

MICHIGAN FARMER

AND
LIVE STOCK
PUBLISHED WEEKLY.

JOURNAL.
ESTABLISHED 1843.

The Only Weekly Agricultural, Horticultural and Live Stock Journal in the State.

VOL. CXXXIV. No. 21.
Whole Number 3506

DETROIT MICH., SATURDAY, MAY 21, 1910.

75 CENTS A YEAR
\$1.50 THREE YEARS

What a Gasoline Engine Will Do on the Farm.

The late quite general discussion of the advancing prices of foodstuffs and the conclusions arrived at by many of the writers, leads one to think the reason of it to be scarcity of help on the farm. This may or may not be the leading cause, but the fact remains that the farmer seems to be coming into his own, or, in other words, getting prices that will pay the cost of producing and possibly enough over as a profit to make farming slightly resemble other industries. It seems to me to be the part of wise men to make an extra effort to get a share of these deserved prices by using every labor saving device and machine help that we can in our endeavor to raise larger crops, despite the scarcity of help, and I believe one means to this end is the gasoline engine, and for several reasons which I will try to make plain.

In the first place, if we raise good crops no one will dispute that we must have a fertile soil which must be kept up in its producing power, by the application of barnyard manure. To obtain this we must keep stock enough to consume at least all of our rough feed, such as corn-stalks, bean pods, and perhaps a share or all of the clover hay raised, together with the straw eaten and used for bedding the stock. In connection with this corase forage, the grain of a good corn crop and a part of the oats raised will, when put on with a spreader, cover the corn ground for the next season and thereby insure another good crop. And here is where the gasoline engine comes in—to grind the feed for the cattle and shell the corn for the sheep and lambs consuming this roughage, and we believe therein lies the road to successful cattle feeding, viz., grinding the grain fed to them. We have fed cattle 25 years with scarcely a miss and in none of these years can we remember that they have lost us money, although in a few seasons they have run very close to the danger line. We have also seen the merits of ground feed verified by our neighbors, and seen cases of whole grain feeding that left the feeder at the end of the season without profit and with a heavy load of disgust at the business. The cost of gasoline in grinding is but a trifle, less than two cents per cwt, with a good engine and grinder, and the time used will not be of much greater length than that taken to shell the corn as some do, or cut up the ears as others do. Another point of advantage a home grinding plant holds is that your feed will be fresh, as you need not grind a large quantity at once

to get sour or bitter, which cattle on full feed are quick to detect, especially if the weather turns warm for a few days. And then you can mix your grain as you please. For instance, our feeding cattle get but one-half as many oats as our milch cows; our horses get the same mixture, but not ground as fine as for the

do on the farm, in the order of importance, is to husk the corn with whatever help you may happen to have. We know of at least two cases where two men ran a husker the past season, shredded the stalks into the barn and secured a good sized crop in good shape. We husked our crop of 4,000 bu, before snow came on

gas engine so eminently fit for a farmer is husking, as it is ready to start when your load gets there, and when the load is husked the engine is stopped and fuel consumption ceases instantly.

And now we want to tell of another quite unusual place where a gasoline engine makes good on the farm and saves at least one hand and considerable time, that is in putting hay into the barn with horse fork or slings. We have a hoist connected to engine by sprocket chain, with sprocket gear or crank shaft of engine with six teeth and one on hoist with 36 teeth, although this can be varied to suit the user's idea of the speed wanted. We think this gear makes the hay move at about twice the speed a team would take it, and yet the motion is so steady and free from jerks and jars that it don't seem as fast as it really is. The hoist consists of two heavy cast iron standards or brackets about four feet apart in which rest each end of a heavy shaft, which has upon it a cast iron drum with flanges, upon which the hay rope is wound. This drum is loose on the shaft but is gripped by a powerful iron band, or clutch, which is operated by a lever which, when pressed forward slightly, causes the clutch to grip the drum, which then revolves and winds up the hay rope. On releasing the lever a coil spring throws it back, freeing the drum, which instantly stops. On returning fork to load the drum acts as a loose spool to play out the rope and, with a return weight on hay car it works fine. If you want to hold the load stationary you can do so by pressing the lever forward just hard enough, and, although it will show a slightly tremulous condition, you have complete control at all times. If the hay car strikes an obstruction of any kind no harm will be done, as the clutch will simply slip around on the drum as it is kept well oiled by an oil cup. By using a rope attached to the lever one man could easily handle the fork and hoist also, but we did not, as we had the extra man with nothing to do after the load was on, as we have a device for distributing the hay in the mow, so he attended to the lever. It don't seem to require very much power; a 5 H. P. engine would do it easily, and possibly a 3 H. P. would.

Then there is the wood to cut, and nothing will buzz wood as good and cheap as a gasoline engine. If we don't have a great deal of standing timber the most of us have the rail fence to move, which always leaves quite a few broken or partly rotten rails which, cut up into the



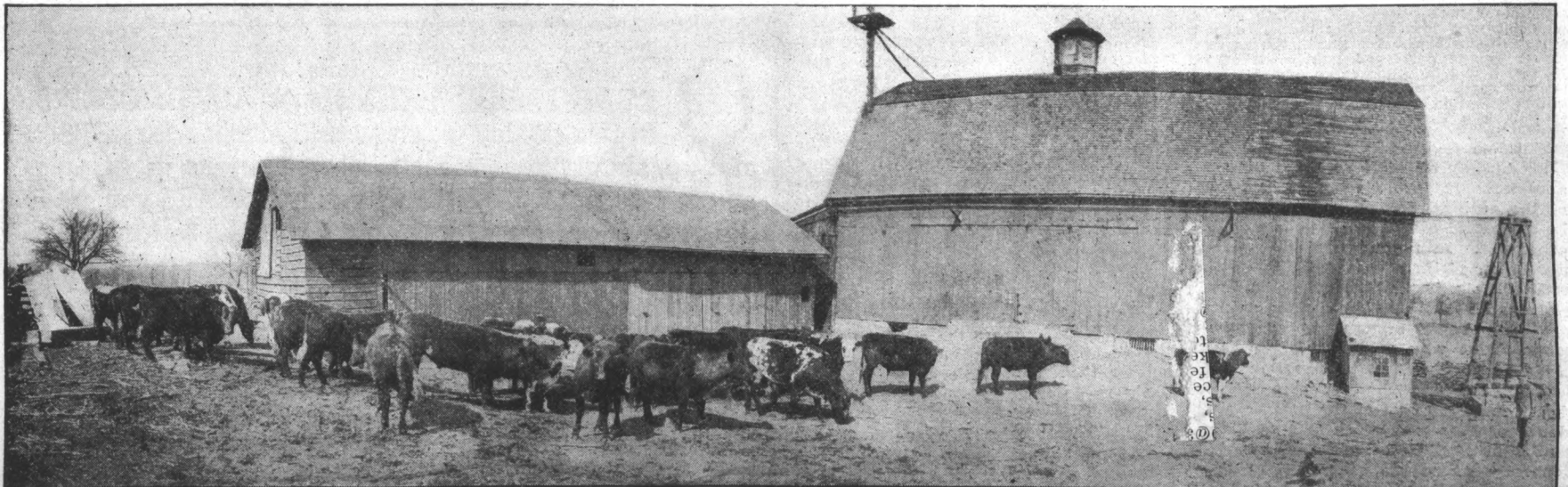
Feeding Barns and Cattle on the Farm of E. & H. Boyd.

cows, while the calves get clear oats ground, and the hogs ground rye, very fine, to mix with the milk and slops. Of course, this could be managed when taken away to a custom mill, but it would be more trouble than the average farmer would be willing to take all through the season. We can grind graham flour, and do occasionally, and can make it very fine, but it lacks something to make it equal to the graham we buy. But for meal for family use the mill has a set of buhrs made especially for that purpose, and we pick out each ear and see that it has no bad kernels and is strictly clean, then shell, fan and grind and you have a product that in eating causes you to forget many little troubles of life.

As a pumping medium a gasoline engine is far in the lead of a windmill, in our estimation, and we have them both that work the same device. A pair of triangles connect by wire cables the engine and windmill, each about 75 feet from the pump, and there are a great many days when the windmill will not pump, but no days when the engine occupies its regular stand and is not engaged in other work that it has failed to do our pumping at call in the six years we have owned it.

The next thing a gasoline engine will

the shocks, except the last 100 bu., with just our regular help for the summer, three men, with an occasional fourth. But three men make a good gang, two to draw the shocks from the field, the other to unload the husked corn and level down the shredded fodder in the mow, and it makes a great deal better way than to have a regular husker come down on you without regard to weather conditions, as the quantity of the fodder depends largely on the amount of outside moisture on the stalks when shredded. If the morning is too damp you can work at something else until more favorable weather conditions prevail, whereas if you had a husking gang it would be a difficult matter to get them to "lay off" on expense, and, as a consequence, the fodder would go into the mow in such a condition as would certainly carry a loss to you. We used a 5 H. P. engine for four years, but the last two seasons have used an 8 H. P. Either engine, with a four-roll husker, makes a good rig, but we think the larger engine a little the best, as it does the work with less exertion and there is no perceptible difference in gasoline consumption. It takes about five gallons per day of such time as we could put in, at a cost of 65 cents. The one thing above all others that makes a



Main Farm Barn and a Bunch of Feeding Cattle on the Farm of E. & H. Boyd, of Eaton County, Michigan.

proper length, make very good summer wood. We have heard of cases where fences which seemed to have outlived their usefulness on the farm were buzzed up and sold in town for enough to buy a good new wire fence to replace them. It has been our experience that we have saved enough wood by cutting up stuff on the farm that would better be out of the way, to pay the interest on the investment in a pretty good engine and buzz saw.

Last spring we baled out 50 tons of hay bale as fast as our hands, not expert at it, could wire—about 25 tons per day—and the engine did the work in good shape.

We belt our grindstone to a pulley on line shaft for grinding our sickles, axes, tools, etc.; also an emery wheel for grinding our plow points and other grinding of that nature.

One of our near neighbors has a 3 H. P. engine which he uses for running a cream separator and washing machine, and I believe the women have the full management of it on washing days, and the young lady of the family is capable of giving many would-be experts pointers on the art of running a gasoline engine. The next and last use we will write about making of a gasoline engine on the farm is on a sprayer for fruit trees, and I am sure many farmers who are in the habit of spraying by hand, if they could see it spray, would say it was the most helpful of any case noted in this article, as it does the work so thoroughly and so easily for the orchardist. We use a 1½ H. P. and run on a pressure of about 120 lbs., although we can run up to 200 lbs.; but 120 lbs. enables us to spray a pretty tall tree and do it thoroughly, standing on the ground. We have two lines of hose of 25 feet each, with two cluster nozzles on the end of two bamboo tubes 10 feet in length, which gives a pretty good reach into a tree, and takes a pretty good sized orchard to keep the rig running all day.

Eaton Co.

E. J. BOYD.

FARM NOTES.

Seeding Other Grasses in Clover.

I have a 15-acre field seeded to red clover which I am going to pasture this summer and having no pasture for next year would like information through The Farmer as to what kind of seed to sow this fall so as to have pasture next year on the same field.

Wayne Co.

C. L.

If this red clover pasture is a new seeding, and is not permitted to seed this year, a good yield of it should live over for pasture next season, although there is considerable uncertainty as to how much of a stand will remain. It is, however, a difficult proposition to seed any other grasses in this with any prospect of success. If timothy seed were sown in August with a disk drill, enough might be gotten into the ground to make a partial stand of this grass the following year, although no great result could be expected from it with the cattle pasturing on the field during the entire summer. However, this would be about the best that could be done, in the writer's opinion, since the prospect of having considerable of the clover live over winter to make pasture next year, is a more attesting one than that of sowing any other seed this fall to make an entirely new pasture next season.

Methods of Handling the Clover Seed Crop.

Will you please inform me as to when is the best time to cut medium red clover to insure the largest yield of seed? Two years ago we pastured with sheep, about six acres of June clover, until the tenth day of June, then clipped it off with the mowing machine. Six acres yielded 36 bushels of seed. One of my neighbors some years ago cut his clover when it was just heading out. He had a large growth but the grasshoppers and clover midge destroyed nearly all of it. I have heard of other cases of total failure of early cut clover. My way is to cut it when in full bloom for hay and if it makes a crop of seed, harvest that. Which is the most profitable way?

Hillsdale Co.

J. A. P.

Six bushels of clover seed per acre was a remarkably good yield for this section of the country, one which will not often be duplicated except under very favorable conditions. In the more northern counties better yields of clover seed have been secured, six bushels being an ordinary yield and as high as 12 bushels or more per acre being secured in exceptional cases. Just why so much larger yields of seed are secured in that section is not fully explained, although some contend that it is on account of the greater prevalence of bees which are said to be essential in fertilizing the blossoms. Undoubtedly where the seed crop alone is figured on, better results will be secured from pasturing it until about the first of

June and clipping it back with the mower, or clipping without pasturing as may be desired. However, where the value of the product as a whole is considered, it is probably more profitable upon the average farm to manage it as noted in this inquiry, taking the first crop for hay and cutting the second growth for seed, providing it fills. However, the hay crop should be cut rather early for best results, and we believe that, one year with an other, more profitable results will be secured where the hay crop is cut during the early part of the blooming period than where it is allowed to stand until the blossoms begin to turn brown, because the earlier the second crop come on for seed, the more likely it is to have favorable weather for filling in the average season, and the clover midge would be no more likely to injure it than it would be a little later. In fact, it would then be later than the crop which is clipped back for seed where no attempt is made.

What to Use with Poultry Manure.

Please advise through The Farmer what to mix with poultry manure to make a fertilizer for farm crops.

Maine.

G. W. ABBOTT.

Poultry manure has about twice the fertilizing value of sheep manure. It is richer in nitrogen and potash than other manures. Absorbents, such as dry earth, or gypsum, or better yet, flats or acid phosphate can be profitably applied.

COMBATING THE CUTWORM.

Noticing an article on the cutworm problem in your issue of April 30, also a treatise on the same subject in a late bulletin from the State Agricultural College, leads me to give my experience with this pest.

My corn last year was planted on a rich clover sod. The soil being a rather loose sandy loam, the ground was plowed deep, the plow being set to run nine inches deep when the point was new. It was also planted unusually deep, because it was feared chickens would help it to come up. The corn was drilled with a two-horse corn planter.

As soon as planting was completed we went over it to pick off some stones and while doing so discovered that we had a record-breaking crop of cutworms. They must have simply swarmed over the field at night, for in the daytime everything that could hide them was liberally patronized. A foot of clover lying on the surface was given a shake and out dropped nine cutworms. From beneath a small mullen that the plow had failed to cover the boys and I took out 67 lively cutworms. And so it went. The hens, that were feared, were on hand digging vigorously, but it was soon discovered that they dug only where some bit of sod or weed showed above ground, and were hunting, not corn, but cutworms. Their work did much to help matters on the front part of the field.

The corn was cultivated before it came up, with a two-horse cultivator, the shills being raised a bit to let loose soil on top of the row, but keep off stones and lumps. As soon as the corn was well up it was cultivated a second time, and here the work of the cutworm was very much in evidence. In some places for a distance of several rods every spear of corn showing above the surface had a square top, as though the field had been pastured by sheep. But the kernel was two inches or more below the cut and the corn didn't seem to mind it at all. Much of it was cut off a second time, yet aside from making it somewhat later the corn was apparently uninjured by the trimming it had received, for I had a splendid stand of corn and not one kernel was re-planted.

But for the storm of wind, hail and rain on August 28, which riddled the fodder and left the corn flat on the ground, I should have had a big yield of No. 1 corn. As it was, the 18 acres yielded 2,400 bushels of ears, but owing to the damage by the storm much of it did not mature properly. Hereafter I shall simply plow deep, plant deep, be careful to use good seed and lose no time worrying over cutworms, no matter how numerous they may be.

On a wet, heavy soil this plan might not prove successful, but where the land is high and dry and the soil has been plowed deep for years the corn will be all the better for being planted deep and neither the crow, cutworm or chicken is likely to do it any lasting injury. Even a crow gets sick of pulling where the spear of corn breaks off each time, letting him tumble over backwards, while the kernel of corn never comes up where he can reach it.

Branch Co.

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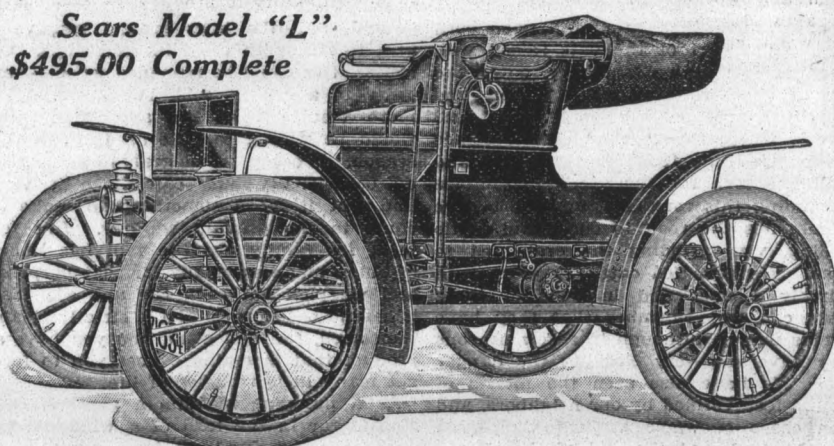
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TAMARACK SWAMP LAND.

I am clearing up 600 acres of tamarack swamp, which fire has been over. Soil is 2½ to 3 ft. muck, part clay bottom, part about a foot of sand, after that muck, then clay. Drainage good. R. R. runs through land, and I have my own switch on it. Am planting five acres to sugar beets and chickory this year. What crops would you advise raising? Would it be safe to put in rye or wheat and seed to timothy or clover, and which would do the best, rye or wheat, clover or timothy? Do you consider this kind of soil good?

Bay Co.

A. W.

After these tamarack swamps are properly drained, in time they make the very best kind of land for all kinds of agricultural purposes. What this land and all other swamp land needs is weathering. The air has been excluded from it so long by its being water soaked that the most of this sort of land is not in fit condition to raise crops at once. The way to improve it is to cultivate it, to stir it, to get the air in so that nature can take her natural method of getting this land in proper condition for growing all kinds of crops. If it is properly drained, and I presume it is, from Mr. A. W.'s letter, I do not see any objection to raising chickory and sugar beets. The probability

LIVE STOCK

INFERIOR MILKING EWES.

Ewes vary widely in ability to produce a strong flow of nutritious milk during the period they are suckling their progeny. The direct reason for this evident variation in milk flow is not easy to determine. It is one of the initial laws of nature that the mother should produce sufficient nourishment for its young to induce rapid bone and flesh formation, but when a number of individuals are kept together it is self-conclusive there is a wide variation in milk production among animals of practically the same breeding and under similar care.

Inferior milking qualities in ewes may be traced to improper feeding previous to parturition. Despite the fact that a ewe may possess deep milking qualities her feed and care during pregnancy would strongly influence her habit to produce a large flow of milk during the suckling period. Many good milking ewes are practically ruined on account of improper

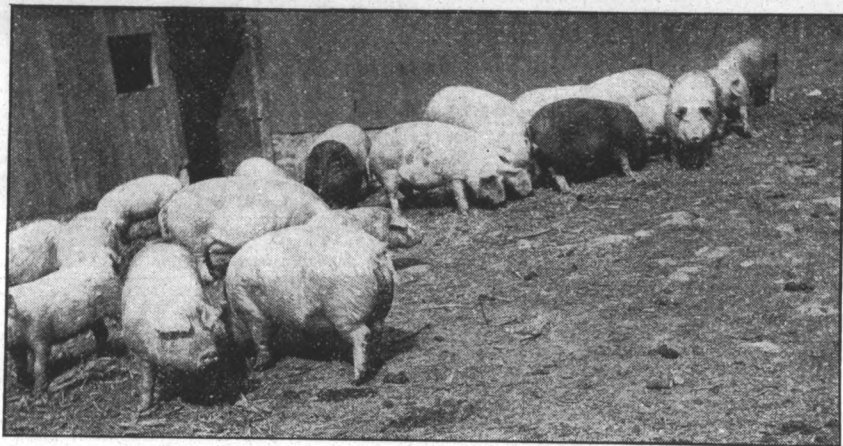


A Good Bunch of Cattle Fed by E. & H. Boyd, of Eaton County, this Year.

is that sugar beets will not be very rich in sugar. Possibly the land is so raw that they will not do well, but this can only be told from experiments. If it is dry enough, I think a crop of corn would be good to put upon this land and then give it thorough cultivation, or if it can be plowed and worked this summer (summer fallowed), then I do not think that there would be very much danger of putting in wheat or rye. Personally, I should prefer to put in wheat instead of rye because it is more valuable and this land ought to be rich enough to raise wheat, or anything else. Now I do not think that anybody can tell just how well a crop will do upon this land. You must experiment. It is too raw and no one knows just exactly what condition it is in until you try and see what crops will grow. Possibly the land is a little sour and needs some lime. All of these things must be learned by actual experience. This kind of soil is also apt to be deficient in phosphorus, and it might be a paying

feeding prior to lambing. It is not infrequent that a flock owner on looking his lamb crop over in the spring notices that some ewes are nursing their young much better than others. The ewes nursing lambs low in vitality and unhealthy in appearance may seem in good flesh but yet lack in ability to produce the essential nourishment to force their young forward as rapidly as desired. Ewes that have been improperly fed prior to parturition fail to respond to proper feeding later and are generally injured permanently.

It is a well established fact that inferior milking qualities in ewes may result from over-production the first season the ewes give birth to young. I have observed instances in my flock where ewe lambs were retained from dams of excellent milking qualities and the first year produce abundance of nourishment for their young, but fail the second season. I am inclined to think that twin lambs are a serious detriment to the milking qualities of yearling ewes and in no few



Some of the 1910 Pork Product on the Farm of E. & H. Boyd, Eaton County.

investment to apply phosphoric acid, and possibly potash also. There isn't any doubt but what there is plenty of nitrogen if it is only available and it will become available when the land has a chance to weather. I am positive that if you would sow timothy this fall, after the land has been worked this summer, you would make a success out of a meadow. I would not sow red clover on this land, but if I wanted a mixed hay, I would sow alsike with the timothy.

COLON C. LILLIE.

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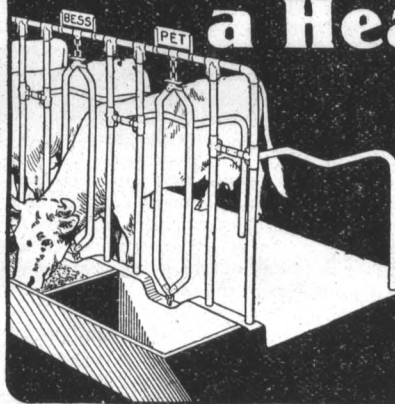


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able characteristic will be perpetuated through the offspring. I have carefully noted individuals in my flock that give evidence of inferior milk flow and wherever their ewe lambs have been retained they have shown more or less of the same habit. Flock owners should carefully study their ewes during the suckling period and note the disposition of each individual in this regard and when discovered an inferior milker should be disposed of as soon as possible.

Shiawassee Co. LEO C. REYNOLDS.

INDIANA CATTLE FEEDERS' MEETING.

Silage Favored as a Roughage for Feeding Steers.

The third annual spring meeting of the Indiana Cattle Feeders' Association was held in the new Stock Judging Pavilion at Purdue University, Lafayette, Indiana, on April 30, 1910. The attendance was exceptionally good, considering the fact that the meeting was held during the season of the year when farmers are all busy with their crops. When President Frank DePuy, of Wabash, called the meeting to order he was greeted by about 200 cattle feeders representing practically every county in the state and also representatives from the neighbor states of Pennsylvania, Ohio, Illinois, Missouri and Kansas.

Mr. William M. Jones discussed the cattle feeding work that has been conducted on his farm in co-operation with the Indiana Experiment Station. He said that this work had demonstrated the practicability of feeding corn silage to beef cattle. Among many other things which Mr. Jones learned from this work is that in winter feeding it does not pay to give the cattle very much roughage. Other things being equal the smaller the feed lot the better. This experiment also demonstrates that the addition of cottonseed meal to the ration increases the profit of the feeding operation.

Mr. Alexander gave a short talk on the outlook for the summer cattle market. He said that in spite of the fact that the market at present is in the worst condition it has been recently, he believes that good fat cattle will bring high prices this summer. He says that the market has slumped recently because there is a heavy run of contract cattle. This run he thinks is practically over and we may look for better prices within the next few weeks.

Mr. H. P. Rusk, of the Experiment Station, reviewed the cattle feeding situation in Indiana and presented the results of the past winter's experimental work. He said there is an increasing tendency to market the crops in such a way that as large a per cent of the fertility as it is possible to retain will be kept on the farm. This tendency is clearly demonstrated by the almost incessant demands from the country for anything in the live stock line that can be fattened for market. In the face of this demand for feeders and the increasing tendency among farmers to market their crops through live stock we are confronted with the fact that there has been a slow but steady decrease in the beef cattle of this state during the last five years. There are two explanations of these seemingly conflicting conditions; first, Indiana has ceased to rank as a producer of beef cattle and is turning her attention more and more to the fattening of cattle produced elsewhere; second, the farmer with only three to five cows, who formerly had a few yearling stockers for sale every spring, is now vealing his calves. One of the most adverse conditions in the Indiana beef cattle situation is that this state is not producing beef cattle in sufficient numbers to be considered as a source of stocker and feeder stuff for her own feed lots. Western steers, too, are not so plentiful as in former years and altogether the prospect for cheap feeders is not very bright. He said this is a condition which he believes Indiana cattle feeders are going to find more and more difficult to meet as the years go by and the time is not very far distant when they will be compelled to produce their own feeders.

He discussed the influence of the scarcity of clover hay on the cattle feeding industry during the past winter and said that one of the best ways to guard against such emergencies is by the erection of silos. The Purdue Experiment Station has been investigating the value of silage as a roughage for fattening steers for several years and enough data have been obtained to justify the statement that when properly supplemented with some nitrogenous concentrate, corn silage is one of the most economical roughages which the cattle feeder can use.

During the last winter the experiments were carried on with three objects in view; first, to make a further study of the influence of corn silage in the ration; second, a study of the influence of different proportions of the supplement in the ration; third, a continuation of a study of long and short feeding periods. Ninety head of steers were used in this experiment, two lots of 15 each and six lots of 10 each. In every case cattle receiving corn silage in the ration made more rapid and cheaper gains than those which did not receive corn silage in the ration. Of the six lots of cattle which were fed 160 days, the lot receiving a ration of shelled corn, cottonseed-meal and a full allowance of corn silage, with what clover hay they would consume in addition to corn silage, made the most rapid gains. The average daily gain of this lot was 2.63 pounds and cost \$9.56 per hundred. They returned a profit of \$18.09 per steer without including the pork made from the droppings.

Where silage was included in the ration two and one-half pounds of cottonseed-meal per 1,000 pounds of live weight daily proved more economical than one and one-fourth pounds of cottonseed-meal per 1,000 pounds live weight. However, this was not true where clover hay was the only roughage used. Owing to market conditions the results of the long vs. short feeding trial were in favor of the short-fed cattle.

NO MARKED SHORTAGE OF CATTLE.

The predicted shortage in market supplies of cattle has thus far failed to materialize. There have been two and a half million cattle at six markets thus far this year, against the same number in 1909. Chicago and other points show increases, but Kansas City's lessened supply serves to even up the receipts as a whole. The cattle were in the country at the time the predictions were made, and it is but another illustration of the unreliability of such forecasts. We are producing live stock over a vastly wider area; the business is in an ever increasingly large number of hands. There may be but few big growers, but there is a host of smaller men whose output in the aggregate is tremendous. Again, we have more people to feed, and even if our export business has fallen off and Argentina and Australia given us some concern in the matter of competition, we are on a plane of high prices in every department of the live stock business, as it affects the consumptive demand. True, our production is less than two years ago; in fact, away below what it ought to be, and what it has been the past decade.

But our argument is this: There can be, in our opinion, no marked shortage in cattle receipts this year. The Southwest and Northwest grassers will be moving freely marketward the next few months. There may be less than a year ago, but every one knows that last year's receipts were surprisingly liberal, and if we do have less this year that does not essentially mean a famine run. Bear in mind the host of small rangemen. They are as the army of Sennacherib in numbers, and their influence is not to be regarded lightly. They will "sweep down" in ever multiplying phalanxes and their combined forces will mean no inconsiderable numbers of cattle. There is, too, lots of native grass and cattle roaming over it, and summer supplies of grass-fed natives will in all probability be fairly good. So much for supplies.

Now what of the market? Are we predicting lower prices? Not necessarily. The market has remained upon an excellent basis the past four months. With a continuance of receipts running, say evenly, with a year ago, and our present industrial and commercial activity, and taking conditions the past four months as a criterion for the next eight (a not unreasonable hypothesis), why should values decline seriously? Why should we predict or expect lower prices? They may come, it is true, but if the live stock industry will be saved from the onslaughts of over zealous investigators, yellow journalism and unfair criticism and calumny we venture to say the course of the market will be such as to yield the producer very fair returns indeed.—Clay, Robinson & Co..

In various sections of the country the spring pig "crop" is only moderate in size because the high prices paid for brood sows induced many owners to sell off their breeding stock.

Recently drivers and gaited saddlers have met with a broader demand at the Chicago stock yards, and at the late special sale buyers paid from \$300 to \$750 per head, and matched carriage pairs were taken at \$600 to \$1,000 for export to Mexico.

KEKIONGA STOCK FARM.

DECATUR, IND.

Importers and breeders of

Belgian & Percheron

Stallions and Mares.



Our last importation arrived last November, and are in a very good condition and of the VERY BEST TYPICAL DRAFT QUALITY. We have over 60 head of Stallions and Mares from two to five years for sale, and we invite prospective buyers to come to our barns where he will find THE IDEAL DRAFT HORSE, of both breeds above mentioned. Our terms are liberal, and every sale is backed up with the best of guarantees. Write, or better—come and see us. Address FRISINGER & SPRUNGER, Decatur, Indiana.

FOR SALE HORSES—Auction Sale of Horses every Friday at 10 A. M. Private Sales daily. A number of draft and farm horses always on hand including some city mares a little pavement sore suitable for farm work. All horses sold are as represented or money refunded. **JOS. GEROU HORSE MARKET.** 475 Grand Ave. Detroit, Michigan.

For Sale—Horses, Cattle, Sheep, Hogs, Dogs or Poultry, nearly all breeds. Strictly exchanged. Southwest Michigan Pedigreed Stock Association, R. E. Jennings, Sec., Paw Paw, Mich.

HARRIS STEEL CHAIN HANGING WOODLINED STANCHIONS AND SANITARY STEEL STALLS. Send for our new catalog which shows photographs of some of the most up-to-date barns in the country. You will be convinced that we make the very best there is at the lowest price. **THE HARRIS MFG. COMPANY.** 816 Cleveland Ave., Salem, Ohio.

BREEDERS' DIRECTORY.

CATTLE.

ABERDEEN-ANGUS.

Herd headed by **UNDULATA BLACKBIRD** ITD 83836, one of the best sons of **PRINCE ITD 50006**, and Grand Champion Bull at the Detroit and Grand Rapids Fairs of 1907, 1908 and 1909. Herd consists of **ECOTAS**, **Blackbirds**, **Prides**, etc. **WOODCOTE STOCK FARM, Ionia, Mich.**

Aberdeen-Angus—Males—Females. Polled Durham both sexes. Devons, male & female. Buy quick at the Clover Blossom Farm, Fort Austin, Michigan.

Ayrshire Bull Calves. Berkshire swine. Eggs for setting. High bred stock. White & Buff Orpingtons, White & Barred Rocks, Light Brahmas, White Leghorns and White Wyandottes \$1 per 15. Mich. School for the Deaf, Flint.

Maple Ridge Farm Breeders and Importers of high class Guernseys. Write us your wants. E. & J. T. MILLER, Birmingham, Mich.

FOR SALE—Young herd of Holstein calves—the oldest established herd in Ind. W. C. JACKSON, 715 Rex St. South Bend, Ind.

TOP NOTCH HOLSTEINS. Top Notch registered young Holstein Bulls combining in themselves the blood of cows which now hold and have in the past held World's Records for milk and butterfat at fair prices. **WATKINSON FARMS CO., Howell, Mich.**

HOLSTEIN FRIESIANS—Bull calves. Herd headed by **Canary Mercedes Royal King**. W. B. Jones, Oak Grove, Mich.

For Sale—Eight choice registered Holstein Sires, ready for service. The bunch at a bargain. William B. Hatch, Ypsilanti, Mich.

5 Holstein Service Bulls For Sale. Any one of which have breeding and individuality that qualifies them to head any herd. Bull calves and a few good cows. **L. E. CONNELL, Fayette, Ohio.**

HOLSTEIN—Best calves from two best families of the breed. C. D. WOODBURY, Lansing, Michigan.

HEREFORDS:—Both sexes and all ages for sale. Also Poland-China hogs. **R. E. ALLEN, Paw Paw, Mich.**

LILLIE FARMSTEAD JERSEYS We have some splendid young bulls for sale. Some of them are old enough for service. They are from cows with records of 800 to 425 pounds of butter last year. Write for description and prices. **COLON C. LILLIE, Coopersville, Mich.**

JERSEY BULL CALF born October 4th '09. Dam gave 9,888 lbs. milk in one year, test 5 to 5 1/2%. Sire's dam's record 10,060 lbs. milk in 10 1/2 months test 5 1/2-10 percent. The Murray-Waterman Co., R. D. 6, Ann Arbor, Mich.

FOR SALE—12 registered Jersey Cows of St. Lambert and Island blood, from 2 to 10 years, all fresh or nearly so. Price \$100 each if taken at once. C. A. Bristol, R. F. D. 5, Fenton, Mich.

AUCTION—Closing out Linden Lea Jersey Herd, **JUNE 14th.** Catalog free. **H. S. CHAPMAN, Cassopolis, Michigan.**

FOR SALE—Jersey Bull Calves from 3 to 9 mos. old. Fine thirty fellows and from extra good cows. **A. Newman, Marlette, Mich. R. F. D. No. 1.**

BUTTER BRED JERSEY BULLS **CRYSTAL SPRING STOCK FARM.** Silver Creek, Allegan County, Michigan.

Register of Merit Jerseys. Official yearly records. **T. F. MARSTON, Bay City, Michigan.**

NORTHERN GROWN JERSEYS

WITH BIG MILK RECORDS. TUBERCULIN TESTED BY STATE VETERINARIAN. **ROYCROFT FARM, Sidaaw, Mich.**

BIDWELL STOCK FARM.

FOR SALE—10 Reg. Shorthorn Bulls. All good, reds and roans, from 12 to 24 months old, from the best of breeding at \$75 to \$125 each. Some of them Scotch and Scotch-topped, of the herd heading type. Also, young cows and heifers, all ages. Fifty head in herd. Farm—Two blocks from Lake Shore Station. **L. I. BIDWELL, Tecumseh, Michigan.**

DAIRY BRED SHORTHORNS—No stock for sale at present. Visitors welcome. **J. B. HUMMEL, Mason, Mich.**

SHEEP.

Oxford-Down Sheep and Polled Durham cattle for sale. **A. D. & J. A. DEGARMO, Mulr, Mich.**

OXFORD DOWNS A few good field rams for sale. **H. J. De GARMO, R. No. 1, Clyde, Mich.**

PARSONS OXFORD RAMS also registered Hornless Delaines grade X \$15; XX \$20; XXX \$25. **Romeyn C. Parsons, Grand Ledge, Mich.** Michigan's largest breeder of good sheep.

SHROPSHIRE HALL STOCK FARM

Will import one hundred yearling ewes and 15 rams in June for Michigan and the same for Boise, Idaho. Branch of this Farm. Will make a fair price on yearling ewes or rams, also on some aged ewes with lambs at side, for 60 days. **L. S. DUNHAM & SONS, Concord, Michigan.**

130 Reg. Rambouillet Ewes for sale, descended from the best flocks and bred to a pure Van Honeoye and a ram sired by a Gilbert ram and imported dam. All in perfect health. In lots to suit buyers—none reserved. **J. Q. A. Cook, Morrice, Mich.**

HOGS.

LARGE ENGLISH BERKSHIRES.

Have a fine lot of spring pigs, both sexes. The type for profitable pork production. Vigorous and strong and of best blood lines. Satisfaction guaranteed. **F. A. BYWATER, Memphis, Mich.**

HUPP FARM BERKSHIRES!

WON 159 PRIZES IN 1909. Stock of both sexes and all ages for sale. Breeders of Guernsey Cattle, M. B. Turkeys, Barred Rock Chickens, Pekin Ducks. **GEO. C. HUPP, Mgr., Drawer A Birmingham Michigan.**

BERKSHIRES Unexcelled in breeding. Selected boars, sows and gilts. Choice fall pigs. **T. V. HICKS, R. No. 11, Battle Creek, Mich.**

BERKSHIRES of the most fashion a ble type and strains. **C. S. BARTLETT, Pontiac, Mich.**

NORTHERN GROWN BERKSHIRES.

ROYCROFT FARM, Sidaaw, Mich.

A DAMS BROS. Litchfield, Mich., breeders of Improved Chester White and Tamworth swine. Pigs, either breed, by 1st prize State Fair winners. Buff Rock, Buff Wyandotte eggs \$1 per 15; W. Orpington \$3 per 15.

Berkshire—A few choice fall gilts bred for early farrowing and a choice lot of Spring Pigs with prices right and the right breed. **A. A. Pattullo, Deckerville, Mich.**

Improved Chesters—Sows bred for Aug. and Sept. farrow. Choice March and Apr. farrow, either sex also W. Wyandotte Eggs \$1 for 15. **W. O. WILSON, Okemos, Mich. (Both Phones).**

PURITAN HERD OF CHESTER WHITES The peer of any in America. Spring pigs for sale. **WILL W. FISHER, Watervliet, Michigan.**

Durocs For Sale—A few fall gilts bred for summer farrowing. Also a few spring pigs. **M. A. BRAY, Okemos, Michigan.**

DUROC JERSEYS. **CAREY U. EDMONDS,** Hastings, Mich. Nothing for sale at present.

DUROC JERSEY SWINE. Shepherd Dogs. B. P. Rock eggs, \$1 for 15. **J. H. BANGHART, Lansing, Mich.**

WALNUT HILL FARM Herd of Durocs. Bred sows all sold. 35 fine fall sows, 35 fine fall boars ready for service, 100 spring pigs to date. Write J. C. Barney, Coldwater, Mich.

O. I. C. bred sows all sold. Have a few boars still on hand. **GEORGE P. ANDREWS, Danville, Mich.**

O. I. C.—A few bred sows. Orders booked for spring pigs from very choice stock, pairs not akit. **S. J. COWAN, Rockford, Michigan**

O. I. C. REGISTERED PIGS, 10 to 12 weeks from World's Fair winners. **Glenwood Stock Farm, Zeeland, Mich. Phone 94.**

O. I. C.—Orders booked for spring pigs from State Fair winners. **C. J. THOMPSON, Rockford, Mich.**

30 P. C. Fall Pigs—by two champion boars. Booking orders for weaned pigs by 10 different boars. **WM. WAFFLE, Coldwater, Mich.**

MULE FOOTED HOGS—Greatest vitality of all breeds. All ages for sale from 5 big boars. Send stamp for information. **J. H. DUNLAP, Williamsport, Ohio.**

HEAVY BONED POLAND-CHINA PIGS at reasonable prices. Eggs from big, business Barred Rocks \$1 per 15. **ROBERT NEVE, Pierson, Mich.**

MICHIGAN'S GREATEST HERD of big Poland-China Hogs. Big Bred, Long Bodied, Big Litters. The farmers' hog. A bigger, better and more prolific Poland-China. Write for what you want. Bell phone. **J. C. BUTLER, Portland, Mich.**

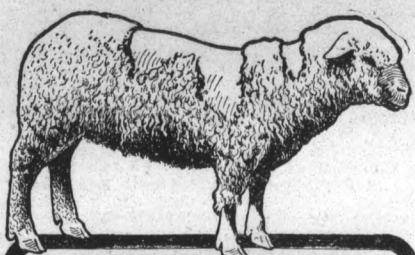
FOR SALE—4 P. C. boars ready for service. Eggs for hatching & prize winning Regal White & Columbian Wyandottes, Zach Kinn, Three Oaks, Mich.

Poland Chinas—Boars, Gilts and Pigs of quality at the right price. **B. M. WING & SON, Sheridan, Michigan.**

POLAND-CHINAS—Booking orders for spring pigs. Nothing else to offer. **WOOD & SONS, Saline, Mich.**

Large Improved English Yorkshires.

The hogs that make good. September gilts bred to farrow next August or September. Spring pigs of either sex. Pairs not akit. Satisfaction guaranteed. **COLON C. LILLIE, Coopersville, Mich.**



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**A DIP THAT DOES THE WORK
WITHOUT INJURY**

**TO THE ANIMAL OR FLEECE
NO BURNING OF THE FIBRES;
NO STAINING; NO POISONING;
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**The Great French Veterinary Remedy.
A SAFE, SPEEDY & POSITIVE CURE.**

Prepared exclusively
by J. E. Gombault, ex-
Veterinary Surgeon to
the French Government
Stud.



SUPERSEDES ALL CAUTERY OR FIRING.

Impossible to produce any scar or blemish.
The safest best Blister ever used. Takes the
place of all liniments for mild or severe action.
Removes all Bunches or Blemishes from Horses
or Cattle.

As a **HUMAN REMEDY** for Rheu-
matism, Sprains, Sore Throat, etc., it
is invaluable.

WE GUARANTEE that one table-
spoonful of Caustic Balsam will produce
more actual results than a whole bottle of any
liniment or spavin cure mixture ever made.

Every bottle of Caustic Balsam sold is
warranted to give satisfaction. Price \$1.50
per bottle. Sold by druggists, or sent by ex-
press, charges paid, with full directions for its
use. Send for descriptive circulars, testimo-
nials, etc. Address

THE LAWRENCE-WILLIAMS COMPANY, Cleveland, Ohio.

NEWTON'S HEAVE COUGH, DISTEMPER AND INDIGESTION CURE

The Standard Veterinary Remedy.
20 years sale. Send for
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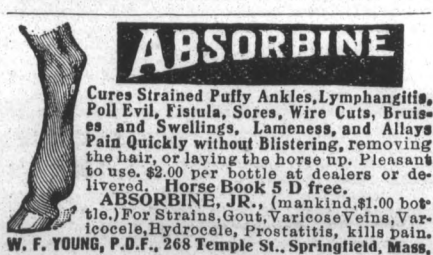


Makes the horse sound, stay sound

DEATH TO HEAVES

The first or second \$1.00 can cures. The third can
is guaranteed to cure or money refunded.
\$1.00 per can at dealers, or express prepaid.

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ABSORBINE

Cures Strained Puffy Ankles, Lymphangitis,
Poll Evil, Fistula, Sores, Wire Cuts, Bruises
and Swellings, Lameness, and Allays
Pain Quickly without Blistering, removing
the hair, or laying the horse up. Pleasant
to use. \$2.00 per bottle at dealers or de-
livered. Horse Book 5 D free.

ABSORBINE, JR., (mankind, \$1.00 bot-
tle.) For Strains, Gout, Varicose Veins, Var-
icose, Hydrocele, Prostatitis, kills pain.
W. F. YOUNG, P.O.F., 268 Temple St., Springfield, Mass.

BREEDING PURE-BRED SWINE.

The Breeder as a Salesman.

The highest financial success in breed-
ing pure-bred swine depends, in a large
measure, upon the ability of the breeder
to sell his stock at a remunerative price.
Many of the best animals sell for much
less than their actual value, simply be-
cause their breeders are not first-class
salesmen. A first-class animal will sell
itself, but if the breeder is a good sales-
man the exercise of this one talent will
often result in his securing a much larger
price for the animal. Some very suc-
cessful breeders are poor salesmen. Some
of the most prominent money-makers in
the trade have never become prominent
as constructive breeders. Men are very
scarce who have achieved the two-fold
success as breeders and salesmen.

A good salesman does not allow his
commercial cleverness to dull his moral
senses and sell inferior animals far above
their actual worth, though this may fre-
quently result through no studied effort
of his own. While the experienced breed-
er often recognizes at once an inflated
price for an inferior animal or a low
price for an animal of outstanding excel-
lence—still the intrinsic value of breeding
animals is, always has been, and always
will be more or less vague and intangible.
The most president of the prophets are at
sea when they are asked to estimate the
value of a young breeding animal. In
fact, there is no way of telling when a
seller is securing an inflated price for the
best class of young breeding swine. How-
ever, on the other hand, there are many
grades of inferiority and also of superior-
ity, and when these are multiplied it is
evident that unless the animal is a real
"scrub" or an unmistakable winner there
can be no set standard, which can be used
in estimating its actual value. One thing
is certain, more pure-bred swine are sold
below than above their true value. The
fact that speculators can buy animals for
low prices from breeders and sell them
for many times what they paid the breed-
ers for them is very strong evidence that
they possess better ability as salesmen
than the men who bred the animals.

Only a few men are natural salesmen,
but every man can acquire a knowledge
of selling stock that will prove of incal-
culable value to his business. Any man
can sell good stock for absurdly low
prices, but it requires an intelligent man
who is a close student of human nature
to get the last dollar represented in the
value of the animal he is selling. Good
salesmanship can be used in compiling
catalogues and writing his advertising
matter, in correspondence and in talking
the business, face to face with buyers.
You should make a study of the art of
selling your stock. Make a study of each
letter and of each visitor. You will find
that fully as much of your success will
depend upon your ability to obtain good
prices for your animals as it will upon
your ability to produce them.

Never advertise something for nothing
or quote an absurdly low price for good
breeding stock. Advertise persistently
and liberally as the size of your herd and
the quality of your stock will warrant.
Be bold and conservative. Have exactly
what you advertise and be ready to de-
liver the stock when promised. As more
than one-half of the sales of pure-bred
swine are mail-order sales it is very nec-
essary that the breeder be a good letter
writer and send out well written letter,
reinforced by attractive stationery. An-
swer every inquiry as promptly as pos-
sible. Invite personal inspection, de-
scribe your sale stock accurately, keep an
exact copy of every letter sent out and to
this attach the inquirer's letter. Be brief
and concise in all of your letter writing.
There is no reason why a breeder should
not own a typewriter and send out as
good appearing letters as a business firm.
A pleased customer is a fine advertise-
ment and you should try and adjust every
complaint in a satisfactory manner, even
though you may not be entirely to blame
for the trouble. By not over-describing
the animals the complaints will be very
few and far between. Always hold a
bred sow until you are sure that she is
safe with pig, for this is one of the most
proud sources of trouble between breeder
and buyer and a matter that is always
difficult to adjust to the entire satisfaction
of both parties.

Human nature is largely the same
wherever we find it and in no matter
what line of business we are engaged. If
something is bought and good money paid
for it and it fails to turn out as the buyer
had figured it would, then he is dissatis-
fied. Dissatisfaction takes various forms
with various men. Some lose their rea-

son entirely and demand damages far be-
yond all reason. Others get dissatisfied
and leave everything to the seller to ad-
just. Then again, there are many honest
buyers who merely want what is coming
to them and are willing to adjust their
troubles in a quiet way and on an equi-
table basis. Some buyers seem to be
looking for trouble and are always claim-
ing large damages if they do not get
something for nothing. To protect him-
self from such buyers the breeder should
fortify himself in case such buyers make
an effort to impose upon him conditions
which were not contemplated when the
original deal was made. It is one thing
to be seeking a good bargain, but quite
another to be seeking one with the aid of
questionable methods.

The public sale is an excellent means
of disposing of pure-bred breeding swine.
The sale should be well advertised in the
best farm and live stock papers circulat-
ing in your own vicinity and in adjoining
localities. These papers have your inter-
ests at heart and will do everything with-
in their power to make your sale a suc-
cess. They know that if your sale is a
success they will be more than repaid by
the larger amount of advertising you will
throw their way in the future as your
business expands. This is not a matter
of sentiment but hard business principles.
Look over the leading agricultural papers
that carry the same business advertise-
ments year after year and you will realize
the important factor they have been in
the development of practically every ad-
vertiser's business.

Engage a good auctioneer before you
claim the date for your sale; all of the
best men are booked many days ahead.
The auctioneer must be a man that is a
thorough judge of individual merit and
also one who is acquainted with the blood
lines of the breed he is selling. It is a
mistake to engage a local auctioneer who
might be a good seller in ordinary sales
but who is not acquainted with the pure-
bred sale business. An expert auctioneer
travels in all parts of the country and has
an acquaintance among breeders that will
prove very valuable in attraction to your
sale.

Combination sales have not proven as
satisfactory as breeders' individual sales,
principally because they attract a crowd
of buyers who are looking after a cheaper
class of animals. Of course, when two or
three breeders live in one locality they
many times find it very convenient to
hold a combination sale, especially when
they have more animals on hand than
they desire to keep over.

Present only good stock that is in good
flesh at the public sale. Flesh and condi-
tion in the sales ring, the same as in the
show ring is an important factor in show-
ing the animal to its best advantage.
Have every arrangement made early and
plan to keep the crowd in good humor
and have competent help to look after the
stock so that you will have time to en-
tertain your visitors to the best advan-
tage. Never make a guarantee that you
will not be perfectly willing to live up to.
Have your pedigrees ready to hand over
with every animal that is sold. If there
is any one thing that pleases the buyer
it is to have the pedigree and transfer
promptly handed over as soon as he set-
tles for his stock.

New York. W. MILTON KELLY.

LIVE STOCK NOTES.

D. Hereley, of McHenry county, Ill., is
feeding about 300 hogs and finds it highly
profitable to purchase liberal quantities
of skim-milk from the condensed milk
factories close by at the low price of ten
cents per per eight-gallon can, using from
240 to 400 gallons every day. He mixes
heavy wheat middlings with the milk, and
results are much better than are ob-
tained with straight corn rations. Gains
in weight are made more economically,
especially when milk is warmed. He also
feeds potatoes liberally, the price having
fallen to 15c a bushel, while a year ago
it was around \$1.25 a bushel. Mr. Hereley
last summer went to the southwestern
part of Iowa, where the corn crop was
drowned out, and purchased 500 shoats
that averaged about 115 lbs., at a cost of
\$7.50@7.65 delivered, there being quite a
number of sows in the lot old enough to
breed. He bred them and sold them to
neighboring farmers for 11c per lb.

In a recent week Chicago received 16,-
500 calves, largely from dairy regions,
breaking all former records. Milk is a
valuable asset with the dairymen these
times, and calves are apt to be marketed
prematurely. It seems a pity that the
better grades of calves should not be con-
verted by stock feeders into beef cattle,
for the supply in the future promises to
be greatly short.

Reports from Richland, Iowa, state
that because of the late spring the
preceding two years, many farmers bred
their sows later than usual this year, and
consequently the pigs were born late. This
year March chanced to be an ideal month
for farrowing, and farmers who had their
pigs born in that month were extremely
fortunate.

LIGHTNING

kills and maims more human
beings, destroys more property
and stock than all cyclones, tor-
nadoes and floods combined. It
causes 75 per cent of all fire losses
according to official record.



**Professor
West
Dodd's
Wonderful
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ESTABLISHED 1843.

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39 to 45 Congress Street West, Detroit, Michigan.

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CHICAGO OFFICE—1736 First Nat'l Bank Building.
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DETROIT, MAY 21, 1910.

CURRENT COMMENT.

How Co-Operative Organizations Develop.

In the year book of the Department of Agriculture for 1909, which is just out, appears some data with regard to co-operative farmers' organizations or selling associations which substantiates our oft repeated contention in these columns that to be most successful such organizations should be based upon community production of some special product. As a result of the investigations of the department, the fact is mentioned that such special crops as the cranberry, produced largely in the east, apples from Hood River, Oregon, vegetables from Yuma Valley, Arizona, celery from Florida, cantaloupes from Tennessee, onions from central and western Texas, peaches from Georgia, etc., are successfully marketed in a co-operative way by their producers in these various sections of the country. As an indication of the development of co-operative selling in various sections of the country, it is stated that in the state of Colorado alone, there were in 1907 at least 33 such organizations. This data also substantiates our contention that such local organizations can be federated for their larger mutual benefit when they become sufficiently numerous, reference being made to a number of California associations having united to form larger bodies through which sales are made, while the local organizations pack and load the produce for shipment. Reference is also made to two general produce exchanges which have been conducted successfully for a number of years, by the truck growers of the peninsula lying between the Chesapeake Bay and the Atlantic ocean. Two of the numerous advantages of this method of selling which are emphasized in this comment are the better grade of fruit and vegetables which are placed upon the market and the command by their producers of a greater influence in the market on account of the large quantities of single products controlled by a single authority.

The associations of grape growers and the example of the single produce association for the marketing of potatoes, as well as the co-operative creameries and cheese factories now operated in Michigan, demonstrate both the practicability and utility of this method of marketing. May we see, in the near future, the

growth of co-operative enterprises which has been mentioned as having occurred in other sections of the country, in our own good state of Michigan.

Notwithstanding the The Shortage of predictions which are Beef Cattle. coming from market centers to the effect

that sufficient fat cattle will come forward during the summer and fall so that no alarming shortage to supply the demand of the trade will be felt, it is freely admitted that there is a very considerable shortage in comparison with recent years. This means that consumption will be sufficiently curtailed to make supplies adequate to the demand. It also means that meats have become so high in price that deficiencies in our supply may, if necessary, be supplied from other beef-producing countries. It also means that the average farmer can afford to devote a little serious thought to the situation and its probable future outcome.

With the gradual limitation and breaking up of the big western ranges, and the consequent increase in our western population through the greater development of general agriculture in that section has come an inability on the part of western cattle breeders to supply the cattle-feeding states east of the Mississippi river with feeding steers at prices which they can afford to pay, unless record prices for finished beef are to be maintained. At the same time there has been a reduction in the number of fat cattle which come to our big market centers from the west. In the light of these conditions it appears to be fairly certain that the supply of beef from that source will not again be sufficiently plentiful to keep the market price of beef animals down to a point which will make it unprofitable to raise beef animals on the farm, as was the case during the halcyon days of the bonanza cattle kings. Thus it would seem that the question of our future beef supply lies with the farmers who have heretofore produced it only as a side issue and because they must keep some cows for home use, rather than as a staple product upon which they figured as a source of cash income.

If beef production comes to be looked upon as a profitable department of production upon the average small farm, it will mean an era of better breeding and better feeding. Unquestionably, with better breeding and better feeding as the general rather than the exceptional practice any present or prospective shortage in our supply of beef can be obviated with little more outlay in feed or labor and correspondingly increased profits on the average small farm. This in turn will cause a revival of interest in the improved strains of general purpose and beef cattle. When to these benefits is added the important consideration of conserving soil fertility, the cattle situation becomes one which should be carefully studied by every farmer who is or might profitably be even a small producer of beef cattle.

The old mother goose A New Use for prophesy regarding the Cement. wenders of modern invention and development which closed with the couplet,

"Iron on water shall float
As easy as a wooden boat."
was fulfilled long ago. Indeed, iron, in common with other heavier-than-air materials now floats skyward in our atmosphere, bearing man in bird-like flight in the wonderful aeroplane. In the meantime, another common material familiar to us all has found an adaptation in the building of boats, which not only float upon the water, but transport heavy loads. A recent dispatch states that the Panama Canal Commission has just launched a big barge built of re-inforced concrete. While this boat weighs 60,000 pounds it is said to be lighter than a strongly constructed wooden boat and has the advantage of being more durable and better adapted to use in the tropics, since it is unaffected by sea worms and marine vegetation does not adhere to it as to boats built from other materials. Truly, modern methods of construction excel in the permanence as well as the utility of the product.

OUR GRAND RAPIDS BRANCH.

As mentioned in our issue of May 7, we have arranged with Mr. H. J. Slade to take charge of our branch office at Grand Rapids, located at 5 and 6 New Hawkins Building, Second Floor. Mr. Slade is in every way well qualified to fill such a position, having had several years' experience in subscription work. As manager of our office in Grand Rapids, he will be ably assisted by his son, Clifford. Mr.

H. J. Slade will be on the road much of the time soliciting subscriptions, appointing agents and local correspondents in territory not now thoroughly covered.

With Mr. Slade's natural ability and that which he may acquire in working in the interests of the Michigan Farmer, we



H. J. SLADE,
Manager of Grand Rapids Branch.

know he will add a very large number of new readers to the thousands we now have in that territory. We trust our new and old friends will give him all the assistance in their power to make his efforts most successful.

ANNUAL GOOD ROADS CONVENTION.

The third annual convention of the Michigan State Good Roads Association was held in Grand Rapids on Thursday, May 12. There was a large attendance at the convention and it was considered an encouraging feature, by those who are most interested in the cause of good roads for Michigan, that a large percentage of those in attendance were farmers.

After the usual opening features of such a convention, those in attendance were welcomed to the city by Assistant City Attorney Ferguson, who expressed the city's interest in the association's work. Hon. Philip T. Colgrove, of Hastings, vice-president of the association, responded, saying that what is needed is not merely advocates of good roads, but men who will do things to secure them, who will go home and arouse their neighbors to action to convert the sandy highways into good roads that will contribute to the farmer's prosperity.

President Wm. W. Todd, of Jackson, delivered a short but pointed address in which he called attention to the organization of the association a little more than four years ago, and the work which it has done since that time. He believes that with her natural resources of road building material, Michigan should have the best roads of any state in the union, but was sorry to say that it now falls far short of having them. He mentioned the fact that 60 per cent of the automobiles manufactured in the country are made in Michigan and that we are third in the output of other road vehicles, in view of which he asked the pertinent question, "Why should we be behind other states, in building up good roads?" He commended the present administration and the recent legislatures of our state for the laws which have been enacted for the improvement of our highways. As a further means of improving our highways without increasing the burdens of taxation, he advocated the utilization of the prisoners at Jackson, Ionia and Marquette in the quarrying and crushing of the rock which is accessible from these institutions, by means of which it could be sold to cities and townships at a price which would be cheaper than gravel, quality considered; while the men now imprisoned in the various county jails could be utilized in the work of road building in these various counties. This plan he asserted would not only result in a great improvement of our highways, but would also tend to lessen petty crimes by men who think little of a jail sentence, but less of hard labor of this character. He mentioned the desirability of road signs for the convenience of travelers as one of no small importance. In addition to the question of state aid in highway building, he believed that we should take up seriously the matter of national aid in improving of highways and advocated the appointment of a committee on legislative affairs to this end.

Governor Warner expressed his deep interest in a good roads movement which in Michigan is still in its infancy, but growing. He mentioned the fact that in 1906 the state expended \$26,000, which sum has increased annually until this year it reached \$200,000, mostly for rewards for the building of good roads in counties and townships according to state specifications. He believes the time will soon come when the state will spend three or four times this amount, which will be possible with a tax of less than 10 cents on each \$1,000 valuation. He mentioned the different attitudes of the people toward good roads in different sections, noting the fact that one eastern Michigan county this spring voted to bond for \$50,000 for road building, while his own township of Farmington voted \$3,500 for the same purpose this spring.

Herbert A. Knott, president of the board of trade, expressed the sympathy of the organization which he represented, with the movement, and favored the extension of government aid. He also advocated the taxing of automobiles for the purpose of aiding in road building.

Herbert F. Baker, chairman of the executive committee of the state grange, said that his county of Cheboygan now has 35 miles of good roads as the result of agitation began eight years ago. He approved the idea of taxing the automobiles and favored government aid and a larger degree of state aid.

N. P. Hull, master of the State Grange, dwelt upon the importance of interesting the farmers of the state in the good roads movement. He declared the sentiment among the farmers of Michigan would be much more favorable than formerly and believes that the time is ripe to push the campaign among them, since they are realizing more than ever before how important good roads are to them. He declared the State Grange to be in favor of the movement and that it is doing all it can to help it along educational lines.

Hon. T. A. Ely, state highway commissioner, endorsed the idea of using prison labor in road building and particularly in crushing stone for that purpose. He stated that the applications for state aid have come from 60 counties in the state and that since state aid was offered, 525 miles have been built through the aid of the state reward plan, which the commissioner declared to be evidence that the present law is a good law. He predicted that the future would see a rapid increase in this movement.

Hon. Robt. D. Graham said that 12 to 14 miles of good roads have been built in the Grand Rapids district in three years.

Representatives of the automobile industry pledged their active support and co-operation to the good roads movement and the plan of taxing automobiles took definite form in a resolution offered by Alvah W. Brown, purposing to tax automobiles 25 cents per horse-power, the money to go into the good roads fund of the county in which it is paid. It was pointed out, however, that such a measure would be unconstitutional as it would be in the nature of a special tax, and the matter was referred to the legislative committee to see what could be done about it.

New officers of the association were elected as follows: President, Philip T. Colgrove, of Hastings; vice-president, N. P. Hull, of Dimondale; secretary and treasurer, Thomas M. Sattler, of Jackson. Former Presidents Horatio S. Earle and Wm. W. Todd will act with the officers on the legislative and executive committees.

HAPPENINGS OF THE WEEK.

Foreign.

Col. Roosevelt arrives in London this week where he will represent the United States at the funeral of King Edward. Rest has completely restored the Colonel of the attack of bronchitis contracted in Norway.

No satisfactory reports are coming of the trouble between Ecuador and Peru but all news indicates that the forces of the two countries are in the field, making preparations for war. No engagement of importance have taken place.

The steamer Venus, which left New Orleans a fortnight ago with arms and ammunition for the Madriz forces in Nicaragua is reported to have made harbor and will probably be successful in delivering her munitions of war. An engagement is expected in a few days between the provisional troops and those of Madriz, the two armies now are facing each other. Protest was made to this government for allowing the ship to clear harbor at New Orleans, officials being informed of the purpose of the trip of the vessel.

The English parliament in session last week, paid tribute to King England VII, and passed resolutions of condolence and congratulations to King George V.

The Canadian navy which has been in contemplation for some time, will be built in Canada. It is the purpose of the government to establish a large ship building plant for the purpose. The navy will be started by the construction of ten war vessels.

National.

Last Friday Theodore Roosevelt delivered a lecture on "The World Movement," at the University of Berlin in the presence of Emperor William. Mr. Roosevelt received from the institution the honorary degree of doctor of philosophy.

James W. Van Cleave, ex-president of the national association of manufacturers and famous as a fighter of labor boycotts, died in St. Louis, Sunday.

A battery of five boilers exploded at Chewton, Pa., killing three and injuring six other persons.

This week the United States Supreme Court is considering a dispute over the boundary between Maryland and West Virginia along the Potomac river, Maryland claiming that the line is the high-water mark on the south bank of the stream, while West Virginia contends that the low-water mark is the proper division. The description was written in Latin back in 1620 and is not clear.

With the hope that business will be well enough in hand to allow the members to go home then, congress is now anticipating adjournment about the first of July; no vote has, however, been taken on the matter to date. Plans involve the holding of night sessions to finish the vast amount of necessary work. No administration bills of importance have as yet been passed, the work thus far being largely in the hands of the committees.

A series of earthquake shocks occurred at Los Angeles, Cal., and vicinity last Sunday morning. Damage to buildings was done in many sections although the destruction of property was not particularly serious at any point. No casualties were reported.

Counsel for the United States in a case against Great Britain involving disputes (Continued on page 549).

Magazine Section

LITERATURE
POETRY
HISTORY and
INFORMATION

MICHIGAN FARMER
AND LIVE STOCK JOURNAL
PUBLISHED WEEKLY
ESTABLISHED 1843

The FARM BOY
and GIRL
SCIENTIFIC and
MECHANICAL

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

A VISIT TO BARBARA FRITCHIE'S TOWN.

BY T. C. HARBAUGH.

YOU might almost count on your fingers the boys and girls of America who have not heard of Whittier's war-time heroine, Barbara Fritchie. Her name and fame have crossed the seas and are known wherever there is a written language. The "Barbara Fritchie" of the good Quaker Poet has been declaimed in many a school and will ever be a favorite with young elocutionists. Though she went to her rest years ago and sleeps in a quaint little cemetery in her cherished town, "green-walled by the hills of Maryland," many a tourist seeks the spot of her sepulcher and parts the long grass in order to read the simple inscription on her modest headstone. There are graves better cared for in nearly every cemetery and loftier monuments than the one that marks her resting place; but it is a much sought-for place and few visit "Frederick town" without making a pilgrimage thither.

First, a word about old Frederick, to which city "dame Barbara" has given undying fame. The place lies in western Maryland, in the heart of the beautiful Monocacy Valley and the Catoctin Mountain on the west and Sugar Loaf Mountain on the east. It is circled entirely by mountains whose summits stand out against the sky, the whole forming a landscape fitted for the brush of the greatest artist and the inspiration of the finest poet. In 1745 the "Village of Frederick" was laid out by people who were entranced by the beauty of the location and was named for Frederick, Prince of Wales. It was already a noted place when General Braddock set out on his ill-fated expedition to the Monongahela, for he rested there a spell, or until the teams secured by Benjamin Franklin could join the army. Washington, then a rising young officer of the British army, accompanied Braddock, and he is said to have danced with the belles of Frederick the night before the journey through the wilderness.

It is now a city of ten thousand souls, with modern streets and buildings and a seat of much learning, having several seminaries and colleges. It is a recorded fact that prior to the Declaration of Independence the citizens of old Frederick assembled and adopted the following resolution: "That what may be recommended by a majority of the Congress equally delegated by the United Colonies we will, at the hazard of our lives and fortunes, support and maintain, and that every resolution of the convention tending to separate the province from a majority of the Colonies without the consent of the people is destruction to our internal safety and big with public ruin." All through the War of the Revolution Frederick stood fast for freedom, sending many of her young men into the famous Maryland Line which, on many a hard-fought field, met and repulsed the king's veterans with the bayonet. As early as 1765, in the old court house at Frederick, the odious "stamp act" was boldly pronounced inoperative.

Miss Barbara Hauer, afterwards Mrs. Fritchie, grew up among scenes and times like these which breathed resistance to oppression, and, coming from good old Pennsylvania German stock, she became a woman of strong convictions. She loved the Valley of the Monocacy; she spent her girlish days among the mountains about her home, little dreaming that she was destined to add undying fame to the place of her adoption.

Advancing years were kind to Barbara Fritchie. She visited the sick and comforted the dying, and her gentle heart was full of charity. Whether or no the poet erred in ascribing to her the thrilling heroism that breathes through his poem matters little now. Her fame is secure

and the young of our country take pride in telling of her deed

"On that pleasant morn in the early fall
When Lee marched over the mountain wall—

"Over the mountains, winding down,
Horse, and foot into Frederick town."

The home of Whittier's heroine has given place to modern improvement, but its site is still pointed out to the visitor. Not far away runs a narrow little street which is crossed by a mill-race, spanned by a swinging bridge, and over this scant way that September day in 1862 poured "Stonewall" Jackson's men in gray—

"Forty flags with their silver stars,
Forty flags with their crimson bars."

Beyond the little bridge lies an old cemetery in which burials are no longer made.

It is encircled by a high wall and entered through a dilapidated gateway. It is an uncanny spot even in the garish light of day, and at night it is truly dismal. The ponderous iron key to this uninviting "God's acre" is kept by a sexton who loans it to the visitor. The key is attached to a cumbersome bit of board which one has to carry with him through the streets. One has to search a long time for the grave of Whittier's heroine. Rank grasses, frequently cut for hay, impede progress at every step. It is almost like hunting for the proverbial needle in the haystack.

At last, half enclosed by a broken iron fence, he finds the burial place of "good dame Barbara" and her husband, John Fritchie. If one expects to find a beau-

tiful shaft marking the spot of Barbara's sepulcher he is doomed to disappointment. The long grass hides everything. By diligent search one is rewarded at last by a very modest stone over which, in the soft Maryland light, trail myrtle and honeysuckles, the very flowers Barbara Fritchie loved and tended. The simplest of inscriptions relieves the stone of bareness and the tourist reads it at a glance:

"BARBARA FRITCHIE,

Died December 18, 1862.

Aged 96 Years."

"Only this and nothing more!" Time may come when old Frederick will awake to her duty and replace that poor stone with a fitting memorial to the woman whose name is indissolubly linked to her own. After all, Barbara Fritchie's grave lies amid scenes of beauty; her blue mountains surround her, she has her myrtle and her honeysuckle, and bird and bee make music over her last home in Frederick Valley.

Not many squares away, in the heart of beautiful Mt. Olivet Cemetery, stands an imposing monument over the grave of the poet who gave us our national anthem. Francis Scott Key, the illustrious author of "The Star Spangled Banner," was a native of Frederick and was brought here for entombment with his fame secured by his immortal lyric. He has been honored by one of the most beautiful monuments ever erected to the memory of a poet and one can stand beside it and almost see the neglected spot where Barbara Fritchie sleeps. In the same inclosure lie the remains of four hundred Confederate soldiers who fell at the battle of Monocacy, fought in the outskirts of Frederick, and they, too, are remembered by a handsome shaft.

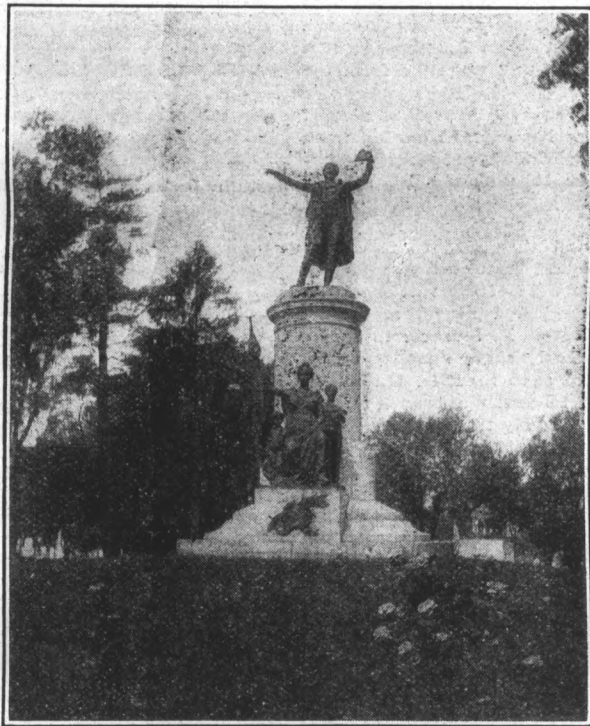
Frederick has still another historic plot of ground. On one of the side streets stands a tumble-down house which at one time formed the headquarters of the immortal Washington. The patriot is thrilled by memories of the past as he gazes upon the old structure which long ago housed the Father of His Country. No steps have ever been taken to keep the old place in repair. It is the refuge of the owl and the dwelling place of the drowsy bat. Its old windows with their diminutive panes carry one back to the "days of yore" and invest the old shack, despite its dilapidation, with sacred memories. I am told that a movement will soon be started to wrest from the hands of ruin the grave of Barbara Fritchie and the headquarters of Washington, and restore them, as far as is possible, to their original condition.

There is much about Frederick to interest the visitor. In fact, there are few places so rich in historic recollections, and few cities so romantically situated. The surrounding country is productive and well tilled. Great stone barns that have withstood a century's storms dot the enticing landscape, the picturesque Monocacy ripples away within hearing of the city, and around it, in season, in the words of the Quaker poet, are,

"Apple and peach trees fruited deep."

More than once during the Civil War Frederick was a place of excitement. Her streets echoed to the tread of the Blue and the Gray, and from her hills can be seen the crest of South Mountain, where brother met brother in one of the important battles of those sanguinary times. But such scenes have drifted into the past. Frederick reposes in a valley of thrift and peace, the golden-winged bee seeks sweets among the wild flowers that beautify Barbara Fritchie's grave, and one can say as said the loving Whittier: "Peace and order and beauty draw
Around thy symbol of light and law;

"And ever the stars above look down
On thy stars below in Frederick town!"



Francis Scott Key Monument—Frederick Town.



Where Washington Stopped in Historic Frederick Town During Colonial Days.

ROMANTIC LIFE of HERBERT FURLONG.

Thrilling Experiences of a Soldier of Fortune, Ranchman and Federal Detective.

Hale and Hearty at 89, he is Living the Life of a Recluse within the Confines of the Peninsular State.

BY J. W. GRAND.

After knocking about in America for a while I rented a small farm in New England and sent for my family. But, being green in the farming business, I soon tired of that and decided to go back to England on a visit, but before going any further I must tell you of a narrow escape I had one day.

It was a bright morning in early June that John, my man, hitched "Old Morgan" to the wagon while I donned my fishing suit and prepared the lunch, or rather, told the women how to prepare it. I had a pair of stout corduroy pants, made on purpose for forest and river wear, and in setting the pockets the maker had so cut and inserted them that they hung low down upon the thighs, causing a chafing sensation from their contents, which was anything but agreeable.

"Hello! how is this?" I cried, as I put my spare lines into the left pocket. "I thought you promised to alter these pockets before I had occasion to use them again."

"Who knows," said my wife, "but the depth of those pockets may be the means of saving you something of value, which you might have lost had I cut them off."

"All ready," shouted John at that moment, for which I was thankful. I turned and saw Morgan's intelligent face peering at the window, John holding him by the bit, and without further remark I packed up and made off, only stopping to do what I have never learned to forego—to kiss my loved ones as the parting blessing is whispered. It dissipates mists and makes sunshine.

Into the wagon and away we went. Up Swift river in the town of Albany, N. E., (we started from Conway) under old "Mote Mountain," taking the shadow of "Hay Stack" and "Eagle Ledge"—these on our right, the swiftly rolling and dashing river low down on the left—in under the grim side of Chocoma, thence over the river, and now through a region as wild and romantic as the most devoted lover of the sublime in forest compass could desire, up to the "Falls," where we unharnessed the faithful horse, secured him, and gave him something to eat; and then over to the little pond under Spruce mountain, where we caught fifty beautiful trout. After this we ate our lunch and then took about one hundred and fifty of the speckled fellows from the river. We quit fishing a little earlier than we might otherwise have done in order that we might keep a promise made to the women folks. We had, inadvertently, let them into the knowledge of the fact that on the way to and from our fishing ground we passed a spruce wood, where we observed signs of nice chewing gum, the result of which was that we were placed under a solemn promise to take a long-handled chisel with us the very next time we went up the river, and get them a good lot of spruce gum. On this afternoon we started on our return three-quarters of an hour earlier for the purpose of fulfilling our promise.

The spruce wood was within three or four miles of my home, and when we arrived there we secured the horse, took our long-shafted chisel, and set forth. We had gone but a short distance when we discovered a large rattlesnake in the path ahead of us, which John succeeded in killing. He measured, as nearly as I could judge, from five and a half to six feet in length—a large one with eight rattles.

Oh, how I shudder when I see one of those monsters! Talk of your cobras and moccasins, and your stinging vipers. I believe there is nothing of the reptile kind more deadly than the New England rattlesnake. I know they give token of their presence in shrill, piercing alarm—no one knows it better; but annihilation seize them! They will strike the death blow while they do it, if they can.

I looked for gum while John carried the dead snake to the wagon and stowed it away under a branch of break-leaf. When he returned we talked rattlesnakes and told each other what we had heard and read, and what we knew of their awful nature.

"Of course," said John, who held himself an oracle in such matters, "there's another o' them snakes not far away. They always travel in pairs. And he was

not the first one who had declared the same thing in my hearing. However, we were after spruce gum, not snakes, and we made a strike for it. I had a tree in my "mind's eye." It was a stately spruce that had been blown over by a gale during the previous March, the top of which had been lodged against a clump of scrub oak that grew upon an abrupt elevation which must have once been a bank of Swift river; but the trunk of the tree was so far from the ground that no one had been able to reach a section where a long, rich line of goodly lumps of pure amber gum had exuded from a seam about half way between the roots and the top. I found the spot and eagerly jammed my way in among the thickly growing shrubs that extended down the whole face of the bank, for I saw that I could reach the big bright tears of gum with my shaft chisel.

This bank faced west, and as I observed how the rays of the declining sun were pouring their golden sheen upon it, I thought what a place for the lurking of a snake. The thought thrilled me as I approached the bank, but when I saw my prize I forgot all but how I could best secure it. As I have said, I jammed my way into the shrub thicket, which was there about breast high, never looking down, for the cloth of my garments had been selected to withstand such contact, only looking up to where the gum was within reach of my chisel. I had secured twenty or thirty pure lumps, all within my reach, from two standing places, and was pushing recklessly ahead against the intervening shrub, when I stopped as if a thunder bolt had burst upon me from the clear sky above.

Reader, did you ever hear that alarm? If not you may have heard our common locust—the rough-hided, grey-backed, flying grasshopper that sings with such a sharp ear-piercing note. Well, strengthen and intensify that sharp, ringing vibration tenfold, and then add to it a hiss just as sharp and penetrating, and you have the alarm note of the rattlesnake.

And this is what I heard, and what arrested my steps. In starting to spring backward my heel caught an obstruction, and in order to save myself from falling I was obliged to grasp a branch of the fallen spruce, the only thing at hand stout enough to support me, and in doing this I made a slight bounce to the left. My left foot came down on something that moved beneath it—moved, and struggled, and hissed—and I felt as though ten thousand galvanic batteries had sent their united currents through my frame.

I cast my eyes down and saw a bright bow, formed of two threads of light, clearly defined amid the deep shade of the shrub. I knew 'twas the monster's eyes, flaming mad fire, drawing that curve of light as the ugly triangular head swept to and fro, but swept so only for an instant. My foot was upon its body not more than a third of the distance from its tail, so that fully two-thirds of its length was free, and it was a large snake. What did I do? What could I do? Within one second after I looked down the deadly reptile was ready to strike. The head was thrown far back, the upper jaw raised until it fairly lay over toward the crest, and I knew the blow was coming. I could only throw up my hands, start backward once more, and think of the wife and two precious children at home. The blow came quick and strong, striking me upon the left thigh, and yet I forced my way backward without stopping, but I looked down and saw that the venomous reptile was clinging to the fabric of my trousers, the hooked fangs preventing his letting go while I was in motion. In an instant, however, the tail, or the lower part of the body, caught among the shrubs and the fangs were torn away.

Backward I staggered to the path, faint and dizzy, knowing that I had been struck and expecting every moment to feel the touch of the poison upon my vitals. As I reached the path John was by my side. He noticed the fallen spruce and was making for it.

"Good gracious! What ails you?" he cried as he caught sight of my face.

"Bitten!" I gasped.

"A rattlesnake?" was his instant query.

"Yes," said I.

"Where?"

I placed my hand upon my thigh where I still felt the force of the blow. "Let's look. We'll cut into it, bind on a piece of the fat from the dead one and then put for home. Quick—where is it?"

My thigh was exposed, but there was not a mark of poison fangs—not a scratch or puncture of any kind.

"There's no bite here, master, not a sign of a one."

John's happy, thankful smile of assurance gave me strength, and my thoughts came to my aid.

I looked where the thread of the corduroy had been started up into loops by the tearing away of the snake's fangs and saw that it was directly over the objectionable pocket. I put my hand into the receptacle and drew forth the only thing it contained, the broad, flat piece of shingle with the trout line wound upon it. The line was new and of fine white silk, and we saw upon the silken surface the stains of the snake's deadly virus, but we saw it more plainly upon the smooth wood. The fangs had struck through the pants' pocket and three turns of the line to the wood; and we could follow the yellowish lines where the subtle poison had crept along the grain of the wood as plainly as though they had been drawn with pen and ink.

Do you wonder that I was weak and that I let John drive home? And do you wonder that my face gave token of recent terror when I entered the house? At all events, there was no more wonder or marvel at that board after my story had been told. But you can imagine that the pocket, so condemned in the morning, furnished food for a very curious discussion, and in the end we were all inclined to admit that man is so far a creature of circumstances that he hath much and continual need of reliance upon a higher power than his own.

(In our next Magazine Section Mr. Furlong will tell of an extremely perilous hour during his experience as a mill overseer in England.—Eds.)

A FLASH FROM BLACK EMBERS.

(Concluded from last week.)

In his recent visits to Evangeline the young man had become acquainted with certain features of Castonia that fitted his suddenly formulated plan.

The chief crop of the settlement was potatoes. The community had built a single, frost-proof repository, for no house had a cellar. This storehouse was a cavern in a hillside.

The young man gathered up the arms in the warden's canoes, when he had landed in the inner cove of the logan. The warden had confiscated ammunition as well as weapons. The girl secured the sack that held the cartridges. And crouching and running in the underbrush they circled the houses and came out upon the hill.

The evicting party was in full operation. They were piling the scant furniture out of doors, preparatory to removing it to the river bank. The manager depended on the bateau men to assist in the job later. No eye was cast their way when the young man and the girl stole into the mouth of the potato cellar.

A moment later she emerged and walked down the hill and went among the women and children, giving them certain commands in low tones. And these in twos and threes edged away from the houses and went up the hill, gathering in a group before the mouth of the cave until all were assembled there.

The evictors glanced that way occasionally with some curiosity but worked on and were evidently glad to have the field clear for their operations. Weeping women and sobbing children are not comfortable spectacles for even a man with the soul of a Herod.

But when a voice, tense, commanding, and having the unmistakable note that men fear, hailed the toilers from the eminence, they stopped and gazed with something more than mere curiosity. There was no one in sight except Nicola of the Penobscots, erect, determined and with his rifle in the hook of his arm.

"I'll give you three minutes to be in your canoes and paddling down the river, you white thieves," he shouted. He swung his rifle to his shoulder, and they who blinked up at him saw that the primordial spirit of the savage like "a flash from black embers," had subjugated all that civilization had taught him.

"Come down here, or I'll shoot!" roared Murtha, hauling out his revolver and, as a woodsman, realizing its inefficiency as soon as he held it in his hand and looked up at the rifle. The sheriffs, certain that the field was clear for them, had come

armed quite as inefficiently. They fumbled a moment at their hip pockets and took their hands away.

"I've got twelve rifles in my canoe," cried Murtha, not yet understanding the sortie managed by the Indian.

"Your twelve guns are here and loaded and each one is in the hands of a woman bound to protect her home," retorted Nicola. Then the men saw the muzzles shoved through the dirt walls of the cellar.

"It will be state's prison for you, resisting officers," cried the manager, for Murtha seemed to have suddenly lost his voice.

"I am an Indian," said the young man. "I was willing to become something more. But you would not let me. You have two minutes left. Then I shoot to kill."

"He'll do it!" growled the manager. "And there's no knowing when one of them women will pull too hard on a trigger. We've got to back up."

They tried to retreat with dignity, but when one of the sheriffs began to run the others followed him in a rout. And the girl came and stood by her lover's side and watched them.

"We should have let them take us, dear," she said despondently. "All the power is with them. It will make it the harder for us in the end."

"I know it, little girl," he replied; "it has been only another sorry flash from those dead embers that they thought they had trampled into blackness forever. But the old spirit blazed in me. I couldn't help it. I fear the past has not taught the Indian his lesson!"

After a moment he sighed, laid his rifle in her hands and went down the hill without a word, following them.

The men were out upon the river when he came to the shore but he called to them, holding up his empty hands.

"Gentlemen," he said quietly, when they were within hearing distance, paddling back slowly and not without suspicion of stratagem, "It has all been a mistake on my part. I should have made better use of my education and remembered the precepts of my church in better fashion. But that game warden first partook of my hospitality and then took me by deceit and refused me the common courtesy due to one who had tried to be a gentleman according to the white man's standard. I gave him fair warning to expect strategy in return. My thoughts were wild and my heart was bitter—and when I arrived here I saw the girl to whom I am betrothed insulted and cast out of her home. I think it is all wrong and bitterly cruel—but what can the weak avail when the strong are determined?" He tossed his hands to them outspread and smiled in wistful apology. "I do not want to make more trouble for these innocent people. They will go with you. I will go with the warden but I will test our legal and our treaty rights in the white man's courts."

There was long silence among those in the clustering canoes. Then the canoes drew more closely together and there was the mumble of voices in colloquy.

At last one canoe separated from the rest and came ashore. It brought the manager of the pulp company. He stepped on shore, looked the young man up and down for some time, his eyes puckering shrewdly, and remarked, "So you are 'Big Thunder,' eh, the ball player?"

"They called me that. I was earning money for my education."

The manager surveyed him up and down once more.

"You are no coward, young man," he said, with simple earnestness. "We'll shake hands on that Indian war that just closed."

Nicola clasped the outstretched palm.

"I'm a business man," the manager went on. "I've always been a business man. I never took enough time off for sentiment, I'm afraid. Business men are a little ashamed of sentiment. But when you came down to the lake shore there a moment ago and talked, I had a sort of illuminating flash to the effect that plain and straight law and business demands don't settle all the human rights in this world. It was just a flash. It made me dizzy. I don't want to think too much about it. It might spoil me for a business man. It isn't our business to leave squatters here on our property—not even though your sweetheart pleads for them. But"—he blurted out his decision in haste that showed he feared for himself—"I propose to let 'em stay here. My word goes. I handle all this line of business for the company. When their men folks come back from the woods I'll make a trade with them to keep within certain bounds. It may be good business to do

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this. If I wake up in the night and think of caving in like this, I'll say to myself, 'It's good business' and kind of console myself that way. So that's all! Tell 'em so. Good day."

He started back to the canoe, but whirled and looked Nicola over again.

"Let's see!" he mused, "you are strong, mighty healthy, full of grit, know these woods and waterways, have got a college education and probably are good at figures! What kind of recommendations can you furnish?"

"From all my teachers, from my church fathers and from the officers of the bank that has offered me a position."

"Bank life would kill a hearty chap like you," objected the manager bluffly. He came and pleasantly took Nicola by the collar.

"I'm looking for an outside man to tour our twenty camps and mills, keep account of supplies, act as paymaster and be my right-hand man generally. In business you've got to size men and size 'em quick. I've sized you. You seem right. The job pays twenty-five hundred a year and expenses and would give you a chance to help and defend your people. It's twice as good as a bank job. Get your recommendations together and hunt me up. I'll give you five days. What say?"

"I'll take it," replied Nicola, his eyes filling, and he gazed up to where the girl was standing on the hillside.

"Oh, and by the way," said the manager briskly, "when you get married you can have one of our houses, rent free. Why not get married in those five days? Then you'll be all ready to settle down to business."

Nicola forgot the warden, glaring from his canoe in the river. He started away up the river bank, his eyes still on the girl. He heard the manager shout to Murtha. "Your guns, warden? Oh, go get them if you want that truck! But don't you bother my new paymaster, there. He's got other things on his mind besides fooling with game wardens. You and I will settle that matter going down the river."

And while they were going down the river—sheriffs and warden and lawyer and manager—Nicola settled another matter, with Evangeline Hebert's head on his breast and her dark eyes beaming with love and gratitude into his.

KINKS.

Kink I.—Two Problems.



Kink II.—Drop Letters.

Drop the same letter and change: 1. An article of food into a small nail. 2. Part of the body into a verb. 3. A small ornament into an adjective. 4. A metal into a boy. 5. A verb in the present into its past. 6. A water plant into a color. 7. A nuisance into a verb. 8. Necessity into a boy's name.

Kink III.—Charade.

My first the place I love to be,
My second a land beyond the sea,
My whole a king it seems to me.

Prizes for Straightening Kinks.—To the sender of each of the ten nearest correct answers to all of the above Kinks, we will give choice of a package of 50 postcards of general interest, an Atlas of the World, or a book, "A Trip to the North Pole." Where contestant or some member of his family is not a regular subscriber a year's subscription (75c) must accompany answers. Answers must not reach us later than June 10, as correct solutions will be published in issue of June 18. Address answers to the Puzzle Dept., Michigan Farmer.

Answers to April 16 Kinks.

Kink I.—Botanical What-is-it?—Equisetum hyemale, commonly called Scouring Rush. Equisetacea family. Prefers sandy soil and low, moist situations. Early May.

Kink II.—Progressive Enigma.—1, H; 2, Ho; 3, Hon; 4, Hone; 5, Hones; 6, Honest; 7, Honesty.

Kink III.—Remnants.—Hawk. (haw); pain, (pan); nape, (ape); bark, (bar); star, (tar). The remnants spell Kinks.

April 16 Prize Winners.

But one set of correct answers was received and award is made to Florence Jones.



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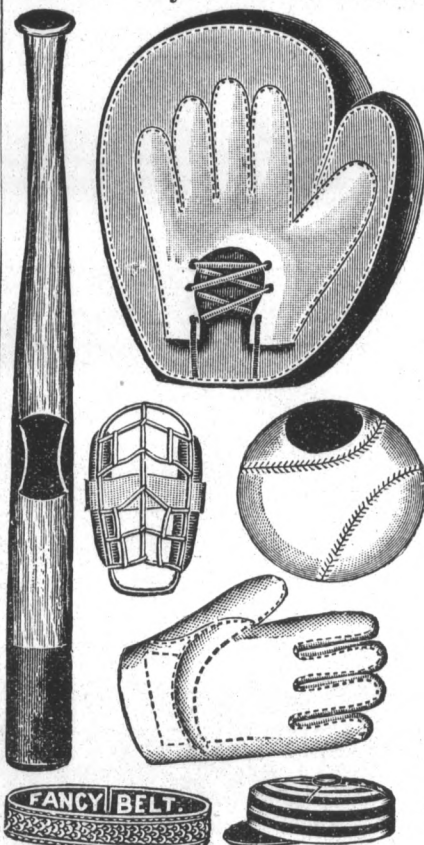
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WOMAN AND HER NEEDS

Have You Missed the Masculine Woman?

WHAT has become of the masculine type of woman? Ten years ago, you could scarcely look out your front door without seeing a creature who took two looks to satisfy you if it was a man or a woman. Bifurcated skirts, stiff shirt fronts, high, choking collars, plain, hard, sailor hats and coarse, thick-soled shoes were common articles of feminine attire. And with this garb went a female whose ways were brusque, voice gruff, walk, a bold, vigorous stride, an independent, aggressive creature who could not be loved for her clinging feminine charm nor admired for her near-masculinity.

But now all is changed. This type of woman has passed away, and even the suffragettes are mild-mannered, graceful, gracious, charming, feminine women. Our eyes are no longer pained nor our sense of the fitness of things shocked by this figure of the past. Perhaps we have the fashion-makers to thank for this, for clothes are again feminine. And if it is true that manners make the man, it is equally true that clothes make the woman. A woman just can't wear a Princess gown, lingerie waists, and trailing skirts and act like a man. In such a garb she is essentially feminine, and must play the part, so a vote of credit is due the modistes who have brought about the change.

But I am inclined to think the women brought about the change to a great degree themselves. Women are prone to go to extremes, but left to themselves they usually see the error of their ways and right things. I believe women just naturally awoke to the fact that a manish pose isn't a good thing, for more reasons than one. In the first place, it wasn't natural, and all unnatural poses are bad. Then women can never get over that old-fashioned habit of wanting to lean on some man, and how can a strong minded, manly woman play the part of clinging vine? Besides, the men didn't want to be leaned on by such women. It is all right for a man to act as stay and comfort to a delicate, flower-like bit of femininity, but it makes him feel mighty foolish to be a prop to a big, muscular, mannish woman who wears clothes a great deal like his own.

There were other forces at work, too. That woman belonged to the era when women's highest aim was to get rid of home-making. Business, professions, fame, were beckoning her and seemed to have more force than love and baby fingers. But that period is passing away. Once more the world has swung around, and woman is again settling back into her best work, that of keeping a hearth bright for a happy family.

Take it all in all, the masculine woman had to go. Everything and everybody was against her, and seeing the trend of things she considered discretion the better part of valor and tactfully and silently withdrew. So silently did she go that her departure was never noticed. It was like the passing of the snow, so quietly and naturally effected that we never thought of it until one day we awoke to find her gone. It is a good thing. She probably had a part in the world's work, but that part is over. Womanly women are here to stay, for women everywhere have come to realize that abnormalities have no real place anywhere in nature.

DEBORAH.

EARLY SPRING VEGETABLES. No. 15.

BY MRS. ALTA L. LITTELL.

First among the vegetables which the housewife may call upon in the early spring, when it is so hard to know what to serve, is asparagus. This comes in at that trying season of the year when the warm spring days make us turn from the winter vegetables, and as yet it is too early for the farmer's wife to go to her garden for peas, beans, corn and the like.

Asparagus is most frequently served with a white sauce, though the boiled asparagus may be simply dressed with butter. In preparing it for cooking, all tough fibrous parts of the stalk should be rejected and only the tender ends used.

Always remove the scales before cooking. A favorite dish in many homes is made by pouring creamed asparagus over toast. If the toast is very dry and hard pour on boiling water to soften slightly, but do not allow the toast to stand in the water and become soft.

"Greens" play an important part in many a housekeeper's schedule, and there are many things which the country woman can utilize in this way. The city dweller must content herself principally with spinach and young beet tops, while she who lives outside, and has time, may gather dandelion greens and many others known to country housewives. Of course there are many who refuse this dish with scorn, but they are useful in furnishing water and salts to the system.

The trouble one must take in preparing greens for cooking is one cause of their disfavor with cooks. Each leaf must be carefully gone over for insects, and the leaves washed thoroughly through three or four waters. Do not use too much water in cooking. For old spinach and dandelions allow about two quarts of water to a peck of greens. Young spinach is better if no water is added. Put it where it will heat through slowly and boil it in its own juices.

After a rain storm, the lovers of mushrooms may often be seen out in the fields looking for their favorite dainty. If you are sure you know an edible mushroom from a poisonous one, this practice is all right, but so few people are sure, and so many who think they can tell the eatable ones sometimes pluck the poisonous variety, that it is far safer to buy your mushrooms unless you cultivate them yourself.

Mushrooms are declared by some to be as nutritious as beefsteak, but as steak contains 19 per cent protein while mushrooms contain but three and a half per cent, it seems that the vegetable is somewhat overrated. However, they do contain a certain amount of nourishment, and when served alone or with other foods, as meat, cheese or tomatoes, they form a palatable and nutritious dish. In cleaning, wipe with a damp cloth, as soaking in water removes the flavor. Remove the skin if it is tough.

Canned mushrooms are sold, but like every other canned food, are not so satisfactory as fresh ones.

A DAINTY BEDROOM—HANGINGS AND SPREADS MATCH PAPER.

BY E. E. R.

If you need a new bedspread and bureau scarf this spring, why not make the new ones of cretonne? This, to use the fashion writer's phrase, is the "last word" in smartness, and besides, the fad is very practical and artistic. Select a pattern of cretonne to harmonize with your wall paper. If you paper the bedroom this spring, so much the better, for the wall paper houses sell cretonne to match their papers. Indeed, whole sets of cretonne including curtains, bedspread, cover for toilet table, shirt waist box and chairs,

are quite the thing. If the room is of convenient size for a couch, it, too, may be covered with the popular fabric.

In arranging your curtain use the lambrequin effect. Use two poles, placing the one on which the curtains are to hang even with the top of the upper sash and the one for the lambrequin at the extreme top of the casing. The curtains should fall straight, and the lambrequin should slightly overlap the top of the curtains. It may be straight across the bottom, or shaped to suit the fancy.

For the bedspread seam two lengths of the cretonne together carefully, matching the figure, and cutting the size to fit the top of the bed. Make a gathered flounce with a neat hem at the lower edge and arrange for a standing heading at the top. Join this to the top portion of the spread. Slit the two lower corners so the flounce will fall smoothly around the posts at the foot. Make or buy a bolster and cover with cretonne to match the spread.

A soap or baking powder box may be converted into a pretty shirt waist holder by hanging the cover with a pair of ten cent hinges, padding the top with pieces of an old quilt and covering with the cretonne. Tack a flounce around the sides of the box and paper the inside or line it neatly with thin cloth.

HOME QUERIES EXCHANGE.

Dear Editor:—Will you kindly tell me through the Home Queries Exchange of your paper a good recipe for making cheese; also, what is used for coloring the cheese?—Mrs. L. K., Lake View.

To make a small quantity of cheese at home, I would recommend the following outfit: A new wash boiler or a galvanized wash tub. The tub would be best, as the bottom has a rim at the edge which would aid in heating the milk gradually as the bottom of the tub would not rest directly on the stove.

Have the tinner make a tin cylinder eight inches in diameter and ten inches high, with a number of small holes in the sides—for the escape of whey—and a close fitting wooden follower. That makes the hoop.

A dish pan with a strainer, six or eight inches across, in the bottom for draining the curd. In place of the strainer, a piece of cheese cloth could be placed across slats of a table, but the strainer pan is much more convenient.

For the press, a heavy stone or other weight can be used, or a lever arranged across the top of the hoop with a weight at the end.

For cutting the curd, a long slim knife, or better, a wooden paddle two feet long, two inches wide, half an inch thick with beveled edges.

A glass thermometer costing 25 cents can be purchased at most drug stores.

If Mrs. L. K. expects to make very much cheese I would advise sending to a supply house for a gallon of rennet extract and four ounces of cheese color. That would make 300 ten pound cheese. The next best plan is to purchase at a drug store a small bottle of butter color and a box of "junket" tablets.

Butter color is not so good as regular cheese color, as the annatto in butter

Womens' Power Over Men



Woman's most glorious endowment is the power to awaken and hold the pure and honest love of a worthy man. When she loses it and still loves on, no one in the wide world can know the heart agony she endures. The woman who suffers from weakness and derangement of her special womanly organism soon loses the power to sway the heart of a man. Her general health suffers and she loses her good looks, her attractiveness, her amiability and her power and prestige as a woman. Dr. R. V. Pierce, of Buffalo, N. Y., with the assistance of his staff of able physicians, has prescribed for and cured many thousands of women. He has devised a successful remedy for woman's ailments. It is known as Dr. Pierce's Favorite Prescription. It is a positive specific for the weaknesses and disorders peculiar to women. It purifies, regulates, strengthens and heals. Medicine dealers sell it. No honest dealer will advise you to accept a substitute in order to make a little larger profit.

It Makes Weak Women Strong Sick Women Well

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We ship on approval without a cent deposit, freight prepaid. **DON'T PAY A CENT** if you are not satisfied after using the bicycle 10 days.

DO NOT BUY a bicycle or a pair of tires from anyone at any price until you receive our latest art catalogs illustrating every kind of bicycle, and have learned our unheard of prices and marvelous new offers.

ONE CENT is all it will cost you to write a postal and everything will be sent you free postpaid by return mail. You will get much valuable information. **Do not wait, write it now!**

TIRES, Coaster - Brake rear wheels, lamps, sundries at half usual prices.

MEAD CYCLE CO., Dept. M77, CHICAGO

DAISY FLY KILLER placed anywhere, attracts and kills all flies. Neat, clean, ornamental, convenient, cheap. Lasts all season. Made of metal, cannot spill or tip over, will not soil or injure anything. Guaranteed effective. Of all dealers or sent prepaid for 20 cents.

HAROLD SOMERS
150 DeKalb Ave., Brooklyn, N. Y.

WE CONQUER ASTHMA

Dr. Steagall's Asthma Remedy is PROMPT, SAFE and SURE. Nothing else offered like it. Write for booklet "FREE AIR" to

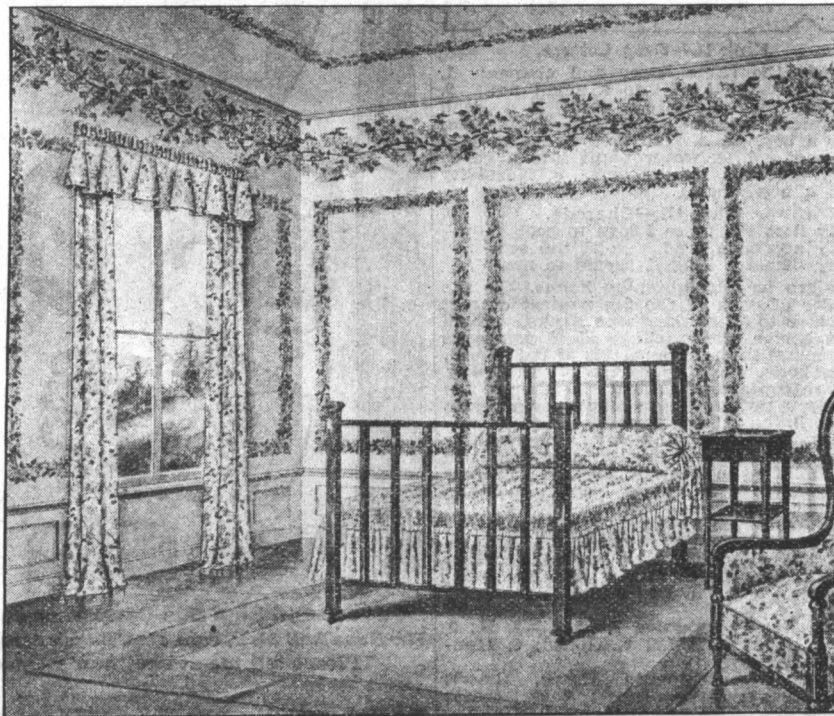
H. MILLAR REMEDY CO.,
214 St. Helens Ave. Tacoma, Washington.

Mt. Pleasant Woolen Mills, Mich.
Manufacturer of Blankets, Flannels, Yarns and Wool Batting for Comforters. A postal card will tell all.

FARMERS—If you have wool for sale or to make into any description of pure fleece wool goods, write **WM. LAMBERT, Woolen Mills, Reed City, Michigan**, for samples and particulars.

PERSIAN CATS for SALE.—Finest of the kind. Write for prices, **FRANCIS CATTERY, Ingleside, Mich.**

JUST SAY "Saw your Ad. in the Michigan Farmer" when writing to our Advertisers.



Curtains, Bedspread, Couch Covers, etc., Having Same Design as Wall Paper Give Very Pleasing Results.

color is made up with oil and does not mix well with the milk. In fact, the color adds nothing to the value of the cheese and in many factories is not used at all.

For ten pounds of cheese use twelve gallons of milk. Place the milk in the tub and warm it to 85 degrees. Remove from the stove, add a quarter of a teaspoonful of the cheese color or 10 drops of butter color, stir in well. The second day increase or decrease the amount to get the color desired in the cheese. Next add three teaspoonfuls of rennet extract for the twelve gallons of milk, or three junket tablets to each gallon of milk. The rennet extract or tablets must first be mixed with a pint of water not warmer than 70 degrees. After adding the rennet to the milk stir carefully for two minutes, then let it stand without stirring or jarring until the milk is firm, which will be about 25 minutes. When the curd will break clean in front of the finger when inserted into the curd it can be cut carefully lengthwise and crosswise, with the wooden paddle. Next stir the curd with the handle loosening it from the sides and bottom of the vat. Now cut again with the paddle if necessary to have the curd in pieces about half an inch square.

By this time the whey will be separating from the curd. The heating can be done either by placing the tub over a slow fire, or by dipping off a portion of the whey, heating it and pouring back onto the curd. Either way, the curd should be gradually heated—taking about 30 minutes to 100 degrees. Hold the temperature at about 100 until, when a double handful of curd is pressed dry in the hands and the pressure released the curd will readily and quickly fall apart. It will also have a clear squeak when chewed between the teeth. It is now ready for drawing off the whey. As the curd settles to the bottom much of the whey can be dipped off. The balance of the whey and the curd can be dipped into the draining pan. When the whey has all drained out add four ounces of dairy salt to the curd and stir well.

Lay a cloth ten inches square on a flat board, place the cheese hoop on it, dip in the curd, and put on pressure. After the cheese has been in the hoop one-half hour take the hoop off by lifting it up, and bandage the cheese. The bandage—made from cheese cloth—is in the form of a cylinder just large enough to slip over the cheese and long enough to double over an inch at each end. A cheese eight inches in diameter and eight inches high requires for bandage a piece of cheese cloth $26\frac{1}{2} \times 10$ inches. The $26\frac{1}{2}$ inches allows for seam, in dressmaker language. On the ends of the cheese place circular cheese cloth, return cheese to press—other end up, and leave until following morning. In place of the circular cloth on ends of the cheese, a little butter or lard rubbed on the next morning, can be used.

The cheese should be "cured" for 15 to 30 days in a room of about 70 degrees temperature, and turned over each day. A little practice will put one on the right road to cheesemaking.

Two important rules are: Don't let the milk get too ripe before setting, and don't let the curd get too firm before dipping.

E. A. HAVEN,
State Dairy and Food Inspector.

House Plants Bothered with Flies.

Dear Editor:—My house plants are covered with small black flies. I have done everything to get rid of them. Will you please tell me through the columns of your paper, what to do? Also, when the border of a paper is a continuation of the pattern where should the molding be placed if used?—Inquirer, Clarkston.

A prominent florist advises as follows regarding the plants: Sprinkle thoroughly with water until every part of the plant is wet; then shake over it tobacco dust, which may be purchased at any good seed store. This, it is claimed, will drive the flies away. In the modern, lowceilinged houses the molding should go to the ceiling. If you have an old-fashioned ten-foot ceiling, run the border just below the molding. This way takes off from the height of the room, but makes it look larger. Tint the ceiling and drop if you wish the latest effect.

Pork Cake.

Take one pound of salt pork chopped fine, boil a few minutes in half pint of water; one cup of molasses, two cups of sugar, three eggs, two teaspoonfuls soda, cinnamon, cloves and allspice to taste, or instead of allspice nutmeg if preferred, one pound of raisins chopped fine, flour to make stiff batter. Bake slowly.—Mrs. J. T.

SHORT CUTS TO HOUSEKEEPING.

This department is opened as a means of exchange of new and successful ideas in homemaking. If you have learned something in cooking, sewing, child raising, fancy work, economy, anything which is helpful, and new, send it in. Twenty-five cents will be paid for every article used, but none will be returned. Keep your suggestions short.

Pour water on your onions when cleaning and they will not smart your eyes.—M. G. W.

Salt thrown in the fire when burning refuse will do away with the bad odor.—M. G. W.

In making little girl's dresses that will need lengthening some time, allow for a tuck on underside of hem, and run it in by machine, using a long stitch. Then, instead of having to let down hem and face, it will take you but a few minutes to take out tuck, and press.—T. F. C.

Rub a hot flatiron over the inside soap wrapper. It will clean the flat nicely.—Reader.

I find it convenient to put dry oatmeal in a box that a cold breakfast food came in. It is easier than leaving it in the sack, which breaks easily. Put everything possible in glass cans or baking powder cans and label.—Reader.

In washing lamp globes, if they are first washed in warm soap and water, then rinsed in cold water and placed on top of the range until the moisture is gone, they will need little polishing and will be found to have a fine lustre. The globes will not crack if first placed on the back of the range until tempered by the heat.—M. A. P.

An antiseptic and healing powder for chapped skin is made of one tablespoon of boric acid to three tablespoons of corn starch. Bathe the skin, and powder on lightly, for baby and the invalid. Boric acid is a white powder and can be bought of any druggist.—Mrs. M. F.

When grease is spilled on the floor try dashing cold water over it once. It cools the grease and prevents it spreading or farther penetrating the wood.—Mrs. L. M. L.

If your carpet must be patched, instead of sewing it on make a stiff paste. Paste down the patch, after which iron slowly with a hot iron. It will not come off and looks much better than when sewed on.—Mrs. L. M. L.



No. 4886—For general wear no model could be smarter or more appropriate than the design shown. The general outline at once recommends it to the home sewer, who will see that it can be quickly and satisfactorily developed. Pattern is in six sizes, from 32 to 42 inches bust measure. For 36 bust, it requires $9\frac{1}{2}$ yards 36 inches wide. Price of pattern, 10 cents. Be sure and give size or age. Address orders to MICHIGAN FARMER, Detroit, Mich.

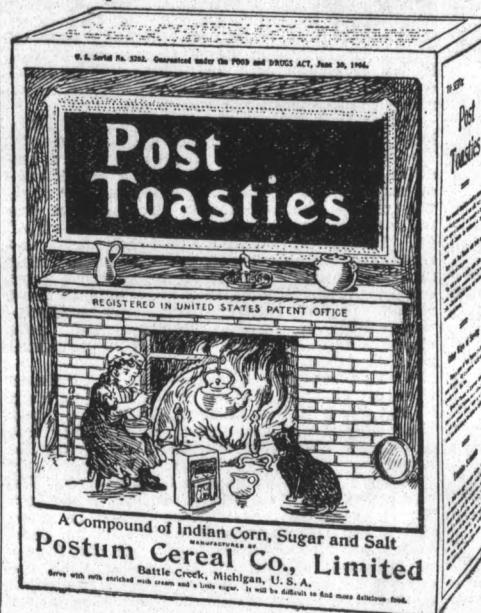
Some Sweet Day

You may be served with

Post Toasties and Cream.

Then you will know what a dainty, tempting food you have been missing.

Every serving wins a friend—



Popular pkg. 10c.
Family size 15c.
Sold by Grocers.

"The Memory Lingers"

Postum Cereal Co., Ltd., Battle Creek, Mich.

Elkhart Buggies

are the best made, best grade and easiest riding buggies on earth for the money.

FOR THIRTY-SEVEN YEARS

we have been selling direct and are The Largest Manufacturers in the World selling to the consumer exclusively. We ship for examination and approval, guaranteeing safe delivery, and also to save you money. If you are not satisfied as to style, quality and price you are nothing out.

May We Send You Our Large Catalogue?
Elkhart Carriage & Harness Mfg. Co.
Elkhart, Indiana



TEST IT 10 DAYS FREE

We will ship to you, prepaid, a 1910 RICK bicycle. Give it 10 days test. If then it does not satisfy you and is not superior to all others at double the price, send it right back at our expense. Your money will be refunded at once, the trial not having cost you one cent.

In this double-bar model you get coaster brake, puncture proof tires, twin roller chain, 45 position handle bar, "Comfort" Spring saddle, bell, tools and kit, telescopic pump, detachable mud guards, etc., the easiest riding and most durable bicycle you can buy at any price.

Low Price to First Buyer in Each Town

Or, if you will promise to show our catalog and to solicit orders from your RICK Bicycle in towns where no dealer is now selling our goods, we will sell you a "RICK" at wholesale agent's price and allow you BIG DISCOUNTS on everything in the cycle line and on "BEATS ALL PUNCTURE-PROOF TIRES," the most popular tires in the world.

Send postal quick for unique 48-page FREE COLOR CATALOG and this special low price free trial offer.

F. F. RICK & CO., Mfrs., Dept. M, BUFFALO, N. Y.

NEW HOME



No other like it. No other as good.



Warranted for All Time

Not sold under any other name.

The NEW HOME is the cheapest to buy, because of its superior wearing qualities. All parts are interchangeable, can be renewed at any time. Ball bearings of superior quality. Before you purchase write us for information and Catalog No. 4. THE NEW HOME SEWING MACHINE CO., Orange, Mass.

No. 750
Price, \$8.50



"ENTERPRISE"

BONE, SHELL AND CORN MILL

Just the mill for farmers, poultrymen and all who keep poultry. Cracked grain, ground bone and shell is the proper food to feed to increase the egg production, and with one of these mills you can turn grain and waste materials into food for your poultry.

The "ENTERPRISE" Mill is thoroughly reliable. Runs easily, is strong, durable and doesn't get out of order. Look for the name "ENTERPRISE" on the machine you buy. Mill shown in cut weighs 60 lbs. Grinds DRY bones, Oyster, and other shells. Capacity $1\frac{1}{2}$ bushels of corn per hour.

Illustrated catalogue free. Our famous recipe book, the "ENTERPRISING HOUSEKEEPER," sent anywhere for 4c in stamps. THE ENTERPRISE MFG. CO., Dept. 42 PHILADELPHIA, PA.

FARMERS' CLUBS

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.

YEARLY PROGRAMS.

The last yearly program of a club to be received is the program for the Ingham County Farmers' Club, for 1910. It is more condensed than some of the programs previously described, although it is quite complete in character, containing everything essential to such a convenience for reference. Aside from the date and name of the club, the cover page bears the announcement that the regular meetings are held on the second Saturday of each month and that no club meeting occurs in July. The inside cover page contains a list of the officers. The title page the name of the club and date. The succeeding pages are devoted to the programs for the monthly meetings, two being published on each page, the subject of papers and discussions only being given in the program. The farms of the members are, many of them, named, the name of the farm appearing with that of the host in the announcement. The March meeting was a temperance meeting. Soldiers' and Pioneers' day is observed in September, while the November meeting is designated as "Woman's Day." The last page is devoted to a list of the standing committees, completing this concise, yet convenient and comprehensive program of the club, which has the honor of being the oldest of any in the state.

CLUB DISCUSSIONS.

Adopt Yearly Program.—The East Otis-co Farmers' Club met at the home of Mr. and Mrs. Wm. Beach, May 5. After dinner the meeting was called to order by R. S. Halkins, in the absence of the president. Mr. O. A. Nummer gave a talk on "In what way are the labor unions beneficial to the laboring classes," which was discussed by those present. Mrs. S. D. Chickering gave a recitation and Mrs. M. L. Howe read a paper, "Our Friends." Both were enjoyed by the members. Mr. R. L. Hawkins gave a talk on "What I saw on my travels," which was very interesting. He had a number of post cards of scenes he visited on his trip through the west last year. Programs for the year were passed out and the meeting adjourned to meet June 2 at 9:30 a. m., at the home of Mr. and Mrs. C. V. Cooper.—Mrs. J. F. Kohn, Cor. Sec. Pro Tem.

Adopt New Entertainment Plan.—The April club meeting of the Norvell Farmers' Club, held with C. P. Holmes on the afternoon of the 30th, while not largely attended was greatly enjoyed. All were glad that L. D. Watkins was able to be present once more. President C. P. Holmes presiding, the exercises began with the singing of "America," and prayer by A. R. Palmer. The matter of the method of entertainment was taken from the table and it was voted to adopt the Grass Lake plan and Mrs. Wm. Ray was appointed a committee of one to carry it into effect. This plan involves the dividing of the membership into about five classes, each of which furnishes the refreshments about twice each year, the

amount and kind being prescribed by the committee.

Hard Times and the Farmer.—The topic, "Is it necessarily hard times for good farmers?" was taken up by C. P. Holmes who denied that they were having a hard time. They work hard and for long hours truly, but many in the city do the same. It is difficult to get good help and we have to be satisfied with a smaller production in consequence. It has been suggested that it is not the high cost of living that makes hard times for many. If we lived as our grandfathers did and with as little as they had, we should have more money than we could use.

What is a "Good Farmer?"—T. B. Haladay asked "What is a good farmer?" To be such his farm must show the results of labor and to effect this the farmer must keep everlastingly at it. To such the times are not hard. To sustain the body is so easy that we scarcely think of it. The good farmer must conserve the moisture which we can only do by stirring surface soil and doing so he insures good crops. Wm. Ray agreed that it was good times for the farmer now. Clyde Beckwith finds it harder work to live now than when he was under the parental roof.

The Cost of Living.—A. R. Palmer thought it true that it is the cost of high living that makes it hard times for those that find it so, and yet it is probably not desirable that the standard of living be lowered. L. D. Watkins said that it is what we buy that makes living hard. We can save much in this direction if we try. T. B. Haladay said that if it is good times for the farmer it ought to be good times for the other fellow. "If the farmer gets but 35c out of the dollar that the consumer pays for his products the middleman and the transportation companies ought to do well on what they get. I have long thought that they were getting more than their share. Workmen who get \$3.50 for seven hours work or \$5.00 per day, as masons do in Ann Arbor, are getting more than the farmer does."

GRANGE

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

THE MAY PROGRAMS.

Suggestions for Second Meeting.

Roll call, responded to by quotations or remarks about the spring season.

What progress in legislation has been made for: 1. Parcel post. 2. Postal banks.

Recitation.
In the Home—III. Harmful bacteria.
Duet.

Recitation.
How market eggs to best advantage.
Songs and recitations, relating to the spring season, in charge of Lady Assistant Steward.

POMONA GRANGE FAIRS.

About two years ago an effort was made by Kalkaska Pomona Grange to hold an agricultural fair which, while being under its immediate supervision, would be open to any resident of the county who cared to compete. Several very successful Subordinate Grange fairs have been held in the county, but this move was intended to include the entire county in the one fair.

The first year no regular premiums were offered by the management outside of ribbons, although many valuable special premiums were put up by the merchants of the several towns of the county. All the departments usually found at our

county fairs were open to exhibitors. This first fair was such a success that, spurred on by the enthusiasm manifested by all those who attended, steps were immediately taken by Pomona Grange toward the holding of another fair the following year on a larger scale.

This second fair was a grand success in every way. With the appropriation allowed the Pomona for the purpose of holding a county agricultural fair in 1909 we were able to offer various cash premiums, besides meeting the necessary expenses. The photo reproduced upon this page shows a portion of the fruit and vegetable exhibits as displayed in a 25x100 ft. store building which was packed the entire two days with eager visitors. The baked goods, fancy work and school exhibits occupied another large building, while the live stock and machinery were exhibited on the street in four of the large county road tents.

While Kalkaska county has not held a county fair for several years, the showing made through the efforts of Pomona Grange, and the loyal support of practically every farmer, business man and other residents of the county would seem to assure the continuance of this plan and a good live county fair each year. That the fair should be continued another year under the management of the Pomona Grange was the almost unanimous opinion of both farmers and business men of the county. Officers were elected early and plans have been laid for a larger and better fair for 1910.

The smaller fairs held by individual Granges are a fine thing, an effort along the right line, but why not combine our efforts and instead of several one-day or, as is often the case, only evening fairs, have a good rousing two or three day Pomona fair, particularly in counties not already supporting agricultural fairs? A good fair of this kind held annually is one of the very best advertising mediums which any county can boast, and the larger its scope the greater will be the benefits naturally arising therefrom. It is certainly to the interests of every farmer to maintain such fairs, and the Grange, moreover, should not be backward in taking an active hand in matters that are of such vital interest to its members.

Another in Jackson Co.—Deputy John Wilde organized another Grange last week, this time at the Clement school, in the center of Leon township, Jackson Co. The Grange starts with 44 members and the following officers: Master, Charles H. Freeland; overseer, Jennie Ballard; lecturer, Eva Cooley; steward, Floyd Cole; ass't steward, B. J. Freeland; lady ass't steward, Grace Hill; chaplain, Pearl Cole; treasurer, B. D. Hill; secretary, J. D. Ballard; gate keeper, Jacob Cooley; Ceres, Ivah Covey; Pomona, Catherine Sweet; Flora, Lavina Madden.

COMING EVENTS.

Pomona Meetings.
Gratiot Co., with Star Grange, Saturday, May 21. L. W. Oviatt, state speaker.

Benzie Co., with Thompsonville Grange, Tuesday and Wednesday, May 31 and June 1.

Western (Ottawa Co.), with Conklin Grange, Saturday, June 11.
Lenawee Co., with Hudson Center Grange, Thursday, June 2.

GROWING CHILDREN

The Period when the Nervous Activity is at Its Greatest.

"Against the practice of giving tea and coffee to children, we cannot speak too strongly. Childhood is the period when the nervous activity is at its greatest. The brain is ever busy receiving new impressions. Reflex action, co-ordination of muscles, and the special senses are all under a special course of training.

"The nervous system is pushed to its utmost capacity, and long is the list of victims that follow its over-stimulation. In these little people nothing but harm can come from the use of such cerebral stimulants as tea or coffee. Bad, then, as this practice is, let us as physicians be aggressive in its prohibition.

"Do not be satisfied by answering 'No' when asked as to their use, but let us teach the families with whom we come in contact that such practice is evil. We speak emphatically, because not only among the poor and uneducated, but among the rich, who should know better, this practice is marvelously prevalent."—The Home Doctor.

Children like a warm beverage for breakfast and it is well for them to have it if the drink is a food and not a drug.

Postum is made to supply a rich nourishing liquid food with a crisp coffee taste for those who cannot and should not use coffee. Analysis shows it to contain about fourteen per cent of muscle-forming elements and 66.11 per cent of energy and fat-producing elements, which go to nourish and sustain the delicate nerve centres throughout the body and from which the vital energy proceeds.

The success of child or adult depends largely upon proper sustenance for the body. Children who depend upon the intelligence of their elders to furnish them with good food deserve our most careful attention and thought.

Read "The Road to Wellville," found in pkgs. "There's a Reason."

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

WESTERN CANADA

Prof. Shaw, Well-Known Agriculturist, Says:
"I would sooner raise cattle in Western Canada than in the corn belt of the United States. Feed is cheaper and climate better for the purpose. Your market will improve faster than your farmers will produce the supplies. Wheat can be grown up to the 60th parallel (800 miles north of the international boundary). Your vacant land will be taken at a rate beyond present conception. We have enough people in the United States alone who want homes to take up this land." Nearly

70,000 Americans will enter and make their homes in Western Canada this year. 1909 produced another large crop of wheat, oats and barley, in addition to which the cattle exports was an immense item. Cattle raising, dairying, mixed farming and grain growing in the provinces of Manitoba, Saskatchewan and Alberta. Adaptable soil, healthful climate, splendid schools and churches, and good railroads. For settlers' rates, descriptive literature "Last Best West," how to reach the country and other particulars, write to Sup't of Immigration, Ottawa, Can., or to the Canadian Government Agent.
M. V. McInnes, 176 Jefferson Ave., Detroit, Mich.; C. A. Laurier, Marquette, Mich.
(Use address nearest you.) (6)

'RUPTURE CURED

I was helpless and bed-ridden for years from a double rupture. No truss could hold. Doctors said I would die if not operated on. I fooled them all and cured myself by a simple discovery. I will send the cure free by mail if you write for it.
Capt. W. A. Collings, Box 555, Watertown, N. Y.

AGENTS 200% PROFIT

HANDY, AUTOMATIC HAME FASTENER
Do away with old hame strap. Horse owners and teamsters wild about them. Fasten instantly with gloves on. Outwear the harness. Money back if not satisfactory. Write today for confidential terms to agents.
F. Thomas Mfg. Co., 845 Wayne St., Dayton, Ohio

Let Me Start You in Business!
I will furnish the advertising matter and the plans. I want one sincere, earnest man in every town and township. Farmers, Mechanics, Builders, Small business men, anyone anxious to improve his condition. Address Commercial Democracy, Dept. D 30, Elyria, Ohio.

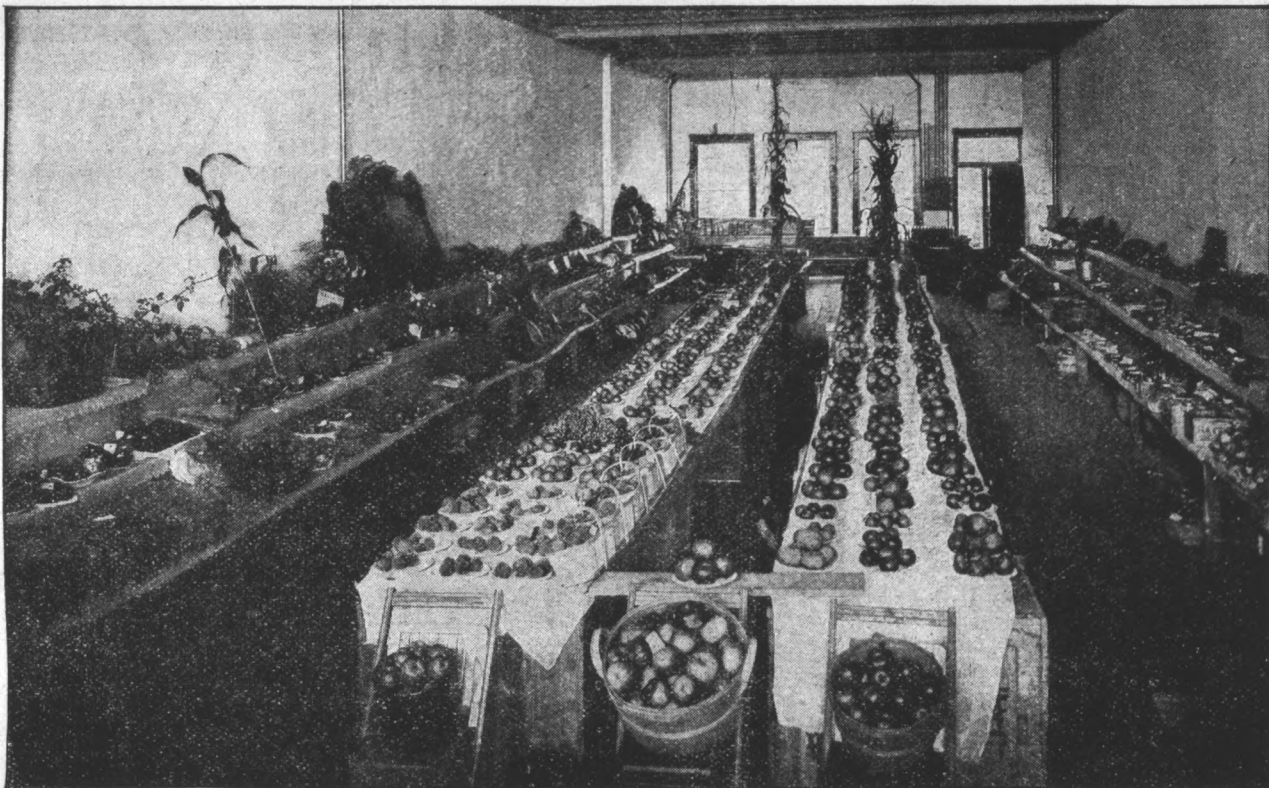
Wanted—Agents to sell Farmers' Account Book.
Quick sellers, big inducements, exclusive territory. Address L. L. SYMPHERS, Ft. Wayne, Ind.

Beat Everybody Catching Fish
Get a box of Marvel Fish Lure and a Patent Marvel Automatic Hook. Write for Special Free Bait & Hook Offer now and help introduce them.
JAPANESE NOVELTY CO., Dept. 39, Clinton, Ia.

40 Men Wanted—To try coming Railway Mail, Internal Revenue, and Postoffice examinations, \$50 to \$125 monthly. Common education sufficient. Political influence unnecessary. Candidates prepared free. Write immediately for dates of exam's in your neighborhood. Franklin Inst., Dept. T 46, Rochester, N. Y.

PATENTS WORTH FORTUNES

Inventors: Send 6 cts. for our Valuable Patent Books
R. S. & A. B. LACEY, Dept. 89, WASHINGTON, D. C. Est. 1869



Portion of Fruit and Vegetable Exhibit Seen at Last Season's Successful Pomona Grange Fair in Kalkaska County.

\$6,000,000 Could be Saved

Lightning does over six million dollars damage every year. Your property is liable to be a part of this loss unless you insure against it by using good lightning conductors.

Science shows that no metal (except silver) excels pure soft copper in power to conduct electricity. Hence, pure soft copper is the only safe metal to use. Hard copper is not so good a conductor, so it is not enough to buy merely a copper rod. You must be sure it is pure soft copper.

Write for
"The
Laws of
Lightning,"
Free

per—the finest we or anyone can buy.

National Flat Cable

(Patent Pending)

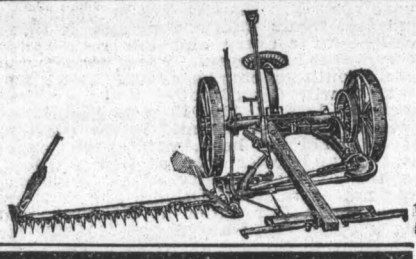
is woven flat to still further increase the conducting capacity and to do away with side flashes and induced currents. No joints to fuse, come apart or resist conduction.

National cables both flat and round—we make both—are on many thousands of buildings today and every foot is covered by a perpetual guarantee in writing. Look for the Little National Tag and the word "National." None genuine without it.

If your home is already rodded, write anyhow for full information as to protecting your telephone with the National Automatic Telephone Lightning Arrester (patent pending) the original and only effective Automatic Arrester on the market. Write for price.

We want a reliable representative in a few unoccupied territories.

National Cable & Mfg. Co.
59 Cable St. Niles, Mich.



A Strong, Simple Mower That Cuts Clean and Easy

The longer the lever, the heavier load you can lift. This is the principle to which the Dain, with its high, broad-gauged, wide rim wheels, long pitman and compensating gears, owes its remarkable light draft and its tremendous cutting power.

Season in, season out it cuts over all kinds of ground and goes through heaviest grass without choke-downs, breakage or trouble of any kind. The gears are compensating—neither work out of mesh nor wear apart. Has the strongest braced cutter-bar, too, with a protected Pitman that gives a long, unerring stroke, applying power direct to cutter-bar without lost motion.

Is strong where others are weak. The Dain is the only mower in which the cutter-bar can be re-aligned at a moment's notice. A monkey wrench does the business in a jiffy.

Dain Vertical Lift MOWER

A boy can lift cutter-bar right from the seat by hand, foot or both at once. Trees, stumps, stones, etc., can easily be passed—and you never have to back up with a Dain. This mower is built of few parts, is so simple in construction that any one can operate it and it's durable, too.

Dain Hay Tools Make Biggest Hay Profits

After hay is cut with a Dain mower, it can best be cured and handled by Dain rakes, loaders or stackers, because like the mower, these machines are built by specialists who for 25 years have been making successful hay tools that get the biggest value out of hay.

If your dealer hasn't this remarkable Dain mower, send your name, tell what tools you are interested in and complete information, and a valuable book

"All About Hay" will be sent to you by return mail.
DAIN MFG. CO.
814 Vine Street
OTTUMWA, IOWA

YOUNG MEN WANTED—To learn the Veterinary Profession. Catalogue sent free. Address VETERINARY COLLEGE, Grand Rapids, Mich. 42 LOUIS STREET.

(Continued from page 542).
over the rights of fishermen in Newfoundland waters, will leave Friday of this week for the Hague where the matter is to be presented before the Hague tribunal. Should the judges declare in favor of the right of Newfoundland to restrict the rights of aliens to fish in her territory as per the treaty of 1818 then that same right will be extended to every other country concerned in the compact, the far reaching effects of which can only be conjectured. Both England and America will await the decision with concern as it involves the question as to whether a country can curtail rights conferred upon an alien by treaty.

Sharon Springs, a small village of western Kansas, was nearly destroyed by a tornado which swept through that section Monday.

The extradition move on the part of the prosecuting attorney of Hudson county, N. J., to bring the Chicago packers before the courts of the county upon charges of conspiring to enhance the price of meat, has been stalled by the refusal of Gov. Fort of that state, to grant the requisition. The ground for the refusal is that the evidence set forth is insufficient.

It is unofficially announced that Ex-Vice President Fairbanks, of Indiana, is to be appointed ambassador to the court of St. James to succeed Whitelaw Reid, present ambassador of America in Great Britain.

The reports of the senatorial primaries in Florida indicate that a second election may be necessary to make a choice. The present incumbent, Senator Taliaferro, is leading thus far.

Much damage has already been done and grave apprehensions are held by settlers of northern Minnesota, Wisconsin and Michigan, lest fires become general owing to the dry weather prevailing. Recent small showers have quieted the flames temporarily, but cut over lands need to be soaked by heavy storms before danger is past.

It is asserted that New York brokers who are defending a suit brought by the government, have declared that they will go to jail rather than show their books relating to transactions in cotton, it being alleged that the brokers were parties to a pool organized to corner that product.

Last Thursday the warship Florida was launched at the New York Navy Yards. This is one of the dreadnaught type of battleships and is the largest ever launched in this country.

Thousands of men are working in the ruins in Costa Rica. Over 800 bodies have been taken from the debris caused by the recent earthquakes. Lighter shocks have been felt in the past few days.

Arbitrators have awarded the employees of the Michigan United Railways an advance in wages of one cent per hour.

The state has brought an action against the Western Union Telegraph Company for unpaid taxes, the company claiming they have been over-assessed.

Dr. Hyde, of Kansas City, was found guilty of murdering Col. Thomas H. Swope by poison and was sentenced to life imprisonment. The jury balloted for nearly three days before reaching a verdict.

The legislature of Rhode Island has passed a law prohibiting the employment of any person under 16 years of age.

In the future the qualifications of Indians seeking the privileges of citizenship will be under the supervision of a board appointed by the commissioner of Indian affairs.

CROP AND MARKET NOTES.

Iosco Co., May 12.—May started in with pleasant, sunny days and cold, frosty nights. At the present writing we have had five heavy frosts in May, which no doubt will do some damage. The month also started pretty dry, just about as dry as we can stand it. Spring-sown grain all looking fine. Many farmers are engaged in getting their corn ground ready and planting. Market quotations: Eggs, 20c; butter, 25c; potatoes go begging at 10@15c a bu.; pork, 14@15c per lb.; horses and cattle very scarce and high.

Genesee Co., May 14.—Weather continues cold and vegetation is progressing slowly. Heavy frosts for several nights past. Oats looking well, aside from an occasional instance where the soil is not drained. Grass promises heavy yield. Wheat has not done very well owing to dry weather after the snow went off. Some corn has been already planted and many are all ready and waiting for a few warm days before planting. Sugar beets where early sowed, are not doing very well, the soil having been too cold and wet. Thousands of bushels of potatoes held over are still in farmers' hands and the loss in this direction will undoubtedly be heavy, as the price last fall was much higher than now. Considerable hay remains unsold also. Prices on nearly all farm products lower than a few weeks ago. Farm lands are changing hands freely at prices ranging from \$60 to \$100 per acre. Help as scarce as ever, and good wages offered.

Livingston Co., May 9.—The first week of May was very wet and cold which retarded farming operations considerably. Three heavy frosts last week damaged fruit greatly, though probably not as much as was at first thought. Farmers are rushing the work of fitting corn ground. No corn planted yet. Wheat and clover have made a good growth. Farmers are not shearing their sheep as early as usual on account of the cold weather. No wool being marketed yet; price not very satisfactory. Prices of good farms have advanced materially. Several farms have changed hands at high prices. Market quotations are: Wheat, \$1.03; beans, \$1.80; rye, 73c; corn, 63c; oats, 37c; butter, 27c; eggs, 18c.

Shiawassee Co., May 10.—Weather moderate, accompanied with low temperature at night. Frost of severe nature on low lands. Fruit is somewhat injured, but at present cannot be determined just how much. Farmers are busy plowing and preparing corn land. The late rains have retarded many farmers from working land

on account of being too wet. Wheat is recuperating wonderfully from the hard setback early in the spring. If conditions are favorable from now on the outlook is very good for a fair crop. Barley and oats are doing well, but suffering some from too much wet weather. The usual acreage of beans will be planted. Many farmers have abandoned the sugar beet crops on account of low prices paid by factory. Potato growers are discouraged with their crop last fall and will cut down acreage this spring. The hay crop is looking fine and bids fair to be the banner crop of the season. Very few hogs in the country. Horses are still changing hands at good prices. Farmers are turning their attention to dairying and consequently good cows are selling high.

E. Clark and West Marathon Co.'s, Wis., May 14.—Weather conditions are not very favorable for farming since April 16, when our summer weather turned into the mid-winter kind, doing much damage to growing crops and especially fruit trees, and the night frosts since the 16th of April make gardens look sick. Potato and corn planting is about completed but the dry and cold weather keeps it from coming up. Several well improved farms were sold at prices from \$50 to \$75 per acre and auction sales are in order. At such sales some grade Holstein and grade Guernsey cows were sold at \$65; all sold above \$50. Pasture is in fair condition. Milk brings good prices. Cheese sold at 14½c; creamery butter, 27c; dairy, 22@25c; eggs, 19c; wool, 25c.

FRUIT DAMAGED.

We are informed through our Grand Rapids office that considerable damage has been done Michigan fruit by frost during the past few nights. Mr. Bassett, secretary of the State Horticultural Society, states that it is impossible to say yet the extent of damage done, although strawberries are known to be pretty well destroyed. Peaches and apples are hurt some.

Robert Graham, of Kent county, states that heavy damage has been done all fruit in the vicinity of Grand Rapids, except where protected by favorable locations. Strawberries are nearly all gone. Cherries, 75 per cent killed. Peaches and apples are still hopeful, although in many places peaches are badly killed.

Dr. E. H. Ryno, an authority on fruit and an old grower, reports strawberries that blossomed early, and cherries, principally lost. Peaches are badly used up. About 25 per cent of a crop of apples are saved.

Other sources indicate general damage which argues that those having fruit that is safe should take the very best care of it.

CATALOGUE NOTICES.

The Leader Iron Works, Decatur, Ill., manufacturers of the Leader Water System, are sending out a handsomely illustrated catalogue fully describing and explaining the air pressure system and its utility in the farm home.

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SNAP FOR LAND—Wanted to trade state right, state of Michigan, most successful patent oil burner for cook and heating stoves for land in Southwest. C. P. KENNEDY, Athens, Texas.

Wanted—GOOD FARM from Owner Only. Want possession now or next fall. State particulars. OHIGAN, Box 754, Chicago, Ill.

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FOR SALE—Select corn and other lands in Southern Michigan. Write now for list. The Ypsilanti Agency Co., Inc., Ypsilanti, Mich.

OLD VIRGINIA FARMS FOR SALE. Send for Free Illustrated Catalog, largest list in Virginia. CASSELMAN & CO., Richmond, Va.

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FOR SALE—41-acre farm at \$55.00. Half mile of village, clay loam heavy upland soil, nearly level, 8-room house, barn, etc. G. M. MADDEN, Constantine, Michigan.

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Farms Income \$4000 in 1909
208 acres, wire fenced, 46 cows, spring watered pasture, 100,000 feet timber, cuts 80 tons hay; new 40-cow barn, big wagon house, 12-room 2-story residence; 2½ miles to depot, creamery village; to close affairs quickly, if taken immediately owner will include 30 fine cows, 10 yearlings, 5 horses, hens, tools, wagons and improved potato machinery; \$7,500 takes all; half cash, and easy terms. For traveling instructions see page 5, "Strout's Farm Catalogue, 2nd Edition." Other farmer from \$1,000 to \$10,000 in Penna., Ohio and Michigan. For free copy, with reliable information of sales, crops, markets throughout the Eastern States address, Station 101, E. A. Strout, Union Bank Bldg., Pittsburg, Penna.

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MARKETS

DETROIT WHOLESALE MARKETS.

May 18, 1910.

Grains and Seeds.

Wheat.—The trend of prices the past week was not altogether consistent with the causes that dealers hold are responsible for price changes, and the independence of the farmer is challenged as the real factor that is interfering. Bears had the news in their favor but they dare not sell, they say, because farmers do not have to dispose of their holdings to pay off mortgages, meet interest, etc., as was once the case, but are at liberty to hold over till another year if prices are not right. Rains have materially helped the spring wheat crop and in Kansas and Oklahoma where considerable plowing of wheat fields was reported there has been a decided improvement favorable to the crop. When satisfactory prices are offered farmers of both the northwest and southwest offer the grain liberally but declines are met with restricted deliveries. The Hessian fly is doing the bulls a favor. A year ago the price for No. 2 red wheat was \$1.49. Quotations for the week are:

	No. 2	No. 1	Red.	White.	July.	Sept.
Thursday	1.11½	1.11½	1.04½	1.03½		
Friday	1.12½	1.12½	1.05½	1.04½		
Saturday	1.12½	1.12½	1.05½	1.04½		
Monday	1.12	1.12	1.04½	1.04		
Tuesday	1.12	1.12	1.04½	1.03½		
Wednesday	1.12	1.12	1.04	1.02½		

Corn.—Conditions have not been the best for getting in the new crop and the trade has felt the situation to an extent that a material advance in values was made. There was a substantial decrease in the visible supply and deliveries at local elevators are not large. One year ago the price for No. 3 corn was 62c per bu. Quotations for the week are:

	No. 3	Yellow.
Thursday	64	65
Friday	64	65
Saturday	65	66
Monday	65	66
Tuesday	65	66
Wednesday	65	66

Oats.—This grain, like corn, advanced in spite of the steady condition of wheat. The supply is restricted and the influence of adverse weather conditions have encouraged the bulls to take a more firm stand for better values. One year ago the price for No. 3 oats was 62c per bu. Quotations for the week are:

	Standard.
Thursday	45½
Friday	45½
Saturday	45½
Monday	45½
Tuesday	45½
Wednesday	45½

Beans.—Although no transactions on the local trade are reported the sentiment of the deal here is decidedly bullish owing to the call for beans for seed and the generally strong position of the deal combined. Last year at this date the quotation for cash beans was \$2.52. Nominal prices here are:

	Cash.	Oct.
Thursday	\$2.15	\$2.05
Friday	2.15	2.05
Saturday	2.20	2.05
Monday	2.25	2.07
Tuesday	2.25	2.07
Wednesday	2.25	2.07

Cloverseed.—This trade has been reduced to dealings in futures. The price is about 15c above the figure of a year ago. Quotations for the week are:

	Prime Oct.
Thursday	\$6.50
Friday	6.55
Saturday	6.55
Monday	6.60
Tuesday	6.60
Wednesday	6.60

Rye.—Transactions are few. Market firm and grain scarce. No. 1 is quoted at 82c per bu., which is last week's quotation.

Visible Supply of Grain.

	This week.	Last week.
Wheat	22,872,000	24,584,000
Corn	7,780,000	9,300,000
Oats	7,276,000	8,118,000
Rye	559,000	585,000
Barley	2,035,000	2,154,000

Flour, Feed, Provisions, Etc.

Flour.—Market is moderately active at prices ranging about 40c below those of last week. Quotations as follows:

Clear	\$5.15
Straight	5.25
Patent Michigan	5.55
Ordinary Patent	5.35

Hay and Straw.—No. 1 timothy is higher. Other kinds steady. Quotations: No. 1 timothy, new, \$17.50@18; No. 2 timothy, \$16@16.50; clover, mixed, \$16@16.50; rye straw, \$7.50@8; wheat and oat straw, \$6.50@7 per ton.

Feed.—Bran and middlings are lower while corn feeds are higher. Carlot prices on track: Bran, \$25 per ton; coarse middlings, \$26; fine middlings, \$28; cracked corn, \$27; coarse corn meal, \$27; corn and oat chop, \$24 per ton.

Potatoes.—Brokers are inclined to offer even lower values than were given a week ago and do not care to take the tubers. Michigan grown are selling in car lots at 20c per bu.

Provisions.—Family pork, \$28@29; mess pork, \$26.50; medium clear, \$26@26.50; pure lard, 14½c; bacon, 20@21c; shoulders, 14½c; smoked hams, 18@18½c; picnic hams, 13c per lb.

Hides.—No. 1 cured, 10½c; No. 2 cured, 9½c; No. 1 green bulls, 8½c; No. 1 green calf, 15c; No. 2 green calf, 14c; No. 1 cured calf, 16c; No. 2 cured calf, 15c; No. 1 horsehides, \$3.50; No. 2 horsehides, \$2.50; sheepskins, as to wool, 50c@52.

Dairy and Poultry Products.

Butter.—With no change at Elgin and other trade centers the Detroit market

remains steady with last week. The deliveries are not heavy for the season and demand is good. A year ago the price for creamery was 3c below the present figure. Quotations are: Extra creamery, 27c per lb; firsts, do., 26c; dairy, 21c; packing stock, 20c.

Eggs.—Although values advanced during the week they are a cent below last year's quotations for the same date. The receipts are not heavy and buying is active. Fresh eggs, cases included, are exchanged at 20c per dozen.

Poultry.—There is a tendency toward stronger prices. The offerings are very scarce. Demand is not large but is sufficient to keep values up and market firm. Chickens are higher; other kinds steady. Live.—Broilers, 25@26c; spring chickens, 18c; hens, 18c; old roosters and stags, 12@13c; ducks, 15@16c; geese, 12c; turkeys, 18@19c.

Cheese.—Michigan, late made, 15@15½c; Michigan, fall made, 18@18½c; York state, 19@20c; limburger, Wisconsin, 17@18c; New York, 18@19c; bricks, 16@16½c; Swiss, domestic block, 21c; Swiss loaf, 28c.

Calves.—Steady. Choice to fancy, 11@11½c; ordinary, 9@9½c.

Fruits and Vegetables.

Apples.—Steady and in good demand. Spy, \$4@4.50; Baldwin, \$4@5; Steel red, \$5; Greening, \$4@4.50 per bbl.

Cabbage.—Selling at \$2.75@3 per crate for new.

Strawberries.—Per 24-qt. crate, \$2.75@3. **Vegetables.**—Beets, 60c per bu; brussels sprouts, 25c per qt; carrots, 75c per bu; cauliflower, \$2.25@2.50 per bu; celery, 45@50c per doz; eggplant, \$1.50@1.75 doz; green onions, 10@12c per doz; head lettuce, \$2.50@3 per hamper; mint, 25c per doz; parsley, 25@30 per doz; radishes, 20@25c doz; spinach, 90c hamper; turnips, 50c per bu; watercress, 20@25c per doz; wax beans, \$3@3.50 per bu; pieplant, 25c per doz; asparagus, \$1@1.25 per doz.

OTHER MARKETS.

Grand Rapids.

Receipts of fresh eggs are falling off a little as the season advances, which steadies the market and prevents any break in prices. Eggs are still worth 19c delivered here. Dairy butter has increased in supply, but prices show no material change, jobbers paying the country merchants 21@22c. Creamery butter is unchanged at 27c. The live poultry market is 1c lower all round, which makes quotations for stock delivered in Grand Rapids as follows: Fowls and chickens, ducks and turkeys, 15c; old roosters, 10c. Dressed hogs are steady at 11@11½c. In spite of the disastrous potato slump, the potato acreage this year will probably be large. Seed is cheap and some of the large dealers in the state are offering the farmers free seed and a contract price of 30c a bushel in the fall, or the prevailing market price, just as the grower chooses. Wheat is 2c lower, while corn, rye and oats are 1@2c higher. Quotations follow: Wheat, \$1.06; corn, 66c; rye, 72c; oats, 46c; buckwheat, 55c. Beans have advanced a little; white peas, machine screened, being quoted on \$1.85 basis, while red kidneys are worth \$2.50 @2.75. The freeze of Friday night, May 13, caused much damage to fruit growers in this section. Strawberries, currants and all small fruits will be a small crop, while cherries, plums and other tree fruits have been hit hard.

Chicago.

Wheat.—No. 2 red, \$1.13@1.15; July, \$1.03½; September, \$1.01½.

Corn.—No. 2, 63½@64c; July, 62½c; September, 63½c per bu.

Oats.—No. 3 white, 41@43c; May, 42½c; July, 40½c; September, 38½c.

Butter.—There was some recovery in creamery values the past week but dairy butter is lower. Quotations are: Creameries, 22@27c; dairies, 21@25c.

Eggs.—The demand for eggs is preventing any large accumulating of stocks. Prices are higher. Prime firsts, 20c; firsts, 19c; at mark, cases included, 16@19c per doz.

Hay and Straw.—Market lower. Quotations are: Choice timothy, \$16.50@17; No. 1 timothy, \$14.50@15.50; No. 2 do and No. 1 mixed, \$12.50@13.50; No. 3 do and No. 2 mixed, \$8.50@11.50; rye straw, \$9@10; oat straw, \$7@8; wheat straw, \$6@6.50.

Potatoes.—There has been a fairly good undertone to the potato deal here this week and prices as given out are a little higher. Fancy and choice stocks are selling at 28@30c per bushel, while fair to good grades are quotable at 25@27 per bushel.

Beans.—Common beans are higher. Choice hand-picked are quoted at \$2.26; fair to good, \$2.20; red kidneys, \$3@3.15 per bushel.

Wool.—There is a little weakening in the deal here and prices rule a little lower. For fine unwashed delaine, 23@25c is being paid.

New York.

Butter.—All week there has been a firm market at last week's figures. Western factory firsts, 21½@23c; creamery specials, 29c per lb.

Eggs.—Market moderately firm with receipts large and demand liberal. Fresh receipts are quoted at 21@21½c per doz.

Poultry.—Market easy with tendency of prices downward. Western fowls, 15@18c; frozen chickens, 16@18c; turkeys, 16@20c per lb.

Boston.

Wool.—Brokers are more active and their awakening has lent the market a decidedly better tone. Some heavy sales were completed during the week. There is a good demand for delaine and medium fleeces. While prices in the east are shading in favor of the buyers, the western producers are firm in their demands and the situation appears to many to be more hopeful than it was, although others are weakening under the systematic campaign on the part of buyers to hammer down prices. The leading domestic quo-

tations range as follows: Ohio and Pennsylvania fleeces—No. 1 washed, 36@37c; delaine washed, 35@36c; XX, 33@34c; half blood clothing, 31@32c; three-eighths blood clothing, 31@32c; quarter blood clothing, 30c; delaine unwashed, 26@27c; fine unwashed, 23@24c. Michigan, Wisconsin and New York fleeces—Fine unwashed, 22@23c; delaine unwashed, 25@26c; half blood unwashed, 28@29c; three-eighths blood unwashed, 30@31c. Kentucky, Indiana and Missouri—Three-eighths blood, 30@31c; quarter blood, 28@29c.

Elgin.

Butter.—Market firm at 27c per lb., which is the quotation of a week ago. The sales for the week amounted to 592,400 lbs., compared with 593,400 for the previous week.

THE LIVE STOCK MARKETS.

Buffalo.

May 16, 1910.

(Special report by Dunning & Stevens, New York Central Stock Yards, East Buffalo, N. Y.)

Receipts of sale stock here today as follows: Cattle, 160 cars; hogs, 12,800; sheep and lambs, 16,600; calves, 2,100.

Receipts of cattle on our market today, 160 cars. Good to best cattle, weighing from 1,250 lbs. and up, were only steady with last Monday, quality considered. All the light and handy weight butcher stock sold strong last week, and active, as did cows, heifers and bulls, and in some instances 10@15c higher. Everything was well cleaned up by two o'clock. Stockers and feeders full quarter lower than last week.

We quote: Best 1,300 to 1,450-lb steers, \$7.65@8.15; good 1,200 to 1,350-lb. do., \$7.25@7.75; best 1,100 to 1,200-lb. shipping steers, \$6.50@7.25; medium butcher steers, 1,000 to 1,100 lbs., \$6@6.40; light butcher steers, \$5.25@5.75; best fat cows, \$6.50@7; fair to good cows, \$5@5.50; common to medium do., \$3.50@4; best fat heifers, \$7@7.50; good fat heifers, \$5.75@6.25; fair to good do., \$5.50@6; best feeding steers, \$5.25@5.75; medium to good do., \$4.25@4.50; stockers; all grades, \$3.75@4; best bulls, \$6@6.50; bologna bulls, \$5@5.75; thin light bulls, \$3.75@4.50; best milkers and springers, \$5.50@6.50; common to good do., \$2.50@4.50.

A few extra prime bulls sold for \$6.75 today. Good milkers and springers sold strong today.

With 36,000 hogs in Chicago today, and 12,800 here, and Chicago quoting hogs 10@20c lower than Saturday's high time, caused a weak and bearish feeling here; packers bidding strong 10c lower than Saturday's best time. Market closed steady at the opening prices, with a good clearance, all that got in time for the market. Prospects look only fair.

We quote: Mixed, medium and heavies and good yorkers, \$9.85@9.90; a few fancy decks of choice hogs up as high as \$9.95. Light yorkers and pigs, \$9.90@10; roughs, \$8.80@8.90; stags, \$7.75@8.50 as to quality.

The lamb market opened slow today, with more of the best lambs selling from \$8.85@8.90. Market closed steady, all best handy weight lambs selling; few coarse and heavy lambs unsold. Look for little better prices balance of the week. Sheep were very dull and 65@75c lower than last week. Most of the best wethers selling at \$6.50@6.60; few at \$6.75. Don't look for much improvement in the sheep trade.

We quote: Handy lambs, \$8.85@8.90; heavy lambs, \$8.85@8.90; wethers, \$6.50@6.65; ewes, \$5.50@5.75; yearlings, \$7@7.50; cull sheep, \$3@5; skip lambs, \$5@5.50; bucks, \$3@5; veals, choice to extra, \$8.25@8.50; fair to good do., \$7@7.75; cull to common, \$6@6.75; light thin calves, \$5@6.

Chicago.

May 16, 1910.

Received today 22,000 38,000 25,000
Same day last year.. 23,011 43,244 13,908
Received last week.. 41,397 94,148 59,170
Same week last year.. 44,872 111,334 54,636

The new week opened today with a very good cattle supply, and early dullness prevailed, buyers being determined upon forcing sharp declines, if possible. After business got well started there was very good trading at average declines of 10c, with some lots showing a break of 15c, and butcher stock showed a greater reduction than steers. The unexpectedly large supply of hogs caused a decline of 15@20c, sales being active at \$9.25@9.65. Shippers and local buyers operated freely, and the greater part of the supply was taken, more hogs selling at \$9.55 than at any other price. As large Monday receipts are usually followed by much smaller supplies on other days of the week, killers were glad to have an opportunity to load up at lower figures. The best 195-lb. hogs sold around \$9.57½. Hogs received last week averaged in weight 237 lbs., compared with 234 lbs. a week earlier, 215 lbs. a year ago, 216 lbs. two years ago and 236 lbs. three years ago. Lambs declined today 25c under the unusually large supply, clipped lots going at \$5@8.85. Sheep declined 25@50c, with very little doing, being quotable at \$4@6.75, with little selling above \$6.60. Spring lambs were plentier and weaker in price, and a consignment of California grass sheep arrived.

Cattle were in very limited general demand last week, as is usual at this season of the year, when comparatively cheap fresh vegetables and berries always have a tendency to lessen the consumption of beef, the demand for meats of all kinds being further checked by the unusually high prices everywhere prevailing. The betterment of prices that took place was due to the declining receipts of cattle and not to any gain in demand, either on local or shipping account, while prices were far too high to allow of an export trade. The fact that corn planting was going forward in many sections was sufficient to account for the smaller receipts, but it could not fully explain why only 14,483 head arrived on Monday. The fact is that grass is unusually good, and many farmers are turning their growing cattle

on grass, rather than part with them now. Sales of beef steers have been largely at \$6.85@8.10, with common to fair light killers selling at \$5.60@6.90; medium grade steers at \$7@7.45; good cattle at \$7.50@7.90 and choice to extra heavy shipping heaves at \$8@8.70. The top price was 35c higher than a week earlier, there being a great scarcity of prime cattle. Butcher stock sold extremely well on packer and outside account, cows and heifers going at \$4.25@7.50, while canners and cutters were good sellers at \$2.50@4.20. Bulls were active at \$4.25@6.60, and the calf market was variable, sales ranging at \$3.25@7.75 per 100 lbs., while milkers and springers moved off fairly at \$30@75 per head. Stockers and feeders were in fair demand, considering the extremely high prevailing prices, offerings being so limited that prices averaged decidedly higher. Stockers sold at \$4.75@6 and feeders at \$5.75@6.75. Corn planting kept some buyers away, but the demand about equalled the supply of desirable feeding steers.

The skirmishes between stockmen and killers have shown several victories for the former, last week's hog supply having continued on a much smaller scale than a year ago, both here and at other western markets. There was a good percentage at times of prime 230 to 260-lb. offerings, and packers showed a preference for these, while eastern shippers took a good proportion of the hogs offered, with a good call for choice light hogs. Speculators purchased the best hogs rather extensively and thereby assisted in putting prices higher. The outlook does not appear to be very good for the packers putting hogs on a lower basis, and unless supplies undergo a considerable increase and eastern shippers operate less freely, sellers are likely to be in a position to maintain values. Stockmen appear to realize the position of affairs and are not generally disposed to market their holdings after a sharp decline in prices. Provisions sympathize with hogs and are bringing high prices, the statistical showing being of a bullish character. On May 1 western packing points held aggregate stocks of 165,860,000 lbs., compared with 158,403,451 lbs. a month ago and 305,322,263 lbs. a year ago.

Sheep and lambs have sold well or otherwise according to their quality, buyers bidding up well for the high dressing lambs and taking other kinds under protest as substitutes. As for sheep, most lots had to be sold lower last week, the call being mostly for high-class lambs, which sold higher, Colorado woolled lambs selling at the highest prices recorded in several weeks. Regarding the sheep and lambs received, traders stated that many country shippers sent in holdings which they called choice, but which were only fair, and had to be sold below expectations. There was a scarcity of spring lambs, whereas a year ago supplies from Kentucky and Tennessee were fairly large at \$8@9 per 100 lbs. High dressing fed flocks are becoming scarcer all the time, and receipts are showing an increasing proportion of grassy stock that makes a bad showing on the hooks. This explains the widening out of quotations.

Horses of late have been marketed more sparingly than earlier in the spring and less freely than a year ago, it being evident to country shippers that fewer were wanted by buyers. Farm mares and small southern chunks ceased weeks ago to meet with a good outlet, and they have declined largely \$10@15 per head. At present the best demand is for drafters at \$170@275 per head, with more selling at \$200 and lower than at higher prices, as the average quality of the offerings was not extra fine. Drivers and saddlers have had a fair outlet at \$150@300, and big feeders are wanted at \$190@225 for shipment to farming districts in Ohio and Pennsylvania. Wagon horses are wanted for city delivery service at \$160@210.

F.

LIVE STOCK NOTES.

F. W. Walker, one of the old-time stock feeders of Hancock county, Ill., believes there will be a shortage of fat cattle this year. He sticks to the business year after year and makes it pay well on the whole, being in the habit of feeding at least 150 cattle and 150 or more hogs every year, and this year he will summer-feed about 100 head of each. In Hancock county pastures are in extremely fine condition, but cattle feeding has largely ceased, and farmers prefer to raise corn for the market rather than hay or cattle. Sod has been broken up freely for corn, and the corn acreage will be largely increased. Mr. Walker tells of purchasing the first of this year a stack of hay that made the grower \$22 an acre.

A. D. Fey, of Western Iowa, says farmers in his region are generally putting cattle on grass, grazing being extremely popular, but not many are placed in feed lots, summer feeding being out of fashion. He reports a good "crop" of spring pigs, favorable weather having been a great help in farrowing. Old corn is bringing 43 to 45 cents per bushel, and farmers have been busy of late in planting corn.

Conditions in the hog trade show no marked changes, the great shortage being as marked as ever and stockmen disinclined to market their immature holdings, as they realize that it will pay them well to hold to full maturity. Corn is cheap enough to return big profits when fed to growing hogs, and few pigs are being shipped to market.

In recent weeks competition between the killers and the feeder buyers has not been as strong as it was in the Chicago cattle market, and on that account stockmen have in numerous instances been in a position to get a better selection of feeding steers. A good share of recent purchases went to Indiana, Ohio and northern Illinois. Buyers in these sections were mainly after good to choice feeders. Demand for good milkers and springers has been strong in the Chicago market of late, and high prices have been paid for choice cows. Cincinnati buyers were especially good customers.

THIS IS THE LAST EDITION.

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

DETROIT LIVE STOCK MARKETS.

Thursday's Market.

May 19, 1910.

Cattle.

Receipts, 1,322. Market dull and 25@35c lower than last week.

We quote: Best steers and heifers, \$7; steers and heifers, 1,000 to 1,200, \$6.25@6.75; steers and heifers, 800 to 1,000, \$6@6.50; grass steers and heifers that are fat, 800 to 1,000, \$5.50@6; grass steers and heifers that are fat, 500 to 700, \$4.75@5.50; choice fat cows, \$5@5.50; good fat cows, \$4.50@5; common cows, \$3.50@4; canners, \$2.50@3; choice heavy bulls, \$5.50; fair to good bolognas, bulls, \$4.50@5; stock bulls, \$4@4.50; milkers, large, young, medium age, \$4@5.50; common milkers, \$2.50@3.50.

Bishop, B. & H. sold Schlischer 20 steers av 762 at \$6.20; to Goose 5 do av 1,050 at \$5.35; to Kamman 13 do av 858 at \$6.25, 1 cow weighing 700 at \$3.25, 2 bulls av 1,015 at \$5, 1 do weighing 1,320 at \$5.25, 4 steers av 750 at \$6, 6 do av 930 at \$6.75; to Mich. B. Co. 26 steers av 855 at \$6.25; to Thompson Bros. 1 bull weighing 650 at \$4, 1 cow weighing 1,000 at \$5; to Regan 3 heifers av 516 at \$4.40; to Davenport 2 stockers av 550 at \$4.50; to Sullivan P. Co. 1 cow weighing 1,070 at \$4, 3 do av 863 at \$5.50, 2 steers av 930 at \$7, 1 cow weighing 1,300 at \$5, 3 do av 866 at \$4.75, 1 do weighing 1,550 at \$6, 1 bull weighing 1,500 at \$5.50, 3 cows av 887 at \$3.75; to Mich. B. Co. 22 steers av 1,080 at \$6.75.

Spicer & R. sold Kull 12 steers av 927 at \$6.90, 6 do av 891 at \$6.90, 27 do av 746 at \$6.50, 1 bull weighing 1,160 at \$5, 1 do weighing 1,390 at \$6; to Sullivan P. Co. 3 cows av 1,033 at \$3.75, 6 do av 1,068 at \$5.50, 1 bull weighing 1,070 at \$5, 1 do weighing 920 at \$5, 2 do av 835 at \$4.50; to Thompson Bros. 4 cows av 975 at \$4.40, 3 do av 943 at \$5, 6 steers av 970 at \$6.60; to Fry 11 butchers av 824 at \$6.25, 2 cows av 1,020 at \$4.50; to Kamman 9 butchers av 685 at \$4.50, 1 cow weighing 850 at \$3.25; to Brown 4 stockers av 567 at \$4.50, 1 do weighing 400 at \$4; to Regan 5 heifers av 510 at \$4.25; to Brown 4 stockers av 535 at \$4.50, 3 do av 533 at \$3; to Goose 6 cows av 908 at \$4; to Taite 1 bull weighing 1,130 at \$6.10; to Davenport 9 stockers av 560 at \$4.50; to Kamman B. Co. 23 butchers av 800 at \$5.60, 11 do av 873 at \$5.75; to Urban 1 bull weighing 550 at \$4; to Schuader 8 steers av 825 at \$6.50; to Sullivan P. Co. 2 canners av 755 at \$3, 2 bull and cow av 975 at \$4.50.

Roe Com. Co. sold Mich. B. Co. 32 butchers av 750 at \$5.75, 25 steers av 863 at \$6.50; to Kamman B. Co. 14 steers av 956 at \$6.75, to Fry 1 cow weighing 1,090 at \$4.50, 4 heifers av 760 at \$5.25; to Mich. B. Co. 4 cows av 887 at \$4.50, 15 butchers av 763 at \$6, 23 do av 972 at \$6.50, 3 baby steers av 813 at \$7.50, 1 do weighing 600 at \$6, 4 cows av 1,155 at \$5.50.

Lowenstein sold Mich. B. Co. 10 cows av 1,042 at \$5.25.

Weeks sold Lingeman 14 steers av 900 at \$6.40.

Haley & M. sold Bresnahan 13 stockers av 453 at \$4.15; to Marx 16 steers av 942 at \$6.85; to Goose 4 cows av 1,037 at \$5.15, 1 do weighing 960 at \$4.25; to Cooke 14 steers av 944 at \$6.80, 8 heifers av 775 at \$5.80, 1 bull weighing 750 at \$4.50; to Thompson Bros. 2 steers av 800 at \$5, 2 bulls av 1,000 at \$5.25; to Fry 4 heifers av 700 at \$5.75; to Regan 3 do av 500 at \$4.90; to Fronn 2 cows av 950 at \$3.75, 1 cow weighing 700 at \$3.50; to Breitenback Bros. 19 butchers av 842 at \$6.10, 1 steer weighing 760 at \$5.50; to Sullivan P. Co. 10 cows av 982 at \$5; to Rattkowsky 4 steers av 837 at \$6, 1 cow weighing 990 at \$4.25; to Markowitz & B. 4 do av 935 at \$4.50, 1 do weighing 920 at \$3.50, 3 butchers av 900 at \$4.60; to Lachalt 9 do av 750 at \$5.

Veal Calves.

Receipts, 1,291. Market 75c higher than last week. Best, \$8@8.50; others, \$4@7.50; milch cows and springers steady.

Bishop, B. & H. sold Friedman 1 weighing 240 at \$8.50; to Kull 6 av 130 at \$8, 14 av 125 at \$8; to Nagle P. Co. 52 av 130 at \$8, 4 av 135 at \$5; to Pragg 3 av 100 at \$6, 22 av 135 at \$8; to Brodloff 11 av 140 at \$8.25; to Sullivan P. Co. 24 av 135 at \$8, 3 av 140 at \$8; to Nagle P. Co. 54 av 140 at \$8, 16 av 130 at \$8, 3 av 140 at \$6, 16 av 125 at \$7.75, 9 av 150 at \$7.50, 5 av 120 at \$7.75.

Spicer & R. sold Parker, W. & Co. 35 av 135 at \$7.75, 32 av 130 at \$7.75; to Rattkowsky 10 av 133 at \$7.50; to Goose 5 av 125 at \$6.50; to Sullivan P. Co. 17 av 130 at \$7.75, 5 av 130 at \$7.75; to McGuire 7 av 140 at \$7.65; to Hammond, S. & Co. 1 weighing 200 at \$5, 13 av 125 at \$7.25, 18 av 130 at \$8; to Thompson 4 av 140 at \$7.25.

Cheney & H. sold Sullivan P. Co. 32 av 135 at \$7.85.

Johnson sold Schlischer 26 av 130 at \$7.50.

Wagner sold Newton B. Co. 8 av 150 at \$7.75.

Long sold same 7 av 140 at \$8.

Weeks Bros. sold Friedman 9 av 110 at \$7.50.

Waterman sold Hammond, S. & Co. 5 av 125 at \$7.25.

Duelle sold Burnstine 25 av 130 at \$8.

Roe Com. Co. sold Rattkowsky 5 av 105 at \$7; to Mich. B. Co. 29 av 130 at \$7.75.

Haley & M. sold Thompson Bros. 33 av 130 at \$7.75, 23 av 125 at \$7.35; to Kull 2

av 210 at \$7; to Newton B. Co. 2 av 110 at \$7, 25 av 135 at \$8; to Hammond, S. & Co. 4 av 140 at \$6, 12 av 130 at \$7.75; to Goose 5 av 125 at \$7.75, 35 av 130 at \$7.50; to Markowitz 24 av 135 at \$7.40.

Sheep and Lambs.

Receipts, 2,354. Good grades 15@25c higher than last week. Common lambs 25c, grass sheep 50c lower and dull.

Best lambs, \$8.50@8.75; fair to good lambs, \$8@8.25; light to common lambs, \$5@6.50; spring lambs, \$9@11; fair to good sheep, \$5; culls and common, \$3.50@4.

Bishop, B. & H. sold Sullivan P. Co. 4 lambs av 80 at \$8.50, 9 do av 68 at \$8, 4 sheep av 112 at \$4.50, 19 lambs av 60 at \$8.25, 4 sheep av 130 at \$4.50, 6 do av 95 at \$3.50; to Nagle P. Co. 607 lambs av 82 at \$8.75, 112 do av 65 at \$6.50; to Mich. B. Co. 8 sheep av 125 at \$4.75; to Thompson Bros. 25 lambs av 60 at \$7.50; to Mich. B. Co. 81 lambs av 75 at \$8.50, 4 sheep av 82 at \$4.50; to Fitzpatrick Bros. 25 lambs av 65 at \$7, 10 do av 69 at \$8, 21 do av 55 at \$7, 24 sheep av 80 at \$5, 7 do av 75 at \$4, 21 do av 110 at \$5, 29 lambs av 72 at \$8.50, 6 spring lambs av 58 at \$11.

Wagner sold Newton B. Co. 4 sheep av 155 at \$4.50, 19 do av 120 at \$6.

Long sold same 36 lambs av 67 at \$8.

Carmody sold Mich. B. Co. 11 lambs av 80 at \$8.25.

Waterman sold Sullivan P. Co. 9 lambs av 85 at \$6, 16 do av 75 at \$7.50.

Spicer & R. sold Mich. B. Co. 21 sheep av 85 at \$5.75, 61 lambs av 58 at \$7.50, 13 sheep av 110 at \$4.75, 8 do av 130 at \$5.50, 7 do av 100 at \$6; to Sullivan P. Co. 4 do av 80 at \$3, 12 lambs av 65 at \$4.50, 29 do av 85 at \$8.75, 31 do av 68 at \$7, 4 sheep av 135 at \$5; to Mich. B. Co. 5 do av 90 at \$5, 4 spring lambs av 48 at \$8.50, 16 sheep av 105 at \$4.75; to Eschrich 29 do av 70 at \$4.50; to Mich. B. Co. 11 lambs av 58 at \$6.75.

Roe Com. Co. sold Nagle P. Co. 5 lambs av 82 at \$8, 5 sheep av 140 at \$5.

Haley & M. sold Thompson Bros. 16 sheep av 120 at \$6.

Hogs.

Receipts, 4,741. Market 5@10c higher than last Thursday.

Range of prices: Light to good butchers, \$9.70; pigs, \$9.70; light yorkers, \$9.70; stags, 1/2 off.

Spicer & R. sold Hammond, S. & Co. 68 av 200 at \$9.75, 299 av 190 at \$9.70.

Roe Com. Co. sold same 287 av 190 at \$9.70.

Sundry shippers sold same 680 av 180 at \$9.70.

Haley & M. sold Sullivan P. Co. 257 av 185 at \$9.70.

Bishop, B. & H. sold same 260 av 190 at \$9.70.

Sundry shippers sold same 370 av 185 at \$9.70.

Bishop, B. & H. sold Parker, W. & Co. 2,019 av 190 at \$9.70.

VETERINARY

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

Injured Back.—For the past two months my two-year-old stallion has traveled out of line as though his back was weak. This colt has not been castrated. F. K., Carsonville, Mich.—It is possible that your colt met with an accident and sprained his back. Apply equal parts turpentine, aqua ammonia and sweet oil to back every day or two and give him 1/2 dr. fluid extract nux vomica at a dose in feed three times daily.

Scratches Stocking.—My four-year-old colt's left hind leg stocks when idle, exercise reduces it some, but still remains larger than normal at fetlock joint. The heel is cracked and indicates scratches, but causes no lameness. S. J. W., Litchfield, Mich.—Give 1 dr. iodine potassium at a dose twice a day and apply equal parts powdered alum and boric acid to sores twice a day.

Sharp, Irregular Teeth.—Slavers.—Have a horse that chews her bit and slobbers when in harness. When in field to pasture holds her head high and moves the tongue almost constantly. She will not eat corn off cob and appetite is not very good. She first commenced slobbering in the winter and has kept it up ever since. A. S., Bath, Mich.—Her teeth should be looked after by some one who is competent to float them. Also give 1 oz. baking soda, 1/2 oz. ground gentian and 1 dr. ground nux vomica at a dose in feed three times a day. Dissolve 1 oz. powdered alum in a quart of water and wash mouth three times a day.

Leucorrhea.—My eight-year-old mare was bred last year, but failed to get with foal. During the winter she commenced discharging a thick white mucus and has had more or less of it ever since. F. G. B., Oxford, Mich.—Dissolve 1 dr. permanganate potash in three quarts water and wash out vagina thoroughly once a day until the discharge ceases. She will not get with foal as long as she has much discharge. Also give 1 oz. bicarbonate of soda at a dose in feed or in water three times a day.

Bone Spavin.—Cracked Heels.—I have a mule that has a bone spavin which I would like to have cured. I also have a horse that is troubled with cracked heels. What had I better do for him? M. F., Detroit, Mich.—Apply any one of the spavin remedies that are regularly advertised in this paper. For your horse that has cracked heels, dissolve 1/4 lb. sugar of lead, 3 ozs. sulphate zinc and 2 ozs. carbolic acid in a gallon of water and apply to sore heels three times a day.

Cow Leaks Milk.—Sweened.—I have a cow that leaks milk and I would like to know what to do to prevent it? I also have a horse that is badly sweened which I would like to know how to cure. A. V. P., Richland, Mich.—By using teat plugs it will prevent your cow leaking milk. The Lawrence Publishing Company can supply you and save you a little money. Blister horse's shoulder with cerate of cantharides every week.

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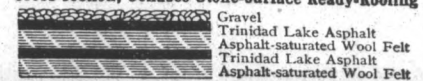
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Cross-section, Genasco Stone-surface Ready-Roofing



THE DAIRY

CONDUCTED BY COLON C. LILLIE.

WHY MAKE BUTTER ON THE FARM?

There are many advantages in favor of making butter on the farm, especially if conditions are fairly favorable and one is reasonably close to a market. On the other hand, there are a few objections and the question must be decided by each one for himself.

It is really less trouble to make the butter at home than it is to draw the milk to the creamery, especially if whole milk is sent when the bulk or weight of it must be hauled both ways. If it is separated on the farm, it will take less time to care for the cream and make it into butter, than it will to deliver the cream to the creamery. It breaks up a half day to go to the creamery, where one has to wait in line his turn to get the skim-milk. By the time one gets home, his horse put out and into the field, considerable time has been consumed without any farm work having been accomplished. The buttermaking can generally be managed to come when it is convenient, that is, not to take a man from the field, and never a horse.

Better calves and hogs can be raised, because the skim-milk can be fed when it is sweet and yet warm with the animal heat, and the buttermilk is left for the hogs. Calves will not do well if frequent changes are made from sweet to sour milk, but this cannot be avoided very well with the skim-milk received from the creamery. It is generally sweet for the morning feed but sour for the night during hot weather. By separating it on the farm, the milk is always sweet and calves will do far better upon it. The buttermilk is another item to be considered, it having a feeding value for hogs or poultry equal to skim-milk.

A profitable market can usually be found for good home-made farm butter. Some sell to creamery patrons, charging them the market price at the creamery. The creamery patrons usually are glad to buy from a neighbor making butter at home, because a majority of them prefer it to the creamery butter. If one has milk sufficient to make say, fifteen pounds of butter per day and can find a sale for it among neighbors or at the local grocery store at creamery prices, he would be receiving fair pay for his time. The usual charge for making is $2\frac{1}{2}$ ¢ a pound, so if the farmer made it himself, he would be paid at the rate of from 25 to 50 cents per hour for his time. By taking it to the creamery, he not only loses his own time and that of the horse and rig, but he receives $2\frac{1}{2}$ ¢ per pound less than he would get if he kept the milk on the farm. There is no trouble in obtaining creamery prices and often one can place it at a cent or two above highest quotations.

If the farmer handles it himself, he knows that none is getting rich at his expense. Of course, most buttermakers are honest, but there are some who cannot resist the temptation to lay away part of the farmer's butter money to make good measure in addition to the regular $2\frac{1}{2}$ ¢ per pound. This can be done very easily and without detection unless the patron keeps close watch.

The main objection to making butter on the farm is the work, but in reality there is less work connected with it when made on the farm than when delivered to the creamery. It is a simple matter to make good butter on the farm, there is more profit, less labor and more satisfaction than there is in hiring it made at the creamery or factory.

Pennsylvania. L. J. HAYNES.

OVERCOMES DIFFICULTY OF DEEP SILO PIT.

In regard to Mr. J. D. McL's inquiry as to a silo partly built in the ground, I would say that I have a silo built this way. I dug my pit the desired size and depth and then built a stone wall about 10 or 12 inches thick, after having set a plank door frame directly in line with the door through the barn wall. Have top of the stone wall on a level with the top of the door frame. I have a stave silo and I had the door frame of the silo proper set exactly over the door frame in the stone wall. By this method I do not have to use any bucket or pitch up any ensilage. The bottom of my silo is a little lower than the floor of my basement but the floor of my ensilage chute is on a level with the basement floor. The door

for the stone wall is made in two sections and are placed on the inside of the door frame when the silo is being filled and are easily removed when necessary. After my silo was up I had a mason plaster the inside of the stone wall, also letting the plaster reach up on the inside of the staves as far as possible. My ensilage keeps well, only where the air is allowed to get in. I always consider my ensilage is better when we get down below the top of the wall where it is impossible for the air to enter.

Livingston Co.

F. H. DURFEE.

GRADING CREAM AT CREAMERIES.

Just about five years ago our state legislature passed the present dairy law, which broadened the scope of the dairy and food department and gave us the inspection of creameries, cheese factories and dairy products. It is just five years since we began the systematic inspection of creameries and cheese factories and farm dairies so far as we have been able to do it. Of course, we have accomplished the most with creameries and cheese factories because we have given them the most attention. Every creameryman in this state will, I think, agree with me that inspection has been beneficial to the industry. We have accomplished much in that direction. We are putting on the market a more uniform product in both cheese and butter. And not only is it more uniform, but it is of better quality than it was five years ago, it is yet, however, far from what it should be and it is not what it would have been had we not changed largely from the whole milk to the gathered cream system. Five years ago we had many whole milk creameries; today we have very few of them. We have changed to the gathered cream system and now we have another problem to solve. As fast as we have improved in buttermaking, we have deteriorated in the raw material and therefore the average score is not so very much better now than then. Nevertheless, the inspections have been of great benefit. However, it seems to me that from one standpoint this inspection has gone just as far as you can go with it, so far as bettering the product is concerned, unless you can induce the legislature to provide more inspectors. We have enough to look after the creameries and the cheese factories, but we haven't the force so that private dairymen can well be reached under this inspection.

I tried to get an agreement among the larger creameries as to a basis of grading cream, and there was a willingness to do so and abide by the agreement, paying for the cream according to quality, but in the practical working out of the question the agreement amounted to nothing, because they were afraid they would lose a customer or two. Here is the real problem and it is a serious one in the way of accomplishing much of anything in this direction under the present circumstances.

The great stumbling block in the way of grading cream is that we could not fix upon a standard that would be agreed to and lived up to. We had no exact way of determining what was good cream and what was poor cream. When you say from your sense of smell or taste that this man's cream is bad and another man's cream is good, when you say that this man's cream is just as good as that man's, then the man with the poor cream comes back at you and says, "My cream is just as good as that man's cream, and if you don't think so, I will take it to the other creamery," and you know what the result will be, especially if there is much competition.

In our creamery the necessity of grading the cream was admitted; but we hesitated for we were right under the eyes of the centralizers of Grand Rapids. We didn't want to lose our customers, we wanted their business, and we did not want to do anything that would drive them from us.

We ran right up against a proposition, however, that made us sit up and take notice. A year ago we succeeded in getting the contract for supplying 150,000 pounds of butter for the United States Navy. We were led to believe that we could fill that order without any trouble. The specifications were looked over very carefully and we believe that we could comply with the specifications within the period of time named.

We began to fill this order and found that what we called sweet cream was not sweet cream, at least, not sweet enough. We found that when we applied the test that the government required, that 15

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—Has the only revolving supply tank. Worth \$15.00 more on any machine. Costs nothing extra on a Galloway.

—Easiest to clean and the few parts come out easy and can't get back out of place.

—Easiest to run—high crank—low tank. With no high lifting and no "back-breaking" cranking.

—Gets the finest quality cream, and all of it—no lumps or churning, as Nature's true principle is followed without forcing either the milk or cream the wrong way up or down.

—Skims closest in any climate or season, no matter whether your milk is warm or cold.

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Let us send you all the facts, told in our New Cream Separator Book. Let me write you personally and send you this Big, New Separator Book of mine—postpaid—Free, so that you and your wife and the boys and girls can talk it over and then try one of my separators under my easy plan for you to do it.

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—No oil cups to remember to fill or turn up twice a day.

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—Easiest to clean and the few parts come out easy and can't get back out of place.

—Easiest to run—high crank—low tank. With no high lifting and no "back-breaking" cranking.

—Gets the finest quality cream, and all of it—no lumps or churning, as Nature's true principle is followed without forcing either the milk or cream the wrong way up or down.

—Skims closest in any climate or season, no matter whether your milk is warm or cold.

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Let us send you all the facts, told in our New Cream Separator Book. Let me write you personally and send you this Big, New Separator Book of mine—postpaid—Free, so that you and your wife and the boys and girls can talk it over and then try one of my separators under my easy plan for you to do it.

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cubic centimeters of Mann's standard alkaline solution should neutralize the acidity in 50 cubic centimeters of cream, that it was not up to standard, and a lot of our cream was rejected. Then we saw we were up against it. We had agreed to fill this contract within a certain length of time, and if we failed were to pay a forfeit. And so this question became a very interesting one to our board of directors, and we resolved to grade the cream. We were in hopes that we would draw some of the cream that the centralizer was getting, and perhaps lose some of the poor cream that we could not use in filling this contract. We agreed to pay a cent and a half more for sweet cream than for sour cream. We were very much concerned about this proposition, as to how it would work out, as you can very readily see, but I am glad to tell you that it worked very nicely.

We did not lose any customers, but on the other hand, we gained a number and I want to say that the effect of grading the cream and paying a cent and a half more for sweet cream has improved the quality of our entire product. Then we were getting cream that half of it would not stand this test, and today, by continuing this standard in grading cream, practically all of our cream will stand the test. This seems to me to be as good proof as one could want that grading cream can be done, and that successfully, not only to the creamery but to the farmer as well. So, now, I tell you, I approach this subject with more confidence than I did before I had had practical experience. We have found by actual experience that grading cream did not drive our customers away. We got a better quality of product and it was a paying proposition all around. Our people seem much better satisfied than ever before. When people say to me that one cannot run a gathered cream creamery and have the cream delivered sweet, all I say is that I know from experience that it is not so. I know that the farmer can keep his cream and send it in twice a week and deliver good sweet cream.

This cream will do to manufacture into ice cream, if it is handled right. Do you know that some of the ice cream manufacturers buy cream early to be used the first warm spell that comes in the spring? If they can do that, cannot the farmer handle his cream so that he can deliver it at the creamery twice a week, sweet? The creamery managers are not responsible—it is up to the farmer, but will the farmer do this if you pay him just as much for poor cream or milk as for good cream or milk? He will never do it and we can hardly blame him if he does not. If a man produces milk under good sanitary conditions and delivers it sweet, this makes that cream worth more to you, and you should be willing to pay more for it, and the reason you don't do it is because you are afraid for the reason that you think you will lose customers. Take my word for it, if you do it and do it right, you will not lose any customers, but rather you will gain others. We know by experience. I believe this whole question can be solved by the creameries and the cheese factories. It is only a matter of giving each man a square deal. We have been able to sell this No. 1 butter for enough more per pound to pay the patrons one and one-half cents more for butter-fat.

BUTTERMILK CHEESE.

As food stuffs become higher in value new ways of utilizing by-products or making more palatable and valuable some ordinary food, are devised, or discovered. From Wisconsin comes a new method of securing the curd in the making of a buttermilk cheese. The method was designed to meet the difficulty which workers have experienced in the past in collecting the curd from heated buttermilk, since the curd is usually so fine grained that it can not be collected on a cheese-cloth strainer. To obtain the desired result a careful regulation of the temperature is necessary. The buttermilk is heated to 78 degrees as rapidly as possible, while it is being stirred. The heating is then stopped and the buttermilk allowed to stand perfectly quiet for one and a half or two hours. From this time it curdles slowly, the clear whey separating from the curd. The curd is then heated to 130 degrees and stirred gently and again left quiet for one hour, during which period it is not allowed to cool. The curd settles to the bottom of the vessel and much of the clear whey may be poured or drawn off, the curd and remaining whey being then put onto cheese-cloth to drain. After

draining for about six hours one to one and a half per cent of salt is added and the buttermilk cheese is ready for use. The cheese has a mild butter-milk flavor and is finer in texture than cottage cheese, so that it may be spread on bread like butter. From 12 to 15 pounds of cheese may be made from 100 pounds of buttermilk and judging from the waste of buttermilk at so many creameries, it offers a profitable use for buttermilk.

AMERICAN JERSEY CATTLE CLUB MEET.

The annals of the American Jersey Cattle Club do not record a more thoroughly representative or enthusiastic gathering of its members than was assembled in New York City last week.

Repeating the happy experiment suggested by President Darling last year, the annual meeting was preceded by a banquet at the Manhattan Hotel on Tuesday evening, May 3, at which the seventy guests gathered around the tables were delightfully entertained for more than five hours with each other, with the menu and with the wit and wisdom of the speakers, among whom were included leading breeders as well as leaders in thought along lines of dairy production. Professors Scovell, of Kentucky, Van-Norman, of Pennsylvania, Wing, of New York, Smith, of Massachusetts, and Rawl, of the government service at Washington, were invited guests and contributed in no small measure to the pleasure and profit of the occasion.

The annual business meeting at the Hoffman House on Wednesday, was attended by 68 members, and 227 others were represented by proxies, making a total of 295, or more than two-thirds of of the club had exceeded those of any the entire membership.

The president reported that the year just ended had been the most prosperous in the entire history of the club; that more animals had been registered, more sales recorded, more money received, more money spent in the interests of the breed and that despite the increased expenditure the addition to the reserve fund of the club had exceeded that of any previous year; and that one would have to go back 25 years to find the record of so large an increase in the membership of the club.

Naturally, all were pleased with this showing and accepted it as indicating the increasing favor with which the Jersey cow is regarded throughout the country as well as the efficient work which has been done by the club, and by individual members in promoting the interests of the breed.

Among those present were one of the original organization of 1868, several others who have outlived the three score years and ten, and more than a few of those who in years past did so much to establish the club on a sound, business-like foundation, and mingling with them in pleasant association the newer members and younger men gathered from widely separated sections of the country for the purpose of expressing and recording their best views of the methods which should be pursued to promote the best interests of the club and the breed.

The general policy of the club as indicated in its past management was upheld by the meeting, and it was gratifying to note the almost perfect unanimity of those present on the main questions at issue.

Mr. E. A. Darling was re-elected president by a unanimous vote, made all the more emphatic because, at the suggestion of a leading western member, the vote was taken by rising, in expression of the appreciation in which Mr. Darling is held as an officer and a gentleman. The choice of four new directors fell upon Lyman A. Mills, of Connecticut, Heulings Lippincott, of New Jersey, A. O. Outen, of Illinois and D. B. Lyons, of Texas, a happy blend of men of "the old guard," and of the younger breeders. If there had been any thought of radical changes in the administration, the membership fee, the policy of the club or the location of the club headquarters, there was at no time either expression or other indication of any such purpose.

The character of this meeting and its results unmistakably evidence the will of the members in regard to some of the changes which rumor had so generally predicted.

The management now has every encouragement to continue its efforts for the improvement and development of the Jersey breed and the conservation of the best interests of Jersey breeders.

New York, H. N. McKinney.

EVERYBODY HAVING COWS WILL SOME DAY USE A DE LAVAL CREAM SEPARATOR



Nearly 1,200,000 farmers, creamerymen, milk dealers and owners of country homes, throughout the world, are already using De Laval Cream Separators, and 150,000 or more are being added to the number every year—many more this year than ever before.

If you haven't a De Laval Cream Separator already you can't be anywhere near the head of this tremendous procession that started thirty years ago, but it will be foolish to wait to bring up the tail end of it.

The use of a De Laval Cream Separator—with even a single cow—means more and better cream and butter, warm and sweet skimmilk, less labor and more profit, twice a day every day in the year.

A De Laval Cream Separator saves its cost in a few months, not only over any other method of creaming milk but over any imitating cream separator.

Then why not fall into the De Laval procession now? You can't recover the waste and worry of previous years, but you can stop it going further. Why not do so? Every day of delay means just that much more waste of product, quality and dairy comfort. Why prolong it?

De Laval Cream Separators are made for one cow to one thousand, in proportionate size, style and price, and sold for cash or on such reasonable terms that they actually pay for themselves.

They are sold direct or through local agents. If you don't know the nearest agent write for his name and a catalogue, which we shall be glad to send you.

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50,000 BRANCHES AND LOCAL DEALER AGENCIES.

HORTICULTURE

ENCOURAGE LOCAL EXPERIMENTATION.

We are impressed with the utility of local experimentation. It is not only impossible, but unjust, for the state to solve every individual's problems. There are some disputed questions that apply to conditions throughout the state or concerns the people of a large part of it. Such questions are proper matters for the state to investigate. There are other problems of a strictly local character and should be the object of investigation by the members of that locality. Still other matters are purely individual and call upon the individual for solution.

The state investigates the matter of soil drainage and publishes general findings regarding it. Kalamazoo county meets certain conditions in applying those principles to the culture of celery. Saginaw and Gratiot counties must fit the principles to their soil for growing sugar beets. Then beyond this adjustment to the general needs of the crop every farmer must meet the peculiar undulations of his own farm, provide against quicksand deposits, secure proper outlets, etc. The placing of the obligation can in no case be reduced to a nicety, but we believe the example suggests that our state experiment stations are not institutions for the solution of every uncertain matter. Localities have a fairly well defined obligation and so have individuals.

In this regard, news comes to us of a move on the part of public spirited persons of Muskegon county to learn by systematic experimentation what kind of treatment light, sandy soils need in order to cause them to produce at their maximum. There are certainly good methods and bad methods of handling any kind of soil in every agricultural community. Any effort that purposes to separate the good from the bad methods and mark them so that the rank and file of farmers and fruit growers can know which is which, must be commended. And success in this effort is bound to add to the wealth-producing power of the locality concerned. We believe the steps taken by Muskegon county citizens can be followed in every county of the state with profit.

SOIL MOISTURE.

A very large per cent of the bulk of garden plants is water—from 75 to 90 per cent. Much water passes through the roots, stem and leaves and then off into the air, being the medium that carries raw material to where it can be manufactured into ready plant food and then takes this food to all growing parts to build tissue. From the soil about the plants much moisture is constantly evaporated. The exact amount needed for any given crop cannot be determined for conditions vary the amount used and wasted. But it is large. If we could know the reason for the failure, or part failure, of every crop that does not yield a maximum harvest and could classify those causes we would be amazed at the number of poor crops that needed more moisture. Every process of the living plant demands the presence of this universal liquid. If in any way there is caused to be a scarcity, then the functions of the plants are impaired or checked, plant food is not gotten ready fast enough to keep all the growing tissue supplied and the waste material is not well disposed of. It is needful, therefore, to have an abundance of water from the beginning.

The humidity of our climate gives us plenty of water without going to the great expense of constructing costly irrigation ditches and forever bearing a heavy tax for maintaining them. We need only to retain what nature has applied. And during this very season the gardener should be wise to his possibilities. A systematic culture of the garden plot—a culture that forbids the ground to remain long without an earth mulch to discourage evaporation and to urge the root systems to go deep where droughts do little harm, is a great part of the prudent gardener's philosophy. It prepares both the ground and the plant for emergencies—rains are absorbed to keep the plants through dry times. Such a practice balances against each other the extremes of weather to the good of the crop. If the soil is furnished with a generous supply of humus the effect of the cultivation will be augmented. Humus will absorb 143 lbs. of water for every 100 lbs. of the humus; clay, 55 lbs. of

water, and sand only 22 lbs. The greater the percentage of humus the larger water-holding capacity will the soil have. A further practice that is not overlooked by the wise gardener is underdraining. The feeding surface of the soil is expanded for roots can prosper down further. There is a limit beyond which water will arrest plant growth. When the air has been thoroughly displaced by water, roots will not perform for they need the presence of air in small quantities to make the needful chemical changes in the minerals to be assimilated. The moisture wanted in the soil is that which envelopes the small grains of earth; whatever more water the soil contains is useless. Underdraining fixes these matters as they should be for the good of the crop; it takes away the excess moisture but leaves the thin coat about the little particles of sand and clay and humus. Cultivation, vegetable fiber or humus and underdrainage are the subjects of important chapters in the unwritten book of the practical gardener. They are important to him because experience has impressed their necessity.

SOUR SOIL AND CLUB-ROOT.

Much trouble is experienced in some localities through the ravages of Club-Root in cabbage and allied vegetables. This is often caused by the acid state of the soil in which the seed is sown or into which the plants are set. Test the soil with blue litmus paper (obtained at any drug store) by moistening the soil and inserting a piece of the paper, if paper turns red, or a red-purple, the soil is sour and needs an application of air-slaked lime, from one-half to a ton per acre. If a crop of cabbage is to be grown make the usual application of manure, plow it under and harrow. Then, if possible, apply the lime with a seed drill and work it very thoroughly into the soil. The plants should be obtained from a locality known to be free from the disease and should be kept in as vigorous state of growth as possible. Great care must be taken to destroy, by boiling, or burning, any plants of any kind which show the least trace of club-root, as the disease is infectious and easily carried from place to place. Tools which have been used in infected districts should be disinfected before using again. The disease may also be spread by the drainage from one field flowing upon another; so it will be in order for all farmers and gardeners in such localities to join together in a big and united effort to stamp out the trouble. Keeping the soil sweet, rotation of crops, destruction of diseased plants and clean tools are the best preventives we know of; air-slaked lime the best remedy.

Wayne Co. J. E. MORSE.

THE COLUMBIAN RASPBERRY.

Is the Columbian raspberry a good salable berry and has it a good flavor? Wayne Co. E. S. This berry is a good berry, both for kitchen and market purposes. It is purple in color, very large, round, and is an early maturing kind. It is considered one of the very best varieties for the north central states. E. S. could make no mistake in planting it. For different reasons it is unwise to plant a whole patch to a single variety; hence, we would advise inquirer and others to plant other kinds that the season may be lengthened and the work of harvesting better distributed. Shaffer is another excellent variety of the purple raspberries and being one that matures in midseason and after the Columbian, would be a good companion sort.

STEEL RED AND CANADA RED APPLES ARE DIFFERENT.

In Mr. Clapp's article on the Steel Red apple in a recent issue of The Farmer he makes no mention of the Canada Red. They are, I believe, supposed to be the same variety. Is the Steel Red he mentions a different apple? Please explain. Washtenaw Co. W. S. B. The Steel Red and the Canada Red are two different varieties of apples. If Mr. Bird or any of those who have been led to think they are the same, let them mention Canada Red to a well posted buyer who is in quest of the genuine Steel Red, and notice the look on his face, and the decided answer, which is likely to be "No! No! don't want them; they haven't got the quality."

The branches on the Canada Red trees are longer and larger at same age than they are on the Steel Red, and the small stems, or fruit branches, are not so numerous and well spread at the surface. The Canada Red apples are a handsome, deep red, with a show of greenish color where the red does not cover the entire

surface. The skin is rather thick and tough. The tissue of the flesh is not so fine as with the Steel Red, and while the flavor is sub-acid, when ripened, it lacks the exquisitely pleasant and agreeable flavor that excites the great flow of saliva that is experienced when one eats the Steel Red. In shape the Canada Red is inclined to the oblong, leading toward the shape of the Baldwin, and not so uniform as with the Steel Red, nor do the small ones possess the excellent quality that is found in the large specimens.

One of the characteristics of the Steel Red branches, is slow growth. The Steel Red is usually top grafted on other varieties, and do well when set on slow growers such as the Talmon Sweet and natural fruit stalks. The twigs spread at the surface, therefore do not require as much pruning as most other varieties.

In color the Steel Red is generally a fairly handsome red, but not such a deep red as some other varieties. Where the red does not extend all over the surface of the apple, the balance is a yellowish white. It is very flat at the stem end, and usually thicker sidewise than from stem to blossom end. It has a tender skin and is very susceptible to scab. It is a variety that the worms from the eggs laid by the codling moth seem to take delight in getting to. Orchardists who raise them declare that it requires more spraying to secure good Steel Red than any other of the late winter varieties. The season for the Steel Red, under ordinary conditions, is from January to June. As a hand apple it is a worthy successor to any of the fall varieties, and as far as I know, is superior to any other of the late varieties. Buyers are generally willing to take the smaller ones down to an inch and a half in diameter, as they carry the same quality when small as do the larger ones.

Wayne Co. N. A. CLAPP.

ANOTHER SUCCEEDS BY PLANTING SQUASHES AMONG POTATOES.

I would like to say to Mrs. J. P., who, in your issue of April 23, makes inquiries in regard to raising squashes, that we have had excellent success and absolute freedom from both bugs and root borers by planting our squashes amongst potatoes, and this for some six or seven years past, although previously we had fought these two pests until we were in despair. We discovered this method by wishing to utilize a desirable bit of ground in the midst of the potato field, for our squashes and to our surprise they were entirely unmolested by bug and borer. We have raised them in this way ever since, and our neighbors do the same. The seed can be planted in separate hills, or inserted in the potato hills, only be sure the squash patch is well surrounded with potatoes. I can give no explanation for it, but fancy the odor of the potato vines may be obnoxious to these pests.

Oakland Co. SUBSCRIBER.

THE PROFITABLE ONION.

At the head of the list of important vegetables stands the onion. While it has made its way up there by merit, yet it has qualities that are somewhat repulsive. "The more freely onions are used the less drugs are needed," is an old saying and there is enough truth to make it worthy of consideration. Those who reject the onion because of its lingering attachment to the breath are more nice than wise. The growing of the odorous vegetable has become a great industry, and the conditions of success with it are simple and easy when once mastered. When the hot weather of July comes on, the inclination of the onion is to quit growing and ripen up, and many a man has found to his sorrow that the bulbs have only made half size, because their growing season was too short. Use seed enough, for it is better to have some thinning to do, than to have a poor stand. But with good care and sense you may avoid both extremes, thus reducing the cost to the minimum, and increasing the profits.

R. B. RUSHING.

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By special arrangement, Ratekin's big 1910 seed catalogue, with a sample of "Diamond Joe's Big White" seed corn that made 153 bushels per acre, will be mailed free to every reader of this paper who is interested in the crop he grows. This big book tells how to make the farm and garden pay. It's worth dollars to all who plant or sow. Write for it and mention this paper. The address is Ratekin's Seed House, Shenandoah, Iowa.

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POULTRY AND BEES

POULTRY THAT THE CENSUS MAN IGNORED.

For census purposes a "farm" consists of three or more acres, or a smaller piece of ground may be scheduled as a farm if \$250 or more was produced on it in 1909. Under this ruling of the census act all poultry raised on small lots in small numbers by laboring men, professional men, business men, and many small poultry breeders, doesn't come within the census this year and will not be censused. A moment's consideration of the vast army who raise from 15 to 50 or perhaps 100 head of poultry alone for pleasure and profit will convince anyone that the value and profit thus turned out every year is marvelous if only we could get the figures.

I have taken a census of this poultry in my election district and admit that I am surprised, though I suspected that much money was secured yearly by these poultrymen who operate on a very limited scale. This district has 300 registered voters and represents about 250 families. In it is included about three-quarters of a country village of about 500 population; the remainder is farm and dairy country. All in all, I believe it represents a pretty fair average of those small poultry keepers who are in tenant houses in the dairy and farm districts and who rent or own homes in our villages.

In this section I found 37 families who keep poultry in lots of from seven to 57 each but which didn't come within the meaning of the census act and had not been censused. I believe this to be an oversight, as I believe it is the desire of the Census Bureau to make this information as full and complete as possible. I certainly trust this may be rectified ten years hence, and also that pure-bred fowls and common or mongrel stock may be counted separately so that we may know what breeders of pure-bred poultry are doing throughout the country. Our poultry industry stands fourth in importance, considering market value alone, and these statistics are important to the country.

These 37 families have a total of 661 head of poultry—376 common and 285 pure-breds. The value of the former was given at from 75c to \$1.00 each, and the latter from \$1.00 to \$10 each. From the whole I estimate that \$2.00 each is a good fair average for the 661 head, as many of the common fowls are good sized birds, and will average, on market, \$1.00 or more per head. This gives a total estimated value of \$1,322. By careful inquiry I found that these hens averaged from nine to 10 dozen eggs each last year, besides raising young, and the laying hens were about the number on hand now. Allowing 100 eggs for the year to each hen of the common stock, and figuring them at 22c per dozen for the year, we find these hens produced \$689 in eggs alone during 1909. The pure-breds did better than this because the owners nearly all sold some eggs for hatching, a few selling their entire output from February to May for hatching. Prices on these varied from 50c to \$2.00 per 15. I believe a conservative estimate on this is to allow \$2.50 for hatching eggs to each of the 12 breeders of pure stock from these 37 families. This makes a total of \$30 for eggs for hatching. These pure-bred hens averaged 11 to 12 dozen each. If we allow a half dozen per hen for her share of hatching eggs our hens then would average about 11 dozen each of market eggs. These, at 22c per dozen, would be \$2.42 per hen, or a total of \$690 for the 285 pure-bred hens; add \$30 for hatching eggs and we have \$720 for the pure-breds, making total egg values for \$661 head \$1,409.

This doesn't include any fowls raised or sold. This is from a capital investment of \$1,322, plus the buildings, which may be much or little. This is only for 37 families whose poultry is too small in numbers to be censused, but the district taken is only one-third of our town, and 1-57th or thereabouts, of our county. This allows an estimate of over \$80,000 for the county of Delaware, New York in poultry income from uncensused poultry. No estimates can be secured from the enumerators upon the farm and censused poultry to compare with this, as the census act prohibits any information or estimates of any kind being given out except through the Director of the Census. However, these figures as to fowls and values are pretty conclusive. The estimates as to egg values and average per hen may be varied to suit the reader's notion, but I believe they are fairly accurate.

Delaware Co., N. Y. O. F. SAMPSON.

IN ANSWER TO INQUIRIES.

Raising Ducks with Hens.

Please tell me how to raise ducks with hens—the care and feed they need while young. Do you have to take them away from the hens as soon as hatched?
Osceola Co. E. J. P.

On many of the large duck farms it is the practice to hatch ducks in large numbers with hens and place the young in brooders or brooder houses as soon as hatched. No attempt is made to brood them with hens for the reason that the artificial method is more economical and satisfactory where ducks are raised on an extensive scale. However, it is not practical to practice artificial hatching and brooding where only a few of these fowls are raised upon the farm. It is then best to have the hatching done by hens, since the ducks will continue laying for several months and a fairly good-sized flock can thus be produced from a limited number of breeders. The hens will be found rather more satisfactory for brooding the young ducks than the ducks themselves for the reason that they are not so restless and not inclined to wander about over the farm as ducks are. While they require careful attention early, ducklings are harder than chicks and more easily raised. Proper feeding and a good coop or pen having a perfectly dry floor in which to spend the nights, are the main requisites. The coop or pen must, of course, give absolute protection from rats and other enemies of young fowls.

If the plan is to grow the ducks as quickly as possible and market them they must be fed liberally from the start. The big duck farms claim to be able to bring a duckling of the Pekin or other large breed to marketable size at the age of ten weeks. One method of feeding for this result is, briefly, the following: During the first week cracker or bread crumbs and corn meal, equal parts by measure, are mixed with about 15 per cent of their bulk of finely chopped hard-boiled egg; sharp sand, about 5 per cent of the entire bulk, is added and the whole mixture moistened with water or milk until it forms a crumbly mass. This is fed four or five times a day, with care to have it perfectly sweet and wholesome at all times. The following two weeks the ration is made up of wheat bran, 2 parts; corn meal, 1 part; rolled oats, 1½ parts, with about 5 per cent each of sand and beef scrap and about 10 per cent of green food. The green stuff is cut fine, green clover, lettuce, rape or tender grass, oats or rye being used. The whole is thoroughly mixed, moistened as before, and fed four times a day. During the next three weeks the ration is practically the same except that the rolled oats is dropped. From then until ten weeks old the proportion of wheat bran is reduced one-half and that of corn meal is doubled. Beef scrap is also increased to 10 per cent, thus making a ration which will bring the duck to this age in a fat and plump condition and large enough for early marketing. If it is desired to keep some of the ducks for breeders, or if it seems preferable to grow them with a view to fattening and marketing when more mature, a smaller proportion of corn meal and beef scrap should be used. Otherwise the ration is not a bad one for growing ducks and has the advantage of being composed, in the main, of ingredients which should be available upon every farm.

Food Packs in Crocks.

My little chicks are dying of bowel trouble. Their crops seem to be full of feed but their wings droop and they die. Have been feeding oatmeal and cooked potatoes. Had the same trouble last year. A little nux vomica has been given the affected chicks but without results.
Huron Co. MRS. R. DRESSLER.

The nature of the food and the fact that you do not mention grit would seem to explain the trouble. Oatmeal and potatoes are foods that pack easily and require a liberal allowance of good, fine, but sharp grit, to enable the chick to handle them. Perhaps, too, they have been eating more of this ration at a time than was best for them, thus packing the crop too full and rendering digestion more difficult. Young chicks should be fed frequently but not enough at a time to make it possible for them to gorge themselves. If not practical to feed a number of times during the day a portion of their food should be given in litter, compelling them to hunt for it, which will not only remove the danger of overeating but will give them exercise. They will quickly learn to search for the food, but be sure there is nothing in the litter that might harm them.

Change your method of feeding at once, giving a greater variety of food. Finely cracked wheat and corn, clover chaff, millet seed, with some green stuff, such as lettuce or cabbage leaves, or chopped on-

Kills Germs

Nothing in medicine is known which accomplishes such vast good in so short a time with weak, broken-down, worn-out, diseased stomachs and sluggish, torpid, lazy livers, as Dr. Pierce's Golden Medical Discovery—a standard remedy for germ-laden, impure blood. When you feel dull and sickish, the bile is not flowing right, and the whole system suffers. The organs lack power to convert food into energy. Bacterial germs thrive at the expense of the blood corpuscles. To escape worrisome stomach trouble and liver complaint, go to the aid of the blood corpuscles and kill off the germs that would otherwise invade your system.

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EGGS from pure Toulouse Geese 10 for \$1.75. Pekin Duck Eggs 11 for \$1.25. Mrs. Amy Southworth, R. D. No. 13, Allen, Mich.

EGGS FOR HATCHING—Light Brahma, White Wyandotte and B. P. Rock, \$1 a setting; \$1.50 for 2 settings. E. D. Bishop, Route 38, Lake Odessa, Mich.

EGGS—Barred Plymouth Rocks, from champion Blue Bell and Chimes Strains of Iowa City. Introduction price \$3 a setting. Limited number of baby chicks for sale. Lakeridge Farm, Levering, Mich.

BARRED PLYMOUTH ROCK eggs for hatching from selected breeding pens; 15 for \$1.00, 25 for \$1.50, 50 for \$2.50, 100 for \$4.50. COLON C. LILLIE, Coopersville, Michigan.

S. C. W. LEGHORNS—Eggs 15, \$1; 100, \$4.50. Buy of the man that perfects one breed only. GILMAN A. GREEN, Clarkston, Michigan.

My S. C. Brown Leghorns Lay Eggs '98 cts per 15. Wm. J. COOPER, Mt. Pleasant, Michigan.

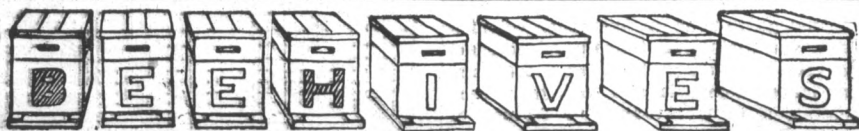
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If your dealer does not handle the above Compound send \$1 and we will deliver to your station enough Electric Compound to keep your chickens free from lice and healthy for a whole season.

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A. T. Pearson Produce Co., Fremont
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G. Fischer, Twin Lake
R. W. Ardis, Hart

ion tops, will very materially improve the ration. But, first of all, look to the supply of grit and place it where they have constant access to it. Also provide a supply of wood charcoal or charred bone, as this material is a good preventive of bowel trouble. When there is meat among the table scraps chop it fine and give an occasional allowance while it is fresh; otherwise secure a little of the commercial meat meal prepared especially for poultry, or else give sweet skim-milk as a drink, as they require some animal food.

It may not be possible to save the chicks whose crops have become packed with food. Give a little of the charcoal to sweeten the contents of crop. Then give a liberal dose of sweet oil and knead the crop with the fingers. If you succeed in getting the mass to move down the digestive tube or in removing it through the mouth, follow it up with a half teaspoonful of castor oil to clear the digestive tract and then feed carefully on soft food for a few days.

CONTROLLING INCREASE IN BEES.

This is easily managed by using modern methods. We can have much increase and little honey, or much honey and little increase, whichever we most desire. We will suppose, first, that we wish only a moderate amount of increase, say about enough colonies to make up for the winter losses. If we wish to run principally for comb honey the following method will be a good one:

As soon as the honey flow commences put a second hive body on the top of each strong colony filled with drawn combs, if you have them; if not, use full sheet foundation and draw up two or three frames of honey or brood from below, replacing them with foundation. This will draw the bees above. When they have started work in good shape above and quite a lot of uncapped honey is in evidence, set the colony to one side, remove the upper story and place on the stand previously occupied by the colony. Put your comb honey super on this and shake the bees from the parent colony in front of the old stand, leaving enough bees to take care of the brood in the parent colony.

When you have gone through the yard in this manner, take your hives of brood and stack them two or three deep. These will make booming colonies with very little danger of swarming that season. At the old stand you have nearly the full flying force thrown into a hive filled with uncapped honey and empty sections. The queen, which should be with these bees, will have no place to lay without this honey is removed, consequently the bees immediately begin work in the sections, drawing out foundation, and carrying up this honey from below.

If one wishes to avoid all increase these hives of beeless brood can be placed back on the new colony, over the sections at the end of five or six days, having first cut out all queen cells. If these combs are dark it will not be best to allow them to cap over the sections while this extra hive body is on, for they may incorporate some of the wax from these old combs into the cappings. This can be done by giving plenty of room or even removing the sections to another colony to be finished.

If one desires lots of increase, rather than honey, he can secure it in the following manner: Pick out your best queen, or the one having shown the best record for the past year. We will call this colony No. 1. For colony No. 2 pick out a strong one and remove its queen and all brood to another stand. Now take the brood from No. 1, shaking the bees onto empty combs, and carry the brood to No. 2. Now go to four or five other colonies which you wish to use in making increase, and take from each one what brood they can spare, being careful not to reduce each stock to less than four frames of brood. Put these frames of brood in an upper story and set on hive No. 1 and your queen will immediately occupy them.

Leave them for nine days, at which time hive No. 2 will have an abundant supply of capped queen cells. Divide the brood from this hive into two or three nuclei. Remove the brood from No. 1, giving it to No. 2 as before, replenishing No. 1 from the other colonies.

This round can be repeated every nine days. As soon as you get eighteen or twenty frames of brood at a time for No. 1 use the extra ones for building up the nuclei already started. By using this method six or eight colonies can easily be increased to from 30 to 40.

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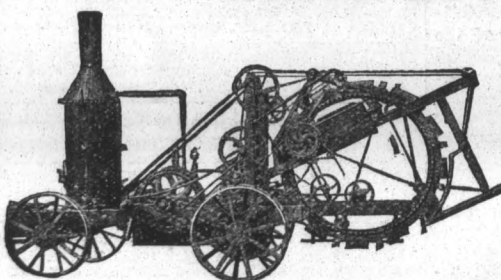
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