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\$1.50 THREE YEARS

FARM NOTES.

Improving a Sandy Farm.

Please advise me thru the Michigan Farmer how to improve a sandy loam farm that has been run. There has been no one living on this place for eight or ten years but it has been rented out, and I don't think it has had much manure put on during that time. I just bot it last fall and had 20 acres of rye sowed with the intention of plowing it under. There is 10 acres of new seeding which is about half a stand and 10 acres of old seeding which is about half a stand. Clover does not seem to make a very good catch. How would cowpeas be to plow under, as compared with rye? Do you think it a good investment to get stock yard manure from Chicago, which I understand will cost about \$50 a car? Would have to haul the manure 4 1/2 miles. There is 12 acres of pasture; about one-third is good, and other two-thirds is about one-third of a stand of clover. What could I sow there and drag in to make good pasture for next year?

Kent Co.

J. M. H.

In the opinion of the writer, it would not be a profitable investment to purchase stock yard manure at a cost of \$50 a car and draw it 4 1/2 miles to apply to this land. It is estimated from experiments conducted at the Cornell Station that the average ton of good yard mixed manure contains about 10 lbs. of nitrogen, five lbs. of phosphoric acid and 10 lbs. of potash, which plant food, at the average price for these ingredients in commercial fertilizers, would be worth about \$2.45. If we estimate that 20 tons could be shipped on a car it would appear that full price or more must necessarily be paid for the plant food contained, and that the value of the manure from the standpoint of the humus which it would afford is all the recompense that could be expected for the 4 1/2-mile haul, necessary to apply it. Under these conditions we believe that it would be more profitable to devote the necessary time to growing some crop for green manure to supply the humus and also a large part of the nitrogen required in building up this soil and to purchase the mineral elements of plant food needed in the form of commercial fertilizers. In order to do this to the best advantage some leguminous crop should be grown for green manure. Cowpeas would undoubtedly be a good crop to grow for this purpose. Soy beans would perhaps be equally good and, where there is even a fair stand of clover, there is already a good foundation for such improvement of the soil. The rye mentioned as intended to be plowed under this spring will furnish some humus but will add nothing to the soil in the way of plant food which it did not take from it. Consequently a complete fertilizer should be applied to promote the growth of a profitable crop on the ground where the rye is plowed down.

In establishing a rotation on a worn sandy farm it is best to make the rotation a short one, for which reason we would suggest that the 10 acres of old seeding be plowed up for some spring crop and the 10 acres of new seeding left to be cut for hay this year. If there is what is considered a good half stand of clover upon this it is likely to make a much better crop than is

A FEW LEADING ARTICLES OF THE WEEK.

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expected for where it is well distributed a half stand of clover will often produce twice the hay which it is expected of it in the spring. It will be difficult to sow any grass in the pasture which will improve the forage for the present year.

The better plan in managing a farm of this kind would be to lay out a regular rotation of crops and seed some field to clover without a nurse crop, if necessary, to get the rotation started properly. By planning a three-year rotation, with the clover which is already on the land it should be cheaper to supply needed humus and nitrogen in the manner suggested than to purchase the stable manure at the price named. A three-year rotation would probably be most profitable for the reasons given, as humus can be added to the soil more rapidly by the use of a short rotation. Possibly the cash returns from this farm would not be so great for the first few years, but the expense of improving it would, in the writer's opinion, be less under the plan suggested than with any other which could be followed.

Maintaining the Crop Rotation.

I have a field which, two years ago, was sown to beans. The following spring it was sown to barley. A rain followed shortly after, which resulted in the ground becoming baked and consequently I got

only about a half a crop. It was my intention to plow the stubble last fall but, owing to the dry weather which prevailed in this section, I was unable to do this. Now it so happens that I must put the field into corn or beans or go without a hay crop. It was stated recently at a farmers institute held here that a corn crop cannot be secured with any measure of success after a bean crop, and I do not see where the chances would be better since the field was sown to beans and followed by barley. Would it be better to sow it to beans again, then sow it to barley the next spring and seed, which I have done with success, (but neglected to do so last spring), or would it be better to plant to corn? I am well aware of the fact that in either case this field is getting a mighty hard drubbing, but the dry weather spoiled my plans, and I am thoroly "up against it." Can you advise? Oakland Co.

L. D.

In a case of this kind it is the writer's opinion that it would be better to continue the regular rotation of crops, plowing the old sod which is mentioned as being essential to a hay crop and planting to corn. Then use some substitute crop to be cut for hay on this field which has been so often cropped in recent years. If plowed early and sowed to oats and peas, with a fairly liberal dressing of fertilizer, it is probable that as valuable a hay crop might be secured as could be harvested from the old meadow. At any rate, a much better crop of corn would be assured than could be secured if the corn

were planted on this field. The field could then be sown to some fall grain crop, preferably to rye to be pastured or cut for hay next year, after the land is seeded to clover. It is not advisable to undertake to grow too many cultivated crops upon the same field in succession, unless it is possible to fertilize it very liberally with stable manure, and this plan would avoid the necessity of such a course.

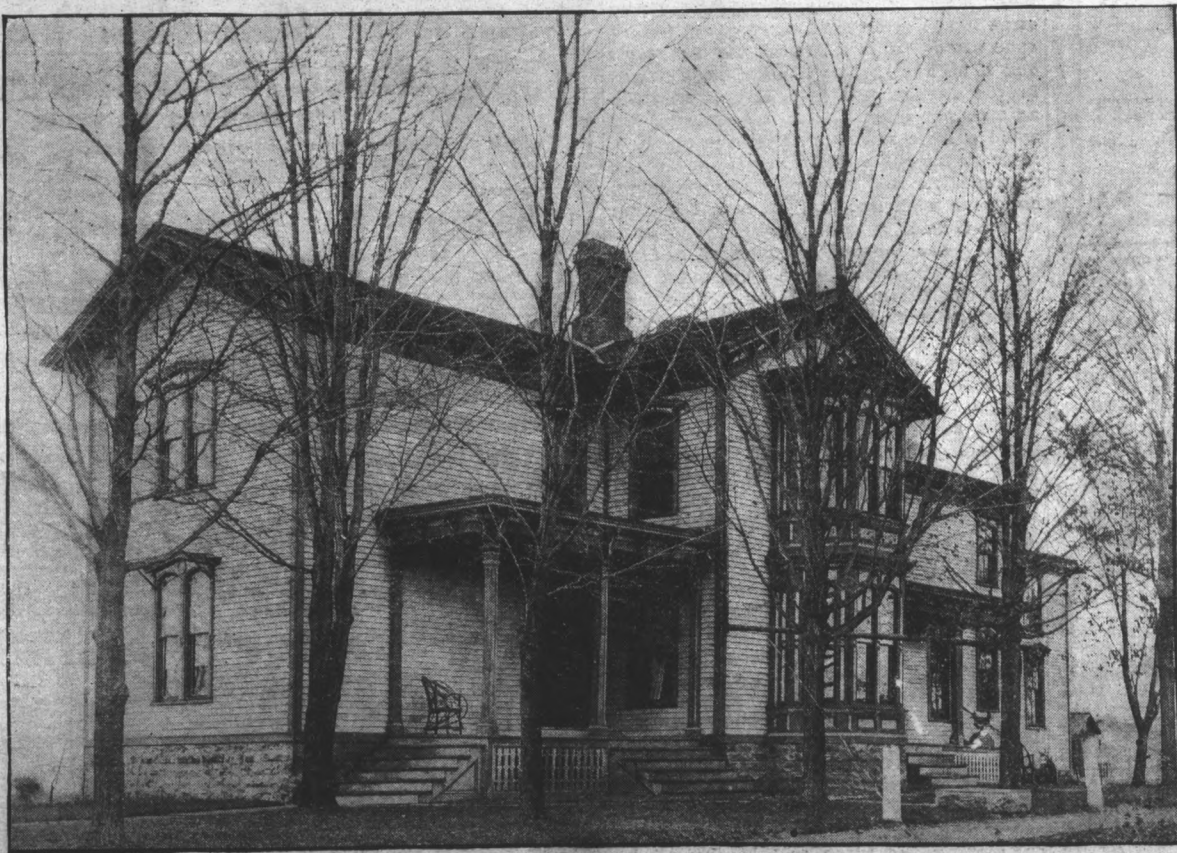
Cowpeas, Clover and Fertilizer.

I have a farm of 200 acres of light sandy soil, which has been run heavy for several years. I wish to sow 50 acres to cowpeas; how should the ground be prepared? How many peas to the acre? What kind will deposit the most nitrogen and when is the best time to plant? State how best to plant. I wish to seed 50 acres. Would red clover, alsike, June grass and alfalfa be a good mixture? I wish to put in 20 acres of potatoes. What would be the best commercial fertilizer to use, and how best to use? Also 30 acres of corn, what kind of fertilizer would you use on same? St. Joseph Co.

E. R.

The inquirer has forgotten to state what disposition he expects to make of this crop of cowpeas; whether it is to be left on the ground to be plowed down the following year for the improvement of the soil or whether it is to be harvested for forage or grain. In case it is intended to use the crop for green manure, the peas may be sown either broadcast or in drills and cultivated, as may be found most expedient on this soil. From one bushel of the smaller seeded variety to two bushels of the larger kinds will be required per acre where sown broadcast, or from one peck to half a bushel sown in drills, if a seed crop is desired. A good seed bed should be prepared and the cowpeas should not be sown until the soil is well warmed up in the spring, as many failures occur from planting too early in northern locations. Where grown for green manure, the crop should be left on the ground until late fall or early spring before being plowed under. Varieties should be selected in view of the purpose for which the crop is to be used; earlier and smaller varieties for seed, and larger and later ones for the greatest improvement of the soil. Experiments at some of the southern stations show that this crop will add to the soil something like 110 lbs. of nitrogen per acre, having a cash value of at least \$15, besides making available for the use of succeeding crops an average of 25 lbs. of phosphoric acid and around 100 lbs. of potash. It would probably be profitable to take the precaution to inoculate either the seed or soil with the proper bacteria where cowpeas have not been previously grown upon land to be planted to them.

The mixture of seeds mentioned, with the substitution of orchard grass for June grass, would be a good mixture to use. June grass being native to this section will run in of its own accord, and it is unnecessary to sow it. A combination of alsike, orchard grass and alfalfa makes an excellent meadow where a good stand is secured. The writer saw a wonderfully heavy crop of hay of this kind standing on our State Experiment Farm last



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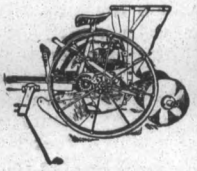
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STUMPS—Farmers having stumps to blast this spring should write THE MEREDITH POWDER CO., Richmond, Ind., for prices on Dynamite, Caps and Fuse.

summer. Probably the first one or two crops would be larger by the addition of red clover as suggested, and the use of alfalfa in a mixture of this kind will be beneficial in bringing about a natural inoculation of the soil with the bacteria peculiar to this legume, if in no other way.

The best commercial fertilizers to use for any crop can be stated only in a general way, since different soils require different combinations of plant food for best results. Generally speaking, however, the standard brands of fertilizers have been so compounded as to give good results for the purpose for which they are adapted upon average soils, thus a 2:8:2 brand is generally used for grain crops and a 1:9:5 or a 2:8:10 is often used for potatoes, according to the grower's idea with regard to the special needs of his soil. Where fertilizer is to be applied liberally, as it undoubtedly pays to use it for potatoes, it is best to put on broadcast and thoroly mix with the soil. Where only a small amount is to be used, it is more profitable to apply it in the hill or drill, but only personally conducted experiments will give any farmer the most reliable information about the kind and the amount of fertilizer that he can use with the greatest profit on his soil, or for any given crop.

There is yet a great deal to be learned with regard to the use of fertilizers on different soils and different crops, but it seems to be well established that where used intelligently, they can be used with profit. But it remains for the user to determine the formula, and amount that he can use with the maximum profit, hence in the use of fertilizers a check plot should always be left for comparison until this point has been determined in any individual case.

SOME QUESTIONS FOR THE TENANT FARMER.

It is quite common for young men starting out in life to imagine that they can do a little better working land on shares or by renting than they can working out for others. A speaker at a recent largely attended farmers' meeting, a man of large experience in employing help, and mostly married help, said that he has found that before a married man is prepared to settle down and make the most stable and in every way satisfactory help, he has to have his experience at working land on shares.

Now, this is not written for the purpose of discouraging any person from making the venture, but to set out some facts for his consideration. Occasionally a man works land on shares or rents a farm and does well, but the number is small and the conditions are favorable. There are a very few simple things that should always be considered in the proposition of leasing a farm. One is what degree of success the present or last occupant has reached with it and another is what the place is capable of producing. The majority of farmers, even with the present high prices for farm produce are not making money. The average farmer who owns his farm unincumbered about makes ends meet—not much more. At the year's end if he has had no ill luck, no sickness in the family, nor loss of any valuable animal, nor other misfortune, he may lay aside a little money, but on the average, after making due allowance for wear and depreciation and all necessary expenses, one year with another, he is not getting ahead much.

Last year the writer managed a farm of 120 acres, about 80 to 90 acres under plow, the balance in pasture. The land is naturally fertile but badly run for a number of years. There was a considerable quantity of coarse feed, corn fodder and bean pods, of little salable value, and several tons of clover hay that, in early winter a year ago, went begging at \$6 per ton. Nineteen head of young cattle were purchased and five horses besides, were wintered and this cheap fodder was turned into profit and the manure returned to the ground. There were about 15 acres of apple orchard on the farm which returned a handsome profit last season, but taking the farm crops by themselves they were grown at a loss.

Now, a very pertinent and practical question for any man who contemplates renting a farm to ask is, what is the place producing as at present managed? Is it turning off enough to insure good wages after turning over one-third, the ordinary rental, to the owner? If not, then how can it be so managed as to safely promise such return? If the farmer, owning the place and having all he raises, barely makes a living, how can his methods be so improved upon as to

POTASH

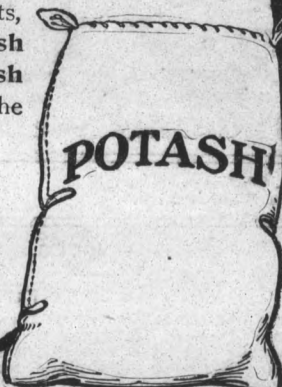
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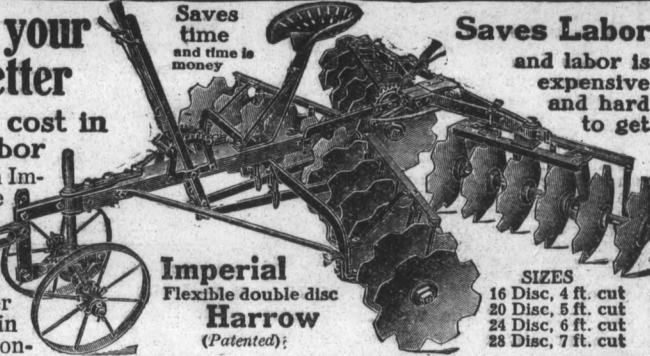
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give him one-third of all it produces and still leave a competence to the man who works it? If these questions, the last one in particular, cannot be clearly answered and with a very positive degree of assurance then it is pretty safe to let it alone. A sure thing working for someone else is much better than an uncertainty, with perhaps the chances against one, working land on shares. It is because these matters are not carefully considered beforehand that perhaps nine out of ten must have a very distressing experience before they are satisfied to settle down and work for someone else.

settle down and work for someone else. Allegan Co. EDWARD HUTCHINS.

THE GOOD ROAD QUESTION.

No question is settled until it is settled right. Some counties in our state are doing fairly well along this line, while many counties are doing no better than they did under the old "pathfinder" system. I say no better—they are spending more money but getting no better results. Quite frequently we hear people say it would be better to go back to the old method. Now this that ought not to be harbored for a moment. It is not in keeping with the times. The writer served his township eighteen years as highway commissioner under the old system, and we know, with the many faulty features in the law it was almost impossible to do any permanent work. It was simply patch the worst places this year, and the next year do the work over again. Under the cash system for the past two years in very many of the counties the same patching work has been continued. It does but little good to fill up a low place or raise the center of the road with a plow or scraper and then let it alone. It is only a little while until it is just as bad as ever. Everybody knows this to be a fact, for we have been doing that very thing for at least 75 years. When a road has been properly graded, if it is sandy it should receive a heavy top-dressing of clay and it will remain a good road for a long time with but very little attention; if it is a prairie or clay soil it should be top-dressed with gravel or crushed stone. We know this will not meet with the approval of all on account of the expense. Money spent in making good roads, if handled in a business-like way, is one of the best investments that the farmer can make. If we can't make but one mile of good road in each township in a year we had better make that one mile sure the next year we would want to do better.

St. Joseph Co. B. Q. GOODRICH.

THE POTATO SITUATION.

According to all reports there is a large surplus of potatoes at this time, and consequently there is a disposition to bear the market. The price at shipping points in the northern counties of Michigan is about 20c per bu. Those familiar with the production of this crop are well aware that at this price there is no margin of profit for the grower, consequently it behooves the grower to see if there is a way out of this dilemma. It is a well known fact that the warehouses at the shipping points are comparatively empty, therefore the bulk of the crop must still be in the hands of the producer. Now, if 50 per cent of those potatoes could be eliminated would it not have a beneficial effect on the market? It looks reasonable that it would. How can this be accomplished? Stock feed is very scarce in this potato-growing district. Almost every grower keeps from five to 30 head of cattle, many of them milk cows. It has been demonstrated that cows fed on potatoes produce large quantities of milk. Of course, they should be fed in connection with other feed, commencing on two to four quarts and working up to a quarter of a bushel twice a day. Then the pigs will consume a lot more; when cooked and mixed with milk it is astonishing how they will make pigs grow, and pigs are a gold mine these days. This would save carting them off the farm, which, on an average, is worth five cents a bushel, thus taking the place of high priced feeds which the farmer must buy, and in the end probably getting about as much for what is left as the whole crop would bring.

If the growers of the state would combine, set a reasonable price on the crop and feed the surplus, there will be time after the 1st of March to get a large proportion of them out of the way. What do the growers of the state say to this? Why not organize and stand together? Grand Traverse Co. PRODUCER.

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EXCLUSIVE FEATURES ARE: An Automatic Gate which prevents the incoming corn from crowding while bundle is being tied. The pole placed between gearing and drive wheel gives perfect balance and direct draft. A large and powerful Main Drive-Wheel—Good Traction. Roller Bearings. Binder Attachment gear driven. No packers to knock off corn. And the widest band adjustment of any machine—binds 32 in. from butts, or as low as 18 in. Can also bind above or below the ears. All levers convenient to driver. In fact—

The Most Satisfactory Binder in Use

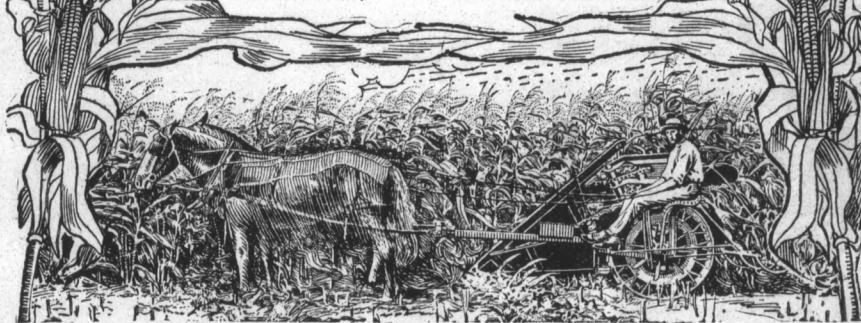
Send today for special literature describing this profitable machine, and interesting new art catalog of our full line.

NOT IN A TRUST OR COMBINE

JOHNSTON HARVESTER CO.

Box 105-C

BATAVIA, NEW YORK



Plow and Harrow at Same Time

This plow attachment pulverizes and levels the soil as it is fresh turned and moist, thereby making a perfect seed bed before the ground gets lumpy and dries out. It is light running and requires no more horses than for ordinary plowing. Made for sulky and gang plows.

The cutting blades are made of the best plow steel, with plenty of curve to the blade so that it produces a draw cut. These blades are self-cleaning and cornstalks or trash cannot lodge.

THE NATIONAL ROTARY HARROW ATTACHMENT

is destined to become the greatest farm labor-saver of the age! It does the work far better and easier than the old drag, because of the draw cut blades, and also because the ground is easiest pulverized and leveled when it is fresh turned. When your plowing is done, your harrowing is done! By all means SEE this great machine attachment. It will save you dollars, time and trouble. Ask your dealer to show it to you today. If he hasn't it, write us today and we will see that you are supplied. (1)

NATIONAL HARROW COMPANY, Box 121, LEROY, ILL.

30 Days Free Trial

A wonderful machine. Every one guaranteed.

Established in 1879

OUR NEW SAW MILLS

Are the Sensation of the Year. The result of the greatest practical and scientific mechanical minds in saw mill construction. A mill without an equal on the globe. The mill that is revolutionizing the entire saw mill business. The simplest, lightest running, fastest cutting, and easiest mill to handle in the world. Original in design, result of over 30 years painstaking experiments, observation, and practical tests. Sold on 30 days free trial. Just try the mill—that's all we ask—it costs you nothing—we take all the risk. BIG PROFIT in sawing lumber with our up-to-date Saw Mills. Keep your engine earning money all the year. Now is the time to buy when the price of lumber is going up. Write today for catalog and prices.

R. R. HOWELL & CO., Minneapolis, Minn.

Imitations of This Harrow Are Not Worth The Prices Asked

The Genuine is Better Than Ever At Same Low, Factory Price

The Detroit-American was the first and still is the only genuine Tongueless Disc made. All others are weak imitations—mere makeshifts—old-style tongue harrows with tongues cut off and front trucks stuck under. The real tongueless is made only by us and sold only direct from our factory to farm. Don't let a dealer or anyone else palm off a substitute on you. They don't work at all the same; they don't save the horses; they don't last like the famous original—

Detroit-American

Try It Free 30 Days; No Money Down CASH OR CREDIT TERMS

Free Book Will Prove It

Lightest Draft Harrow Made

Try this harrow entirely at our risk. Use it a month—even more. If it does the work as it should do, send us the price—if not, return the machine. We take care of the freight in both cases. Test won't cost you a nickel. Note these points:—All-steel frame; hard maple bearings; rigid steel adjustable standard; pipe oilers; double levers; indestructible steel spools between blades—and a dozen other important features.

Send Your Name Now for our big, money-saving, free book. The best Harrow book, best Manure Spreader book, best Cultivator book—all Detroit-Americans—all improved—prices cut. PROMPT DELIVERY is our hobby. We ship from transfer points in all sections of the country. No long waits. Send coupon or postal now for our guide to the RIGHT Disc at the RIGHT PRICE.

American Harrow Co. 1076 Hastings Street, DETROIT, MICH.

Name Town State R.F.D.



Is Your Saw A Help Or A Nuisance?

If it gets dull easily, runs hard, cuts crooked, and makes you mad, is it worth owning?

If you want a saw that will always be a saw, get one of the kind that good carpenters use—

Atkins SILVER STEEL Hand Saws

Made of Atkins secret-process Silver Steel—better steel than you'll find in most razors. Taper ground, so that the tooth edge is thicker than any other part of the blade. Doesn't "bind" or get stuck in the wood. Stays sharp, and always cuts fast and easy. Fitted with Atkins Perfection Handle, which prevents the usual wrist-cramp.

Try an Atkins—be sure it has our name on the blade. If it doesn't prove to be the easiest running, fastest cutting saw you ever used, take it back to the dealer and get your money back.

Our best saws have "Silver Steel" marked on the blade. Our cheaper saws are the best value at their price, but are not marked "Silver Steel." Before buying, see how the blade is marked.

FREE—An attractive silverline tie pin and our interesting book, "The Care of the Saw." A postal brings them free.

E. C. Atkins & Co., Inc.

404 Illinois St., Indianapolis, Ind.
Largest Exclusive Saw Manufacturers in the World.

We make all types of Saws—Hand Saws, Cross-Cut, Wood, Rip, Panel, Band, Circular, Meat, Metal, Etc.

The Western Plow Attachment
Makes a **SULKY PLOW**
OF ANY WALKING PLOW

Steadies the plow, saves the horse. Does away with hard work. Right or left hand—wood or steel beam. Absolute control of plow however hard the ground.

Address: **WESTERN IMPLEMENT CO.,**
256 Park St., Ft. Washington, Wis.
"A Boy can run it as well as a Man"

Write for Special Price. No Side Draft. Agents Wanted.

Salvage Wheat
A cheap feed for sheep, hogs or chickens.
Price \$22 per ton, sacks included.

Clover Seed
Get our samples and prices before buying.
Ask for our complete price list of feeds and farm seeds. We can save you money.

C. H. BARRETT CO.,
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HARRIS
STEEL CHAIN HANGING
Woodlined Stanchions
And Sanitary Pipe Stalls

make the most sanitary, strongest and neatest appearing barn equipment. Send for descriptive circular and get our prices before you equip your barn.

THE HARRIS MFG. COMPANY,
816 Cleveland Ave., Salem, Ohio

JACKS AND MULES.
Raise mules and get rich. 300 fine, large Jacks, Jennies and mules, 14 to 17 hands high, weigh from 700 to 1500 lbs. Good ones. I pay a part of shipping. Mules in teams or carload lots. Stock guaranteed. Write for prices today.

KREKLER'S JACK FARM
West Elkton, Ohio.

KENTUCKY MAMMOTH JACKS.
Jacks, Jennets and Saddle Horses. 260 head to select from. Tamworth Swine, all ages. Catalogues now ready.

J. F. COOK & Co., Lexington, Ky.

Just Say "Saw your ad. in the Michigan Farmer" when writing advertisers

LIVE STOCK

RAISING SPRING LAMBS FOR THE MARKET.

The practice of raising lambs for the spring market is coming to the front in different parts of this and other states. In former years sheepmen did not think it prudent to have their lambs dropped until the latter part of April and first of May, but in late years there has been a ready market for well grown spring lambs at prices much above that paid later in the season. It is my opinion that flock owners can well afford to look into this method of handling their flocks as the raising of spring lambs has several advantages over the ordinary practice.

The first advantage is, the early lambs command a better market price. Last season lambs that were dropped during the months of March and fore part of April commanded from 9 to 12 cents per pound and in instances of extra quality as high as 14 cents was paid the producer. Second, early spring lambs sold before the first of June, reduces the flock before the drought arrives, thus giving the breeding ewes a better opportunity on pasture. Third, the lambs come at a time when farm work is not pressing and special attention can be given them to promote rapid growth. Fourth, early pasture and supplementary feed can be supplied in abundance to encourage a strong flow of nutritious milk.

A number of flock owners have already bred their ewes to lamb during the late winter months and expect to force their lambs forward for the spring market. Special attention will need be paid to details if the undertaking is made successful. There is little difficulty in raising spring lambs if proper attention is paid to housing the flock during adverse weather, and in feeding. The ewes should not be allowed to remain out of doors for any great length of time as lambs are likely to get chilled. During bad stormy weather the flock should be confined to the barn, where dry and well protected. When the weather is favorable the ewes should be allowed the run of a large yard for exercise.

If the lambs are expected during the early part of March the ewes should be shorn. Much trouble can be avoided by shearing the sheep before the lambs arrive as the fleece prevents the lambs from nursing and besides, the youngsters are unable to secure warmth from their dams during the cool nights. Then, too, if the ewes are shorn they can be housed in much warmer quarters, thus affording the young lambs more comfortable conditions. Instances are very common where young lambs eat wool while attempting to nurse, which latter form wool balls in the stomach and cause death. I always like to have my ewes shorn before the lambs arrive as they both can be taken care of much better.

The feeding of both ewes and lambs is a vital matter in securing best results in raising lambs for the market. The ewes should be well fed but not forced too heavily. A ration of high protein content should be fed the ewes for milk production. For this purpose there is nothing better than clover hay and bean pods for roughage. For a grain ration, oats, wheat, barley and oil meal should be fed liberally. Some succulent foods should be supplied. Ensilage is good, but should be fed carefully, especially if containing a large amount of corn. Roots are preferable.

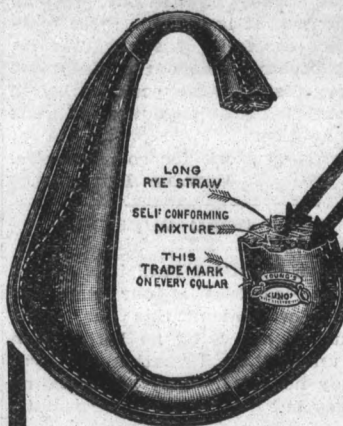
Shiawassee Co. LEO C. REYNOLDS.

PREPARE FOR THE SPRING PIGS.

As the time approaches for the spring pigs to be farrowed, the fact that they will be worth saving, even at the cost of considerable extra time and effort, becomes more apparent. They are always worth saving, of course, but they are especially so at the present time, since hogs are now selling at higher prices than the present generation of farmers have ever before received, and stocks of provisions are so low as to make it certain that the spring pig crop will be marketable at long prices next year. This being true, it will pay every farmer better than ever, and it always pays him well, to provide proper feed for the brood sows before farrowing, a proper place for them to farrow and to give the sows and the little pigs the best of care after the farrowing season. A properly balanced ration should be fed sparingly, if at all, both before and after farrowing. Middlings are high, but it will pay to feed them.

1 A TRADE MARK THAT GUARANTEES 2 SELF-CONFORMING MIXTURE 3 SELECTED LONG RYE STRAW

3 GREAT POINTS IN "UNO" SELF-CONFORMING HORSE COLLARS



BRIDLE ROSETTES FREE

Send us the name of a harness dealer who does not handle "UNO" Horse Collars, and we will send you a beautiful pair of Nickel Embossed Bridle Rosettes, FREE.

Our booklet, "Horse Collar Sense," gives you some valuable pointers on how to judge and buy horse collars. Free on request.

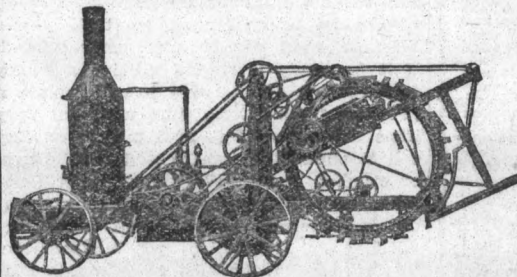
Horse collars that have the fitting and wearing qualities of the "UNO" are by all odds the cheapest collars to buy. They wear twice as long and give many times the satisfaction.

"UNO" collars have a heavy facing of Young's Uno self-conforming mixture backed up with selected long rye straw—a facing that adjusts itself perfectly to the shoulders—have double strength throats, giving extra strength where common collars are weak—have smooth, heavy sole leather top pads—are made only from bark tanned leather from best part of the hide—strong rims that will hold the hames in place—all sizes. Save time and expense, and save your horses from painful galls; \$3.75 to \$5.00 apiece, according to size and shape.

Look for the "UNO" Trademark.

BENJAMIN YOUNG, Dept. 53 **Milwaukee, Wis.**

THE NEW BUCKEYE TRACTION DITCHER



This type expressly for farm tile drainage. Cuts to perfect grade at the rate of 100 to 150 rods per day.

Big money for anyone desiring to do contract work for the farmer.

Sold on five days' trial. Write us today for Drainage Catalog "F." Address all inquiries "Sales Dept."

THE BUCKEYE TRACTION DITCHER COMPANY,
FINDLAY, OHIO.

Write Me First Before You Buy

ANY OTHER MAKE OF SPREADER FOR CATALOG AND PRICES on the

GRINNELL Detachable Spreader

Answer this ad. and we will save you \$25 to \$30 on your spreader investment. Write today for greatest spreader proposition ever made. Don't put \$125 in a big horse-killing machine that is idle eleven months in the year. The Grinnell gives you an extra farm wagon for use during husking time as well as a manure spreader any time you want one. Here is the machine that solves the spreader problem for all farmers.

A COMBINED MANURE SPREADER AND FARM WAGON
SAVES WAGON-BOX, TRUCKS AND ALL FOR OTHER USES ON THE FARM.

SOLD DIRECT—FREIGHT PAID—30 DAYS' FREE TRIAL
The Grinnell is a 50 bushel, two horse machine. Drives from both sides. Spreads 5 to 20 loads to the acre. No better spreading machine made. Sold without trucks, or with trucks, top box, scoop board and all to make a complete farm wagon like this.

Try it first before you buy any other make, entirely at our risk. Your money back if not satisfactory. Isn't that fair? Write me today for catalog and special offer and let me help you get a machine partly or entirely free.

Chas. F. Chase, Pres., CHASE MANUFACTURING CO., 159 Broad St., Grinnell, Iowa.

FRESH IMPORTATION ARRIVED SEPT 8, 1909.

BLACK PERCHERONS AND ENGLISH HACKNEYS

These Horses are all Prize-Winners

from the leading shows in Europe; ages from two to four years old; terms to suit the purchaser. Byron is located on the Toledo & Ann Arbor R. R., 44 miles north of Ann Arbor and seven miles south of Durand, immediate connections off the Grand Trunk R. R.

Every horse guaranteed, and all at low prices.

CALKINS & AUGSBURY Props., BYRON, MICH.

50 Imported Stallions & Mares

AT SPECIAL PRICES FOR 60 DAYS.

To make room for a new importation, I will make special prices for those on hand. All young, sound and highest class SHIRES, fine style and best of breeding. Ages 3 and 4 years. Weight 1775 to 1950. Also WELSH MOUNTAIN PONIES OF BEST TYPE. Write for particulars.

GEORGE E. BROWN, Aurora, Illinois.

Thirty-seven miles from Chicago by C., B. & Q. and C. & N. W.; also trolley trains every hour.

LIVE STOCK NOTES.

Butcher cattle have been, on the whole, extremely good sellers this winter, and fat cows and bulls have been first to advance and last to decline. More than ever before, killers have wanted a rather cheap or moderate-priced grade of cattle to cut up into fairly cheap beef to meet the popular demand everywhere. The eastern markets have required moderate supplies of choice long-fed beefs, and the limited offerings of cattle of that class in the Chicago market have usually sufficed to meet such demands, but quite recently offerings became meager and inadequate, forcing sharp advances.

A prominent Chicago live stock commission firm says: "We have bot a good many car loads of heavy feeder cattle during the last few weeks to be sent into Indiana at prices ranging from \$5 to \$5.35 per 100 lbs. These steers weighed in every instance over 1,000 lbs., and in our opinion, they are the only kind of feeders to buy. We look for them to be big money-makers within the next three to four months. We believe there will be a greater scarcity of good corn-fed killing cattle by next summer than there has been recently."

The railroads are still rendering extremely unsatisfactory service in many instances in moving live stock, even at times when there are no snow blockades to disturb transportation. Complaints and demands for damages are piling up at a great rate. The greatest trouble is due to the scarcity of motive power on the various lines traversing the country.

It will take a long time to accomplish a return to normal supplies of cattle, and in the meanwhile breeders and feeders will have a good opportunity to make some money by taking up that industry. Enormous numbers of cattle have been hurried to market regardless of their condition, owing to dear hay, corn and other feed, and there has been too free a marketing of calves, while big numbers of cattle of the feeder class have been sold to the packers and cut up into beef, instead of being fattened for the future beef trade. Distillery-feeding is reported as smaller than usual, and the best authorities are counting on seeing seasonally high prices for prime heavy beefs in the coming spring and summer months. A crop of pigs can be grown in a year, but with the west poorly supplied with breeding cattle, it will take years to bring about a restoration of former ample supplies of beef cattle. Down in Texas cattle are growing scarcer all the time, and stockmen who are searching the southwest for feeder cattle to move to Oklahoma and Kansas pastures next spring realize how limited is the supply of cattle for fattening.

The general surroundings of the cattle industry are widely different from conditions existing a year ago, when roughage was abundant and sentiment optimistic regarding the future. What happens in one season is seldom repeated the following year.

The great demand for pure-bred draft horses was well demonstrated by the recent big attendance at the sale in Bloomington, Ill. They hailed from the far west, the south, the east and all parts of the grain-growing west, as well as from Canada.

Some big hog "runs" in the Chicago market recently were the result of delays of the railroads in accepting stock owing to cold weather, big snow storms, switchmen's strikes and lack of cars and engines. Growers naturally desire to move their swine marketward before the season of bad country roads returns, and railroads traversing Illinois, Iowa, Wisconsin and Minnesota have had large numbers of hogs to ship to market.

According to reports received by the Missouri, Kansas & Texas railroad, less than 6,000 cattle have been placed in the feed lots along the line of that road in Oklahoma this season, as compared with 50,000 a year ago, and most of these have been sent to market. This indicates a great fall down in feeding operations in the southwest. Evidently there are fewer cattle in that part of the country than usual, or more of them would have been forced into the feed lots, even if meal and hulls were dear.

Charles O. Robinson, a well-informed Chicago live stock commission merchant, says: "A few years ago when corn could be bot at 10¢ to 15¢ per bushel, hay at \$2.50 to \$5 per ton and feeding cattle at 3¢ to 4¢ a pound, it was an entirely different proposition and the city dwellers as a result had cheap meat. Now good feeders are costing 5¢ to 5½¢ per lb., corn anywhere from 50¢ to 65¢ per bushel and in some cases more, and hay \$15 to \$25 per ton. As a rule it takes six months to produce a fat steer and during that time he will consume eighty bushels of corn, and hay in proportion. In addition to the original cost of the steer when put on feed, a man must figure on putting in about \$50 to \$55 worth of feed before the animal is in good beef condition, to say nothing of the interest on the investment the labor and the risk."

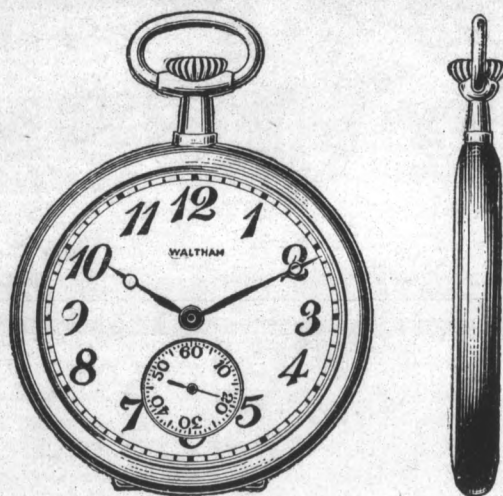
Farmers say that at the present price of corn there is not much profit in the cattle feeding business, and many feed lots are empty for the first time in years on this account, but some farmers are making the industry pay, in spite of every obstacle. Obviously, the poorest profit is made on scrubs that have merely been warmed up, giving them a little feed.

Recent overloading of the Chicago horse market has resulted in slumps in prices that caused serious losses to country shippers. A decline of \$10 per head means \$200 decline per car load, which not only removes the shipper's profit, but also in many instances causes actual losses. Plenty of sales have been made recently at lower figures than the first cost in the country. A great deal of the speculative element enters into the business of sending horses to market by traders.

The country's hog shortage is now estimated at 25 to 35 per cent, and predictions are made that smoked hams will sell at 20¢ a pound by next summer.

WALTHAM WATCHES

The Authentic American Watch



When you buy a watch it pays to buy a good one. A watch is something that should last a life time and longer. If you buy a Waltham Watch you will know that you are safe on this point.

When you buy a watch go to a jeweler whom you know or know about, and tell him you want a Waltham Watch and one that is *adjusted to temperature and position*, and then have him regulate it to your personal habit and occupation. You will then have a watch that will keep time under all conditions.

When you buy a watch remember not only that Waltham Watches are the best, but that they were the first American Watches. Every watch making device and invention of importance in use has originated in the Waltham Watch Factory.

WALTHAM WATCH COMPANY,

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Send for the "Perfect American Watch," our book about watches.

STUMP PULLER

Warranted the most practical machine made. One man can lift 20 tons. 3 styles. 10 sizes. \$25 and up. Screw, Cable or Hand Power. We make cheapest **TILE DITCHER** and the best **Corn Harvester** ever sold. One horse cuts 2 rows. One man. No twine. On trial. Agents wanted. Our new 64-page Catalog FREE. Write Today. H. M. BENNETT & COMPANY, WESTERVILLE, OHIO.

BOWSER SWEEP MILLS



Different from all others. 4 or 2 horses Geared 10 to 1 or 7 to 1. Grind Corn with shucks or without. And all small grains including Oats and Wheat. (Also make 8 sizes belt mills.) D. N. P. Bowser Co., South Bend, Ind.

A GREAT COMBINATION.

The Michigan Farmer and the Detroit Semi-Weekly Journal, both a year each, for only \$1.35, including a free premium. THE MICHIGAN FARMER, Detroit.



look out!—they are infested.

But you can have healthy lambs. First rid your ewes of these parasites, **but do it now** before they have a chance to re-infest your pastures this spring. The time to begin is **now**. They will doctor themselves when they have access to Sal-Vet, the highly medicated salt, and so destroy and expel the worms prevent further infection, and tone the digestive organs, so that the greatest gains possible will result, from what you feed. If you have sheep, hogs, horses or cattle, Sal-Vet will surely save you more than the slight cost of feeding it.

SEND NO MONEY—But Send Us the Coupon NOW

The coupon explains; fill it out and send to us. Don't delay; the sooner you send the more you save.

Prices—100 lbs., \$5; 200 lbs., \$9; 300 lbs., \$13; 500 lbs., \$21.

THE S. R. FEIL CO. Dept. MF Cleveland, O.

Stop Your Lamb Losses!

Haven't you lost sheep and lambs from worms? What do you do to prevent it? Some breeders consider these enormous yearly losses unavoidable, but now those most prominent and successful—those who **know**—have either eliminated these losses entirely, or reduced them to a minimum—with Sal-Vet.

SAL-VET DESTROYS WORMS

Lambs become infected with stomach and intestinal worms by grazing on the pastures with older sheep.

When these animals move with heavy, dragging steps, drooping ears and dull eyes, when they have colic and later scour, when their skin is pale instead of pink,

WHAT GEO. ALLEN, LEXINGTON, NEB., SAYS OF SAL-VET.

From one of the most prominent live-stock authorities. "I have used 'Sal-Vet' for over a year, and ever since then my lambs have been absolutely free from worms. I attribute their satisfactory condition to the 'Sal-Vet' which I keep before them all the time. I heartily recommend 'Sal-Vet' to all sheep and hog men."

(Signed) GEO. ALLEN, Lexington, Neb.

CUT OUT—MAIL TODAY

S. R. Feil Co., Cleveland, O. Send me enough Sal-Vet to feed my stock 60 days. If it does what you claim I will remit \$1.00 not you are to cancel the charge. M. F. Feb. 26, 1910.

Name.....
P. O.
State.....
Shipping Sta.....
No. of Sheep.....
Hogs.....

WRITE ME NOW

THIS IS A BUSY TIME! FARMERS EVERYWHERE ARE GETTING READY FOR SPRING. ARE YOU READY?



Freight Prepaid

Made in 5 Sizes

LOWEST Prices ever offered. Try it 30 days on your own farm.

There is going to be the hottest rush for manure spreaders this spring that ever happened in Manure Spreader History, and I am prepared for it. I had the hunch 6 months ago. It's not too late now for you to write me and it isn't a moment too soon. Do it then while you have it in mind, today. Get my special prices and proposition NOW.

Never was so much manure piled around the barns and feed lots as there is this year. Never in 15 years has there been such a need for manure spreaders as there will be this spring? I say again, are you ready? You've been seeing my ads this year, last year and the year before. Never wrote me yet, did you? Just because I advertise you have often wondered if Galloway was really giving the value—the quality.

Say! Do you know that that is the reason I sell so many, just because I tell the people about them. All there is to selling the Galloway is simply telling the people about them. That's how I have got the biggest spreader factory making wagon box and complete spreaders, 100 a day, more on mighty short notice. I'm ready. Are you ready?

Don't put off that manure spreader matter one more day. Don't let it lie over night.

Rouse out your pencil and drop me a card for my spreader catalog. Get it and investigate. Its full of live facts. You can't tell how good and valuable it is till you see it. Make yourself acquainted with the biggest thing in Manure Spreader History. That is the Matchless Galloway Wagon Box and Complete Spreaders. Made in enormous quantities in my own factories at Waterloo, Iowa. Priced right, guaranteed absolutely. What I say to you is in black and white. I write it in the contract. Whatever promises, claims or challenges I make, I write it in the contract. No verbal promises go with you. I put it up to you unreservedly. There are no strings to my promises to you.

Here's apart "Try my Galloway Spreader 30, 60, 90 or 120 days. If you are not satisfied, I will pay the freight both ways and refund every cent of your money with 6 per cent interest."

NOW GET your letter, postal card, telephone or wire into my office. Ask me to send you my Book of Facts on the manure spreader. Today, right now, is the best time. Do it before some other thing comes up. Write me now for my Manure Spreader Catalog. Write me the kind of trial proposition you'd like to have.

WM. GALLOWAY, President, **THE WILLIAM GALLOWAY COMPANY**, 847 Galloway Sta., WATERLOO, IOWA.



FREE This book contains barrelsful of good information about Manure Spreaders and how to make money with them. Ask us for one—they are FREE!

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.



Prairie Stock Farm

The Leading Horse Importers in the State of Michigan. We have opened the eyes of all Michigan horsemen by our large exhibit at the State Fair in the previous issue of the Michigan Farmer they gave the startling news of our wonderful success, not alone over our Michigan exhibitors, but over all exhibitors of the several States that were represented in competition. We won every prize in the stallion and mare classes except the 4th prize in the 2-year-old stallion class. All our horses are now at our barns ready for sale for less money than a good horse can be bought elsewhere with a guarantee that has stood the test for the past 33 years. Come and be convinced. Terms to suit purchaser.

E. Metz Horse Importing Co., Niles, Mich.

DUNHAMS' PERCHERONS

Next large importation stallions and mares here FEBRUARY 10th, which, added to our present stock, offers intending purchasers the finest collection in America. If you want the best horses, horses with bone, quality, size, action and best breeding, stallions or mares; if you want fair and liberal treatment; if you want lowest prices consistent with good merchandise, visit Oaklawn. Catalog shows the place and the horses.

W.S., J.B. & B. Dunham, Wayne, Ill.

100 Percheron Stallions 100 and Mares

Imported and pure bred registered Stallions from \$400 to \$1200. Mares from \$250 to \$600.

Write for Art Blotter.

BURTON & CO., Kenton, Ohio.

FOR SALE HORSES—Auction Sale of Horses 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. Geron, Horse Market, 475 Gratiot Ave., Detroit, Mich.

PERCHERON STALLIONS. One 4 and one 2 years, record ed. Shorthorn cattle, both sexes, reasonable prices. T. M. Southworth & Son, R. 13, Allen, Mich.

FOR SALE—The Percheron Stallion, Harold No. 18589. Sire King of Perche Jr. 8819. Dam Pan. vette 8803. Write GEO. L. RICH, Paw Paw, Mich.

Morgan, Belgian and Shire Stallions for sale or exchange. H. H. JUMP, Munith, Mich.

FOR SALE—Gilt Edged, Registered Percheron Stallions coming 1 and 2 years old this spring. HENRY C. WALDRON, R. D. 5, Ann Arbor, Mich.

PILLING CATTLE INSTRUMENTS

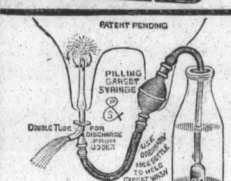
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VETERINARY

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Advice thru this department is free to our subscribers. Each communication should state history and symptoms of the case in full; also name and address of writer. Initials only will be published. Many queries are answered that apply to the same ailments. If this column is watched carefully you will probably find the desired information in a reply that has been made to some one else.

Impaction—Vertigo.—Have lost two yearling heifers that showed symptoms of blind staggers. R. E. S., Clifford, Mich. —Your heifers die the result of impaction of the third stomach. This very often produces delirium and staggers.

Horse Scours.—My 4-year-old horse scours most of the time. He has been idle since last fall. I fed him condition powder without result. C. C., Monroe, Mich. —Give ½ oz. powdered sulphate of iron, 1 oz. ground ginger at a dose in feed two or three times a day.

Garget.—Have a cow that suffers from caked udder. What had I better apply? J. C., Sparta, Mich. —Apply iodine ointment to udder and give ½ oz. fluid extract of phytolacca at a dose in feed two or three times a day.

Acidity of Stomach.—My cows, when turned out are inclined to chew on old sticks and decayed wood. What ails them? W. N. M., Bay City, Mich. —Give your cows two tablespoonfuls of baking soda, the same quantity of ground ginger and powdered charcoal at a dose in feed three times a day. Also feed them some vegetables.

Nasal Polypus.—I have two pigs five months old that have difficulty in breathing; they cough and gag when drinking. W. H., Kalamazoo, Mich. —Your pigs may have nasal polypus, or it is possible it is laryngitis. Examine for polypus and if you find none apply equal parts aqua ammonia and sweet oil to throat once a day. Give ¼ dr. syrup of squill at a dose to each pig twice a day.

Shoulder Tumor.—I have a colt that has a bunch on shoulder which is growing and is now the size of a goose egg. What can be done to remove it? W. W., Suttons Bay, Mich. —If the bunch is soft, open it, if hard, have it cut out. You might try to reduce it with tr. iodine or iodine ointment, applied once a day.

Corn.—I have a horse that travels sore forward that two or three different horse shoers have examined. One found a bruised spot in foot. I have poulticed the foot with linseed meal; now, shall I blister? G. H., Fairgrove, Mich. —Your horse suffers from a bruised heel, or else coffin joint lameness. Have your horse shoe apply a bar shoe. If the corn hurts him and if the coffin joint is sore, blister coronet.

Warts on Cattle.—What shall I do for warts around the eyes and down the legs of cattle? Also, my hogs are troubled with scours. They are fed ground barley and separator milk. F. J., Flat Rock, Mich. —Cut the warts off if possible, or apply one part chromic acid and two parts water carefully once a day. Daily applications of acetic acid might reduce them and be less dangerous.

Rickets.—I would like to know what can be done for four-weeks-old pigs that are fat and healthy, but breathe heavy and are unable to stand on forelegs; they are drowsy. Two of them have died, but the sow seems to be well. D. B., Grass Lake, Mich. —Your pigs die of congestion of the lungs, which must be acute, to kill them in 24 hours. The weakness in forelegs must be rickets. Change sow's feed.

Obstructed Teat.—I have a cow that came fresh last October, at which time there was a small bunch on end of teat which has since reduced, but closes the opening. L. E. S., Milan, Mich. —What you need is a milking tube and if you are not supplied the Lawrence Publishing Co., can furnish you with one. A ¾ inch tube costs 35c, delivered by mail, a 3 inch one 30c; either of these sizes are no doubt what you need.

Indigestion.—I have a four-year-old colt that is thin and out of condition. She had an attack of azoturia about a year ago and I have that her kidneys did not act right. G. E. T., Howard City, Mich. —Some of caps of temporary teeth may need pulling off to allow the permanent teeth to grow into proper place, or the cap may be pushing against the cheek or tongue and hurting mouth; if so, pull them with pincers or forceps. Give a teaspoonful of ground nux vomica, two tablespoonfuls gentian and two of ginger at a dose in feed three times a day. Also give ½ oz. powdered nitrate of potash daily until the kidneys act freely; also give this medicine as often as you find necessary.

Chronic Lameness.—I have a ten-year-old mare that went lame one year ago and has been lame at times ever since. She starts out showing a great deal of stiffness but after traveling a mile or two she shows but little soreness, but if allowed to stand still for a few minutes. This mare is in a healthy condition so far as I can tell and has a good appetite. F. K., Ionia, Mich. —Your mare is either rheumatic or she may have been foundered. If her fore feet are hot pack them with wet blue clay, oil meal or white rock. Give 3 drs. nitrate potash and 1 dr. powdered colchicum at a dose in feed twice a day for a week, then once daily for 10 days longer. Perhaps blistering coronets in front will help her.

Chronic Lymphangitis.—I have an 8-year-old mare that had an attack of lymphangitis last fall and it affected the inguinal lymphatic glands. Daily exercise keep the swelling down in the leg groin. But if she stands in the stable for two or three days and is driven the next day, she is quite swollen. The remedies I have given her fail to produce results. L. R. S., Elsie, Mich. —Give 2 drs. fluid extract of phytolacca root at a dose twice a day; also apply extract of

phytolacca to the swollen lymphatic glands once a day. It is needless for me to advise you to exercise the mare daily and feed lightly on grain when she is idle.

Chronic Poll Evil—Fistulous Withers.—I have a 10-year-old mare that has been troubled several times with poll evil, but our Vet. succeeded in getting her well. Some time later she stumbled and fell, soon showing lameness, but got over it. Still later she swelled on withers and had to be opened; after a time the shoulder healed, but is now discharging pus, and causes some soreness. W. H. B., Mellin, Wis. —In treating a case of this kind I always try to ascertain if the bones are diseased and if so the diseased portion must be removed before a recovery can take place; besides, a drainage should be obtained; if not, inject some tr. iodine into sinus once a day and in a few days use one part peroxide of hydrogen and two parts water twice a day. But remember, it should be injected slowly into shoulder to do the most good and least harm. One part carbolic acid and 30, or even 20 parts water is a good remedy to use after the iodine applications.

Bed Sore.—My horse sprained its ankle about two weeks ago and after the medicine that was left by the Vet. had been used up, I used wormwood and vinegar, also, binding on the leaves, the horse not being out of the stall during this time until today when I noticed its front leg was swollen considerably; upon examining closely under the leg at the joint there is a sore spot perhaps as big as one's hand and about half an inch thick, scaly and most of the hair has become loosened and come off over the sore. I washed with carbolic acid water and covered with salve to prevent the air getting to it too much. Cannot account for this sore spot unless it is where the horse has been laying during its lameness as it has been laying on the same side all the time with good clean bedding. Any information you will give in regards to the remedy of this trouble will be thankfully received. I. E. G., Dowagiac, Mich. —The parts were bruised or else you scalded them. Apply equal parts powdered alum, oxide of zinc and boric acid to sore after the dead skin is cut off.

Colt Out of Condition.—I have a colt two years and nine months old that is not thriving; he is fed as much as my other horses and does not look so well. They are fed on cornstalks and soft corn cut together with roots and a small quantity of oats. He is losing flesh and his skin seems to be tight. He eats well and runs out every day. F. O. E., Lakeview, Mich. —Give your colt a tablespoonful of the following compound powder at a dose in feed three times a day. Ground gentian, cinchona, quassia, nux vomica and bicarbonate soda, equal parts by weight, mixed thoroly. I suggest that you give him 1½ pts. raw linseed oil every two weeks; this is done to clean out his stomach and bowels.

Chickens Pick Feathers from Each Other.—We are having a serious time with our chickens picking feathers from each other. If there is anything which can be done to prevent it, we certainly would be glad of the advice. We read your veterinary department every week and learn a great deal from it. N. D. W., Dublin, Mich. —Furnish your chickens with more green food, such as cabbage, lettuce or vegetables, and exercise them more. Perhaps they are troubled with lice or mites. Make a thoro examination of them and if mites, apply kerosene to their roosting poles, and if lice use any of the lice killers advertised regularly in this paper. Thanks for kind words regarding this department of the Michigan Farmer.

Pin Worms.—I would like advice regarding pin worms in horses. My horses have been troubled with them for the past eight months and our local Vet. has failed to effect a cure. S. B., Bay Port, Mich. —Dissolve 3 ozs. powdered sulphate iron in 1 gal. tepid water and after washing out the rectum with warm water, pour in 1 qt. of this mixture thru a rubber tube with funnel. Your drake is incurable.

Fistula.—I have a mare four years old that is troubled with a sore neck; the collar bruised the top of neck last summer causing it to break; since then it has not healed. A. J. S., Mt. Pleasant, Mich. If there is a hard crust surrounding the sore, cut it off and apply tincture iodine to sore once a day.

J. G., Oakley, Mich.—Your hog suffered from tuberculosis. The throat and bowel glands are most often affected in hogs, perhaps on account of them becoming diseased from drinking milk from cows that suffer from tuberculosis or by digging in the excrement from cattle which were diseased.

Hogs have seldom enriched farmers as much as they have for a year past, and it is going to take a long time to raise enough swine to restore the supply to anything like normal proportions. Despite frequent breaks in prices, following occasional liberal receipts at Chicago and other markets, there are pretty sure to be prompt rallies that put stockmen in good humor, and money cannot be made faster than by putting high-priced corn into hogs and keeping it up until the hogs are fat and heavy. And yet the recent average weight of the hogs marketed at Chicago has fallen to 208 lbs., the lowest weekly average since last April. A year ago, when farmers were rushing their hogs to market to avoid big feed bills, the average weight of the Chicago offerings dropped to 202 lbs., but the average stood at 216 lbs. two years ago and at 224 lbs. three years ago. Within a short time prime weighty hogs have sold in the Chicago market as high as \$9.05 per 100 lbs., the highest price in more than 27 years. A year ago, when hogs were rising in value, the best sold for \$6.40, while two years ago the top was \$4.52. At that time general discouragement was felt because of the low prices paid, and it was complained that hogs were not paying for what they ate. At that time markets were glutted, and even young brood sows were sacrificed for whatever could be got for them.



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POULTRY

RAISING CHICKENS WITH A
BROODER.

(Concluded from last week).

Where one hatches chicks with an in-
cubator and then rears them in a brooder,
the lice question is reduced to a mini-
mum. In fact, there are no lice on young
chickens. You don't have this to contend
with, while it is almost impossible to
raise them with hens without having
them lousy. If your brooders have been
used a season or two they should be at-
tended to strictly before any young chicks
are put into them. I think it is a good
plan to take off the old hover cloths and
put on new, and to thoroughly saturate every
part of it with some insecticide, or kero-
sene, several days before you want to use
the brooder, so that you can get rid of
every vestige of filth.

One must use a little patience, of course,
in educating young chicks, just as he
would in educating a young calf to drink.
For instance, when they are first put into
the brooder they must be confined for the
first day in the compartment containing
the hover. Then the hover door is let
down and they are allowed to get out,
for a little exercise, into the larger com-
partment which is not so warm, and they
do not know enough the first night or
two to go back under the hover cloth.
There is no hen to call them, and the
party who takes care of them must edu-
cate them. The only thing to do is to go
out about four o'clock and put them back
and shut the door, so that they will be
under the hover cloth during the night.
You may have to do this three or four
nights in succession before you get them
trained. They they get so they will go
back of their own accord, just as regu-
larly as the old hens go to the roost at
night. A mistake is made by leaving
them out there until after dark because
they will get chilled. Don't leave them
out for the longer they are left out the
more trouble you will have in breaking
them of the habit. Attend to it the first
night and do it early. As a matter of
fact, the first day they are let out they
ought not to remain in the large com-
partment of the brooder later than the
middle of the afternoon, because they
don't want too sudden a change.

Then when the chicks are three or four
days old provision must be made to give
them a run outside of the brooder itself
on pleasant days. As they grow they
must have exercise. A small yard can
be enclosed with very fine-mesh chicken
wire, or wide boards can be used, the
same width as the brooder, to extend out
in front, and then a bridge board used
so that they can readily go in and out of
the brooder when they desire. The first
day you let them out they should be out
but a short time, because they do not
want too much exercise at once. Then
the time for their being out of the brooder
can be extended until finally you can let
them out after you feed them in the
morning and they will go back of their
own accord. The first three or four days
you will have to put them back, and you
should educate them to go back at the
proper time.

When you get them so they will go
back from outdoors into the brooder and
under the hover cloth, then the worry is
practically over. All you have to do is to
feed them and water them properly, open
the door so that they can go out in the
morning and, after they have gone back
at night, go and see that it is properly
closed so that you can control the tem-
perature during the night, and also so
that they will be free from any night
marauders.

If a man thinks that the chicken busi-
ness is a woman's business, if he thinks
that chickens are too small for him to
bother with, he probably will not make
a success of it, but if he is interested,
studies their habits and studies condi-
tions, there isn't any reason why he can-
not raise all the chickens he wants by
artificial incubation. He can raise nice
ones, and can raise them cheaper and
better than with hens.

COLON C. LILLIE.

Effective Treatment for Roup.—I have
had good results from the following treat-
ment for roup: Shut the affected fowls
in a coop and close all openings. Then
take two tablespoonfuls of tar and a like
quantity of turpentine. Mix them thor-
oly, place in coop and set fire to the mix-
ture. The fumes inhaled will cause
sneezing. If they do not recover, repeat
the treatment in four or five days.—C. D.
Edmonds, Gratiot Co.

THE STORY OF THE PEANUT SHELLS.

As everyone knows, C. W. Post, of
Battle Creek, Michigan, is not only a
maker of breakfast foods, but he is a
strong individualist who believes that the
trades-unions are a menace to the liberty
of the country.

Believing this, and being a "natural-
born" scrapper for the right, as he sees
it, Post, for several years past, has been
engaged in a ceaseless warfare against
"the Labor Trust," as he likes to call it.

Not being able to secure free and un-
trammelled expression of his opinions on
this subject through the regular reading
pages of the newspapers he has bought
advertising space for this purpose, just
as he is accustomed to for the telling
of his Postum "story," and he has thus
spent hundreds of thousands of dollars in
denouncing trades-unionism.

As a result of Post's activities the
people now know a whole lot about these
organizations: how they are honeycombed
with graft; how they obstruct the devel-
opment of legitimate business, curtail la-
bor's output, hold up manufacturers, graft
upon their own membership, and rob the
public. Naturally Post is hated by the
trades-unionists, and intensely.

He employs no union labor, so they
can not call out his men, and he defies
their efforts at boycotting his products.
The latest means of "getting" Post is the
widespread publication of the story that
a car which was recently wrecked in
transmission was found to be loaded with
empty peanut shells, which were being
shipped from the south to Post's estab-
lishment at Battle Creek.

This canard probably originated with
President John Fitzgerald of the Chicago
Federation of Labor, who, it is said,
stated it publicly, as truth.

Post comes back and gives Fitzgerald
the lie direct. He denounces Fitzgerald's
statement as a deliberate falsehood, an
underhanded and cowardly attempt to
injure his business, having not the slight-
est basis in fact. As such an effort it
must be regarded. It is significant that
this statement about "the peanut shells"
is being given wide newspaper publicity.
In the "patent inside" of an eastern
country paper I find it, and the inference
naturally is that labor-unionites are in-
sidiously spreading this lie.

An institution (or a man) which will
resort to moral intimidation and to phys-
ical force, that will destroy machinery
and burn buildings, that will maim and
kill if necessary to effect its ends, natu-
rally would not hesitate to spread false-
hood for the same purposes.

We admire Post. While we have no
enmity toward labor unions, so long as
they are conducted in an honest, "live-
and-let-live" kind of a way, we have had
enough of the tarred end of the stick to
sympathize thoroughly with what he is
trying to do. He deserves support. A
man like Post can not be killed, even
with lies. They are a boomerang, every
time. Again we know, for hasn't this
weapon, every weapon that could be
thought of, been used (and not simply by
labor unions) to put us out of business
too?

I am going to drink two cups of Postum
every morning from this time on, and put
myself on a diet of Grape-Nuts. Bully
for Post!—Editorial in The American
Journal of Clinical Medicine.

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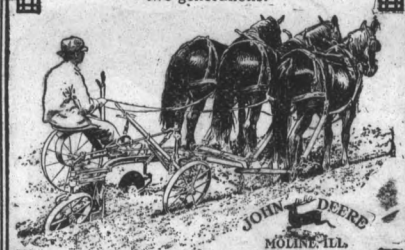
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THE DAIRY

CONDUCTED BY COLON C. LILLIE.

THE WATER SUPPLY FOR THE DAIRY HERD.

Water is so common that we often lose sight of its value and sometimes fail to get the greatest benefit from it. There are but few dairy farms where the water supply is gotten to the cows in anything like sanitary condition. The watering trof is usually located in the muddiest spot in the stockyard. Litter blows into the water and decays there, giving off, in the process of decay the unpalatable and unhealthy gasses and by-products of decomposition. Algae grows in the trof. Many times the trof is rotting and makes it impossible to get pure water to the animals by its use. Then the well is too often dug in the lowest level of the yard because water can there be found nearer the surface. This makes it difficult to keep the surface water from getting into the well unless it be deep and constructed with impervious walls. Should drainage water find its way in, the health of the herd is jeopardized and it will continue to be in peril so long as the condition exists. And not only the cattle but the persons who consume the products of the cows, are likewise endangered. The best way to overcome a situation of this kind is to change the source of supply, or to put down a drive well or crotch up the open one so that the drainage water cannot get in without leaching thru the soil to the bottom of the crotch or to the screen. Another precaution is to run a course of drain tile close about the well. It is better, however, to have natural drainage and the well situated away from the barnyard with pipes to carry the water to the cows.

In conversation recently with a former manager of a large dairy of Washtenaw county, it was remarked that by the installation of individual watering bowls which kept water before the animals constantly there was an increase of ten gallons of milk a day from the fifty cows that were then in the barn; the cows having average 150 gallons per day before the installation and in a few days after the average ran up to 160 gallons and remained there as steadily as it had at the lower figure before. This experience suggests the value of having a constant supply of water before the cows. It likely is not convenient for many to pipe the barn and provide individual bowls but where this cannot be done every effort should be made to see that the animals do not lack for water to keep their bodily functions in normal condition and supply them with the materials to manufacture their maximum capacity of milk.

Still another feature of the water supply at this season is the temperature. In many instances the amount of water before the animals is ample but because of its low temperature they cannot or will not consume sufficient for their needs. And then, too, the shock to the system created by drinking water around freezing point, is not conducive to a full flow of milk and the best health of the animal, for it is sure to impair digestion. Some provision should therefore be made to keep the water so the cows can consume all they need without cooling their organs unnecessarily.

A CRITICISM ON COST OF FEEDING COWS.

I have read with interest article by "A. H.," page 76 of January 15 issue. It would make mighty profitable reading if A. H. would particularize as to what was fed this 4,468 cows, that would enable their owner to produce practically 3,500 quarts of milk a cow, at an average cost per cow of only \$40.36. I hope he will tell us what was fed and what prices ruled the computations. If we in this section could keep cows at any such figures we would need nothing better than cows to get a respectable bank account.

It does not seem possible that the seasons are enough shorter in Michigan nor the prices of hay and grain enough lower to create such a difference in cost to maintain a cow as A. H.'s figures would indicate.

Here we figure that without ensilage a cow producing a good flow of milk must have three tons of hay during the stabling season. The grain ration fed by us will not vary greatly from three dollars a month on the average for the year, per cow.

Therefore we have as the bare cost to maintain a cow, to say nothing of pasturage, labor, or interest or depreciation of buildings and herd, \$66 a year, or Three tons of hay at \$10.....\$30.00 Twelve months grain at \$3.....36.00

Total\$66.00 or \$5.50 a month on the average for the year. This high cost of keep does not preclude a profit as usually figured, but if too many extras were charged in I am afraid there would be little profit.

I will give our income from April 1, 1909, to February 1, 1910, estimating the last week in January, as I know what it will be within a dollar or so. Milk sold:

April	\$ 107.60
May	115.20
June	110.00
July	124.40
August	116.80
September	124.00
October	124.40
November	128.50
December	138.40
January, 1910	144.40

Total for 10 months\$1,234.00 Express deducted 92.55

\$1,141.45 Milk used 10 mos., 900 qts. at 3.7c 33.30

\$1,174.75 This equals 3,175 cans of 10 quarts each, or as we usually figure it 20 lbs. of milk per can or 63,500 lbs. of milk in ten months. During this time we milked from nine to 11 cows. Using 11 as the average we produced 5,773 lbs. of milk per cow in ten months with nothing to indicate that we will fall much below that for the coming two months.

This ten months' income of \$1,174.75 gives us an income per cow of \$106.79 which, after deducting cost of hay and grain, 10 months \$55, leaves an apparent profit of \$51.79 per cow with two more months to be added, but it is done at an added cost of feed per cow of \$25.64 per year over the figures given by A. H. It would seem we are "way off" somewhere in feeding, and I hope for figures for comparison.

In reality, if everything is charged up to the cow, in the way of interest or capital invested, taxes, insurance, depreciation of buildings and herd, it is hard to find the profit, but like ensilage, there is something in it we do not reckon on. A good dairyman, give him a respectable start and he will pay for a farm, improve the buildings, raise and educate his children, and make old worn out, neglected fields produce a bountiful harvest, larger and still larger as the result of a good herd of good cows, with good care. He should credit the cows with providing a good home where he may, in later years, enjoy some freedom from hard work, and the amount to be credited them for increased fertility, and consequent increased value of his farm cannot be well calculated. I respect the good dairy cow. Maine. D. J. RYTHER.

ELM LATH FOR SILO.

I take this liberty of writing you about your new silo that was described in the Michigan Farmer of Nov. 13, 1909. I would like to know if elm lath sawed 2 1/2 inches wide and 1/2 inch thick would do instead of board lath. Do you think it would do to lath and plaster on outside? I think it would be a little cheaper than siding. Do you think a silo like yours, 30 ft. high would need hoops?

Lapeer Co. E. L. I think elm lath would answer just as well as board lath, and in some respects better. You could bend the elm lath and when these were nailed to the studding it would make the silo very strong. The board lath has to be sawed as they will not bend without breaking. There can be no objection to lathing and plastering on the outside instead of boarding. It would make a silo practically indestructible. If you use elm lath and bend them to the circle, you will need no hoops. In fact, every lath will be a hoop and it will make a very strong silo.

LINSEED MEAL VS. FLAXSEED MEAL.

If linseed meal cost \$2 a hundred and unpressed flaxseed meal \$4 a hundred, which is the best and cheapest to feed to milk cows? If a man has two cows and the milk from both is skimmed by the same separator, one after the other, could there be any difference in the test of the cream? If so, is it in the cows or in the feed? The cows are fed differently. Osceola Co. J. K. H.

Linseed meal is worth more, pound for pound, than flaxseed meal to feed dairy cows. Flaxseed meal contains about 30 per cent fat and you do not need this fat for the cows. You want a food rich in protein. After the fat is removed in the linseed oil, linseed meal is richer in protein and more valuable, pound for pound, than it was before the oil was removed.

Other Cream Separators

Merely Discarded

or Abandoned

De Laval Inventions

It is interesting and instructive to know that nearly, if not quite, every cream separator that has ever been made, and certainly all that are being made at this time, are merely copies or imitations of some type of construction originally invented or developed by the De Laval Company, and either not used by it because of something more practical or else discarded and abandoned in the course of De Laval progress and utilization of later improvements.

As earlier patents have expired some of their features have one after another been taken up by different imitators, so that at all times, as is the case to-day, every separator made in the United States or elsewhere in the world, utilizes some type of construction originally owned and developed by the De Laval Company, though some of them have never been commercially used by the De Laval Company because of their inferiority to other types of construction used by it.

The De Laval Company has always been forging ahead, with its many years of experience and the best of experts and mechanics the whole world affords in its employ, so that before any expiring patent might permit the use of any feature of construction by imitators, the De Laval Company had already gone so much beyond that type of construction that it was then old and out-of-date in the modern De Laval machines.

All cream separator inventions by others have been of immaterial details or variations, upon which patents have been taken, if at all, more for the sake of the name than by reason of any real value or usefulness attaching to them.

The first practical continuous flow centrifugal Cream Separator was the invention of Dr. Gustaf de Laval in 1878, the American patent application being filed July 31, 1879, and issuing as Letters Patent No. 247,804 October 4, 1881.

This was the original Cream Separator—of the "Hollow" or empty bowl type—and it has been followed from year to year by the various steps of cream separator improvement and development, all De Laval made or owned inventions, the American patent applications being filed and letters patent issued as follows:

The original hand Cream Separator of the "Bevel Gear" type; application filed October 2, 1886, issuing as Letters Patent No. 356,990 February 1, 1887.

The original hand Cream Separator of the "Spur Gear" type; application filed January 17, 1887, issuing as Letters Patent No. 368,328 August 16, 1887.

The original Steam Turbine-driven Cream Separator; application filed December 8, 1886, issuing as Letters Patent No. 379,690 March 20, 1888.

The original "Tubular" shaped "hollow" bowl Cream Separator, application filed April 19, 1886, issuing as Letters Patent No. 372,788 November 8, 1887.

The original "Disc" bowl Cream Separator; application filed May 12, 1890, issuing as Letters Patent No. 432,719 July 22, 1890.

The original vertical curved or interlocking "Blade" Cream Separator bowl, covered likewise by the application filed May 12, 1890, issuing as Letters Patent No. 432,719 July 22, 1890.

The original "Bottom Feed" Cream Separator bowl; application filed July 24, 1889, issuing as Letters Patent No. 445,066 January 20, 1891.

The original "Suspended" bowl Cream Separator; application filed August 21, 1893, issuing as Letters Patent No. 512,203 January 2, 1894.

The original "Star" or "Pineapple Cone" shaped series of cylinders Cream Separator bowl; application filed August 24, 1893, issuing as Letters Patent No. 521,722 June 19, 1894.

The original "Curved Disc" Cream Separator bowl; application filed January 18, 1905, issuing as Letters Patent No. 892,999 July 14, 1908.

The original "Split-Wing" Tubular Shaft Cream Separator bowl; application filed April 29, 1898, issuing as Letters Patent No. 640,358 January 2, 1900—which invention, with a series of later improvements, is the type of bowl construction used in the De Laval machines of to-day, and still covered by protecting patents which prevent its appropriation by would-be competitors.

The patents thus enumerated are but a few of the more important of the more than 500 original Cream Separator patents owned, controlled and developed by the De Laval Company during its thirty years of creation and development of the Cream Separator industry throughout the world. They are recited because they show in the most illustrative and conclusive manner possible De Laval originality and leadership from 1878 to the present day.

In addition to these patent-protected features, the De Laval machines have within two years been mechanically re-designed and re-constructed in every part, from top to bottom, so that the new and improved line of De Laval machines are to-day, even more than at any past period, fully ten years in advance of any other cream separator made.

These are the Rock-of-Gibraltar-like separator facts against which the mere "word claims" of would-be competitors fade away like the mists of night before the rays of the morning sun.

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for feeding cows to help balance and make an economical ration. Flaxseed meal would be more valuable to feed to calves with skim-milk for there you want fat to take the place of the fat removed from the milk. If one cow gave 3 per cent milk and the other 5 per cent, then there would be a difference in the cream, because the separator is set to remove, say 1.10 of the milk, and if it removes ten pounds from a hundred pounds of milk, you would have a richer cream than when it removes 10 pounds from a hundred pounds of 3 per cent milk. In the first instance, 10 pounds of cream would contain five pounds of fat, or you would have 50 per cent cream, and in the second instance 10 pounds of cream would have only three pounds of fat, or 30 per cent cream. You see, the feed of the cow would have nothing to do with it. It is the amount of butter-fat in 100 pounds of milk.

COST OF CEMENT LINED SILO.

Will you please give plan and cost of building cement lined silo mentioned in recent issue of The Farmer. **Cheboygan Co. W. F. B.**

I have given the plan of this silo to readers of The Farmer, but for the benefit of those who were not interested in silos at that time, and for any new subscribers, I am glad to give it again. The plan is simply to build your circular wall, going deep enough to get a good foundation and have the grout wall come about a foot above the ground. Then put on a circular sill and on this put 2x4 studding, or you can use 2x6 studding if you prefer, which will make the silo all the stronger. Set the studding 16 inches apart, put a circular plate on top, lath the silo on the inside with patent board lath, or you can lath it with any kind of lumber sawed into narrow strips like lath. The lath should not be less than half or three-quarters of an inch thick to make the silo strong. Common lath used in lathing houses would not do, only for a shallow silo, because the pressure would be too great. In putting on the circular sill have it back far enough from the edge of the wall so that when it is lathed the lath will come even with the wall. Then plaster it from top to bottom with a good cement mortar made by mixing good fine sharp sand with cement, two parts sand to one of cement. On the outside you can clapboard it with common half-inch lumber. I tried to keep careful memoranda of the expense of my silo, and it cost me about \$325.00 for a silo fifteen feet in diameter and fifty feet high.

GOOD BUTTER AND BAD BUTTER.

If you will spend an hour or two at a grocery store you will hear several persons inquire of the merchant if he has "any good butter." In answer to a large proportion of the inquirers the honest merchant will say that he has "plenty of butter but it is not good." Now, was your butter classed among that, that was not good? It should not have been. The cause of the two classes of butter is, chiefly, the cream. Good butter cannot be made from bad cream and good butter is not always made from good cream. All doctoring possible will not make good butter from bad cream.

The one great thing in butter making is cleanliness. From the time the milk is drawn from the cow until it is churned, every vessel used must be spotlessly clean and free from all odors. This can be had by washing and airing each vessel immediately after the milk is emptied from it.

A great deal of butter is spoiled in the churning. Always stop churning while the butter is in granular form. Then draw the buttermilk off and add plenty of clear, cold water to wash out the remainder of the milk. Some prefer to work the milk out, but washing is usually regarded as being the better method. After all of the milk has been washed out, the butter is ready for salting. One ounce of salt to each pound of butter is about the proper amount. Unless sufficiently salted the butter will get strong quickly. Salt also serves to bring out that rich, creamy taste. Do not place butter in cupboard or ice box with other victuals, for it absorbs other flavors very readily.

Too little attention is paid to butter making on the average farm. The groceryman never has any trouble in disposing of all the good butter he can get and it always brings a good price. By exercising the proper care and judgment, gilded butter can be produced on any farm and the bad butter will be conspicuous only by its absence from the grocery.

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No matter how hard you try you can't make an old stable with dirt floors and wood partitions sanitary—you can't keep it clean and sweet. Wood partitions gather dust and disease germs. Dirt floors with their tramped-in filth should never come within a stone's throw of your milk pail. When a cow gets off her feed and her milk yield falls below normal, look to your stable. It may be as clean as you can make it; but that may not be clean enough. Equip your stables

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SILO FOR TEN COWS.

Will it pay to build a silo for 10 or 12 cows, and how large? What is the capacity of a 10x30 ft. and 12x36 ft. silo? How many acres of corn will it take to fill each? I thought a 12x30 ft. would be about what I would need on a 40 acre farm.

Hillsdale Co. H. W.

Yes, I think it will pay to build a silo for ten cows, but for this number of cows I would think that a silo ten feet in diameter would be more suitable than one twelve feet in diameter. The rule is that there should be not more than eight square feet of surface, exposed, per cow, to feed the ensilage down sufficiently fast so that it will not spoil. Consequently, a twelve foot silo will be rather large, tho it would probably work all right except in warm weather. The ten foot silo, however, would be better and if you wanted more capacity you can build it higher than 30 feet; you could build it 40 feet high, in order to get the desired amount of ensilage. A silo ten feet in diameter and 30 feet high would hold about 40 to 50 tons of ensilage, while one 12 feet in diameter and 36 feet high will hold 85 tons of ensilage. For ten cows, I would prefer one ten feet in diameter and 40 feet, to the one you suggest, and it is perfectly practical to build one 40 feet high, or even higher, if you choose.

REGARDING MR. ELENBAAS' HERD.

In our issue of February 5, we published the record of Mr. Elenbaas' herd for the year 1909 in which he showed that milk was sold to the value of \$1,146.18, which cost him to produce, \$540.65, the herd consisting of 10 grade Durham cows. This was an unusual record for grade cows, and we wondered if the same 10 cows were kept thru the entire year, as substituting other cows for those that had gone dry, would make it rather easy to secure such a record as this from ordinary cows, providing that they were well cared for. We have just received a communication from Mr. Elenbaas in which he states over his signature that the same 10 cows were kept the entire year and that these cows were the only ones concerned in the record published. He states that most of these cows freshened in the fall and early winter. Such reports as these are encouraging. It shows that our dairymen are beginning to take more care of their cows and they are more exact in their demands of the animals. The use of the Babcock test and the scales is enabling the dairymen to know the exact value of each cow and it is from this exact information that he is able to build up such a herd as Mr. Elenbaas has. Many pure-bred herds are being tested but the practice is little extended to grade herds outside of those localities where cow testing associations are operating. But the benefit being derived thru individual effort alone, or by the aid of the above named association stands out so strongly that it is certain to become a general practice in the future.

WEIGHT OF ENSILAGE.

How much silage is there per ft. in height in a silo 12 ft., also one 16 ft., in diameter, and how much per ton is it worth? The corn put in would go about 125 baskets per acre.

Monroe Co. A. C. GREEN.

Silage, on the average, will weigh 40 pounds per cubic foot. One foot deep in a twelve foot silo would amount to 113 cubic feet, or 4,520 pounds. While in a 16 foot silo there would be 201 cubic feet in a layer one foot thick, or 8,040 pounds of ensilage. Toward the top of the silo the ensilage would not weight quite as much, while near the bottom it would weigh more. It is hard to tell the value of ensilage, but it is usually figured at \$2.50 per ton.

TWO VS. FOUR-BOTTLE TESTER.

Can there be any better results obtained from a four-bottle Babcock tester than a two-bottle tester? Also, is there any benefit derived by having the tester incased?

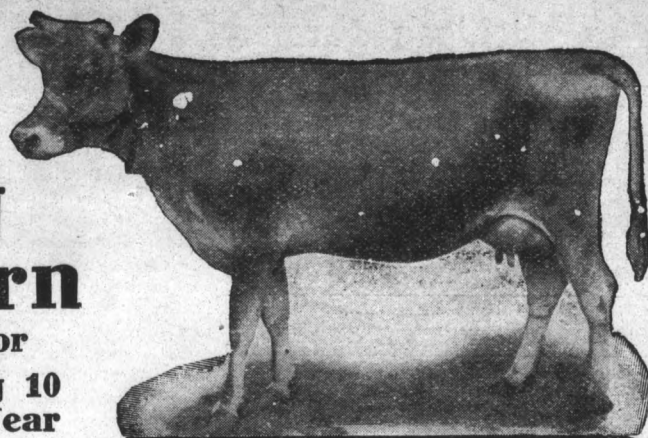
Van Buren Co. V. E. G.

A two-bottle tester will give just as accurate results as a four-bottle tester. The only object in having a four-bottle tester is so you can test four samples at one time. It is a good thing to have a case around the tester. It helps keep the samples at the proper temperature and sometimes a bottle will break in whirling it very fast. If it does, you may throw the acid and milk on your person and clothes and the glass might cause injury. This, however, rarely occurs. It is safer and better to have a case, but it is not necessary.

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All of the gears and bearings are cut and set with the accuracy of the highest grade watch-making. Imported Chelmsford ball bearings. Guaranteed the easiest machine to turn ever made.

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Ask your dealer to show you or to get you a Great Western Separator. He will (or we will) give you any kind of a trial you want without one cent of expense to you.

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DETROIT, FEB. 26, 1910.

CURRENT COMMENT.

An inquiry recently received from Educating the Farm Boys and Girls, a subscriber touching this important subject is a fair example of many such received at this office during the year. This inquirer owns a fine farm, is somewhat in debt, is evidently satisfied with his location and home, but has a worthy ambition to give his boys and girls the best possible education, and to this end asks advice as to whether he should sell or exchange his present home in order to get near a college town for that purpose. This is a problem which confronts a good many farmers and which is answered by them in a variety of ways. Some consider that it would not be wise to send the boys and girls away to school where the influence of the home could not follow them, for which reason they feel that they must locate where the children can have the advantages of good schools, and yet be at home while getting this advanced education.

In some cases, perhaps, the parents feel that it would be cheaper for them to make a change of this kind than it would to send the children away to school. Probably in most cases this would not be true and, in a large majority of instances, this is not given the weight in considering the proposition that the desirability of having the home influence follow the young people is given. There are two ways of looking at this problem, and while in some cases it is undoubtedly a wise move to have the young man or woman kept within the home influences, yet in other cases one of the greatest benefits derived from a course in the high school or college is the real experience gained by the young men or women in being away from home and acquiring a degree of independence which will be of not a little value to them in after life. In some cases, of course, this may result disastrously for the young men or women, but it does not follow as a necessary conclusion that the home influence would have saved them from the consequences of bad associates or thoughtless indiscretions. In fact, it is not at all certain that the opposite is not true and while, of course, it is largely a personal problem for the parents in each case to determine what is the wisest course for them, in general application it is probably true that such a sacrifice would be repaid more largely

in the pleasure which would be derived from the young people's society than in the benefit to the young people themselves, especially where the children appreciate the advantage which is being given them in an opportunity to get a good education and the responsibility which devolves upon them in turn. Where there is not such an appreciation, or where the young people are not sufficiently stable in character to be trusted beyond the paternal roof, they had probably better be sent to some school where there is strict discipline and a constant restraining influence.

Of course, we would not for a moment infer that where it is practicable for the young people to attend college without leaving home such a course should not be followed, for it will undoubtedly be more pleasant for both parents and children. But where this cannot be done without additional sacrifices on the part of the parents we doubt that advisability of making the sacrifice, since most of the young men and women who attend college and make a success in the world have done so without such a sacrifice on the part of their parents.

The prevalence of The Tuberculosis among the live stock of the state has been a serious problem to all who have given the matter serious consideration. Various plans have from time to time been proposed to effect its eradication, none of which have seemed to be practical or feasible.

Dr. Marshall, of M. A. C., has given this topic no little consideration and his opinion is as generally respected upon this subject as that of any man with whom the people interested in Michigan live stock are acquainted. After a full consideration of the problems involved, Dr. Marshall has reached the conclusion that it is impossible for professional men to cope with this disease among the live stock of our state, since there are not enough veterinarians in the state to test all of the cattle in the state in a year's time; in fact, it would take two or three times as many veterinarians as there are in Michigan to do this. The tuberculin test which, according to the Bureau of Animal Industry of the United States Department of Agriculture, gives correct results in 98.81 per cent of the cattle tested, is largely a mechanical test which can be applied intelligently by any bright man who has been trained and to whom assistance can be given in interpretation of the same, with proper supervision. With this fact in mind, Dr. Marshall has evolved a plan by which the farmers in any locality who may wish to test their animals for tuberculosis, can easily make such a test for themselves. The plan is for such farmers in any community to select bright young men who will be able to test and watch the herds in any community where the disease may exist until it is wholly eradicated. To this end lectures and demonstrations will be given daily during the dairy week course from February 28 to March 5, to provide these young men with the necessary technical knowledge and these lectures will be supplemented by practical demonstrations in the actual work of testing cattle to determine whether or not they are afflicted with tuberculosis. The tuberculin serum will be furnished by the bacteriological laboratory for simply the cost of transportation, on condition that tests are made in accordance with its direction and that a full report of all tests be returned for review and interpretation. This plan is in line with the generally accepted theory that the better way of accomplishing the eradication of tuberculosis is thru the education of stock owners to the importance of such a move to them. It involves none of the expense incident to the compulsory testing of cattle and should appeal to the stock owners thruout the state as a possible means to a desirable end, of which they should not neglect to take advantage.

Occasional reference has been made in these columns to a bill pending before the national congress providing for the control of the purity of insecticides and fungicides, so far as they may enter into interstate commerce. This bill has now progressed to a point where a public hearing is to be given upon it by the committee having it in charge. As before noted, there is practically no opposition to the bill except on constitutional grounds, which the committee of scientists having in charge the work of pushing it believe can be obviated. Prof. E. D. Sanderson, director of the New Hampshire Experiment Station and chairman

of this committee, writes as follows regarding the present status of the bill, and what interested farmers should do to help bring about its early enactment into law.

Every farmer, fruit grower and trucker is interested in the bill now before congress providing for the control of the purity of insecticides and fungicides, so far as they enter interstate commerce by the U. S. Department of Agriculture. The general scope and purpose of this bill have been previously explained in these columns. The measure has the endorsement of all the leading national organizations representing the farmers, such as the National Grange, the National Apple Growers' congress, the National Horticultural Congress, the American Pomological Society, the Association of Economic Entomologists, etc., and also has the hearty endorsement and support of practically all the manufacturers. The use of insecticides and fungicides has increased so rapidly in the last few years that the manufacturers realize that it is of the utmost importance that standards be adopted so that the use of manufactured products may be on an equitable and scientific basis. It is often impossible for the reputable manufacturer to compete with one who is selling inferior goods at a slightly lower price. This sort of business is injurious both to the legitimate manufacturer and consumer.

The question has been raised whether this sort of control should not devolve upon the states, and whether it would not be an infringement of the powers of the states for congress to enact such legislation. An increasingly large proportion of the insecticide and fungicide business, however, is direct from the manufacturer to the consumer, or to a co-operative association of buyers. This business, which is a very large proportion of the whole, in which the manufacturer ships in original packages or cargoes direct to the consumer is strictly interstate and is beyond the police powers of the state. The control of such interstate commerce is entirely subject to national laws and administration.

There is a very general appreciation of the need of such control due to many a low grade and some evidently fraudulent insecticides and fungicides, so that no further argument for the passage of the measure would seem to be necessary. The measure is one of those many meritorious ones, which come before congress, whose passage will depend largely upon whether congress feels that there is any real need or popular demand for it.

We therefore urge upon any of your readers who are personally interested in this matter, or who have suffered from the impurity of adulteration of insecticides or fungicides to at once write to Hon. James R. Mann, Chairman of the Committee on Interstate Commerce, Washington, D. C., and to their own congressman, in favor of H. R. 3658. A public hearing will be given the measure on March 8, and interested parties should let their congressman hear from them before that date.

These arguments are in line with those previously set forth in these columns. Every farmer in Michigan is interested in the passage of a law of this kind and should act on the above suggestions.

BEWARE OF HIM.

A party who has been taking subscriptions for the Michigan Farmer, signing himself Geo. Wood, Geo. F. Wood, and Geo. Smith, of Muir, Ithaca and other places has every indication of being a fraud. He has sent us subscriptions without the money and we have had many complaints from others who state they have subscribed with him. If we could get the party's picture we would publish it; if any of our friends could send same to us we will appreciate its receipt.

HAPPENINGS OF THE WEEK.

Foreign.

Ex-President Zelaya, of Nicaragua, who was recently driven from his home country by the success of the revolutionary party on the battlefield, is now at Madrid, Spain.

The first battleship of the dreadnaught type to be admitted to the German navy was tested early this week. All of her guns, both large and small were fired simultaneously without the slightest damage to her machinery.

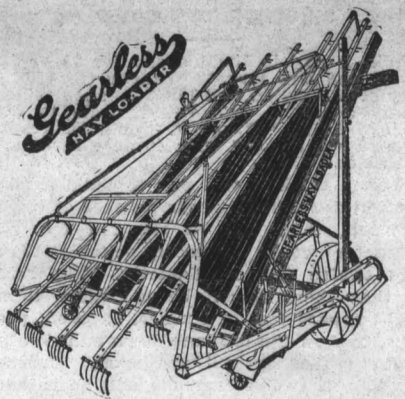
Ex-Vice-President Fairbanks is in Paris this week on his trip around the world. Great Britain and France have made joint and formal recommendations to China to the effect that the eastern country should not proceed with the construction of the Chin-Chow and Aigun railway project, without the consent of Japan and Russia.

Tai Hung Tzu has been appointed to the position of grand chancellor of China. He is a man of advanced ideas, having visited America and Europe and will no doubt be a progressive factor in the advancement of China.

French aeroplane manufacturers are sending attorneys to the United States to defend suits brought by the Wright Brothers against concerns charged with infringement upon patents held by the American flying machine experts.

The Mad Mullah of Arabia is again on the war path and towns are being destroyed by the dervishes. In one place 14,000 camels were taken by the followers of this notorious leader.

The instructions sent the department of foreign affairs of Austria by the United States, the compliance with which would place that country in the United States' preferred list of nations, can not be granted by Austria, according to the latest reports from Vienna, because it would necessitate legislation upon the part of the Austrian and Hungarian Par-



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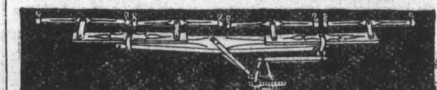
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liaments, and also because the political situation practically forbids carrying out the instructions, the particular feature of which is a reduction in the tariff on cottonseed meal.

Colonel Roosevelt and other members of the Smithsonian scientific party recently completed their expedition thru the wilds of Eastern Africa and are now back in civilized country again. All the members of the party are in excellent health and the best of spirits, being delighted with the experiences of the past several months in African jungles.

National.

Riots occurred thruout the city of Philadelphia last Saturday night and Sunday because of the strike called by the street car men. Monday morning 100 persons were reported to have been injured during the disorder and the police department is recruiting 4,000 extra policemen to keep the mobs subdued.

The local militia company of Cairo, Ill., has been ordered out to quell the mob that is searching for negro purse snatchers, the race war spirit having been aroused by several crimes of this kind upon the streets. Last Friday night a number of the rioters were shot by the sheriff who was defending the jail where one of the negroes was confined. The official is now being threatened by the mob.

Senator William Alden Smith was operated upon last Friday for appendicitis in a Washington hospital. The latest reports from his doctors states that he is progressing rapidly and they anticipate a speedy recovery.

The question of building a navy upon the Great Lakes is being agitated in congress. It is declared that the Rush-Bagot treaty with England in 1818 is a dead letter and should not stand in the way of placing a navy upon the Great Lakes.

The Philadelphia flyer between St. Louis and New York left the track near Scioto, Ohio, while attempting to make up lost time on a level piece of road. The passengers were seriously shaken up but none badly injured.

Women suffragettes of New York are preparing to battle for the franchise privilege at Albany during the present session of the assembly of that state.

A large number of small craft and harbor interests were greatly damaged by general storms thruout the British Isles early this week.

The committee having in charge the contributions of the George Washington memorial building to be erected in Washington, states that they now have pledged the two and one-half million dollars necessary for the erection of the building.

Senator Tillman, of South Carolina, was taken with a severe paralytic stroke in Washington recently, and his life was despaired of for some time, but the latest report indicates a general improvement in his condition and his doctor is now hopeful of a recovery from the shock.

A merger of the interests of four electric line companies in the southern district of Chicago, was completed last week, the new company being capitalized at \$62,000,000.

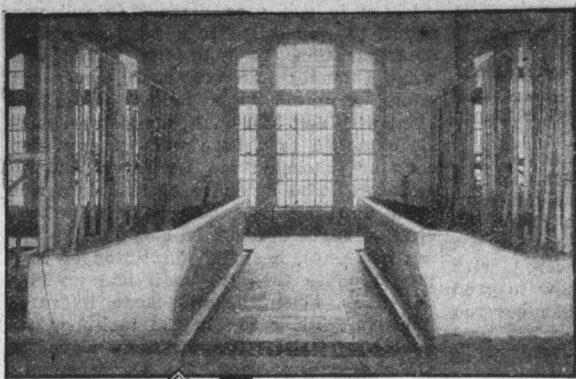
CROP AND MARKET NOTES.

Osceola Co., Feb. 14.—Plenty of snow and more coming; no thaw to speak of yet this winter; too much snow in the woods to accomplish much work, and the snow in the roads is from two to five feet deep right in the track. It will be impossible to get thru when it breaks up. Ice harvest has been in progress the last two weeks; the ice is of fine quality. Considerable heading bolts being hauled to the local heading mill; \$3 per cord is the price of good hardwood bolts. Not many potatoes moving; market pretty slow on account of low price. Live stock is doing well and beef cattle and hogs are scarce. Cattle 3@3½c; hogs, dressed, 10c; potatoes, white, 20c, red 25@30c per bu; rye, 75c; corn, 60c; oats, 50c; hay, \$15 per ton; butter-fat, 28c per lb; butter, 22c; eggs, 22c per doz.

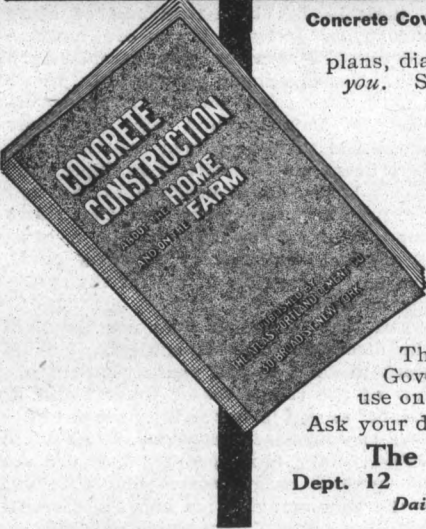
Lapeer Co., Feb. 14.—Winter steady; snow not very deep in fields; high banks and roads drifted very badly. All live stock doing well. Feed very high. One feeder contracted his beef cattle at 6c at barn, to go in March or April; hogs 8c at same time; potatoes are moving to market at 25@30c; beans, \$2; butter dropped from 30c to 25c; eggs 25c; hay, \$12@15; all grain in good demand at following prices: Wheat, \$1.17; oats, 46c; barley, \$1.10 cwt.; corn, 75c; dressed hogs, 10½c; beef, 6½@7½c. Farmers look for a good start this spring, as much plowing was accomplished last fall. Auction sales are plentiful.

Isabella Co., Feb. 14.—There are good prospects for the establishment of a chikory plant at Mt. Pleasant as 500 acres of the necessary acreage have already been secured. The different sugar beet companies are also busy securing acreage in this county. There is about an inch of snowfall about every four or five days which keeps the sleighing in good condition and farmers are making good use of it, marketing hay, grain and wood, and getting many logs to the saw mills. The winter thus far has been very good for the farmer never better than now. All farm produce is bringing a good price except potatoes, which are 25c per bu; apples, 75c; onions, 75c; corn 35c basket measure; oats, 44c; wheat, \$1.28; hay, \$14@15 per ton; beans, white, \$1.95; pork, 9@10c; eggs, 22c per doz.

Emmet Co., Feb. 5.—Ideal winter weather prevailed during the month of January. Snow fall, perhaps six inches. There was some drifting of roads, but what else could be expected when man has cut all the timber away. The fields are pretty well protected with snow, such conditions being much better than last winter. A great many farmers will have to purchase hay and feed this spring; indeed, some are buying now. Those who are so fortunate as to have hay to sell are holding for higher prices. City dealers are selling hay at \$18 per ton and straw at \$11. Feedstuffs seem to be advancing. Quite a lot of wood and logs being marketed.



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HORTICULTURE

WINTER WORK IN THE SMALL FRUIT GARDEN.

There are a number of things that we can do at this time of the year to lessen the work in the fruit garden after the frost is out of the ground. If we did not get the strawberry patch covered with mulch last fall we can do it now to good advantage. The snow that has covered the ground most of the winter has protected the plants very well thus far, but we do not know how much cold weather and bare ground, with the accompanying freezing and thawing will follow, and kill much of the green foliage and heave out the roots, hence it is best to get the mulch on as soon as possible. Of course, the benefit of the mulch as a moisture conserver and to keep the berries clean and make picking easier will be about the same if applied now as if applied last fall. In fact, there are quite a number of growers that have not yet hauled their mulch. The I believe the autumn or early winter is the best time to mulch the berries, yet in a season like the past there would be little difference between the results from mulch put on last fall and that applied now, but there might be considerable difference between the results from mulching now and next April, or not at all. The material most readily available to the farmer is clean wheat straw. This makes a nice loose mulch, its only objection being that it usually contains some seeds which grow before picking time. Rye straw is also a good material to mulch with, tho it is more likely to contain grain. Oat straw is not as easily spread and lies closer to the plants but will answer where other straw is not available. Marsh hay is very good and if it can be obtained is cleaner than straw. Coarse manure that is reasonably free of seeds is an excellent material for mulching, especially if the soil is in need of fertilizer.

If there is fine barnyard manure available at this season of the year it is a good time to spread it on the rows of raspberries or blackberries. If the patch is too wide to scatter from a wagon without driving on the rows it may be done with a stone boat or log boat and one horse, or with a one-horse sled if there is room between the rows. Manure can be boated in more easily now while the snow is on than when the ground is bare. We got most of ours on early in the winter and hope to finish when there is a spell of weather warm enough to thaw out the manure. Fine, clean manure can also be used on the strawberries if it is needed.

The old canes can also be removed as soon as the snow is off and the new ones thinned out to the proper distance. This part of the pruning can be done best when the ground is frozen, as there is then no danger of the plants being pulled up by the roots rather than cut off, and the frozen ground holds them more firmly so that they cut more easily. A hook for this purpose can be made of an old bush hook or wood file by a blacksmith bending it so as to leave an inside semi-circular cutting edge from one to two inches in diameter. This can be kept filed sharp and worked rapidly among the canes, cutting out the old ones and the poorest of the new growths. The clipping of the new canes that are left can be best done later when the leaves start and one can tell how much of the cane is winter killed.

Calhoun Co. S. B. HARTMAN.

FACILITIES AND EQUIPMENT FOR SPRAYING.

During the past spring, summer and fall, it has been my good fortune to travel about the state, visiting many of the farms upon which fruit culture is pursued to a greater or less extent. A considerable portion of this time was given to studying spraying in all its phases. I had opportunity to visit a large number of the best fruit farms and to see the existing facilities and equipment, and to consult with the owners of these farms concerning spraying outfits, as to their expense, their convenience, and ease of operation, and as to the satisfaction they gave. And it has been gratifying, indeed, to, at least, occasionally find an equipment for spraying that would be difficult to improve upon, i. e., with the ideas and apparatus that are available today. On the other hand, I have found innumerable as crude affairs as were known fifteen years ago.

There is one case I want to tell you about. I was called to a farm to give a demonstration in spraying. This was what I found: An old, rusty, worn-out pump, mounted in a barrel quite well filled with dirt and chaff, a medieval nozzle attached to a hose without any stop cock or extension rod whatever, and no agitator. The arsenate of lead keg was open and the lead covered with wheat chaff (delightful stuff to clog up a spraying machine), a stock of solution of copper sulphate that the man had no idea as to its strength, and some hydrated lime that had stood in the tool-shed for nearly a year. The strainer, a coarse piece of gunny sack, the water supply, a tank in the barn-yard full of algae and straw. Imagine, if you can, a worse collection of spraying paraphernalia than that. Not one single part of it in proper condition to spray as nice a young orchard of Baldwins and Spys as I ever saw. And that same man had the latest experiment station bulletin on "Spraying" in his house. It is needless to say that I did my best to impress upon that man's mind what he needed to make a complete and satisfactory spraying outfit, and how to care for it and for the spraying materials.

But that is neither here nor there, in the discussion on this subject. What I want to do is to call your attention to a few of the things that I think would be helpful to you in improving your facilities and equipment for spraying. And in so doing, I take it for granted that you are all anxious to get some point that will make your spraying not only more profitable but more pleasant and agreeable.

In the first place, the mixing station deserves considerable more attention than most fruit growers give it. If this is not complete and convenient in arrangement valuable time is lost, the spray may not be mixed properly and various other difficulties arise. I think one of the best mixing stations I saw last summer was on the farm of Mr. Frank Stainton, of Van Buren county, and tho it was designed to suit the needs of a fifty-five acre vineyard of grapes, I think you would like to know about it.

He had a storage tank that held 34 barrels, mounted upon a tower eight feet high. A gasoline engine in a little shanty beneath the tank filled it with water. A well-built platform upon which were placed the stock solution barrels and dilution barrels was about six feet above the ground and five feet below the bottom of the storage tank. A two-inch hose was used to transfer the water from the storage tank to the two dilution barrels. Each of these had a one and one-half inch faucet or valve which were caused to empty at the same time into a trof which, in turn, emptied into the strainer, placed in a hole in the top of the spray tank. While the dilute copper sulphate and dilute lime were passing down the trof, the poison was poured in.

To my mind a better arrangement could not possibly be made. With stock solutions of both lime and vitriol handy, and with the poison within easy reach, Mr. Stainton would prepare and load one hundred gallons of Bordeaux in eight minutes. The only change necessary to adapt this to any sized sprayer would be to change the size of the dilution tanks. In all cases the dilution tanks should have a capacity of, at least, one half of the spraying tank. For larger orchards perhaps a fifty barrel storage tank would be better, especially if you depend upon a windmill for pumping water. Now, if there is any reader who can suggest any improvement I should like to know it, and I presume others would. And if any of you have not an arrangement of that kind, or equally as convenient, I suggest that you make one before another spraying season comes around.

If you make lime and sulphur this arrangement can be modified so that the boiler which furnishes the steam for boiling the mixture can pump the water into the storage tank. The steam can also be used to dissolve the vitriol if you prefer to do that way rather than keep a stock solution. I have seen sixteen lbs. of vitriol dissolved by steam in three minutes.

Mr. Dwight Wadsworth, of the same county, who, by the way, is one of the most successful apple growers in Michigan, called my attention to a novel and practical idea he had in measuring his stock solution of copper sulphate. He had pegs driven into the end of the tank, the intervals between which denoted a certain quantity of the solution. Knowing the quantity he desired he had only to dip out until the solution had lowered the required distance. By the way, stock

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solutions of any spraying material should always be thoroly stirred before any is taken from the tank.

He also had an exceedingly simple way of dissolving his copper sulphate. He put the crystals into a flat, shallow tray, the bottom of which was made of burlap and which was just submerged in the water. I think he said he could dissolve forty-eight pounds in an hour or two trays that were about three feet square, or having nine square feet dissolving surface each.

The above is a portion of a paper read before the recent meeting of the State Horticultural Society by the field agent of the horticultural department of our agricultural college, O. K. White. If any of our readers have, from experience or observation, discovered improvements or conveniences that will in any way facilitate spraying operations or make more effective the remedies applied we would be glad to receive same and pass it on to others. The plan outlined by Mr. White is commended to all who desire an up-to-date plant.

PRUNING THE HOME ORCHARD.

Judging from the appearance of many of our home orchards, this is a phrase of the orchardists work that is not well understood by the average farmer. Too often it is entirely neglected and the results are poor fruit and misshapen, unsightly trees. Many of our orchards look more like brush heaps mounted on posts than decent trees. During a recent 35 mile drive thru Clinton and Ingham counties I counted the number of orchards beside the road. Of the 103 orchards counted only two had been pruned as they should be. Five had been pruned some but more damage had been done than good. Some had left stubs six to eight inches long while others had cut off all the lower branches, and still others had trimmed all the larger limbs to mere poles with a small tuft of limbs at the top.

While no hard and fast rule can be given for pruning, yet there are several important points to be kept in mind. First, remember that all pruning is more or less of a shock to the tree. Hence the best pruner is the one who can remove the least wood and still leave the tree in first-class condition. Second, all dead or diseased wood should be cut out as it forms a breeding place for all kinds of insects and diseases. Third, thin out the tangled and interlaced branches so as to let the sunlight reach all parts of the tree. Fourth, make all cuts as close as possible. Do not leave a six or eight inch stub to rot back into the trunk. Fifth, do not be afraid of paint; have it on hand and apply it to each wound. This prevents the wood from cracking and keeps out rot and fungi. Sixth, keep the saw and pruning knife sharp so that the cut will be smooth and heal over quickly, and last, but not least, prune regularly. A light pruning each year is much better than a severe pruning once in three or four years.

In our own practice we prune the orchard as early in the spring as possible. Sometimes there is considerable snow on the ground and in such cases we have a hand sled on which a light box is fastened. One corner of the box is set aside for the paint pot while the saw and pruning knife occupy the rest. As soon as a tree is pruned the wounds are carefully painted and the brush placed in piles between the rows. Later it is hauled away and burned.

In the case of a newly set orchard a half or two-thirds of the top should be cut off at the time of setting. This so reduces the top that the shortened root system is able to supply all parts with plenty of plant food which it would be unable to do if all the branches were left. For the next three or four years the young trees should be headed back annually so as to make them more stocky. During the summer months it is a good plan to go over the young orchard and pinch off the suckers and sprouts that would be in the way later in the life of the tree.

G. W. LINDSLEY.

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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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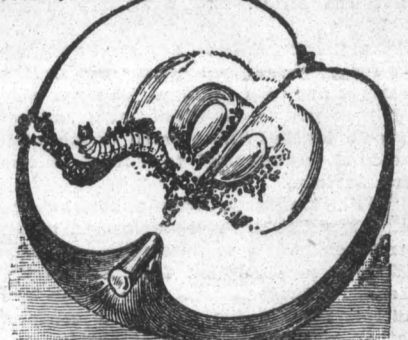
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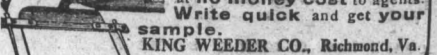


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HOME AND YOUTH

A LITTLE GIRL'S FANCIES.

BY MILDRED M. NORTH.

Little Katie with golden curls
Came from the woods today;
She is the dearest of dear little girls,
And this I heard her say:

"Auntie, out in the woods I found
These—and her hands were full—
"Gray pussy-willow-cats soft and round
They've not one tail to pull."

As she said this the little maid
Looked at her brother, Guy.
"Tails on a cat were," he often said,
"Just made to hold them by."

"Once, I'm sure," little Kate said,
(Her reasons never fail),
Sagely she nodded her curly head,
"These cats all had a tail."

"Somebody pulled them; his name was
Will;
When I was out to play,
Somebody said, 'Whip-poor-Will, whip-
poor Will,'
I heard it plain as day.

"Pulled them so that, you see, by 'n' by
They were pulled off! And so
That's why, alone, where the brook runs
by,
All the brown cat-tails grow."

THE SUDDEN RECOVERY OF MR. JACKSON.

BY ALICE J. CLEATOR.

A Little Story Illustrating the Power of Suggestion.

Mr. Jackson possibly did not eat as hearty a breakfast as usual. At least his wife came to that conclusion. "Are you feeling as well as usual, Henry?" she inquired anxiously, as having finished breakfast he rose and stood silently at the window which looked out upon a glorious autumn day whose wonderful tints would have delighted the brush of the most extreme colorist—a day whose very soul seemed to be visible, holding out eager invitation to all to come forth and behold, and dream and rest.

"Why, yes, I guess so," answered Mr. Jackson. "At least, I hadn't realized but what I'm all O. K. What makes you ask?"

"Oh, I thought you hadn't as good an appetite for breakfast as most mornings. You nearly always eat as much as three rolls, and here you've eaten only one; and you haven't touched those fresh doughnuts—the kind mother used to make," finished Mrs. Jackson.

"Well, I suppose even a healthy person's appetite isn't characterized by the sameness of an automatic machine. Likely I made up on fruit and steak." Here Mr. Jackson went over to the large mirror, stroked his chin in a contemplative way and looked searchingly at himself.

"Seems to me I do look a trifle pale and thin," was his mental comment, as his wife began clearing away the breakfast things. Then aloud, "Guess I'll let the man go on with that apple packing alone today. Seems as if my head doesn't feel real clear. Likely I worked a little too hard yesterday."

"Well," replied Mrs. Jackson, "I'm glad you're going to listen to me for once. I've always been telling you to let the hired men do the work they're paid for instead of shouldering half the burden yourself. You'll get all run down if you don't slack up a little."

Just then a step was heard at the half-open door. "I've brot over that quince honey recipe you asked for, Mrs. Jackson," said Mrs. Brent from across the way. "But what's that I overheard about someone being run down? Not you, Mr. Jackson. You're looking fine."

"Dear me, do you think so?" said Mrs. Jackson in almost an aggrieved tone. "I was just telling him he didn't look up to the usual mark. Guess he's been working too hard lately."

Here Mr. Jackson arose from his chair, walked over to the mirror again and looked at himself once more, this time with a more prolonged and anxious gaze. He sighed deeply.

"Well," said Mrs. Brent, always anxious to appear acquiescent in a conversation. "Possibly he is a trifle thinner than usual. I wouldn't wonder a bit. Likely you've a touch of neuralgia, Mr. Jackson. That's sure to follow a run-down condition. Oh, I'm a regular encyclopedia on neuralgia. Last winter George had such a siege with it. Nothing helped him so much as aconite and chloroform. I'll just run over and get some. Have you had any pain in your head, Mr. Jackson?"

"Why, er—yes! Last week one afternoon I had a mighty severe headache,"

was the reply, as with a groan Mr. Jackson recollected the headache he had endured after having eaten a hearty dinner of pot roast, warm bread and pastry.

Mrs. Brent ran across the street and hurried back with a bottle of camphor and chloral hydrate, which out of her abundant knowledge of neuralgia she had concluded was better than the aconite and chloroform. "Well, here it is," she exclaimed on her return, "and some quinine, too. That's fine for neuralgia. It gives a shock to the nervous system, and that's what neuralgia needs, the doctors say."

As she was hurrying over to Mr. Jackson's with the medicine Mrs. Brent had met Mr. Moore rumbling home from town in his high-seated wagon. "Anybody sick over to Jackson's?" he called.

"Why, Mr. Jackson isn't very well, and I'm helping dose him up."

A few minutes after Mrs. Brent's departure, Mrs. Moore appeared at the door. "James said he met Mrs. Brent carrying medicine over here. Said Mr. Jackson was pretty bad, he guessed. Thot I'd just run up and see if there's anything I can do. Like as not it's indigestion. Lime water and milk is the best thing I know of."

Mr. Jackson was by this time leaning back in his Morris chair by the fire, arrayed in his dressing gown and slippers. He wore a look of invalidic resignation, occasionally sighing or groaning as becoming to the patient who feels that he is rapidly growing worse.

"I declare," went on Mrs. Moore, "your cheeks look as red as any picture of health, Mr. Jackson. But then, you never can tell. Red cheeks sometimes mean a tendency to apoplexy or gout. Lung trouble, too, sometimes gives a flushed face. Did any of your ancestors die of consumption, Mr. Jackson?"

Before he could reply "Gramma" Perkins was seen to pass the window. "Well, if here doesn't come 'Gramma' Perkins," exclaimed Mrs. Jackson. "She's always in her element if she finds somebody ailing. Her head's running over with recipes, from a remedy for a cut finger to a cure for organic heart disease."

"Wal, good mornin', Mis' Jackson," said Gramma in her peculiar falsetto, as she entered the dining room. "Be you all purty well? Huh? Your man's sick? Wal now, like as not he's rheumatically. That's apt to come on with fall weather sometimes. The best thing I know of is steepin' up yaller-dock, stone-root, stillingia, burdock an' poke-root. An' mebbe he's got a cough. Mustn't let that run on in to the winter. Steep up some yarrer, seneca snakeroot an' hoarhound, an' dose him up with that when he gits to coughin'."

After prescribing for him in case he had the consumption, jaundice, typhoid fever, deafness or brain affection, Gramma rose to go, saying as she reached the door, "Wal, Mis' Jackson, I hope your man'll pull thru the winter. Land! I'd hate to see you left a widder like me. Speakin' of widders," went on Gramma, "When I was down to Rossville last winter visitin' Lucy's folks, they was one o' them reporter fellers come down from Chicago to write the town up, cause it had so many widders. Thirty-five! Jest think of it, fur a town o' that size, Mis' Jackson."

When at last alone, Mrs. Jackson said, "I believe I'll just run down to Mrs. Green's to get some of those herbs Gramma spoke of. She's always got bushels. You know she gathers them for sale at Thompson's drug store. Now you just sit still while I'm gone, and don't stir out of doors."

After his wife's departure Mr. Jackson arose and again gave himself a survey in the looking-glass. He turned away with the look of a man from whom hope had almost fled. A ring at the front door-bell was the next interruption.

Mr. Jackson's first thought was to leave the summons unanswered, but concluded to drag himself to the door.

"Well, well, old boy, whoever expected to see you?" was his surprised exclamation on opening the door and seeing Horace Latimer, an old friend and wealthy farmer whom he had not seen for years. "You're looking fine, Horace."

"Why, of course! What's the use of looking out of harmony with this magnificent day?" was the breezy reply as he followed Mr. Jackson into the pleasant sitting room. "Mighty sorry you're laid up, Henry. If it wasn't for that dressing gown and slippers I'd say you seem to be looking in better health than I've ever seen you. I stopped off from that nine o'clock train purposely to have you go with me to Martinsburg fair. It's going to be the best in years; lots of your old

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Make a plain syrup by taking one pint of Granulated Sugar, add one-half pint of warm water and stir for two minutes. Put two and one-half ounces of pure Pinex in a pint bottle and fill it up with the Granulated Sugar Syrup. Take a teaspoonful every one, two or three hours. Keep well corked and it will never spoil.

The effectiveness of this simple home-made article is surprising. It usually stops a deep-seated cough in twenty-four hours. It is also excellent for colds, whooping coughs, pains in the chest, bronchial troubles and similar ailments.

Use the real Pinex in making it, however. It is the most valuable concentrated compound of Norway White Pine Extract, and it is far superior to the numerous pine oil and pine tar preparations. If your druggist does not have it, he can get it for you without trouble.

The proportion above suggested makes a full pint of the best cold and cough remedy. The taste is so pleasant that children take it willingly. The total cost is about 54 cents.

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neighbors from Elmwood'll be there, too. Let's see, the next train east leaves at 10:15, doesn't it?"

The room seemed suddenly vitalized with an atmosphere of health and good cheer, as Mr. Latimer talked of the events of the past few years as related to himself and family, reminiscences of boyhood days, etc. His conversation was frequently punctuated with hearty laughter, which certainly had a contagious effect upon Mr. Jackson. Mr. Latimer noted with amusement and satisfaction the rapidly rising spirits of his old friend.

"Well," said Mr. Latimer at last, consulting his watch, "there's just thirty minutes till that train for Martinsburg is due, and I must be going. Must stop on my way to the station to see John Price on a business deal."

A strange mixture of thots and feeling had been passing thru Mr. Jackson's mind. Suddenly he jumped up, flipped off his slippers, and threw off his dressing gown, exclaiming, "Here's for that Martinsburg Fair! I'll meet you at the station for that ten fifteen train, Horace."

"Good!" laughed Mr. Latimer. "I imagined you were simply under the spell of visionary ills. You don't need those herbs your wife is after any more than I do. Remember Solomon's statement? 'As a man thinketh in his heart, so is he.' That's up-to-date auto-suggestion! Think health and you've got it. Every existing thing is but the result of the thot that once produced. This isn't any new mental science, 'ism'—it's just plain, common sense. But I must be off, now don't fail to be on hand for that ten fifteen."

Mr. Latimer departed, laughing to himself on the way at the sudden transformation of the imagined invalid of a few minutes before.

The next fifteen minutes Mr. Jackson spent in wrestling with bureau drawers, wardrobe hooks, and collar buttons, until he felt that, with one of the old Roman generals, he must exclaim, "Alas, I am vanquished!" Fully one-third of the time was spent in dashing to the window to look for his wife. But at last he was ready. Added to the magic effect of the sudden change of thot and suggestion of the past hour was the tonic influence which always comes from being arrayed in one's "best clothes." Mrs. Jackson finally appeared, but it was some minutes before she could believe that her husband had not gone mentally unbalanced during her absence.

"Gracious, but this is a pretty situation," she exclaimed at last, beginning to laugh. "I may as well tell you, Henry, that I 'phoned for the doctor from Green's. I didn't want to scare you by 'phoning from here. What in the world shall I tell him?"

"Well," replied her husband, hurriedly kissing her good-bye, "I guess you'll have to get out of it the best way you can. I'll be back Thursday, sure."

Just as Mr. Jackson was swinging down the street stationward whom should he see driving toward the house but Dr. Vinton.

"Hello, there!" called the doctor, bringing his horse to a standstill, "Didn't suppose you were such a youngster as to run away from the doctor. Your wife 'phoned me you were sick. Wanted me to come up. What does this mean?"

"It means this," answered Mr. Jackson, hastily consulting his watch, "that a set of sympathetic, apprehensive women can make a fool and a sick man out of even a Hercules. But," noting the doctor's mystified look he added, "Just drive round to the house, Doc, and Mrs. Jackson will settle with you for the trip over. My train's almost due! I'm off to that fair at Martinsburg!"

"Now, John, suppose I gave you two rabbits and another kind friend gave you one more, how many would you have?" John—"Four, sir." Inspector—"No, my boy, two and one don't make four." John (quickly)—"Please, sir, I've got one old lop-eared un at home."

BOOK NOTICES.

Pupils Notebook and Study Outline in Roman History. By Edna M. McKinley, Ph. B. Teacher of Ancient European History, Central High School, Syracuse, N. Y. This notebook combines the topical and library methods of studying history. Manila, 144 pages, 7x8 1/4 inches. Price, 25 cents. American Book Company, New York, Cincinnati and Chicago.

Plane Geometry. Developed by the Syllabus Method. By Eugene Randolph Smith, A. M., Head of the Department of Mathematics, Polytechnic Preparatory School, Brooklyn, N. Y. This book shows that the proofs of geometry should be worked out by the pupils, rather than merely memorized. The list of theorems is sufficient for any college entrance examination. Cloth, 12mo, 192 pages. Price, 75 cents. American Book Company.

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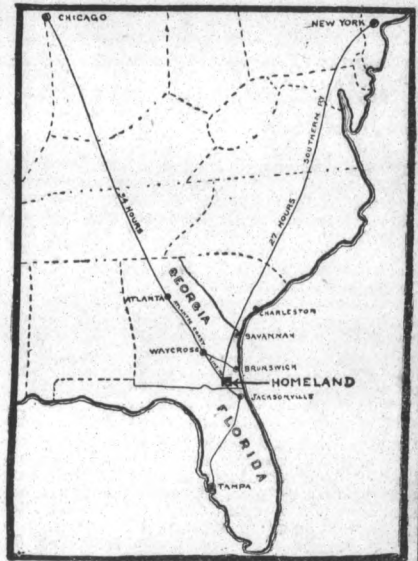
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MARKETS

DETROIT WHOLESALE MARKETS.

February 23, 1910.
Grains and Seeds.

Wheat.—The crop damage reported in the southwest last week was amended in part by the heavy fall of snow which covered nearly the whole southwest wheat region. The market, however, was fortified by light receipts in the winter wheat territory and this, with the small stocks of wheat on hand, and the demand from millers, gave better average prices the last week than for the previous period. One year ago the price of No. 2 red wheat was \$1.19½. The visible supply is practically unchanged from a week ago. Quotations are as follows:

	No. 2	No. 1	May	July
Thursday	1.25½	1.25½	1.25½	1.07½
Friday	1.24½	1.24½	1.25	1.06½
Saturday	1.25	1.25	1.25½	1.07½
Monday	1.25	1.25	1.25½	1.07½
Tuesday	1.24½	1.24½	1.24½	1.07½
Wednesday	1.24½	1.24½	1.24½	1.07½

Corn.—Corn values average higher than a week ago. The local market is slow and traders feel that the heavy receipts in the corn belt will weaken the trade. The general demand is not as urgent as during a few weeks past. A year ago 55½¢ was the price for No. 3 corn. Quotations are as follows:

	No. 3	Yellow
Thursday	66	67
Friday	65½	66½
Saturday	65½	66½
Monday	65	66
Tuesday	64½	65½
Wednesday	64½	65½

Oats.—Standard oats are lower. There is very little trading in the local market which is a characteristic of all large oat markets in this part of the country. One year ago No. 3 oats were quoted at 56¢ per bu. Prices for the past week are:

	Cash	March
Thursday	2.15	2.20
Friday	2.15	2.20
Saturday	2.15	2.20
Monday	2.15	2.20
Tuesday	2.15	2.20
Wednesday	2.15	2.20

Beans.—This market is inactive and the quotations are only nominal. No transactions are reported. Prices for the past week are:

	Cash	March
Thursday	2.15	2.20
Friday	2.15	2.20
Saturday	2.15	2.20
Monday	2.15	2.20
Tuesday	2.15	2.20
Wednesday	2.15	2.20

Cloverseed.—The cloverseed market is on an entirely new basis, values having declined about 35¢ during the week, except for alsike. There is considerable selling on the market and a general interest is now being taken in the trade. Quotations for the week are as follows:

	Prime	Spot	Mar.	Alsike
Thursday	8.40	8.40	8.40	7.50
Friday	8.35	8.35	8.35	7.50
Saturday	8.20	8.20	8.20	7.50
Monday	8.05	8.05	8.05	7.50
Tuesday	7.90	7.90	7.90	7.50
Wednesday	7.90	7.90	7.90	7.50

Rye.—Market is dull and steady. No. 1 is quoted at 84¢ per bu., which is an advance of ½¢.

Visible Supply of Grain.

	This week.	Last week.
Wheat	27,827,000	25,255,000
Corn	12,294,000	9,500,000
Oats	8,689,000	8,710,000
Rye	737,000	779,000
Barley	3,000,000	2,802,000

Flour, Feed, Provisions, Etc.

Flour.—Demand is active at unchanged prices. Quotations are as follows:

Clear	\$6.00
Straight	6.05
Patent Michigan	6.25
Ordinary Patent	6.15

Hay and Straw.—Prices unchanged. Quotations are: No. 1 timothy, new, \$17.50@18; No. 2 timothy, \$16.50@17; clover, mixed, \$16.50@17; rye straw, \$8.50; wheat and oat straw, \$7 per ton.

Feed.—Market steady with last week's range of values. Carlot prices on track: Bran, \$28 per ton; coarse middlings, \$26; fine middlings, \$30; cracked corn, \$28; coarse corn meal, \$28; corn and oat chop, \$25 per ton.

Potatoes.—There is nothing encouraging in the market news for farmers holding potatoes. The supply is bearing the trade. Demand fair. Michigan grown are selling in car lots at 30¢@32¢ per bu.

Provisions.—Family pork, \$26@27; mess pork, \$25; medium clear, \$26@27; pure lard, 14½¢; bacon, 16½¢@17¢; shoulders, 12½¢; smoked hams, 16¢; picnic hams, 12½¢.

Hides.—No. 1 cured, 10¢; No. 2 cured, 9¢; No. 1 bulls, 9¢; No. 1 green calf, 14¢; No. 2 green calf, 14¢; No. 1 cured calf, 15¢; No. 2 cured calf, 14¢; No. 1 horsehides, \$3.50; No. 2 horsehides, \$2.50; sheepskins, as to wool, 50¢@52.

Dairy and Poultry Products.

Butter.—There was a stronger feeling among butter dealers this week and values are advanced here and at other markets. Quotations are: Extra creamery, 30¢; first do., 29¢; dairy, 22¢; packing stock, 20¢ per lb.

Eggs.—Consumption of eggs is improving rapidly with the arrival of better goods upon the market. The offerings are coming fast and values are down 2½¢. Current offerings, cases included, are quoted at 24¢ per dozen.

Poultry.—Chickens are higher and other fowls steady with last week. Quotations are as follows: Live—Spring chickens, 17¢; hens, 17¢; geese, 14¢; turkeys, 18¢. Dressed—Chickens, 18¢; hens, 17½¢; ducks, 18¢@19¢; geese, 15¢@16¢; turkeys, 20¢@24¢.

Cheese.—Prices are unchanged and the trading is steady. Michigan fall made

16½¢@17¢; York state, 19¢; limburger, 18¢. Calves.—Choice to fancy, 11¢@12¢; ordinary, 10¢@11¢ per lb.

Dressed Hogs.—Light, \$11@12 per cwt.; heavy, \$10@10.50.

Apples.—Spy, \$3@3.50; Baldwin, \$2.50@3; common, \$1.50@2.50 per bbl.

Cranberries.—Cape Cod berries selling at \$2@2.25 per bu.

Elgin.

Butter.—Market firm at 30¢ per lb., which is 1¢ above the quotation of a week ago. The sales for the week amounted to 439,400 lbs., compared with 457,600 for the previous week.

THE LIVE STOCK MARKETS.

Buffalo.

February 21, 1910.
(Special report by Dunning & Stevens, New York Central Stock Yards, East Buffalo, N. Y.)

Receipts of sale stock here today as follows: Cattle, 130 loads; hogs, 8,800; sheep and lambs, 18,000; calves, 1,200.

Our cattle market today was from 10@15¢ per hundred higher than one week ago on all grades and at the close everything is sold. If the receipts in Chicago are not too heavy we look for better prices. One load of extra fancy cattle sold today at 7¢. There are not many stockers coming yet and the demand is light.

We quote: Best export steers, \$6.35@6.60; best 1,200 to 1,300-lb. shipping steers, \$6@6.50; best 1,100 to 1,200-lb. do., \$5.75@6; medium 1,050 to 1,100-lb. butcher steers, \$5.40@5.60; light butcher steers, \$5.10@5.40; best fat cows, \$5@5.50; fair to good do., \$4.50@4.75; trimmers, \$2.75@3; best fat heifers, \$5.50@6; fair to good do., \$4.75@5; common do., \$4.25@4.50; best feeding steers, 950 to 1,000 lbs., \$4.50@4.75; best do., 800 to 900 lbs., \$4.40@4.60; 700 to 750-lb. dehorned stockers, \$4@4.25; 600 to 650-lb. do., \$3.25@3.50; best bulls, \$5@5.50; bologna bulls, \$4.25@4.50; stock bulls, \$3.75@4; best fresh cows and springers, \$5.50@6; fair to good do., \$4@4.75; common do., \$2.50@4.

With 40,000 hogs estimated in Chicago this morning our packers were very bearish and slow to take hold but finally got at a decline of 5¢ per hundred from Saturday. At the close everything is sold, market closing strong to 5¢ higher than the opening.

We quote: Mixed, medium and heavy, \$9.55@9.60; best yorkers, \$9.55@9.60; light yorkers and pigs, \$9.50@9.55; roughs, \$8.90@9; stags, \$7.50@8.

The lamb market this morning opened slow with a few of the best native lambs selling at \$9.15 and westerns from \$9@9.10 but closed dull with the tops selling at \$9¢. We don't look for them to sell much below 9¢ unless the runs are very heavy the last of the week.

Best lambs, \$9@9.15; fair to good, \$8.75@8.90; culls, \$8@8.25; skin culls, \$6@7; yearlings, \$8@8.50; wethers, \$7@7.35; ewes, \$6.25@6.75; cull sheep, \$3.50@5.50; best calves, \$10@10.50; fair to good do., \$9@9.75; cull to common, \$7.50@8.50; heavy, \$4@5.50.

Chicago.

February 21, 1910.

Cattle. Hogs. Sheep.
Received today 23,000 35,000 17,000
Same day last year 20,034 47,835 17,299
Received last week 60,217 153,690 50,054
Same week last year 57,168 192,424 64,040

Stock trains were late in getting in today, and this tended to delay business considerably and to render the amount of the offerings a matter of uncertainty. Cattle were fairly active and steady to a dime higher, the advance being more in good than in choice beefs. Hogs advanced 10¢@15¢, and it was reported that \$9.50 was paid, making still another high record. The poorest lots went at \$9.05, and the best strong light hogs brot \$9.40, while stags sold at \$9.60@10, boars at \$5.75@6.35 and pigs at \$8.25@9.25. Sheep and lambs were firm at their big advance of last week, lambs being salable at \$6.50@9.30, wethers at \$6.50@8, ewes at \$4.50@7.50, bucks and stags at \$5@6 and yearlings at \$7.75@8.50. Feeding lambs were salable at \$7.75@8.60. Clipped sheep and lambs were plentiful and salable at \$1 below unshorn flocks.

Cattle were marketed more freely last week, owing to the recent marked improvement in prices, and there was a little weakening at the start, but the small decline was regained later, as there was a better general demand than had been counted upon. Before the week closed cattle were placed on a 10¢@20¢ higher level than during the preceding week, with the bulk of the week's sales at \$5.40@6.75, the lower average sales being attributable to the fact that the average quality of the offerings was poorer than heretofore. Cattle good enough to sell as high as \$7 were especially good sellers, being scarcer, and the best steers brot \$7.90, while the poorer light weight killers went at \$4.40@5.40, packers competing with feeders for such offerings. The sensational advances in hogs and hog products had a stimulating influence on cattle prices, as it was figured out that their advance would result in a larger consumption of beef. Butcher stock was again particularly active, with only moderate offerings, and prices ruled 10¢@20¢ higher, cows and heifers selling readily at \$3.30@6.25, while even canners and cutters were on the up-grade, selling at \$2.25@3.25. Bulls were active and higher at \$3.25@5.50, the highest price of the season, while calves moved up to \$4.25@9.75 per 100 lbs. under a lively demand. There was a brisk demand for stockers and feeders, and prices were materially higher, sales being as large as the supplies would permit. Stockers brot \$3.25@5.40, while feeders found buyers at \$5@5.75, with fancy feeders at \$5.80@6, new high records. One load of 1,028-lb. Angus feeding steers brot \$6, going to an Illinois buyer, who at the same time took some heavier steers at \$5.75. Milksters and springers were again in moderate supply and demand at \$30@65 per head. It may be said that the general cattle market is in a strong position, with bright future prospects.

Hogs had another extremely sensational week, prices shooting up at a rapid rate and reaching the highest figures seen since 1870. The average prices were the highest since the civil war, there being a red hot demand, with eastern shippers competing with local packers for the better class. The extremely high prices tended to encourage country shipments, but for all that, there were not enough swine for the wants of buyers, and sales were within a very narrow range, the spread for the bulk being only 10¢. It is probably needless to say that this is a time when every holder of healthy young

hogs and brood sows should take the very best care of them, making the hogs weigh well before marketing and retaining every sow for aiding in increasing the future swine supply, for there is an enormous scarcity, and high prices are assured for a long time. Light-weight hogs and pigs are selling extremely high, but extra weight counts big with sellers. Corn is commanding high prices, but it pays much the best when converted into hogs. Western packing since November 1, when the winter season began, amounts to but 7,460,000 hogs, a decrease of 2,625,000 hogs compared with a year ago.



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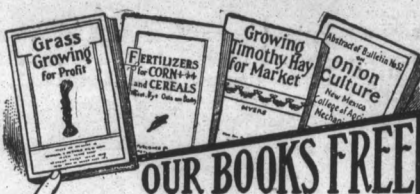
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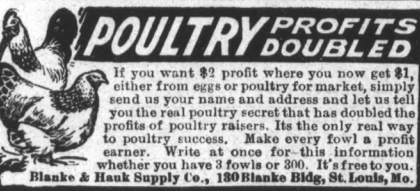
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In the first edition the Detroit Live Stock markets are reports of last week; all other markets are right up to date. Thursday's Detroit Live Stock markets are given in the last edition. The first edition is mailed Thursday, the last edition Friday 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.

February 24, 1910.

Cattle.

Receipts, 714. Good grades active and strong 25c higher than last week. Common grades steady.

Best steers and heifers, \$6@7; steers and heifers, 1,000 to 1,200, \$5@5.75; steers and heifers, 800 to 1,000, \$4.75@5.25; steers and heifers that are fat, 500 to 700, \$4@4.75; choice fat cows, \$4.50@4.75; good fat cows, \$4@4.50; common cows, \$3@3.50; canners, \$2.50@3; choice heavy bulls, \$5; fair to good hogs, \$4@4.75; stock bulls, \$3.50@4; choice feeding steers, 800 to 1,000, \$4.25@4.75; fair feeding steers, 800 to 1,000, \$4@4.25; choice stockers, 500 to 700, \$3.75@4.25; fair stockers, 500 to 700, \$3.50@4; stock heifers, \$3.50@4; milkers, large, young, medium age, \$4@5.00; common milkers, \$2.50@3.50.

Bishop, B. & H. sold Mich. B. Co. 1 bull weighing 1,160 at \$4.75, 5 butchers av 696 at \$4.50, 2 cows av 875 at \$4.25, 11 butchers av 782 at \$4.50; to Sullivan P. Co. 21 steers av 1,221 at \$6, 32 do av 1,180 at \$5.80, 1 do weighing 750 at \$5.25, 8 do av 1,225 at \$6.05, 1 cow weighing 970 at \$4, 2 do av 975 at \$4, 1 do weighing 1,220 at \$5, 1 do weighing 1,090 at \$3, 19 butchers av 575 at \$4.10, 1 cow weighing 1,120 at \$3.50, 2 bulls av 1,090 at \$4.75, 8 steers av 1,053 at \$5.50, 3 cows av 806 at \$4.25, 2 do av 950 at \$3.25, 4 steers av 1,442 at \$7, 5 do av 1,012 at \$5.25, 3 cows av 910 at \$3.25, 2 do av 1,110 at \$4.50, 1 bull weighing 730 at \$4.50; to Mich. B. Co. 4 cows av 1,100 at \$4, 2 do av 1,000 at \$3.50; to Goose 8 butchers av 707 at \$4.60; to Sullivan P. Co. 2 bulls av 1,325 at \$4.75, 5 steers av 954 at \$5.60, 2 bulls av 1,035 at \$4.50, 1 cow weighing 1,180 at \$4.50, 3 do av 1,000 at \$3, 7 butchers av 813 at \$4.85, 1 bull weighing 1,200 at \$5, 2 heifers av 860 at \$5; to Newton B. Co. 7 steers av 946 at \$5.15.

Haley & M. sold Mich. B. Co. 3 cows av 1,010 at \$4.25, 1 do weighing 700 at \$2.50, 29 butchers av 740 at \$4.55; to Breitenback Bros. 29 do av 700 at \$4.55; to Sullivan P. Co. 4 do av 560 at \$4.30; to Newton B. Co. 24 do av 790 at \$4.85.

Lovewell sold Hammond, S. & Co. 3 cows av 1,100 at \$3.75.

Same sold Kamman 5 cows av 1,124 at \$4.50, 8 butchers av 740 at \$5.

Spicer & R. sold Mich. B. Co. 13 steers av 1,071 at \$5.60, 7 butchers av 703 at \$3.25, 2 cows av 850 at \$3.25; to Sullivan P. Co. 1 bull weighing 1,100 at \$5, 1 do weighing 1,130 at \$4.75, 9 butchers av 570 at \$4.75; to Newton B. Co. 7 do av 800 at \$5.25, 3 cows av 900 at \$3.75, 11 butchers av 750 at \$4.40, 3 cows av 890 at \$3.25; to Lachalt 4 do av 1,070 at \$4.

Bohm sold Mich. B. Co. 9 butchers av 763 at \$4.75.

Wagner & A. sold Sullivan P. Co. 13 steers av 1,094 at \$5.75, 5 do av 984 at \$5, 4 butchers av 925 at \$5, 4 do av 587 at \$3.50, 1 steer weighing 1,010 at \$6.

Carmody sold same 1 bull weighing 1,550 at \$4.50, 1 do weighing 1,230 at \$4.25. Jedele sold same 1 do weighing 1,160 at \$4.50, 2 heifers av 795 at \$5, 6 steers av 1,181 at \$6.25.

Groff sold Marx 1 heifer weighing 780 at \$5.50, 4 butchers av 842 at \$4.50.

Veal Calves.

Receipts, 450. Extra good 25c higher; others steady. Best \$9@10; others, \$4@8; milch cows and springers steady.

Bishop, B. & H. sold Nagle P. Co. 18 av 125 at \$9; to Sullivan P. Co. 7 av 160 at \$9.50; to Mich. B. Co. 13 av 120 at \$9, 8 av 115 at \$8.50; to Newton B. Co. 12 av 130 at \$9.25; to Parker, W. & Co. 11 av 140 at \$9.25, 13 av 140 at \$9; to Nagle P. Co. 7 av 135 at \$8, 11 av 130 at \$8, 2 av 150 at \$9, 2 av 150 at \$9.50.

Groff sold Breitenback Bros. 14 av 130 at \$9.

Spicer & R. sold Sullivan P. Co. 1 weighing 140 at \$7, 5 av 150 at \$9.50, 3 av 112 at \$8.50; to Goose 6 av 300 at \$4.10; to Sullivan P. Co. 20 av 135 at \$9.50.

Roe Com. Co. sold Mich. B. Co. 20 av 150 at \$9.50; to Breitenback Bros. 21 av 130 at \$9, 3 av 120 at \$7, 5 av 125 at \$9.

Wagner sold Newton B. Co. 2 av 110 at \$7, 10 av 158 at \$9.50.

Hauser sold Burnstone 3 av 165 at \$10, Duell sold same 25 av 130 at \$9.

Chase sold same 1 weighing 180 at \$9.50.

Boyle sold Mich. B. Co. 3 av 150 at \$9, Lovewell sold Street 15 av 140 at \$9.60.

Downing sold Nagle P. Co. 2 av 150 at \$8.

Haley & M. sold Goose 12 av 120 at \$7, 1 weighing 210 at \$4; to Nagle P. Co. 1 weighing 140 at \$10.

Sheep and Lambs.

Receipts, 4,035. Market 25@35c higher than last week and 10c higher than on Wednesday.

Best lambs, \$8.75@8.85; fair to good lambs, \$8.35@8.60; light to common lambs, \$7.50@8.15; fair to good sheep, \$5.50@6.25; culls and common, \$4.50@5.50.

Roe Com. Co. sold Mich. B. Co. 6 sheep av 85 at \$5.50, 15 lambs av 55 at \$7.50; to Breitenback Bros. 41 do av 65 at \$8.25, 1 sheep weighing 120 at \$6; to Sullivan P. Co. 4 do av 130 at \$5.50, 19 lambs av 65 at \$8.40.

Bishop, B. & H. sold Swift & Co. 3 sheep av 110 at \$6.25, 7 do av 145 at \$5.75, 16 do av 90 at \$5; to Nagle P. Co. 441 lambs av 83 at \$8.75; to Parker, W. & Co. 35 do av 80 at \$8.65, 3 sheep av 100 at \$5.50; to Baker 95 lambs av 75 at \$8.25, 31 do av 50 at \$7.75; to Harland 3 do av 70 at \$8.25, 1 sheep weighing 200

at \$5.50; to Sullivan P. Co. 8 do av 70 at \$5, 4 lambs av 45 at \$6; to Swift & Co. 10 sheep av 105 at \$5.50, 3 do av 160 at \$5.50, 6 do av 95 at \$5.75; to Mich. B. Co. 58 lambs av 50 at \$7.75; to Newton B. Co. 15 do av 65 at \$8, 76 do av 83 at \$8.75, 162 do av 80 at \$8.65, 134 do av 85 at \$8.85; to Swift & Co. 26 sheep av 90 at \$6, 5 do av 100 at \$5.50; to Baker 55 lambs av 58 at \$8.15; to Nagle P. Co. 91 do av 88 at \$8.85; to Parker, W. & Co. 37 do av 85 at \$8.75, 45 do av 70 at \$8.60; to Mich. B. Co. 49 do av 55 at \$7.50; to Swift & Co. 10 sheep av 109 at \$5.60.

Spicer & R. sold Sullivan P. Co. 12 lambs av 85 at \$8.50, 21 do av 50 at \$6.25; to Nagle P. Co. 80 do av 80 at \$8.85, 123 do av 85 at \$8.85; to Mich. B. Co. 55 do av 67 at \$8.35, 3 sheep av 110 at \$5; to Nagle P. Co. 45 lambs av 75 at \$8.75.

Hauser & B. sold Nagle P. Co. 200 lambs av 80 at \$8.60, 169 do av 85 at \$8.60.

Hertler sold same 189 do av 83 at \$8.60.

Bohm sold same 66 do av 80 at \$8.50.

Downing sold Baker 98 lambs av 62 at \$8.30, 6 sheep av 110 at \$5.50.

Sheppard sold Mich. B. Co. 42 lambs av 75 at \$8.25.

Lovewell sold same 24 do av 75 at \$8.50, 4 sheep av 155 at \$5.

Haley & M. sold Mich. B. Co. 14 sheep av 90 at \$6.

Widow sold Sullivan P. Co. 19 lambs av 80 at \$8.65, 1 sheep weighing 130 at \$5, Baker sold Street 39 lambs av 70 at \$8.60.

Hogs.

Receipts, 1,724. Market steady at Wednesday's prices; 25@40c higher than last week.

Range of prices: Light to good butchers, \$9.80; pigs, \$9.25@9.50; light yorkers, \$9.50@9.65; stags, 1/2 off.

Bishop, B. & H. sold Parker, W. & Co. 230 av 175 at \$9.75, 180 av 150 at \$9.60, 451 av 160 at \$9.70, 113 av 200 at \$9.80, 54 av 155 at \$9.65.

Spicer & R. sold Sullivan P. Co. 100 av 200 at \$9.75, 120 av 180 at \$9.70, 110 av 165 at \$9.65, 45 av 140 at \$9.50.

Bishop, B. & H. sold same 4 av 180 at \$9.75, 59 av 150 at \$9.60, 133 pigs av 120 at \$9.50.

Roe Com. Co. sold Hammond, S. & Co. 41 av 195 at \$9.80, 34 av 180 at \$9.70, 65 av 190 at \$9.75.

Haley & M. sold same 69 av 190 at \$9.75, 78 av 170 at \$9.65, 160 av 170 at \$9.60.

Sundry shippers sold same 340 av 190 at \$9.75.

AUCTION

17 Head Reg. Holstein Cows, 15 Head High Grade Holstein Cows,

Herd headed by Fairview Korndyke DeKol No. 46787, son of Pontiac Korndyke.

Also Mares, Mules, Swine, Poultry, Farm Implements and Tools.

The undersigned will sell at Public Auction, to the highest bidder, on the premises, 3 miles east of Northville, 1 mile south of Power's D. U. R. Station, on

Wednesday, March 2, 1910.

Commencing at 9 o'clock, sharp. Hot lunch at noon.

O. D. PECK, Proprietor.

RATTENBURY & BROOKS, Auctioneers.

Conveyances will meet all D. U. R. cars at Power's Station on date of sale.

100 Registered 100 Rambouillet Ewes

At PUBLIC AUCTION

On FRIDAY, MARCH 4, '10,

One O'CLOCK, P. M.

At my farm, 2 miles south of West Liberty, Ohio, one mile east of Couchman Crossing on Ohio Electric Ry.

These ewes are all good ones, large, splendidly woolled and are bred to drop lambs in March and April. During the past dozen years I have used the best rams I could buy from France and Germany and the blood lines of this flock are second to none.

The ewes will be sold in small lots and certificate of registry and transfer furnished with each animal. Arrange to attend this sale. Sale positive, regardless of weather—will be held in large barn. Further particulars may be had by addressing

B. F. HARRISS, West Liberty, O.

COL. DWIGHT LINCOLN, Auctioneer.

PUBLIC SALE

Winans & Lemen, of Hamburg, announce public sale of Stock, Tools, and registered Shropshire Sheep, three miles northwest of Hamburg and 1/2 of a mile north of Lakeland, on Wednesday Mar. 2nd, 1910. Representatives of this flock have given absolute satisfaction in eleven different states this season. The entire flock of ewes and ewe lambs will be sold without reserve. All trains on Ann Arbor and Grand Trunk R. R.'s will be met at Lakeland and parties returned after sale.

Having Rented Our Farm we will sell at Public Auction on Tuesday, Mar. 22nd, 1910, our entire herd of registered Holsteins, consisting of 18 cows, 8 heifers, and three yearling bulls. RIPLEY BROS., Dimondale, Mich.

For Sale Cheap—Brilliant bred registered Percheron Stallion, 5 years old. Solid black 16% hands high. Weight 1600 lbs. Sound and sure. Bell phone. J. C. BUTLER, Portland, Mich.

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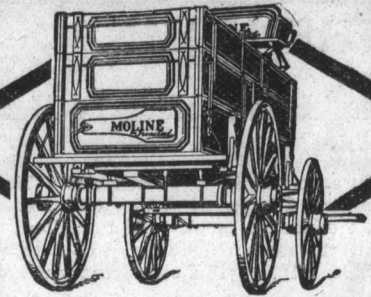
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Something has been happening down in this neck of the woods. It's vital to you, so we're going to give you a hint. Then it's up to you. We've got a wagon perfected down here—of air-dried oak and hickory wood stock, so far ahead of any farm wagon you ever dreamed of that there's no comparison. We've christened this wagon the

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If you don't need a new wagon just now, send for prices and description just the same. But buy now, and the wagon will still be new, in 5 years, and you'll have a heap of satisfaction in between.

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highest priced, most powerful Gas or Gasoline Engines give the most trouble—are hardest to keep going—are greediest on fuel, because the charge is hard to fire. The common remedy is to cut down the air and give more Gas or Gasoline. Fuel expense is often doubled in this way. The right way is to throw away batteries and install the

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A White-Hot Spark for a Lifetime.

It will deliver an intensely hot spark at from 3 to 15 volts (adjustable while running). This with regular fire any mixture that can be ignited, at high speeds or low. No battery could do it. Manufacturers of high compression engines make the Auto-Sparker part of their regular equipment for this reason. It is self-regulating, foolproof and so durable that those made 10 years ago are in use today. Few have required repairs or replacements. A single month's saving on fuel will often pay for the Auto-Sparker. Don't waste expensive Gas or Gasoline. Ask for name of nearest dealer today and we will arrange for a "show-me" demonstration or NO sale.

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Fortunes are being made on fertile Tennessee farms. They raise big crops of Cantaloupes, Cabbage, Tomatoes, String Beans, Green Corn, etc., also Horses, Cattle, Sheep, Swine, Poultry and Eggs. Write me at once for Free Literature. I'll tell you how to get one of these splendid farms for \$5 to \$10 per acre. Act quickly! H. F. Smith, Traf. Mgr., N. C. & St. L. Ry., Dept. P, Nashville, Tenn.

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Daniel McCaffrey's Sons Co., Pittsburg Pa. Ref.—Washington Nat'l Bank, Duquesne Nat'l Bank.

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Michigan Farm for Sale—170 acres land, 200-ton brick silo, bank barn 117x34, complete water system in barn, cement floors, good house, mile from center of village 1600 inhabitants on two railroads, 47 miles from Detroit, 2 miles from Pontiac, 16 miles from Flint. Now controls supply of milk to village at 14c. per gallon at the farm. Fine lake on farm. Reasonable price. Would consider sale of farm with or without stock and tools with suitable payment down. Balance long time at 5 percent. Address owner, C. J. LANE, 1280 E. 55th St. Cleveland, Ohio or G. J. SMITH, Holly, Michigan.

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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 (300 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 railways. 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.

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WOMAN AND HER NEEDS

THE CALL OF THE HOME.

Woman's Place Is Not Outside, Homemaking Is Her True Work.

IF some one were to ask you, "What do you consider the most important thing for a girl to learn?" what should you answer? I know what I should answer, quickly and unhesitatingly, "How to cook a square meal." And the longer I live and the more poorly cooked meals I eat, the more emphatically do I think that the knowledge of how to cook plain meals well, is the one great need of every girl and woman.

Once I thought differently. Like many another girl with "ambitions" I had "a soul above such vulgar things as food." But even in those days I had an appetite which appreciated the things someone with a less lofty soul would cook for me. Then I would have said that the crying need in every woman's life was a higher education. A knowledge of everything contained in books was to me the one thing needful, and I could never understand those girls and women who were contented and happy doing the everyday tasks of life. It never occurred to me that those things were quite necessary to the scheme of creation, indeed, far more necessary than the study of books. I just thought cooking and baking and dishwashing were humdrum, ordinary things, which any woman with good sense would get rid of doing if she could.

But I have had a radical change of heart. The change has not been sudden, but it is complete. It began when I married, and learned that the one crying need of man is food; food three times a day, food well cooked, and food in large enough quantities to keep one contented and cheerful. The change began then, and continued when two boys arrived on the scene, two healthy, husky boys who also demanded food in astonishingly large amounts, and who showed themselves very unpleasant to live with if their wants were not supplied. My conversion is complete now, and I can see quite clearly that if the crying need of man is food, the crying need of women is to know how to prepare food so it will be palatable and digestible.

Now, instead of being amazed at women who do not want to go to college and send their daughters thither, I am amazed at the women who choose the so-called higher sphere of life instead of the eminently useful and practical sphere of home-making. Really, there is nothing in life that is more necessary, albeit the tasks are humdrum and irksome at times. It is fine to go out into the big world and earn your own money to spend as you choose, but of what use would that money be to you if no one stayed at home to keep ready a corner for your return? After all, eating and sleeping are the only two things in life we must do in order to live, and looking after these necessities is surely the most important work in the world.

And mothers are making a great mistake who do not train their daughters in the art of home-making. Many mothers are wise enough to do this, but there are many more who are lax. Some do not do it because they imagine housework is degrading; others because they can work faster without "children bothering around," and will not take the trouble to teach the girls what they really would like to learn when they are young; others, again, are simply lax and do not realize the importance of the work. They seem to think that their daughters will learn all they should know by just being around the house while mother works. But a greater mistake could not be made. We learn to do by doing, and the girl who is to become a competent cook and housekeeper, must practice the art.

In the cities, the schools are remedying the oversight of mothers by teaching cooking and sewing as a part of the school course. Many still sneer at this as a "fad," but it is proving to be one of the best fads ever taken up by the schools. But in the country, the girls must look to their mothers for training. And the mother who would do her full duty must not fail to teach her daughter this most important part of her education.

We are influenced largely by what we read. When I was coming up, the movement of higher education for women and the entrance of women into the business world was just at full tide. Every paper was full of the wonderful advantages for women. But a generation has proven that the advantages were not such wonderful blessings after all. Woman has found out by trying that it isn't such a fine thing to do a man's work, if she must also bear the man's worry of meeting bills. Home is the best place in the world for women. But still, reading and training has given me and many other women a distaste for the daily tasks about the home. We love the home, but the home-making pains us because we were not trained into the work from girlhood.

It is because of my own mistakes that I urge mothers to inculcate the home-making spirit into their daughters. They will have homes some day, at least you hope they will. See to it that their hearts will be in the necessary tasks of making that home a haven of rest to their family.

DEBORAH.

THE NEW COLORS AND WEAVES.

Those girls who love blue and who look their best when wearing that color may rejoice, for it is to be one of the leading colors of the coming season. The darker shades, beginning with navy, have the lead, but this is true of every color. Quiet, subdued tones are to be the thing, and pronounced colors of any sort will be in bad style, as they are always in bad taste. Following blue comes green, wistaria, old rose, and a variety of colors with fancy names, such as artichoke, coal dust, walnut and mustard. Brown is going out of favor, but it has been good style so long that this is only natural.

The new cloths are all in soft weaves which seems to indicate that the styles will be those described by fashion writers as "long, clinging, graceful lines." Serge which has been transformed from the stiff wiry cloth we are accustomed to call serge, into a cloth with a soft cashmere-like finish is popular for dresses for general wear.

The walking skirts are to be about an inch and a half from the ground. Braillings of soutache, strappings, and folds of silk or velvet trim the season's suits. The coats to these suits are principally three-quarter length, tho there is an occasional Eton.

Slight puffs are seen on some of the


newest sleeves, some at the shoulder, others at the elbow or the wrist. They are only excuses for a puff, but as little straws show which way the wind blows they may be taken as a sign that the days of the tight-fitting sleeve are numbered.

FOR THE HOME DRESSMAKER.

One of the greatest difficulties encountered in home garment making, is in pressing sleeves and waist seams. The difficulty comes from the lack of a proper board for such purposes. A pine board one inch thick can be used to make a sleeve board. Saw the board 24 inches long, six inches wide at one end and tapering gradually down to three inches at the other end. Round the ends. Underneath the center of the board secure a block of wood four or five inches high. Fasten this block securely on a board broader than the top, for a base. Pad the top and you have a press board which will make pressing sleeves, if not a delight, at least much easier than the old way. It will be, if not a "thing of beauty," at least "a joy forever," while doing home dressmaking.


While dressmaking in the summer, when often the fire is out, a coal oil stove on which an iron can be quickly heated, is a help in getting thru.—E. J. Lynch.

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This can be done with most satisfactory results when the paper is firm on the wall, and is not printed with aniline dyes or in bronze raised pattern.

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The Stylish Wall Tint

Alabastine has none of the bad features of kalsomine. It is a powder and comes in packages with the name Alabastine on red cross and circle.

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Alabastine is just mixed with cold water and applied with a flat wall brush. It is inexpensive, durable, beautiful and easy to apply.

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Please give us your name and address—a postal card will do—and we will send the book—also tell you about our "Suggestion Department" and how we furnish color plans in Alabastine and Alabastine Art Stencils absolutely free. Write today for this unusual offer.

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Without obligation to me kindly send the "Laws of Lightning," and tell me what it would cost to rod my building. Give dimensions of Building.

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SHORT CUTS TO HOUSEKEEPING.

This department is opened as a means for the exchange of new and successful ideas in housekeeping. Every housekeeper is anxious to learn the quickest and best way of doing her work, and is constantly looking for new ideas. If you have what you consider a good idea send it on for the benefit of your sisters. They will do the same by you. Please do not send recipes. Every housekeeper now has more than she can use. But if you think you have the quickest and best way of washing, ironing, sweeping, dusting or doing anything else about the house, please write and tell us about it.

Dear Editor:—Here is a quick way to make a filling for lemon pie. Wet the corn starch or flour with cold water and pour over it the desired amount of boiling water, add the yolks of eggs, grated rind and juice of lemon, sugar and little piece of butter. Cook a minute or two longer and it is ready for the meringue. After this is put on and browned in the oven cut it while hot, not the pie, just the meringue, and it cuts much nicer.—Mrs. A. S., Mt. Clemens.

Please let me send a little help to those who have to do their own washing. I have done my own washing for the last 22 years and do it just as well and in less than half the time some other people take. My first work is to put a boiler of water on the stove, put in a half, or a little less than half a cup of good washing powder, two tablespoons of ammonia, and a quarter of a bar of soap cut in it. While this is getting hot I bring my two tubs in the house. One of them I fill nearly full of cold water while in the other I put my white clothes, the small fine pieces first. Then I wash my dishes, make my starch, and if the water is not hot by that time, I peel potatoes or do anything I wish to do. When the water is hot I take out a half pail of hot water, set it on top of the white clothes in the tub, then add cold water from other tub to it until I think it is just right to pour on the clothes. If the water is too hot it will set the dirt in the clothes. I repeat this until I have enough hot water on my clothes to wash, and still I have enough cold water left in the tub to rinse. In this I put bluing. Now I start to wash and do it in a hurry, rub the wrist and neck bands well, but it is not necessary to wash the other part of the garment until you rub holes in it. The boiling will make that clean. I wring by hand, except the sheets and heavy underwear, for which I use the wringer as they don't have to be so dry. Be sure and let your clothes boil; add a little ammonia while the fine white clothes boil; wash the coarse white clothes, then light calicoes. Before you put in the coarse white clothes take out some hot water and put in the tub. I just take the white clothes out of the boiler with a stick and while holding a dishpan or pail to the top of boiler it is easy to drop the hot clothes right into that. Put in the bluing water by taking it out of the pan with the stick; this leaves the suds in the pan. Stir up well so the bluing will reach all parts. Now I use my wringer. In order to gain time use one hand to stir and handle the clothes, the other to wring. Leave your washboard in the tub with dirty clothes, take your clothes basket and set this right in the tub and the wash board will hold it up from the water, and in a minute you will be done with half the labor as your wringer doesn't stop a minute because you have the other hand to feed with. Starch your clothes and hang out. I can do a big washing in two hours from the time my water is hot to start. My people get their clothes very dirty, but when my clothes are dry they look cleaner than my neighbors, and it takes them more than twice as long and they use extra rinsing water. READER.

HOW A GIRL MAY BECOME POPULAR.

I am sure there never was a healthy-minded girl in the world who did not want to be popular.

What will make us popular? asks Hope Canby in The Delineator for March. Well, there are dozens of things that would be helpful.

There must be, first of all, kindness, and plenty of it. The popular girl must be tactful; and tact is nothing in the world but kindness. The very word "tact" means touch. If we want people to like us, they must know that our lives are not aloof from theirs, but that they

touch, and touch them kindly. Others will tell you to dress neatly and becomingly; to speak softly; to cultivate powers of conversation and observation; to read books of high life; to go to the theater and see plays of high life and observe how the thing is done there; never to be "loud" or vulgar; never to be conspicuous; to cultivate any talents you may have. All this is good advice, I am sure, and will help immensely; but I would say to you that beyond all these things other things are needed. Be kind; forget yourself; read good books and think nobly; strive to express whatever is good in you; and, finally, bring all the beauty of every kind into your life that you can.

HOME QUERIES EXCHANGE.

Mrs. G. S., South Branch.—Here is a recipe for oat meal cookies: Four cups oat meal, two cups flour, one cup sugar, two-thirds cup shortening, half cup of warm water, one teaspoon salt, one scant teaspoon soda. Mix oats, flour, sugar and salt together dry. Then add shortening and mix as for pie crust. Lastly, add the soda, dissolved in the warm water. Roll thin.

Dear Editor:—Will you please tell me how to remove ink stains from cotton and wool goods?—Mrs. R. B., Canandaigua.

Try soaking the spots in skim-milk, leaving them in until the milk sours unless they come out before. If this does not remove them, use a solution of oxalic acid. The cloth should be left in this only a few moments at a time and the acid rinsed out carefully. Then dip the spot in ammonia water to neutralize the effect of the acid. In making the acid solution use a little less than one-quarter of a teaspoonful to one cup of water.

Dear Editor:—Can you tell me how to remove creases and machine stitches from silk? It is not taffeta but is a soft silk.—Mrs. J. B., Holt.

I do not believe anything will renovate the silk. Have sent silk to professional cleaners and they could not remove the marks. Perhaps a reader can give some help.

Mrs. H. S., Park Lake.—Granite pails with tight-fitting covers are used in the home-made fireless cookers. The size of the pail would, of course, depend upon the size of your family and how large a piece of meat or how great a quantity of vegetables you must cook. An old trunk makes a fine cooker. Pack it with hay, and make a nest with any good thick cloth, old or new, and make a hay cushion to just fit over the top. Your meat or beans for dinner should be started immediately after breakfast. They must be brot to a boil on the stove, then covered tightly, the pail set in the nest, the hay cushion put over the top, and the lid closed. In the home-made cookers it is sometimes necessary to take out the food and heat it again, as these cookers are often carelessly made and do not retain the heat. You will have to watch your closely and experiment with it until you find out just what it will do. If after using it some months you find it "going back on you," put in all new hay.

Kansas Takes 1,000 Overland Cars

Our agents in Kansas have ordered for this season 1,000 Overland automobiles.

Nebraska takes 750—Iowa 1,000—Texas 1,500. Thus has the Overland—after one year's experience—captured the farming states.

It has captured the cities, too. New York City takes 1,000 Overlands this year. Boston takes 500—San Francisco 500—Washington 500—Philadelphia 450.

Our agents have contracted for 20,000 Overlands—for \$24,000,000 worth of Overlands—to supply the demand for this year. That's a larger sale than any other car commands.

Yet, two years ago few had ever heard of an Overland. This sensational success is due to the creation of a remarkable car.

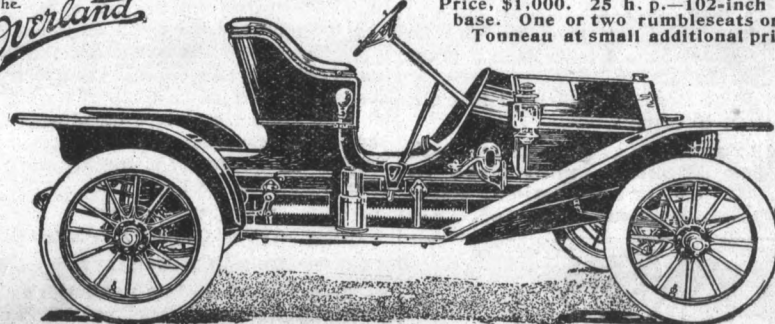
The Simple Car

The success of the Overland is mainly due to its amazing simplicity. A 10-year-old child can master the car in five minutes. Push a pedal forward to go ahead, and backward to reverse. Push another pedal for high speed. There is nothing else to do but steer.

Any man, with the simplest instructions, can run an Overland a thousand miles and back.

There was never a car so easy to care for—so easy to keep in order.

The Overland



Price, \$1,000. 25 h. p.—102-inch wheel base. One or two rumbleseats or Toy Tonneau at small additional price.

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The Willys-Overland Co.
Toledo, Ohio.
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A37

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"Washing has broken down the health of more women than all other household labor. There are more martyrs at the washtub today than heathen Rome ever batted in a century of arenas. Women dread wash-day because it means backache and tired arms. My Champion 'Dan Patch Washer' washes clean just like human hands, and it is so very easy to keep in motion that you can sit and read a book while doing your washing with one hand."

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A Child can even work the "Dan Patch Washer" with one hand while sitting in a chair reading a book. My World-famous Champion, Dan Patch (1.55), is the easiest to work—easiest on clothes and the fastest washer in the world. Return it to me after Four months of hardest washing if not perfectly satisfactory. It is as perfect in its class as Dan Patch is in his class. The "Dan Patch Washer" will save you Time, Soap, Labor, Money and Backaches. It makes wash-day a pleasure in every six months. Mail me the Free Coupon today and I will mail you my large Illustration, showing the "Dan Patch Washer," and also showing the \$10.25 cash value I will send you free for your home. I will also mail you, Free, the Two Splendid Pictures of Dan Patch (1.55). You could not buy these Extra Large, EMBOSSED PHOTOGRAPHS OF DAN PATCH (1.55) at any bookstore for less than One Dollar. I mail them to you absolutely free, and with postage paid.

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I would like to receive it on my 4 Months' Free
Trial. I will not pay you a cent for it, and I will
not risk a cent. I will send you \$10.25, absolutely
free, and at once, in every-day, high-class Household
necessities that will save you \$10.25 Spot Cash.
Please Mail Me This Free "Dan Patch Picture Coupon"
without any obligation on my part.
Do You Want
2 New
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sleigh full of small
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M. W. Savage.

SHE QUIT

But It Was a Hard Pull.

It is hard to believe that coffee will put a person in such a condition as it did an Ohio woman. She tells her own story:

"I did not believe coffee caused my trouble, and frequently said I liked it so well I would not, and could not quit drinking it, but I was a miserable sufferer from heart trouble and nervous prostration for four years.

"I was scarcely able to be around, had no energy and did not care for anything. Was emaciated and had a constant pain around my heart until I thought I could not endure it. For months I never went to bed expecting to get up in the morning. I felt as though I was liable to die any time.

"Frequently I had nervous chills and the least excitement would drive sleep away, and any little noise would upset me terribly. I was gradually getting worse until finally one time it came over me and I asked myself what's the use of being sick all the time and buying medicine so that I could indulge myself in coffee?

"So I thought I would see if I could quit drinking coffee and get some Postum to help me quit. I made it strictly according to directions and I want to tell you, that change was the greatest step in my life. It was easy to quit coffee because I had the Postum which I now like better than the old coffee.

"One by one the old troubles left, until now I am in splendid health, nerves steady, heart all right and the pain all gone. Never have any more nervous chills, don't take any medicine, can do all my housework and have done a great deal beside."

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

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



No. 149
New Autostyle Buggy
Your Home Dealer Can Beat the Mail Order House

If he handles Reliable Michigan line of vehicles. Remember—it's the wear of the vehicle, not its looks, that determines its real value. Reliable Michigan vehicles made 26 years ago are still in use—some we made 16 years ago are in daily service in livery stables. Don't be victimized by the mail order evil. No matter how liberal its promise of "free trial," "return privilege," etc., you become responsible for the vehicle when you sign your name to a letter agreeing to receive it. Avoid trouble—

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You won't have to pay the freight on a Reliable Michigan vehicle you buy from him. And he's always there to come back to in case you are dissatisfied. We authorize him to make good any defect of workmanship or material, not only in one year but any time after your purchase. We do not "assemble" vehicles from parts made in little shops here and there. Every Reliable Michigan vehicle is built from the ground up in our own factory. In the Reliable Michigan line you have a selection from 256 models—every type of horse-drawn pleasure vehicle, and scores of our own exclusive designs. Write us and we will send you our new Catalog "A," showing our newest types and patterns, the hand-somest you ever saw.

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Malted from choicest Montana Barley, shipped in strong air-tight drums, at 6c per lb.

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Travel the worst roads with ease and comfort. And Up SEND FOR CATALOG "5" The Breeze is strong, simple, speedy and safe. Best motor vehicle built for country roads—mud, deep sand or high hills. 12-18 H.P. engines. Lowest cost of upkeep, least tire trouble. Handsomely finished. THE JEWEL CARRIAGE CO. CINCINNATI, OHIO

FLOUR OF VARIOUS SORTS.

BY MRS. ALTA LITTELL.

Of all the cereals used by civilized man, wheat is the most important. From it we get our flour for bread, whether white, whole wheat or graham. In thousands of homes it forms the principal breakfast food, under various names. But its most important use is perhaps the making of bread. Of course, we could do without it in the form of pastries, but as few families would care to, it is well to understand its use in that way, also.

Of late years we have heard a great deal about spring wheat flour, or bread flour, and winter wheat flour, or pastry flour. Spring wheat flour should always be used in making bread and in other cases where yeast is used because it contains more gluten, or proteids than winter flour. It is the gluten which makes the loaf spongy as by reason of its elastic nature it holds the gas formed by the fermentation started by the yeast. Pastry flour is used for general baking.

If you are in doubt as to the kind of flour you have but a very simple test will decide whether it is bread or pastry flour. Take a little in your hand and close the hand, tightly. When you open your hand if the flour retains its shape and has the impression of your fingers it is pastry flour. If it falls apart it is bread flour. Pastry flour is soft and velvety to the touch while bread flour is slightly grainy.

A grain of wheat consists of an outer cover called the husk; next this the bran coats, containing mineral matter, then the gluten and fat, and within the starch. In making white flour the outer husk and bran coat, with some of the gluten is removed from the kernel by the process of grinding and bolting. Entire wheat has simply the outer husk removed and is then ground and left unbolted. Graham flour contains some of the bran. Bolting, as we know, is forcing the flour thru a fine silk or linen cloth.

SOME ATTRACTIVE APPLIQUES.

BY MAE Y. MAHAFFY.

Displays of up-to-date needlework show a variety of effects in applique which cannot but please the most fastidious. The old method of carrying out such work was tedious and intricate, necessitating the cutting out of the background material before setting in the applique figures or flowers. Now the background is left solid, and the terrors of this work are a thing of the past. Any one familiar with the most common needlework stitches can make up handsome articles by the new and simple methods.

The least expensive and at the same time, loveliest possible effects in applique are obtained by what is known as the shadow applique method. In this a sheer fabric like batiste, swiss, chiffon or very fine handkerchief linen is used as the ground work, and the applique is of heavier weave, linen or lawn being used with the majority of fabrics, but silk frequently appearing in connection with chiffon or bolting cloth. As the name suggests, the applied portions are beneath the main fabric.

The design should be stamped on the right side of the swiss or other goods, and the linen or lawn basted directly beneath, with the weave running the same direction in both. If there is any likelihood of one material shrinking more than the other they should be ironed under a wet cloth before being basted together. Padding cotton is now run around each part of the design, and the figures or flowers worked all around in satin stitch or buttonholing right over this padding. The buttonholing may be plain or in long and short effect, as desired, but the pulled edge must be outward. The stems and veins are outlined, and the centers of flowers are worked solid, filled with French knots, or the space is occupied by a single eyelet. When the needlework is done the heavier material is cut away around the design, leaving it only of two thicknesses. This process must be very carefully followed, for a slip of the scissors would mean the possible ruination of the article. However, if designs are chosen which have few small, intricate parts, this will not be found difficult.

This sort of work is beautiful over polished tables, and makes up charming toilet sets when used over a colored lining. It is also largely used as a decoration for lingerie waists and thin dresses, and for numerous dress accessories. This work is by no means limited to all white effects, tho these are preferable from the standpoint of the laundress. Colors un-

der white are lovely. Embroidery cotton is the working medium for white, but silk is usually preferred when colored effects are wanted.

Probably the next most popular applique at present, is the linen work used so much for hangings, sofa pillows, screens, table covers and similar articles. Heavy cream, gray or ecru linens are especially pleasing for this applique, tho the color selected must, of course, be one which harmonizes with the other furnishings. Large or bold effects are the rule in this work. The design is stamped on the background material and also on that to be used as an applique. Only one portion of the design is cut out of the applique fabric at once, the linen having first been dampened and ironed until dry. This gives it sufficient stiffness so that the edges will not ravel if cut out only as needed. The piece is laid on the right side of that part of the foundation design which it fills, and is basted onto the foundation with fine cotton of the same color. Any simple embroidery stitch is used as further ornamentation. Blanket stitch, in reality buttonhole stitches set a little distance apart, are frequently used in this connection, and sometimes it is done over a cord or several strands of coarse floss laid along the edge. Even narrow braids are used as a finish quite often, and solid rows of satin stitch are rich and effective, tho a little more tedious. When completed the work is pressed carefully, face down, on a thickly padded surface.

A handsome pillow of this character is of cream linen with a design of acorns and oak leaves. The acorns are of brown linen, and have the cup portions simulated by thickly set French knots, the edge of each being finished simply in a narrow row of satin stitch in brown floss. The leaves are of green linen with brownish-green stems and veins, the edges worked in a long and short buttonhole stitch.

Appliques of velvet, heavy taffeta, satin or leather are also much used on silk, linen and some of the canvas weaves approved by craftsmen for hanging and upholstery purposes.

Another form of applique in which everyone will be interested is the bobbinet work. This is used for handkerchiefs, tie ends, turnovers and similar belongings. A very fine linen is the main material, and upon this is stamped a pretty design in some small, dainty pattern. The bobbinet is then basted underneath, every portion of it being held smoothly to the linen. There must be no stint of basting threads. The edge of the design is then run around with embroidery cotton, and over this are taken close, even, over and over stitches of fine cotton. If scallops surround the article they are buttonholed. When all the needlework is done the linen is cut away from around the design up to the inner border line, leaving the bobbinet with the linen flowers scattered thereon. Then the bobbinet is cut neatly away on the other side of the inner border, so that only the linen forms the body of the handkerchief or other article being made. This is extremely delicate and charming work, and results in the most lace-like trimmings.

CANNING FRESH MEAT.

BY CLAUDE A. WAUGH.

Tho I have never contributed very much to the household columns, my mother has an idea which is worthy of my best efforts at attempting to describe. By means of it we are able to keep sausage a year and to have spare ribs in June. Sounds like good eating, doesn't it?

Instead of frying down the sausage and putting it in crocks, she simply heats it thoroly and puts it in quart cans. One can makes a meal for a family of average size. It saves the melting of lard over the crock when the sausage is removed. Besides, the sausage seems to keep much better than when fried down in crocks.

At butchering time, people usually get sick of eating up scraps. They like them for a change but not for three meals a day. But under ordinary conditions they must be used soon or they will spoil. Mother breaks the spare ribs up into small pieces such as can be placed in an ordinary glass jar. Then they are boiled until they are one-half to two-thirds done when the ribs are put into the cans with the broth. Place them in a cool place. When taken out they can be boiled a little more and then roasted. This enables you to have what is almost the same as fresh meat as late as May and June. It also enables you to get the mess caused by butchering, cleaned up much earlier than would be possible otherwise.

Is This Fair?

Certain Proof will Be Made That Stuart's Dyspepsia Tablets Cure Stomach Trouble.

A Trial Package Sent Free.

Stuart's Dyspepsia Tablets are made to give to the system, through the digestive tract and the stomach, the necessary chemicals not only to digest food, but to enrich the fluids of the body so that it may no longer suffer from dyspepsia or other stomach trouble.

We will send you a quantity of these tablets free, so that their power to cure may be proven to you.

Thousands upon thousands of people are using these tablets for the aid and cure of every known stomach disease. Know what you put into your stomach, and use discretion in doing so.

Stuart's Dyspepsia Tablets contain fruit and vegetable essences, the pure concentrated tincture of Hydrastis, Golden Seal, which tone up and strengthen the mucous lining of the stomach, and increase the flow of gastric and other digestive juices; Lactose (extracted from milk); Nux, to strengthen the nerves controlling the action of the stomach and to cure nervous dyspepsia; pure aseptic Pepsin of the highest digestive power and approved by the United States Pharmacopoeia.

One of the ablest professors of the University of Michigan recently stated that this Pepsin was the only aseptic pepsin he had found that was absolutely pure—free from all animal impurities; Bismuth, to absorb gases and prevent fermentation. They are deliciously flavored with concentrated Jamaica Ginger—in itself a well known stomach tonic.

Liquid medicines lose their strength the longer they are kept, through evaporation, fermentation and chemical changes, hence Stuart's Dyspepsia Tablets are recognized as the only true and logical manner of preserving the ingredients given above in their fullest strength.

If you really doubt the power of these tablets, take this advertisement to a druggist and ask his opinion of the formula.

It is due your stomach to give it the ingredients necessary to stop its trouble. It costs nothing to try. You know what you are taking, and the fame of these tablets prove their value. All druggists sell them. Price 50 cents. Send us your name and address and we will send you a trial package by mail free. Address F. A. Stuart Co., 150 Stuart Building, Marshall, Mich.

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A homelike institution, where the patient has practically the same privileges as at home. Devoid of many of the cold and cheerless features found in hospitals generally. Comfortably heated with steam; excellent table; services of trained nurses.

Facts About Cancer A booklet giving interesting information regarding the Cause of Cancer. Tells what to do for certain distressing symptoms usually found in such cases. Valuable as a guide to the management of many cases. Also contains full information as to rates, etc. Sent free on application, by mentioning this paper. Address

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Associational Motto.—

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

Associational Sentiment.—

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

NOTICE TO FARMERS' CLUB SECRETARIES.

Many clubs have elected their officers for 1910. As a special favor to the state secretary, will you not immediately forward to her the list of officers with their addresses?

Some have already done this, but the majority have not. Nearly all the lists sent to the Michigan Farmer are not complete, as the addresses are lacking. Please add addresses in future reports. Compliance with this request will save the secretary much time and correspondence.

There are still some delinquent Clubs both for reports and dues, for 1909. Will you not attend to the matter immediately?

Mrs. C. P. JOHNSON, Sec.

CLUB DISCUSSIONS.

Hold Club Institute.—The farmers' institute held Feb. 2 at Napoleon town hall was of much interest to all who had the pleasure of attending. The forenoon session, which was short, was given over to the discussion of alfalfa. The subject was briefly introduced by T. B. Halladay, of Norvell. The state speaker, C. B. Cook, led the discussion to some length. He said the plan was in the experimental stage in Michigan and advised the farmers to put out a small acreage until the crop was fully understood. Some soils require commercial fertilizer and inoculation to insure a sturdy growth of the plant. The afternoon session was opened by singing "America," followed by prayer by Rev. Rowe. Then followed a very good paper by T. B. Halladay, "Are the farmers to blame for the high prices of products?" The discussion by C. B. Cook was well received. Also remarks by Mr. Elliott. Murray Hess believes high prices are largely governed by supply and demand. J. C. Ketcham, of Hastings, gave a talk along educational lines which was very lively and interesting. He spoke of the boys having a more thorough knowledge of the science of agriculture and was very much in favor of its being taught in the rural schools by text books and not by planting gardens on the school grounds. Daniel Fuller, of Norvell, spoke briefly on the care of the farm orchards. C. B. Cook, in his remarks following gave a vivid picture of the benefits of spraying apple trees to allay the ravages of insects and plagues, by a beautiful specimen of Northern Spy highly colored, and a badly affected Greening. The comparison would make an impression long to be remembered. He advocated spraying at least five times during the season and declared farmers would be amply repaid for their time and trouble in quality of fruit and price for same. The afternoon meeting was concluded by music by the Norvell club. The evening session was opened by music by the Napoleon band. Mr. Peters, of Napoleon, spoke of the "Benefits of Farm Organizations." They have brot about the fact that the secretary of agriculture now has a seat in the president's cabinet. The need of the farmer's vote is recognized by the legislators.

The 20th Century Farmers' Club of Jackson Co., met in February at the home of Russel Dancer with a large attendance. Question discussed, "The best and cheapest methods of feeding young stock." All agreed that at present prices of fodder one must feed very economically if they would not feed at a loss. Another saw no profit in feeding cattle. Another has a silo and likes it for both dairy cows and young stock, as they do well on ensilage and will leave good dry feed for it every time. It was expensive at filling time, but when in your field was cleared, so that it cost no more to harvest that way. The Experiment Station says the feed it takes to make a pound of beef will make a pound of butter and the most of us prefer this way and the result is there are not enough cattle to supply the local trade. When sheep are first put upon dry feed, you must feed sparingly and carefully, as, if you overfeed once they will not eat well for two weeks. They will shrink so in weight the first 30 days that at the end of that time they will weigh no more than when you started in. They will gain but little until you get them to eating one pound each per day. Another said he could and had raised the best calves in Jackson Co., but did not as the cost of production equaled the price received, and there was no profit and few could live on honor alone. But all stock must be kept growing from birth to death with no stagnation periods between. Care must be taken to neither overfeed or over stock as nothing does well if over crowded. After further discussion, followed by readings and music, we adjourned to meet the first Wednesday in March, with Delos Cornwall, where we will discuss "The Patronage of Mail Order Houses," and have a question box.—Jennie M. Ford, Reporter.

GRANGE

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

THE MARCH PROGRAMS.

State Lecturer's Suggestions for First Meeting.

Ways in which home may be made more attractive.

Farm Business—III. Rural Law, (relating to real and personal property, deeds, tenants' rights, etc.)

Recitation (in costume), "Over the Hills to the Poorhouse."

How does local option affect business? Facts collected and presented by two men and two women.

Recitation (in costume), "Over the Hills from the Poorhouse."

Music and recitations in charge of a committee of two young ladies and one young man.

CO-OPERATION THE TOPIC AT LENAWEE POMONA MEETING.

Lenawee County Pomona held a very successful meeting early in February at which the various phases of Grange co-operative effort came in for a big share of attention. Bro. Woolsey presented a good paper on "Grange Fire Insurance," in which he first discussed the stock companies whose officers generally receive large salaries and who run the company for what profit there is in it. Then he spoke of mutual companies whose aims are entirely the protection of their members, dwelling principally on the Grange Insurance Company in this county, showing how it had won out in a period of years by its low cost of assessment, and that from 15 assessments the average had been only \$1.44 on a thousand per year.

The Grange was favored with the presence of Bro. A. M. Brown, of Fruitland Grange, of Deleware, who was invited to talk on the general topic of co-operation. He lives in a fruit county from which their Grange takes its name, and ships annually about 1,600 carloads of perishable fruit. They have a greater percentage of farmers in the Grange than any other state in the Union. They use lots of fertilizer and were the means of establishing the best fertilizer law in the land. They have become a great factor in Delaware and buy their farm and household goods thru the Grange. They save thousands of dollars annually, he declared, and said that only those succeed who buy in the cheapest market and sell where they can get the most.

In his opinion the cause of higher prices for farm products is a very simple question; consumption has merely gotten ahead of production, and when the farmer can realize enough on his investment he will proceed to grow two blades of grass, two bushels of wheat or two bushels of apples, etc., where one was grown before and the Grange is the active factor in the education of the farmer so that he can be able to do these things. Make the Grange a business organization. Put dollars into the Patrons' pockets and then they will stay with the organization.

Brother Horton then spoke as to co-operation being the best educator possible, advocating meeting together, working together and talking together, and also bunching our orders and standing by our contract system.

Apple Buyers Blamed.—At a recent meeting of Grand Traverse Grange the members undertook to place the responsibility for the dishonest packing of apples shipped from that section. When asked to prove that their fruit had been honestly packed many of the apple growers admitted that they made a practice of putting fancy apples at tops and bottoms of the barrels with smaller apples between, but said in justification of their actions that the buyers instructed them to do so. In fact, nearly every fruit grower who spoke insisted that the buyers wanted little apples with a few big fellows on top. One Patron who has had considerable experience as a solicitor for big market buyers declared that it is the positive instructions of these buyers that the barrels contain a considerable proportion of cheap stock covered with fancy fruit. He even went so far as to say that he had seen honestly packed Grand Traverse apples unpacked by the buyers and repacked, the good fruit taken from the middle of the barrels being used to sell small wormy apples that had been bot for almost nothing. One Patron testified to having seen the expert packers, sent into a Peninsula orchard by the buyer, shaking the trees and picking the fruit from the ground, to reduce the expense of packing. Good apples were used for facing, however. One grower of considerable importance testified that he had for a number of years packed his apples honestly, marked them correctly, and placed his name upon the packages, but that he had been unable to see results commensurate with the extra work. In fact, the buyers rather wanted fruit that they could buy at next to nothing. So uniform was the testimony of the growers that the following resolution was adopted: "Be it resolved, That it is the opinion of Grand Traverse Grange No. 79, P. of H., that the apple buyers and commission men are largely responsible for the dishonestly packed apples."

COMING EVENTS.

Pomona Meetings.

Lapeer Co., with Almont Grange, Saturday, Feb. 26.
Grafton Co., with Ithaca Grange, Saturday, Feb. 26.
Oscoda Co., with Triumph Grange, Friday March 4.

"Beats 'Em All for Making Money"

"I have run..... and many other machines, but the Wolverine beats them all for making money. I have put 216 pounds of dry straw in a bale and 175 pounds of hay." (Abstract from letter received. Name and address of party furnished on request.)

From "stem to stern" the Wolverine Hay Press is RIGHT. There isn't a dishonest or careless spot in its whole make-up. We have the biggest plant in the country devoted exclusively to making Hay Presses. The Wolverine has made an enviable reputation—and it is maintaining that reputation and increasing its facilities every year to take care of the growing demand.

A smooth, even, heavy bale comes from the Wolverine Hay Press. It is a fact that dealers will often pay more for hay put up in nice bales. It eats hay as fast as it can be handled by four men in a mow. It can be depended upon to work every hour in the day without a repair man constantly "tinkering" around. It is built for hard, long service.

Wolverine Hay Press

WOLVERINE CONSTRUCTION

DEFIES DESTRUCTION

The Wolverine is built both with steel and wood frames, four different sizes, all with double gears, with various equipments to suit the requirements of purchasers. It isn't the cheapest Hay Press made, if first cost is considered, but it is the cheapest baler in the long run because there is an absence of repair bills.

Write FOR THE "Wolverine Book"

Every farmer will find many interesting and instructive things in the "Wolverine Book." A postal will bring this book to you. It's worth asking for.

Ypsilanti Hay Press Co. 208 Forest St., YPSILANTI, MICH.

Advance Thresher Co., Indianapolis, Ind.

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Main Office and Plant

Forest St., YPSILANTI, MICH.

Indianapolis, Ind.

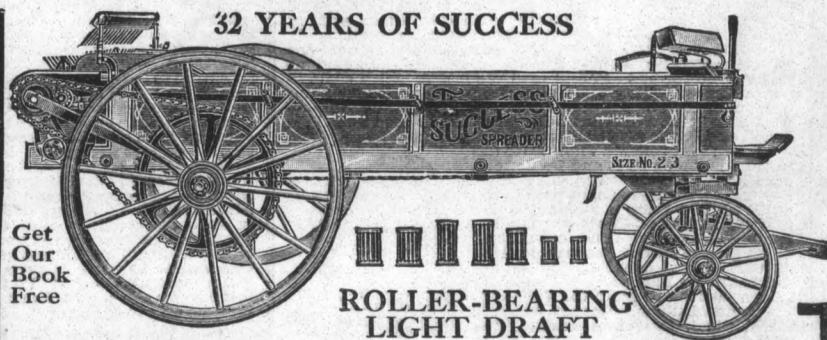
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AGENTS WANTED

Exclusive Territory — Liberal Terms



SUCCESS SPREADER

The only spreader with a 32-year record of good work. Simplicity, Durability and Light Draft always foremost. Direct Chain Drive. No Cog Gears. The choice of men who investigate thoroughly. Wood or metal wheels. A generation of experience back of every Success. The leader from the first. Exclusive features all patented. Catalog of facts Free. Write us promptly.

Kemp & Burpee Mfg. Co. SYRACUSE N. Y.

Pull Your Stumps

No excuse for stumpy fields. Hercules pulls them out, roots and all. Triple-power attachment means one-third greater pull. The only Stump Puller with Double Safety Ratchets. Only one with all bearings and working parts turned, finished and machined, reducing friction, increasing power, making it extremely light-running. Hitch on, and any stump is bound to come.

With This All-Steel, Triple-Power HERCULES STUMP PULLER

—now sold on liberal 30 Days' Free Trial Plan. The strength is there and the power, too. You may have had trouble with iron pullers, but this Hercules genuine steel puller is a different matter. It has 400% more strength than the best iron puller ever made, and is in a class by itself. It is the only stump puller.

Fully Guaranteed for Three Years

—to give perfect satisfaction. Also pulls good-sized green trees and hedgerows. It is the only machine for quick and satisfactory work. Prove it by 30 Days' Free Trial.

Don't Risk Dynamite

It's dangerous and costly. Besides, it only shatters the stump and leaves the roots in ground to grow again. The Hercules pulls roots and all. Once out it stays out.

Get Our Free Books and Free Trial Offer

—also proposition to first buyers in each locality where we have no agents. You need this Hercules and you can try it 30 days. Free and save big money by writing us at once. A postal will do.



VIRGINIA FARMS

You can buy fertile farms with timber, fruit and water for \$10.00 per acre and up. Splendid country for fruit growing, dairying, stock raising and general farming. Fine climate, abundant water,

\$10 AND UP PER ACRE

COME TO SUNNY VIRGINIA

convenient market, good neighbors. Full information and valuable booklet upon request. Write for it now.

F. H. LABAUME, Agricultural and Industrial Agent, Norfolk & Western Ry., Dept. D 26, Roanoke, Va.

When writing to Advertisers mention the Michigan Farmer.

Take Your Time!

Let The Days Pass

deciding. Every day will mean something, will tell its story to you, but take your time. Note results each day, but wait until you are SURE. You will not be rushed, hurried or worried. We want you to take fully thirty days time to judge it, to know for yourself. If you want more time, take it. TAKE ALL THE TIME YOU NEED. Be quick in sending for it--be slow in paying for it. Take time to FIRST MAKE SURE. When you are sure, PAY FOR IT. If you are not sure, DON'T PAY A PENNY. We want to send you a full-sized dollar package of Vitae-Ore entirely on trial, want you to have fully thirty days to watch its results, to note its action in your system, to see how it benefits your health, to see how it cures sickness and disease, to learn WHAT VITAE-ORE WILL DO FOR YOU. We mean just what we say--it is all left to your decision--take plenty of time to decide. We know V.-O.--we take all the risk.

one by one and make up your mind slowly, day by day. Take your time in deciding. Every day will mean something, will tell its story to you, but take your time. Note results each day, but wait until you are SURE. You will not be rushed, hurried or worried. We want you to take fully thirty days time to judge it, to know for yourself. If you want more time, take it. TAKE ALL THE TIME YOU NEED. Be quick in sending for it--be slow in paying for it. Take time to FIRST MAKE SURE. When you are sure, PAY FOR IT. If you are not sure, DON'T PAY A PENNY. We want to send you a full-sized dollar package of Vitae-Ore entirely on trial, want you to have fully thirty days to watch its results, to note its action in your system, to see how it benefits your health, to see how it cures sickness and disease, to learn WHAT VITAE-ORE WILL DO FOR YOU. We mean just what we say--it is all left to your decision--take plenty of time to decide. We know V.-O.--we take all the risk.

Proven By Time.

An Open Letter From Theo. Noel.

Over a quarter of a century has come and gone since I first offered the original Vitae-Ore to America's sick, and my faith in its powers to heal and cure various diseased conditions of the human body grows stronger every day. I believe in Vitae-Ore because I know. Any man who would sit in my office for one day and read the letters which come to my Company, telling what Vitae-Ore has done for men and women sufferers in all parts of the country, could not do otherwise than believe in it and be satisfied of the good work it is doing, and I have read such letters at my desk for many years.

When I first offered Vitae-Ore to the world I believed in it and its powers, else I would not have offered it. I thought I would do some good in the world while making a competency for myself. I was a middle-aged man, beyond the wild theories and enthusiasms of youth, and knew the properties of what I was offering. But in my fondest hopes I did not anticipate the future that lay in store for Vitae-Ore, the world-girdling influence which it would yield, the thousands, yes, millions of sick people whom it would cause to be benefited.

And now, at the ripe age of seventy years, as I look backward over the past and see the present Vitae-Ore business, with its sales of hundreds of thousands of packages yearly, I find therein proof that my first belief in Vitae-Ore was right, that my confidence in it was justified, that the verdict of the people and the passage of time have proven my claims true. Vitae-Ore has succeeded because it has done the work that it was advertised to do, because it has brought satisfaction to those who have used it. Its remarkable achievements of the past are the best pledge of its usefulness in the future.

I say to the sick, give Vitae-Ore a thorough trial and see what it will do for you. Follow the example of the thousands who have used Vitae-Ore with profit to their health. I give this word to all sufferers, no matter what the ailment, for while Vitae-Ore cannot cure genuinely incurable cases or cases in which operations may be necessary, there are out few cases in which it cannot be of some benefit, owing to the almost inevitable constitutional improvement which follows its steady use. The letters in this page, which I ask the sick to read, tell their own story in a way no man can question or doubt. They are but a few of the thousands I have seen and read during the past twenty-five years. I personally vouch for the genuineness of each and every letter contained in this page and ask all who seek health to follow the road plainly pointed out to them by thousands of grateful former sufferers.



Theo. Noel

Use Vitae-Ore For Rheumatism and Lumbago, Kidney, Bladder or Liver Disease, Dropsy, Stomach Disorders, Female Ailments, Functional Heart Trouble, Catarrh of Any Part, Nervous Prostration, La Grippe, Anemia, Piles, Sores and Ulcers, Bowel Troubles, Impure Blood and All Worn-Out, Debilitated Conditions.

COUPON

Theo. Noel Co., Vitae-Ore Bldg., Chicago, Ill.
I have read your large advertisement in the MICHIGAN FARMER

and want you to send me a full-sized One Dollar package of Vitae-Ore for me to try. I agree to pay \$1.00 if it benefits me, but will not pay a penny if it does not. I am to be the judge. The following is my address, to which the trial treatment is to be sent by mail, postpaid:

Name _____

Town _____

State _____

Street or Rural Route _____

How Can You Refuse It?

Vitae-Ore is offered to you freely, unreservedly, just on YOUR WORD that you want it, YOUR PROMISE that you will use it. That is all! What is your excuse if you do not send for it? You need the HEALTH it offers; you NEED IT to help you get the strength, vigor, and comfort in body and mind THAT YOU OUGHT TO HAVE. Give Vitae-Ore a chance to prove it is just what you have long been wanting; just what you NOW ARE SEEKING--a means to perfect, absolute, permanent health. Vitae-Ore holds out to you the helping hand that has lifted thousands up to strong, virile, vigorous, happy, disease-free manhood and womanhood--what is your excuse if you do not grasp it? You want health, your family wants you to have it; Theo. Noel, the founder of Vitae-Ore, whose open letter is on this page, wants you to have it, all of your neighbors, your friends and associates, all want you to have HEALTH. Vitae-Ore offers a chance for all this to you. When it does its work it is as though Health were placed upon a platter and brought to your table. The Theo. Noel Company is the waiter, awaiting your call, ready, willing and anxious to serve it to you. There need be no tip, no fee, not a penny unless you are satisfied with the service. You have but to ask, but to say the word, but to crook your finger, and you will be helped to your share. Read our trial offer and send today!

Read This Trial Offer

Just Say The Word and we will send you a full sized \$1.00 package of Vitae-Ore, enough for one month's continuous use. We want to send it on thirty days' trial. 'We don't want a penny--we just want you to try it without any risk, just want the word from you telling us to send it to you. We are glad to send it to you in this way, for this is the way we sell Vitae-Ore to the sick. We take absolutely all the risk--we take all the chances. You don't risk a penny. All we ask is that you use Vitae-Ore for thirty days, see what it does for you and pay us \$1.00 for it if it has helped you, if you are satisfied that it has done you positive, actual, visible good--benefit that you know and can feel. Otherwise we ask nothing, we want nothing and you pay nothing. Can you not spare a few moments to write OUR name and address on an envelope and YOUR name and address in the coupon, so we will know you want to try Vitae-Ore? Cannot you spare a few moments each day for thirty days to use it? That is all it takes. Cannot you spare this little time if it means new health, new strength, new blood, new force, new energy, vigor, life and happiness. You are to be the judge. We are perfectly willing to trust to your decision, to let everything rest with your honor and judgement, as to whether Vitae-Ore has earned its pay. Read what Vitae-Ore is, read how it brings a healing mineral spring to your door and send today for a \$1.00 package on trial.

A MINERAL SPRING At Your Door

Since the beginning of time mineral springs have been utilized for their healing and restorative powers. The ancients knew their value and had favorite springs, to which they resorted when feeble in health. Although in our artificial civilization, man has gotten far away from nature and natural modes of healing, the medicinal value of mineral waters has always been recognized and they are depended upon as curatives when other means fail. Doctors do not deny their value, but voluntarily acknowledge it when their prescriptions fail to benefit, by sending patients to mineral springs. The curative forces found in mineral waters come from the natural mineral deposits through which the waters force their way and the mineral from such deposits, if oxidized by exposure to the air, would no doubt become soluble in water and make mineral waters of great power. The name Vitae-Ore means "Life Mineral" and the original Vitae-Ore, founded by Theo. Noel and first offered by him to the sick in the year 1880, came from a natural mineral deposit, possessing, when mixed with water, curative virtues of a high order. Vitae-Ore in its improved form is a combination of substances from which many world-noted mineral springs derive medicinal power and healing virtues. It consists of compounds of Iron, Sulphur and Magnesium, elements which are among the chief curative agents in nearly every healing mineral spring and are necessary for the creation and retention of health. Each teaspoonful of the liquid made from Vitae-Ore, drunk in a half glass of ordinary drinking-water, makes a mineral water equaling in medicinal strength and healing value, many glasses of the world's powerful mineral waters, drunk fresh at the springs. Vitae-Ore is a mineral spring, condensed and concentrated, brought right to your door.

Had Kidney Trouble.

MOULTREE, GA.--When I first began Vitae-Ore I had been afflicted for about twelve years with a serious Kidney Trouble, at times so bad that my urine would be thick with blood and phosphate. I tried several doctors, as well as patent medicines recommended for a trouble of this nature, but found absolutely no relief. I also took treatment at different times from three well-known specialists without benefit. At last I decided to quit fooling with medicines, feeling that nothing could do me any good and that I should become resigned to what seemed the end. It was at this time that I read the Vitae-Ore advertisement and sent for a package with the hope it might be the remedy I was looking for. It did not require more than one week's use of Vitae-Ore to satisfy me it was all right and I grew better every day. I gained twelve pounds in six weeks, and soon felt vigorous and hearty, although then 54 years old. I am now 58 years old and can do as much work on my farm as any hand I can get. I feel as though Vitae-Ore saved my life. W. R. Key.



Cured By Vitae-Ore 21 Years Ago.

NEW ORLEANS, LA.--In 1872, while stooping down to tie a boat, something went wrong in my body. I was unable to get up. I had to crawl to my house on my hands and feet and I lay in bed for one month thereafter. I had doctors, who got me out of bed but I could hardly walk. I suffered like this for sixteen years until 1888, when I saw an advertisement for Vitae-Ore. All during that time, when I stooped down, I had to prop myself with my hands on my legs, inch by inch, until I was up. I could hardly walk on account of the pain. I sent for Vitae-Ore and it has cured me. I have been using it as a family remedy ever since that time, for twenty-one years, and I am in splendid health. I am now 68 years old and think I would have been dead many years ago if it had not been for Vitae-Ore. Jos. Kissler, 2325 2nd St.

No Rheumatism In Twelve Years.

OROVILLE, CAL.--About twelve years ago I was suffering from an acute attack of Rheumatism in my hands and arms. My left hand was drawn out of shape, and I could not straighten out my arm. I obtained two packages of Vitae-Ore. After using it one week I noticed a change for the better, and inside of two weeks I could straighten out my arm and use my hands, and soon the Rheumatism had entirely disappeared from them. I took four packages in all, and it drove out Chronic Rheumatism of fifteen years standing from my feet. I have never in twelve years had a sign of Rheumatism returning, although I have been exposed to all kinds of weather. H. E. DOWNER.

A Bad Complication.

WALLACE, NEB.--Vitae-Ore was the means of saving my life and rescued me from an existence that was almost unbearable. I had been suffering for a long time with Palpitation of the Heart and Smothering Spells, Nervous Prostration, Female Weakness, Catarrh of the Head, Throat and Stomach, Kidney and Bladder Trouble. In fact, I do not believe I had a sound organ in my body. I was in bed for seventeen weeks, when I was induced to give Vitae-Ore a trial. I think it was a God-send, as all my diseases began to yield immediately and I was cured after two months use. I could do all of my own housework with pleasure, slept like a child and had a very good appetite. I gained 18 pounds in two months. This was four years ago and Vitae-Ore is now our standby. It is at present nicely tiding me over the Change of Life. MRS. J. O. PURBAUGH.



You Don't Pay For Promises!

You Pay For Only What Has Been Done. You pay for the work, not words, and if the work has not been done to your satisfaction, you don't pay for it--No, not a penny! You are to be the judge, and you can easily judge. You know if you feel better, if you sleep better, if you are stronger, more active, if your limbs do not pain you, if your stomach or kidneys do not trouble you, if your heart or liver does not bother you. You know whether or not your organs are acting better, whether or not health is returning to your body. Send the coupon for a trial package today on these liberal conditions. ADDRESS US AS FOLLOWS:

THEO. NOEL CO., M. J. Dept. Vitae-Ore Bldg. **CHICAGO, ILL.**