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## Selection and Care of Seed.

I believe that the selection and care of seed is next to fertility, the most important factor in crop production for the farmer to consider. I would put a fertile soil first, and proper seed second. Of course, they both go together. You cannot raise a good crop on poor soil; neither can you raise a good crop on good soil with poor seed, and yet fertility is the basis of all successful agriculture. It needs no argument to prove this. A journey through the country will show a man where the soil is most fer-

culture owes more to such men than we average farmers usually give credit.

Much can be done by the average farmer in the selection of his seed wheat and oats. On a farm where the soil is uniform throughout not as much can be accomplished in this way as on a farm where the soil is not uniform. But in our locality where the soil is not uniform there are certain portions of the field which produce better crops of a certain kind than other portions of the field. On some of our heaviest clay we

by itself and reserve this for your own seed. This is much better than it is to store wheat promiscuously and mix it all together and then select your seed wheat from the mixed product. And it is the same way with oats. It is not so very much trouble to store a portion of the crop separate if it is of better quality, seemingly of stronger vitality, and thresh this separate and keep it for your own seed.

Potatoes, without a doubt, ought to be selected from the largest producing hills. I realize that it is quite a task to dig a whole field before you pick them up and then select from the hills which yield the best, and again when you dig your potatoes with a machine this is impossible. The potato seed plat is the real and correct solution of this problem where it is not so large but that each hill can be looked over carefully and the best ones selected from the plat for next year's seed potatoes. But where one plants the smallest sized potatoes and the medium sized he is selecting them from the most prolific hills, because these hills are the ones which have the smaller and medium sized potatoes. But it is needless to argue this question again in the Michigan Farmer because it was quite thoroughly aired last winter.

In the selection of seed corn I think that the plant ought to be the unit of selection, rather than the ear. I would rather have a fairly good ear from a splendid plant than to have an extra nice ear from a poor plant. Of course one cannot go down as fine as this in the selection of oats and wheat, that is the average farmer cannot, but in the selection of his corn he can take the plant because the ear of corn is only about 60 per cent of the food value of the plant. 40 per cent of the food value is in the leaves and in the stalk, consequently the farmer, especially he who keeps live-stock, is almost as much interested in the corn stalks as he is in the ear of corn itself. So he wants a well developed plant and of course a well developed ear on this well developed plant. This kind of selection can be accomplished only before the corn is cut, by going through the field and noting each stalk carefully and selecting the seed from the best. I believe this pays. I

don't believe, however, in always selecting the earliest ears. The earliest ears don't always grow on the most vigorous plants, and I am inclined to think that if one would persist in selecting the earliest ears year after year that he would find out that his corn would deteriorate in value. You want well developed plants and well developed ears and I wouldn't discard an ear of corn that grew on a plant that grew big leaves simply because it wasn't thoroughly filled out at the end, because this is more of a matter of fertilization than anything else. I thoroughly believe in the ear to a row selection of seed corn. The theory is right. The trouble of it is that the average farmer finds it too much bother. It is a question if it would not pay the average farmer to buy his seed corn from a corn specialist, a man who devotes time and attention to the growth and selection of seed corn, and a man who understands how. I am inclined to think that it would. It doesn't cost so very much for seed corn to plant the average farm acreage and if this were purchased each year from a specialist I

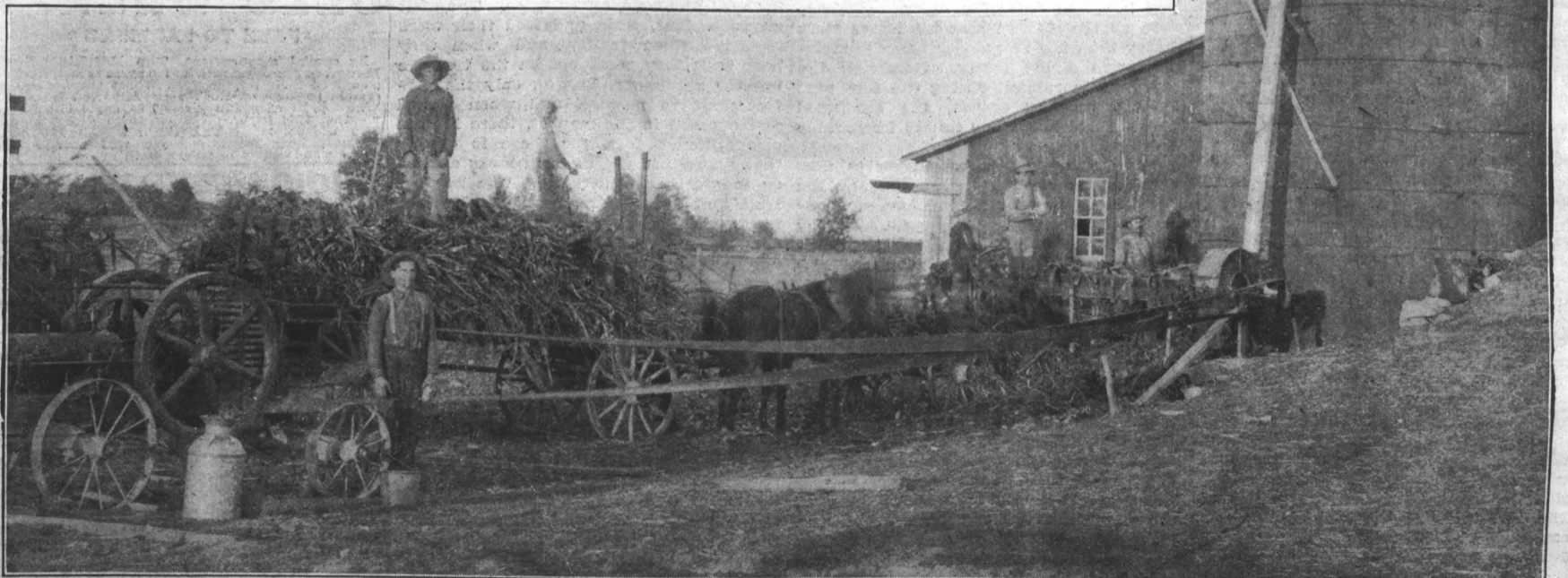
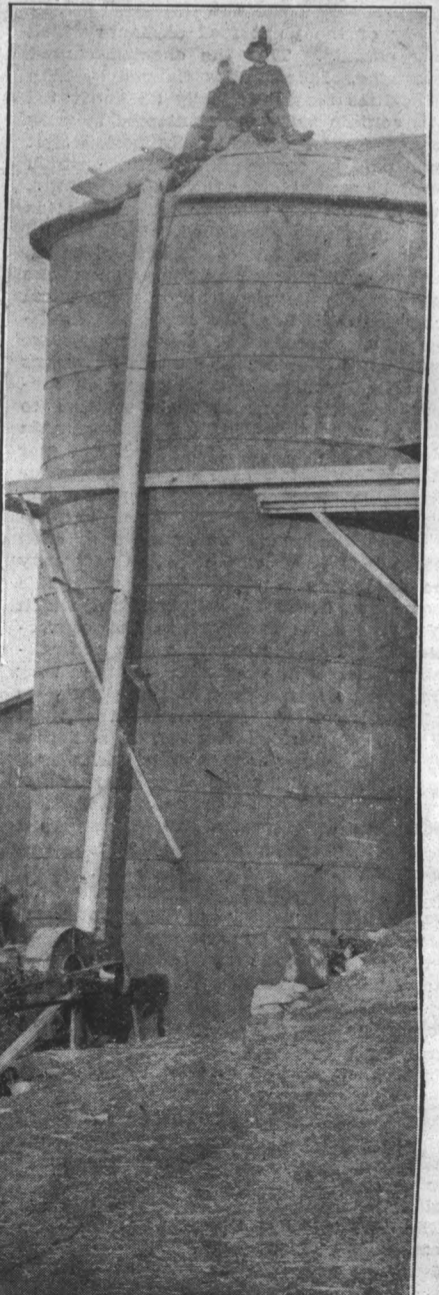


Baling Straw to Get it Under Cover is Sometimes Good Economy.

tile. There you will find prosperity. But to get the best results one must have, in connection with a fertile soil, proper varieties of seed and seeds of the proper quality.

We may learn very much from men who have carefully selected seed. Many varieties of wheat, oats, and other kinds of grain are due to close observation and careful selection by men who understand the importance of good seed and who were patient enough to follow up their results to a practical conclusion. Agri-

get the very best wheat. It is the plump-est, the very best developed and contains the most vitality. Now from this portion of the field the farmer ought to select his seed wheat. He will have wheat with more vigor, and it is the same way with oats and barley. If one realizes the importance of it; if he truly believes in it, it is not so very much trouble, because after the wheat is shocked and you begin drawing and storing it in the barn you can haul this portion of the field first and put it by itself and thresh it



This Quickest and Most Economical Method of Harvesting and Storing the Corn Crop is Increasing in Popularity on Michigan Farms.

believe there would be greater improvement in the corn crop during the next few years than would be possible in any other way. Of course, the corn specialist should be one selected under similar conditions and as near home as possible so as not to get a variety that is not adapted to local conditions.

Care of the Seed.

The care of the seed after it is once selected is almost as important as the selection itself. Seed wheat and seed oats should never be wet after they are harvested. A heavy rain upon wheat in the shock often softens the berry and is liable to lessen its vigor and care should be taken to avoid this as much as possible. A man in selecting his own seed wheat or seed oats can well afford to take good care of those shocks which he intends for his own use as seed, then, of course, care should be taken to have it thoroughly dried before it is threshed, so that when it is stored it will not sweat or heat in the bin.

The care of seed corn is as important as the selection. Of what avail is it to select good seed corn and then have it spoil in the curing. Since I have begun the last few years to fire dry my seed corn I know that I have a better stand of corn and more vigorous plants. The corn should never get wet after being harvested. It should be fire dried and protected from freezing after it is dried. Dry corn will absorb moisture during damp weather and when it freezes it will be injured if it is not destroyed.

COLON C. LILLIE.

FARM NOTES.

The Chemical Analysis of Soils.

Please advise me through your paper what would be the chemical analysis of a perfect soil, if there is any such thing, and how is the best way to obtain these elements. My theory is, it is hard to supply its wants unless we know what it should contain. I have 20 acres of huckleberry marsh in which there is white sand for a depth of from one and one-half to three and one-half feet with a clay bottom. Does the clay at that depth make it any better?

W. H. C.

So many factors enter into the productivity of soils that chemical analyses are of little value as a guide to their productivity or the best means for their improvement. First among these factors will probably come the degree of availability of the plant food elements which they contain. This the chemist cannot determine. Indeed, it is claimed by high authorities that practically all cultivated soils contain sufficient plant food to grow good crops for an indefinite period if it could only be converted into forms which would be available for the growing plants. But it must be remembered that it is only the soluble plant food, which is held in certain limited combinations which can be utilized by plants. Then the question of the physical or mechanical condition of the soil, its depth and drainage and its capacity for holding moisture and giving it up to the surface by means of capillary attraction, all of which factors are important in their relation to soil productivity. The soil may contain plenty of potential plant food, and yet lack a sufficient amount of humus or vegetable matter to make it productive, on which account it may leach or puddle or bake under unfavorable or even normal weather conditions. Or it may be acid, and thus prove an unsuitable home for beneficial soil bacteria, which play an important part in the conversion of plant food elements into an available form, or the opposite condition may prevail, as is the case in the alkali soils of the semi-arid sections of the west. For these various reasons, a soil that shows a high percentage of plant food when analyzed by the chemist, may not prove productive in practice, and, as is sometimes the case, a soil that shows a low percentage of actual plant food elements may be highly productive. Thus a chemical analysis is of relatively little value in determining the important questions submitted by the inquirer.

Thus an inventory of the physical properties of the soil is of much more practical value to the owner, and when coupled with close observation of the growing crops, will form the best basis for the securing of the desired knowledge by practical experimental work, for in the last analysis, only the soil itself can answer with authority the question as to what elements of physical condition or of available plant food are lacking to bring about a maximum production of crops. The intelligent and experienced farmer can judge whether his soil needs tile drainage, and if it does that should be the first step in its improvement. If it is a heavy and impervious soil with very

fine soil grains, or light and leachy character, with coarse soil grains, it will require a high percentage of vegetable matter or humus to overcome these physical imperfections, and indeed, most of our older soils in Michigan are deficient in this respect and their management should be so directed as to increase their humus content as rapidly as possible in order to bring about their improvement. These are doubtless the most important preliminary steps which may be taken in the work of soil improvement. Then, if clover does not grow well on the soil it may show an acid reaction when tested with litmus paper, or the presence of sorrel or other vegetation which thrives on an acid soil may indicate that it needs lime, in which case an experimental application of this soil corrective should be made. The stable manure should, of course, be carefully conserved and applied, and in very many cases supplementary fertilization will prove profitable as a means of building up the soil as well as securing better crop yields. Something of the needs of the soil in this regard can be determined by the growth of the crops grown on it. If the growth is small and if the plants lack the dark green color which indicates plenty of nitrogen in the soil, this should be supplied, preferably in the form of stable manure and clover or other legumes plowed down, supplemented by fertilization with a fertilizer containing a liberal amount of nitrogen. In case the growth is good but the grain yield light, phosphoric acid is needed and phosphate fertilizers can be used with profit, as they can on most Michigan soils. In case the straw of the grain is weak, potash fertilizers used in connection with the phosphate will prove beneficial in keeping the grain from lodging. By following up these general indications or clues with careful experiments; in other words, by putting the question of supplementary fertilization to the soil itself, more accurate knowledge can then be gained as to its requirements for maximum crop production.

But at the outset it should be appreciated that the most crying need of the average soil that has been long cultivated is the improvement of its physical condition, and that if this is neglected the results from supplementary fertilization will possibly prove disappointing. The last question included in the inquiry involves the considerations above mentioned in its correct answer. As a general proposition, however, a clay soil is desirable, provided it is not an impervious hardpan.

FIGHT DROUGHT BY DEEP TILLAGE.

Deep tillage has become an even more vital subject among farmers all over the United States. The government crop report has stirred up discussion everywhere of means of fighting drought. Something must be done. The report shows the greatest decline in the condition of crops during a single month since 1901—a general slump throughout the country, due to drought and intense heat. Taking into account both acreage and condition, indications are that the wheat crop will be 4.1 per cent less than the average annual production of the last five years. Corn will be seven per cent less, barley 16.2 per cent less, buckwheat 8.8 per cent less, potatoes 21.9 per cent less, tobacco 25.5 per cent less, flax 2.3 per cent less, than the average production of the last five years. The total loss will run into hundreds of millions.

In all the states where the losses were heavy the early season deficiency in moisture was a big factor. Following the shortage in rainfall during the fore part of the growing season, the continued drought and hot winds caused irreparable damage.

From many points come reports that farmers are already taking time by the forelock to prevent a repetition of their losses by drought. They will do it by deep tilling this fall, on the heavier, deeper soils. The deep-tilling machines now available now make it possible to pulverize the ground 12 to 16 inches or more in depth. Soil pulverized to this depth absorbs the rainfalls, the melting winter snow, and the early spring rains. The water soaks to the bottom of the deep seed bed below the point of evaporation, and is held there as a reserve against the time of need. There is no "lack of sub-soil moisture" in ground pulverized to a depth of 12 to 16 inches or more.

If the ground is only shallow plowed the water runs off or readily evaporates. In running off, not only is the moisture lost, but the ground is damaged and often ruined by erosion.

Wayne Co.

C. T. H. B.

THE FARMER AND HIS MARKET.

The farmer stands and labors as one at the foundation of all business calculations. It is said of him that he "garners from the soil the wealth of nations." In other words, by his art of tickling the soil with his plow, sowing the seed and guarding the crops, he is able to garner the products on which the trader can traffic and distribute to feed the teeming millions who, by their various arts and devices produce articles that, in an indirect way, return in exchange for the food that is required to meet their ever recurring wants.

The farmer of today is not like his ancestor who cut the bow, shaped the arrow as a means of crippling or killing his prey that satisfied the needs of his stomach as food, and furnished the skins with which he could make clothing to make himself comfortable. The wants of those peoples were few and easily satisfied; they lacked what we now call the spirit of enterprise. The farmer of today is both a producer and a trader. If he succeeds in producing well, and is not a good trader he is not a success; he is easily robbed of his profits and is at the mercy of the greedy traders who delight in making him the hapless victim of sharp practices.

The spirit of enterprise that develops the genius that can trade with Mother Earth in toil and other natural requirements to produce good crops, ought to develop the genius of trade with his "fellow heaps of dust," but such is not always the case. The gift of successful trading is developed only by a few who till the soil. The majority of soil tillers furnish the material on which the geniuses of trade make a living and gain to revel in wealth and luxury. The plain farmers are as gentle as a lamb that is annually shorn of his fleece, and robbed of its full value, for our congress persists in protecting everything the farmer has to buy, and generously (?) allows him to cultivate broad mindedness by compelling him to put his products in competition with products of the whole world, free. We are to reap the blessings (?) of freedom with a vengeance.

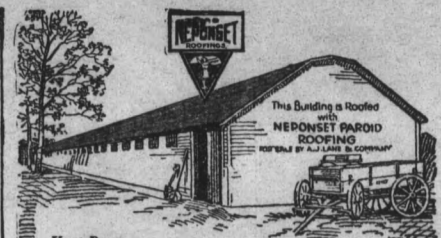
Specializing for Better Prices.

It is needless to say that very few fish are caught with a bare hook; it must be covered with something that appeals to and stimulates the appetite. The large, fat grub is what will attract the large fish while the minnows will nibble at the ordinary worm. It is by furnishing the tempting bait as to the quality of the product that good prices can be obtained that will leave a margin for profit over the cost of production.

The saying that "there is room at the top of the ladder" is as true with the farmer's products, as with the professional men. The genius who can develop an article of extraordinary merit as to quality, can command a good price for his product. This fact was emphasized to a great degree when I was visiting a dairy farm, and the poultry, which was a subsidiary business, seemed to be paying a good profit, for the milk-fed broilers were selling for 50 cents per pound early in the season, and at 35 cents per pound in midsummer. It was a case where quality was appreciated and willingly paid for.

The rule will hold good with nearly, if not all, that is produced on the farm. If one develops a kind of grain that is very productive, it is profitable to raise at the going prices, and it will be in demand for seed at an advanced price. The fruit growers plant, train and feed their trees to make them thrifty, and when they bear fruit they weed out on the tree the inferior specimens, leaving only the perfect fruit to mature, and when picked and exposed in the market, there is keen competition for it, for there is quality that appeals to the taste in looks as well as to gratify the appetite. The luscious fruit that carries size, beauty and flavor, never goes begging for buyers in these days when money is plentiful. We do not hear of overproduction in the way of first-class fruits; there seems to be a demand for all that can be produced at a remunerative price. If there is ever any fruit for which there is not a good demand, it is of the ordinary kind and inferior in quality.

The same rule holds good with live stock. Notwithstanding the extensive use of the steam cars, the great increase in the trolley lines, all of which are well patronized, the advent of the automobile that is utilized to such an extent that it is the "car for the million," good horses that are well proportioned and present a comely appearance, bring good prices. In fact, at no other period in the history of the country have good horses paid



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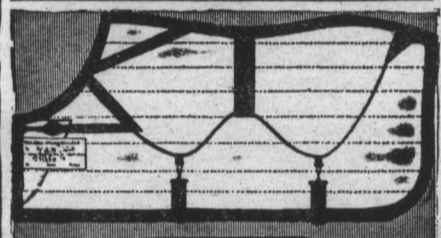
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better profits over and above the expense of raising than at the present time.

The farmers who have the well-bred, "sappy" steers that carry the well-marbled beef which is toothsome for the epicure, the banker, the factory man or the skilled laborer in any and all classes of work, has something for which there is a demand at good prices. The same is true of the lambs. A good class of lambs, which are developed while young, sell at a good remunerative price, even in this year of depression in the sheep business. Although hogs are not as high in price as during the last two or three years, yet the pigs of the right sort that are developed while young and sold early meet a demand that pays well for the raising.

The secret of the good market seems to be in pleasing the tastes of the exacting and fastidious customers, whether it be in high-class butter or other products. By furnishing a good article, above the ordinary, the competition for it is so strong that it can be sold at an advanced price, while the ordinary and low class articles go with the great mass of produce of the same class, at ordinary prices, and are subject to the manipulations of the markets by the "gamblers in trade," who are ever ready and active in devising means by which they can fleece the producers.

The farmers who are capable of producing articles that are above the ordinary are the skilled artisans of the farming profession, and are as deserving of financial success and an honored position in their calling, as are those of the learned professions who live by their wits, creating nothing, and giving but little of substantial value in return for what they receive. The avenues for active effort for the farmers are numerous, and the possibility for reward as flattering as in other walks in life. When each has discovered their own capabilities, are ready to adapt their efforts to existing conditions and meet the demands for the best of the kind which the produce, they will find an active market at satisfactory prices.

Wayne Co. N. A. CLAPP.

TURN ON THE LIGHT.

Is it necessary for the average farmer to keep a complete set of books? The reply from some dependent ruralites would be to draw out, "Yes—and—no." But why this indecision? Why do they not either give an affirmative, or a negative answer? Evidently it is a question that a person may have a double view upon.

Perhaps from the following illustrations some kind of a conclusion can be arrived at. Should the driver of a vehicle carry at night lights? The time was when our forefathers traveled over well known roads in their slow-moving wagons that a light was of very little use, in fact, it would have been more of a nuisance than a help. Yet today, with our automobiles, lights have become a necessity, to guide the chauffeur and protect the passengers from reckless drivers. Public safety demands and state law requires, that horseless vehicles carry lights at night.

Formerly when prices were higher, the ground rent lower, and the land more productive, the farmer could plow, sow and harvest in a blind sort of way, but in this rapid age with its keen competition the man who has not all his lights lit will have trouble to steer down the highway of success and avoid the ditches of failure.

A few years ago all the accounts of some merchants were kept on the sugar barrel cover. Where today is the successful merchant who is stumbling along with such slipshod methods? He has left such unbusinesslike practices behind. Managers of manufacturing plants have complete sets of books to guide their actions, because they realize that a fraction of a cent wasted or saved means an unprofitable year or a handsome dividend for the stockholders.

Surely farmers can learn a valuable lesson from the merchant and the manufacturer. Need the question as to the necessity of accounts be repeated? How many of the readers of the Michigan Farmer can tell the profit on that crop of potatoes, or how much they lost on that prized bunch of hogs?

Then, as it is never safe to blunder along in the dark, let us stop feeling our way along the uncertain highway of success and turn on our lights. Let us do it now. Let us use, if nothing more than a ten-cent account book, and by keeping accounts light our way down the uncertain avenue of prosperity.

Oakland Co. E. S. C.

TOP-DRESSING VS. PLOWING UNDER STABLE MANURE.

Would you advise to plow under the manure to be used on the wheat fields, or is it better to spread it on after plowing and harrow it in well? The wheat is to be followed by clover.

Ottawa Co. H. S.  
I should always prefer to put the stable manure on top, as a top-dressing, and work it into the soil in preference to plowing it under, if it was always practical to do so, but stable manure, in a great many instances is too coarse and contains too much straw and other material to be used as a top-dressing because it interferes with proper cultivation, consequently the only way to handle it is to spread it on the land and plow it under. I think, as a rule, that all fertilizers should be mixed with the surface soil and not put into the ground deep because the rain will have a tendency to carry the fertilizer down to the roots of the plant. The tendency will be to work into the ground rather than working out of it, and in the case of stable manure which forms a partial, and in some instances, quite a successful mulch it is beneficial from this fact.

My own practice is to draw the stable manure directly from the stable and spread it on the field the year around. This summer, until after the clover was cut, we used it as a top-dressing on the pasture, and we did the same last summer and probably we will continue to do so each summer. When the clover is cut then we have a place to put the manure. We are now putting it on the clover sod where we intend to plant corn and potatoes next year. This field will not be plowed until next spring. In the meantime we will be applying it as a top-dressing and mulch until next spring, but, of course, we will be applying it all through the fall and winter and late next spring until it is time to plow the corn. That which we will put on late next spring we do not expect to get as good results out of the first year as we do out of that which we are applying now, because that will be spread upon the top and plowed under in a short time while this which we are applying now acts as a mulch and the rains will wash out the soluble portions of it into the soil, and it will get so firmly fixed in the soil and rendered so available that we will get more direct benefit from it next year, while that which we plow under later will give us a greater benefit the following year.

Now, with regard to applying stable manure on wheat. The old practice was to pile up the stable manure near the barn, in many instances it was simply thrown out of the stable into a pile and left there until after harvest, then it was hauled out and spread on the oat stubble and plowed under for wheat. Where manure is handled in this way, if it could be forked over once during the summer time it would be made fine enough so that it could be used as a top-dressing, and if it was I should by all means wait until after I had plowed the ground, if possible, and then spread this manure on and harrow it in, work it into the soil, and I think you will get a greater value out of it than you would if you had plowed it under. But, on the other hand, I should have preferred to have hauled this manure out from day to day as it was made and put it onto the land rather than to have it lay in a pile and leach and ferment during a greater portion of the year. It is now generally conceded that the value of stable manure can best be conserved by hauling it direct to the field as soon as possible.

COLON C. LILLIE.

FERTILIZER FOR OAT STUBBLE.

On an oat stubble, well fertilized with stable manure, is it advisable to use some commercial fertilizer? Will it not make it too rich?

Ottawa Co. H. T. H.  
I think it would be perfectly proper to use commercial fertilizer on oat stubble. I have always found it very profitable to use a good application of fertilizer on oat stubble for wheat, no matter if stable manure was used either at the present time or with a previous crop. I don't think that you would have any difficulty from lodging. You are more apt to have lodged wheat if you do not have fertilizer, because stable manure contains nitrogen in excess of the phosphoric acid and potash. Now, if commercial fertilizer was used that contains a good per cent of phosphoric acid and potash, you would balance up the plant food and will get a stiff straw and your wheat will not be apt to lodge.

COLON C. LILLIE.

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With hay at its present price and a new Sandwich Motor Press, any live fellow can clean up \$10 a day. Baling hay is a delightful occupation, and you can make more money during the six months' baling season than most men make in a whole year. The few hundred dollars you invest in an outfit brings 4 to 8 times as big returns as the same amount put into farming or a retail business.

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Outfit of best, most substantial construction throughout. Steel press—axles, wheels and platform reinforced throughout. 7 H. P. hopper-cooled engine—brake test, 9 H. P. Tank underneath. Equipped with batteries and magneto, combination seat, battery and tool box, and standard gasoline pump. If you have engine, buy Press alone. Any standard hopper-cooled engine can be used.

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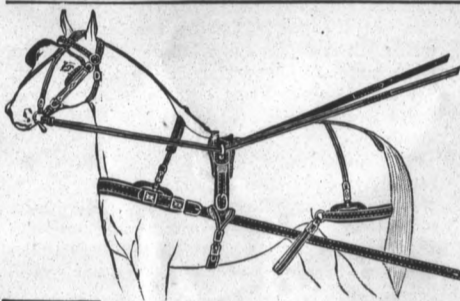
ple, strong and light of draft. Should you desire a smaller outfit—one less expensive and having capacity of, say 1 1/2 tons per hour, we can furnish it, using either a 4 or 5 H. P. gasoline engine.

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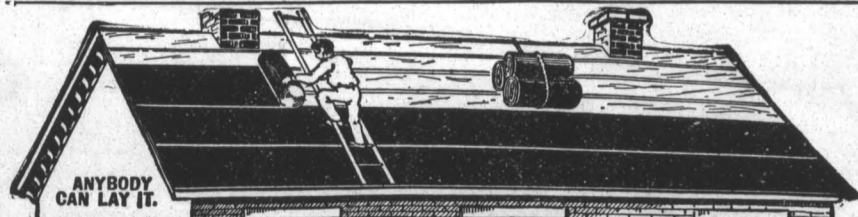
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**LIVE STOCK**

**MEETING THE HAY SHORTAGE.**

Hay is scarce and high in price this fall. The yield of all grass hay crops has been but a fraction of the usual amount in most sections of the country. The clover crop has been short. Alfalfa, which is the standby in regions more dry has been far short of its usual heavy returns this season.

Hay is a crop that is not kept over from year to year as are the grain crops. Each growing season is complete master over the following winter's supply. This is really a sad condition as the yield is so variable in different years. The crop this year is the lightest in a decade. The city trade and shipping market is greater than ever before owing to the fact that there are more work horses that must be fed hay shipped from the country. The indications are that prices of hay will reach a very high plane before spring by reason of the city demand alone.

The farmer is most concerned with his own immediate problem. Even the man who never makes a practice of selling hay finds himself facing the problem of providing sufficient roughage for his stock. His hay crop may be only one-fourth what it is in ordinary years. We were on a farm today where last year two mows in the barn were filled and some stacked outside. This year one mow is partly filled, the other is empty, and there are no stacks outside.

To dispose of the farm stock is not practicable. Unfinished stock is a glut on the market at any time and always goes at a lower price. It would be a mere matter of buying animals to restock the place next summer at an advanced price. Neither is it profitable to starve or stint the farm animals during the winter season. Unless due heed is taken this fall to provide ample feed to carry the stock through until another crop is produced there is grave danger that the farm stock will suffer and that they may be forced onto the market and there to be sold at a sacrifice.

One way of meeting the shortage in part is by the use of forage crops. There is ample time yet to prepare the ground and to sow a patch or field of rye. This is a quick growing crop and furnishes an abundance of green nutritious feed late in the fall and again early in the spring before any of the regular crops have made a start sufficient to be pastured. Rye is greatly relished by all farm stock and it will pay better than ever before. Sow a field of it this fall. There is no particular time during the fall when rye must be sown. However, the earlier it is done the earlier will it be ready for pasture and the greater the yield this season.

Straw has a value for feeding purposes that will warrant its being saved to the utmost degree this year. Oat straw when the crop has been cut before being thoroughly ripened is very palatable and quite high in digestible nutrients and produces no ill effects. Wheat straw has but little feeding value, yet it can be used in a pinch as we did one dry year in Nebraska. If the quality is good it may be utilized to some extent.

It is from the cornfield that we must seek for the greatest relief from the hay shortage. The silo on the dairy farm or beef cattle farm is the greatest factor in making the cattle industry stable by rendering the feed question less subject to the varying yields of different seasons. Those men who have silos will do well to fill them to the utmost. Those who are contemplating the erection of a silo should push the work so that the structure will be ready before the season is too far advanced.

It is not alone through the silo that corn stalks may be utilized. Corn stover of good quality is very nearly as valuable as is timothy hay. How to handle the fodder is a problem to be settled. If shredded the hard, slow work of husking is eliminated, the stover is gotten into shape so that it can be handled in a barn without inconvenience, and the waste from feeding it makes the best of bedding. When fed as fodder without removing the ears to fattening cattle excellent results are secured. However its actual feeding value is not increased.

The farmer or stockman who goes into the winter with an abundance of feed will be thrice blessed. He will be in position to carry his stock through in good shape. He will obtain great personal

satisfaction from seeing his animals well cared for. Then if he has a little surplus roughage he will be able to dispose of it at a profitable price. While it is no more of a sin against the farm to sell hay than it is to sell grain, an abundance of roughage for the winter should be provided on every stock farm.

Iowa. H. E. McCARTNEY.

**FALL CARE OF THE LAMBS.**

It is questionable if any other season of the year is more trying for the lambs than during the fall when the weather is more or less varied and pastures supplying a scant amount of relishable food. It seemingly would appear that nature had neglected her full duty to the shepherd in thrusting upon his shoulders the responsibility of tiding the flock over a period of unproductive pastures.

During fall in a dry season, and especially just before winter sets in, it is quite a common practice among farmers to allow the flock full access to all the fields on the farm that they may have more range and act in the capacity of scavengers about the premises. By this practice the flock is, of course, given a greater opportunity to search for relishable food which is highly enjoyed by the old sheep. But with the lambs it is quite different. All summer they have been partially dependent upon their dams for a limited amount of nourishment and have not acquired the habit of acting as scavengers to the same extent as the older members of the flock. While the lambs, if given the opportunity, will roam the fields searching for food, their flesh condition soon shows they are not obtaining the necessary food required to produce the most pleasing results.

The fact should not be overlooked in the fall management of this year's lamb crop that it is from this source we must draw another year in order to maintain the present high standard of our flocks. The time to develop the sheep that in the near future must make up the flock is right now, while the stage of development is in its infancy. No other time in the growth of any animal presents a better opportunity to develop the weaker qualities than when the individual is young. In a great many instances lambs that possess excellent breeding and would, if properly managed, develop into good individuals, are practically ruined because of the lack of the right kind of food and care at an early stage of growth. We have noted in our own experience many lambs that, had they been separated from the rest of the flock and given extra individual attention, could have been developed into better individuals than they proved themselves later on in life. A great many underestimate the influence of good care upon lambs during early growth and for this reason many a crop of lambs are a great disappointment when they reach the stage of maturity and come in as breeders in the flock.

It is during the fall the lambs suffer most and are apt to get into a condition that is hard to recruit, even under the best of later management. The only safeguard against allowing the lambs to fall into this condition is to supply the necessary nourishment from some other source than the pasture. As soon as the pasture ceases to be productive of relishable food it is advisable to begin feeding a little grain morning and evening. It is quite surprising to note the splendid results obtained from feeding a few quarts of grain to the lambs at this particular time of the year. Just the nature of the grain ration at this season will, of course, depend to a large extent upon when the lambs are to be marketed. If it is the intention to grow the lambs and feed them off during the coming winter and sell upon an early spring market the grain ration should comprise mostly of nitrogenous materials. On the other hand, if early marketing is contemplated, and a great many farmers do sell their entire lamb crop early in the winter, it is advisable to push them along a little faster, and a more carbonaceous ration will cause them to take on flesh more rapidly. In such instances, it would be prudent to add more corn and oats to the ration. Perhaps no grain can be fed more economically than that raised upon the farm, and for this reason it should comprise the bulk of the ration supplied the lambs.

It will certainly pay to feed a moderate ration of corn and oats, with a little bran or oil meal added, at this season of the year. It will save in the later grain bills and, what is more important, will shorten the feeding period.

Shlawassee Co. LEO C. REYNOLDS.

**LIVE STOCK NOTES.**

The recent substantial advance in prices for range feeding lambs was merely carrying out predictions made a short time ago by well-informed sellers at the Chicago stock yards, based on knowledge of the shortage in the supply. Sheepmen who took advantage of the early extremely low prices and stocked up with choice feeding lambs may consider themselves extremely fortunate. As a general rule range sheepmen are making their lambs fat, and there will not be a large marketing of feeding lambs this season.

The supply of beef cattle in the territory tributary to Chicago is lasting much longer than in regions east and west of there, and buyers looking for fat cattle are forced to buy in that market to an unusual extent. Eastern markets are not getting enough good cattle to meet their needs, and there is a great shortage resulting from drought conditions west of the Missouri River. Prime beefs have had a great boom since the upward movement of prices began weeks ago.

Matured hogs have been pretty well marketed, and the packers will have to rely on old brood sows of heavy weight and hogs of rather light weight for about two months more than heretofore. Prices have had a great rise for good hogs, and ruling figures seem good to take where hogs are in marketable condition. Even common hogs are selling very high.

Owners of well-bred cattle who are able to make them prime before sending to market will undoubtedly find it highly profitable to follow this course, but fat grass cattle and those of plain quality should be marketed before the markets become pretty well supplied with grass-fed cattle from the northwestern ranges.

Western range steers sometimes bring prices that are away up, as was the case in the Chicago market recently, when a consignment came from the Lame Deer range in Montana, the steers fetching \$7 per 100 pounds, or 50c higher than any other range cattle had brought since the season opened, several weeks ago. These cattle were raised by the Cheyenne Indians. A car load of helpers out of the same consignment brought \$6.15, also establishing a new record for range helper cattle to date.

The southern demand for cured hog products promises to attain liberal proportions, as cotton, sugar and rice crops are expected to reach extremely large amounts. The south has been a large consumer of the cheaper and medium-priced lines of provisions for some months.

William Kent, a large stock feeder of Nebraska, says beef is dear because stockmen are not buying corn any more for 20 cents a bushel, but are paying 45 cents this year, while it cost them 60 cents last year. He says: "We pay for a lean steer \$45 and then feed it with \$20 worth of corn, \$5 worth of hay and cottonseed meal worth as much as \$3. The freight to market and other expenses foot up about \$5.75, so that the steer stands us nearly \$79 at the packing house."

Fred Gooding and his ranch neighbor, George Skillen, who were in the Chicago market recently stated that later arrivals of lambs are likely to show a rather small percentage of feeders as well as this early run stuff, as the ranges in Idaho and Montana are in the best shape in years and the crop of lambs will be of better general class than has come off the range in years, though in numbers away below the movement last year, the Ketchum line alone being estimated 400 cars short of last year.

"Europeans have done little anticipatory lard buying and the changed feeling, conditions and prospective light receipts for August, September, and perhaps all October, may change this program materially," said W. L. Gregson, a one-time prominent packer. "No one in the trade seems to be willing to dispute the assertion that on or around these levels a tremendous volume will be required to satisfy the continental demand for pure American lard. Reliable data, lately compiled, pointed to a good decrease in marketable fat hogs available for the market during the next 90 days, as compared to a year ago, is liable to add strength to the situation as the fall trade approaches, and the situation unravels itself and verifies the figures."

F. R. Hunt, of Atlantic, Iowa, marketed not long since at Chicago 52 head of branded western beef steers which averaged 1438 pounds at \$7.10 per 100 pounds. They were Herefords that were bought through a South Omaha live stock commission house about a year earlier at \$5.30, their average weight having been 960 pounds at that time. The cattle were on full feed about five months and returned good profits. Mr. Hunt said it had been very dry in his part of Iowa, no soaking rains having fallen since the latter part of May, resulting in very short pastures. He said corn had been injured badly and the hay crop is short, but there was a good yield of small grain.

A Chicago packer says the quality of the hogs coming to market in recent weeks there and at other western points where the packing business flourishes indicates plainly that the crop of hogs has been well marketed and that there will be a gap in hog receipts for two or three months. The current supplies of hogs are hardly more than sufficient to supply the large demand for fresh meats. They have been mostly marketed, and while early shipments netted only losses, later shipments enabled owners to come out with moderate profits. After the Illinois and Indiana distillery cattle are marketed a shortage of beef cattle of the best grade seems inevitable.

The Pacific coast states have been drawing heavily on the Montana and other western ranges for beef cattle, and this is materially lessening the numbers that will be available for marketing at Chicago and other middle western receiving points this year.

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Back of this model are the tens of thousands of cars built by Mr. Olds. It embodies all that has been learned by the oldest man in the business, by the dean of automobile designers. On it is staked Mr. Olds' reputation. Our rashest competitor will hardly attempt to criticise the car.

As for the price, our first announcement quickly swamped us with orders. We are at this writing three weeks behind. On our present output—at present cost of materials—we can keep this price at \$1,000. In any event, that's the price today at any Reo salesroom.

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This is another attempt to keep ahead of the times. Motor car prices are bound to come down. We want to be first to strike bottom.

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No shop in America is equipped to build cars better or cheaper than we. It is us, we consider, to set the pace. Those are the reasons for this sensational price on this new, big, stunning car.

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No man will suspect that, after all these years, we are reducing the grade of the Reo car. We need hardly discuss that. No man will conceive that Mr. R. E. Olds, America's foremost designer, will forfeit his fame on a retrograde car.

The fact is, this new Reo—at \$1,000—is by far the best car that ever went from our shops. Every whit of the car—every feature in it—accords with the best engineering practice.

The engine—rated at 30 h. p.—shows 36 h. p. on brake test. Because of the top valves, it supplies more power for the cylinder size than any other engine we have ever tried out.

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The steel which we use is all analyzed, to know that it meets all our rigid requirements. The gears are tested in a crushing machine, under 27 tons' pressure. Our magneto is subjected to a harder test than any other magneto will stand.

Note the big wheels, the big tires. Note

the car's roominess. Note its magnificent lines. With all of our knowledge, all our experience, there is no part of this car which we know how to better.

This car was not built to sell for \$1,000. It was built to show the best we can do.

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From now on we shall build but one Reo chassis. That policy alone will save \$200 per car. Without it, this price would be out of the question.

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Cars of about this size and power are sold all the way up to \$2,500. We ask you to compare any one that you wish with the Reo at \$1,000. We are willing to abide by your judgment.

### Ask for Details

The first step is to ask us for details. We publish on this car complete specifications. We state every material, every detail of mechanism. This will help you to make your comparisons.

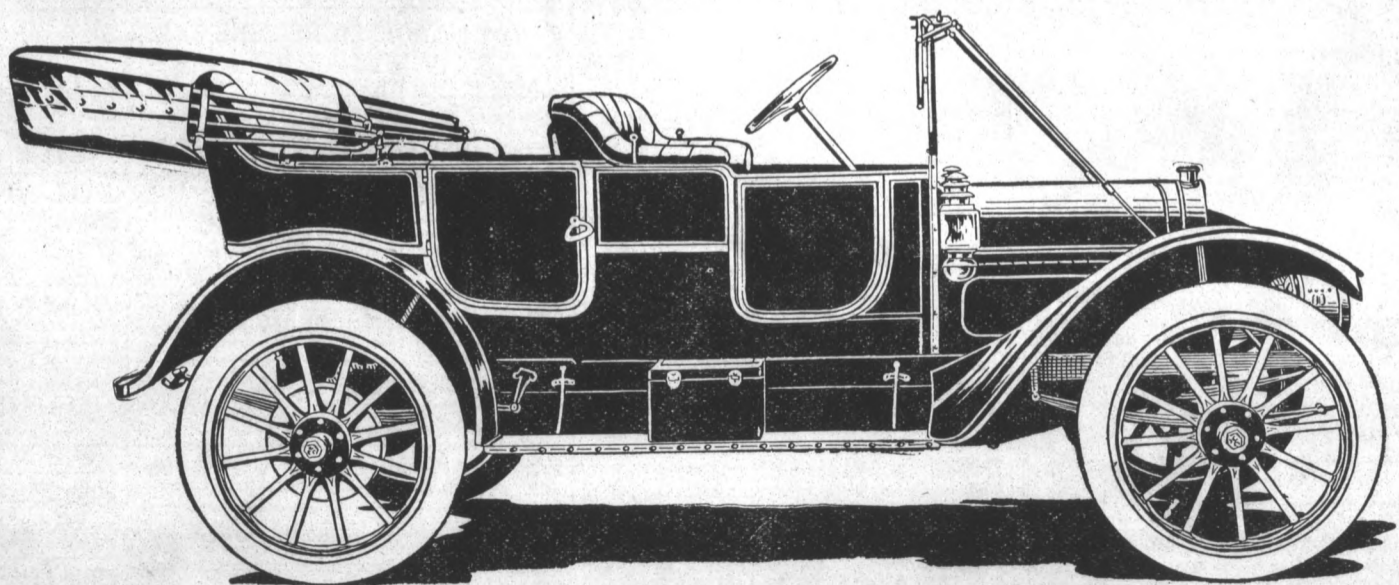
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VETERINARY

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

Advice through this department is free to our subscribers. Each communication will be published. Initials only will be published. Many queries are answered that apply to case in full; also name and address of should state history and symptoms of 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.

Dropsy.—I have a 12-year-old mare that has a swelling under belly, commencing at udder and extending forward some 20 inches. This swelling reduces when she is driven and is worse at one time than others. Some time ago this stocking went away for a few days, but came back again. H. E. H., Vassar, Mich.—Give her 2 drs. powdered sulphate of iron and 1/2 oz. of fluid extract or powdered buchu at a dose in feed twice a day. Hand-rub swelling twice a day. She should have daily exercise.

Warts on Lips.—I would like to know how to treat a colt that has warts on lips. He is two years old and I am going to break him this fall, but am afraid the bit will irritate them. A. L. D., Merritt, Mich.—Cut off those that have necks and apply acetic acid to the flat ones once a day.

Chronic Lymphangitis.—For the past three years my horse has had a stockinged hind leg, but it has never seemed to affect him during hot weather until now. If there is a remedy for such an ailment I would like to know what it is. E. S., Hart, Mich.—It is well to keep in mind that high feeding on grain and no exercise is the most common cause of lymphangitis. Give 1 dr. of iodide of potassium and 2 drs. powdered nitrate of potash at a dose in feed twice daily for ten days, then give the medicine once a day, or as often as necessary. Hot fomentations have a good effect when applied to a tender and inflamed leg. Good care, regular exercise, feed lightly on grain when idle, bandage leg for two hours after work and hand-rubbing leg will have a good effect.

Goitre.—Cough.—I have a two-year-old heifer with first calf that has two bunches on neck one on each side, but they are movable. She also coughs some but seems to be in good health and gives a nice mess of milk. F. J. C., Hudson, Mich.—Give her a dessertspoonful fluid extract opium and 1 dr. iodide of potassium at a dose in feed twice a day. Apply equal parts tincture of iodine and spirits camphor to bunches twice a day for three days then apply once a day for ten days.

Tetanus (Lock Jaw).—I had a colt coming two years of age that was all right in the evening, next morning he acted strange, held head up high, tail some elevated, walked stiff and acted as if choked. I called the Vet., who treated him for acute indigestion, but later discovered he had lock jaw. He gave him medicine with hypodermic syringe and continued treating him every few hours, but he was unable to eat or drink and was suffering so much pain that we shot him. I have other valuable colts and live stock which I am afraid might become diseased, if it is a contagious ailment. B. S., Grass Lake, Mich.—The tetanus bacillus makes its way into the body through a skin or flesh abrasion wound. The most common abode for this germ is in garden earth, barnyard filth and fertile soil. If there are no wounds on the lower parts of your live stock they are in little danger of taking lock jaw. This is a fatal disease; however, some mild cases do recover, but the animal usually suffers more or less for 21 days and sometimes longer. In my practice I usually give tetanus antitoxine, which seems to prevent horses taking lock jaw from wound infection. This preventative is not expensive and I regard it as good practice to administer it. Your Vet. did perhaps all anyone could do for the case, for when an animal cannot eat or drink they must die from starvation, if from no other cause.

The best demand in the Chicago market for stocker and feeder cattle of the better class has been coming from farmers in Illinois, Indiana and Ohio, and considerable numbers of heifers have been taken to place in feed lots.

The Big Black Society of America has been incorporated at Lexington, Kentucky, by seven breeders of this breed of bacon hogs. The purpose of the society is to bring over from England the breed known under the name of the Big Black pig. The breed has been introduced into this country only recently, but it has been raised in England for more than 100 years, and it is very popular, accord-

Farmers owning heavy heifer calves are to a large extent going to fatten them, and a good many will be put in feed pens this autumn, with the object in view of making choice baby beef. There is all the time a good demand from killers for this class of beef, and it usually brings a good premium. Of course, there is a knack in making this kind of beef, and it requires lots of care and thought. A stockman who understands the method of making baby beef says: "The calf or yearlings should be as fat as possible when put up to feed, as the baby fat taken from the milk of the mother cow is the cheapest that can be obtained. The best results along this line come from calves taken right off the cow fat and put on feed, and it is my opinion that the heifer calves would do better if spayed before starting to feed them, but this is a matter to be left to the practical knowledge of the man who handles them."

Stop Using Feed For Fertilizer
Whole corn in your animals' droppings indicates that a part of the feed of even a healthy animal is wasted through non-digestion. Grinding the feed fails to save this waste, and the feeder must either let his hogs follow up the steers and eat this wasted grain or be content to realize what little he can from it as fertilizer. Saving a part of this wasted feed by Improving Digestion is known as "The Dr. Hess Idea," and back of it are the opinions of our ablest writers.
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the prescription of Dr. Hess (M. D., D. V. S.), improves digestion; it contains iron, the greatest of all blood and tissue builders, acts mildly on the kidneys, regulates the bowels, also expels worms and relieves the minor stock ailments. As proof that Dr. Hess Stock Tonic does all these things just show the formula on the label to your family physician. A poor ration well digested is better than a good ration poorly digested. Improved digestion insures more growth, more and richer milk.
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IMPROVED CHESTER WHITES—Choice young boars of March and April farrow. I will also sell 30 thoroughbred Holstein cows to freshen in Sept. and Oct. W. C. Wilson, Okemos, Mich. Both phones.

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O. I. C. Swine—Bred gilts, males weighing from 150 to 250 lbs. Price and type right. Geo. P. Andrews, Dansville, Ingham Co., Mich.

O. I. C.—March pigs with quality and best pedigree. Order now and get first choice. C. J. THOMPSON, Rockford, Michigan.

O. I. C's For Sale—Best quality, large growthy type, either sex, pairs not akin, some fine bred gilts, choice lot of fall pigs all ages. OTTO B. SCHULZE, Nashville, Michigan.

O. I. C. Choice Spring Pigs, akin. Order now and get first choice. All pigs shipped on approval and Reg. free. HARRY T. CRANDELL, CASS CITY, MICH.

O. I. C. SWINE—My herd is chiefly Duroc descent, both males and females. Get my price before you buy. Will register free of charge in purchaser's name. A. J. GORDEN, R. No. 2, Dorr, Michigan.

O. I. C's—I am offering 12 choice young boars and 10 select sow pigs at farmers' prices in order to make room for fall pigs. Fred Nickel, Monroe, Mich., R-1.

DUROC-JERSEY SOWS bred for Sept. farrow. Also spring gilts and boars of choicest breeding at right prices. E. R. CORNELL, Howell, Mich.

DUROC-JERSEYS—Bred Gilts and spring pigs for sale. CAREY U. EDMONDS, Eastline, Michigan.

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DUROC-JERSEYS—25 fine spring gilts, popular blood lines. Good individuals; 10 fine boars, 5 bred sows due to farrow soon. JOHN McNICOL, R. No. 1, North Star, Mich.

WALNUT HILL DUROCS—17 fancy sows bred to Mich. Col. for August and Sept. farrow. 165 spring pigs, both sexes, priced right. Write or come. J. C. BARNEY, COLDWATER, MICHIGAN.

LARGE TYPE P. C.—Largest in Michigan. Pigs sows. Weigh 180 to 195 lbs. at 4 months. My motto—"Not how cheap but how good." Will pay expenses of those who come and do not find what I advertise. W. E. LIVINGSTON, Parma, Mich.

POLAND-CHINAS—Breeders looking for spring pigs. WOOD & SONS, Saline, Michigan.

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Three Extra Good Fall P. C. Boars By Next In Line. 32 spring male pigs ready to ship. I ship C. O. D. and furnish pedigree promptly. If you want good as the best, write me for prices. WM. WAFFLE, Coldwater, Michigan.

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Lillie Farmstead Yorkshires—Holywell Manor and Oak Lodge blood predominates. Large Herd. Three service boars. Pairs and trios, not akin. Boars ready for service. A fine lot of spring pigs. Gilts bred for August farrow. The best long on earth. Satisfaction guaranteed. COLON C. LILLIE, Coopersville, Mich.

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**POULTRY**

**THE FUTURE OF EGG VALUES.**

As we lay our plans for the coming year, with regard to the size of the flock we intend keeping, this question naturally suggests itself: What are the prospects for the coming year? It is a question which has to do with determining the size of the flock and the number of fowls we sell off.

There was a natural disappointment at the slump in egg values this season. This had inevitably to come. With prices constantly increasing from year to year, a check had to come sooner or later. It came this season and eggs have brought about 30 per cent less money this season than last.

Two things contributed to this result—the agitation against storage methods, and a fear of the effects of "reciprocity," so called, the first with some cause, the second mostly "bugaboo," in my opinion. In the end the consumer will, as usual, "pay the fiddler," as the losses sustained during the past season, and the threat of drastic legislation, had the effect of making the storage men prudent. The result is that the "pack" of storage stock will not be sufficient to see the season through, and, unless the hen responds nobly, prices will soar to rarefied heights before spring arrives.

The ever-growing carelessness in handling the crop in its course from the farmer to the consumer made it necessary that something be done. It got to be so that a good egg purchased at the corner store, was the exception, and the continued "holler" of the consumer reached the high places and a halt was called. The storage people were called to account, and it would seem that they were mostly to blame, since investigation brought out the fact that eggs were sometimes "kept over." Be that as it may, the market slumped. Then this "pact" came up, our very discerning President having discovered that the overfed and plutocratic agriculturist is too prosperous and should be checked. This pact plainly meant free trade in farm products and, of course, included the egg, consequently eggs slumped some more. However, this last slump, or cause of slump, is, I think, unwarranted, for the present at least, so far as eggs are concerned.

The competition we fear from Canada will not come from eastern Canada but from the great agricultural region of the west, a region of great ranches in which there are not enough hens kept to supply a tithe of the demand for eggs nor will they be kept. It is Ontario and Quebec and the minor provinces of the east that produce nearly all of Canada's eggs, and even they produce only a small quantity for export.

Canada, in my opinion, will never be a great egg country. The winters are too long for her to compete successfully with her southern neighbor in this field. Not that I am trying to defend this little prize "packet" which our President has so skillfully tied with silk ribbon to conceal the "lemon" contained therein. I consider it no less than a crime against the farmer, but I for one am not frightened as to its results on egg values.

I look for high prices during the late winter and early spring months; perhaps they will come even earlier than this. One thing is certain. Our population is fast increasing and constantly moving cityward. These people all consume eggs but they do not all produce them, and as the percentage of consumers increases in its relation to producers, eggs are going consistently higher.

The meat and egg crop go hand in hand and the contraction of the meat supply seems to grow more acute year by year. As meat goes higher eggs follow until the meat level of prices is reached. Of course, local causes will bring occasional setbacks, but in my opinion, the average price of eggs will continue to rise.

With all the advantages now to be had on the farm, the onward trend to the city continues. The farm is, and will continue to be, the great producer of eggs. Desertion of the farms means but one thing—lessened egg production, the natural and inevitable consequence of which is higher values. Think you that this "pact" called reciprocity, will greatly accelerate the "back to the farm" movement? On the contrary, it will have a tendency to drive more than one half-hearted farmer to the city.

Feeling sure that Canada will never be a great egg producing country, I believe

the economic effect of reciprocity upon eggs will be to ultimately increase values. I am firmly convinced that we will have nothing to complain of as regards egg values in the near future, and I, for one, will build for the future on the strength of this belief.

Isabella Co. Wm. J. COOPER.

**SIDING A WINTER POULTRY HOUSE.**

Will ordinary siding be warm enough for a winter poultry house, or would you line it with one-ply roofing? Will three windows, each 3x6 ft., produce light enough for a 12x30-ft. house? Will canvas windows be warm enough for winter? Kalamazoo Co. G. H.

A single course of siding will probably be satisfactory if the siding is perfectly tight so that cold air cannot come through and create drafts. Putting on a good covering of tarred building paper before nailing on the siding will make it safer. Of course, the house will be warmer if a lining is nailed to the inner edges of studding, thus leaving a dead air space between the outer siding and the lining. However, from tests made at the Michigan station it would appear that such double walls are not absolutely essential, even in this rather severe climate. The tests referred to were made to determine the effect of warm and cold houses upon egg production. Three flocks of 70 hens each, of the White Leghorn breed, were kept in houses 14 by 24 feet. The number of eggs laid in the different houses was, during the first year from November to April, in a house double walled throughout and with a 4-inch air space, 2,850 eggs; in a house double walled only on the north and east sides, 3,128 eggs; and in a single-boarded house, 3,022 eggs. In the second year, from December to March, in a house double walled on all sides, the yield was 2,540 eggs; in the house double walled on two sides, 2,379 eggs; and in the single-boarded house, 2,334 eggs. The conclusion reached was that there was not enough difference in the three houses to justify the building of double walled houses.

If you plan to use canvas instead of glass in the windows, it is essential that the rear and end walls be perfectly tight. A well-fitting window, containing glass, in the forward part of each end wall would increase the light very materially. The three windows you mention will not be sufficient. It is impossible to get too much sunlight into a poultry house. We suggest that you put in the three windows as planned, fitting the sash with glass, and alternate them with three similar windows to contain sash covered with canvas.

**GIVING FOWLS A CHANGE.**

The best place for chickens in the fall is in the orchard. They very seldom fly up into the trees to destroy the apples and they do worlds of good to themselves and the trees by eating the drop fruit and insects. If they have a tendency to fly, cropping one wing will keep them on the ground. Even if all the fallen apples can not be spared it is easy to pick up what are needed before the chickens are turned in.

Close the houses and yards so that the fowls will roost in the trees. This gives an opportunity to clean up and fumigate their quarters before cold weather and is a blessing to the fowls tired of hot, dusty coops. Burn all stray in nest boxes and, perhaps burn the boxes themselves as they are apt to harbor lice. It is cheaper to provide new nests than medicine and care, for sick fowls.

Burn sulphur several times in the houses, whitewash the interior and roosts, and thoroughly clean the floors. Then allow the doors and windows to stand wide open and you will have an ideal place to begin the winter campaign. The only objection to this plan is that the chickens do not like to give up roosting in the trees, but feeding in or near the houses a few times accustoms them to their old quarters.

In addition to the fallen fruit it is best to feed a little corn or wheat once a day with plenty of the feed common on all farms in the fall. Much stuff goes to waste in the country every year that might profitably be used for the chickens. The refuse cabbage and tomatoes, sour milk, curd, small potatoes that could easily be boiled, turnips and many other vegetables are relished by the fowls. The fact that chickens are bound to ravage the garden, should teach us to plant some green food for their especial benefit.

Keep plenty of fresh water under the trees so that it will be reasonably cool, and hollow out several shallow places to hold dust and gravel. It is well to have

two sets of pans or shallow vessels—one for water and the other for soft feed. It is more economical and cleanly to feed from pans than on the ground.

This plan also gives an opportunity to clean up the yards which the fowls have occupied all summer. Plow them as soon as the chickens are out and sow to wheat and rye. Even if little of the grain comes up it will not be wasted, for the chickens will dig it up when returned to the enclosure. In this way the soil is purified and rejuvenated, while countless insects are destroyed. Corn, thickly planted, is also good but is soon destroyed by frost of course, while wheat and rye last until freezing weather begins.

Ohio. H. R.

**VENTILATING A HENHOUSE.**

Would like information in regard to ventilating a henhouse, according to King system. House has all openings in front; they are covered with cotton cloth but the house got very damp last winter. I have come to the conclusion that I must have better ventilation and any information along that line will be gratefully received.

Ottawa Co. H. T. H.

I had supposed from all the information that I have been able to gather on the subject, that if we used muslin over the front opening in a henhouse it would be properly ventilated. That is, if muslin is used in the place of window glass it will protect the hens from draft, give them light, and at the same time allow a sufficient amount of air to pass through to give fairly good ventilation.

It is a difficult matter to ventilate a henhouse by the King system. In order to ventilate a cow stable by that system the stable must be very tight. You have to control the air current. Now, if you have the front openings in the henhouse covered with muslin you cannot control the air current, and the air is just as apt to come down the ventilating shaft as it is to go up. It is barely possible that your front openings are too low down to give the desired ventilation and if this is so a small opening, or several small openings, can be made up close to the roof, which will allow the air to pass out and furnish ventilation. As long as we no longer desire to keep henhouses extremely warm in winter it doesn't matter so much if we have the temperature quite low. In the case of cow stables we don't want the temperature to go below 40 degs., but in henhouses we no longer like very warm temperatures as some people have found that hens do better if not kept in too warm a place. We can have an opening up next to the ceiling, or next to the roof, which will give ample ventilation, and it matters little if it does make the house a little bit colder. I believe it would be an unnecessary expense to install the King system of ventilation in a henhouse as I don't believe it would work.

**WHEN TO FEED BRAN TO FOWLS.**

Bran is rich in phosphates when compared with many other foods fed to poultry, and as phosphates account for the formation of bone, growing poultry may with advantage be allowed a certain proportion of it. It is also useful for laying hens and if used occasionally as a change and to add bulk to the morning mash, the fowls will be greatly benefited by it.

In using bran, however, it should never be mixed with other meals in a dry state as such a mixture is liable to set up a derangement of the digestive organs owing to its irritating nature. Bran before being used should be scalded with boiling water, and left for an hour at least to cook and swell. A little may then be added to the soft food of growing chickens, or it may be used for laying hens in conjunction with meal, using equal parts of each and driving off by the aid of shorts. A mash thus made is suited for use in summer.

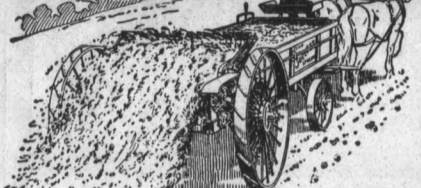
Canada. W. R. GILBERT.

The use of powdered eggs by bakers is being discouraged by the United States Department of Agriculture.

The quality of eggs for the season has been very irregular. Dealers complain that it has been necessary for them to scrutinize consignments much closer than has been the custom in former years.

The receipts of eggs in New York from the first of January till the 15th of August amounted to over 3,900,000, while for the corresponding period of 1910 slightly over 3,300,000 were received, making the receipts for the current year exceed those of last year by 600,000 cases in round numbers.

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R. C. B. Leghorn Cockerels—Kulp strain, the best there is, \$1 to \$3. Eggs in season. O. W. WAITE, Gobleville, Michigan.

SINGLE COMB BLACK MINORCAS—A few more pull-ets to spare. Eggs \$1.50 per setting. R. W. MILLS, Saline, Michigan.

SILVER, GOLDEN and WHITE WYANDOTTES. Eggs \$1.50 per 15; \$2.50 per 30. A few White Roosters left, circular free. C. W. Browning, Portland, Mich.

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B. P. Rocks, R. I. Reds, W. Wyandottes and S. C. W. Leghorn eggs for sale. 15 for \$1; 25 for \$1.50; 50 for \$2.50. COLON C. LILLIE, Coopersville, Mich.

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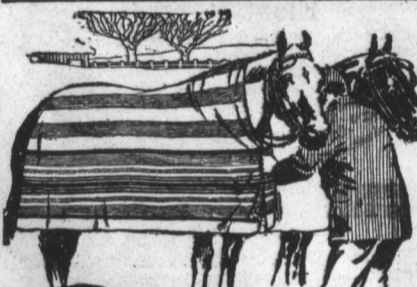
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**CREAM RIPENING AND BUTTER-MAKING.**

Ripening of the cream, or more plainly speaking, souring of the cream, is one of the fine arts of butter making. Creamery operators usually buy a commercial starter, which is nothing more or less than a pure culture of lactic acid germs. For the dairy butter maker, as satisfactory results may be attained by using pure skim-milk that has been kept at a temperature of about 80 degrees until it has a quick, sour taste and is about ready to coagulate. Some butter makers use sour cream or buttermilk that is kept over from a previous churning but such starters are more apt to get off flavor than the skim-milk starter. From eight to 10 per cent skim-milk starter should be used when the cream tests above 28 or 30 per cent fat.

If the cream is kept at about 65 degrees during the ripening period and stirred frequently it should be gradually cooled at the end of 12 or 13 hours and brought down to churning temperature. Some of the best butter makers ripen cream until it contains about five per cent lactic acid. Farrington's Alkaline Tablet Test is the best way to determine when the cream is right to churn. It can be used by any butter maker by following the directions that come with the outfit.

No fixed rule can be followed in churning different creams. If properly ripened cream containing 28 to 30 per cent fat should churn in 30 to 45 minutes if it enters the churn at the right temperature. This will give an exhaustive churning and the butter will be in ideal condition to handle without injuring its texture. Scald the churn and chill it with cold water before putting in the cream. This will freshen it and fill the pores in the wood so the cream will not stick to it. Try and have the temperature of the churning room about the same as the churning temperature. When putting the cream into the churn strain it to break up the lumps. If coloring is used it should be added at this time. The quantity to use will depend upon breed of cows, time of the year and the strength of the coloring. By testing the cream and adding one-sixth to the number of pounds of butter-fat for the churn over-run it is possible to add just enough coloring to keep the butter a uniform color at all seasons. High coloring is not advisable, but uniform coloring is desired most.

Churning is one of the simple arts of butter making. It is simply causing the fat globules to move about and strike each other in such a manner that they stick together. The greater the agitation the more they are moved about and the greater the possibilities of their adhering to each other. For the first few minutes after the churn is in motion, the vent should be freely opened to relieve the pressure due to the air becoming saturated with moisture. It is best not to fill the churn more than half full. As soon as the fat globules have gathered in a granular form about the size of wheat or corn, the buttermilk should be removed if it is to be used for cooking or for sale, otherwise a brine about the same temperature as the churning should be added and the churn revolved three or four times more. This frees the granules from the buttermilk and causes them to float. As soon as the butter is in a free granular form it should be salted in the churn. The amount of salt to use depends upon the kind of trade that is being supplied. The aim should be to have the same amount at all times. Sift the salt evenly over the granules with a sieve, and cause the granules to roll about until the salt is well distributed. They can then be brought together and the butter is in condition to be worked. The kind of worker used does not matter as long as it does the work. With the salt evenly distributed the chief object is to press the granules together so there will be no holes left in the butter. Too much working spoils the grain and makes it salvy. More working is generally required in the winter than the summer. When finished it should be velvety, free from holes and show no signs of stickiness when cut with a ladel. If this treatment does not dissolve the salt allow it to stand two hours and then finish working. Working the butter at

the right time and straining the cream as it goes into the churn should prevent mottles in the butter.

The question of marketing good butter depends upon the trade that is being supplied. High-grade dairy butter will find a ready sale, provided a man puts his product before the best class of buyers and keeps it uniform in quality at all seasons. People are slow to change brands of butter when they find a dairyman who makes butter to suit their tastes.

New York. W. MILTON KELLY.

**SHEET OR STEEL LATH FOR LATH AND PLASTERED SILO.**

I wish to ask through the Michigan Farmer for experience with sheet lath and plaster silo. Are they a success? How long will the plaster last with good care? How many coats of plaster for a first-class job? How thick ought it to be? How fine should sand be made? Is there any difficulty in cement mortar, 1 to 2, sticking to sheet lath? Does it need hair or other material, such as ground lime or wood pulp? Would this weaken lasting quality of walls? I have silo nearly built, ready for plastering. The silo is built of 2x4 oak studding, 12 inch center to center. Lath on inside. Sheet lath 3/4-in. thick, matched. Inside diameter 10 ft., 35 ft. high; sheeted on outside with 29 gage galvanized sheet steel.

While I have never had any experience with sheet or steel lath for lath and plastered silos, I know of their being used and they are giving entire satisfaction. In fact, there is not the slightest reason in the world why they shouldn't be satisfactory. The steel lath are certainly stronger than wooden lath and this will add strength to the silo and as long as they are covered with mortar and not exposed to the weather at all, there is no danger of their rusting and they will last indefinitely. Now, with regard to using hair or wood pulp or anything of that sort in the mortar, it is not necessary; use fine, clean, sharp sand, two parts sand to one of cement, and put it on one-half to three-quarter inches thick. It will stick. This mortar ought to last 15 years. It did on one of my silos. Of course, we washed it about every other year with cement wash. Should the plaster get porous all you have to do is to plaster it again right over the old plaster and you have a silo as good as new.

**A HERDSMEN'S CONTEST.**

The success or failure of a herd in the show ring is due largely to the care and handling they have received in the process of fitting. The Iowa State Dairy Association, realizing that the herdsman is directly responsible for the condition of his herd, and desirous of placing credit where it is due, have inaugurated a herdsmen's contest at the next gathering of the dairy cattle congress.

In placing prizes the judges will keep in mind that there is no class of live stock exhibits that requires such great attention to neatness, cleanliness and sanitation as does the exhibit of dairy cattle. To assist the herdsman in keeping the barn clean and neat overhead platforms will be constructed for the storage of feed and the bunks of attendants. Barrels will be furnished for the manure and these will be emptied several times each day into wagons and all refuse matter disposed of at once.

The following score card will be used as an aid in making the awards:

Conditions and cleanliness of herd...	20
Neatness and cleanliness of herdsman and helpers .....	10
Courtesy and deportment of herdsman and helpers .....	8
Method of keeping feed and bunks..	10
Cleanliness of stall .....	10
Cleanliness of alleys .....	10
Decoration and attractiveness of barn	6
Promptness of getting cattle into the show ring .....	8
Expertness evidenced in showing cattle .....	10
Promptness in entering parade.....	8
Perfect .....	100

The contest will extend through an entire week, and should assist the management in making the cattle exhibit clean and attractive.

**A CHANCE FOR THE SMALL BREEDER.**

The opportunity to get a free official test of dairy cows at the State Fair, as outlined in the editorial on page 204, is a chance which the small breeder, who has too few cows to make an official test on the farm practicable, should not miss. Those who have only a few cows of any dairy breed should avail themselves of this opportunity to get their best cow in this official test.

**DISCARDING Complicated and Cheap CREAM SEPARATORS**

Others who have bought disk-filled, complicated and cheap cream separators are now discarding them for

**SHARPLES Tubular Cream Separators**

These people paid good money for the machines they are discarding. Do you suppose they would change without good reason? They realize that Tubulars repeatedly pay for themselves by saving what others lose. Could there be a better reason for changing? Can you afford to ignore the experience of others, whose names we could give you by thousands? Others have finally got Tubulars. You will finally have a Tubular. Why not get the Tubular first?

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Dairy Tubulars have no disks. Have twice the skimming force of others. Skim faster and twice as clean. You can arrange with our local representative for a free trial. Other separators taken in exchange.

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High Grade Separator—Direct  
Save \$25 to \$50 direct at my factory price—freight prepaid. Get the only Separator that runs in "Bath of Oil," like a \$5,000 automobile. This alone is worth \$50 extra, but costs you nothing extra.

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Why pay \$85 to \$110 to dealers or agents who cannot sell you a separator equal to the Galloway—closest skimmer—easiest run—easiest cleaned—10-yr. guarantee. Send for **BOOK FREE** WM. GALLOWAY CO. 613 Galloway St., Waterloo, Ia.

**EVERLASTING TILE SILO**

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No more frozen ensilage  
No more door jams to rot  
Will withstand high winds  
Never Needs Painting  
Absolutely indestructible  
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ANY handy man who can handle a trowel can set up the tile. They are self centering. Simple in construction. Absolutely air tight and sanitary. Being hollow tile, there is no fear of ptomaine poison. We have experimented for several years before putting this tile silo on the market, and feel that it cannot be improved upon. Write for prices and further information.

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**MONEY SAVED —BY USING— Roy Swing Stanchion**

Best, safest, simplest and the easiest for cattle of any Stanchion on the market. Send us your name and we will tell you all about them.

Manufactured by **ROY BROTHERS, East Barnet, Vermont.**



WHEN TO CUT CORN FOR SILAGE.

I am a reader of the Michigan Farmer and enjoy reading it very much. I would like to ask your advice on how I can tell when my corn is fit to go into the silo. My corn is turning yellow and the silk is dry and the corn is down and will be slow cutting. Will I have to cut the corn the same day when I fill my silo? I am a beginner and never put up any silage and the only one in the neighborhood that has put up a silo.

Monroe Co.

F. W. W.

Some of the lower leaves on corn will turn yellow, especially in a dry time, before the corn is anywhere near ripe enough to go into the silo, especially is this true if the corn is planted pretty thick. It shows more a lack of sunlight and a lack of moisture than it does maturity of the corn. Corn should not be cut off for silage until it is fairly well matured. Of course, if late corn should be cut by a frost, the sooner you get it into a silo, the better. Where the corn has a normal growth under normal conditions the earliest ears ought to be about ripe enough to cut up and shock if you were going to husk the corn and crib-cure it, and some of the later ears when they get nicely past the milk stage and the greater portion of it would be glazed and commencing to dent. Now that is just about the right time, the ideal condition of the corn, to cut and put into the silo, because at that stage of its growth it contains the largest per cent of digestible nutrients. If you leave it very much longer some of the digestible food nutrients in the plant are changed, the cellulose turns to woody fiber and becomes indigestible and if you cut it very much earlier than this it isn't properly matured so that you get the full food value of the corn.

In extremely dry times or during an extreme drought when the corn is fired by dry weather and hot winds, it might be advisable to cut it even before the ears are formed but such conditions are unusual, at least for Michigan. In the west sometimes the hot winds wither up the corn before it is developed and the only way to get anything out of it at all is to cut it, even though it is not more than half mature. But in Michigan such instances as that are extremely rare, if they ever happen.

It is not necessary to remove the corn to the ensilage cutter as soon as cut, but it can be left on the ground till the following day.

THE MODERN COW STALL.

Will you kindly give me what information you can in regard to the model cow stall?

Washtenaw Co.

J. S. B.

To get a correct and satisfactory idea of the model cow stall one must see one. I tried to explain this cow stall in the Michigan Farmer a number of different times and I don't believe I ever succeeded in making myself understood thoroughly. The model cow stall differs in principle from every other kind of a stall that I ever saw or heard of. One feature about it is the double manger. It has a manger in which to feed silage or roots and grain and then another manger above the first in which to feed hay. Now, I like this because if you want to put the hay in at the same time you feed the ensilage and grain, you can do so and the cow can eat it at her pleasure. All the other kinds of cow stalls you have to give the cow her grain and silage and then wait until she eats that up to feed her the hay. For this reason I like the other plan the best. The model cow stall, when it is properly adjusted for the length of the cow and the cow has been educated to lay in the stall where she ought to, will keep cows clean. There is no question about this. There won't be a stable stain on them from one year's end to the other. The principle securing this result is entirely different from that of any other stall. A 2x4 is placed edgewise in front of the cow's hind feet and when she lays down she must lie in front of this 2x4 or else lie right across it. Now, between this 2x4 and the manger the space is supposed to be filled with bedding, which makes a sort of raised platform for the cow to lie upon and when she lies upon this she is above all of the filth of the stable and keeps herself clean. When she gets up the hay manger which is constructed of slats that slant back towards the cow, causes her to back up and consequently she does not get her hind feet on her clean bed. When she lies down she has got to step up and lie on this raised platform (her bed) and she consequently moves forward out of the filth.

Now, with the model cow stall you don't have to have a gutter. It is not

necessary. It is no part of the stall. If you have a gutter it is merely for the convenience of having some place to store the manure until you haul it out. If you do not have it you will have to haul out the manure oftener.

The cow is tied with a chain around the neck, or around the horns, or with a halter, or with almost anything that you wish to. They can be tied to the bottom of the hay manger or to either side of the stall. They do not have to be confined very closely with the hitch. They can be given all the liberty that a cow can have, and yet, when they lie down they must lie upon this clean bed.

Some cows don't seem to have sense enough at first to step forward and lie upon this clean bed. They lie right down over the 2x4 and get into the filth which is always behind the 2x4 and they have to be educated and sometimes it takes a little bit of patience. But I do not think you will find a cow but what can be educated to lie in the proper place. If you will get a big stone with a flat side and put it just behind the 2x4 the cow is compelled then to lie where she ought to. She will get right down on this stone but she will find it so uncomfortable that she will make up her mind that the only way to rest comfortably is to step ahead before she lays down. You can keep the stone there until she gets the habit of stepping forward before she lays down and then you can remove the stone. Probably 90 per cent of the cows know enough to step forward and lie upon this clean bed without any inducement but the other 10 per cent will have to be educated. Considerable care must be taken in adjusting this 2x4 to fit the length of the cow. For a small cow you must move the 2x4 ahead. She requires a short bed, and for a long-bodied cow, of course, it must be adjusted to fit her. If this is done you can keep the cows clean and comfortable and yet they have all the liberty that cows can possibly have and still be confined in a stall.

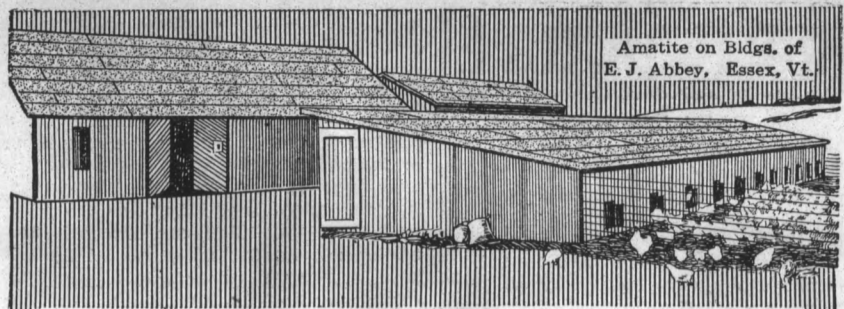
APPLES FOR COWS.

Though a constant reader of your paper for over four years I have never noticed any remarks on feeding apples to cows. As I have a lot of wind-fallen apples I would like to make use of I would like to hear from someone who knows as to their value for dairy cows in Michigan.

Allegan Co.

"SCOTT."

Apples haven't a very great food value. They are mostly water and flavor and some of them haven't any too good a flavor. They are considered more as a relish than as a food. Human beings don't eat apples with the expectation of getting very much food nutriment out of them but they are appetizing and make the balance of the food taste better. They assist in keeping the digestive tract in better condition, to stimulate the flow of the digestive fluid, and they are a good thing in this way. But who would think of making a meal out of apples. Why, a man could eat two or three apples before dinner but he wants his dinner just the same and I have known men, and I have done it myself, eat several apples just before going to bed, with no bad results, which simply goes to show that there isn't very much food value in apples. Consequently, when you feed apples to cows you must not expect the same returns that you would from the same amount of ground oats or cottonseed meal or clover hay, because the food value isn't in it. But to feed them a small feed of apples night and morning would be a good thing for the cows and certainly so if you didn't have any other succulent food, but they would want their grain ration and their roughage ration just the same. I would not substitute apples for any portion of the ration but give the apples in addition to the ration and I think possibly that you would get a better flow of milk. Your cows certainly would keep in finer condition and feel better, and in this way it will pay, but it would take a good many apples to amount to as much as 100 lbs. of corn meal or ground oats. Apple pumice is sometimes put into silos the same as you would corn-silage, and preserved in this way and fed, and people report that they get splendid results from feeding it. Apple pumice would be richer in food nutrients than the apple itself because, in making the cider much of the water is taken out and the apple flavor with a little of the sugar but the principal parts of the food nutrients, the protein, the carbohydrates, and the fat remain and by feeding this pumice judiciously the same as we feed corn silage one can get very good results from it and it acts as a succulent food the same as corn silage.



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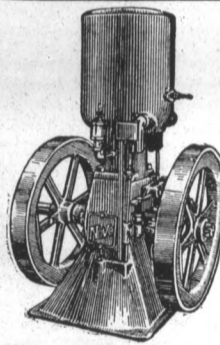
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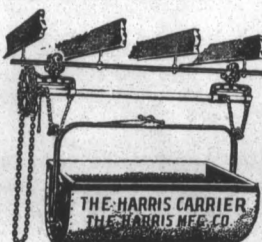
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## HORTICULTURE

### PEACH YELLOWS.

This is a subject which most writers shun, probably because no one can give a cure or even a sure preventive, or tell what it is or when and how it spreads, so there is not so much left to tell. I will not attempt to solve any of these mysteries but rather to give some symptoms that will enable anyone not familiar with the disease to detect it and something of our experience in attempting to control the disease.

Just what the yellows is scientific men do not tell us. It is supposed to be a bacterial disease, the bacteria diffusing themselves through the sap, and the trees becoming inoculated through the blossoms, stomata of the leaves, injuries, or other means. However, the bacteria have not been isolated, and those who have given the subject the most study will not commit themselves as to the exact nature of the disease or just how or when it is spread. Some growers believe that it is spread only at blossoming time, but this belief is not held by most growers, the majority believing that it may spread at any time. Just how we do not know, but no doubt bees and birds are instrumental in carrying the disease and probably it is transmitted by means of pruning tools and other orchard tools. I have not seen any proof as to whether it is or is not carried by winds without some transmitting agent. One thing is certain, it spreads and spreads rapidly, and it is freakish in its manner of spreading, not always taking trees in rotation but affecting one here and there in different parts of the orchard.

About the only definite symptom of the yellows on trees not bearing fruit is what is called "fungus growth" which consists of twigs or shoots usually of a slightly paler color and with much narrower leaves which may shoot out from almost any part of the tree during the summer, but usually its first appearance is from the main branches near the trunk. These shoots divide and subdivide more rapidly than healthy ones, making a rather bushy shoot as they lengthen.

If the tree is bearing fruit there are several additional symptoms that may be noted. One is the premature ripening of fruit on the affected branch or tree. The fruit may ripen from a week to a month earlier than it should, but it usually ripens unevenly, one side becoming soft while the other remains green and hard though the skin may have considerable color. On a tree just affected one branch may have ripe peaches while another will have small green ones. The following season if the tree it allowed to remain the entire tree will probably be affected and the fruit worthless, so it may as well be removed anyway even if it did not act as a means of spreading the disease.

Aside from premature ripening, the yellows fruit usually has a higher color, and the color may extend to the pit in streaks making red marks or lines radiating from the pit. In size it is variable being usually smaller than normal, but often on branches but recently affected the fruit is above normal size and color. The larger fruit from recent infections may not be lacking in flavor perceptibly, but as soon as the disease has obtained a good hold on the tree the fruit will be tasteless or bitter, at least the smaller ones will. The second year it will be small, shrivelled and worthless.

If the above condition of the fruit is coupled with the fungus growth mentioned above, one is certain that the tree is affected, but either symptom is a good indication. A yellow appearance of the foliage may or may not be present at first, so the name is rather deceiving, but later the yellow appearance of the leaves will be noted.

The only preventive that has proven to be of worth is the one of eradication, that is the taking out of affected trees as soon as one is sure they are affected. The top may be cut off and burned, and the stumps dug later, when the ground is soft, but they should not be allowed to remain and sprout up again. Where only a small branch was affected we have tried cutting this off together with a large amount of apparently healthy wood, but in every case the balance of the tree would be affected the next season. It is possible by cutting off the affected portion of a tree in fruit to leave the tree and obtain some fruit from the non-

affected portion, but this may be at the expense of other trees. If the scientists could only tell us when and how the disease is spread we would know better what we should do or should not do. For instance if the disease is spread only at blossoming time it would not be necessary to remove affected trees until the fruit was removed from the unaffected part. But this we do not know and the safest method where there are many healthy trees at stake is to remove all trees as soon as they show definite signs of the disease.

Our experience in controlling the yellows has not been very satisfactory. In spite of the prompt removal of affected trees the disease has continued to spread, and in three years' time has taken an entire orchard, and has started on a younger one. Of course it is difficult to combat the disease single handed. We have no inspectors, and there are many trees in the neighborhood. Possibly if we were isolated or had inspectors who would look after the removal of trees in the neighborhood, the results would have been better. It is also possible that the yellows is more virulent in some localities than in others, or that it will be less virulent after it has been here for some time, and like the old fashioned potato bug lose its hold.

Calhoun Co.

S. B. HARTMAN.

### SAN JOSE SCALE—TWIG BLIGHT.

Does the San Jose scale affect the tree or the leaves or the fruit, or all? We have a few trees that I think are affected, there being grayish scales on the bark, leaves and fruit. Some of the branches seem to be dying and fruit withering and decaying. What shall I do for these trees and when? I also notice in parts of the orchard not affected with this scale, that a good many limbs seem to be dying, especially on north sides of trees. I am cutting out these branches. Is there anything else that should be done?

Hillsdale Co.

H. J. M.

San Jose scale attacks all parts of the tree above the ground—trunk, limbs, twigs, leaves and fruit. Spray these trees before growth starts next spring, with a lime-sulphur mixture, which can be made at home or secured in commercial form.

The dying twigs are probably the result of twig blight. This disease is common only in favorable years. It was so this season. Cutting out the affected limbs is about all that can be done. Cut well below the parts diseased.

### SECOND GROWTH OF OATS AS COVER CROP.

I set a young orchard this spring in a piece of ground that was sown to oats, and the oats are taking second growth. Will this answer for a cover crop for the orchard? Or would it be better to clip it and leave clippings on the ground? I would like to know what kind, and how much commercial fertilizer to use on this orchard, and when to apply it. I have not sufficient barnyard manure. Would it be advisable to set apple trees in this latitude in the fall? Can peach trees be kept successfully in a cellar over winter?

Clare Co.

W. D. S.

It is now too late to think of sowing another cover crop, hence this second growth of oats should be left to protect the trees during the winter. There would be no advantage in clipping the oats; they should be allowed to make all the growth they will. Freezing and snows will bring the straw of the plants down to the ground so that the snow will be held, thus aiding by their own presence and by the snow that accumulates about the intercesses of the mulch to prevent sudden changes of temperature about the roots of the trees.

The condition of the land, the size, age and vigor of the trees would determine to a large extent the kind and amount of fertilizer to add. Ordinarily you would only need to supply the trees with potash and phosphoric acid since cover crops can be depended upon to furnish the nitrogen, unless the spaces between the trees are to be used for other purposes. Clovers, vetches, peas and other leguminous crops will provide nitrogen cheaper than it can be secured in any other manner and we would recommend this way of securing it. But since you have not sown such a crop this fall it would be well to add a complete fertilizer (one containing potash, phosphoric acid and nitrogen), for the coming season. Your dealer can provide a brand testing about two per cent nitrogen, eight per cent phosphoric acid and five per cent potash. Apply this early in the spring at the rate of 300 to 600 barrels per acre, depending upon the fertility of the land, fertilizing the land out from six to eight feet away from the trunk of the trees. If other crops are to

be grown in the space give the whole area an application. Later the potash and phosphoric acid can be added in form of muriate of potash or wood ashes, and phosphate rock, while cover crops will supply nitrogen as mentioned above. The cover crops when plowed under add humus, which is an all-important matter in the proper feeding of fruit trees.

There is not sufficient data at hand to warrant our advising fall planting in your section. Better do the work early in the spring.

With proper regulation of temperatures peach trees can be successfully carried over in a cellar.

### THE APPLE MARKET.

Our last issue contained an article from Mr. Hutchins in which he warned apple growers not to become scared at the published report of the Apple Dealers and Shippers' Association, inasmuch as the figures were only a comparison of this year's crop with that of a year ago, and not with an average crop, and further, that the great bulk of the present yield is composed of early apples leaving the later market open to a good demand, and very little stock to supply it. Of course, it was a natural thing for the apple buyers to make such a report public to get the people in general to think that this fall and winter at least, they could satisfy their appetite for the King of Fruits, and also to send afloat among the growers the idea that the crop is large and if they desired the best opportunity to sell they had better accept the immediate present for a few days or weeks might mean the sacrifice of the whole crop, for just such publication seems to be in harmony with business ethics of the day. Buying apples being their business, it is expected that they will use means to secure the apples they want to satisfy their customers at the lowest prices. One way of securing them at low prices is to get the grower to think that they are plentiful, for the grower knows that when the supply is heavy he must take a smaller price for what he has than when the trees over the country are loaded. And on the other hand, the buyers can create in the public mind, an apple habit, by declaring the plentifulness thereof. Thus both ends of the deal is aided by this bit of printing.

This being the business of the buyer it is equally the business of the seller to see that the whole truth is made clear, and if it is not then the seller of the fruit should supplement, for if there is one person more than another who should reap the benefit of conditions favorable to high values we believe that that person is the grower of the fruit and not the middlemen, for while the middlemen do take some chance upon losing, their chances do not compare with those taken by the grower. The reports submitted by the buyers are true insofar as data can be gathered regarding the amount of fruit to be harvested for the season, but this report is not the proper basis for fixing prices for the late apples. The early apples cannot be held over successfully to meet the demand that is sure to develop from now on. Late apples must be drawn upon, and as the report did not show that these apples were in small supply, it is not a good basis for making contracts between grower and buyer.

The situation has been very evident upon the city market in Detroit. A few weeks ago there were plenty of apples coming in and it was difficult to get rid of them at a price that would leave the grower a profit. Now the situation is different—the offerings are small and the seller sets his price and can afford to wait for it. Good fruit is at present selling on the city markets for \$1.25 and more per bushel. The writer sold ordinary apples at \$1 per bushel the past week and the parties came for more. Two weeks ago apples of the same quality could be purchased for less than one-half this figure. We note that the New York market was glutted in the same way and prices sunk to an extremely low point, but that now the early apples are out of the way a better trade is going on.

The question naturally arises as to what figure the seller should adopt as a fair ground for contracting his fruit. We believe that, speaking generally, the fall fruit should not get out of the grower's hands upon a lower basis than three dollars per barrel. This was the general contract price in the principal sections at the beginning of the season a year ago. The conditions certainly warrant as high price this year for the late apples and we do not think growers will suffer if they are slow in contracting.



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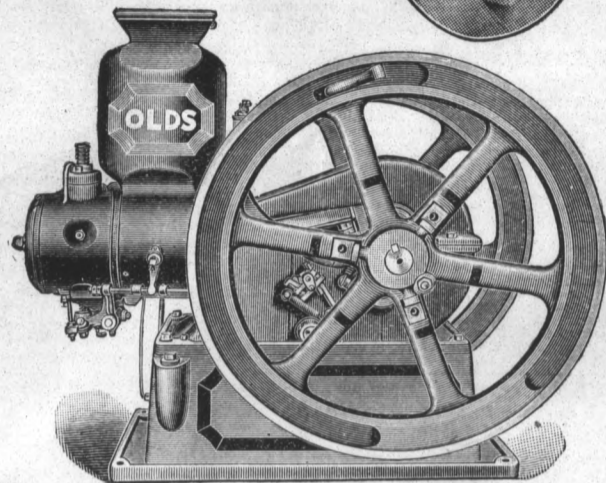
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The Lawrence Pub. Co.,  
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DETROIT, SEPT. 9, 1911.

## CURRENT COMMENT.

**Preparations for the State Fair.** State Fair are now nearing completion and everything will be in readiness for the opening of the big show on the morning of Monday, September 18. The fair will this year continue for nine days, closing on September 27, thus affording greater opportunities for those who would attend it, to choose their time for going. It is not well to postpone a visit to the fair until the last days however, since everything will be in place from the start, and early visitors will have the same opportunity to study the exhibits and benefit from the educational features of the fair as those who go later.

In addition to the representative exhibits and displays in all departments, there will be new features at this year's State Fair which should be of great interest to all farmers and particularly to the dairy farmer. A new model dairy barn is under process of construction and will be completed before the opening of the fair. This is made after the plan worked out by the experts of the United States Department of Agriculture for such a building and will be complete in every particular.

One educational feature which should be greatly appreciated by dairymen and stockmen will be the free lectures given twice each day by prominent educators, dairymen and stock breeders, on subjects that will be both interesting and profitable. Among those that will give lectures are: Hon. Colon C. Lillie, former State Dairy and Food Commissioner; Prof. A. C. Anderson, of the Michigan Agricultural College; Hon. N. P. Hull, Master of the State Grange, and former Deputy State Dairy and Food Commissioner; Dairy Expert Helmer Rabild, of the United States Department of Agriculture; Hon. Jas. W. Helme, Deputy State Dairy and Food Commissioner; Dr. Floyd W. Robinson, former State Analyst; W. F. Raven, of the Michigan Agricultural College; Ex-Governor Fred M. Warner, of Farmington; Prof. R. S. Shaw, Dean of the Agricultural Department at the Michigan Agricultural College.

Another feature which should be attractive to dairymen has been arranged by Superintendent Marston, of the dairy department of the fair, who has arranged with Prof. Anderson of M. A. C. to conduct official tests of dairy cows for a seven-day period during the fair. Under

this arrangement dairymen or cow owners who wish to give their cows official seven-day records can do so by placing their animals in the new modern demonstration barn. This test will not be limited to exhibitors and will be open to any and all dairymen who wish to have their cows officially tested under the rules and regulations of their particular breed association. Those desiring to take advantage of this opportunity must notify Superintendent T. F. Marston, at Bay City, before the fair opens, and have the cows to be entered at the fair grounds during the ten days of the fair. There will be no expense, except for transportation to and from the fair. If the owner desires, all feed will be furnished by the dairy department; all milk produced by the cows in this test will become the property of the dairy department for use in the demonstration creamery. This demonstration creamery will be in the new dairy building, which for this year's fair will be covered by a large tent, the foundation and floors being in but the building not being completed.

So far as the general exhibits are concerned, the fair officials state that every available inch of exhibition space will be occupied. In the agricultural and horticultural sections exhibits will be larger than ever before, the several development bureaus of the state having arranged to make special exhibits. There will be an educational exhibit from the Philippines and big exhibits from the Canadian northwest. The live stock barns will be well filled with choice animals. Already there is guaranteed a fine horse exhibit, while a large number of cattle breeders with herds of noted quality will be on hand and there is every promise that the hog exhibit will be especially strong, while that in the sheep department will be up to the high standard set in previous years.

For the first time in its history the State Fair will this year receive official recognition from the United States Department of Agriculture, President Newton having been notified that Prof. Chas. E. Snyder has been detailed to represent the department, with instructions to pay special attention to the horse and sheep exhibits.

The entertainment features of the fair will be up to those of previous years and need not be here enumerated. It is certain that there will be plenty of attractive features to make attendance profitable for all who go, from the opening of the fair by President Taft on September 18 to its close on September 27, and no Michigan Farmer reader who can possibly arrange to attend should neglect the opportunity.

**The West Michigan State Fair.** The enterprise of the officials of the West Michigan Fair during recent years

has won for their annual show the merited dignity of a state fair since, while it is peculiarly representative of the progressive agriculture of Western Michigan, the exhibits are fairly representative of the agriculture and manufactures of the whole state. This season the West Michigan State Fair will be the first of the big Michigan fairs, the dates being September 11 to 15 inclusive. Located as it is in the heart of the Michigan fruit belt, this fair is always strong from a horticultural standpoint, and its show of live stock is always good, as are the exhibits in every department, including agricultural machinery. Its entertainment features are also of a high class. Altogether the West Michigan State Fair is an exhibition which does credit to its name, and which no farmer who can arrange to attend can afford to miss.

**Cutting of Brush in the Highway.** An Eaton county subscriber asks for another exposition of that portion of the new highway law relating to the cutting of brush along the highway. He states that on the highway adjacent to a recently purchased farm there was a considerable growth of brush, a portion of which he has cut, the balance being left as a protection for an old fence, with the intention of cutting the same during the coming winter. Recently he has received notice to cut the brush before a specified date or the highway commissioner will cut them and the cost of cutting, together with a penalty of ten per cent, will be charged against him and collected with his other taxes. In this connection the inquiring subscriber asks a number of irrelevant questions relating to the ownership of the highway, its occupancy by a telephone company for the planting of its poles and their right to trim trees to accommodate wires and the right of the township officers to cut the

brush and charge him for same with an added penalty.

At the outset, for the benefit of this subscriber and others who may be interested, it might be well to say that while the township does not own the highway, it is by law dedicated to the use of the traveling public, and there is no question about the authority of the legislature to enact almost any legislation which it may deem expedient regarding its obstruction. The telephone companies have no other rights in the highway than those given them by law for the convenience of the public who desire the advantages of telephone service, which rights carry with them no obligations regarding the maintenance or care of the highway, other than as relates to their lines.

As before noted in these columns, the provisions of the new highway law requiring the cutting of brush along the highway appear to be somewhat ambiguous, which, however, is not true regarding the provision relating to the cutting of noxious weeds. Section 2 of the law reads as follows:

Sec. 2. It shall be the duty of the overseer and commissioner of highways to cut or cause to be cut, prior to the first day of July in each year, all brush within the limits of any highway passing by or through such lands: Provided, however, That this section shall in no wise apply to young trees which have been set out or preserved by abutting property owners for shade or other purposes.

The next section of the law makes it obligatory upon the owners of property to cut all noxious weeds growing on their land or on the highways passing through or by said land at specified times, but does not mention the cutting of brush. The next section prescribes the form of notice to be given for the cutting of noxious weeds but does not mention brush, nor does the section following giving the highway commissioner authority to enter upon the land and cause all noxious weeds to be cut. Section 6 of the law, however, provides for a report to the township board by the commissioner of highways regarding the expense incurred in cutting brush as well as weeds from the highways and provides for the auditing of such bills by the township board, while the succeeding section provides that the cost of cutting, together with the 10 per cent penalty shall become a lien on the land, to be assessed and collected as other taxes are collected. From the reading of Section 2 of the law as above quoted it would appear that to make the action of the highway commissioner legal, and the cost chargeable against the property owner, the cutting must be done prior to the first day of July, and there is some reason to believe that, in a case of this kind, the proviso in the section would become operative, since the brush has been temporarily preserved for a purpose.

However, this rather indefinite provision of the law could be tested only at some disadvantage, since the property owner could only serve written notice on the highway commissioner not to cut the brush, then pay the tax under protest and bring suit to recover the amount, which would be hardly worth while. The best course of procedure in such cases would be to talk the matter over frankly with the township officials and come to some definite understanding by which all trouble and litigation may be avoided. The officials will generally be found to be reasonable men, which will make this course practicable and wholly satisfactory to all concerned, since litigation is expensive and there is no certainty regarding the interpretation which the courts might make of this apparently ambiguous provision of the law.

## CANADIAN RECIPROCITY AND MICHIGAN AGRICULTURE.

This whole matter of reciprocity with Canada is certainly a most remarkable affair. Like most questions of national importance, few men are qualified to discuss it understandingly. Personally, I hesitated to take sides in the matter at all, but I finally came to the conclusion that it is all wrong to have this reciprocity treaty with Canada. I hesitated to side against it largely because it was fathered by President Taft and because Hon. James Wilson, Secretary of Agriculture, is first, last and all the time for it. In matters affecting the farmers, as this undoubtedly does, I would take Secretary Wilson's judgment before I would that of almost anyone else. I had the pleasure of spending a good part of two days with him at Hancock, Houghton and Marquette, and upon the beautiful boat, City of Cleveland, recently, when the Detroit Board of Commerce visited the Upper Peninsula. I did not hear any arguments then, nor have I read or heard

any, before or since, that convinced me that reciprocity with Canada is a good thing to have.

Possibly I should say for the benefit of my readers that I am interested in the lumber business, but I do not believe that the cancellation of the lumber tariff is of much moment to my own particular interests. I do think it is of considerable importance on the Pacific coast and also, but of less importance, on the Atlantic coast. However, I feel that it is altogether wrong to single out a few manufacturing industries and the farmers to bear the burden of the Canadian treaty, and a burden I believe it will be found to be.

There are many honest champions of this measure, but I feel certain that there are few sound arguments in its favor. For instance, President Taft in his address at the Columbus, Ohio, corn show last winter, said that one of the principal reasons why he is in favor of reciprocity is that there is no good agricultural land left unoccupied in this country, and that it is advisable, therefore, for us to tear down the tariff barrier between the United States and Canada and "let an ever increasing agricultural population flow over into the Canadian northwest." He also said it had become "necessary for us to spend millions of dollars yearly to reclaim the arid regions of the west," presumably to take care of the increasing number of farmers. It is quite evident that President Taft has a limited knowledge of the resources of this country in some respects, but, of course, we can hardly expect him to know everything.

As a matter of fact, there are about twenty-five million acres of good agricultural land crying for farmers to come and use them in the three states of Michigan, Wisconsin and Minnesota. Millions of dollars are being spent annually in an effort to settle them. While it is true that some of them are heavily infested with stumps, they are no different than were the acres turned into farms by our forefathers. As far as the expense is concerned it is not to be compared with the cost of irrigation, and as far as productiveness is concerned many of these unoccupied acres are the equal of any lands on the continent. I am strongly in favor of filling up our own waste places before we start to help Canada populate hers. She has shown a remarkable ability to do it in the past. Her advertising has been very effective. Year after year we see the lure of the wheat fields, where they have frosts on the Fourth of July and blizzards in summer, tempt our middle west farmers north of our boundary line, to lands and conditions less desirable than Michigan has to offer. More will go under the new treaty, and why shouldn't they? The President of the United States seems to think it is the proper thing to do, or at least inevitable.

The Upper Peninsula of Michigan has about eleven million acres of land, a very large part of it the best of agricultural land, a larger percentage of good agricultural land than the Lower Peninsula, as shown by the new soil map now being prepared by the state geologist, is nearly half yet covered with virgin forests, but they will go very fast from now on. There are literally millions of acres lying around loose, fit to be farmed with very little work. Now that the world is beginning to recognize that the Upper Peninsula of Michigan can grow fine apples, corn, beets, and in fact, nearly everything else the rest of Michigan can grow, the mystery is why people will even dream of going to Alberta and the far west and northwest. When farm lands here can be had for a song, compared with prices paid in parts of Canada and the western states. I have seen, time and again, men with families, settle on farms in this county, having not over ten dollars to start with. I never saw one of these settlers fail to make good. I know instances where men have farms worth thousands of dollars who started with little or nothing six or seven years ago, and on stump lands at that. Our native grasses are what help settlers out. They can let their cows pasture on the old logging roads all summer and gather together enough hay and other feeds even the first year to take care of their live stock. At the same time they can raise enough other things to feed their families. Then, work is very plentiful. New copper mines are being developed on every hand and further south our iron mines show a steady development. Some of them are literally under our farms. A very large area of our mining districts are wonderfully fertile and the mining districts afford a fine market, for all we can raise for many years to come. Sec-

retary Wilson said we would come to the front as a dairy section. Probably nowhere else is clover a weed, literally overrunning the land. Some have maligned us because of our deep snow, but they are forgetful of its effect on our clovers and grasses and our fall grains. Some day not far distant we will be famous for our winter wheat. I cannot refrain from telling our lower Michigan brothers that we can plant our potatoes in the fall with certainty that they will grow in the spring, or we can leave them in the ground and dig them in the spring as we did on Hemlock Hill Farm this spring. We actually dug our seed potatoes this spring and immediately planted them.

I see I have digressed, but if I once get started on the subject of the opportunities in the Upper Peninsula it is hard for me to get back to other subjects. To go back to reciprocity again, those who favor it talk the way I should expect a Canadian boomer to talk. It is true, if we don't like it we can quit it, but it is the uncertainty of things that makes for our present business depression and it is dangerous to experiment. No one really believes we will ever have free trade in this country who has seen its workings in England. Why not have protection against all? If a reduction of tariff is needed, let's have it, but let us not put the burden upon the farmer, and particularly the farmers of the states along our northern border, like Michigan.

Ontonagon Co. T. A. GREEN.

HAPPENINGS OF THE WEEK.

**National.**  
The manager of the theatre at Canonsburg, Pa., where so many persons were killed in a crush caused by people fleeing from the building after a cry of fire was heard, was severely censured by the coroner's jury who decided, however, that no person is criminally liable for the catastrophe.

Reports of the different railroads leading through the sugar beet districts place the crop of Michigan about 20 per cent higher than the crop of last season.

Sugar interests state that because of the shortage of the crop in foreign countries the price of sugar to consumers will not go lower than it is now, which is one cent higher than a year ago, and in all probability it might reach higher quotations.

The receipts at the Chicago postal savings bank for the first month of its existence was \$200,000, which is a record for the postal banks established so far in this country.

The breaking of a coaster car at Coney Island Saturday, resulted in the death of two women and the injury of many others.

Six miners came to their death at Butte, Montana, by riding in a cage loaded with drills which caught on the side plates of the shaft and pounded the men into pulp and finally swept them down the shaft 1,400 feet below.

Experiments at Sandy Hook have demonstrated that the new 16-inch guns will be able to destroy the largest Dreadnaught at a distance of 22 miles. The shell thrown by the monster gun weighs 2,400 pounds.

Statistics indicate the following figures to be the number of board feet of lumber produced by the leading lumber states in the year 1909: Washington, 3,862,916,000 feet; Louisiana, 3,551,918,000; Mississippi, 2,572,669,000; North Carolina, 2,177,715,000; Arkansas, 2,111,300,000; Virginia, 2,101,716,000; Texas, 2,099,130,000; Wisconsin, 2,025,038,000; Oregon, 1,898,995,000; Michigan, 2,889,724,000; Alabama, 1,669,001,000, and Minnesota, 1,561,508,000.

The Massachusetts cranberry crop is reported to be about 11 per cent larger than the crop of 1910. Harvesting has begun.

The Michigan state board of equalization has increased the value placed on the state's property for taxing purposes, from \$1,734,100,000 which was the amount agreed upon five years ago, to \$2,290,000,000. This increase is \$673,553,882 less than the estimate made by the state tax commission.

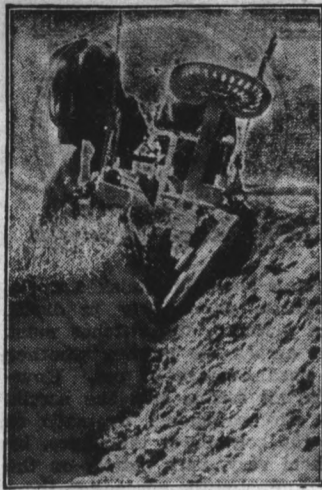
Nine persons are believed to have lost their lives in a fire at Juneau, Alaska, and 14 others are in the hospital suffering from burns. The fire consumed a hotel and one other structure.

Three persons are dead and a score injured as the result of a suburban trolley car plowing through a crowd of Hungarians who had been picnicing Labor Day and had returned to the car line at St. Cosme, four miles west of Detroit city limits, where they were to take the car home. When the car approached the anxious waiters crowded those close to the track upon it, and they could not escape before the moving car swept them down.

**Foreign.**  
Food riots are reported in many parts of France. The high prices asked for bread and other necessities have aroused the working people who have formed organizations to resist further advance of prices. Conflicts with police and troops at St. Quentin resulted in 20 soldiers and 100 manifestants being injured.

Cholera is reported to be getting a firmer hold in Turkey. It is stated that in Constantinople there were during the month of August, 70 cases reported and 25 deaths.

The boiler of a German steamer exploded while the boat was near the mouth of the Oder river, killing eight men, including the captain of the boat.



Spalding Deep Tilling Machine preparing the ground against drought by pulverizing a seed-bed 18 inches deep. Send for catalog.

positively pulverizes your soil and prepares a seed-bed 12 to 16 inches deep or more—all IN ONE OPERATION. The Spalding Deep Tilling Machine works equally well in the fall, when the ground is hard and dry, as in the spring. It has never failed to thoroughly pulverize the soil to a depth of 12 to 16 inches in the fall, when the soil is so hard that an ordinary mould-board plow can hardly be made to work at all.

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The use of the Spalding Deep Tilling Machine is especially beneficial in the fall, for the reason that the deep, thoroughly pulverized seed-bed, 12 to 16 inches deep or more, is an ample reservoir to hold the fall rains, the moisture from the winter's snow and the early spring rains.

The farmer knows that all crops suffer from drought at one time or another during the year. In some districts more than enough rain falls each year to make a crop, but it often happens that excessive rains are followed by dry weather. If the seed-bed has been prepared with a Spalding Deep Tilling Machine to a depth of 12 to 16 inches it will absorb three times as much moisture as a shallow seed-bed. The moisture will soak to the bottom of the deep seed-bed below the point of evaporation and be held there as a time of need.

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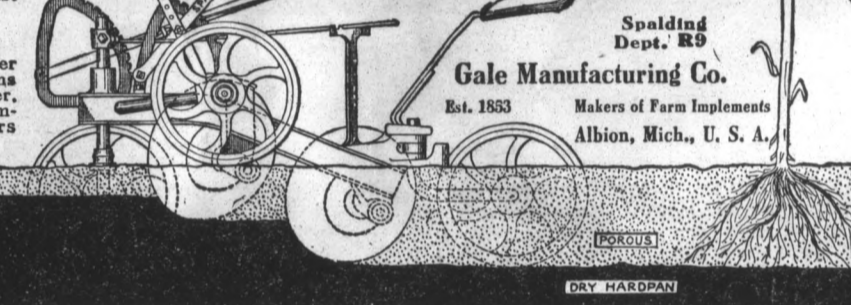
## Spalding Deep Tilling Machine

plow shallow, expecting the moisture to rise by capillarity to moisten their crust and hold the drought at bay, when capillarity is already exhausted by the downward pull of gravity. Since the moisture does not rise to moisten our crust except very slightly by distillation, it is clear that the best thing we can do is to go down after the moisture. The only way to do this is to plow deeply, not only six or seven inches, but eight, nine, ten or twelve.

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# Woman and Her Needs

## At Home and Elsewhere

### THE TRAGEDY OF THE OLD.

A woman was taken from a smart boarding house the other day to a home for old ladies. She was not old, she should have been a happy mistress of a happy home. She was simply worn out. A hard battle with the world had been too much for her. For years she had solicited advertising for a prominent weekly and had earned thousands of dollars, but at forty-five she had not enough money ahead to provide for this unexpected breakdown. Every cent she had earned had gone to educate her only daughter.

Dolly had been sent to the most exclusive school. Then a vocal teacher had "discovered" she had a voice and hundreds of dollars had been poured out in the cultivation of the "discovery." Dolly had to have fine clothes to appear in numerous concerts, for which affairs she never received a cent of pay. And hundreds and hundreds of dollars more went to help Dolly make as good an appearance as the daughters of the wealthy men with whom she chummed.

Finally Dolly married. Her mother's friends expected the mother to give up work and live with the young couple, but Dolly and her husband had other ideas. Dolly's husband would "not have a mother-in-law ordering his house." His salary was just large enough to give the two of them everything they desired but a third would mean sacrificing a few luxuries. So Dolly dutifully submitted to her liege lord's decree, and the mother kept on working.

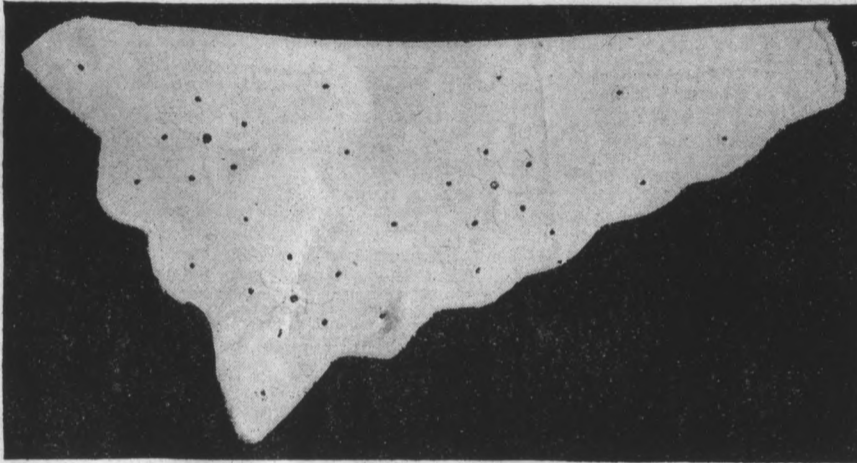
Then came the crash. Overwrought nerves and the sorrow of separation from her idol were too much for the mother and she gave up. Again her friends expected Dolly to come forward, but she did nothing of the sort. Dolly said she simply could not take her mother in without giving up her career, and no one could reasonably expect her to do that. She had reached a point where prominent church soloists occasionally asked her to supply for them. Besides, what would the Girls' Friendly Society, the Mothers' Club, the East Side Settlement and the Y. W. C. A. do if she withdrew from her committees? And then there were three bridge clubs and a literary club that claimed her support.

And Dolly's friends agreed. It was altogether too much to expect a young thing like Dolly who was so fond of life, to give up everything and spend her time fussing over a nervous old lady. What were Old Ladies' Homes for, anyway?

So the mother was bundled off to grieve her heart out, and pretty Dolly went blithely on her way.

And the tragedy of the whole thing was that so many thought it quite the proper thing to do. No one thought of the things Dolly's mother had given up for her. No one called to mind the sleepless nights, the breathless terror and the

remaining petals show the finished work. In many figures, particularly in disks, like the one pictured, the stitches must run straight across the figures, whether padding is used beneath or not. However, in curving forms, like the scrolls shown, the stitches should be made to conform to the contour of the figure, by crowding them very, very closely on the inner edge, and slightly spreading them on the outer edge, though not sufficiently to show spaces between. The padding stitches are shown in the lower one of



Cuff in Solid and Eyelet.

pain which were the mother's before Dolly was brought forth. No one reminded Dolly of her mother's constant care of her in her childish illnesses, nor hinted at the sacrifices the mother made for her when the father left them alone. The money lavished on Dolly's education, if put at interest, would have kept the mother in ease, but no one thought of that, least of all Dolly. Sacrifices which were accepted as a matter of course on the part of the mother were too much for anyone to ask of the child, such was the general opinion.

And this is the remorseless spirit of the age. The mother who neglects her child or openly laments because she must give up so much for it is branded as an inhuman monster. But the children who bundle their parents off into homes, or delegate them to servants, are applauded for their good sense. To the modern mind the helplessness of the aged is inexcusable, even though that helplessness arises from the fact that the children absorbed everything. One would think when the same gray days await us all at the end of the road that a purely selfish motive, if no other, would bid us be kind.

DEBORAH.

### SATIN STITCH OR SOLID EMBROIDERY.—No. 8.

MAE Y. MAHAFFY.

Satin stitch or solid embroidery is of two varieties, flat and raised. In the former, stitches are placed flat upon the surface of the material to be ornament-

ed; while in the latter a raised effect is obtained by first working row after row of padding stitches before the real embroidery is commenced. These padding stitches are made of a regular padding thread, or of the working cotton or silk; some workers even use darning cotton. The stitches must be placed in an opposite direction to what the afterwork will be made, as this prevents the outer stitches from sinking down into the padding, and becoming lost or hopelessly entangled with it. In the violet shown in the sketch in figure one, these padding stitches appear; in fact, the entire process of raised solid work is shown in this flower. One petal is plain, save for a row of running stitches around its edge. These should be placed first as an outline, and all padding stitches must then be kept inside of these. The petal adjoining shows the running stitches and the padding stitches lengthwise of the form. These should be much longer on the surface than they are on the under side of the goods, as the work is much neater by keeping all padding on top, and then, too, a waste of the thread is avoided. When a very high effect is desired, as in French laid work, and initial embroidery, the padding stitches should be piled up well, particularly toward the center of the figure, thus allowing the rounding-off effect which is so desirable.

In the third petal, part of the outer stitches have been placed, and it will be noticed that these run directly across the padding, as indicated before. The two

these scrolls, while the upper shows the direction the finishing stitches should take.

All solid work is merely carrying the thread across the figure again and again, whether straight or diagonally, and whether the design be large or small. When very large figures are present it is not always practicable to work them in this way, as the long, loose threads are quite likely to be caught and pulled away. The solid Kensington or the tapestry stitches should be utilized in such cases.

In the leaf near the bottom of the sketch the slanting stitches are illus-



Fig. 1.

trated, the slant being exactly opposite on the two sides of the leaf, so that it runs always toward the base. Even the turned tip is wrought to correspond. This style is made oftener without padding than it is with the raised effect, though it is possible to work it either way. The midrib may be outlined, or be simulated by the jointure of the stitches, which should be decidedly even and true. In the leaves in the upper corner of the sketch another method of working is suggested, though it is also in a slanting form. It will be seen that the slant is confined on both sides of the midrib or voiding through the center. This, too, may be worked with or without padding, but the raised mode is much prettier. The voiding is simply a spacing, the stitches being stopped at this line in a distinct, even edge. This voiding is a charming feature of the Chinese and Japanese work, and they also are greatly giv-

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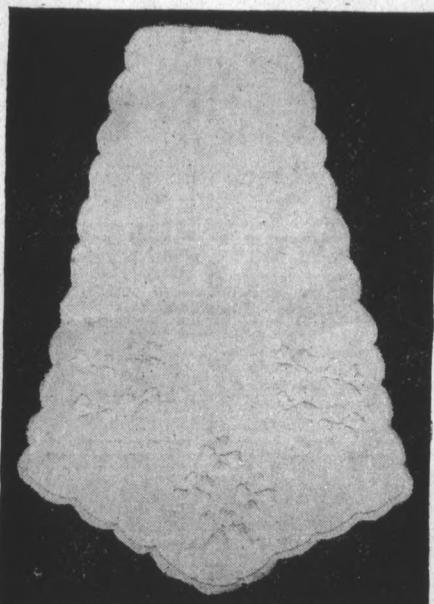
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Solid Embroidery.

en to continuing the slant on the opposite side of the space on the same angle, as in these leaves.

In one of the jabots pictured, solid work is the keynote, but the stitches are made lengthwise of the petals, the small amount of padding used being placed across, the entire process being exactly opposite or contrary to that in the violet. Some designs are seemingly better adapted to this style than to the other. The French laid work, so deservedly popular, usually has its solid stitchery made like the violet.

The pretty cuff shows a combination of solid, raised work and eyelets. The conjunction of these two forms produces some of the most elaborate and beautiful patterns it is possible to find in modern needlework. Neither seems quite so complete alone, although for certain usages and in certain designs they are each unusually attractive, but taken together, the eyelets to lighten the rather monotonous work, no stitches are more seemly or more capable of being utilized in varied ways to good purposes. A majority of the decorations for waists, lingerie, table linens, etc., of today are made in this combination. The worker must certainly include these two handsome stitches in her curriculum before she can feel even moderately well versed in the craft of the needle.

The flat solid work is utilized largely for the conventional designs now so often seen on sofa pillow tops, library scarfs, etc., in colors. They also form the foundation of a large number of the peasant embroideries of Europe, colors being used without padding, with perhaps a fanciful stitch combined in some portion of the design. Braid-like patterns are also carried out in the solid work, the stitches being taken across the width of the design. Quaintly pretty bandings are formed in this fashion, such patterns as the Greek key, the linked chain, etc., being well adapted to it.

RECIPES.

We do not pay for recipes. Our readers may ask for any recipe they wish, and as a return courtesy we hope they will donate their own favorites.

Grape and Orange Jam.

Six pounds of grapes, seeded, four pounds of sugar, two pounds of seeded raisins, four oranges. Chop raisins and oranges fine. Cook the grapes after seeding them, for fifteen minutes. Then add the rest and simmer slowly till thick. Do not put in the peel or skin of the oranges.—A. E. L.

Oranges added to pears when canning make a big improvement. Take three or four oranges for a peck of pears. Cut the oranges into small pieces; mix with the pears and cook as usual.—A. E. L.

Have You a Good "Summer Drink?"

Editor Household Department:—I wonder if you will consider an inquiry from a mere man? Would you be willing to ask Farmer readers for home recipes for drinks suitable for the hot weather; especially for men doing outdoor work?—M. G. G. (Please send a self-addressed and stamped envelope for information regarding book).

Offers Tomato Mincemeat Recipe.

I have never sent recipes before but saw a request for brown bread, so I send it, and with it, other ones that I know to be good. I wonder if the ladies would like the recipe for tomato mincemeat?

Brown Bread.—Two cups buttermilk, two-thirds cup sugar, two teaspoons soda, a little salt, graham flour enough to make it a little stiffer than pancake batter. Bake one and one-half hours.—Mrs. S. L. H.

Cold Catsup.

Half peck ripe tomatoes, one and one-half peck peppers, two teaspoonfuls black pepper, one cup grated horseradish, three-fourths cup ground mustard, half cup salt, one cup sugar, one pint vinegar, one quart onions. Chop or grind tomatoes, peppers and onions fine and mix all together. Do not cook or seal.—Mrs. J. B. McC.

To Pickle Cabbage.

For each six-gallon jar or other earthen vessel take a pint of salt, the same amount of horseradish cut into small bits and two tablespoonfuls of mustard seed; mix thoroughly. Remove the outer leaves from the cabbage, so as to leave no bruised or affected parts; cut into the finest particles possible, and having sprinkled a thin layer of salt over the bottom of the vessel, put a layer of cabbage down, pressing firmly. Then sprinkle the layer with the prepared mixture; place another layer of cabbage, and proceed as before. When the vessel

is filled, place an inverted plate or saucer over the mass—it must fit in the vessel—and put a weight on to keep it pressed down. Let the vessel remain undisturbed for about 24 hours, then pour off the brine and pour on a quart of vinegar, boiling hot, boiled in a porcelain vessel—no other. Replace the plate to keep the cabbage from floating, tie cloths over the top of the vessel and leave in a cool place.—F. M. E.

Who Has Raw Chili Sauce Recipe?

Will someone please send in recipe for making raw chili sauce? In return I will contribute one for sweet tomato pickles that is sought for by many: To one and one-half quarts of good vinegar add eight cups brown sugar, one tablespoon each of cinnamon, cloves and allspice in a cheesecloth bag, boil well. Slice half bushel green tomatoes and a dozen or so large onions in moderate salt water. Let stand over night, drain well and cook in weak vinegar until tender but not mushy. Drain again, put in jars and pour on hot syrup.—Mrs. G. W. E.

Blackberry Jam.

Two quarts of berries, one quart of apples, two quarts of sugar. Boil 20 minutes, or more if the apples are not tender by that time. These are tried recipes and I can say they are first-class.—Mrs. S. B. McC.

Editor Household Department:—I am sending a few of my own recipes for canning string beans and tomatoes, also putting up pickles, which I hope will be a help to the readers who read the home department in your paper.

To Can String Beans.

Pick and prepare as for immediate use. Wash well in the evening and put to drain over night. In the morning I have ready two quart jars and fill with the dry beans, pressing down tightly, then put on good rings, turn cover down tightly and boil in the wash boiler until the beans have shrunk, leaving the cans about two-thirds full. Remove from the fire, let cool, and retighten the covers, if any are loose, but do not remove. Set aside in a cool place until ready to use. When wanted to use turn off the liquid and cover with clear water, boil a few minutes and season the same as fresh beans. I have tried this way for ten years and never lost a can.

To Can Tomatoes.

Scald, peel and cut in halves, place over the fire and cook just enough to heat through, then put in cans and seal while hot. Set in a cool, dark room.

For cucumbers I take the small or medium size, turn boiling water over them and let stand over night. In the morning turn off water, wipe dry and drop in vinegar prepared in this way: To one gallon of good vinegar, not too strong, add half cup of salt, half cup of sugar, one-eighth cup of ground mustard, stirred smooth. Mix well and turn in jar or keg. Can add cucumbers from time to time, also vinegar, until full. Place a plate or something over top to keep pickles under the vinegar. These never mold or get soft and will be found as good in two or three years as when first put in. Are always ready for use.—Mrs. A. C. D.

Butterscotch Pie.

Two egg yolks, two tablespoons flour, one pint of milk, half cup granulated sugar, half cup maple syrup. Mix these together, boil until quite thick, put in baked crust. Then whip the whites of two eggs until stiff, add one tablespoon of sugar and a little vanilla and put in oven to brown.—N. M. H.

Canning Endive.

Editor Household Department:—I see you don't find a recipe for canning endive, so will send you my way, and my mother and grandmother have used it before me. We all think it fine. I have some now that I canned last fall and it is fine. Clean endive and cut in about three-inch lengths, then boil in weak salt water till tender, then add enough vinegar to make it tart. Can boiling hot and set in cool place. It may be eaten as picked or as greens or with a salad dressing. Celery may be canned the same way and it is fine and will keep a long time.—Mrs. M. G. A.

Black Chocolate Cake.

Two cups light brown sugar, half cup of butter, two eggs, half cup cold water, half cup boiling water, half cup shaved chocolate or two squares, two and a half cups flour, one level teaspoon soda, one level teaspoon baking powder, one teaspoon vanilla.—Mrs. F. S. L.

Editor Household Department:—Will you please ask some of the ladies to give me a good recipe for canning green beans and corn?—Mrs. H. C. H.

These recipes were published in the issue of July 8.

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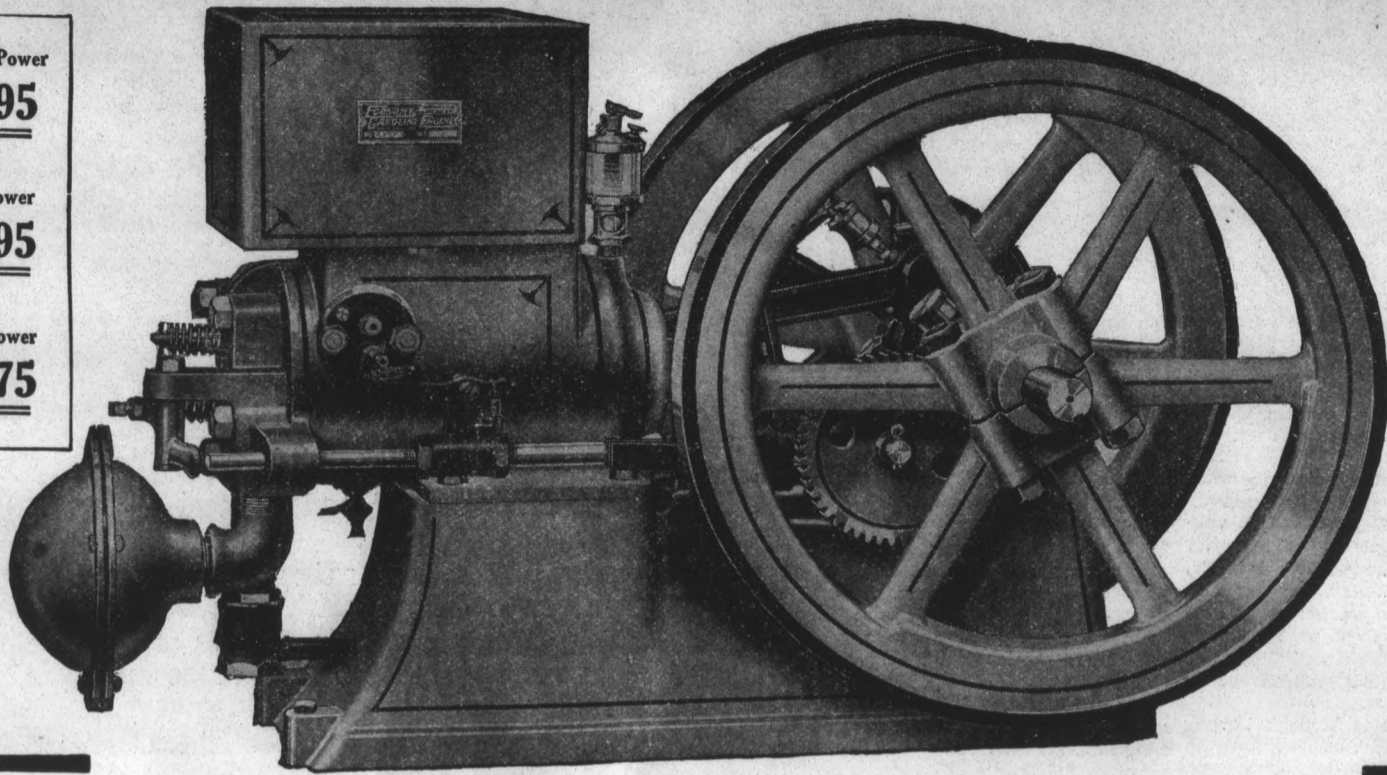
**\$2995**

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# We Have Saved Millions of Dollars for American Farmers

on Cream Separators, Buggies, Wagons, Farm Implements, Sewing Machines, Pianos, Organs and other necessities, by going back to original sources of supply, assembling the raw materials and producing these articles in our own factories. We have put into the pockets of our customers every cent of the extra profits and unnecessary expense of the "agent-and-middleman" system of distribution.

Now comes our latest and perhaps biggest sensation in manufacturing enterprise, the newly completed engine works in which we are building the celebrated stationary and portable, 1½ to 10-horse power

## Economy Gasoline Engines

### PUMPING OUTFITS

Users of gasoline engines are paying from one-third to one-half more than actual value for engines bought through the wasteful out of

### WOOD SAWING OUTFITS

date "agent-and-middleman" method. Never was there a greater opportunity for us to serve our customers than in gasoline engines. Never has there been a better chance for us to demonstrate the practical value of our "factory to farm" method of merchandising.

**The Remedy** The remedy for high prices and unjust profits in gasoline engines is at hand. We now own what we believe to be the best engine building plant in the country, equipped with all the latest improved automatic and labor saving machinery, manned by an organization of the highest skill. In this perfect engine factory we have made a complete investigation of the gasoline engine question. We know exactly what the farmer's gasoline engine must do, and we are building the engine that will do it. Every problem has been met squarely and solved honestly. We offer no makeshifts or compromises in the Economy Gasoline Engine. In the testing department of our engine factory every engine on the market has been actually operated and tested alongside the ECONOMY.

The result of these tests shows Economy Engines to be so perfect in their quality, power, efficiency and durability, that we now sell them under a lifetime guarantee and with the privilege of a sixty days' trial.

How we have knocked the bottom out of the high prices that have formerly ruled the engine trade, together with the whole story of our great engine building plant, with its perfect machinery and its splendid organization for raising quality and lowering prices, is all told in our new Gasoline Engine Catalog. The coupon to the right properly filled out brings it to you. The Economy Gasoline Engine Catalog puts the whole situation before you so clearly that you will shake hands with yourself and will want to shake hands with us after you have read it.

Before you turn this page, or lay the paper down, **TEAR OFF THE COUPON.** No, don't tuck it in your pocket! Fill it out and mail it to us without delay.

### Let Our Experts Answer Your Questions.

You do not need to be told that a gasoline engine will earn its cost several times over in a few months. You are probably figuring on letting a gasoline engine take the place of hand labor in the house, dairy and laundry, letting it help the windmill when there is no wind, doing by gasoline engine power some of the work now done by your horses.

### How Much Power Do I Need?

It won't cost you a penny to get an absolutely accurate answer to this or any other question connected with power for the farm. Just write and tell us what work you have for the engine to do and our engineers will tell you exactly what power you require and how much it will cost you. If a 4-horse power engine will do your work as well as 6-horse, our engineers will tell you so. If you actually need 4-horse power to operate your machinery, our engineer may be able to show you where it would be better to purchase two 2-horse power engines instead of one 4-horse power. Tell us what your needs are.

Write us today and let us solve your power problems. The engineers who made the Perfected Economy Gasoline Engine are ready to give you expert advice without one penny of cost to you.

SEARS, ROEBUCK AND CO., Chicago, Ill.

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**SEARS, ROEBUCK AND CO., CHICAGO, ILL.**



# GRANGE

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

BUSINESS MEN AND GOOD FARMING.

The stimulation of better farming affects both farmer and business man. Rarely, however, does it occur to the merchant or Board of Commerce to initiate a movement looking toward this end. If the farmers do not fare well, if they do not "get on" of their own accord, it does not often happen that business men set about the encouragement of agriculture in a systematic, determined way. Yet in a few cases it is being done. The Chamber of Commerce of Binghamton, N. Y., is a notable example. It has made the improvement of methods upon surrounding farms a regular feature of its plan to build up its city. It employs an agent whose sole business it is to study farm conditions in that vicinity and to seek out individuals who will apply such remedies as he deems necessary. In fact, he is to stand as a sort of consulting friend for farm needs. The effect upon both farmers and business men is of marked interest.

Why have not business men thought of this before, you ask? I do not know, except it be that we are coming into the light of the day when men see clearer than ever before how closely all peoples are bound together and that what lifts one raises all—that what holds one class down retards the progress of every other. I do know that on every hand is being heard evidence of the fact that the welfare of producer and consumer is one welfare. Last winter at institutes which I attended business men came to learn how to farm. They not only wanted to get a foothold on land for themselves but they wished to unite their business organizations in a movement to promote better farm methods about their towns; to secure trained farm men to come and instruct farmers how to handle their soils and animals to better advantage, what crops and fruits would do best and how to raise the best of their kinds.

All of this is very different from the talk we used to hear when the Grange was starting. Then there was much schism between producer and consumer and much talk of an offensive and defensive character.

A striking instance of the changing attitude was shown by the business men of Escanaba last year when Delta Pomona Grange held its fall meeting in that

of culture were overheard all around. When brought before Pomona Grange to receive the formal thanks of that body, the enterprising merchant modestly refused to take any undue credit for his effort. He assumed that the promotion of better farming was a matter in which he was vitally interested, in common with the Grange and every individual farmer of the county. JENNIE BUELL.

## WESTERN POMONA GRANGE.

Western Pomona Grange No. 19 was entertained at Grand Haven, Aug. 25, by Peach Plains Grange, the newest Grange in Ottawa county. If our hosts lacked in numbers, they more than made up in hospitality and enthusiasm. A bountiful dinner was served to a company of about 75, among whom were representatives from seven of the ten Granges in the county.

Meeting was called in the fourth degree and the Nunica Grange Degree Team exemplified the third and fourth degrees in a creditable manner. It was particularly fitting that the work be given at this time since the Peach Plains members are holding their meetings at their homes and have been unable as yet to confer the degrees in full. They are hoping to have a hall of their own sometime, and to be able to do the initiatory work as well as do the young people of Nunica Grange.

Bro. Thomas Wilde, Sr., thanked Western Pomona for the potted plant sent Sister Wilde during her last illness, and told in a touching manner how much she appreciated the kindness.

Bro. W. F. Taylor, of Oceana county, concluded the afternoon program with a helpful talk on degree work, in which he emphasized its value to the team, the candidates, and the Grange. He said in part: "Good degree work teaches discipline, its lessons impart inspiration and the practice gives power in elocution and inspires to lofty ideals. The object of degree work is to reveal the Grange to the candidate. To do this well, the ritual must be understood by the degree team and they must strive to make the candidate feel what they feel. The whole Grange is better for having witnessed good degree work. The sublime lessons of the ritual are not lost, though they are often given. The lesson of fidelity in the fourth degree is a priceless thing. The Grange is a great fraternity and the mass of our membership in the state is at peace with each other. They are working loyally and earnestly along Grange lines. True, there are a few, a very few, (perhaps not more than could be counted upon the fingers of one hand), who would divide us into factions and I have often thought that it would be well for them to go back again and repeat the solemn obligation of the fourth degree at this altar, listen to that matchless story of fidelity from the lady assistant steward, and hear the words of the master as the Patrons' chain encircles the candidate."

Friday evening a public session was held in which music and recitations were a prominent feature. There was a short discussion of the question, "If you were given your choice, would you choose an automobile or a college course, and why?" The general opinion seemed to

# FARMERS' CLUBS

OFFICERS OF THE STATE ASSOCIATION OF FARMERS' CLUBS.

President—E. A. Holden, Wixom.  
Vice-Pres., J. D. Leland, Corunna.  
Secretary—Mrs. C. P. Johnson, Metamora.  
Treasurer—Mrs. Lewis Sackett, Eckford.  
Directors—A. R. Palmer, Jackson; Wm. H. Marks, Fair Haven; C. L. Wright, Caro; E. W. Woodruff, Blanchard; C. P. Johnson, Metamora; Patrick Hankerd, Munith.

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

## Associational Motto.—

The skillful hand, with cultured mind, is the farmer's most valuable asset.

## Associational Sentiment.—

The farmer, he garners from the soil the primal wealth of nations.

## THE MICHIGAN FAIRS AND THE FARMERS' CLUBS.

There is no better place for observation which will result in the gleaning of valuable material for future discussions in the Farmers' Club, than our big educational fairs. The Michigan State Fair, which will be held at Detroit, Sept. 18-27, inclusive, is an educational exhibition that should not be neglected by any progressive Club member who can possibly plan to attend it. There will be seen the choicest products of the best farmers of the state, and many of the best herds and flocks in the country. A study of these exhibits, together with the large line of manufactures which are shown at such an exposition, will furnish the most valuable data for the future discussion of practical topics in the Club meetings. Then there will be chance meetings with other members, which will make the occasion the more enjoyable, to say nothing of the entertainment and relaxation which the outing will afford. Those who are so situated as to make it possible should also attend the West Michigan Fair at Grand Rapids during the week of Sept. 11-15, which is a good second to the Detroit fair from an educational standpoint. The local fairs should, of course, have the support of the Club members, and in many cases their cooperation in exhibits has proven helpful to both. Last, but not least, the Club fair should not be forgotten, as it has proven a valuable special feature of Club work in many communities.

## FARMERS' CLUB PICNIC.

The Farmers' Club picnics are all good and the one held by the Odessa Farmers' Club in the Lakeside grove Saturday, Aug. 19, was no exception. The meeting was called to order by President Carter and opened by the song, "The Red, White and Blue."

M. L. Foght was given the subject, "What Public Improvement is Needed Most?" In part he said: "The farmers wanted free rural mail delivery. The mail is now delivered by auto. We are to have postal savings banks; don't know what the result will be. We want parcels post and will soon have an electric railway nearby, some are agitating the centralized school idea; others are giving it a trial. All this will call for better roads. The thought seems to be that good roads are the most needed. Mr. Carter thinks that a more thorough system of practical education is most needed."

Mrs. Carter read a fine paper on "Little Things." This referred to the snowflake, the drop of water, the grain of sand, etc. Many flakes of snow make the avalanche; many drops of water, the ocean. The acts of the child make character. We go to the Club, look in the faces of our friends and hear their voices. These are all little things. The paper needed no apology. Mrs. Klahn said: "We sometimes get discouraged but we should not; life is made of little things and it will be all right at last when we hear the 'Well Done.'"

Mr. Henry Stinchcomb read, "What Next." This gave us a mental view of the "Might Be," and some remarked that it was good for us to see that side of things for a little while.

After the literary program, including recitations and musical numbers, was completed, tables were arranged and loaded with good things to eat to which all did justice. There were about 88 present and more might have been fed from the abundance of good things.

Our next meeting will be with Mr. and Mrs. Edward Anway the second Saturday in September. This should be a big meeting.—Reporter.

## A JOINT CLUB AND GRANGE RALLY.

Clinton county Farmers' Clubs and Pomona Grange held a joint rally at the fair grounds Saturday. By one o'clock there were probably 800 people gathered, a great many having brought their dinners.

The program was one of interest and each number was enjoyed. It opened with a song, "America," by the entire company, followed by a prayer by the Chaplain. Theodore H. Townsend gave the welcoming address in which he conveyed the idea that Clinton county has farmers' organizations which do great credit to it. A good literary and musical program was then rendered.

John C. Ketchum, the postmaster at Hastings, was the first speaker of the day and his speech was received with great enthusiasm by everyone present. He was entertaining and held the interest of his listeners by giving forth many splendid thoughts in a clever manner.

Mr. Ketchum chose his own subject, "Some Open Doors for Granges and Farmers' Clubs." He talked close to his subject from the start. He told how necessary education is for general good. Here in the United States young people are afforded privileges which are unknown in England. Here a boy or girl can choose his or her occupation and under ordinary circumstances can become educated to follow it up. In England it rests with the child's father. There he is apprenticed to whatever trade his father may dictate.

There are four things, he said, which the Farmers' Clubs, and in fact, every individual whether a member or not, ought to do, and those are to (1) have a good big door for the development of leadership in the country. The man depends a great deal upon the boy. Early training is essential. Good health, a good balance wheel, and sincerity of purpose assure strength to become a leader. Without them is weakness. There is no better place than a Grange or a Farmers' Club. (2) Develop a better community spirit. He said that neighborhood quarrels should not be tolerated. Difficulties over line fences should be settled in friendly ways and every person should contribute toward another happiness. (3) Cultivate peace and contentment with the place where you live. Mr. Ketchum spoke of the great satisfaction it brings a great many people who have been traveling extensively, to return to their home. This is as it should be. (4) Use the "Big Stick." This is to bring about reforms which are much needed. Every person should do his or her part to improve society.

The program closed with a successful balloon ascension.—Mrs. C. L. Pearce, Reporter.

## CLUB DISCUSSIONS.

**Domestic Science in Rural Schools.**—Every family but one of the membership of the Burton Farmers' Club, and a large number of invited guests were most cordially welcomed to the home of Mr. and Mrs. George Rush, Friday, Aug. 4. After the dinner hour President Putnam called the Club to order. "The Blue Bells of Scotland" was sung and the devotions were conducted by Mrs. Hammond. As to the advisability of teaching domestic science in the rural schools, Miss Ethlyn Peterson thinks it both advisable and practical. The gasoline stoves could be used in the school rooms as well as the home. Mrs. Hammond does not believe the country girls need to be taught domestic science as almost every girl is taught to cook, bake and sew at home. Mr. Fauth says the girls are taught, for one thing, food values, of which but few country women know anything about.

**The Farmer's Health.**—Does the farmer take as good care of his health as other people? Mrs. Fauth's opinion was that they do not. The fresh air is a help to them, but their hardest work and longest hours come at the hottest and hardest time of the year. Mr. Fauth thinks they are the healthiest class of people. They have a diversity of occupation, fresh air and simple, well cooked food, which all tends to keep man healthy.

**The Child's Manners.**—Mrs. Putnam gave some good pointers on teaching a child good manners. She says we must first study our children as rules do not always work on all children alike. Then we should set a good example, using the same manners that we expect them to use, for children are born imitators, and manners thus learned will come to be used second nature. Then these things should be explained to the child and a strict watch kept that he may not forget.

**How Can we Improve Our Club?**—Many good ideas were advanced on this subject. "Rub up against other Clubs and improve the whole batch." "A little leaven leaveth the whole loaf." "Attend the state association. Much benefit is derived by all who attend." "Be responsible for each topic assigned us." "Each one do his duty as far as he is able, as it comes to us."

**Mother's Position in the Home.** Mrs. Fauth said: "Home without the mother is a cheerless prospect. To her is left the work of home-making. She can make it the center of all good and bring up her children so they will revolt from evil." She also read, "The Mother's Creed," which contained many sweet, elevating thoughts for mothers.

**The Hay Loader a Saver.**—Is the hay loader a labor-saver for the man at the carrier? Mr. Peterson has a hay loader and says he hardly knows that he has harvested 20 acres of hay, it was done so easily. Albert Schultz prefers a side rake with the loader. The loader is a labor and time saver.

After the announcement of the program for September and singing "Beautiful Bells," the Club adjourned to meet the first Thursday in September with Mrs. A. E. Auiler and family.



Section of Farmers' Fair, Held at Escanaba in Connection with the October, 1910, Meeting of Delta County Pomona Grange.

city. An agricultural fair had, for some reason, to be given up at a late date. It looked as if no exhibition of farm products would be held. Not so. Less than a week before Pomona was to meet, the enterprising proprietor of a leading store in Escanaba sent circulars broadcast over the county calling upon farmers to bring in their products. He freely offered the entire front of his large store for exhibit purposes. More than \$500 in cash prizes was offered, besides free lunches and entertainment tickets. Crowds of people passed and repassed among the counters of displays, or stood outside the show windows which were filled with Delta county's biggest and best of all sorts of fruits, grains and vegetables. Discussions of varieties and of methods

be that the college course is much more desirable.

Bro. W. F. Taylor delivered the address of the evening, taking for his subject, "The Farmer of the Future." The farmer of the future will understand his business better. He must have a more thorough knowledge of each phase of farming he may choose to follow. Every boy on a farm ought to know how to operate and repair a gasoline engine so as to avoid costly delays in a busy season. Through organization the farmer of the future will achieve greater success along business, legislative, and educational lines. He will also stand by the institutions of the country—the Grange, the country school, the country church, and he will build the country home better. He will do his part toward country betterment wherever there is work to do, regardless of petty prejudices and differences in religious beliefs.—Myrtle B. Brown, Lecturer.

MARKETS

DETROIT WHOLESALE MARKET.

September 6, 1911.  
Grains and Seeds.

**Wheat.**—The wheat market has ruled with a slightly firmer tone during the past week, prices closing on Tuesday with a fractional advance over the quotations of that day for the previous week. Futures advanced more than did cash grain. The decline on Tuesday's market was credited to profit taking by brokers who were long on supplies. Reports from Russia show a change in the attitude of brokers regarding the crops of the country, it now being certain that a general shortage in export wheat will be shown at the end of the year. In the Canadian northwest weather has been favorable for completing the plant's growth, except that in a number of sections frosts are reported. Foreign buyers are active, however, the world's exports were less than expected, and the quantity now crossing the Atlantic is on the decline. One year ago No. 2 red wheat was selling on this market at \$1.01½ per bu. Quotations for the past week are:

	No. 2	No. 1	Red.	White.	Dec.	May.
Thursday	.88½	.85½	.85½	.95½	.1.00	
Friday	.88	.85¾	.85¾	.95½	.1.00½	
Saturday	.90¼	.87¾	.87¾	.96½	1.01¼	
Monday						
Tuesday	.89¾	.86¾	.86¾	.96	1.00¾	
Wednesday	.90¾	.87¾	.87¾	.97	1.01¾	

**Corn.**—A material advance is noted in corn quotations. Many sections report that dry weather has necessitated premature harvesting of the crop in order to save the fodder. The outlook is more bullish each succeeding day, which will probably keep prices for this grain on a level for the year. One year ago the price for No. 3 corn was 60c per bu., which is nearly 7c below the present value. Quotations for the past week are:

	No. 3	Yellow.
Thursday	.66	.67
Friday	.66	.67
Saturday	.66½	.67½
Monday		
Tuesday	.66¾	.67¾
Wednesday	.67	.68

**Oats.**—The advance noted in these columns a week ago was but the beginning of a wide upturn in oat prices, standard oats having gone to 45c per bu. This price is nearly 11c above the quotations of a year ago when it was 35¼c per bu. The tone of the trade is steady at these figures. Quotations for the week are:

	Standard	No. 3	White.
Thursday	.43	.42½	.43½
Friday	.44	.43½	.44½
Saturday	.44	.43½	.44½
Monday			
Tuesday	.45	.44½	.45½
Wednesday	.45	.44½	.45½

**Beans.**—This deal is easy, with practically all of the transactions closed at one price. The following are the leading quotations:

	Oct.	Nov.
Thursday	\$2.10	\$2.05
Friday	2.10	2.05
Saturday	2.05	2.05
Monday		
Tuesday	2.05	2.05
Wednesday	2.05	2.05

**Clover Seed.**—For the first time in weeks a decline is noted in seed quotations. This is probably due to the marketing of surplus seed by farmers who are now hulling their crop. The decline amounts to about 75c per bu. Quotations are as follows:

	Oct.	Alsike.
Thursday	\$12.00	\$10.00
Friday	12.00	10.00
Saturday	11.75	10.00
Monday		
Tuesday	11.50	10.25
Wednesday	11.50	10.25

**Rye.**—There is practically no dealing in this grain, the market being firm with No. 2 rye quoted at 88c per bu.

**Flour.**—Market is quiet and easy with values steady. Quotations are:

Clear	\$3.90
Straight	4.15
Patent Michigan	4.60
Ordinary Patent	4.40

**Feed.**—All kinds of feed are steady. Carlot prices on track are: Bran, \$26 per ton; coarse middlings, \$27; fine middlings, \$30; cracked corn, \$26; coarse corn meal, \$26; corn and oat chop, \$26 per ton.

**Hay and Straw.**—Prices were not sustained at last week's advanced prices for hay. Rye straw is higher. Quotations on baled hay in car lots f. o. b. Detroit are: No. 1 timothy, \$19@21; No. 2 timothy, \$18@19; clover, mixed, \$17@18; rye straw, \$7.50@8; wheat and oat straw, \$6.50 per ton.

**Potatoes.**—This deal is steady with a week ago, the supply holding the price at \$1.40 per bu, for fair to good grades. Demand is normal.

**Provisions.**—Family pork, \$18.50@19.50; mess pork, \$18; medium clear, \$16.75@18.50; smoked hams, 16@17c; brisquets, 11½@12c; shoulders, 11c; picnic hams, 10½c; bacon, 15½@16c; pure lard in tierces, 10¼c; kettle rendered lard, 11¼c per lb.

**Dairy and Poultry Products.**  
**Butter.**—The improvement in pastures has created an easy undertone, with prices ruling steady for both creamery and dairy. Output appears to be a little ahead of the amount made a year ago. Extra creamery, 26c; firsts, do., 25c; dairy, 18c; packing stock, 17c per lb.  
**Eggs.**—The tone of this deal is much firmer than last week and the basis of prices throughout the country is a little higher. In Detroit a one cent advance was made. Demand is brisk. Fresh re-

ceipts, case count, cases included, are now quoted at 17¼c per dozen.

**Poultry.**—There is a liberal supply of poultry on the market and values are working lower in most of the active grades. Prices are: Live—Hens, 12½@13c; old roosters, 8c; turkeys, 14@15c; geese, 8@9c; ducks, 12@13c; young ducks, 14½@15c; broilers, 14½@15c per lb.

**Cheese.**—Michigan, old, 17c; Michigan late, 14½@15½c; York state, new, 14@15c; Swiss, domestic block, 16@18c; cream brick, 15@16c.

**Veal.**—Market higher for best. Fancy, 11@12c; choice, 8@9c per lb.

**Fruits and Vegetables.**  
**Cabbage.**—Steady. Selling at \$2.75 per bbl. for home-grown.

**Plums.**—Lower; now quoted at 75c@ \$1 per bu.

**Peaches.**—While peaches were delivered to the market freely last week and prices fell to a much lower basis, the present market is firmer and advances are expected. Quotations: A. A., \$1.50; A., \$1.25; B., 75c@ \$1 per bu.

**Huckleberries.**—Steady. Quoted at \$3@ 3.50 per bu.

**Apples.**—Supply of apples is limited. Prices are steady with a week ago. Wholesale quotation for good fruit is 65 @85c per bu.

**From Farmers' wagons on Detroit Eastern Market.**

While there was not the amount of produce upon the market this week that there was last because of the holiday and inclement weather, the tone of trading seemed steady. Following are the prices asked by farmers: Potatoes, \$1.35 for ordinary grades; cucumbers, 35@50c per bu. for large; butter beans, 75c per bu; tomatoes, 60@80c per bu. according to quality; melons, 40@55c; onions, \$1; cauliflower, \$1.25; apples, \$1 for good hand-picked; pears, \$1.35 for best; peaches, \$1.50@2 for fancy; grapes, 10c per 5-lb. basket, 50c for 22-lb. basket. Hay was selling steady with a week ago and not many loads offered at \$22@24 per ton for good timothy.

OTHER MARKETS.

Grand Rapids.

The egg market is firm, dealers paying the country trade 16c for fresh stock. Dairy butter is worth 20c, creamery, 25½c. Peaches were in good demand on the city market Tuesday morning, selling at \$1@1.75. Pears are worth 75c@ \$1; grapes, 60@75c per bu; muskmelons, 50c; tomatoes, 40@50c. Potatoes continue to be the strongest article of produce offered, fair stock readily bringing \$1.50. Many guesses are being made as to the late crop of potatoes and reports from the growing sections up the state are very conflicting.

Chicago.

Wheat.—No. 2 red, 91@92c; Sept., 90½c; Dec., 95½c per bu.  
Corn.—No. 2, 66@66½c; Sept., 65½c; Dec., 63½c per bu.  
Oats.—No. 2 white, 44½@45c; Sept., 42½c; Dec., 46c.  
Barley.—Malting grades, \$1.05@1.20 per bu; feeding, 70@90c.  
Butter.—Receipts are fully up to the requirements of the trade and the market is inclined to be slow and unsettled. Prices, however, show no change from last week. Quotations are: Creameries, 20@25c; dairies, 18@22c per lb.  
Eggs.—All grades are quoted 1c higher, the result of active trading and slightly declining receipts. Market firm. Quotations are: Prime firsts, 18½c; firsts, 17c; at mark, cases included, 11@15c per dozen.

Potatoes.—Receipts of potatoes last week were more than 100 cars in excess of the preceding week and prices declined in consequence. Market reported weak with Minnesotas quoted at \$1.10@1.15 and Michigans at 90@95c.

Beans.—This market has lost some of the strength that has been in evidence for many weeks. Trade quiet at reduced figures on all grades. Choice hand-picked pea beans are quoted at \$2.15@2.25 per bu; prime, \$2@2.05; red kidneys, \$2.75@3.05 per bu.

Hay and Straw.—Hay firm at last week's advanced figures. Rye straw is \$1 higher. Quotations: Choice timothy, \$23 @23.50; No. 1 timothy, \$20.50@22; No. 2 do., \$18.50@20; No. 3 do., \$13.50@17; clover, \$10@14; rye straw, \$8.50@9; oat straw, \$7@8 per ton, wheat straw, \$5 @6 per ton.

New York.

Butter.—Market is firm with the best grades steady and lower grades ruling higher. Creamery specials are quoted at 27c; extras, 26c; firsts, 24@25c; seconds, 22@23c; thirds, 20½@21½c.

Eggs.—All grades are higher. Fresh gathered extras, 24@26c; extra, firsts, 21 @21½c; seconds, 17@18c; western gathered whites, 19@24c per dozen.

Poultry.—Dressed. Values are generally higher with market irregular. Turkeys, 12@13c; do. young, 28@30c; fowls, 15@17½c; western broilers, 17@21c.

Elgin.

Butter.—Market firm at 26c per lb., which is last week's quotation.

THE LIVE STOCK MARKETS.

Buffalo.

September 4, 1911.  
(Special Report of Dunning & Stevens, New York Central Stock Yards, East Buffalo, N. Y.)

Receipts of stock here today as follows: Cattle, 165 cars; hogs, 80 double decks; sheep and lambs, 70 double decks; calves, 1,200.

With 165 loads of cattle on our market today, and being Labor Day, buyers not over plenty, our market was only fairly active at last week's prices on the top grades. All other grades selling slow and in many instances 10c lower. Some of the best cattle here today that have been here in the last few weeks.

We quote: Best 1,400 to 1,600-lb. steers, \$7.50@7.90; good prime 1,300 to 1,400-lb. steers, \$6.85@7.50; do. 1,200 to 1,300-lb. steers, \$6.75@7.15; best 1,100 to 1,200-lb. shipping steers, \$5.85@6.40; medium butcher steers, \$4.50@5.25; best fat cows, \$4.75@5.25; fair to good do., \$3.50@4.50; common to medium do., \$2.75@3.25; trimmers, \$1.75@2.75; best fat heifers, \$5.75@6.25; good do., \$5@5.50; fair to good do., \$4.25@5; stock heifers, \$3.50@4; best feeding steers, dehorned, \$4.25@4.50; common do., \$3.50@3.75; best butcher and export bulls, \$4.50@5.25; bologna bulls, \$3.50@4; stock bulls, \$3.25@3.50; best milkers and springers, \$55@60; common to good do., \$20@35.

The milker and springer trade ruled about steady with last week.

The hog market ruled active on the good quality corn-fed stuff, but slow and unsatisfactory on the other grades. The bulk of the choice quality yorkers, mixed and medium weights, sold from \$8.05@8.15, with the heavier weights of good quality around \$7.90@8.05. The lean commoner grades, running to the york weights, sold mostly from \$7.80@8, and the heavier weights, common in quality, from \$7.60@7.90. Pigs sold generally from \$7.40@7.50; the bulk of the best grades at the latter price. The rough sows sold generally around \$6.70. Stags from \$5@6. There is a good many of the commoner grades coming lately and prices show a wide range, and we advise getting a wide margin on anything that is lacking in quality.

The sheep and lamb market was active today. Most of the choice lambs sold from \$6.90@7; wethers from \$4.10@4.25. Look for strong prices the balance of the week; everything sold tonight.

We quote: Best spring lambs, \$6.90@7; wethers, \$4.10@4.25; cull sheep, \$1.50@2.50; bucks, \$2.50@2.75; yearlings, \$4.50 @5; handy ewes, \$3.50@3.75; heavy ewes, \$3@3.25; veals, choice to extra, \$9.50@9.75; fair to good do., \$8.50@9; heavy calves, \$4@6.

Chicago.

September 4, 1911.

Cattle Hogs Sheep.  
Receipts today . . . 18,000 29,000 9,000  
Same day last year . . . 31,242 24,703 9,061  
Receipts last week . . . 57,862 99,736 122,818  
Same week last year . . . 60,287 90,072 131,440

Only 18,000 cattle arrived for the Labor Day market, of which 4,500 were western rangers and although it was a holiday in Packingtown, good demand prevailed and general market showed reaction of 10@15c from low levels hit last week. Eight dollar steers were reinstated, several lots making this price and top was \$8.10 for 1,720-lb. beefs, against \$8.20 last week. Bulk of good to choice 1,200 to 1,500-lb. steers sold at \$7.15@7.85, but due to short supply of matured grades there was a small showing of sales above \$7.50. Medium to good steers sold at \$6.40@6.90 and grassers largely which had competition from range steers went largely at \$5.50@6.10. Rangers sold strong to 10c higher than last week, largely at \$5.25@6.10. Native cows and heifers advanced 10@15c over last week's close, selling largely at \$3.50@4.50 for plain to fat grass cows and corn-fed cows and heifers made \$6 and higher. Bulls sold 10c higher while calves went 50c lower than high point last week, topping at \$9. Feeder and stock steers held last week's rates. Hogs opened strong to a shade higher on a run of 29,000 but later broke 5c from Saturday's level. Tops went at \$7.80 while it was largely a \$7.15 @7.45 market for the bulk of all grades and poor packers sold below \$7. Average weight of hogs at Chicago last week was 240 lbs. against 242 lbs. the week before and 257 lbs. a year ago. Sheep and lambs were in small supply, only 9,000 arriving for the Monday trade. Owing to the holiday western stuff was range stuff and was held off the market. Market for sheep was steady while lambs scored 10 @15c advance over last week. Prime lambs went at \$6.75, and top wethers made \$4.

Consumers have wailed long and loud against advanced beef cost in recent weeks and the effect of their complaint is now felt. It has brought about decreased consumption and the killers retaliated by forcing steer values downward. Whether the market will remain down or speedily react will, of course, depend upon country shipping sentiment. Bullish enthusiasm still prevails countrywards and many feeders who have matured stock may not be willing to part with it as freely in the next two weeks as was the case in the past two. This naturally will bring about some better feeling in the market but just now the situation is anything but firm, either for choice or medium and good quality beefs. Western range competition continues to hurt the grass-fed and corn-warmed natives. That kind are going 40 @50c lower than high time in mid August, but the same decline is reflected in range values. A large share of fat steers has changed hands at \$7@7.50 on the new price basis and only strictly choice heavy and yearlings grades have made \$7.60@7.90, while sales at \$8, which were quite numerous last week were conspicuously scarce. Native steers of warmed up and short-fed description sold at \$6.40@6.85, and the grassers at \$5@6.15, though feeder buyers got bulk under \$5.40. Feeder cattle of high grade sold strong at \$5.35@5.75 but common stockers and medium to good feeding steers declined 10@20c in sympathy with the beef steers, a decent sort of 700 to 850-lb. feeders going at \$4.65@5, good stockers around \$4.60 and plain at \$4, with a poor, thin kind down to \$3.25@3.50. Fat cows sold mainly at \$4.50@5.25, holding last week's prices, but medium and pretty good grassers went 10@20c lower at \$3.75@4.25, while canners and cutters were steady at \$2.25 @3.35. Bulls sold at \$3.50@5.25 for plain to choice, and fancy veal calves topped at \$9.50, highest of the season, while bulk made \$8.75@9. Range cattle run for the week was 18,000 and prices held the pre-

vious week's basis, a spread of \$5.25@6.10 taking most steers, and tops sold at \$7.

Packers are again pretty well in control of hog prices. Receipts continue rather light but high cost of fresh meat is slowing down the demand to some extent and a wider price spread is showing between heavy packing and good light and medium weight shipping grades. August movement throughout was close to 60,000 heavier than a year ago, but when it is considered that last year was an abnormal year the volume coming in the past month was still quite small. September is expected to witness an expansion in the receipts, and weight of marketing being heavier now there is expectancy of a still bigger general average in pounds. Trend of trade opinions lean a little toward the bear side as regards the outlook for the next few weeks.

Heavy marketing still proves burdensome to the sheep and lamb trade and it is a weak general market, with prices close down to lowest levels of the year. Opinion prevails that values will remain low for several weeks, or at least as long as big supplies continue to come from the western ranges. By far the largest volume of the runs are range stock now and lambs form a big percentage of this. Idaho and Washington grass-fed stock is most conspicuous and sells at prices which afford the producers a scant profit. Only fancy range lambs have gone of late above \$6.65, tops at \$6.85, while a lot of fat stock off the range went at \$6.15@6.50 and good range feeding lambs were taken by Indiana, Michigan and Ohio farmers at \$5.65@5.75. Best native lambs have not gone above \$6.50 and a good sort made \$5.75@6.15, while plain light stock landed down to \$5, and culls at \$4 and lower. Wethers, ewes and yearlings appear to have hit bedrock levels and it surely is about time, since this stuff has been selling at money losing prices for weeks past despite relatively high retail prices. Fat native wethers have gone at \$3.50@3.75, best westerns at \$4 and good ewes at \$3.75 while fair ewes went around \$3.35 and culls down to \$2. Breeding yearling ewes have sold at \$4.25@4.35 and a plain grade of two-year-olds down to \$3.25.

The horse market has undergone a period of sharp price reaction following some strong selling recently. Receipts were of heavy volume last week, nearly 1,500 arriving, which was 450 in excess of the corresponding week a year ago. The bottom dropped out of the market, a \$10 @15 decline being forced for most offerings and even on this basis many animals proved a drug. Eastern support has been withdrawn, temporarily, at least, and its absence is seriously felt, while local demand, being over supplied, is naturally apathetic. Only prime drafters reached \$225 and \$160@200 brought good grades while common sold down to \$125. Expressors of fair kind sold around \$140@150 and common light horses down to \$100, with some thin old plugs around \$70@85.

LIVE STOCK NOTES.

Murdo Mackenzie, for years general manager of the Matador Land & Cattle Co., which concerns has ranches in Texas, Colorado, South Dakota and Canada, will relinquish his connection with that company before the end of this year to become manager of the Brazil Cattle & Land Co., one of the largest in South America. Mr. Mackenzie is one of the best known cattlemen in the United States and was a leader in the opposition fight against certain features of the Canadian reciprocity bill injurious to live stock interests in this country. It is reported his new position will pay him \$50,000 a year salary. He will have supervision over a herd of upwards of 200,000 cattle in Brazil, besides half a million sheep. The Brazilian company is financed by Scotch and English capitalists.

Live stock markets are receiving a liberal number of 40 to 70-lb. pigs from sections wherein cholera is prevalent and that class of offerings gets low prices. It is a \$4.50 market for them now and demand is weak at that, since packers run risks of having the stuff condemned on post mortem examination. Healthy 100 to 120-lb. pigs, on the other hand, sell at \$7@7.25.

In feeding cattle trade the keenest demand is for strong weight, good quality steers which can be given a minimum amount of corn and returned for the winter market. Feeder buyers are paying \$5.35@5.65 for most of that kind, getting 1,000 to 1,100 lb. averages, and while the price appears rather high, when it is figured that weight bought at these figures is not more expensive than the cost to put the flesh onto light thin steers, the investment is not considered especially risky.

Portland, Oregon, is still drawing heavily upon the ranges of Montana and the Dakotas for beef. Portland buyers are in the field there, paying relatively strong prices in their endeavor to swing the stock west, and this season have bought some big strings of steers of brands which for years previous have been seen only on the Chicago market. It is a significance of the growth of the beef demand on the Pacific slope as population increases.

A co-operative organization of Pennsylvania and New York farmers is said to be planning to establish a distributing station in New York where all products of the farm will be put into the hands of retailers without the aid of middlemen, thus effecting a saving of 30 to 40 per cent in cost to the consumer. The scheme is yet in its infancy, and the meat packers are said to be giving it small heed, since previous attempts to count them out of the deal have not been very successful.

Fat butchering cattle have been in excellent demand in the Chicago market much of the time in recent weeks. Liberal buying orders have been received from butchers, and fat heifers and cows have sold well.

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.

DETROIT LIVE STOCK MARKETS.

Thursday's Market.

September 7, 1911. Cattle.

Receipts, 1,016. Bulls and canners strong; other grades dull at last week's prices.

We quote: Best steers and heifers, \$6; steers and heifers, 1,000 to 1,200, \$5.25@5.50; steers and heifers, 800 to 1,000, \$4.50@4.75; grass steers and heifers that are fat, 800 to 1,000, \$4.50@4.75; do. 600 to 700, \$3.75@4.25; choice fat cows, \$4@4.25; good fat cows, \$3.50@4; common cows, \$2.50@3.25; canners, \$1.50@2.25; choice heavy bulls, \$4@4.50; fair to good bolognas, bulls, \$3.50@3.75; stock bulls, \$3@3.25; choice feeding steers, 800 to 1,000, \$4.50@4.75; fair do. 800 to 1,000, \$4@4.25; choice stockers, 500 to 700, \$3.50@4; stock heifers, \$3@3.50; milkers, large, young, medium age, \$4@5.5; common milkers, \$25@35.

Cattle market closed 10c lower for medium grades; bulls 10@15c higher than the opening.

Haley & M. sold Breitenbeck 14 cows av 997 at \$3.65, 30 steers av 865 at \$4.65; to Sullivan P. Co. 1 canner weighing 940 at \$2.50, 5 butchers av 634 at \$3.50; to Parker, W. & Co. 1 bull weighing 1,560 at \$4, 1 do weighing 1,100 at \$4, 1 do weighing 1,530 at \$4.25; to Bresnahan 5 heifers av 600 at \$3.75, 2 do av 625 at \$3.50, 9 canners av 871 at \$2.50, 3 do av 843 at \$2.75; to Parker, W. & Co. 1 bull weighing 1,300 at \$4, 1 do weighing 820 at \$3.50, 2 do av 1,005 at \$4; to Applebaum 1 cow weighing 700 at \$3.25, 4 do av 945 at \$3.95, 3 heifers av 477 at \$3.60; to Robinson 20 feeders av 767 at \$4.30; to Regan 3 heifers av 543 at \$3.50, 12 do av 576 at \$3.80; to Sullivan P. Co. 4 butchers av 680 at \$4.10, 1 cow weighing 860 at \$2.75, 8 butchers av 737 at \$4.40, 4 cows av 1,025 at \$4.10; to Mich. B. Co. 3 bulls av 1,013 at \$3.90, 17 butchers av 756 at \$4.25; to Parker, W. & Co. 1 bull weighing 1,000 at \$3.85, 1 do weighing 1,450 at \$4; to Regan 7 heifers av 577 at \$3.65; to Goose 7 butchers av 443 at \$3.50.

Roe Com. Co. sold Parker, W. & Co. 4 bulls av 1,050 at \$4; to Goose 1 do weighing 370 at \$2.75, 2 do av 505 at \$2.90, 1 heifer weighing 370 at \$3; to Sullivan P. Co. 9 do av 670 at \$4, 22 butchers av 626 at \$3.85, 2 bulls av 560 at \$3, 2 cow and bull av 1,030 at \$3.50; to Cox 8 stockers av 487 at \$3.35; to Rattkowsky 2 cows av 900 at \$3.25; to Sullivan P. Co. 2 do av 955 at \$2.50, 2 do av 935 at \$2.50; to Rattkowsky 8 butchers av 967 at \$3.40, 2 do av 290 at \$3.50, 1 cow weighing 830 at \$3.25, 1 do weighing 1,050 at \$4, 1 do weighing 700 at \$3; to Sullivan P. Co. 2 heifers av 560 at \$3, 2 cows av 1,030 at \$3.50; to Bresnahan 2 do av 1,080 at \$2.25; to Mich. B. Co. 18 butchers av 762 at \$4.15, 8 cows av 1,045 at \$4.25; to Sullivan P. Co. 2 cows av 925 at \$2.50, 2 do av 865 at \$4, 1 bull weighing 1,750 at \$4.50, 2 do av 1,115 at \$4; to Bresnahan, Jr., 21 stockers av 546 at \$3.40, 1 cow weighing 750 at \$3; to Erban Bros. 11 butchers av 774 at \$4.50; to Ford 1 stocker weighing 730 at \$3.75, 1 do weighing 660 at \$3.75, 10 do av 574 at \$3.75; to Hammond, S. & Co. 3 heifers av 673 at \$3.50, 2 do av 710 at \$4.50, 3 canners av 833 at \$2.50.

Spicer & R. sold Bresnahan 7 heifers av 700 at \$4; to Fry 19 butchers av 774 at \$3.75; to Young 5 steers av 910 at \$5.15; to Mich. B. Co. 3 do av 923 at \$4.25, 2 bulls av 715 at \$3.25; to Lachait 12 butchers av 887 at \$4.80; to Sullivan P. Co. 4 do av 830 at \$4.25, 1 canner weighing 810 at \$2.25, 1 cow weighing 1,120 at \$3.50.

Bishop, B. & H. sold Fromm 6 cows av 953 at \$3.45; to Kamman 8 butchers av 745 at \$4.25, 15 do av 922 at \$4.75, 1 bull weighing 930 at \$4; to Parker, W. & Co. 5 butchers av 644 at \$3.90, 1 steer weighing 1,160 at \$6, 1 heifer weighing 850 at \$5.50, 1 canner weighing 780 at \$2.50, 10 butchers av 718 at \$3.90, 2 steers av 825 at \$5.50, 1 bull weighing 910 at \$4; to Sullivan P. Co. 3 butchers av 890 at \$4.75, 2 cows av 1,025 at \$4, 1 bull weighing 810 at \$3.25, 7 butchers av 780 at \$4.25; to Erban Bros. 1 cow weighing 940 at \$3, 2 heifers av 685 at \$4.25; to Bresnahan 13 cows av 802 at \$2.60 to Fromm 9 butchers av 690 at \$4.25, 3 heifers av 533 at \$2.50; to Hammond, S. & Co. 4 butchers av 890 at \$4.50; to Bresnahan 4 cows av 890 at \$3; to Mich B Co. 7 do av 980 at \$3.75; to Kamman 14 butchers av 800 at \$4.25, 8 do av 893 at \$4.50, 3 cows av 833 at \$3.50; to Sullivan P Co 3 do av 1,000 at \$4, 2 do av 870 at \$3.50; to Regan 6 heifers av 608 at \$3.90; to Bresnahan 4 cows av 952 at \$3; to Parker, W. & Co. 6 do av 913 at \$3.75, 2 do av 980 at \$3.25, 11 butchers av 603 at \$4, 3 do av 990 at \$4; to Sullivan P. Co. 2 canners av 850 at \$2.50, 2 cows av 980 at \$4, 1 bull weighing 1,050 at \$4.15.

Waterman sold Marx 11 butchers av 727 at \$4.

Bohm sold same 1 steer weighing 900 at \$5.

Sandell sold Parker, W. & Co. 1 bull weighing 1,600 at \$4.25.

Weeks sold Grant 8 butchers av 875 at \$4.05.

Same sold Hammond, S. & Co. 2 bulls av 1,240 at \$4.25.

Veal Calves Receipts, 513. Market 50c lower than last week. Best, \$9@9.50; others, \$4.50@

8.75. Milch cows and springers, good grades strong; others dull. Bishop, B. & H. sold Hammond, S. & Co. 2 av 315 at \$6, 3 av 150 at \$9.50; to Mich. B. Co. 2 av 160 at \$9.25, 5 av 145 at \$9, 8 av 125 at \$9; to Friedman 2 av 130 at \$9.10; to Goose 3 av 185 at \$6, 3 av 165 at \$9; to McGuire 6 av 145 at \$9.50, 1 weighing 150 at \$6, 5 av 130 at \$9.25, 6 av 145 at \$9, 5 av 165 at \$9.50, 2 av 125 at \$6.50; to Hammond, S. & Co. 2 av 205 at \$7, 4 av 185 at \$9; to Burnstine 17 av 160 at \$9, 7 av 140 at \$9, 2 av 110 at \$9.

Haley & M. sold Parker, W. & Co. 16 av 225 at \$7, 2 av 360 at \$5, 36 av 170 at \$9, 9 av 205 at \$9; to Mich. B. Co. 3 av 125 at \$7, 12 av 150 at \$9; to Hammond, S. & Co. 8 av 155 at \$9.50, 2 av 300 at \$5.50, 1 weighing 170 at \$9.50, 2 av 135 at \$8.50, 2 av 310 at \$5.50; to Lachait 16 av 225 at \$8; to Rattkowsky 7 av 170 at \$8; to Hammond, S. & Co. 7 av 165 at \$8.25, 4 av 130 at \$8.50; to Rattkowsky 3 av 185 at \$8, 3 av 160 at \$8.

Spicer & R. sold Mich. B. Co. 4 av 155 at \$9, 2 av 145 at \$8.50, 2 av 140 at \$9.25, 1 weighing 150 at \$8.50; to Sullivan P. Co. 4 av 140 at \$8.50.

Roe Com. Co. sold Mich. B. Co. 2 av 190 at \$9.

Lewis sold Newton B. Co. 11 av 155 at \$9.

Weeks sold Burnstine 11 av 150 at \$9. Bergin & W. sold same 10 av 149 at \$9.

Sheep and Lambs. Receipts, 3,872. Market steady at last week's prices at opening. Best lambs, \$6@6.25; fair to good lambs, \$5.25@5.75; light to common lambs, \$3.50@4; yearlings, \$4@4.25; fair to good sheep, \$3@3.50; culls and common, \$1.50@2.75.

Haley & M. sold Newton B. Co. 91 lambs av 65 at \$5.25, 16 sheep av 95 at

\$2.50, 25 lambs av 55 at \$4; to Hobbins 60 do av 75 at \$5.50; to Breitenbeck 160 do av 67 at \$5.10; to Fitzpatrick Bros. 65 sheep av 115 at \$3.

Roe Com. Co. sold Newton B. Co. 65 lambs av 65 at \$5.50, 89 do av 63 at \$5.35; to Mich. B. Co. 19 sheep av 100 at \$3.25, 15 do av 105 at \$3; to Sullivan P. Co. 17 do av 65 at \$3.50.

Spicer & R. sold Thompson Bros. 26 lambs av 65 at \$4.60; to Mich. B. Co. 12 sheep av 90 at \$2.40; to Newton B. Co. 130 lambs av 73 at \$5.85, 5 sheep av 190 at \$2, 28 do av 110 at \$3.50, 8 do av 112 at \$3.25, 21 lambs av 70 at \$5.50; to Hobbins 114 do av 68 at \$5.80, 76 do av 65 at \$5.75; to Jones 96 do av 65 at \$5; to Hammond, S. & Co. 19 yearlings av 75 at \$4, 11 sheep av 80 at \$2.50, 27 lambs av 53 at \$5.25; to Jones 40 lambs av 50 at \$4.50; to Young 35 do av 57 at \$5, 11 yearlings av 80 at \$4.25; to Jones 84 feeders av 50 at \$4.85.

Bishop, B. & H. sold Mich. B. Co. 9 sheep av 105 at \$3.35, 4 do av 140 at \$3.25, 30 do av 100 at \$3.25; to Sullivan P. Co. 8 lambs av 55 at \$4, 40 do av 73 at \$5.50, 28 do av 58 at \$4, 27 sheep av 85 at \$1.60; to Newton B. Co. 37 lambs av 65 at \$5; to Hammond, S. & Co. 29 do av 70 at \$6, 26 do av 70 at \$6, 25 yearlings av 78 at \$4; to Thompson Bros. 21 lambs av 58 at \$4.25; to Jones 27 feeders av 65 at \$5; to Fitzpatrick Bros. 87 lambs av 73 at \$6, 12 sheep av 105 at \$3.25, 17 lambs av 55 at \$5, 17 do av 40 at \$3.50, 28 sheep av 85 at \$3.25; to Young 10 lambs av 80 at \$6.25; to Harland 30 do av 70 at \$5.50; to Eschrich 20 do av 62 at \$5.

Bohm sold Newton B. Co. 11 sheep av 105 at \$3, 25 lambs av 75 at \$5.75.

Sandall & T. sold same 20 lambs av 48 at \$4, 53 do av 66 at \$5.50.

Lewis sold same 96 do av 75 at \$6, 16 sheep av 120 at \$3.

Hogs. Receipts, 3,752. Bidding Wednesday's prices; none sold up to noon; 10@20c lower than last week.

Range of prices: Light to good butchers, \$6.75@7.30; pigs, \$6.50@7; light yorkers, \$6.75@7.30; heavy, \$6.75@7.25.

Bishop, B. & H. sold Parker, W. & Co. 710 av 200 at \$7.30, 325 av 170 at \$7.25, 415 av 160 at \$7.20, 311 av 160 at \$7.10, 150 av 125 at \$7.

Roe Com. Co. sold Sullivan P. Co. 240 av 200 at \$7.25, 75 av 195 at \$7.20, \$7 av 180 at \$7.10, 35 av 160 at \$6.75.

Spicer & R. sold Hammond, S. & Co. 250 av 200 at \$7.25, 150 av 180 at \$7.20, 48 av 160 at \$7.15, 120 av 190 at \$7.25.

Haley & M. sold same 96 av 180 at \$7.20, 87 av 160 at \$7.15, 92 av 160 at \$7.10.

N. J. Cole, a farmer and stockman of Illinois, who was at the Chicago stock yards recently, said that farmers in his vicinity have experienced great difficulty in raising hogs this summer, many having suffered severe losses from cholera. Quite recently quite a number of little pigs from central Illinois have shown up in the Chicago stock market, having been hurried to market on account of sickness prevailing among the pigs, but the corn belt as a whole seems to have comparatively little to complain of on this score, most droves of pigs being healthy. This is a time when farmers cannot be too careful about caring for and feeding their hogs, as prices for choice matured offerings are unusually high, with strong prospects for continuing so for several weeks at least.

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## HOME AND YOUTH

## SUNSET.

BY ALBERTA.

When daylight is leaving the woodland  
And touching the hilltops with gold,  
When bird songs are stilling to silence  
And the lambs are safe in the fold,  
Then Nature's most wonderful colors  
On landscape and lakes we behold.

'Tis a picture of wondrous beauty,  
Tho' we see it each eve in the west,  
And it gladdens the soul of the wanderer,  
Toiling homeward to family and rest,  
And he thinks that of all great paintings  
Surely this one must be the best.

'Tis a picture that ever is changing  
And yet is ever the same,  
That none can view without rapture  
And none can give it a name—  
This wonderful picture so changing  
That yet is ever the same!

The same hills that we've looked at  
Since our childhood, now years ago.  
The same old valleys and woodlands  
Where wild creatures still come and go.  
Yet o'er these familiar old landmarks  
Each sunset has cast a new glow.

To the soul that is thirsting for beauty,  
And the heart that is weary and sore,  
Just look for the pictures about you,  
You may see them each day from your door,  
And you'll find that many rare treasures  
Are yours if you just look them o'er.

So, when daylight is leaving the woodland  
And touching the hilltops with gold,  
We stand with our hearts thrilled to silence,  
With the clouds of care back of us rolled,  
And gather new joy for the morrow  
From this beauty which all may behold.

## WHAT'S IN A NAME?

BY HOWARD DWIGHT SMILEY.

The big touring car with its two occupants suddenly slowed down, turned to the side of the country road and stopped. The young men jumped out, climbed the rickety rail fence and following a faintly marked trail through the deep grass, disappeared into the wood that flanked the roadway.

A few minutes later the bushes parted on the opposite side of the road, and a very bald head, surmounting a long lank neck, was thrust cautiously forth. After a careful survey of the surroundings the owner of the head stepped out into the road, at the same time beckoning behind him.

Another man appeared through the bushes and together they tip-toed stealthily across the road and examined the automobile from all sides.

"Can you run her, Jim?" inquired the first man in a low tone.

"Well, I reckon I can, John," was the scornful reply. "Why, I've got fifteen of these things on my Canadian estates. Everything from the heaviest tourabout to the lightest runabout!"

"Hist!" whispered John suddenly, raising a warning forefinger. From the direction in which the two young men had disappeared there came a loud splash followed by an exultant yell. A second later these sounds were repeated to the accompaniment of ear-splitting whoops.

"Wait here a minute," whispered John. "I'll see what they are doing."

He climbed over the old fence and followed the trail into the bushes while his partner watched apprehensively from his position beside the machine.

Several minutes passed during which Jim listened to splashes and shouts, wondering at their cause. Then his companion suddenly appeared, treading softly and carrying in his hand a lot of clothing, including two pairs of shoes and two hats.

"Swimming in the creek," he announced briefly when he had reached Jim's side. "I've stolen their clothes. Here, get into these quick; they're liable to get through any minute."

Rapidly the two divested themselves of their torn and muddy clothing, which showed evidence of recent hard usage, and donned those of the young men. This done, Jim cranked up the automobile, the two jumped in and a second later were speeding swiftly away down the turnpike.

"That was easy," grinned John as a bend in the road hid them from the view of the two young men, whose cries of dismay and rage had reached their ears as they started off.

"It was that," answered Jim, who was managing the machine. "We're safe enough now. This section of the country

seems to be sparsely settled and they can't get to a 'phone quickly. We'll be miles on our way before they can spread the alarm. I'd like to see those railroad directors catch me, now."

"Yes, and I'd like to see those process servers get a line on me," put in John exultantly. "They'll never catch up with this machine."

"You keep a sharp lookout, just the same," cautioned Jim. "You can never tell when one of 'em is going to bob up."

John had been examining his clothing while they talked and now produced a fat wallet from the inside of the coat. Opening this he found it to be stuffed with bank bills of large denomination.

"Hello, this looks good!" he cried. "Gee! There must be at least a thousand in that wad."

"Fine, fine," said Jim, giving a side-long glance at the wallet. "That's going to help us out a lot just now, too. It's a shame to rob those young fellows this way, but of course we had to do it. As soon as we get where those men can't bother us, we'll send them a check for everything we've taken. We'll probably find an address in the pockets."

"Yes, here's a card-case now," said John.

Jim threw the high speed lever open and they covered ground rapidly until they had put at least thirty miles between them and the owners of the car. Then he stopped and tested the gasoline gauge.

"Getting pretty low," he said. "We'll have to replenish the supply."

About a mile further on they came to a small town and Jim brought the car to a stand in front of the store. A crowd of loungers promptly gathered around to view the machine, much to John's discomfiture.

"Got any gasoline?" Jim asked the storekeeper.

"I 'low I have. How much'll you want?"

"Fill up the tank."

The dealer hastened to do so. When he had finished Jim asked about the cost.

"Two dollars an' sixty cents," the dealer informed him.

"Here, John," said Jim, "it's up to you to pay this."

"All right," answered John uneasily.

"Just make out a bill and give it to me," he said to the dealer. "I'll send you a check for the amount when I get home."

"Well, say, mister, you've got more gall'n a pair o' Missouri mules!" snapped the dealer. "I don't know who you are, no more'n Adam, an' you'll just hand over the price o' that oil in cash or I'll have the constable on you."

"My dear sir," said Jim suavely, placing his hand on the dealer's shoulder, "if you knew to whom you are talking you wouldn't be so impudent. This gentleman you were just addressing is not other than the world renowned financier, John D. —"

"Hold on there," John interrupted him hastily. "Come here a minute, Jim."

He drew his companion out of earshot of the crowd.

"You're too careless," he remonstrated.

"I don't want these people to know who I am. Besides that, I think I saw a process server in that bunch. Let's get away before he has a chance to serve papers on me."

"Where is he?" whispered Jim, casting a frightened glance over his shoulder. "By Jove!" he added in sudden trepidation, "there's a director standing right beside the machine, now! Come on!" and seizing John by the arm he hurried him off down the street, without a word of explanation to the astonished dealer and onlookers.

Chance took them in the direction of the railroad station. A train from the east was just pulling in as they arrived there, and Jim hustled his companion aboard.

They took a seat in the smoker and when the conductor came along he accosted John first.

"Tickets," said he.

"This gentleman will take care of that," answered John, motioning to Jim.

"Why, yes," said Jim cheerily, "we don't know where we are going, conductor, but we'll ride until we get tired and then you can give me a memorandum of the amount of the fares and I'll have them checked over to the company as soon as I get home."

The conductor gazed at him in amazement. "What are you talking about?" he demanded. "Give me your tickets."

"We haven't any tickets," answered Jim patiently. "We don't need any. I never pay railroad fare."

"Oh, you don't, hey?" snorted the indignant conductor. "Well, you'll pay

fare this time or get kicked off at the next station."

"My friend," began John, rising from his seat and placing his hand familiarly on the conductor's coat sleeve, "if you knew to whom you are talking you wouldn't be so impudent. This gentleman is no other than the world renowned railroad magnate, James—"

"Stop that!" almost shouted Jim, jerking his companion down into the seat again. "Rather than have everybody on the train know who we are I'll pay the fares. How much is it, conductor?"

"Where're you going?" asked the still indignant and somewhat mystified ticket taker.

"How far are you going?"

"Pacific coast."

"Oh, well, we don't want to go that far? Here's a twenty dollar bill. When we have ridden that out let us know and we'll get off."

The conductor consulted his rate sheet. "That'll take you as far as Alston, Oklahoma," he informed them.

"That'll be all right," Jim assured him. "That's just the place we wanted to get to."

The journey to Alston was uneventful and when, in due time, they arrived at this small western town they went immediately to a hotel and engaged rooms for the night.

John was still lingering at breakfast next morning when Jim came rushing into the dining-room.

"Hurry up," he cried excitedly. "There's a stage leaving here in a minute and we're going to take it."

"What for?" John mildly inquired.

Jim placed a warning finger to his lips and whispered the one word: "Directors."

That was enough. John arose hastily and followed Jim outside to where the coach was waiting.

As they crossed the walk to enter the vehicle John noticed a large man, wearing a huge sombrero and with a big revolver hanging from his belt, regarding him fixedly. Instantly John was overcome with terror and would have bolted off down the street had not Jim seized him and bundled him into the stage.

The driver was on his seat and evidently waiting for them. As soon as they were seated he whipped up the horses and drove rapidly away, while the large gentleman on the sidewalk gazed after them in open-mouthed astonishment.

"I dunno what ails that maverick," he muttered to himself, "but I'll bet he's been stealing a hoss somewhere."

"Gee! I had a narrow escape from that process server!" gasped John as soon as they were well started. "He had a subpoena right in his pocket ready to serve on me."

"Yes, and there were two directors waiting for me in the barroom," said Jim. "They were disguised as farmers, but I spotted 'em the minute I laid eyes on 'em. That's why I hustled you off in such a hurry."

The two had things pretty much to themselves during the long drive that followed. They were the only passengers and the driver showed no inclination to talk with them.

Towards night they arrived at their destination, the small town of Sunflower, some fifty miles distant from Alston. They were both tired and hungry and at once repaired to the tavern where they asked for accommodations.

The landlord, a stalwart and bewhiskered son of the west regarded them with interest. The eastern tenderfoot was an unusual sight in that locality, inasmuch as Sunflower is fifty miles from a railroad and in a section little visited by strangers.

"Yes, I 'low I can put you up," he told them.

"We may remain here some time," Jim informed him. "If we like the place and find the proper inducements we may remain here permanently and enter into business."

The landlord's curiosity was at once aroused and he inquired into the nature of their business.

"Well," began Jim, "for my part, I am considering building a railro—"

"Shut up!" snapped John, giving him a poke in the ribs. "You'll have all the directors in the country swooping down on you if it leaks out what you are thinking of doing. Why don't you wait until we know for sure."

"I guess you're right," acceded Jim, and then added to the landlord. "Our business is of a nature that can't be made public just now, but I can state that we are here in the interests of the

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community and are prepared to invest millions of dollars if we find the opportunity."

"Millions?" gasped the landlord weakly. In his mind a million dollars would buy up the whole state of Oklahoma. A man might find a place to invest a few thousands in that section, but a million—he took a deep breath at the thought.

"Certainly," said Jim cheerfully. "Not only millions, but tens of millions—yes, billions, if necessary! Why, do you know who this gentleman is here?" he asked motioning to John. "He's the richest man in the world! He's John D.—"

John interrupted him with another vigorous dig in the ribs. "What's the matter with you?" he growled disgustedly. "Can't you keep anything to yourself?" "Oh, suit yourself about it," retorted Jim peevishly. "I can't see what harm it'll do way out here in the wilderness. If you'll give us our supper, landlord, we'll be much obliged to you, and then we'll go to bed. We're tired."

The landlord did as he was asked, somewhat bewilderedly. He had never entertained millionaires before and the novelty of it rather overcame him. He took an extra large drink out of his private jug after he had showed them to their rooms.

In the barroom that night he detailed his experience to those present, who were, for the most part, small ranchers and cow-punchers living in that vicinity. Naturally his story excited considerable interest and there was much speculation as to whom the strangers might be and their possible business.

Among those who happened in during the evening was Peter Red Feather. Peter was a Kiowa Indian who had but recently returned to the land of his fathers, from whose congenial surroundings and influences he had been literally torn away against his will, several years before and compelled to undergo a course of study, under pale face instructors, in a college of the east, known as Carlisle.

Peter was of his fathers' fathery and it was not a desire to mingle in the society of the pale face that had brought him to the tavern, but rather that the fire-water of the pale face might mingle in him. He therefore displayed but little interest in the conversation of those present, standing quietly at the end of the bar and sipping his liquor in silent, stolid soliloquy.

However, when the landlord repeated for the tenth time that night, to a late comer, the account of his conversation with the two tenderfeet, with its mention of millions—yea, billions—Peter began to take notice.

"Where are these men?" he asked the landlord.

"Gone to bed," answered that worthy shortly.

"Don't you know their names?"

"No. Didn't either o' 'em register. One o' 'em started to tell me that the other's name was John D. something or other, but his pardner stopped him an' wanted to know if he didn't know enough to keep his mouth shut."

"John D, huh?" said Peter with a sudden display of interest. "Was he tall and lank and bald headed?"

"He was that," answered the landlord, surprised at this fairly accurate description of his guest. "Do you know him?"

"Not personally, but I believe I know who he is, by reputation," answered Peter, and thereupon he related to his hearers the life history and exploits of one of our mightiest financiers.

"And if he is who I think he is," said Peter in conclusion, "I can assure you that he has got millions of dollars to invest in anything he sees fit, and it may be that he'll find a place to plant a million or two of it here. He must have some reason for coming to this out of the way place, and you can depend on it that he knows the reason. But, remember this, he has never been known to give anything away that didn't return to him a hundredfold. If he shows any inclination to invest here, keep your eyes open or you'll find out in the end that he has cleaned you all out of everything you've got and that he owns the whole reservation."

"If that's the case it'd be a good idea to run 'em out o' the country tomorrow, before they get a chance to do any cleanin' out," suggested one of the ranchers.

"Oh, no," answered Peter. "Let them stick around and we'll see what they've got up their sleeve. It's a cinch they've got something or they wouldn't come way out here. That kind of business men don't go into an undertaking unless they are sure it is going to reap them twenty to fifty times the amount of the investment. Let them stay until you find out

what they're going to invest their million in, and then you can freeze them out and make the profits yourself."

Jim sat in the shade of a small tree, in profuse perspiration, and swore softly as he wrathfully watched the approach of John, followed by a small boy, across the fields.

Beside Jim stood the youthful scion of one of the ranchers and over the lad's shoulder was slung a bag holding a number of golf sticks.

Jim was still growling when John, after a clumsy drive, came over and sat down beside him.

"You've beat me again," he puffed, mopping his perspiring brow.

"I suppose so," snapped Jim. "If that's what you call it, but I'm blessed if I can see anything in this game but hard labor. Why do you do it?"

"Why," answered John in mild surprise, "haven't I told you repeatedly that I am the champion golf player of the country? I've got to keep my hand in, you know."

"You're a peach of a champion, you are," said Jim sarcastically. "Why, I've beaten you every game we've played so far, and I never heard of the thing until you sent to Chicago for the outfit."

"Oh, I know I ain't in what you'd exactly call good form," admitted John. "But just you wait until I practice up a bit, then I'll show you."

"John and Jim had been sojourning in Sunflower for a month. The populace, forewarned as to their identity and probable intentions, had held aloof from them, regarding the two with a mixture of awe, envy and grim defiance. They didn't know at what time one or the other would start investing a million dollars in something thereabouts, and they held a vague idea that should such a thing happen it might have much the same devastating effect as a ton of dynamite exploded in the vicinity.

They didn't know whether they wanted the two financiers to do any investing or not. If they did and it should prove a benefit to the community, why, that would be all right; but, on the other hand, if, in so doing, John and Jim should gobble up everything in sight, as Peter Red Feather had intimated they might, that was a different proposition.

Those simple country folk didn't propose to be juggled out of their little holdings if they could help it, and, at the same time, they didn't want to miss anything good that might come their way.

They were therefore hung up between two impulses: One—and a strong one—to ride the two invaders out of town on a rail, and the other to let them alone and find out how they were going to invest that million.

This latter impulse had prevailed so far, and therefore Jim and John had been unmolested; in fact, they had been left pretty much to their own devices, while the populace looked on from the distance, as it were, and awaited developments with the patience born of the west.

John had started the golf game early and had done little of anything else since. Jim had joined him in the play, not because he was an enthusiast—he was anything but that—but because John had insisted that it was the proper thing to do. He was now, however, close to the rebelling line.

"I can't see where knocking a ball around the pasture is particularly lucrative," he grumbled. "Why don't you do something that will be less arduous and more remunerative than this fool game? Why don't you make some money? You're more celebrated for that than you are for playing golf."

"That ain't a bad idea at all," said John reflectively. "Yes, it's a good suggestion. I believe I'll start right now and make some money."

"How?" asked Jim, interested at once.

"Why, the way I always have. I'll put down some oil wells."

"Where?"

John got onto his feet and surveyed the surrounding country. "It looks pretty much all alike," he observed. "Seems to be about as likely a place as any right here in this pasture. Yes, I believe I'll buy this farm and drive a well right here," and he indicated a spot about ten feet away under a small bush.

The two caddies, who had been silent but attentive listeners to the dialogue, now exchanged significant glances, and each carefully noted the spot to which John pointed.

"Do you know who owns this land?" the great financier asked them.

"Yessur, it b'longs to Barney Spencer," they replied in unison. "He lives in that house right over there."

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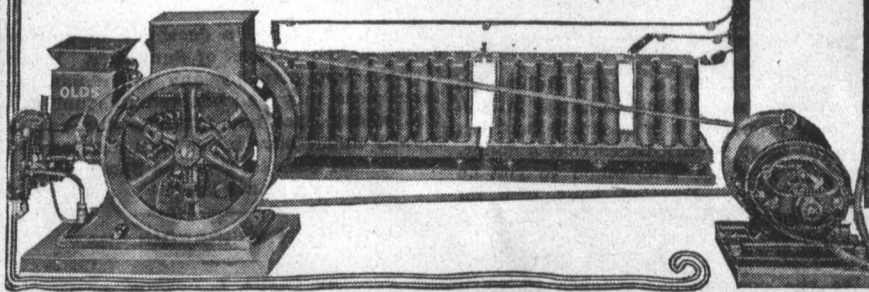
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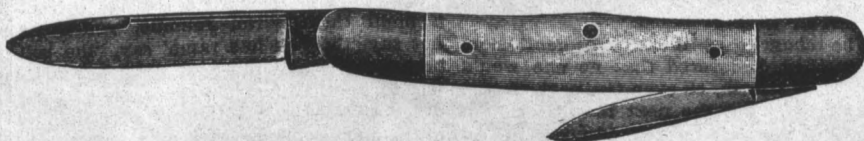
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John immediately ordered the boys back to the tavern with the golf outfits, and he and Jim started for the house indicated.

"That's a fine idea you've got, John," said Jim on the way there. "Think you'll strike oil?"

"Think!" exploded John. "There's no think about it! Did you ever know me to fail?"

In as much as Jim had never seen John bore for oil he had to admit that he hadn't.

"Well, I'll tell you what," he said enthusiastically, "if you're so sure as that I'm going to start building a railroad right away. We'll need one to ship out the oil."

They found Barney out in the barn mending a broken harness, and John proceeded to business at once.

"I want to buy your farm," he said. "I'll give you a million dollars for it."

The harness fell from Barney's nerveless fingers and his mouth dropped open, while his eyes took on a vacant stare. The inevitable had at last come! They were going to invest that million and he was the mark. It fairly took his breath away.

"What for?" he managed to ask after he had recovered himself to some degree.

"Well, I am going to drive some oil wells and start a new industry in this community."

A gleam of understanding came into Barney's eyes. News of the great oil strikes in Texas, with their resultant wealth, had percolated into even that remote section of the state of Oklahoma.

"Oil wells! Do you mean to say there's oil on my land?"

"Of course there is. What do you suppose I'd be buying it for if there wasn't?"

"An' you want to give me a million for it?"

"Certainly. That won't be a drop in the bucket to what I'll take out. Why, I expect it'll yield me not less than a billion!"

Barney threw up his arm as if to ward off a blow. The million was beyond his wildest comprehension, but the billion staggered him. He could only gasp and stare.

"Well," said John impatiently after a minute's wait, "are you going to sell?"

"I dunno," Barney weakly replied. "I'd like to think about it an' talk it over with the wife first. How much time'll you gimme?"

"Well, I don't want to crowd you. I'll give you until this time tomorrow. I'll call again then. In the meantime I believe I'll look around and see if I can't buy some more farms."

John and Jim started away and within two minutes after their departure Barney was burning up the road in an effort to get to town in double quick time.

He burst into the tavern barroom where several of his fellow men were congregated. Among them was Peter Red Feather.

"She's come, boys!" he yelled. "They're goin' to invest that million! They just offered me that amount for my farm!"

The effect was instantaneous. Everybody except the Indian became interested and excited. He alone remained calm.

They listened breathlessly while Barney related his experience with the two financiers and then they turned with one accord to Peter for the explanation.

"It's just as I told you," said the ex-Carlisleite. "They've discovered oil in this vicinity and will make a big thing out of it if you let them; but, you take it from me, they'll leave you poorer than you are now, if you let them get control of the thing."

"But how're we goin' to stop 'em?" asked Barney.

"That'll be easy enough. Refuse to sell. If they are willing to pay a million for your property it is a cinch that it's worth at least twenty times that amount, and it is worth just as much to you as it is to them. Develop your own oil wells and freeze them out."

Everybody at once fell in with this idea. Messengers were quickly dispatched to the surrounding ranches to warn the owners not to sell at any price, and that night a mass meeting was held in the tavern dining-room, from which Jim and John were excluded.

The chagrin of these two gentlemen, when they discovered that no one would sell them a farm, or even the part of one, was great. For the next few days John exerted himself to the utmost in an effort to acquire even an acre of land on which to commence amassing wealth, and Jim was equally energetic and unsuccessful in trying to buy a right of way for his railroad. The community had sud-

denly closed up like a clam, and refused to even speak to the two.

"Going to build a railroad, is he?" said Peter Red Feather when he was informed of Jim's ambition. "Well, if it's worth while for him to build one it is worth while for you. Build it yourself and make the money he expects to pull out of the project."

And this everybody agreed was a good idea and they acted upon it at once.

Peter Red Feather, as the only educated man in the community, was selected to manage the undertaking. A pool was taken up among the ranchers and other land owners, and five thousand dollars raised, and with this Peter and Barney left for the oil fields of Texas. At the same time Peter wrote letters to several eastern railroad contractors.

Within two weeks experienced oil well drivers with their apparatus were on the grounds and these at once proceeded to business.

The site selected for the driving of the first well was the precise spot that John had indicated to Jim when the sudden determination seized him to commence making money. This was pointed out to the drivers by the two ex-caddies.

In the meantime the railroad people arrived and were given contracts to build a road between Sunflower and Alston, to be pushed to completion as rapidly as possible. Construction on this was begun at once.

And then just what everybody was expecting happened.

The well drivers had got down a bare two thousand feet when they struck such a gusher as blew the drill a mile into the air and kicked the derrick clear over the fence.

They had never seen anything like it, the oil men declared. The land around that section was fairly swamped with oil before they could get control of the well and shut off the outpouring flood.

It was, beyond a doubt, the greatest strike the west had ever seen, and the village of Sunflower was destined to become famous the world over, without even the aid of a championship prize fight.

Naturally the news of the great strike spread like wildfire over the entire country. The newspapers parographed it under headlines a foot high, and with it the story of how two of the country's mightiest financiers had been frustrated in their efforts to acquire possession of the properties, and had been completely frozen out by the natives.

As a result of this last item there arrived in Sunflower three days later, two men, in gray uniforms, who strolled quietly around the town until they discovered Jim and John seated in the tavern barroom, dejectedly condoling with each other over their misfortunes.

Silently the two men crept up behind the unsuspecting pair and a second later had slipped handcuffs onto their wrists and taken a firm grip on their coat collars.

To the astonished landlord and several others who witnessed these proceedings they explained briefly:

"They're a couple of lunatics who escaped from the Granville insane asylum about two months ago. We have been searching the country over for them and when we read about the big oil strike here and their connection with it we at once suspected that they were the men we were looking for and we hustled right out here. They are quite harmless, but they labor under the delusion that they are multi-millionaires and that they own all the oil wells and railroads in the world."

All of which had a decidedly numbing effect on the citizens of Sunflower. Had it been two men by any other names than those they had adopted this unlimited wealth that had fallen to the community might have never been discovered—which all goes to show, as Shakespeare says—"What's in a name?"

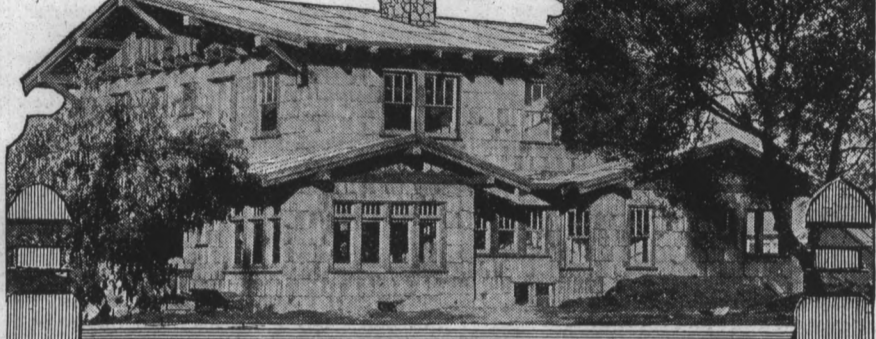
#### WATCH THE "IRREGULARS."

BY CLARA J. DENTON.

A very funny little book might be written on the inconsistencies of incorrect English. I once heard a teacher correct a pupil thus: "No, Johnnie, you must not say 'the bell has rang,' say, 'the bell has rung,'" and the next moment, turning to another teacher she said, "I have did that four or five times," and she was quite unconscious of her own glaring inconsistency.

We never hear the most careless speaker say, "I gone there yesterday," while it is exceedingly common to hear the solecism, "I done that yesterday." This

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sad mixture might easily be avoided by a little care. Open your grammars at the table of irregular verbs. Now, if you will only remember never to connect any form of the verb to have with the past tense of any of these verbs, save in the few cases where the past and perfect forms are the same, as in the verb sweep, where swept is both the past tense and the perfect participle, you can make no mistake in this part of the English language. Also, since you are never to mention the past form of the verb with the auxiliary have, at the same time you are not to mention the perfect participle without the verb to have. If you will go carefully over the list of irregular verbs, supplying have in the proper places, and leaving it off where it doesn't belong, you will, I think, have the philosophy of this law so thoroughly established in your mind that you will never be guilty of saying either, "I done it," or "I have did it." "I seen it," or "I have saw it." Try it if you are one of those to whom these distinctions do not come easily. A very dignified and handsomely dressed lady, who was presiding over a large assembly of educated ladies recently, annoyed many of her audience by her continued repetition of the phrase, "I done it." If she were the only sinner in this respect the incident would scarcely be worth repeating, but, unfortunately, she is the representative of a large class of people who need sadly to make a careful study of the page of irregular verbs.

JUST OUT WALKING.

BY HATTIE WASHBURN.

It is deplorable as well as detrimental to the health of humanity in general, that the most primitive means of human locomotion, walking, when indulged in for the sake of health and enjoyment, should be of such rare occurrence as to cause comment and wonder. Yet, with out autos, trolleys, horses and other means of quick and easy conveyance, people who take long walks for mere pleasure, are becoming so rare as to excite wonder and often laughable speculation, as the writer knows from personal experience.

Having long since indulged in a daily walk, I have become familiar with every bit of country within walking distance of my prairie home; have derived great benefit and pleasure thereby and now and then been the cause of mystery and wonder. But my friends and neighbors being used to my peculiarities, it was for me to arouse greater sensations when visiting in a strange country.

While staying in southeastern Minnesota, I reveled in the wondrous beauty of hills, streams and woods as only one having grown to womanhood on the level prairies and possessing a keen sense of the beautiful in nature, can revel in such picturesqueness. Although it was mid-winter, I took prolonged walks, often over rough roads, through deep snow and in inclement weather. Despite warnings and dire prophecy to the contrary, they but improved my health and vigor.

While visiting in the outskirts of a beautiful little city, one morning I walked down town with an aged uncle. A wooded river flows through the town and where this is spanned by a great bridge, I left my escort to pursue his way, and descending the bank, followed the course of the stream. How beautiful it was and who, versed in nature's lore, would tread cement walks to gaze upon man's structures of wood and stone, when such a stream lured her to wander along its banks?

For a way its beauty was disfigured here and there by unsightly rubbish dumped along its course at random, but when free of the city at last, nature's handiwork was unmarred by the agency of man. Fences, roads, bridges and railways intruded there, but so long has man made them within her realm, nature loves them as her own, for a team, an auto or gliding train lends beauty and animation to a scene.

Rejoicing in each charm of the ice-bound stream, I wandered along its course for miles, oblivious of the flight of time, and returned at last to find my hostess concerned because of my prolonged absence, while my uncle had a tale to tell.

When he returned to the bridge where he had parted from me a short time before, he found a woman with a shawl thrown over her head, looking over the rail in the direction I had gone. Seeing him, and perhaps recognizing the old gentleman as my recent companion, she explained that she was concerned because a woman had descended the bank

there and walked along the stream. What suspicion caused her concern she did not say, but I thought with a shudder, even while I laughed, that she might have thought me a suicide, seeking in desperation the only open water in the frozen river. I only followed the lure of the stream with the happy innocence of a child, and unwittingly aroused a stranger's wonder and concern while hundreds might have trod the walk before her home without arousing question or comment.

This is but a laughable coincident, yet it sounds a warning. Have women who walk for the sake of health and enjoyment alone, become so rare that one wandering in nature's realm or walking along a highway where teams and autos frequently pass, should be an object of suspicion? It is to the detriment of the human race if this be true.

While it is not advisable to reject a means of quick and easy conveyance and walk from place to place for the sake of exercise, we realize that there are many who pass time much less profitably and enjoyably that might be spent in that gentle, yet invigorating and pleasurable form of exercise, walking in nature's beautiful out-of-doors.

Only those who have indulged in a daily walk understand the benefit derived therefrom and realize how little cause for wonder or comment should be one who is "just out walking."

FIRE PROTECTION ON THE FARM.

BY LALIA MITCHELL.

When you invest fifty dollars in an insurance policy try investing five in fire protection for the home. A fire prevented is much better than one paid for after the house and all its contents have gone up in smoke.

First buy a large open mouthed crock and place it in a closet off the kitchen, in the landing at the head of the cellar stairs, or if preferred in one corner of the pantry. Keep this filled with common salt, and closely covered. Some day the soot in the chimney may take fire and if a liberal amount of salt be at once thrown into the stove the gas arising from it will extinguish the flames. More farm houses burn from fires in chimneys than from any other cause. Next build a light but firm ladder long enough to reach to the eaves of the house. Buy two large tin pails and to one attach a rope long enough to reach from the roof to within two or three feet of the ground. Put these under the back porch where they can be easily reached. When lightning strikes the house or a spark from a burning bonfire ignites the dry shingles of the roof a bucket brigade acting promptly will probably confine the flames to their starting point.

Very often the head flying from a match or mice gnawing these same dangerous bits of wood and brimstone left in a bureau drawer start a fire on the second floor which could be extinguished very easily the moment it is discovered, but which, by the time water is brought from a well in the yard, has gotten beyond control.

If possible have a heavy woolen rug in every room and if the flames start in a curtain or drapery they may be extinguished by tearing them down, throwing them on the floor and smothering them with the rug. Another precaution is the keeping of large corked jugs of water in every closet. If a liberal layer of charcoal is placed in the bottom of the jug the water will not sour and sometime, that one jug of water carefully poured over a fire may extinguish it and save the house.

Every member of the house should know exactly where to find the fire fighting paraphernalia, and, most important of all, don't buy the vessels and then allow them to get emptied. You may not need them for ten years but be sure that if they are needed on the eleventh they will not fail you because of your neglect.

COMPLIMENTARY. COLORS.

It is a generally understood fact among physicists and students of color that certain colors when combined in two's, produce a sensation upon the eye the same as white. Such colors are called complementary. When one looks for a long time at a single color the experience is very tiresome, but complementary colors, since they furnish a stimulus that is approximately even and general to the color sensations, are very agreeable and resting to the eye. These complementary colors result for the confusion of light rays of various lengths so that none of them can effect a color on the retina.

Why You Need a New Range

Some housewives who display a remarkable amount of broad, sound, common sense along other lines, persist in the delusion—and it is a delusion—that they are really practicing economy by trying to get along—to get results—out of an old, worn-out range merely to save the price of a new one.

Your old range or stove was put together with putty and stove bolts and probably you can stick a pen-knife in the seams and joints anywhere on it where the stove putty has crumbled away. When a range gets in that condition, it takes fuel enough to warm all outdoors in order to get your oven hot enough for baking—and then you run the risk of burning whatever is in the oven. You can soon burn up the price of the best range ever made in a useless waste of fuel in an old, worn-out stove or range—and that's neither practical economy nor good management.

If you would practice real economy in your household management, it will pay you, the next time you are in town, to call on the dealer who handles it and examine closely into the perfect baking and remarkable fuel saving qualities of the



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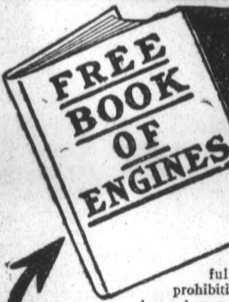
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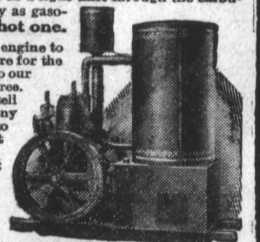
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