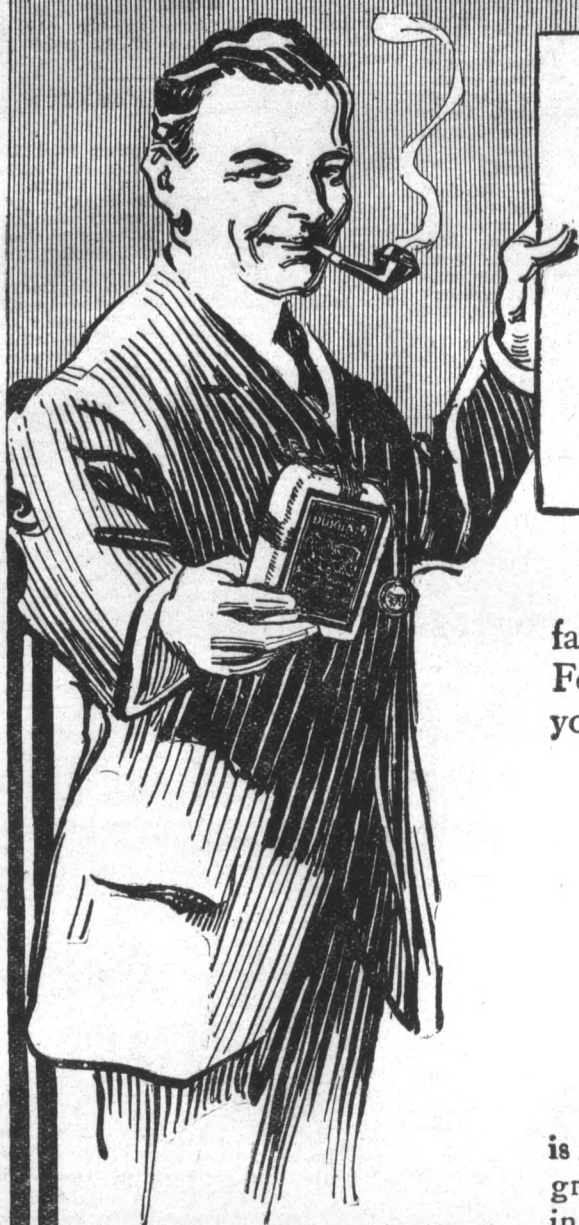
A little dewberry, she was; tanned a light walnut, a ruddy glow showing through at the cheeks and aiding the eyes, giving them a startling, frank expression which allowed the ugliness of her dress to escape almost unnoticed.

It wasn't that her dress was so ugly, either; but it was hopelessly patched, yes, and unpatched in many places. Startling anomaly, she looked a waif and yet showed such foundation for latent possibilities. There was a crimson wild flower in her hair and she had brodered a barbarous little design at the neck of her waist—rather artistic but unusual—very.

Not that Sid saw all this. Nut-brown maidens are mostly mulattoes in New York. He was used to powder and rather more inclined toward the fair-faced. He saw in the girl only a pitiful bit of struggling humanity with more than her share of hardship.

(Continued next week).

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Fact No. 1—"Bull" Durham has outsold any other tobacco since 1859.

Fact No. 2—"Bull" Durham has been the world's standard smoking tobacco for three generations.

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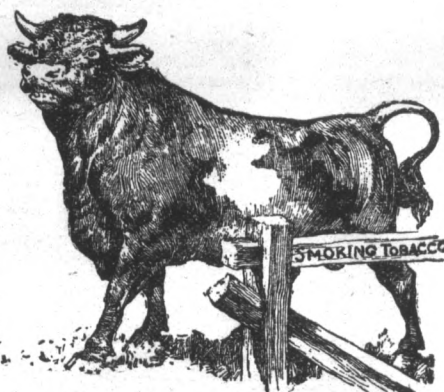
is just the sweetest, purest, finest leaf grown down on that famous sunshine belt in Virginia and North Carolina. "Bull" Durham is all tobacco—rich, mild, fragrant—just as fresh and natural as when it leaves the field—not an artificial thing about it.

"Bull" Durham is packed in plain muslin sacks, instead of in fancy tin boxes. That's why you get *more value* in the tobacco itself.

Join the "Bull" Durham army today—the sooner you fill your pipe with it or make yourself a fragrant "Bull" Durham cigarette—the quicker you'll get real smoke satisfaction

Blackwell's Durham Tobacco Co.

A book of "papers" free with each 5c. muslin sack.



Over 1,000 Gallons of Water Pumped With 1 Pint of Gasoline

That's what you can secure with the Eclipse Pumper. This reliable little pumping engine will pump from 200 to 4,000 gallons of water per hour—depending on type and size of pump and lift—and do it on 1 pint of gasoline.

Fairbanks-Morse Eclipse Pumper

frees you from the labor of pumping by hand and makes you independent of wind or weather. The Eclipse Pumper can be attached to any windmill pump without special attachments.

This powerful pumping engine is simple; has no complicated parts to get out of order. It is reasonably priced and absolutely guaranteed. It makes possible a modern water system with all its conveniences at a very low cost.

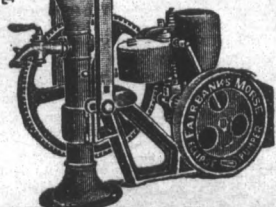
Write for Descriptive Pamphlet No. MN 601

Fairbanks, Morse & Co.

Chicago

Detroit

This shows the Eclipse Pumper attached to an ordinary windmill pump (The pump is not included with the engine)



Want Men

Like YOU, Who Want to Make \$3,000 A Year or More



We need a good live man right now in your territory to handle real estate deals for us. No experience or capital necessary. I will teach you the Real Estate Business. Also Commercial, Law and Business Methods, then appoint you representative in your locality. Easy work; large profits. Write for free book.

MORDEN LAND & LOAN CO.,
315 Palace Bldg., Minneapolis, Minn.

WANTED FOR U. S. ARMY—Able-bodied, unmarried men, between ages of 18 and 35; citizens of United States, of good character and temperate habits, who can speak, read and write the English language. For information apply to Recruiting Officer, 212 Griswold Street, Detroit, Mich., Heavens Block, Saginaw, Mich., 1st and Saginaw Streets, Flint, Mich., 144 West Main Street, Jackson, Mich., Huron & Quay Streets, Port Huron, Michigan.

Farmers Sons Wanted with knowledge of farm stock and fair education to work in an office; \$80 a month with advancement, steady employment, must be honest and reliable. Branch offices of the association are being established in each state. Apply at once, giving full particulars. The Veterinary Science Association, Dept. 22, London, Canada.

MARKETS

Realizing the importance to our readers of reliable market quotations we spare no trouble or expense to insure the correctness of the quotations in our columns. Special representatives at all leading market centers insure the subscriber accurate market reports, uninfluenced by any factor of trade. All quotations are correct for the dates on which they are made.

DETROIT WHOLESALE MARKETS.

November 13, 1912.

Wheat.—Although wheat values have remained about steady with the close of last week, dealers have been operating with considerable caution. The bears are able to produce any amount of information showing why the market should be placed on a lower basis, but these same men lack the courage to sell themselves short in order to bring about the change in values. And again, whenever prices show a tendency toward a sudden break buyers stand ready to take offerings and thus check the downward trend of prices. The political situation in Turkey is a big factor in the trade, larger than many are inclined to think reasonable. The possibility of war between Serbia and Austria, however, increases the importance to some extent. Deliveries have been heavy in this country, the farmers being generally satisfied with prevailing prices. Millers are grinding a maximum volume and are taking considerable of the cash offerings. One year ago No. 3 red wheat was quoted at 92½¢. Quotations for the week are as follows:

	No. 2	No. 1
Thursday	1.07½	1.06½
Friday	1.07½	1.06½
Saturday	1.08	1.07
Monday	1.07½	1.06½
Tuesday	1.07½	1.06½
Wednesday	1.07½	1.06½

Corn.—Corn values have been maintained at the closing figures given in last week's issue. The government report shows the amount of last year's crop of corn remaining on the farm to be about 40 per cent less than the amount retained by farmers on November 1 a year ago. The government also estimates this year's crop to be more than 600,000,000 bushels larger than the crop of 1911. One year ago the value of No. 3 corn on the local market was 75½¢ per bu. Quotations for the week are as follows:

	No. 3	No. 2
Thursday	61½	63½
Friday	61½	63½
Saturday	61½	63½
Monday	61½	63½
Tuesday	61½	63½
Wednesday	61	63

Oats.—Following the decline noted in this market a week ago there has been a settling of values, the trade holding steady until Tuesday when a small fractional decline resulted. Although the yield of oats this year is about one-half billion bushels larger than in 1911, a considerable amount of the surplus will be used in filling bins made empty by last year's shortage, and the probabilities are that values will not reach a much lower basis than that now ruling. One year ago standard oats were quoted at 50¢ bu. Quotations for the week are:

	Standard.	Oct.
Thursday	34	33
Friday	34	33
Saturday	34	33
Monday	34	33
Tuesday	33½	32½
Wednesday	34	32½

Beans.—There is not enough business on the local market to establish prices and the figures given below are merely nominal. The state crop report places the average yield at 12.91 bu. per acre, which is the final estimate for this year's crop. Quotations are as follows:

	Cash.	Dec.
Thursday	\$2.30	\$2.15
Friday	2.30	2.15
Saturday	2.30	2.15
Monday	2.30	2.15
Tuesday	2.27	2.15
Wednesday	2.27	2.15

Clover Seed.—Clover seed values have declined 25¢ in both Alsike and December offerings. The state crop report shows the acreage to be about 14 per cent below that of the previous year and the yield to average 1.38 bu. per acre. On the local market dealing is active, but the volume of business is small. Quotations are as follows:

	Dec.	Alsike.
Thursday	\$11.00	\$13.00
Friday	11.00	13.00
Saturday	10.75	13.00
Monday	10.75	13.00
Tuesday	10.75	12.75
Wednesday	10.75	12.75

Rye.—The rye trade is dull with prices 3¢ below that reported for last week, the quotations for No. 2 rye now being 73¢.

Flour, Feed, Potatoes, Etc.

Flour.—The market is active with all grades steady.

Provisions.—Family pork, \$21; mess pork, \$24.25; clear, backs, \$22.25; hams, 16¢; brisquets, 13¢; shoulders, 14¢; picnic hams, 14¢; bacon, 18¢; corned beef, 13¢; kettle rendered lard, 14¢ per lb.

Feed.—Steady. Carlot prices on the track are: Bran, \$23 per ton; coarse middlings, \$24; fine middlings, \$29; cracked corn and coarse corn meal, \$29; corn and oat chop, \$22 per ton.

Hay and Straw.—The quotations are: No. 1 timothy, \$16.50@17; No. 2 timothy, \$15@15.50; clover, mixed, \$13@16; rye straw, \$10.50@11; wheat and oat straw, \$9@10 per ton.

Potatoes.—The bulk of inferior potatoes being largely out of the way dealers are taking hold of the market with more spirit and better conditions are ruling with prices advanced for the first time in several weeks. The national crop report estimates this year's crop to be about 40 per cent larger than the 1912 crop. Local prices for car lots on track are 53¢ in sacks and 48¢ in bulk.

Dairy and Poultry Products.

Butter.—Practically all the leading markets show an upward tendency in butter quotations. Offerings are restricted and the demand steady, thus giving the creamery trade a firm tone. Dairy grades steady. Local quotations are: Extra creamery, 33¢; first creamery, 31¢; dairy, 22¢; packing stock, 21¢ per lb.

Eggs.—While complaint is made by dealers that many of the receipts from farm sections are grading low, due to the fact that farmers have been holding their eggs, still the demand is so urgent that the price for current receipts, candled, cases included, is now 29¢, an advance of 2¢ over last week's quotations.

Poultry.—Broilers and hens are off a little in values, while turkeys and geese are advanced. Other kinds remain steady with a week ago. Quotations are as follows: Broilers, 13¢ per lb; hens, 11¢; No. 2 hens, 9¢@10¢; old roosters, 9¢@10¢; turkeys, 16¢@18¢; geese, 11¢@12¢; ducks, 12¢@13¢; young ducks, 14¢@15¢ per lb.

Veal.—Fancy lower. Fancy, 10¢@12¢ per lb; choice, 9¢@10¢.

Cheese.—Michigan flats, 16½¢@17¢; York state flats, 18½¢@19¢; limburger, 17½¢@18½¢; brick cream, 18½¢@19¢; domestic Swiss, 21¢@23¢; brick cream, 18½¢@19¢ per lb.

Fruits and Vegetables.

Pears.—Keiffer, 75¢ per bu.

Apples.—Market about steady. Local prices: \$1.75@2.25 for fancy, and \$1@1.50 for common; poor, 75¢@1 per bbl. Snow apples, \$2.25@3. Good apples by the bushel are selling at 35¢@75¢.

Honey.—Higher. Choice to fancy comb, 16¢@17¢ per lb; amber, 14¢@15¢; extracted, 9¢@10¢.

Onions.—Per bu, 65¢.

Cabbage.—\$1@1.25 per bbl.

OTHER MARKETS.

Grand Rapids.

An average turkey crop is expected for Thanksgiving and prices will range somewhat higher than last year. No. 1 turkeys, live, are worth 15¢; old Toms, 13¢. Fowls and springs are worth 10¢; roosters, 6¢; ducks, 10¢; geese, 8¢; guineas, 25¢ apiece. Bean dealers report good conditions, with the old crop well cleaned up and an excellent demand for the new crop. The price paid farmers through the state for white beans is on \$1.90 basis, though \$2 is paid at some places. Dealers in dairy products are paying the country shippers 27¢ for fresh eggs and 26¢ for No. 1 dairy butter. Hay is worth \$14@16¢; potatoes, 40¢@50¢; apples, 20¢@50¢.

Chicago.

Wheat.—No. 2 red, \$1.03½@1.07½; Dec., 88¢; May, 94¢.

Corn.—No. 3, 56¢@57½¢; Dec., 49¢; May, 49½¢.

Oats.—No. 2 white, 34½¢@35¢; Dec. 31¢; May, 32½¢.

Butter.—This market has a firm undertone with values advancing, creameries gaining ½¢ and dairies a full cent since this time last week. Creameries, 28¢@32½¢; dairies, 25¢@30¢.

Eggs.—Miscellaneous receipts showing more uniform quality, placing values nearly on a par with graded stock. Top grades ½¢ higher. Storage stock hard to move and easier. Quotations: Firsts, 26½¢; ordinary firsts, 23½¢; at mark, cases included, 22¢@25¢; storage, 21¢@22¢ per dozen.

Poultry.—Live, steady. Chickens, 11¢ per lb; springs, 12½¢; turkeys, 16¢. Dressed, steady. Chickens, 12½¢@14¢; fowls, 11¢@14¢; turkeys, 19¢@20¢.

Beans.—All kinds show a further slight decline. Pea beans, choice, hand-picked, \$2.70@2.75 per bu; prime, \$2.60@2.65; red kidneys, \$2.25@2.35.

Potatoes.—Steady with last week's advanced figures ruling. Now quoted as follows: Michigan, 48¢@53¢ per bu; Minnesota, 47¢@50¢; Wisconsin, 45¢@52¢.

Hay and Straw.—Steady with clover range slightly wider. Quotations: Timothy choice, \$18.50@20; No. 1, \$16@18; No. 2 and No. 1 mixed, \$13@15; clover, \$8@13; No. 2 and no grade, \$5@7. Straw—Rye, \$8@9; wheat, \$6.50@7; oat, \$6.50@7.

New York.

Butter.—All grades of creamery butter show firmness at advanced figures. Demand steady and receipts lighter. Quotations are: Extra creamery, 33½¢; first creamery, 30½¢@32½¢; seconds, 28¢@30¢; process extra, 27½¢@28¢ per lb.

Eggs.—For all grades the trade has put prices higher and given a firm tone to business on the new basis. Fresh gathered extras are quoted at 38¢@40¢; extra firsts, 34¢@37¢; firsts, 29¢@33¢; western gathered whites, 33¢@42¢ per dozen.

Poultry.—Dressed. Chickens show further weakness and turkeys more strength than a week ago. Fresh killed western chickens are quoted at 12¢@18¢; fowls, 13½¢@16½¢; turkeys, 16¢@24¢.

Boston.

Wool.—It is stated that the demand for wool this past week has been less active than in recent periods. However, prices are being well maintained and the market continues on a firm basis. It is stated that fully 75 per cent of the 1912 clip of wool is already in the hands of manufacturers so that dealers are not worrying about the future of the market for this season, knowing that the demand will be more than sufficient to care for the remaining stores. Michigan fine unwashed is quoted at 22½¢@23¢; delaine

unwashed, 24½¢@25¢; ½-bloods unwashed, 27¢@28¢; ¾-bloods unwashed, 29¢@29½¢. Ohio delaine unwashed is 34¢; ½-blood combings, 29¢@30¢; XX, 32¢ per lb.

Elgin.

Butter.—Market firm at 32¢ per lb, which is an advance of 1¢ over last week's quotation.

THE LIVE STOCK MARKETS.

Buffalo.

November 11, 1912.

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

Receipts of stock here today as follows: Cattle, 275 cars; hogs, 140 double decks; sheep and lambs, 115 double decks; calves, 1,200 head.

With 273 cars of cattle on the market here today, and 23,000 reported in Chicago, we had about a steady trade here on all kinds. There was ample demand all day for all grades, and everything that was in and yarded in time was well cleaned up.

We quote: Best 1,350 to 1,500-lb. steers \$9@9.50; good to prime 1,200 to 1,300-lb. steers, \$8.25@8.75; good to prime 1,100 to 1,200-lb. steers, \$7.75@8; medium butcher steers, 1,000 to 1,100, \$6.40@7; butcher do. 950 to 1,000, \$6@6.75; light butcher steers \$5.50@6; best fat cows, \$5.50@6; butcher cows, \$4.50@5; light butcher cows, \$3.75@4.25; trimmers, \$3.25@3.40; best fat heifers, \$6.75@7.50; medium butcher heifers, \$4@4.25; best feeding steers, dehorned, \$6@6.50; common feeding steers, \$5@5.25; light common stockers, \$4.25@4.50; prime export bulls, \$6@6.25; best butcher bulls, \$5.50@5.75; bologna bulls, \$4.50@5; stock bulls, \$4.50@5; best milkers and springers, \$65@75; common to fair kind, \$40@50.

With 130 double decks of hogs on the opening market this morning, packers started off by bidding 8¢, but were unable to buy and raised the price to 8.10, at which price the bulk of the hogs sold for here today; a few choice heavy hogs weighing 225 lbs. or better brought as high as \$8.25. Yorkers quotable from \$7.90@8.10; light Yorkers, \$7.50@7.75; pigs selling mostly at \$7.50; roughs, \$7@7.10. There was a good clearance for all that got yarded in time for the market, still quite a few late arrivals going over unsold; yarded too late for the market.

The sheep and lamb market was fairly active today, with prices about 10¢ lower than the close of last week; most of the choice lambs selling from \$7@7.15; yearlings from \$5@5.50. Look for little better prices the balance of the week.

We quote: Choice lambs, \$7@7.15; cull to fair do, \$5.50@6.75; yearlings, \$5@5.50; bucks, \$2.50@3; wethers, \$4.50@4.75; heavy ewes, \$3.90@4; heavy ewes, \$3.75@3.85; cull sheep, \$2@3; veals, choice to extra, \$10@10.50; fair to good, \$7.50@9.75; heavy calves, \$4.50@6.

Chicago.

November 11, 1912.

Cattle. Hogs. Sheep.
Received today 23,000 32,000 60,000
Same day last year 25,964 31,022 29,253
Received last week 52,289 92,038 131,956
Same week last year 73,288 151,492 166,776

The week starts off with a good run of cattle for times like these, and while the moderate proportion of fat beefs sell at steady prices, with a good demand, others are slow and promise to go lower before the day closes. Hogs are a good dime lower, with slow sales at \$7.20@8, pigs bringing \$5@7.15. Hogs received last week averaged in weight 225 lbs., compared with 203 lbs. a year ago and 234 lbs. two years ago. Sheep and lambs declined 15¢@25¢ because of the greatly increased offerings, including a large representation of Montana range flocks. Feeders were an exception, being active and firm.

Cattle opened 10¢@15¢ higher on an average on Monday, the day preceding the national elections, the receipts being unusually small, but there was a reaction Wednesday on a return to large receipts, the improvement being lost. The week's average quality of cattle offered was decidedly poorer than heretofore, the better class of corn-fed steers selling at \$9.50@10.65, with an absence of the prime class selling recently up to \$10.70@10.85, while inferior to good grass steers sold for \$5.40@7.45. Plain to good short-fed steers brought \$7.50@8.25, and pretty good lots brought \$8.30@9, very desirable little yearlings bringing \$9.25@10.50, with no large offerings of the best lots. Butchering cows and heifers were in good demand at \$4.35@7.25, and limited sales took place of prime lots at \$7.50@8.50, with cutters going at \$3.80@4.30, canners at \$2.50@3.75 and bulls at \$4@7.25. The receipts of western range cattle were of fairly large proportions for so late in the year, their average quality being much poorer than a short time ago, with no large showing of females. They had a very good outlet on the whole, although prices weakened some by the middle of the week, most of the steers going at \$6@8.75 and cows and heifers mainly at \$5@6.75. The volume of business transacted in stockers and feeders was a good deal less than usual, with lower average values prevailing, stock steers selling at \$4.10@6.60 and feeders at \$5.75@7.50, but there was not much trading higher than \$7 most of the week. The calf market was active on the basis of \$4@10.75 per 100 lbs., choice vealers being scarcer and higher. Milk and springers were firm at \$40@100 per head, choice Holsteins being scarce and very firm.

Hogs were marketed last week in such greatly diminished numbers that buyers could not prevent some sharp upward turns in prices, despite a continued meager demand for the better class of hogs for eastern shipment. The character of the demand was much the same as heretofore of late, with prime weight hogs selling at the highest prices, while the best light weights had to be disposed of

at large discounts, the local packers purchasing the cheaper class of packing hogs especially freely. Owing to the poor average quality of the offerings, the bulk of the hogs sold at prices far below the daily top quotations. The large consumption of fresh pork throughout the country because of its relative cheapness compared with beef is using up a big share of the hogs received at western markets, and the accumulated stocks of lard and cured hog meats here and elsewhere are undergoing startling reductions from month to month. Recently published official returns show that on the first day of November Chicago warehouses contained only 50,501,207 lbs. of provisions, compared with 80,631,210 lbs. a month earlier and 67,446,670 lbs. a year ago. Similar reductions are reported elsewhere. After prime hogs touched \$8.30, there was a smash-up of 20¢@25¢ on Saturday, hogs closing at \$7.30@8.10, compared with \$7.25@8.05 a week earlier. Pigs closed at \$5@7.20.

Sheep and lambs are in a much stronger position than they were several weeks ago, now that the shipments from the western ranges are materially lessened. Before long the receipts will be altogether confined to fed flocks, and even now the offerings are mainly from feeding districts of the middle west. Decreasing supplies have brought about some good advances in prices, particularly for choice muttons, with fat lambs retaining their former supreme popularity and commanding a big premium over everything else. However, fat little yearlings, as well as good wethers and ewes, have shared in the general upward movement, and good feeder lambs, yearlings and wethers are in as lively demand as ever at well maintained prices. Some weak markets have been experienced on days when it was rainy and the sheep's and lamb's fleece was full of water. Fat lambs advanced about 25¢ during the week, but matured muttons were steady to a dime lower. Lambs closed at \$5@7.40, yearlings at \$4.75@5.75, wethers at \$4@4.50, ewes at \$2.75@4.25 and bucks at \$2.75@3.75. Feeders bought lambs at \$6@6.60, yearlings at \$4.75@5.50, wethers at \$4@4.40 and ewes at \$2.75@3.50.

Horses were in light supply and in poor general demand most of the past week, the elections interfering with country shipments, as well as lessening the attendance of buyers from other points. There was no perceptible improvement in prices, and few strictly prime heavy business horses were offered in the auctions. Sales of inferior animals were on a basis of \$75@100 per head, and few prime extra heavy drafters of the \$275@325 class were exhibited. Chunks weighing from 1,250 to 1,450 lbs. were salable at \$150@200, and farm workers were quoted at \$90@190, with slow sales. Wagon horses were worth \$150@250.

LIVE STOCK NOTES.

During the past summer large numbers of steers were removed from Kansas pastures to corn belt feeding lots for finishing off, and after feeding from two to three months, these cattle have been moving to market, many sales taking place at Chicago at \$8.25@8.75 per 100 lbs. The business has been unprofitable in many instances, but owners had to let the cattle go, as they had used up their supplies of corn. Of late the Chicago cattle market has ruled the steadiest on the whole for the best corn-fed beefs and for the steers below the \$7.60 per 100 lbs. line, the latter being wanted for feeders. The country is full of feed, and hundreds of farmers are anxious to fill their feed lots with cattle. Montana and Wyoming are stocking up with southern-bred yearlings to be boarded out this winter with new settlers, and Texas owners of cattle are making lots of contracts for stock cattle to ship to Kansas and northern pastures by next spring. In such leading markets as Chicago, Kansas City and Omaha there is a steady demand for stockers and feeders, as well as for stock cows and heifers, and many more sales of choice feeders would be made if the supply were larger. Then a great many heifers have been shipped to the country to be used for breeding purposes. A careful study of the situation indicates that the winter and spring supplies of cattle will embrace but a small proportion of fat, heavy beefs and a large showing of medium grade steers, with a good many warmed-up cattle and many fat little yearlings.

Senator J. M. Smith, of Iowa, whose ranch lies in Ness county, Kansas, marketed recently at Kansas City seven carloads of fat beefs. He has owned the ranch for a period of seven years, and has made semi-annual visits out there to look after it. He says: "There is rough feed everywhere, kaffir corn, millet and cane, besides alfalfa. Last fall at this time feed was scarce. Farmers are feeling good over the situation, and the country is prosperous. Up in Iowa, my home, we raised a bumper corn crop. In that country we raise no kaffir corn, no cane and no alfalfa. Tame hay is the feed, and it is plentiful."

Dean Charles F. Curtiss, of the Iowa Agricultural College, is advising farmers that the great waste of corn fodder has been a menace to agriculture and should cease, the production to be utilized through the silo, great numbers of which are going up on all sides. Alfalfa is now grown to balance the corn ration, and this will furnish a new source of fertility. He adds: "Our grass lands, the most neglected part of our farms, will be built up. The whole result will be more beef production and more profit and a conservation of all soil resources."

A big percentage of the recent marketings of hogs at western packing points has gone to satisfying the fresh pork trade, which has been the largest in volume ever known, largely because of the dearthness of beef. This is a partial explanation of the big cut in stocks of provision stocks held in Chicago warehouses within a month.

THIS IS THE LAST 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.

November 14, 1912.

Cattle.

Receipts, 2,564. Market 10@15c lower than last week.

We quote: Extra dry-fed steers, \$7.50 @8; steers and heifers, 1,000 to 1,200, \$6.50@7; do. 800 to 1,000, \$5.25@6; grass steers and heifers that are fat, 800 to 1,000, \$5.25@6; do. 500 to 700, \$4.25@5; choice fat cows, \$5@5.50; good do., \$4.50 @4.75; common cows, \$3.50@4; canners, \$2.75@3.25; choice heavy bulls, \$5; fair to good bolognas, bulls, \$4.50@4.75; stock bulls, \$4@4.25; choice feeding steers, 800 to 1,000, \$5.50@6.50; fair do., 800 to 1,000, \$5@5.50; choice stockers, 500 to 700, \$4.75 @5.25; fair stockers, 500 to 700, \$4.50@4.75; stock heifers, \$3.75@4.25; milkers, large, young, medium age, \$4.50@70; common milkers, \$2.50@3.50.

Haley & M. sold Mason B. Co. 13 cows av 909 at \$3.85, 2 do av 1,000 at \$4, 2 do av 1,090 at \$4.75, 9 butchers av 785 at \$5.30; to Lachalt 5 do av 668 at \$5.10; to Goose 33 do av 484 at \$4, 3 cows av 1,190 at \$4.30; to Nagle P. Co. 4 do av 1,095 at \$4.50, 2 do av 950 at \$4.60, 10 do av 1,062 at \$4.50, 1 do weighing 920 at \$4; to Bresnahan 1 heifer weighing 660 at \$6.50, 9 cows av 860 at \$3.50, 7 do av 873 at \$3.45, 3 do av 840 at \$3.40, 25 butchers av 530 at \$4.15; to Sullivan P. Co. 9 do av 690 at \$4.85, 4 cows av 900 at \$4.25; to Lachalt 7 butchers av 780 at \$5.20, 4 do av 770 at \$5, 3 do av 600 at \$4.50; to Goose 15 do av 321 at \$4.20, 3 do av 347 at \$4.25; to Hammond, S. & Co. 1 bull weighing 1,250 at \$4.75, 6 cows av 935 at \$3.75; to Applebaum 6 butchers av 583 at \$4.35, 2 cows av 970 at \$3.85; to Mich. B. Co. 2 bulls av 685 at \$4.35, 1 do weighing 1,250 at \$4.75, 9 do av 702 at \$4.15, 3 do av 1,133 at \$4.75, 8 butchers av 602 at \$4.75; to Bresnahan 8 steers av 649 at \$4.80, 2 cows av 935 at \$3.60, 3 do av 916 at \$3.50, 3 do av 693 at \$3.50, 4 do av 922 at \$3.50; to Hammond, S. & Co. 30 steers av 880 at \$6.10.

Bishop, B. & H. sold Bresnahan 8 cows av 844 at \$3.50, 8 steers av 780 at \$6, 2 canners av 695 at \$3.50, 3 do av 900 at \$3.55; to Sullivan P. Co. 3 steers av 857 at \$5.50, 10 butchers av 822 at \$5.60, 2 do av 450 at \$4, 1 cow weighing 950 at \$5, 2 do av 1,040 at \$4.25, 2 steers av 870 at \$6.25, 2 do av 585 at \$4; to Hammond, S. & Co. 9 cows av 923 at \$3.90, 1 bull weighing 1,020 at \$4.75; to Parker, W. & Co. 11 butchers av 924 at \$5.50, 25 do av 906 at \$6.25, 3 do av 927 at \$5.50, 4 do av 712 at \$4.50, 8 cows av 837 at \$3.50, 1 bull weighing 710 at \$4.25, 1 do weighing 1,020 at \$4.50, 4 butchers av 777 at \$4.25, 4 canners av 807 at \$3.50; to Newton B. Co. 17 butchers av 803 at \$5.10; to Bresnahan 4 cows av 930 at \$3.70, 6 do av 860 at \$3.50; to Goose 5 do av 1,036 at \$4.30; to Regan 2 heifers av 640 at \$4.10; to Sullivan P. Co. 3 cows av 833 at \$4.75; to Newton B. Co. 3 do av 850 at \$3.60, 1 steer weighing 1,000 at \$6.25, 1 bull weighing 1,130 at \$4.50, 4 canners av 717 at \$3.25, 12 cows av 862 at \$3.50; to Parker, W. & Co. 4 butchers av 675 at \$5, 3 cows av 1,043 at \$4.50; to Regan 8 butchers av 540 at \$4; to Gerisch 16 do av 840 at \$6.15; to Newton B. Co. 6 do av 800 at \$4.50, 3 do av 890 at \$3.50.

Roe Com. Co. sold Newton B. Co. 5 butchers av 692 at \$4.50, 1 canner weighing 800 at \$3.25, 5 cows av 1,046 at \$3.75, 28 butchers av 660 at \$4.65, 1 cow weighing 820 at \$3.25, 3 do av 1,080 at \$3.75, 19 steers av 880 at \$6.25, 4 cows av 900 at \$4.50; to Sullivan P. Co. 6 butchers av 790 at \$5.50, 11 do av 753 at \$4; to Nagle P. Co. 7 cows av 1,047 at \$4.75; to Bresnahan 6 do av 970 at \$3.60, 2 steers av 680 at \$5; to Parker, W. & Co. 13 cows av 807 at \$3.60, 5 do av 836 at \$3.50; to Mich. B. Co. 2 bulls av 900 at \$4.50, 3 heifers av 690 at \$5.25; to Rattkowsky 5 do av 670 at \$4.25; to Bresnahan 10 cows av 903 at \$3.50; to Nagle P. Co. 28 steers av 1,065 at \$6.40, 2 do av 985 at \$6, 11 cows av 1,032 at \$4.10, 6 butchers av 816 at \$4.50, 1 heifer weighing 460 at \$4.

Spicer & R. sold Bresnahan 3 cows av 910 at \$3.60, 3 do av 1,010 at \$3.60, 3 do av 820 at \$3.60; to Newton B. Co. 3 bulls av 610 at \$4.25, 1 do weighing 540 at \$4.25, 30 butchers av 952 at \$5.75, 1 steer weighing 1,190 at \$6.50, 25 cows av 907 at \$4; to Bray 1 steer weighing 620 at \$5, 4 cows av 870 at \$3.50; to Rosnick 4 do av 912 at \$4.25; to Borce 12 feeders av 855 at \$5.50; to Sullivan P. Co. 6 butchers av 846 at \$5.40, 10 do av 771 at \$5; to Hammond, S. & Co. 4 cows av 887 at \$3.50, 3 bulls av 1,073 at \$4.85, 13 butchers av 544 at \$4.10; to Voice 9 stockers av 630 at \$4.75; to Newton B. Co. 1 cow weighing 970 at \$3.50; to Kull 7 steers av 714 at \$5.25, 5 cows av 976 at \$4.25.

Veal Calves. Receipts, 439. Market strong at last week's close. Best, \$9@10; others, \$4@8; milch cows and springers steady.

Bishop, B. & H. sold Burnstine 1 weighing 120 at \$9.50, 5 av 165 at \$8.50, 4 av 145 at \$9.50, 1 weighing 120 at \$7, 1 weighing 160 at \$10, 1 weighing 130 at \$10, 2 av 200 at \$10, 5 av 145 at \$9; to Parker, W. & Co. 4 av 130 at \$9, 3 av 275 at \$5, 18 av 150 at \$9; to Rattkowsky 8 av 145 at \$9.50; to Thompson Bros. 8 av 150 at \$9.50; to Parker, W. & Co. 3 av 120 at \$9; to Hammond, S. & Co. 4 av 150 at \$9, 15 av 180 at \$9.50, 3 av 140 at \$10, 2 av 150 at \$10, 5 av 145 at \$10, 2 av 125 at \$9, 8 av 150 at \$9.50, 1 weighing 160 at \$10, 3 av 140 at \$8.50, 9 av 160 at \$9.50, 5 av 165 at \$9.50, 2 av 140 at \$5.

Sheep and Lambs.

Receipts, 7,584. Good grades 10@15c, common 25@50c lower than last week; common very dull. Best lambs, \$6.25@6.50; fair to good lambs, \$5.50@6; light to common lambs, \$4@5; fair to good sheep, \$3@3.50; culls and common, \$2@2.75.

Haley & M. sold Nagle P. Co. 17 sheep av 110 at \$3.50, 4 do av 90 at \$2.50, 14 do av 115 at \$3.50, 8 do av 90 at \$3.25, 12 lambs av 80 at \$6.25, 197 do av 70 at \$6.45, 8 do av 65 at \$5.50; to White 154 do av 75 at \$6.50, 67 do av 70 at \$6.35.

Bishop, B. & H. sold Nagle P. Co. 37 sheep av 105 at \$3.50, 4 do av 100 at \$2.50, 15 lambs av 80 at \$6.75, 60 sheep av 95 at \$3.50, 27 do av 80 at \$3, 91 do av 90 at \$2.60, 21 lambs av 70 at \$6.35, 74 do av 65 at \$6.35, 190 do av 65 at \$6, 79 do av 75 at \$6.50; to Youngs 53 do av 80 at \$6.50, 51 sheep av 110 at \$3.50, 19 do av 80 at \$3.15, 10 lambs av 64 at \$5.75, 76 lambs av 83 at \$6.60; to Parker, W. & Co. 9 do av 53 at \$4.50, 29 do av 50 at \$4.50, 47 do av 45 at \$4.50, 47 sheep av 90 at \$3.25, 71 lambs av 73 at \$6.75, 20 do av 65 at \$6.50; to Youngs 11 sheep av 100 at \$3; to Sullivan P. Co. 32 lambs av 45 at \$3, 4 do av 100 at \$2.50, 18 do av 50 at \$4.50, 13 do av 50 at \$4; to Newton B. Co. 98 do av 65 at \$6; to Rattkowsky 26 sheep av 110 at \$3.75; to Hammond, S. & Co. 74 do av 105 at \$3.50, 14 do av 85 at \$2.50, 263 lambs av 75 at \$6.50, 102 sheep av 90 at \$3.50; to Eschrich 41 lambs av 45 at \$4.50, 57 do av 50 at \$4.75; to Patterson 109 sheep av 90 at \$3.10; to DeBane 123 do av 115 at \$3.50; to Sullivan P. Co. 150 lambs av 65 at \$6.10; to Breitenbeck 55 do av 60 at \$6, 38 do av 50 at \$5.50.

Spicer & R. sold Thompson Bros. 11 lambs av 65 at \$5.75; to Mich. B. Co. 17 sheep av 100 at \$3.40; to Nagle P. Co. 21 lambs av 75 at \$6.60, 28 sheep av 105 at \$3.50; to Mich. B. Co. 45 do av 90 at \$3.30; to Nagle P. Co. 106 lambs av 70 at \$6.35; to Breitenbeck 48 do av 55 at \$5.50, 61 sheep av 85 at \$3; to Thompson Bros. 11 lambs av 65 at \$5.75; to Nagle P. Co. 21 do av 70 at \$6.60, 28 sheep av 110 at \$3.50; to Young 16 do av 80 at \$2.50.

Hogs. Receipts, 6,119. No hogs sold up to noon; looks about 5c higher.

Range of prices: Light to good butchers, \$7.65@7.80; pigs, \$7; light yorkers, \$7.25@7.50; stage one-third off.

Bishop, B. & H. sold Parker, W. & Co. 1,500 av 190 at \$7.75, 1,010 av 170 at \$7.70, 515 av 160 at \$7.65, 510 av 150 at \$7.60, 300 av 140 at \$7.50.

Haley & M. sold Hammond, S. & Co. 750 av 195 at \$7.75, 150 av 150 at \$7.70, 200 av 160 at \$7.65, 180 av 150 at \$7.50.

Spicer & R. sold same 455 av 200 at \$7.75, 260 av 160 at \$7.70, 190 av 160 at \$7.65.

Roe Com. Co. sold Sullivan P. Co. 175 av 200 at \$7.75.

Friday's Market.

November 8, 1912.

Cattle.

Receipts, 2,633. Market steady at Thursday's prices. Best dry-fed steers, \$8; choice dressed steers, \$7@7.50; light to good butcher steers and heifers, 700 to 900 lbs., \$4.50@5.50; mixed butcher's fat cows \$3.50@5.50; canners, \$2@3.50; common feeders, \$4.75@5.50; common bulls, \$3.50@4; good shippers' bulls, \$4.25@4.75; good well-bred feeders, \$5.50@6.25; light stockers, \$4@5.25.

Sheep and Lambs. Receipts, 7,898. Market steady at last week's close. Best lambs, \$6.50; fair to good lambs, \$6@6.25; light to common lambs, \$5@5.50; fair to good butcher sheep, \$3@3.50; culls and common, \$2@2.75.

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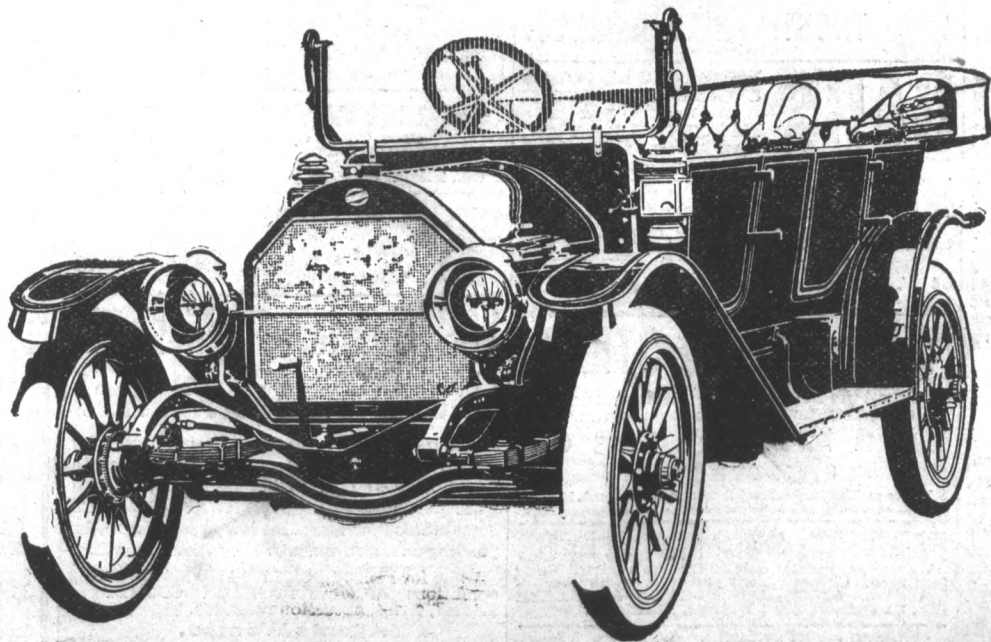
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