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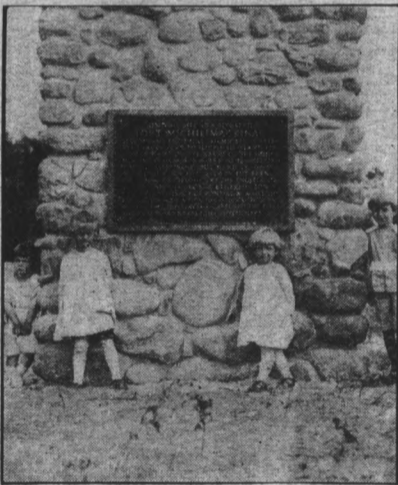
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VOLUME CLVIX NUMBER FIVE

DETROIT, JULY 29, 1922

CURRENT COMMENT

THE MICHIGAN FARMER SAYS:

Yield not to too much temper.

A quart of berries well sold is better than two on the bush.

An ounce of pretention is worse than a pound of unassuming self-confidence.

The bigger a hog a hog can make of himself the more profitable hog he is.

Common effort produces common results. A little extra effort produces success.

Wool gathering is all right for sheep but bad for men. Grow sheep but don't let wool gather in your mind.

The man who raises the dust does not accomplish as much as the man who settles it.

Taxes and Tax-Free Bonds

THE multiplication of issues of tax-free bonds during recent years has come to be regarded as an evil which should be corrected by many thinking people. This is a matter for congratulation, since it indicates a more thoughtful attitude on the part of the public on the important question of taxation, even though the reasons most generally advanced for the limitation of tax free securities are aimed at the result rather than the cause of unprecedented spending for public improvements and purposes.

The reason most generally advanced for the curtailment of the issue of tax free securities is the fact that wealthy men are investing their capital in these securities, thereby escaping taxation which as a result falls more heavily upon the farms and the homes of the country. While this is a good reason, it is not the best reason for such curtailment, nor would the accomplishment of this desirable purpose result in the relief of farm and home owners from excessive taxation to the extent which would at first appear.

Fully taxable bonds issued for the making of public improvements would inevitably mean higher interest rates on such bonds, hence higher taxes to meet the interest. Not all of this increase would be borne by the bondholders. But a portion of it would, and in the redistribution of the burden farm and home owners would probably be gainers to some extent.

But a greater gain would be likely to result from the probable curtailment of bonds issued for these purposes

with a higher interest rate and a less ready market for their disposal. That this would be a desirable result no thoughtful person can well doubt.

In the twenty years from 1901 to 1921 the total taxes levied for all purposes on property in this state was multiplied by seven. In other words, this burden was seven times as great in 1921 as it was in 1901. And the increase was consistent all along the line from the state down to the school districts. And during this same period there were millions of dollars in bonds sold on which the interest must be paid by taxation and the principal as well, if it is ever paid. This is very largely due to the fact that we, the public, wanted the things for which the money was expended and expressed this desire by a majority of our votes.

In most instances, perhaps, the things we got for the money were worth it. In other cases this is doubtful. The curtailment of tax free bonds is a step in the right direction, but it will not shift our responsibility as citizens in the matter of holding down public expenditures to a reasonable limit. And if we keep on dancing to the same tune we will have to continue to pay the fiddler. We cannot shift the burden by merely cutting out the tax exemption feature of bonds issued to secure the money for public improvements or expenditures.

The Farm Plan

IT is told of a farmer and his son who, one winter's evening, sat down with pencil and paper and came to the surprising realization that they were very much short of feed for their stock. The conclusion of that paper and pencil evening was that father and son determined to work out a farm plan which would meet their requirements in home-raised feeds for their farm animals.

Several other winter evenings were spent in working out this plan, which included a replanning of the fields, changing the cropping system and developing a comprehensive live stock plan.

While making out a farm plan can not be as accurate as making a bill for building materials, the several years' experience of the father and son showed that it worked out beyond their expectations.

It would undoubtedly benefit many of us if we would change from the "I don't know where I am going but I am on my way" method, to the one which means, "I have my ticket and time-table, and I know where I am going and when I'll get there."

What's to Blame?

EVERY little while a pest of some kind which is usually controlled by ordinary methods of treatment becomes rampant and gets entirely too prominent. Some years it is the codlin moth, others the scab, and so on. This year it is the cherry leaf spot and the grape leaf hopper.

It is perfectly natural that when something serious of this sort happens which threatens to spoil a good crop and the financial returns thereof, that people should get agitated about it. And it is also perfectly natural that they should blame everything but themselves.

The other day a prominent fruit worker said that he was going before a large crowd of fruit men whose fruit was seriously affected and tell them that they were to blame.

We rather think this man is right, for in every case of serious infection there are some thorough fruit men who have their orchards normally free from the outstanding pest. These men have invariably established thorough and efficient methods of control which they practice each year regardless of condi-

tions, and therefore get results regardless of conditions.

This leads us to the conclusion that those who do not take a chance, but do an extra thorough job all the time, are the ones who usually get the extra good results all the time. Too many of us let down on our vigilance too easily.

On Buying Ballons

A BALLOON is a half cent's worth of poor rubber which, when inflated with air, sometimes hot-air, becomes ten or fifteen cents worth, according to the nerve of the seller. Balloons have their attractions. The bright-colored, buoyant rubber ball is pleasing to a childish fancy. This makes the balloon business a good one—for the seller—but after a momentary pleasure the buyer feels as if he were stung.

But, while children buy cheap rubber balloons, grown folks buy more expensive ones. These are made of attractively colored stock certificates which are blown up to their limit by the hot air of the salesman. And like the child's purchase, there is a momentary feeling of pride in ownership but also, like the balloon, only too often it bursts and nothing is left but the paper certificate.

Balloon sellers ply a harmless trade compared to some stock sellers. So we suggest it as wise to investigate before you invest, and take into your counsel men who can better judge whether the stock purchase is a balloon or not.

Some stock are balloons, other are investments. Perhaps your banker can tell you which is which.

Toward Cleaner Living

CONTRARY to the thoughts of pessimists, we are truly progressing toward a cleaner living. Even though bootleggers abound, stills are busy and corks pop out of home-brew bottles, one great evil, drink, has been given a body blow. No great evil dies completely but drink will in due time become such an invalid that it will do no harm, even though this temporary spectacular liquor law-breaking may make it seem otherwise.

And in the matter of morals, even though women's skirts are shorter and the hair bobbed, we feel sure that the nation is getting cleaner morally. Our minds are more open than they used to be, and we discuss many of the things which were forbidden a generation ago. We have even discontinued marking with a scarlet letter the erring ones. This broader-mindedness and better morals go hand in hand, for vice thrives best in darkness and secrecy.

As the present outstanding evils are brought into control, it may be that other things which are not now considered evils, will be given attention. Perhaps the next great thing to be given consideration will be the cigarette with its insidious sapping of the fiber of manhood.

It is the thought of the optimist that we are coming to a better understanding of life and as we understand life better, it will become better.

"A Good Scout"

THESE three words mean much in boyhood and manhood for they bring to the mind the qualities of a real man. These qualities are hard to describe, but they involve a big consideration of others, a willingness to take rebuffs when fighting life's battles on the square, and a clean, upright personality. In the vernacular of the street, a "good scout" is "a real guy."

While these words have always had

their meaning, they have had added significance during the past generation because of the development of the boy scout movement. This movement has had a world-wide effect in making real men out of various kinds of boys, and in doing so has added considerably to the quality of manhood.

In our present day a boy develops to disadvantage if he is allowed to just "grow-up." Civilization has brought about so many disadvantages which prevent the natural development of the child. But a consistent, well-founded program of development like that of the Boy Scout movement, the Camp Fire Girls and the Boys' and Girls' Club work makes better boys than Nature ever thought of making, because it gives Nature a great assistance.

Because of the great importance of the habit of forming years of youth, it is vital that every parent bring to his child as much of the influences of the good boy and girl activities mentioned above as he possibly can.

And, too, if we are frank with ourselves, we find life so imperfect, so full of petty failings, that it will help us all if we will keep before us the ideals of a "good scout."

Digkneetee

SOPHIE is tryin' to learn me about digkneetee, but it is takin' me a long time to find out if it is a foreign langwiche or a new way of curin' sickness.

Sophie says I need this learnin' 'cause I ain't got enough digkneetee about me. I guess she is right, 'cause I went through all my pockets and can't find none at all.

When Sophie started this educashun, I tried a little of this digknee stuff to

see how it'd work. For inst., Ezra Samson was sitting next to me and we was actin' real sociable, then I give him a nice little slap on the knee and dug in, and he luffed and haw-hawed fit to

beat the band. Well, that worked fine, so when I was sittin' by Lizzie Robinson, listenin' to what she had to say about Widow Morrison and Jasper Johnson, I thought I'd try this digknee stuff, so I pat her on the knee. I guess I musta done it wrong or somethin'. Anyhow, what she said and did ain't in my recollectshun, 'cause it come too fast for my absorbshun. Anyhow, I was what you call considerably covered with embarrassmunt and my name hereabouts is Mud now.

And what Sophie said when we got home was somethin' I kin say but don't know how to spell. But when she come to the part I kin spell she said this digknee stuff wasn't digkneetee at all, and it just showed I didn't have none.

Well, since then I kinda found digkneetee is being like you don't want to be, but like other folks want you to be, like a boy on the last day of school what knows his Ma is lookin'.

Now, Sophie says William Hoskins, who nobody calls Bill, is digkneefied, but I don't want to be like him, 'cause he don't enjoy hisself, and he smiles and says nothin' when he'd like to say somethin' else.

Sophie says I kin still have digkneetee and not be like Mr. Hoskins, so I guess I gotta try and get some of that stuff to satisfy Sophie. I kin try for some more of this digkneetee stuff, but I'm goin' to be awful careful about this dig knee stuff, 'cause I find it is dangerous with some folks.

HY SYCKLE.

Cattle were the first money. The Roman word for money, pecuniam, is derived from the pecus, meaning cattle.—Well's Outline of History.



Hot Weather Hints for Poultrymen

Some Practical Suggestions on Summertime Care of the Flock

By C. J. Ferguson,

Poultry Extension Specialist, M. A. C.

MUCH has been said as to winter practices in the poultry yards, but in too many cases, particularly in farm flocks, as soon as summer comes, the hens are allowed to look out for themselves. This is possibly due to the excellent production received during and early summer which comes without extra exertion on the part of the farmer. We find that at this time of year any hen will lay, but the spirit of hard work is short-lived with the culls, and they again fall off in June and July.

Cull During July and August.

At this time of the year the culls are most easily identified. With a little training and study these unprofitable individuals can be taken out even earlier. Those hens showing lack of vitality, small round bodies, or the big beefy type, will not stand up long into the summer. The yellow pigment returns to the beak and shanks. They go into an early moult and are all through for another year. Get acquainted with the slacker-hen and learn to cull these out. This will materially decrease your cost of feeding and also get the benefit of a better market. Space will not permit a long discussion on culling. Attend a culling demonstration this summer and learn how.

Summer Ventilation.

The condition of the poultry house in summer should be given every attention. A hot, stuffy house is not conducive to health and high production. Make some arrangement for summer ventilation. This can easily be done by putting ventilators at the top of house to carry the hot air off. Bring fresh air in from opened windows, thus creating a constant circulation of air. In houses having shed roofs, fresh air inlets can be placed along the back. This can be done by hinging the cornice board so that it can be dropped, allowing air to enter between the rafters. This draft is prevented from striking the birds by lining up inside the house for a short distance over the roosts and down to the dropping board. This allows air circulation over the birds and keeps the house fresh and sweet.

Houses which have high roofs can use straw lofts to good advantage. These can be made by placing some loose boards over the joists and covering with a foot or fifteen inches of straw. This acts as an insulator, prevents the sun's rays beating down on the roof, heating up the house. This straw can be used to equally good advantage in winter as it aids in absorbing the moisture from the house.

If windows are used under the dropping boards these should be opened up, giving the house every chance to stay cool, particularly at night.

Shade should be applied for the laying stock during the day. If trees are scarce, a patch of sunflowers can be sown and fenced off until they get up to good size. Corn sown in rows makes excellent shade.

While it is true that the birds do not use the house a great deal during the summer it should never be neglected. Keep the dropping boards cleaned and watch for mites and lice. The nests and roost should be frequently treated. Crude oil applied frequently to the perches and nests will eradicate these blood-sucking mites. Lice, if well established, will reduce the production and cause an early moult. If the flock is lousy treat at once with sodium fluoride. This is the best and most easily applied lice treatment and will assure a clean flock for six months at least.

It is good practice during the sum-

mer months to reduce the grain and make the birds eat more mash. They do not require a feed rich in carbohydrates to keep up body heat at this time, but do need the stimulating constituents of mash. Sour milk or buttermilk, if available, should be given at all times and the meat scrap kept up to ten or twelve per cent. If no milk is available keep the scrap up to twenty per cent. A good mash can be mixed of equal parts of ground oats,

from the laying flock at this season. If they are required for breeding another year, put them in a coop and give them a pen away from the hens. If you do not need them, put them on the market just as soon as the breeding season is over. By keeping the males out the eggs will be infertile and the germ will not develop. This is the cause of such heavy losses in commercial eggs at this time of the year. These fertile eggs will, held at a temperature of

a quality product. If you continue to sell on the local market in competition with eggs produced carelessly, you will continue to lose money. You cannot afford to produce a good product and be penalized for the other man's carelessness and you cannot afford to play the role of the careless producer.

With the Young Stock.

Have you cleaned and put away all the brooding equipment ready for next spring? Stoves and metalware will last years longer if carefully cleaned up, oiled and put away in a dry place when the brooding season is over.

The main object with the young stock should be to bring them along with no setbacks and have them in the pink of condition when fall comes. The early hatched cockerels should be ready for the market before now. Segregate the best as soon as the sex can be detected, put them on a separate range away from the pullets. They will do better and the pullets are much better alone, particularly in the lighter breeds.

The cockerels will make better gains when fed alone and supplied with a moist mash in addition to the dry mash in hoppers. A good mash for the cockerels can be made up of ground corn, thirty pounds; ground oats, twenty pounds; bran, twenty pounds; middlings, twenty pounds.

This can be fed dry, and also two feeds a day moistened with milk, preferably sour or buttermilk. Keep milk before them at all times. If milk is not available, ten per cent meat scrap can be added to give the necessary protein.

Every care should be given to pullets from now until fall. See that the roosting quarters are well ventilated, kept clean and free from mites. Supply shade. An ideal place to raise pullets is in the orchard. The corn field, if not too far away, is an excellent spot. It supplies shade and abundance of insect life. Corn or sunflowers can be sown for shade if it is not convenient to move the colony houses to the corn field.

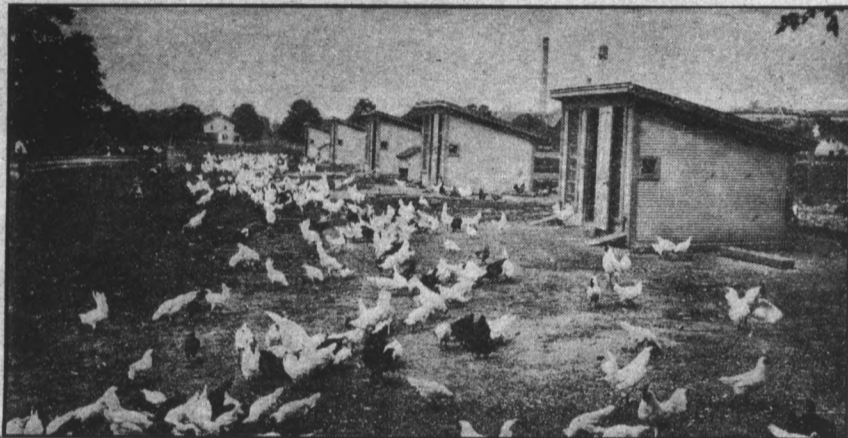
Hopper-feeding both the mash and grain feed is a great labor-saver, and gives excellent results. Outdoor hoppers can be constructed which will shed the rain and hold enough to last for several days.

If milk is available keep it before the birds all the time, if not, be sure they always have a supply of fresh, clean water, and ten per cent scrap can be added to the mash. A very good developing mash can be made from bran, twenty-five parts; middlings, twenty parts; ground oats, twenty parts. Corn, fifty parts; wheat, fifty parts, makes an excellent scratch feed which also can be fed in hopper.

As the pullets begin to develop, twenty per cent corn can be added to the mash to insure good fleshing before they commence laying. This will aid in preventing a fall moult in early pullets.

Special attention must be paid to the green feeds. Pullets not receiving plenty of greens will not yellow up or develop as strong constitutions as when given abundance. Oats are easily sprouted in summer and a patch of rape can be sown to provide this element. A patch of alfalfa is excellent and the birds will do well on a range of this kind. The old tough sod does not yield feed of any value during the hot, dry weeks of summer.

Keep a line on the most promising pullets and enter a pen in an egg-laying contest. The sale of breeding stock will be greatly increased by an official record at an egg-laying contest and will help to sell the eggs for hatching.



Ventilated Colony Houses Are Desirable for the Young Stock.

ground corn, bran, middlings and meat scrap.

Green feed is often neglected. During the hot weather the birds do not range far and the runs are very much devoid of green feed. Sow some rape, Chinese cabbage or sprout some oats for summer. The addition of a little green feed will aid in retarding the moult and help hold up production.

Be sure that all males are removed

seventy or eighty degrees for a few hours, start to produce germs. The heat is insufficient to continue the development and the germ dies and decays, causing rotten eggs.

This is a good time to look up markets for infertile eggs, as good eggs are hard to get on the average market at this time of the year. Get in touch with someone who will pay a premium for guaranteed eggs and then produce

What Michigan's Cow Testers Did in June

THE following summaries total the results for the month of June from the several cow-testing associations operating in Michigan. Two new associations are reported, namely, Eaton and Calhoun counties. Shiawassee, Kalamazoo and Ogemaw counties are each completing an association; Calhoun-Battle Creek has completed and is awaiting a cow tester, while both Cass and Washtenaw counties are half completed.

Association Data for June.

Association and Tester.	No. Cows Tested.	Monthly Average of All Cows.		Monthly Average of Ten High Cows.	
		Milk.	Fat.	Milk.	Fat.
Wayne, J. H. Mathiesen.....	226	979	34.4	1698.2	64.08
Kent, R. Harwood.....	224	874	33.4	1452.6	58.24
Lapeer, H. E. Hoisington.....	313	862	31.36	1799.4	76.45
Jackson, Roy Chilberg.....	257	828.5	30.2	1563.2	58.53
South Van Buren, G. C. Knight... 180	180	665.5	30.2	1327.9	55.35
West Allegan, J. R. Livermore... 216	216	632.5	29.5	1107.8	53.5
North Van Buren, M. S. Thomas.. 225	225	622.0	29.3	1150.2	56.53
Wayland-Allegan, R. Wilcox..... 248	248	787	28.43	1411.8	52.98
Parma-Jackson, F. Leonard..... 347	347	602.9	28.33	1132.3	54.84
Kalamazoo, S. P. Sexton..... 249	249	654	28.3	1152.3	54.78
Livingston, M. Proctor..... 184	184	768	27.5	1393.5	49.39
Newaygo, Hoyt Shisler..... 260	260	630	26.8	939.6	48.40
Calhoun, Percy Parkyn..... 157	157	641.7	25.16	1049.7	44.55
Eaton, Hans Kardel..... 188	188	636.8	23.04	1079.7	43.15
Emmet, D. Welsheimer..... 136	136	1024.3	53.92

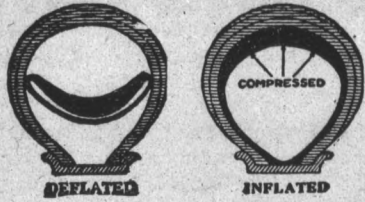


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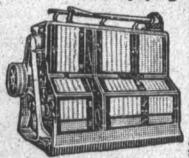
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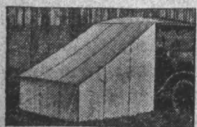
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Late Agricultural News

A BIG DAY AT COLDWATER.

PRESIDENT HOWARD, of the American Farm-Bureau Federation has been secured to address a big Southern Michigan picnic at Coldwater on August 17. This is the only occurrence of President Howard in Michigan this summer. His services were secured for the Branch County Farm Bureau by Milo D. Campbell, president of the National Milk Producers' Organization and a personal friend of Mr. Howard.

Coldwater business men have offered to turn the town over to the farmers for the day. No "Keep Off the Grass" signs will be up; in fact, this will be the one big day of the year in the southern Michigan city, when they plan to entertain the Farm Bureau, Grange and Gleaner members from all Southern Michigan counties and from Northern Ohio and Indiana. Several County Farm Bureaus are planning auto tours to Coldwater to welcome President Howard.

The Grange is cooperating in conducting the picnic. Charles M. Gardner, High Priest of Demeter of the National Grange, will speak for the Grange. The local Gleaners will also join in the big picnic and have a prominent speaker. A big parade is being planned, a ball game, and other sports will make things lively.

All farm organization members should show their colors on August 17 and help to prove to the world that the farm organizations of Southern Michigan are alive and active.

"GRATUITIES" TO BE DISCONTINUED.

THE Federal Trade Commission has issued orders requesting several manufacturers of road construction machinery to discontinue the practice of giving or offering to give to officers or employes of any town, county or municipality, money or other gratuities for the purpose of inducing them to purchase the company's products. It is alleged that this bribery or "tip" practice is being overworked in some sections by agents of the road machinery companies.

RAILROAD STRIKE WILL NOT AFFECT P. O. SERVICE.

THE United States Post Office Department announces that if every mail train should cease to run because of the strike, it would continue to transport the mails by motor truck and aeroplane. The department has 6,300 motor trucks and the war department has thousands of trucks stored in every section of the country. The department has in use fifty-six airworthy airplanes with forty pilots in the service, and twenty-one in the air each day. It is estimated that two planes could carry all the first-class mail between Washington and New York City. As now equipped the post office planes can carry 30,000 pounds of mail at one flight.

A POTATO TOUR.

A TRIP through the big potato section of the northwestern part of the state will take place August 17-24, under the management of J. W. Weston, potato specialist of the agricultural college.

The potato men will congregate at Lake City, August 17, immediately following the annual meeting of the Potato Growers' Exchange at Cadillac. The first day will be spent visiting the large potato farms of Missaukee coun-

ty under the guidance of County Agent Paul Smith.

Wexford county will be covered the next day and on Saturday the potato growers of Grand Traverse county will be visited. A week-end stop will be made at Indian Trail Camp, Traverse City, at which Dr. Houston, of the Grand Traverse County Farm Bureau will provide entertainment.

Monday will be spent in Antrim county, Tuesday in Charlevoix, Wednesday in Emmet, and Thursday a big round-up will be held at Maplewood Farms, which is owned by Thomas Buell, president of the Michigan Potato Producers' Association.

Among those who will attend the tour are C. W. Waid, of the Ohio State Farm Bureau; Professor Cox and J. W. Weston, of the college; H. C. Moore, secretary of the Michigan Potato Growers' Association; C. H. Barnum, of the Farm Bureau Seed Department; Jasop Woodman, of Paw Paw, and D. L. Hagerman, agricultural agent of the Pennsylvania Railroad lines.

FOR BETTER STATISTICS.

AGRICULTURAL statisticians V. H. Church, of Lansing, Mich., and J. B. Shepard, of Albany, New York, have been in consultation with Nat C. Murray, of the Crop Estimates Division of the Bureau of Agricultural Economics for the purpose of developing a more efficient system of securing comparative statistics on farm production.

The state of Michigan has made provision for a state agricultural census for which fifty per cent of the farms have been tabulated and the work is progressing very satisfactorily. Mr. Shepard proposes to select the farms along a ten-mile strip of roadway in each county in New York and with the cooperation of trained men from the statistical department with the farmers on the key farms, secure from time to time accurate data on the acreage of the various crops on each farm, and the yields. It is believed that within a few years much useful information could be collected in this way, and more reliable agricultural statistics obtained than by the ordinary state or federal census.

CONGRESSIONAL APPROPRIATIONS REDUCED.

THE total appropriations made by congress for the fiscal year of 1923 were \$3,747,035,382, a reduction of \$319,280,984 over those of last year, according to a statement issued by Representative Madden, chairman of the house appropriations committee. The indicated deficit for 1923 is \$697,000,000.

ANNUAL MEETING OF ELEVATOR EXCHANGE.

MR. W. E. PHILLIPS, of Decatur, is the second president of the Michigan Elevator Exchange. He was elected July 19 at the Michigan Agricultural College at the second annual meeting of the Board of Delegates of the Exchange. The delegates represented one hundred cooperative elevator associations now affiliated with the Michigan Elevator Exchange. Mr. Phillips succeeded James Nicol, of South Haven, president of the State Farm Bureau, who was first president of the Exchange and served two years.

L. C. Kamlowske, of Washington Farm Bureau local, was elected vice-president, and Carl Martin, manager of the Coldwater Cooperative Com-

pany, was re-elected secretary. Mr. Phillips is manager of the Decatur Co-operative Association.

The delegates re-elected four members of the board of directors to serve for two more years. They were H. D. Horton, manager of the Farmers' Elevator & Grain Co., at Kinde; John Nicolson, farmer, of Marlette; L. C. Kamlowske, of Washington, and Carl Martin, of Coldwater. Directors with one year to serve of their two-year terms are James Nicol, of South Haven; M. R. Shisler, farmer, of Caledonia; George McCalla, president of the Ypsilanti Farm Bureau, and B. H. Ellis, of Albion.

The annual report of the Exchange showed an increase in elevator membership from twenty-five organizations in October, 1920, to one hundred today. The report showed a comfortable working capital, a surplus of \$7,100, no debts and an increase in average monthly business from \$89,000 for October, 1920, to \$324,000 for the month ending July 19, 1922. During the past year the Exchange has marketed for elevator members representing more than 10,000 farmers, a little better than four and a half million dollars' worth of grain, hay and beans.

The board of delegates adopted a strong resolution endorsing the State Farm Bureau's second membership campaign which opens August 7 in Allegan county. They pledged complete support from the Elevator Exchange to the farm bureau in its membership drive and called upon every farmer member of elevator exchange co-ops to renew his State Farm Bureau membership. The delegates declared that a strong State Farm Bureau and strong County Farm Bureaus were fundamental to the future success of farmers' cooperative marketing programs in Michigan.

FRUIT GROWERS' SUMMER TOUR.

A REVISED schedule of the annual tour of the State Horticultural Society, which will be held in Allegan and Van Buren counties, is as follows:

August 1.

Lunch at Graham Horticultural Experiment Station, Grand Rapids.
Inspection of station, 1:00 to 2:00 p. m.
Arrive at Edward House farm, Saugatuck, 6:00 p. m.

August 2.

Fennville Fruit Exchange, 8:00 to 8:30 a. m.
Fennville Canning Company, 8:30 to 9:00 a. m.
Thomas Smith farm, 9:15 to 9:45 a. m.
Douglas basket factory, 10:15 to 10:45 a. m.
Taylor & Yager farm, on the shore of Lake Michigan, 11:00 to 11:30 a. m.
Lunch, Allegan County Park, 12:00 m. (Bring your bathing suits).
Waid & Waid farm, inspection of Baldwin apple orchard, 1:00 to 2:00 p. m.
P. H. Broe farm, dusting and spraying experiments and inspection of work on pear psylla control, 2:15 to 2:45 p. m.
Amos Tucker farm, 3:00 to 3:45 p. m.
Floyd Barden farm, 4:15 to 5:00 p. m.
Arrive at South Haven, 6:00 p. m.

August 3.

South Haven Experiment Station, 8:00 to 8:30 a. m.
South Haven Fruit Exchange, 8:45 to 9:30 a. m.
Farm of James Nicol, president of State Farm Bureau, 9:45 to 10:15 a. m.
Lyman Brothers' peach orchard, 10:45 to 11:15 a. m.
Spencer farm, 11:30 to 12:00 m.
Arrive at farm of Frank Warner, (this farm is the old L. H. Bailey farm), lunch 12:30 p. m.
C. J. Monroe farm, 2:00 to 2:30 p. m.
Green farm, 2:30 to 3:00 p. m.
Robert Anderson farm, 3:15 to 4:00 p. m.

Hogs Efficient In Marketing Grains

Corn Makes Best Showing in Comparative Feeding Value Tests at M. A. C.

By Prof. W. E. J. Edwards,

M. A. C. Animal Husbandry Dept.

THAT hogs ordinarily pay considerably above the market price for the feed they consume, and that they should be used to a greater extent in order to increase returns from grains grown on the average Michigan farm, is shown by the results of experimental feeding tests conducted recently at the Michigan Agricultural College.

The paramount question in the minds of most farmers is the ultimate price they will receive for their crops, and from this standpoint the hog, as a market medium, is placed in a very favorable position by the college experiments.

The test work was conducted to determine the comparative feeding value of the common home-grown grains—corn, barley and rye, which are the principal feeds used by Michigan hog growers for the production of pork. Five trials with various combinations of these grains, supplemented with middlings and sixty per cent digester tankage, were conducted. Skim-milk would have served the same purpose as middlings or tankage, but as the former is not available on such a large number of farms, the latter supplements were used.

Seven lots of six pigs each were used in each trial. Lot 1 was fed shelled corn, ground rye, ground barley and tankage; Lot 2, ground rye and tankage; Lot 3, ground barley and tankage; Lot 4, shelled corn and tankage; Lot 5, ground barley, ground rye, and tankage; Lot 6, ground barley, middlings and tankage, and Lot 7, ground rye, middlings and tankage.

Corn Makes Best Showing.

Of the grains used in the various rations, corn made the best all-round re-

turns, proving to be still "the king of hog feeds."

Each lot of hogs was fed through a self-feeder—a separate compartment being provided for each feed. In this way the hogs had free choice of the different feeds offered and consumed these as their requirements and appetite prompted them.

The average initial weight of the pigs in the different trials varied from fifty-nine to 146 pounds, but in each trial the initial weight of the pigs in the different lots was approximately the same. The final weights of the hogs in the different trials varied from an average of 155 pounds to 261 pounds.

These trials were repeated five times and the results of the different tests were very consistent. The data given are the average of the five trials.

The average daily gains and the feeds consumed per 100 pounds of gain follow:

	Lot 1.	Lot 2.	Lot 3.	Lot 4.	Lot 5.	Lot 6.	Lot 7.
	Corn, Rye, Barley, Tankage.	Rye, Tankage.	Barley, Tankage.	Corn, Tankage.	Barley, Rye, Tankage.	Barley, Midds., Tankage.	Rye, Midds., Tankage.
No. of pigs fed.....	30	30	30	30	32	32	32
Av. daily gain, lbs....	1.391	1.151	1.301	1.472	1.21	1.17	1.12
Feeds consumed per 100 pounds of gain:							
Corn (shld.) lbs..	239	.....	.....	395	.....	.....	.....
Barley (grnd.) lbs	53.5	.....	444	.....	257	269	.....
Rye (grnd.) lbs...	139	414	.....	.....	178	.....	195
Middlings lbs.....	.....	.....	.....	.....	.....	157.7	226
Tankage, lbs.....	30.5	42	28	40	32	26.6	26
Total	462.0	456	472	435	467	453.3	447

The two most important factors in hog feeding are the average daily feed to produce 100 pounds of gain. Lot 1, fed corn, barley, rye and tank-

age, made the next largest daily gain—1.39 pounds, but considerable more feed was necessary. Lot 3, given barley and tankage, followed with a daily gain of 1.3 pounds, but the amount of feed required was the highest of all. The gains made by the other four lots were fairly uniform and considerably lower with medium amounts of feed being required, except Lot 5, which consumed the second largest amount.

Nutritive Ratio Important.

It is interesting to note the proportions, or nutritive ratios, of the different feeds consumed by the hogs in the seven lots. That the proportion of crude protein (growing feed)-to carbohydrates and fats (the fattening feeds) in any feeding ration is important would seem to be indicated by the results of the college tests. This whole question of the "nutritive ratio" is an interesting one.

According to approved feeding standards, hogs of the weights use should have received an average nutritive ratio of 1:6.16. It will be seen from the following that all but one ration—that of corn and tankage—was narrower than this. While the corn and tankage ratio was somewhat above the standard it came nearer to it than did any of the others. Several of the rations, especially Lots 2, 6 and 7, were much narrower than is recommended.

Nutritive Ratio of the Seven Rations.

Lot 1, corn, rye, barley and tankage, 1:5.99; Lot 2, rye and tankage, 1:4.81; Lot 3, barley and tankage, 1:5.82; Lot 4, corn and tankage, 1:6.25; Lot 5, barley, rye and tankage, 1:5.46; Lot 6, barley, middlings and tankage, 1:4.78;

(Continued on page 108).

Silage a Good Milk Cost Reducer

By J. H. Frandsen

BUILDING a silo must not be reckoned as an expense, but as a desirable investment. It is an important step toward a better and more permanent agriculture, and one of the best investments that can be made on the farm.

The reasons for the need of the silo on the farm are numerous, the most important of which are: Insurance against drouth; saving of a portion of the injured crops; saving of a large part of the corn crop that would otherwise be wasted; more and cheaper food production.

In seasons of drouth when the pastures are "burnt up" and the crops partially or totally ruined, the farmer having live stock must dispose of a large part of his herd—usually at a sacrifice, or buy high-priced feed. Here the farmer with the silo is ahead of the man who has none. He can keep his stock in good shape by giving them the silage he has stored from years of plenty. Corn properly ensiled will keep for many years.

He can save portions of the crops damaged by hail, frost, drouth or other causes, that would otherwise be a total loss. Many crops can be successfully ensiled. A silo will also save most of the feeding value of the corn plant, such as the husks, leaves and stalks, much of which is generally wasted.

In cattle feeding, silage takes the place of a large amount of roughage and grain, thus releasing high-priced food for human consumption. The essentials of a satisfactory silo are: Exclusion of air; retention of moisture of crop ensiled; perpendicular walls

smooth inside; durability, wind resistance, and good appearance.

Building the Silo.

Do not build a silo too large in diameter. The diameter should be such as to make possible the feeding of about two inches a day; certainly not less than one inch a day. A one-hundred-ton silo will hold enough to feed forty pounds of silage a day to twenty-five cows for two hundred days. Build the silo to keep as much silage as you will use.

Do not wait until the last minute and then order your material, but get the material ahead of time and then put

up the silo when work is not rushed. Do not wait until fall and then put it up, when you should be filling. Do it now.

Build the silo close to the barn. A silo located close to the feed manger insures a large amount of handy feed in bad weather and it also saves labor.

Crops for Silos.

Almost any green forage crop may be ensiled, but the best crops for Michigan farmers are corn and sunflowers. There are several ways of planting corn for silage. It may be planted in the ordinary way or planted thicker than when the crop is used for

grain, and cut when the corn is well dented, the lower leaves dry and the stalk full of sap. Corn is sometimes ensiled with cowpeas or soy-beans mixed, which is a good practice for enriching the silage.

Silage is valuable as feed for dairy cattle because of its succulence, palatability, feeding value and production of milk. The succulence of the feed keeps the cow in good health, her system in good physical condition, and this makes it possible to digest her feed most economically. The palatability of silage induces the consumption of large quantities of other feed. This increase in feed consumed, together with the way it is relished, naturally results in a large milk flow.

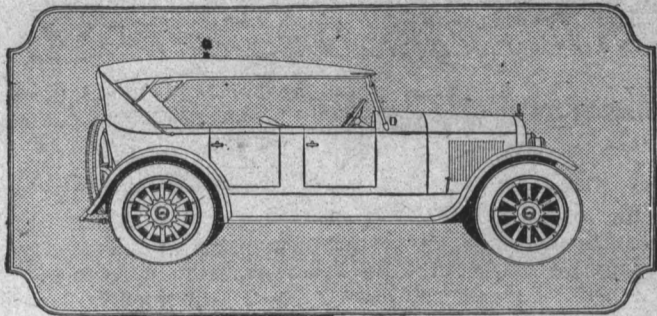
Most generally silage is fed in winter when it gives the effect of summer pasturage. The reason that cows increase the flow of milk when put on pasture in the spring, is that they are getting a succulent feed. The succulence of silage affects the flow of milk in a similar manner. A very good ration for winter feeding is thirty pounds of corn silage, all the alfalfa or clover hay they will eat up clean and a pound of grain for each three pounds of milk produced daily.

While most commonly used for winter feeding it is by no means less important for use in summer. Nearly every summer the pastures dry up in the latter part of July or August and during this time the cows invariably drop off in milk flow, sometimes fifty per cent. This may be partially overcome by feeding succulent feed in the form of silage. Some of the more ent-

(Continued on page 109).



The Silo Stores Summer Succulency, Therefore Conserves Digestibility.



Earl power and economy make it the recognized farm car

A great increase in Earl sales in the smaller cities is the most striking fact in recent Earl history. Earl dealers in these cities report that a large number of the cars already delivered or now on order have been sold to discriminating farm owners, after exacting road tests and comparisons with other cars—many much higher in price.

To the makers of Earl cars this is great and significant news. Any good car can meet the requirements of the average city dweller, with brick and asphalt under his tires and only occasional runs into the country to tax his machine.

To satisfy the men who live and produce in the country, however, a motor car must be able to stand up under all kinds of weather and road conditions. It must be comfortable and safe and easy on the roughest highways. It must have power to spare in the deepest mud and on the longest hills. And to earn its keep, it must be economical.

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All prices f. o. b. Jackson

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PROPERTY HELD BY ENTIRETY.

When, husband and wife have joint deed to property, can husband mortgage or have buildings erected on said property without wife's consent? Can others build on property without wife's consent?—R. R.

The husband cannot give a valid mortgage on this property without the wife's signature, but he may alter or erect buildings, as he has the right to manage the property.—Rood.

SWEET CLOVER AND ORCHARD GRASS FOR PASTURE.

I am wondering if sweet clover and orchard grass could be sown on red-top sod for permanent pasture. Soil is rather light sand. If so, how much per acre and what time should they be sown? Which would be the best, annual or biennial sweet clover? Would it be best to run over the field with a spike-tooth drag or not? If those grasses would not do on the sod, what would you suggest?—A. J. W.

Much depends on the condition of your red-top sod. If the red-top is quite thick, forming a good heavy sod, there is little chance of other grasses getting established by sowing the seed on this sod. But if the stand of red-top is open the other plants might get established. This would be especially true of biennial sweet clover. This plant frequently establishes itself along the roadside and in some instances the adjacent fields, even in a fairly well established sod of June grass or timothy. If there is any opening between the plants so the seed can get a soil cover it will germinate and grow. When once started it has vigor enough to more than hold its own. However, I would not expect to have equal success with orchard grass.

If your red-top is pretty well established you have pretty good pasture anyway. It would probably be safe to sow five or six pounds of biennial sweet clover now or any time this fall, (annual sweet clover is not adapted for such a purpose), and it would do no harm to try a little orchard grass.

rapidly and blossom when they are only a few weeks old and mature seeds within a few days after the blossoms begin to show. A plant will continue to bear blossoms and produce seeds for a number of weeks. Inasmuch as one plant will produce thousands of seeds and the seeds germinate and produce a second crop of plants, etc., it is apparent that one must prevent seed formation from the very first. If the land is to be planted to cultivated crops it should be cultivated at frequent intervals until one is ready to plant the crop so as to prevent the stocking of the ground with seeds. Particular pains should be taken during the growing season to keep the ground cultivated, and if corn is planted hoeing should be continued after the corn is too high for cultivation so as to prevent the plants that are produced from developing seed. Particularly is it essential to watch this plant in the fall as it will continue to produce seed until killed by frost at a season of the year when one ordinarily does not think it necessary to cultivate.—Bessy.

DOWER RIGHT.

I gave my wife my property of eighty acres. She will not give me a life lease or a joint deed of the place. I have a house and lot in my name. Can I sell it and give a clear deed without her signature?—Subscriber.

The subscriber's deed without the wife's signature will pass title subject to the possible dower right of one-third for life to the wife if she should survive him.—Rood.

PEACHES FOR CENTRAL MICHIGAN.

Kindly inform me as to the hardiest and most productive varieties of peaches adapted to growing in Eaton county. What is the best fertilizer for them, and how closely should they be set? Is the Hale peach a good variety for this locality, on clay soil?—Mrs. M. M. Hill's Chili, Gold Drop and Lemon Free are very hardy varieties for the central part of the state, and all are splendid canning varieties. When they set crops of fruit, require rather heavy pruning of the trees and thinning of the fruit along with good cultural practices, cultivation, etc., to produce good grades of fruit.

The distance of planting is usually twenty feet apart each way, and during the first two years any inter-crop which is used should be one that ripens early so that cultivation can be stopped by the first of August and a cover crop planted to help ripen the wood. No peaches should be planted in central Michigan except upon high elevations with good air drainage.

A variety known as Judd, with which I am not familiar, has given splendid satisfaction to Farley Brothers, at Albion, but I do not know where the trees can be gotten. Would hesitate without more knowledge to recommend the Hale peach for central Michigan.

In relation to fertilizer while the trees are young would suggest that during the first two years that two ounces of either sulphate of ammonia or nitrate of soda per tree, and half a pound of acid phosphate per tree be used, applying same the middle of April and as the trees get older the amount can be increased in proportion as the size of the trees, as we have been getting some splendid results from the use of fertilizers on bearing peaches the last two years.—T. A. Farland.

RIGHTS OF LAND CONTRACT PURCHASER.

A signed a contract to B on a twenty-acre farm. A has to pay \$100 a year. A paid taxes and interest, but was unable to pay the \$100 each year. B now asks for \$500 for payments which are due. A seeds winter rye for the coming year, then A goes to get the money promised and the promise was forgotten. In December B tells A he has nothing to do with the farm. A moves out and D buys the farm. D says rye belongs to him, because the farm is his. A's contract expired the same month D bought the farm. Would like to know if the rye belongs to A or D.—A. H.

If not estopped by abandonment, A is entitled to the rye on making up all back payments; otherwise not. If he has by word or act induced D to think he is getting title, A is estopped.—Rood.

NECK WEED.

Inclosed is a sample of a weed which is a very persistent grower and seems hard to eradicate. They are creeping plants and have little white flowers. They do not seem to be affected much by plowing or cultivating, but come up as thick as ever after the next rain. Please tell us what kind of weeds these are and the best way to eradicate them.—R. H.

The weed accompanying your letter of April 24 is Veronica peregrina, Purslane speedwell or "Neckweed." This is an annual plant that springs up early each year from the seeds produced the previous season. The plants grow

Before You Buy A Silo Compare Quality and Prices

The first patent ever issued on a silo was awarded Kalamazoo over 30 years ago. Experience has again proved a good teacher.

Kalamazoo Tile and Wood Silos

are the standard of the world today. A Kalamazoo silo is a money-maker for you. A poor silo is an expense. Over 70,000 farmers can testify to Kalamazoo reliability and stability.

Our Glazed Tile Silos are built of absolutely moisture-proof glazed tile—positively weather tight. Blocks have three dead air spaces—resist heat, cold, moisture, vermin. Need no paint or repairs. Will not warp, decay nor blow down.

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CHERRY LEAF SPOT.

LEAF spot of cherries has made its appearance in all of the cherry-producing sections of northern Michigan in a very virulent form. At this writing the Montmorency cherries are just turning red, but many trees are defoliated. This defoliation is not confined to trees in unsprayed orchards, although, of course, it is worst where no spray has been applied. The disease appeared very suddenly about June 22 and spread with great rapidity. This was about ten days after the third spray had been applied and those orchardists who were spraying properly were not badly afflicted. But where the growers were not awake to the situation, the yellow leaves appeared almost before spray rigs could be made ready.

A very important factor has again been proven by this outbreak. Clean cultivation of cherry orchards is the best means of preventing leaf-spot, next to spraying cherries. Where the orchard is free from weeds, the affected leaves from the previous year are disposed of. Cultivation buries them and destroys the fungous, by exposing it to the elements. Where the leaves are allowed to remain on the ground, they carry the infection from year to year and when the conditions are right shoot the spores into the air, which lighting on an unsprayed cherry leaf, germinate and produce leaf spot. Hence a very important factor of cherry growing is to dispose of the affected leaves, and keep the orchard clean.

Where the infection is bad this year, it will probably pay to plow the infected leaves under at once, and sow to a cover crop, and then disc the cover crop under early next spring and keep your cherry orchard free from weeds next year. Another very important factor in the control of the cherry leaf spot is to spray immediately after using either lime-sulphur 1-40 or Bordeaux mixture 4-4-50 with one pound of arsenate of lead to every fifty gallons of mixture. The lead with the fungicide will control the slugs which work on the cherries.

To sum up, clean cultivation with proper spraying is essential for the control of leaf spot on cherries.—J. L. Kraker, Beulah, Mich.

PROPER MIXING OF BORDEAUX.

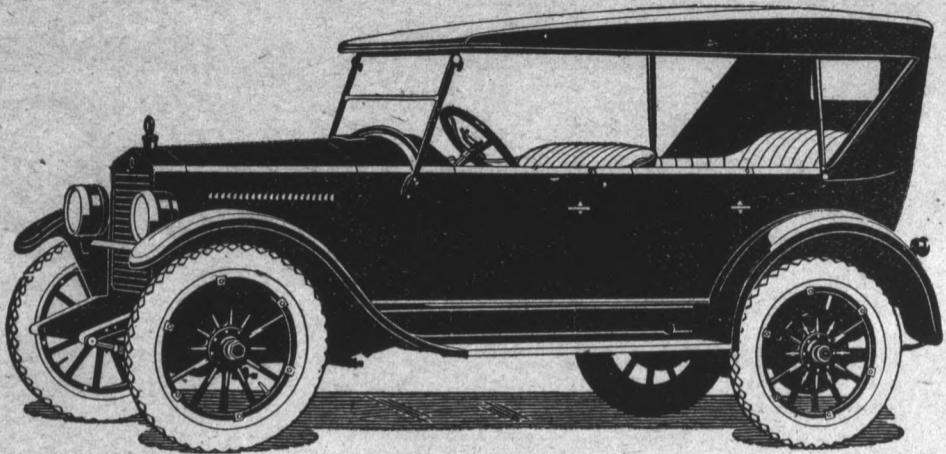
MUCH of the value of Bordeaux mixture in spraying potatoes depends upon how the materials in the mixture are compounded. The standard formula consists of five pounds of blue vitriol, or copper sulphate, and five pounds of freshly burned lime in fifty gallons of water.

The copper sulphate is dissolved by placing it into a bag and suspending in water. The lime is treated separately. A little hot water is poured on the lime until it becomes active. Then cold water is added slowly as the lime slakes until a fairly thin white liquid results.

In mixing, either the copper sulphate or the lime, should be fairly diluted. It is better, especially where mixing small amounts, to pour the copper sulphate solution into the milk of lime. A heavy sediment is apt to result if the opposite process is followed. Many potato growers have mixed it the wrong way and the results have been of comparatively little value.

Hand-picking of small stone is the old reliable, and so far as we have been able to find, the only method. Several machines have been built for this purpose, but as yet none have proved satisfactory. It is hoped that in a few years something may be manufactured which will eliminate some of the drudgery of ridding farms of stone.

\$1095



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smoothness is even more pronounced. You will instantly note its greater beauty. Its care and attention are easier, cleaner, more convenient.

It will reveal a charm you never suspected in any except the large costly cars.

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Old owners tell you of a car so enduringly designed and built that its performance improves for thousands of miles.

But today's Essex combines advantages no earlier owner knows. Go see, and ride in it. It is the best Essex ever built, and at the lowest price.

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Back of the new Essex is all we learned in building 70,000 earlier Essex cars. Finer precision standards have resulted and Essex

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- Lubricated with an oil can—no messy grease cups.
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Touring, \$1095

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(458)

More Silage—Better Silage

If you own a silo it will pay you to own a Papec Ensilage Cutter also. Figure it out for yourself. The cutter crew fills your silo hurriedly. After it is gone, the silage settles and settles until your silo is about one-fourth empty. With your own cutter, you fill moderately and cut close; there is little settling when you finish and that little can be easily

The Powerful PAPEC Ensilage Cutter

refilled. More important still, your corn is likely to be too green or too ripe when the hired crew arrives. In either case, the silage does not have full feeding value. With your own cutter, you can fill when the corn is just right to give you the highest quality of silage. The stock will clean up their silage closer and get more nourishment from it. Besides, there is a very considerable saving in actual cash outlay. These savings taken together will pay for a Papec in two seasons, and it will still be nearly as good as new.

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Our Catalog fully explains how Papec users save money by owning their own ensilage cutter. It also gives the broadest guarantee made by any manufacturer of ensilage cutters—a guarantee that is backed by our entire assets, including the largest exclusive ensilage cutter factory in the world. Write today.

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AS STANDARD AS A HOE
1 MAN - 1 "GUNN" - 1 DAY can readily harvest 2 1/2 ACRES of beans. Wet weather need not stop the bean harvest if you have a "GUNN". ROOTS are really left in the field. Beans dry much faster - threshing is cleaner. NO EASIER CHEAPER way to HARVEST BEANS.

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Rural Health and Sanitation

Conducted by Dr. C. H. Lerrigo

WHAT ABOUT THE VITAMINES?

ONE of the most comforting things to know about the vitamins is the fact that they are nothing new and that anyone who is reasonably careful to eat a mixed diet of good natural food needs to give them little thought. The chief value of the new theory to the average man has been to explain why certain foods which contain no great amount of nourishment are so indispensable to health. Take the leafy vegetables, for example: we knew that they were good in promoting regular habits of the bowels because they contained the "roughness" in their cellulose content necessary to stimulate the bowels to action. But we did not appreciate the fact that they were also amongst the very best foods for "pep" and energy and good digestion because of being unusually rich in vitamins. Now that we know this fact it gives us a good deal more interest in seeing that our gardens are encouraged to produce such vegetables as lettuce, spinach, chard and cauliflower, as well as the more utilitarian cabbage.

It is undoubtedly true that the process of cooking destroys the vitamins to a certain extent, but the average diet is so rich in the elements needed that plenty remains for our needs in spite of this impairment.

The most important consideration is in reference to milk given to infants as the sole article of diet. Warming fresh milk to a temperature suitable for feeding makes so little difference as to need no attention. But it may be necessary to boil, or at least pasteurize the milk for some good and sufficient reason. In such cases it is important to provide vitamins in some other way or the child will become ill with scurvy. Orange juice, given in small quantities, from a few drops to a teaspoonful daily, will fully make up the vitamin deficiency. If orange juice is not readily obtainable the juice of fresh or canned tomatoes is an efficient substitute. It should be given guardedly, however, as it does not always agree with the infant digestion as readily as the orange juice seems to do.

So long as our food contains a reasonable amount of whole milk, fresh fruit and vegetables, such as apples and cabbages, and cereals, such as bread and oatmeal, we need have no fear of not getting enough vitamins.

HIGH BLOOD PRESSURE.

I am a lady, forty-eight years old, and am bothered with high blood pressure. It is 140 all the time. Is that dangerous or not? I am so very nervous and dizzy all the time.—R. T.

One hundred and forty is not unusually high blood pressure for a woman of forty-eight. It is only a few points above normal for that age, and blood pressure varies a few points for very small matters.

REST NEEDED.

I am almost forty-one years old and the mother of four young boys and two little girls. We are farmers with a big garden, and fruit for the mother to care for, in addition to the family. There is a grandmother also, who thinks I should still take in extra work to keep up household expenses. Can you send me some kind of a drug to keep me up until the children get older? I could pay you as soon as I could send some chickens to town.—B. B.

There is no such drug. Stimulating tonics give an artificial energy but soon leave you worse than ever; they

are only the whip to the tired horse. My prescription for you is eight to nine hours sleep every night, in a single bed, in a room with lots of fresh air. Half an hour sitting down to every meal. One hour rest lying down in the afternoon each day. This is what you need. It is your right, and any sensible husband will see that you get it. It is just a matter of self-interest for you will soon wear out entirely without it.

EXOPHTHALMIC GOITER.

Is an exophthalmic goiter different from the other kind? Which is the most dangerous? Is there any cure for the exophthalmic kind?—M. R.

An exophthalmic goiter differs widely from the simple variety and is more serious. It causes degeneration of the thyroid gland and a general poisoning of the system. Quite usually the heart suffers seriously, the eyes may protrude, the whole body is weakened and usually becomes emaciated. In the early stages of the disease a building-up treatment, similar to that given to patients with tuberculosis, is very helpful and may check the progress of the disease so that a good recovery is made. In other cases nothing seems to do any good short of the complete removal of the gland. This often produces cures that seem almost miraculous.

SLEEPLESSNESS.

I am thirty-nine years old, in good health in most ways, but a very poor sleeper. Is there any harmless sleeping powder that you can prescribe to make me sleep?—G. D. F.

There is no such thing as a harmless sleeping powder or drug. Any medicine given expressly for the purpose of producing sleep will eventually react disastrously. A thorough physical examination, including blood pressure, heart action and kidney condition may disclose something that can be cured by medicine and thus give better sleep. I recommend such action. But take no drug that will "make you sleep."

USING OPENED CANS.

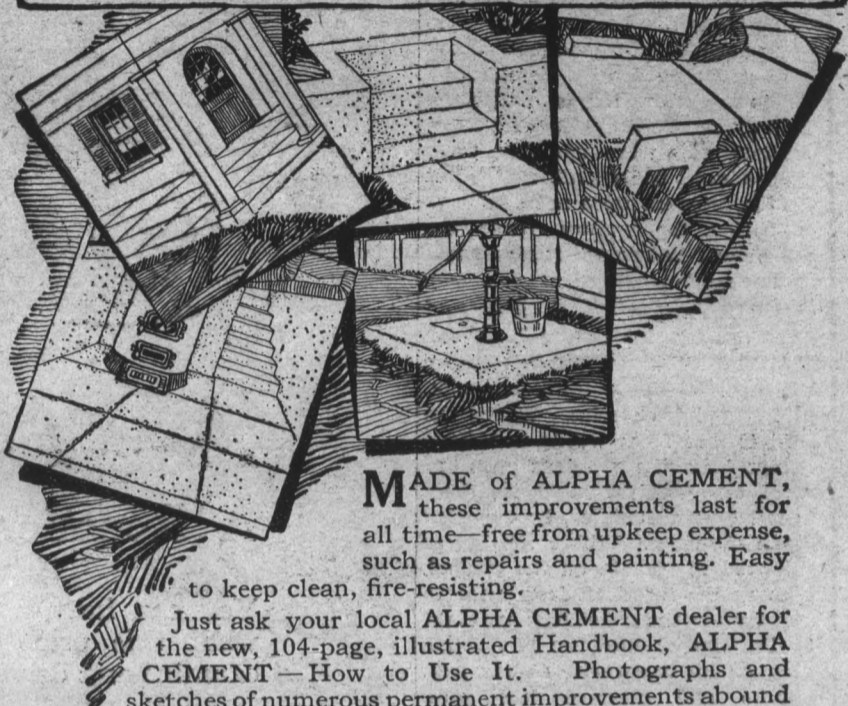
Please tell me if it is very dangerous to allow canned foods to stand in an open can. Would the use of such foods cause death from ptomaine poisoning?—F. D. R.

The practice of allowing foods to stand in open cans is a very poor one. After a can is opened the contents should always be stored in a clean vessel, preferably of earthenware or porcelain. However, it is fair to say that the danger of a tin can is usually exaggerated. The inner surface of cans used in packing food is treated with a shellac which is insoluble in ordinary food juices. It is only when a flaw is present that acid foods may attack the container.

Betsy:—I cannot make a complete diagnosis of your case. The underweight and lassitude might indicate tuberculosis but would be just as prominent if you were absorbing pus from some purulent focus in the body. A blood test would show the difference. The only "home treatment" that I can suggest is a lot of rest and extra nourishment. Sometimes when a patient objects to milk I find that they take malted milk very well and get much good from it, but fresh milk is better.

The Chinese made agriculture a part of their school courses over four thousand years ago.

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MADE of ALPHA CEMENT, these improvements last for all time—free from upkeep expense, such as repairs and painting. Easy to keep clean, fire-resisting.

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If you desire to make money and work up in the insurance field, write at once.

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27 Turner Bldg.,
Battle Creek, Michigan

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Michigan Fruit Farm—Equipped 200 Acres—Growing Crops

Handy town; 90 acres money-making tillage; 20-cow spring-watered pasture; about 1000 cords wood, 50,000 ft. timber, sugar maples; 200 heavy bearing apples; maple-shaded 10-room house, cool porch, delightful view; 46-ft. barn, silo, granary. Owner unable operate, \$5500 less than value buildings, gets it, horses, 3 cows, 3 hogs, poultry, cream separator, thrasher, full implements thrown in if taken now, less than half cash, easy terms. Details page 133 Big Bargain Catalog FREE. STROUT FARM AGENCY, 814 BO Ford Bldg., Detroit, Mich.

Lake-View Farm on State Road Growing Crops, 3 Horses and

150 poultry, cow, vehicles, tools, potatoes; tomatoes, cabbage, beans, oats, hay, garden included if taken soon; 30 acres in vacation land; roadside market; fishing, bathing, boating; 27 acres rich loamy tillage; creek-watered pasture; 32-tree fruit orchard; good 7-room house overlooking lake and beautiful countryside; good barn, outbuildings. Other interests pressing, \$4150 takes all, only part down. PETER SALOWITZ, 721 15th St., Port Huron, Mich.

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of rolling loam land suitable for farming or grazing, watered by fine spring trout stream, located one mile East of Loranger on M. C. R. R. and trunk line highway, and about six miles from City of West Branch, the county seat of Ogemaw County, one of the finest counties in Michigan, at \$12.00 per acre if sold in block, on terms to suit purchasers. Owner WILLIAM T. YEO, West Branch, Michigan

Celling on account of sickness. Beautiful dairy farm fully equipped with Jerseys, with or without stock, right price, easy terms. Write at once. Geo. E. Walker, Burton Heights, Grand Rapids, Mich.

80 Acre Farm all stumped, good buildings, running water, good well, all kinds of poultry buildings, terms, \$5,000. Owner BARTY GIBBS, R. 5, White Cloud, Mich.

For sale—not able to farm will sell my fine farm, 3 miles from Lansing. Good buildings, best of soil 122 acres. S. W. Hempy, owner, R. 7, Lansing, Mich.

If You Want To Sell or exchange farm or city property write, Ann Arbor, Mich JEROME PROBST.

WANTED To hear from owner of land for sale. O. K. HAWLEY, Baldwin, Wisconsin

DOGS

Ten Extra Fine fox hound pups three months old, none better, males \$15, females \$10, W. E. LECKY, Holmesville, Ohio.

WORLD EVENTS IN PICTURES



The striking railroad shop workers in Chicago gather at a local baseball park to hold a big mass meeting.



Mrs. E. C. Cooper, the democratic nominee for the United States Senate from Wisconsin.



Smallest cow and largest steer in the world. The cow is twenty-six inches high and steer weighs 4,200 pounds.



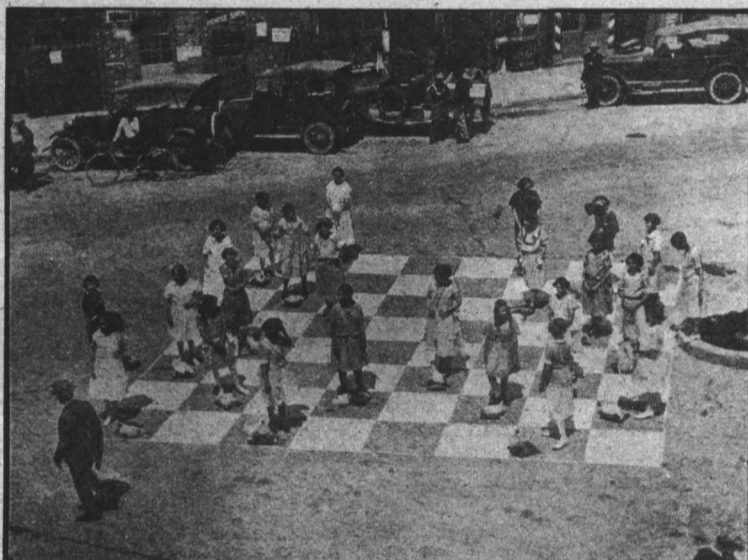
A view of the express train wrecked between Camden and Atlantic City. Twenty were killed and about seventy-five injured when the train plunged down a forty-foot embankment.



An armored car and tender which was used in the Irish Rebellion of the Four Courts in Dublin. Many World War veterans are being used in the Irish uprising.



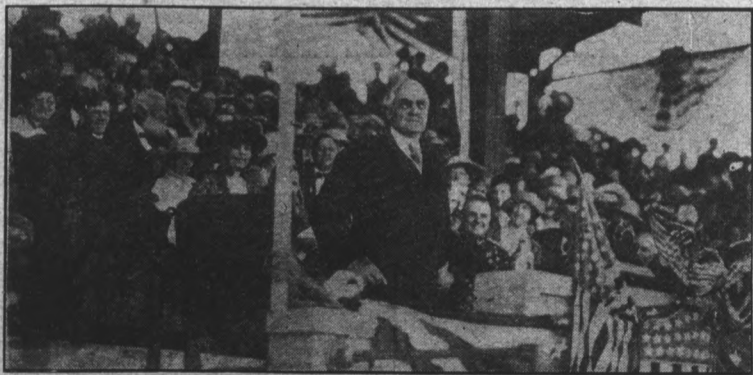
Prominent Chinese girls intend to start a bobbed-hair crusade in their native country.



Chicken checkers is the latest craze in the west. Twenty-four girls play the game, each with a chicken tied to a board. The one who is "jumped" loses her chicken.



Miss Katherine Agar, American champion javelin and baseball thrower.



President Harding recalls many boyhood incidents in his speech before his townfolks at Marion, Ohio, on Independence Day. Mrs. Harding can be seen at the left.



Just a hint of the coming styles. Five models, each of a different color, recently exhibited at the celebrated style show at the Prix des Drags in Paris.

THE CROSS-CUT *—By Courtney Ryley Cooper*

Copyright, 1921, By Little, Brown & Company

He drew the flickering torch to the edge of the shaft and held it there, staring downward, Fairchild beside him. Twenty feet below there came the glistening reflection of the flaring flame. Water! Fairchild glanced toward his partner.

"I don't know anything about it," he said at last. "But I should think that would mean trouble."

"Plenty!" agreed Harry lugubriously. "That shaft's two 'unnerd feet deep and there's a drift running off it for a couple o' 'unnerd feet more before it 'its the vein. Four 'unnerd feet of water. 'Ow much money 'ave you got?"

"About twenty-five hundred dollars." Harry reached for his waving mustache, his haven in time of storm. Thoughtfully he pulled at it, staring meanwhile downward.

"And I ain't got more'n five 'unnerd. It ain't enough. We'll need to repair this 'oist and put the skip in order. We'll need to build new track and do a lot of things. Three thousand dollars ain't enough."

"But we'll have to get that water out of there before we can do anything," Fairchild interposed. "If we can't get at the vein up here, we'll have to get at it from below. And how're we going to do that without unwatering that shaft?"

Again Harry pulled his mustache. "That's just what 'Arry's thinking about," came his answer finally. "Le's go back to town. I don't like to stand around this place and just look at water in a 'ole."

They turned for the mouth of the tunnel, sliding along in the greasy muck, the torch extinguished now. A moment of watchfulness from the cover of the darkness, then Harry pointed. On the opposite hill, the figure of a man had been outlined for just a second. Then he had faded. And with the disappearance of the watcher, Harry nudged his partner in the ribs and went forth into the brighter light. An hour more and they were back in town. Harry reached for his mustache again.

"Go on down to Mother 'Oward's," he commanded. "I've got to wander around and say 'owdy to what's left of the fellows that was 'ere when I was. It's been twenty years since I've been away, you know," he added, "and the shaft can wait."

Fairchild obeyed the instructions, looking back over his shoulder as he walked along toward the boarding house, to see the big figure of his companion loitering up the street, on the beginning of his home-coming tour.

It was evident that Harry was popular. Forms rose from the loitering places on the curbs in front of the stores, voices called to him; even as the distance grew greater, Fairchild could hear the shouts of greetings which were sounding to Harry as he announced his return.

The blocks passed. Fairchild turned through the gate of Mother Howard's boarding house and went to his room to await the call for dinner. The world did not look exceptionally good to him; his brilliant dreams had not counted upon the decay of more than a quarter of a century, the slow, but sure dripping of water which had seeped



through the hills and made the mine one vast well, instead of the free open gateway to riches which he had planned upon. True, there had been before him the certainty of a cave-in, but Fairchild was not a miner, and the word to him had been a vague affair. Now, however, it was taking on a new aspect; he was beginning to realize the full extent of the fight which was before him if the Blue Poppy mine ever were to turn forth the silver ore he hoped to gain from it, if the letter of his father, full of threats though it might be, were to be realized in that part of it which contained the promise of riches in abundance.

Pitifully small his capital looked to Fairchild now. Inadequate—that was certain—for the needs which now stood before it. And there was no person to whom he could turn, no one to whom he could go, for more. To borrow, one must have security; and with the exception of the faith of the red-faced Harry, and the promise of a silent man, now dead, there was nothing. It was useless; an hour of thought and Fairchild ceased trying to look into the future, obeying, instead, the insistent clanging of the dinner bell from downstairs. Slowly he opened the door of his room, trudged down the staircase—then stopped in bewilderment. Harry stood before him, in all the splendor that a miner can know.

He had bought a new suit, brilliant blue, almost electric in its flashiness,

nor had he been careful as to style. The cut of the trousers was somewhat along the lines of fifteen years before, with their peg tops and heavy cuffs. Beneath the vest, a glowing, watermelon-pink shirt glared forth from the protection of a purple tie. A wonderful creation was on his head, dented in four places, each separated with almost mathematical precision. Below the cuffs of the trousers were bright, tan, bump-toed shoes. Harry was a complete picture of sartorial elegance, according to his own dreams. What was more, to complete it all, upon the third finger of his right hand was a diamond, bulbous and yellow and

throwing off a dull radiance like the glow of a burnt-out arclight; full of flaws, it is true, off-color to a great degree, but a diamond nevertheless. And Harry evidently realized it.

"Ain't I the cuckoo?" he boomed, as Fairchild stared at him. "Ain't I? I 'ad to 'ave a outfit, and—"

"It might as well be now!" he paraphrased, to the tune of the age-whitened sextette from "Floradora." "And look 'at the sparkler! Look at it!"

Fairchild could do very little else but look. He knew the value, even in spite of flaws and bad color. And he knew something else, that Harry had confessed to having little more than five hundred dollars.

"But—but how did you do it?" came gaspingly. "I thought—"

"Installments!" the Cornishman burst out. "Ten per cent down and the rest when they catch me. Installments!" He jabbed forth a heavy finger and punched Fairchild in the ribs. "Where's Mother 'Oward? Won't I knock 'er eyes out?"

Fairchild laughed—he couldn't help it—in spite of the fact that five hundred dollars might have gone a long way toward unwatering that shaft. Harry was Harry—he had done enough in crossing the seas to help him. And already, in the eyes of Fairchild, Harry was swiftly approaching that place where he could do no wrong.

"You're wonderful, Harry," came at

last. The Cornishman puffed with pride.

"I'm a cuckoo!" he admitted. "Where's Mother 'Oward? Where's Mother 'Oward? Won't I knock her eyes out, now?"

And he boomed forward toward the dining-room, to find there men he had known in other days, to shake hands with them and to bang them on the back, to sight Blindeye Bozeman and Taylor Bill sitting hunched over their meal in the corner and to go effusively toward them. "'Arry" was playing no favorites in his "'ome-coming." "'Ar-ry" was "'appy," and a little thing like the fact that friends of his enemies were present seemed to make little difference.

Jovially he leaned over the table of Bozeman and Bill, after he had displayed himself before Mother Howard and received her sanction of his selections in dress. Happily he boomed forth the information that Fairchild and he were back to work the Blue Poppy mine and that they already had made a trip of inspection.

"I'm going back this afternoon," he told them. "There's water in the shaft. I've got to figure a wye to get it out."

Then he returned to his table and Fairchild leaned close to him.

"Isn't that dangerous?" "What?" Harry allowed his eyes to become bulbous as he whispered the question. "Telling them two about what we're going to do? Won't they find it out anyway?"

"I guess that's true. What time are you going to the mine?"

"I don't know that I'm going. And then I may. I've got to kind of sye 'ello around town first."

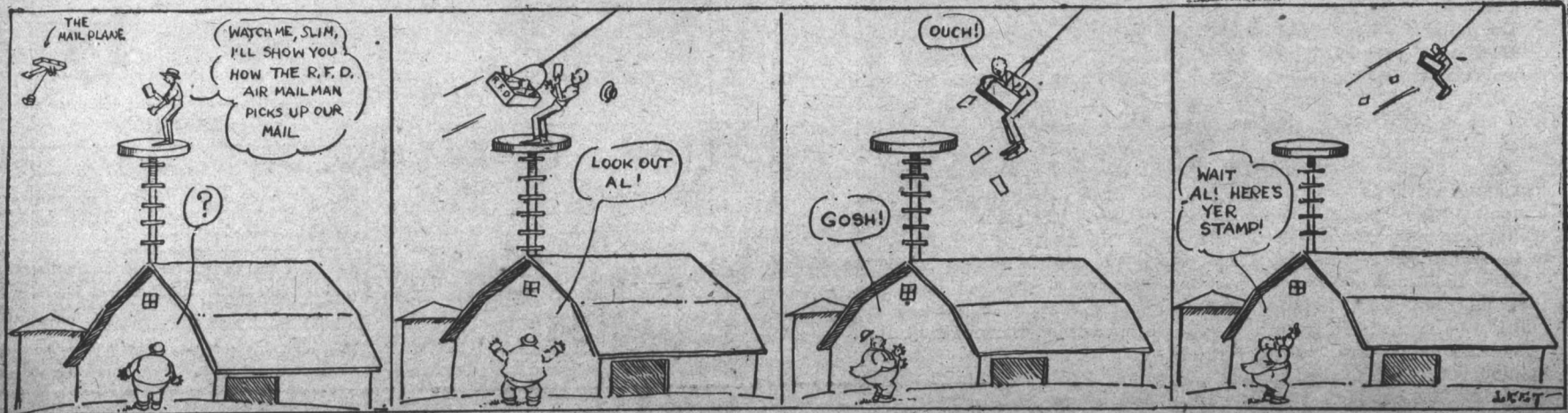
"Then I'm not to go with you?" Harry beamed at him.

"It's your day off, Robert," he announced, and they went on with their meal.

That is, Fairchild proceeded. Harry did little eating. Harry was too busy. Around him were men he had known in other days, men who had stayed on at the little silver camp, fighting against the inevitable downward course of the price of the white metal, hoping for the time when restitution would come, and now realizing that a feeling of joy for which they had waited a quarter of a century. There were a thousand questions to be answered, all asked by Harry. There was gossip to relate and the lives of various men who had come and gone to be dilated upon. Fairchild finished his meal and waited. But Harry talked on. Bozeman and Bill left the dining-room again to make a report to the narrow-faced Squint Rodaine. Harry did not even

AL ACRES—Al is Completely "Carried Away" by the New Mailplane Delivery.

—By Frank R. Leet



notice them. And as long as a man stayed to answer his queries, just so long did Harry remain, at last to rise, brush a few crumbs from his lightning-like suit, press his new hat gently upon his head with both hands and start forth once more on his rounds of saying hello. And there was nothing for Fairchild to do but to wait as patiently as possible for his return.

The afternoon grew old. Harry did not come back. The sun set and dinner was served. But Harry was not there to eat it. Dusk came, and then, nervous over the continued absence of his eccentric partner, Fairchild started uptown.

The usual groups were in front of the stores, and before the largest of them Fairchild stopped.

"Do any of you happen to know a fellow named Harry Harkins?" he asked somewhat anxiously. The answer

Just Try This

BY TERESA G. MORRIS.

When the day looks kinda gloomy,
And your chances kinda slim,
If the situation's puzzlin',
And the prospects mighty grim,
If perplexities keep pressin'
Till all hope is nearly gone—
Just bristle up and grit your teeth
And keep on keepin' on.

was in the affirmative. A miner stretched out a foot and surveyed it studiously.

"Ain't seen him since about five o'clock," he said at last. "He was just starting up to the mine then."

"To the mine? That late? Are you sure?"

"Well—I dunno. May have been going to Center City. Can't say. All I know is he said somethin' about goin' to th' mine earlier in th' afternoon, an' long about five I seen him starting up Kentucky Gulch."

"Who's that?" The interruption had come in a sharp, yet gruff voice. Fairchild turned to see before him a man he recognized, a tall, thin, wiry figure, with narrowed, slanting eyes, and a scar that went straight up his forehead. He evidently had just rounded the corner in time to hear the conversation. Fairchild straightened, and in spite of himself his voice was strained and hard.

"I was merely asking about my partner in the Blue Poppy mine."

"The Blue Poppy?" the squint eyes narrowed more than ever. "You're Fairchild, ain't you? Well, I guess you're going to have to get along without a partner from now on."

"Get along without—?"

A crooked smile came to the other man's lips.

"That is, unless you want to work with a dead man. Harry Harkins got drowned about an hour, ago in the Blue Poppy shaft!"

The Disappearance of Harry Harkins.

THE news caused Fairchild to recoil and stand gasping. And before he could speak, a new voice had cut in, one full of excitement, tremulous, anxious.

"Drowned? Where's his body?"

"How do I know?" Squint Rodaine turned upon his questioner. "Guess it's at the foot of the shaft. All I saw was his hat. What're you so interested for?"

The questioner, small, goggle-eyed and given to rubbing his hands, stared a moment speechlessly. Then he reached forward and grasped at the lapels of Rodaine's coat.

"He—he bought a diamond from me this morning—on the installment plan!"

Rodaine smiled again in his crooked fashion. Then he pushed the clawlike hands of the excited jeweler away from his lapels.

"That's your own fault, Sam," he announced curtly. "If he's at the bottom of the shaft, your diamond's there too. All I know about it is that I was coming down from the Silver Queen when I saw this fellow go into the tunnel of the Blue Poppy. He was all dressed up, else I don't guess I would have paid much attention to him. But as it was, I kind of stopped to look, and seen it was Harry Harkins, who used to work the mine with this"—he pointed to Fairchild—"this fellow's father. About a minute later, I heard a yell, like somebody was in trouble, then a big splash. Naturally I ran in the tunnel and struck a match. About twenty feet down, I could see the water was all riled up, and a new hat was floating around on top of it. I yelled a couple of times and struck a lot of matches—but he didn't come to the surface. That's all I know. You can do as you please about your diamond. I'm just giving you the information."

He turned sharply and went on then, while Sam the jeweler, the rest of the loiterers clustered around him, looked appealingly toward Fairchild.

"What'll we do?" he wailed.

Fairchild turned. "I don't know about you—but I'm going to the mine."

"It won't do any good—bodies don't float. It may never float—if it gets caught down in the timbers somewhere."

"Have to organize a bucket brigade." It was a suggestion from one of the crowd.

"Why not borrow the Argonaut pump? They ain't using it."

"Go get it! Go get it!" This time it was the wail of the little jeweler. "Tell 'em Sam Herbenfelder sent you. They'll let you have it."

"Can't carry the thing on my shoulder."

"I'll get the Sampler's truck"—a new volunteer had spoken—"there won't be any kick about it."

Another suggestion, still another. Soon men began to radiate, each on a mission. The word passed down the street. More loiterers—a silver miner spends a great part of his leisure time in simply watching the crowd go by—hurried to, join the excited throng. Groups, en route to the picture show, decided otherwise and stopped to learn



Back to the Grain Fields For Health

Grape-Nuts is a regular "three bags full" of the best food qualities of whole wheat flour and malted barley, carefully mixed and slowly baked—

To develop all their appetizing flavor,
To preserve all their wholesomeness,
And to provide nature's "broom" that keeps the digestive system spick and span.

There's not a bit of artificial sweetening in Grape-Nuts—it just becomes sweet of its own accord in the long baking.

And that enticing flavor—how good it is with good milk or cream! Fruits, too, fresh or cooked, add to the delight of a dish of Grape-Nuts, morning, noon or sundown.

It is a compact, ready-to-eat food—no cooking needed. Why not try it for tomorrow's breakfast?

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

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Salesmen—For Large Oil Refining Co. From Commission. Prompt Settlements. No delivering. No collecting. Experience not necessary. Yellow Creek Refining Works, 1171 Mallers Bldg., Chicago

FARM HELP

Wanted Position Having sold our large farms, we desire to place our superintendent. He made good in every way. Is 25 years of age, widower, no children. Is man of finest character, well educated, a real man 6 ft., 200 lbs. and a hustler. Address him, Herman R. Branzen, Ephrata, Pa.

Man and Wife for farm near Orchard Lake. Man to do general farming and gardening and wife to look after private living quarters which has all modern conveniences. Apply box number 5729, Michigan Farmer, Detroit, Mich.

Wanted Man or man and wife to work on farm, must understand general farming. Reference. Mrs. E. Gibson, 33 E. Ferry, Detroit, Mich.

Wanted Single man for yr. Prefer stock feeding experience, good wages and good home, position open at once. Chas. D. Harsch, Siloam, Mich. Losco Co.

Wool Wanted

We manufacture your wool into Downy Batting, Fleecy Blankets, Comfy Auto Robes, Yarns, Suitings. We also sell above goods. Circulars on request.

Woolen Mills, Reed City, Mich.

TOP COVERS
Made for ALL cars. Send for estimate. State Name and Year of car. \$7.50 This Ford Top and back curtain
COMFORT AUTO TOP CO., Dept. 161
1621 Germantown Ave., Phila., Penna.

of the excitement. The crowd thickened. Suddenly Fairchild looked up sharply at the sound of a feminine voice.

"What is the matter?"

"Harry Harkins got drowned. All too willingly the news was dispersed. Fairchild's eyes were searching now in the half-light from the faint street bulbs. Then they centered. It was Anita Richmond, standing at the edge of the crowd, questioning a miner, while beside her was a thin, youthful counterpart of a hard-faced father, Maurice Rodaine. Just a moment of queries, then the miner's hand pointed to Fairchild as he turned toward her. "It's his partner."

She moved forward then and Fairchild went to meet her.

"I'm sorry," she said, and extended her hand. Fairchild gripped it eagerly.

"Thank you. But it may not be as bad as the rumors."

(Continued next week).



Woman's Interests



Fruit and Vegetable Salads

Enter Them on Your Summer Menu

IN preparing fruit salads, there are numerous points to be kept in mind, such as the general form of the salad, the combination, the dressing and the garnishing. If these are considered one may have an infinite and appetizing variety.

A salad may be served in delicate green or rosy apples which have been hollowed out, or in small or large melons, tomatoes, peppers or other vegetable casings in like manner. The salad proper may be just a salad, or it may have a meat value by the addition of hard-boiled eggs, nuts, meat left-overs or cheese. Celery, head lettuce or any of the dainty vegetables may be combined with fruit. Bananas and melons cut in cubes may be combined with cherries, plums or strawberries. Pineapples, oranges and grapefruit may be combined with cucumbers, pears, apples, grapes or olives. Other combinations, such as lettuce, half of a tomato, chopped cucumber and green pepper or lettuce with cream cheese

moulded with chopped pimento and olives or lettuce with moulded spinach and hard-boiled eggs, and beets or dandelions with watercress and tomatoes cut in quarters, are excellent when served with French dressing. In fact, there is no fruit or vegetable which cannot be successfully combined with another, fruit or vegetable to make a palate-tickling salad.

The garnish appeals primarily to the eye, although it is a decided addition to any salad. Cress, lettuce, parsley, nasturtium leaves, rose leaves or currant sprigs may all be used as a garnish, according to the individual taste.

Last, but by no means least, comes the salad dressing. It is a very important part in salad making, and in many cases the choice of the dressing is really the making of a salad. One must choose the dressing best suited

to the combination of the salad. The following are some very good salad dressing recipes:

French Dressing:—With one teaspoon of lemon juice, fruit vinegar, or vinegar, mix one-half teaspoonful each of salt and pepper. Gradually pour this on three teaspoons of olive oil, stirring constantly. Beat well and toss the salad in this. Melted butter may be used instead of the olive oil.

Cooked Mayonnaise:—Place in a double boiler one teacup of vinegar and let come to a boil, and add a teaspoon of salt, a bit of cayenne pepper, three teaspoons of mixed or French mustard, three tablespoons each of sugar, olive oil or melted butter. While this is heating, beat the yolks of three eggs with a level tablespoonful of flour. Whip this lightly into heated mixture and cook until thick, stirring

constantly and not letting it boil. Take from stove and cool. This will keep a long while without ice and is good.

Sour Cream Dressing No. 1.—Use cream that is sour but not old enough to be strong. Rub smooth the yolks of four hard-boiled eggs and slowly add five tablespoons of sour cream. Thin with either lemon or fruit juice or vinegar.

Sour Cream Dressing No. 2.—Make a smooth paste of a cup of sour cream and a tablespoon of flour. Heat three tablespoons of lemon juice or vinegar, two of butter and one-half teaspoon each of sugar and mustard and a bit of cayenne. Mix cream and flour in this and cook three minutes, stirring constantly. Just before removing from the fire add the beaten whites of two eggs. Then remove and cool.

Parsley Mayonnaise.—Chop and pound one tablespoon of parsley, adding a few drops of alcohol to start the juices and coloring. This gives a very spicy flavor to the dressing.

Care of the Growing Child in Summer

THE age from two to six has been designated as the neglected age of childhood. The "better babies" crusades of the past few years have resulted in the proper care of babies being rather thoroughly scattered broadcast, while recent health surveys in our schools have resulted in parents watching more carefully the health of the school child.

The child is laying the foundation for good health in the pre-school years and must be watched carefully if the foundation is to be well laid. Of course, no child can grow properly unless it has the proper food. However, food alone will not keep the child growing properly unless other fundamentals are properly adhered to. There must be plenty of sleep in a quiet, well ventilated room.

Quite often during the hot weather my little lad of three has a bath before dinner. Then after dinner I take off all clothing but underwear, or put on a thin nightgown and put him on the floor in the coolest room in the house for his nap. The windows are all open, permitting a circulation of air. During extreme hot weather the little fellow has another bath before going to bed early in the evening. The warm bath is restful and induces

The child should drink plenty of water during hot weather. By all means avoid eating between meals. Ice cream and the popular between-meal dainties may be given occasionally at meal time, but are harmful between meals.

Children of this age are quite apt to play too hard and become over-tired. They should be watched, and not allowed to run around too long in the hot sun. Devise sitting games in the shade for a part of the time, especially during the hottest parts of the day. A sand pile in a shady place is a boom for health. Our children spend many hours playing in the creek not far from the house. They put on bathing suits and dig and splash in the shady creek bottom and enjoy that immensely.

One wise mother of my acquaintance, who was quite famous for her

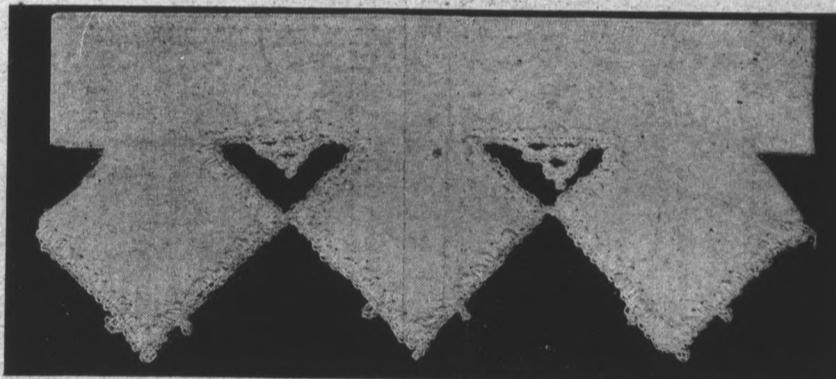
good tempered children, used to insist that occasionally each of the children should have a day in bed. She had special amusements laid away for this day, and they considered it great fun, due to her planning, to spend a day

in bed and have their meals served them on a tray. In that family the children were not allowed to become over-tired. Being over-tired reacts very quickly on the nerves of the child.—May Hoover Mamaw.

the evening. I saw come of the young men stand near my wife and a little to one side, during a whole game, commenting on her attire. She was wearing the dress again which I had requested her not to. After our guests were gone I told her I would apply for a divorce if she ever wore the gown again. She altered it at once, but while doing so she, with the young lady school teacher who boarded here, held me up to ridicule. Only yesterday we motored to the home of a friend and my wife seated herself directly opposite the host on the porch, throwing one limb over the other, and her skirt to her knees, and I either had to sit there in misery during our call, or speak to her about it.

I may be, and probably am, old-fashioned, but what can one of the "old-fashioned husbands do about it?" I have tried to correct this matter in two ways. I told my wife I loved her and did not like to have her do so. I have also threatened divorce. Things go on the same.—A Worried Husband.

A New Crochet Design



Try this New Artistic Crochet Edging. It is Very Effective for General Use, and Easy to Make.

THIS open-work pointed edging makes a very pretty trimming, no matter how it is used. Try it on the bottom of your petticoat, for the ends of a dresser runner, at the ends of pillowslips, or around your luncheon set and the result will be pleasing.

The open work point is very effective. Length from top of open work to bottom of point, measured diagonally, 2½ inches. Width at junction 2½ inches. Width between points 2½ inches. Top of open work one inch.

The open work point is similar to the square excepting that it has a p of 4 ch at each side of the point, 4 s c from the top and another p, on the top of the point. The open space is worked round with s c. At the 9th s c on the top turn, 3 ch s c into 6th s c 3 ch, s c into 3rd s c, turn; 6 s c into 1st 3 ch, 3 s c into 2nd 3 ch, turn; 4 ch, fasten into middle of 6 s c, turn; 3 s c into 4 ch, p, 3 s c into 4 ch, 3

s c into 3 ch, 3 s c into top of open work. Join last s c of open work into 1st s c and continue pattern around second point.

SOME OPINIONS.

THE article written by Mrs. B. O. R., entitled "Present-day Modesty," which might rightfully be called "Present-day Immodesty," appealed very strongly to me, as I have recently had personal experiences with, as Mrs. B. O. R. states, "decollete gowns and skirts which barely cover their knees, some do not."

Last winter my wife and myself called on a neighbor in the evening with some other neighbors. My wife wore one of those "decollete gowns." Coming home I requested her not to wear it again. A few days later we entertained at supper the neighbors we had called on and played cards with during

The article, "Present-day Modesty," by Mrs. B. O. R., in the issue of July 15, is so very comprehensive and tells so truly the serious and harmful results of modern female costume, that I desire to express my most earnest approval of the manner in which Mrs. B. O. R. has treated this matter.

Women's costumes have much influence on man's purity of thought and this responsibility rests upon woman. The law which forbids the wearing of the costume of the opposite sex, it would seem, is violated when woman wears "knickers."

It will be well to recognize and remember that good taste is a God-given attribute, and when present-day style departs therefrom "Good Taste" should be observed and harmful style be regarded as forbidden fruit.—J. T. D.

Equal parts of linseed oil, turpentine and vinegar make a good home-made furniture polish.

The Joys of Returning Home

Our Weekly Sermon—By N. A. McCune

THE Hebrews were seized, as a nation, in the great siege of 686, B. C., and large numbers of them transported to Babylon, under King Nebuchadnezzar. After being in that far-off land for something like sixty years (those who had been taken there earlier being in exile seventy years), the opportunity was given them to return. Many did so. The gladness that the devout Jews felt may be imagined. The land of their fathers, the land to which Abraham had gone in an early day; where Isaac and Jacob and David had lived; the land toward which the Israelites had made their slow, anxious way; where Elijah



had defied the priests of Baal and Elisha had healed the leprosy of Naaman, was to be theirs again.

There is always something beautiful about returning to the old home, where memories cluster.

It may be an old farm, where the barn door is off the rollers, and the wagon and the mower are standing out in the weather. It may be one's native land, with all the associations that go with the thoughts of flag, or a glorious history. Joseph C. Lincoln thus pictures the feelings of the old father, when the children are coming home for Thanksgiving: "They're comin' home! They's comin' home! They're comin' back today to make the old place like it was afore they went away; and Dan'll leave his Boston store, and Ned'll leave his stocks, and John'll stop a drawin' plans for buildin' city blocks, and Mary'll leave her New York house, with all its high-toned stuff, and come down here and say it's home and plenty good enough. The rheumatiz is all forgot; dyspepsy's out of sight; I'm goin' to eat from soup to nuts and dance a reel tonight; and blind man's buff is jest my size, and 'stage-coach' suits me fine. The children's comin' home today! Git out, old Father Time!"

ONE gets an idea of how the Jews felt when they left Jerusalem behind them, a smoking heap, and were escorted under armed guard to Babylon. It was the most terrific blow the nation had ever experienced. People could hardly believe their senses. God seemed to have forgotten them, though the prophets had said for years that such would come to pass, unless the nation became more righteous, and ceased evil ways. The passage that describes how they felt is the 137th Psalm. It has been called the most tragic piece of writing in the Bible. "By the rivers of Babylon, there we sat down, yea, we wept, when we remembered Zion. If I forget thee, O Jerusalem, let my right hand forget her skill, let my tongue cleave to the roof of my mouth, if I remember thee not." But now the opportunity was given for them to return.

Now, the curious fact about it is, that the majority preferred not to go back. Of course, the older generation was dead, the next generation was well advanced, and a third generation had been born. They knew the Babylonian language and had become accustomed to the country. Moreover, they had prospered. Many had made money. Business was good, and they enjoyed a large degree of freedom. To return to Jerusalem was a matter of religious conviction, of patriotic attachment. Money, custom, associations had come in between them and Jeru-

salem, the Temple, Jehovah, and they had no desire to go back. Life was easier under the Babylonian monarch than building up a blackened, waste city, whose only assets were the memories and sentiment connected with it. No, they would not go. They did not go, save leaders like Zerubbabel, Ezra, and others.

It is the tragedy of time. Something happens that shakes a community or a nation to its depths, and we cry, never again! It shall never happen again! But time passes, we are comfortable, and—we forget. For instance—a child is killed by some speed fool on a city street, and the cry goes up, never again! But in a few days the lifeless little form is forgotten, and the defiance of the law goes on. Or—there is a war, a world war. The dead in some towns are more numerous than the living. The flower of a nation's youth is laid away in the earth. Death stalks through the land, diseases spread everywhere, there is famine, and typhus and tuberculosis. Nations are bankrupted, world trade is paralyzed. Never again! But already men are talking about the next war. Before the dead are decently buried, learned militarists are describing how in the next war, the army will not make the mistakes it did in this war! If one would see the irony and bitter tragedy of such talk let him read the last chapter of the Outline of History, by H. G. Wells, where he pictures some women laying wreaths at the foot of the cenotaph in Whitehall, while across the way Sir Louis Somebody (Wells is describing an actual occurrence) is describing at a meeting of generals how they must use more deadly gases, and the like, in the next war. It is a scene to remember. Only a sense of right that is engendered by fidelity to God, will avail to keep the fires of resolution burning in the heart. Spasmodic resolutions and cries of "never again" do not last, and avail but little in the end.

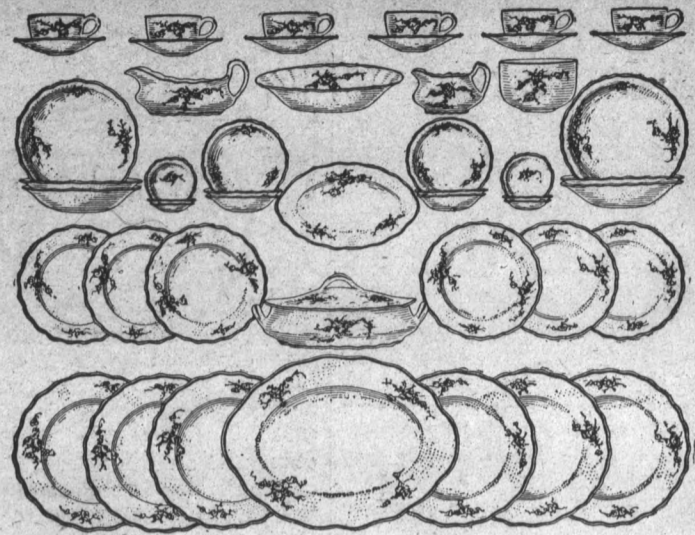
God was not dead, as the Jews had thought. They had learned much during the exile. They had gone to Babylon, thinking that Jehovah is the God of the Hebrews. But they learned that He is the God of the universe. Their attitude toward the world around them was changed. They saw that Jehovah works among other nations as well as among the Hebrews. Out of the pain and loneliness of the exile, as out of the purging fire, there had come a nobler class of men. Moreover, it was a sifting process. The faint-hearted, the ease-loving, fat souls did not see fit to return and take up the burdens of rebuilding a noble nation. Others whom the gods of this world had not bound and fettered, did return and one of the noblest chapters in Scripture was written by their efforts. Is it not ever so? We are told that to this day large numbers of the descendants of the Jews who remained in Babylonia are to be found there. "The descendants of the exiles still inhabit every part of Babylonia. Of the one hundred thousand population of Bagdad, forty thousand are Jews. In the town of Hillah, upon the site of Babylon, there are probably as many Jews as Arabs. In the malarial marshes of lower Mesopotamia, far from other habitation, I have found Jewish families living alone, cultivating their rice-fields, as in the days of the exile." (Tarbell).

SUNDAY SCHOOL LESSON FOR JULY 30.

SUBJECT:—The First Return from the Exile.

LESSON:—Jeremiah 29:10-14 and Ezra 1:1-11.

GOLDEN TEXT:—We know that to them that love God all things work together for good. Romans 8:28.



- 6 cups
- 6 saucers
- 6 soups
- 6 dinner plates
- 6 pie plates

- 6 butter chips
- 6 fruit dishes
- 1 covered dish (2 pcs.)
- 1 pickle dish
- 1 meat platter (13 1/2")

- 1 gravy boat
- 1 creamer
- 1 oval vegetable dish
- 1 bowl

A Good Set For The Small Family Or For Filling In.

FROM FACTORY TO YOU
50 PIECE DINNER SET \$10⁴⁵
 AS ABOVE (LIDS COUNT) Including big, strong clothes hamper

112 PIECE DINNER SET \$19⁹⁵
Including big, strong clothes hamper.

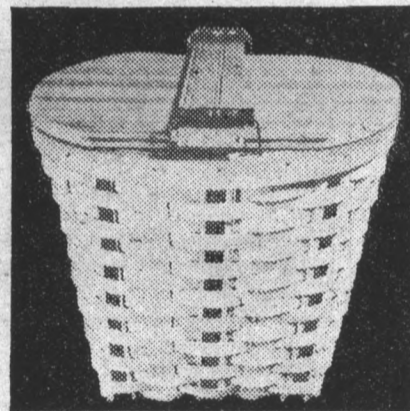
- 12 cups
- 12 saucers
- 12 dinner plates
- 12 pie plates
- 12 soup plates
- 12 oatmeal dishes
- 12 sauce dishes
- 12 butter chips
- 1 sugar bowl (with cover 2 pcs.)
- 1 creamer

- 1 butter dish (3 pcs. with cover and drainer.)
- 1 platter (small)
- 1 platter (medium)
- 1 platter (large)
- 1 covered dish (2 pcs.)
- 1 gravy boat
- 1 bowl
- 1 salad dish
- 1 oval vegetable dish
- 1 pickle dish

A Most Complete Set For The Large Family Or For Use During Harvest Time

Excellent Quality—Pretty Pattern

Don't confuse these sets with seconds or scheme goods. Each piece is carefully selected from gracefully shaped, pure white, semi-porcelain and decorated with the daintiest rose spray ever designed. Soft, beautiful, harmonious colorings from extra fine engraving. Rich, embossed gold edges and every handle covered with solid, bright gold. Every piece guaranteed never to craze (glaze crack). Additional pieces may be purchased or broken pieces replaced for the next five years.



Clothes Hamper -FREE-

New Saving Idea
 Each set comes packed in a big, strong, useful clothes hamper worth \$2.50. Absolutely

FREE
 Safe Delivery of Every Piece Guaranteed

Send No Money
 Pay After Examining If Satisfied

Never before has such a wonderful offer been made to the rural trade. Being factory representatives in Michigan enables us to do this. Just mail us your order, giving your address, nearest express office and tell us which set you want and it will be shipped direct from the pottery to you for inspection.

After examination, if you don't feel that the value is extraordinary, do not accept it and the matter is closed. If you are satisfied pay the transportation charges and the price of the set.

—Use this Coupon, Postal or Letter—

McLOGAN & AUSTIN,
 517 South Saginaw St.,
 Flint, Mich.

Gentlemen:

Please send for my inspection your.....piece dinnerset No. 7-M. I understand that I am under no obligation, and only agree to pay for this set and the express charges if satisfied.

Name..... Write Plainly

R. F. D. No..... City..... State.....

Nearest Express Office

POULTRY

Pure PULLETS Bred
S. C. W. LEGHORNS
OUR SPECIALTY

2000 April Hatched Pullets for July delivery. We sell our own stock only. Bred and raised on our own farm from our strain of American English Leghorns carefully bred for Egg Production. None Better any where at our price.

8 Weeks Old Pullets \$1.00
Choice Breeding Cockerels 1.50
Yearling Hens 1.00

SIMON HARKEMA & SONS,
HOLLAND, MICHIGAN

CHICKS

Three Leading Breeds. Tom Barron English White Leghorns. Parks Barred Rocks. S. C. R. I. Reds.
White Leghorns 25 50 100 500 1000
B. Rocks & S.C.R.I. Reds 3.00 6.00 12.00 57.50 115.00
Broiler Chicks 7.00 35.00
Selected Pens \$1.00 extra per hundred.

We can fill orders for Leghorns the same week received. Strong healthy chicks from tested heavy producing stock correct in plumage and color as well as being excellent layers. 100 per cent live delivery guaranteed. Interesting catalogue free. Importer. BRUMBERS POULTRY FARM, Holland, Mich. Box 30.

S. C. Anconas and
S.C. White Leghorn

yearling hens at bargain prices.
Write your wants.

M. D. Wyngarden, Zeeland, Mich.

200,000

Baby Chicks

FOR 1922

Shepard's Anconas, English Type White Leghorns and Brown Leghorns and Barred Rocks. Why pay two prices when you can buy direct? Our chicks are from strong, vigorous flocks of fine quality and excellent layers. Chicks are shipped prepaid with 100% live arrival guaranteed. Order now, catalogue free.

KNOLL HATCHERY,
R. 12, Holland, Mich.

PULLETS & COCKERELS

Now Three Months Old

WHITE LEHORNS AND MOTTLED ANCONAS Also Black Leghorns, Brown Leghorns, Buff Leghorns, Black Minorcas, R. O. Rhode Island Reds, Barred Plymouth Rocks, White Plymouth Rocks, Silver Wyandottes, White Wyandottes. WE HATCH eggs from Hoganized flocks on free range on separate farms. Where our chicks are raised. Send for Price List.

CRESCENT EGG COMPANY
Allegan Michigan

July, Aug. and Sept. Chix

Order now. Barred on White Plymouth Rocks, R. I. Reds, Black Minorcas, White Leghorns or Anconas \$14.00 per 100 prepaid, 15c each in 25 or 50 lots. 100% live delivery guaranteed. Our 12 year producing chix that please. Order direct from this ad. Green Lawn Poultry Farm, R. 3, Fenton, Mich.

Wanted 300 Pure Barron White Leghorn yearling hens or pullets for breeding, also males. No (forced for eggs) stock wanted. Must be A-1 stock from free range, well fed, well bred. Give lowest cash price. Gorst Bros., Corunna, Mich.

Useful Anconas To install new blood in your next years matings, to improve their laying qualities, to increase their beauty, your cockerels early, a grand lot of youngsters from prize winning Hog an tested layers at bargain prices, sent on approval. Utility breeding hens at reduced prices to make room for pullets. Order now before it is too late. My 18 page booklet "Useful facts about Useful Anconas" furnishes real information and tells you all about them. College View Farm, R. 3, Hillsdale, Mich.

Baby Chicks \$12.00 per 100 and up

Hatching eggs, \$1.50 per setting to \$15.00 per 100. We are listing 17 varieties of pure bred fowls; Chickens, Geese, Ducks & Guineas, also breeding stock. Send for prices and circular. Booking now for early delivery. OLINTON HATCHERY & POULTRY FARMS, WILMINGTON, Ohio.

Barred Rock Cockerels

Parks' 200-egg strain. From stock from Parks' best pedigreed pens. Vigorous, early hatched birds \$3 each. R. G. KIRBY, Route 1, East Lansing, Mich.

Barred Rocks egg contest winners, eggs from strain with records to 290 a year. \$2.00 per setting prepaid by P. P. Circular free. FRED ASTLING, Constantine, Mich.

SINGLE COMB WHITE LEGHORN

baby chicks from our flock of high producing hens, raised on free range. Price \$9.00 per 100. Safe delivery guaranteed. Ralph S. Totten, Pittsford, Mich.

BABY CHICKS

Barron White Leghorns 100, \$10.00; 500, \$47.50; 1000, \$85.00. Park's Strain Barred Rocks 100, \$12.00; 500, \$57.50; 1000, \$110.00. Good healthy, chicks, odds and ends 7c each. 100% live delivery guaranteed. Parcel post paid. PINE BAY POULTRY FARM, Holland, Mich.

BABY CHICKS

We have just the chicks you have been looking for, the large, strong, vigorous kind from free range flocks that have been culled for heavy egg production. Shipped prepaid parcel post. Safe arrival guaranteed. Ask about 8 wk. pullets. Catalog free. Gilt Edge Poultry Farm, Zeeland, Mich.

S. O. Reds, W. Wyandottes, Bred-to-lay stock, Baby chicks, eggs, cockerels. Howard Grant, Marshall, Mich.

Our Boys' and Girls' Department

Club Work Helps Better Farming

Boys and Girls in Upper Peninsula Show Parents the Way to Improved Methods

HOW boys' club work tends to improve Michigan agriculture was explained by Mr. A. G. Kettunen, assistant state leader of club work, in a talk before the Marquette Rotary Club. Mr. Kettunen took Houghton county as an example. When potato club work was established in that county, boys belonging to these potato clubs planted Green Mountains along side of the varieties planted by their fathers. The first fall the boys got twice as large a yield as their dads, acre for acre. That was argument enough. The fathers got the idea and now there is a general use of high-grade seed of this variety in that county.

Mr. Kettunen read a portion of the "story" of the Stenson boy of Covington, telling how he had captured prizes at the county fairs year after year in competition with adult farmers, and had won the state prize three years in succession in the Green Mountain class, thus having become the permanent possessor of a silver loving cup. The surplus proceeds of his potato sales had gone into pure-bred live stock, and now a scholarship at the Michigan Agricultural College was his, with a chance to study his chosen project scientifically.

Letters from several Upper Peninsula bankers who had backed these

boys' clubs with loans, were read, which stated that never a cent had been lost in any transaction and that the farm methods of the district had been positively established. Mr. Kettunen thought if bankers would make a practice of sitting in at club meetings occasionally they would become more sympathetic with the club idea and clearly see the value to the community and to business there in giving it their support. Where bank loans were secured, the father signed the note of the son, which bore six or seven per cent interest.

Of the ninety thousand people dwelling in the rural sections of the Upper Peninsula, twenty-five thousand are children, Mr. Kettunen said. If these young people can be taught worthwhile new ideas in agriculture, in time the general level of farm practice will be raised throughout the district. There was no use, he said, in promoting clubs for recreational purposes. He was himself of Finnish descent, he said, and he knew that it was practical work that the Finnish farmers, who are numerous in the Lake Superior country, want. He talked with them in their homes and he knew how they regarded this work. When they saw their children beating them at their own game, they became converted to new ways.

I cared but little to read the Michigan Farmer, but now at the week-end I wait almost impatiently for its coming.

I was interested in Miss Crowell's letter in the issue week before last, for I think I met her years ago, when she visited her cousin who was then our neighbor. I hope she will write and tell us more about the west, for I never tire of hearing of lands which I never saw.

As evening is now darkening unto night, I will say good-bye.—Your niece, Dorothy L. Shoemaker, Carleton, Mich.

I am glad to know that you have such an appreciation of Nature, for Nature's influence is always broadening and beneficial. You ended your letter "farewell." I changed to to "good-bye" because we will want you to "come again."

Dear Uncle Frank:

I am very busy now, as every farmer boy is during summer vacation.

We have drawn about forty loads of hay and still have more to get in. We have just started cutting about ten acres of wheat. We also have rye, oats and barley, also beans and corn.

If we can get our work done in time we want to go on a trip and camp out. Two years ago our family went to Niagara Falls by way of Canada, back through New York, Pennsylvania and Ohio, camping out each night and getting our own meals. It is so much fun, and besides you learn a lot of geography and have plenty to talk about during the year to friends—Your friend, Ford Chapman, Leslie, Mich.

I hope that you will be able to take that trip and tell us about it.

Dear Uncle Frank and Boys and Girls: Hello! all of "u"!!! Ain't this nice summer sunshine? Makes one want to spend all their time playing, don't it? Really, dears, ain't it so?

I am a "Freshie" in the W. H. S. Oh, and we are going to have a consolidated school. Oh! Boy! The bond only passed July 1. The whole township will build a \$100,000 school. I'm wild, I'm so glad.

I am fifteen years of age, and I live on a farm. I don't like the farm, either, as well as I might.

This is a dairy farm. Papa owns eight head of Holsteins. There is a condensary four miles from here.

I would enjoy corresponding with any of the girls and boys, including and above the age of fourteen years.

I will promise to write you nice long letters.

Will close for this time, so good-bye, dears. "Yours for keeps," Miss Myrtle Walker, Woodland, Mich.

You certainly know how to put "pep" on paper, Myrtle, but I am sorry your enthusiasm does not include the farm. Perhaps you think yonder green pastures are better, but don't think you will find them so.

Dear Uncle Frank:

I wonder if you will let me be one of your little nieces? I want to try your contests, and I suppose you must be a member of your club first.

We live in a town in the center of a farming district, although we have just moved off our farm, so that I might go to school.

I am fourteen years old and I am in the eleventh grade. I like all sorts of work connected with either English or commercial studies. It seems that a farm has uses for that kind of education, too.

I must close now, as I am afraid I will take up too much room. I send greetings to all my cousins, and ask them to remember their cousin, Edna Jones, Bruce Crossing, Mich.

You are already a member of our "Club," what there is to it. Just take part in the "proceedins'" is all that is necessary. I hope my little niece will write again.



Boys' Quality Calves Often Mean Better Cows on the Farm.

Our Letter Box

THIS letter box will be where the boys and girls can express their views, tell of themselves and things about the farm, or ask advice. The most interesting letters each week will appear here. Address your letters to me.—Uncle Frank.

Dear Uncle Frank:

I was very sorry I did not win the prize last time, but I can use one of your "Pals" mottoes, "If you do not succeed, try again." I think that was it. This will be the third time I have tried and I can only hope I will succeed.

I should like very much to see how you work. I am coming to Detroit before long now, and certainly will come if I can, and see you. I see in some of your "Pal's" letters that most of them are your nieces and nephews. So from now on you are my uncle and I am your niece. I'm sure you won't care, so I am doing just as I please. And so you will please remember that I am, hereafter, your niece, Effie Stonerock, Kalamazoo, Mich.

I am glad to get this reply to my letter, and am also glad that you want to establish a niece and uncle relationship. I am perfectly willing. Write again when you can, Effie.

Dear Uncle Frank:

We have taken the Michigan Farmer for four or five years and I find it a nice paper. I read Al Acres, Hy Syckle and the story, "The Cross-Cut."

I am a boy twelve years of age, and

in the eighth grade at school.

For pets we have three kittens and one hound dog, which I hunt rabbits with in winter and woodchucks in the summer.

I have caught three woodchucks, seven rats and two crows.

Our schoolhouse is on five corners and the railroad crosses three of the roads.

I will write more of farm life next time.—Sincerely, Ernest Walder, Cornuna, Mich.

I bet your hound dog is your best pet. I am glad to know the parts of the Michigan Farmer you like best.

Dear Uncle Frank:

One of these beautiful evenings which prevail through this section of this county, has compelled me at last to write and join your happy circle.

I cannot write when the fair face of Nature is hidden from my sight, so it is in a peculiar place that I write this letter—in our orchard, seated on a decayed stump.

Nature's beauty has power over me, and as the setting sun is in my view, I find it easier for me to write at evening.

Before I noticed your letter column,

Some Health Hints from Pals

By Uncle Frank

THE response to the health contest showed that rural boys and girls knew a lot more about health than many people give them credit for. This is gratifying, for health is a fundamental necessity in our pursuit of success and happiness.

Very often those abound in good health as most of our rural boys and girls do, do not realize its value and become careless with it. I have known many naturally healthy young men go to a premature death because they thought health was inexhaustible, while others less strong have realized their lack and have conserved and added to what little they had. So, it pleases me to know that so many normal, healthy country boys and girls realize the value of what they already have and are trying to conserve it.

There is no panacea for getting or conserving health. It can not be taken from a bottle, but it can be obtained by following conscientiously and persistently, Nature's simple health laws.

The one thing that was especially noticeable to me was that practically every paper sent in mentioned fresh air and sleeping with the windows open. This shows that the youth of today pays no heed to the old superstition which prevailed when I was a boy that night air was dangerous, and therefore it was necessary to keep the windows closed. What a foolish idea, is the comment today.

I was out "healthifying" when on my vacation recently. I played ball a lot and went in swimming nearly every day, and frequently we had beach suppers of "weenies" and roasted marshmallows, while we watched the sun sink into the lake. We also had hikes and visits to the woods. In all, it was a complete relaxation and recreation. But even though I reverted to nature I did not forget to brush my teeth and do the other little things necessary for health and cleanliness.

By the way, due credit belongs to a young lady associate in our office for this health contest. She thought of it and announced it while I was taking sun baths on the beach. The response shows she made a wise selection.

The prize-winning health rules are given below. They were selected for their conciseness and for the good health suggestions they contained.

By Irena McLean, Ithaca, Mich.
Clean your teeth at least once a day.
Sleep with a window open every night.
Have plenty of fresh air and sunlight.
Drink at least four glasses of water a day.
Drink at least a pint of milk a day.
Take a bath every day in the summer and once a week in the winter.
A good bowel movement every morning.
Keep your finger nails clean and do not bite them.
Eat plenty of fruit and vegetables.
Have eight to ten hours sleep each night.

By Elva McClintic, Homer, Mich.
Breathe fresh air.
Eat wholesome food.
Exercise daily.
Chew food well.
Brush teeth often.
Get plenty of sleep.
Wear proper clothing.
Never use alcohol and tobacco.
Avoid dirt and germs.
Cultivate cheerfulness.

By Marion Ella Cox, Parma, Mich.
Lots of fresh air.
Regular hours for meals.
Good bath every day or at least twice a week.
Brush the teeth after meals.
Early to bed, and early to rise.

Good muscular exercise.
Sleep with plenty of fresh air, open windows.

Eat good, plain, nourishing food.
Stand straight and breathe deeply.
Keep cheerful, don't worry.

One of my grandfathers lived to be eighty-four, one of my great-grandfathers ninety-four, and one ninety years.

By Rex Ellis, Reed City, Mich.
Take plenty of exercise.
Lots of ventilation while sleeping.
Avoid drafts.
Sleep out of doors if possible.
Brush the teeth regular.
Take baths regular, twice a week at least.
Cold sponge baths, taken on arising

Read and Win

TO the five boys or girls who give the most correct and concise answers to the following questions and the numbers of the pages on which the answers are found, we will give a prize of \$1.00. All of the answers can be found in this issue. This contest closes August 3. Address all letters to Uncle Frank, Michigan Farmer, Detroit, Michigan.

1. What was the ration and its nutritive ratio which was best for fattening hogs?
2. What is a good ration for developing chicks?
3. When should young children eat ice cream?
4. What are the essential things to do in controlling cherry leaf spot?
5. What is the height of the smallest cow in the world?
6. Who was the first experimenter with the vacuum tube?
7. What causes tainting of milk from silage?
8. What were the field expenses of the tuberculosis campaign in Jackson county?
9. Who is Squint Rodaine?
10. What was the per capita meat consumption of this country in 1921?

in the morning, followed by a brisk rub, is believed to be very invigorating.

A cup of hot water before breakfast to flush the bowels.
Eliminate all excessive sweets and over-rich foods from the diet.
Drink six or eight glasses of water daily, preferably between meals, and avoid over-eating.

By Marie L. Blatt, Brown City, Mich.
Get lots of fresh air and sunlight.
Eat good wholesome foods.
Sleep with your window open.
Get lots of exercise.
Breathe through the nose.
Clean your teeth at least twice a day.
Bathe often, or at least once a week.
Drink lots of milk and water.
Keep finger nails clean and away from the mouth.
Get at least ten hours sleep every night.

CAMP WITS.

First Class Scout.—What is it that always goes with its head downward?
Tenderfoot.—Give it up.
First Class Scout.—A nail in your shoe.
Tenderfoot.—Now, Mr. First Class, answer this one. What is that which by losing an eye has nothing left but a nose?
First Class Scout.—You've got me.
Tenderfoot.—Noise.—Boys' Life.

PRICE REDUCTION
on ALL SIZES of

VACUUM CUP

CORD AND FABRIC TIRES AND "TON TESTED" TUBES

WITH these prices prevailing on Vacuum Cup Tires and "Ton Tested" Tubes, you cannot afford to buy ordinary makes:

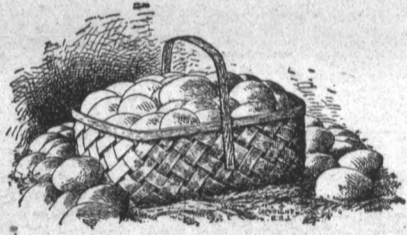
- 30x3½ VACUUM CUP TIRE . . . \$11.95
- 30x3½ "TON TESTED" TUBE . . . \$1.95
- 32x4 VACUUM CUP CORD TIRE . \$29.25
- 32x4 "TON TESTED" TUBE . . . \$3.05

There is a Vacuum Cup Dealer in almost every trading center in the United States. However, if by chance you cannot be supplied at home, we will prepay charges on Vacuum Cup Tires and "Ton Tested" Tubes to any point in the U.S. Complete price list forwarded upon application.

PENNSYLVANIA RUBBER CO. OF AMERICA, INC.
JEANNETTE, PA.

PULLETS

EGGS IN SEPTEMBER OCTOBER NOVEMBER DECEMBER



We have White and Brown Leghorn and Ancona Pullets; also Banded Rocks, White Wyandottes

White and Buff Orpingtons; and a limited number of Pullets in a few other breeds.

There is one lot of:
1000 Three Months White Leghorns
Ready to sell now and that should begin to lay in September and that will give you eggs all through this fall. Here is a chance to buy Money-Making Stock for the high egg price fall period.

If you want extra early fall layers send your order now for these three months old White Leghorn Pullets.

The price of eggs will be high, the same as every fall. Pullets are a safe investment.

"I ordered 50 chicks, English S. C. White Leghorns, and 50 husky chicks were sent to me. I believe as time went on about 6 died, and the remainder grew to be very large. I got 20 fine pullets and a rooster that's got them all beat. I think the pullets were laying at 5 months, and are greatly admired by the neighbors. These pullets have laid all through the cold weather, and during those very cold days some of them froze their combs but did not stop laying. Have been getting one dozen eggs a day. During January they paid me a profit of 200 per cent. My plan is to keep at least 100 this coming year".

Yearling Hens, especially in White and Brown Leghorns and Anconas; but also in the other breeds.
Cockerels, White Pekin Ducks, White Embden Geese and Bronze Turkeys.

Send for a copy of our quarterly publication Homestead Farms, and for other matter describing the Pure Breed Practical Poultry.

STATE FARMS ASSOCIATION,
201 Chase Block, Kalamazoo, Michigan

WHITTAKER'S R. I. RED CHICKS
Grade "A" Both Combs, \$20 per 100. Grade "B" Rose Comb, Hatches of July 5th and 12th, \$15 per 100. July 19th, \$14 per 100. July 26th, last hatch, \$13 per 100. Single Comb one cent per chick less than Rose Comb. Add one cent per chick on all orders for only 25. Michigan's Greatest Color and Egg Strain. All breeding stock blood tested for white diarrhoea by Dr. H. J. Stafseth of M. A. O. Order from this adv. to secure prompt delivery, or write for free catalog and culling chart.
INTERLAKES FARM, Box 99, Lawrence Mich.

ENGLISH S. O. W. Leghorn cockerels April hatched \$1.00 apiece. THE ALL-WHITE POULTRY FARM, R. I., Bay City, Mich.

S. C. Black Minorca Hatching Eggs. Our choice strain, settings \$1.50; for 50 \$3.00; 100 Eggs \$6.00. C. J. DEEDRICK, Vassar, Mich.

Single Comb Buff Leghorn
Early hatched chicks. Willard Webster, Bath, Mich.
Additional Poultry Ads. on Page 111

BREEDERS' DIRECTORY

Change of Copy or Cancellations must reach us Ten Days before date of publication

Edgar of Dalmeny and George Henry advertisement for Wildwood Farms, Orion, Michigan. Includes a coat of arms logo and text about 'Inimitable Quality' and 'Registered Aberdeen Angus cattle'.

Cluny Stock Farm

Offers Cluny Konigen Pontiac Hengerveld No. 254554. Born September 20, 1920

A son of our Junior Herd Sire Duteland Koniger sir Rag Apple whose two nearest dams average over 35 lbs. butter and 720 lbs. milk in 7 days. The 7 nearest dams of the bull we offer average over 600 lbs. milk and 28 lbs. butter in 7 days.

R. B. McPherson, Howell, Mich.

Registered Holstein Bull

born Nov. 2, 1919. Dam at 8 yr. 22,920 milk, 895 lb. butter at 7 yr. 305 days 16,281 milk, 654 lbs. butter. She has three A. R. O. daughters, one above 25 lbs. in 7 da. 99 in 30 days. He is sired by a 24 lb. grandson of Colantha Johanna Lad.

Whitney Farms Holsteins

We are offering our herd sire, Wailana Fobes Colantha, a good grandson of Colantha Johanna Champion. An excellent individual and prepotent sire. Also offer several bull calves of good type from high producing dams. Priced to sell. Fully accredited herd.

32 Lb. Bull, \$150

Pure bred, registered, federally tested. Dam, a daughter of King Segis Pontiac, 37 lbs. Good individual, mostly white, 1 yrs. old. Guaranteed healthy and breeder. Priced to sell quickly. Pedigree on request.

Registered Holsteins for sale at all times both sexes best of breeding and priced right. Our herd sire a 26 lb. grandson of Maplecrest Korndyke Hengerveld. Herd under state and federal supervision.

\$75.00 Buys A yearling bull ready for light service. The six nearest dams of sire average 33.34 lbs. butter for 7 days. Dam has 18.33 lb. record made at three years old.

Holstein Friesian heifer and bull calves, purebred registered and high-grade. Price \$20 up. Splendid individuals and breeding. Write us your requirements.

Holstein-Friesian pure-bred bull calves, tuberculin tested herd. Prices are right. Larro Research Farm, Box A, North End, Detroit, Mich.

A Good Note accepted in payment of finely bred registered Holstein bull calves. Quality of the best, and at prices within reach of all. Write GEO. D. CLARKE, Vassar, Mich.

810 lb. butter 20190 lb. milk largest Jr. 3 yr. semi-official record made in Wayne Co. For yearly production get a Hazel-let daughter of Maple Crest Korn. Heng. M. L. McLAULIN, Redford, Mich.

Wanted Reg. Holstein females from one animal to carload. Would buy herd if priced right, must be T. B. tested and free from abortion.

TWENTY head registered Holstein-Friesian cows and heifers. Heavy producers, excellent type. Tuberculin tested. L. F. Stautz, Manchester, Mich.

250 Money-Making Herefords. At St. Clair, for sale and ready for immediate delivery.

50 Registered Cows and their 50 Sucking Calves

Registered 25 Bred Heifers--Registered 25 Yearling Heifers--Registered 50 Grade Cows Unregistered and their 50 Sucking Calves 10 Extra Good Bulls, various ages.

Our Detroit Packing Co., Hereford Baby Beef Contract and the Sotham Hereford Auction System guarantees our customers profitable cash outlet for all increase and we can help finance responsible purchasers. Come, wire or write, right now.

T. F. B. SOTHAM & SONS, [Cattle Business Established 1835] Saint Clair, Michigan Phone 250

Herefords

Repeaters, Beau Donalds, Fairfaxes, and Farmers represented in our herd. Repeater 173rd, a son of old Repeater, at head of herd. Both sexes and all ages for sale.

ALLEN BROS., (Farm at Paw Paw, Mich.) Office 616 So. West St., Kalamazoo, Mich.

HEREFORDS for sale. A few extra good, all calves for sale. RALPH CALHOON, Bronson, Mich.

Brookwater Farm JERSEYS and Duroc JERSEYS. Bred cows and gilts, boar pigs. Jersey bulls from tested dams. Tuberculosis free herd.

Jersey Thoroughbreds

Few cows and bull calves. Best breeding line. Guaranteed. Tuberculin tested twice a year. If you have no money will take bankable note. E. W. Vasvary, 509 Free Press Building, Detroit, Mich., Main 1267.

Shorthorns for sale. ENTIRE herd just passed State Tuberculosis test. J. A. BARNUM, Union City, Mich.

JERSEY BULLS nearly ready for service. Springfield Owl breeding. Herd tuberculin tested. FRED L. BODIMER, Reese, Mich.

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

For Sale Jersey Bulls ready for service. Lad. Majesty breeding. WATERMAN & WATERMAN, Packard Rd., Ann Arbor, Mich.

Stock Farming

MARKETING GRAINS WITH HOGS,

(Continued from page 97).

Lot 7, rye, middlings and tankage, 1:4.28.

While muscle and bone-building constituents are necessary for growing and fattening hogs, it would seem that when the nutritive ratio is much narrower than that recommended the daily gains are accordingly smaller, as it is in Lots 2, 6 and 7, which gained but 1.151 pounds, 1.17 pounds, and 1.12 pounds, respectively, per day. There also seems to be some relation between the fact that the nutritive ratio of Lot 6 was nearest that recommended, and that the hogs in this lot made the most rapid gains. The nutritive ratio of Lot 1 was next nearest to that recommended, and these hogs made the second most rapid daily gains.

After paying for tankage at \$60 per ton and middlings at \$30 per ton, the returns received for the grains fed, with hogs selling at from \$6.00 to \$10 per hundred pounds, are as follows:

Table with 6 columns: Lot, Feeds, Hogs, and prices for various grain combinations (1-7).

All of the above lots were fed supplementary feeds of tankage, except Lots 6 and 7, which were given middlings and tankage.

The above table needs but little explanation. It is shown by Lots 6 and 7 that it was unprofitable to feed middlings at \$30 per ton with barley and tankage or rye and tankage, when hogs sold below \$7.00 per 100 pounds. In the same lots the value of rye given is very high with hogs at the higher prices and middlings at \$30 per ton, owing to the small amount of rye consumed. Corn and tankage again make a very favorable showing, and considering the average daily gain, amount of feed consumed, and returns received this ration gave the best results.

EDUCATION BASIS OF LIVE STOCK IMPROVEMENT.

THE mere use of pure-bred sires that are easily acquired will not give the best results in the improvement of live stock unless educational work on the value of better blood has preceded their coming. Only when owners fully understand the value of improved animals and are convinced of their superiority to grades and scrubs, says the United States Department of Agriculture, will they make good use of them by following an intelligent breeding program.

It occasionally happens, says the department, that pure-bred sires are made easy to acquire and are taken by men who are not really interested in live stock improvement. It would pay much better to devote money and energy at first to "selling" ideas on better breeding. Much of such work in this country has been done by the agricultural press, extension services of the agricultural colleges, and the county agent system. The department has learned of instances where pure-bred animals were put on farms through outside influence, but the results were unsatisfactory. Better results, in the opinion of the department's specialists directing the "better-sires" campaign, are obtained by encouraging the formation of local live stock associations and the cooperative ownership of sires.

The department's idea is that education is the basis of improvement, and that when the economic value of pure-bred live stock is realized the persons interested will find ways for getting the animals and the problem will solve itself.

DANGER FROM FOOT-AND-MOUTH DISEASE.

WE are in receipt of communications from the Federal Bureau of Animal Industry indicating that foot-and-mouth disease is becoming widespread in some of the European countries. One report indicates that this disease appeared in 966 herds in Great Britain between January 1 and March 5, 1922, requiring the slaughter of 43,735 animals.

The United States has been very fortunate thus far in having escaped an invasion of the plague, as it is exposed by commercial contact with many countries in which the disease has been unusually prevalent since the war. The Federal Bureau of Animal

Industry is using every reasonable precaution to prevent an invasion of the disease and the personnel of that bureau has been so organized that several hundred veterinarians can be sent into the field for the purpose of suppressing foot-and-mouth disease upon a few hours' notice.

There are some sources of danger from this disease which are very difficult to guard against. For example, it seems possible for the virus of the disease to be carried long distances in the clothing or other belongings of immigrant farm laborers, and hay or straw used as packing for crockery and other goods.

It is desired that the danger from foot-and-mouth disease be given publicity in order that those interested in the live stock industry will be on the alert for the first appearance of the disease should we be so unfortunate as to have another outbreak.

Every effort should be made to prevent hay and straw used for packing imported goods from reaching susceptible animals and, where possible, the animals attended by immigrant farm laborers, arriving recently in a community should be observed closely to ascertain whether or not they develop the disease.

The appearance of any disease resembling the foot-and-mouth disease should be promptly reported to a veterinarian or the State Department of Agriculture.—Dr. B. J. Killham.

TO ADVERTISE MEAT.

ON the first of July, the collection of ten cents per car on all live stock received at the various yards will be made to provide a cooperative fund for advertising the food advantages of meat. The campaign and the collection are instituted with the approval of the packer and stock yards administration of the department of agriculture and of a number of cooperative marketing agencies. The money will be expended under the direction of the national live stock and meat board. Meat consumption in the United States declined from 181.5 pounds in 1900, to 156.1 pounds per capita in 1921.

Brookwood Guernseys Birmingham, Mich.

During the past year, we have completed Advanced Registry with 7 Guernsey Cows—two of which were heifers with their first calves.

The average butter-fat production of these cows was 650 pounds, and three of them were leaders of their respective classes for the State of Mich.

We have for sale a number of good bull calves from these cows and their daughters, sired by Rosetta's Marshall of Waddington, No. 54420, Grand Champion Bull at the Michigan State Fair last year.

Our herd is not large, but it is select. Visitors are always welcome at the farm. Prices are reasonable, considering the quality of the stock.

JOHN ENDICOTT, Proprietor

Registered Guernseys

Another crop of calves. Choice bull calves \$75, their breeding and records will please you. J. M. WILKINS, No. Adams, Mich.

For Sale Guernsey Herd Bull 3 yr. old. Sire, Anton's May King sold for \$7,000.00. Dam, Bonnie's Bloom 530 lbs. B. F. Price \$175. Fall bull calves by above sire. Accredited Herd. GILMORE BROTHERS, Camden, Mich.

GUERNSEYS REGISTERED BULL CALVES. Containing blood of world champions. A. R. O. w. Federal inspected. HICKS' GUERNSEY FARM, Saginaw, W.S. Mich.

C. E. and J. B. Evans Breeders of Guernsey Cattle. 4 bulls ready for heavy service for sale. Shp anywhere, all T. B. Tested. Good ones. Butternut, Mich.

For Sale 2 Guernsey Bulls, one 4 mos. old and one 7 mos. old. Registered, accredited certificates, reasonable price considered. Full description by communicating with 2730 Jefferson Ave., E., Detroit.

GUERNSEYS 3 fine heifers, 1 bull, all registered, \$400, if sold this month. W. W. BURDIK, Williamston, Mich.

WINNWOOD HERD Registered Holsteins

It was through the daughters of Flint Maplecrest Boy that Sir Ormsby Skylark Burke

Our Junior Herd Sir produced the Junior Champion and Reserve Grand Champion Heifer, at the Michigan State Fair this year, in a class of 39.

His get won first in Calf Herd, also first in get of sire, in a class of 13. A son of either of these great bulls will help the individuality and production of your herd. We have bulls at the breeder's price, from dams with records up to 38 lbs. of butter in seven days, and 1168 lbs. of butter in one year.

Ask us about a real bull, a Maplecrest or an Ormsby. JOHN H. WINN, Inc., Rochester, Mich.

The Traverse Herd

We have what you want in BULL CALVES, the large, fine growthy type, guaranteed right in every way. They are from high producing A. R. O. ancestors. Dam's records up to 39 lbs. Write for pedigrees and quotations, stating about age desired.

TRAVERSE CITY STATE HOSPITAL Traverse City, Mich.

For Sale King Segis Breeding Bulls of show type that are out of A. R. O. Dams.

Grand River Stock Farms Cory J. Spencer, 111 E. Main St. JACKSON, MICHIGAN



**Act Quick-
Your Last Chance
At Real Silo
BARGAINS**

Best rock prices, the lowest they will ever be again, real bargains. That's what we are offering silo buyers on **ROSS** Industrial Metal Silo—the opportunity you have been looking for. Buy now and make biggest saving.

Ensilage Cutter BARGAINS

The lowest priced cutters on the market, bar none. Saves you 25 per cent on operation and fuel, cuts cleaner, have 25 per cent larger capacity.

These are some of the advantages of owning a **ROSS**. In addition you get all modern improvements and construction features not found on any others, and still **ROSS** prices are lowest. The biggest cutter bargains ever offered, the biggest value your dollar will buy. Let us show you. Get our prices. Our easy terms which mean almost a year to pay. Owning a **ROSS** at present prices is cheaper than renting, better than paying fancy prices to have your silo filled. Write for our bargain proposition and our easy terms. Address

E. W. ROSS COMPANY
Dept. 214 Springfield, Ohio

CATTLE

Lillie Farmstead Jerseys For sale, 12 heifers bred to freshen this fall, 6 bull calves, 6 to 9 mo. old. Colon C. Lillie, Coopersville, Mich.

Milking Shorthorns Bull calves for sale. Also 2 cows. ROSEMARY FARMS, Williamston, Mich.

Central Mich. Shorthorn Breeders' Assn. offer for sale both milk and beef breeding, all ages Write M. E. MILLER, Sec'y, Greenville, Mich.

FRANCISCO FARM SHORTHORNS
FEDERAL ACCREDITED HERD
One red Scotch bull ready for service. Two bull calves ten months old. Poland-China weaning pigs ready to ship. F. P. POPE, Mt. Pleasant, Mich.

The Maple's Shorthorns
Kirk Levington Lad, by imported Hartforth Welfare, in service. Bulls and heifers for sale. J. V. Wise, Gobleville, Mich.

BIDWELL SHORTHORNS
BUY A BULL
that will put weight on your dairy calves—the difference will soon pay for the bull. Now selling good Scotch and Scotch-topped yearlings, reasonably priced. We guarantee every animal to be a breeder. Federal Test. One hour from Toledo, Ohio, N. Y. C. R. R.

BIDWELL STOCK FARM,
Box D, Tecumseh, Mich'gan

Clayton Unit Shorthorn Breeders' Assn. Scotch, Scotch, Top and Milking Shorthorns for sale all ages. W. J. Hinkley, Sec'y, Flushing, Mich.

FOR SALE
Polled Shorthorn Cows & Heifers in calf and calf by side. Also a few young bulls. Herd headed by Victor Sultan and Royal Nonpareil. We can please you in richly bred cattio with quality at farmers' prices.
GEO. E. BURDICK, Mgr.
Branch County Farm, Coldwater, Mich.

RICHLAND SHORTHORNS
We are offering two splendid white yearling bulls by Imp. Newton Champion and a few extra good heifers and young cows at very attractive prices. For full particulars write to
C. H. PRESCOTT & SON,
Herd at Prescott, Mich.
Office at Tawas City, Mich.

Claradale Milking Shorthorns
We invite the discriminating breeder and farmer, who is in need of a real bull, that will transmit the combine qualities, beef, milk, high in butter fat, type, character, beauty. We do state official milk testing. Come and see us or write for circulars and reasonable prices. F. W. Johnson, Custer, Mich., Mason Co. Box 26

Milking Shorthorns of best Bates breeding, bulls, cows and heifers for sale.
E. H. KURTZ, Mason, Mich

Don't you want a good Shorthorn, priced in keeping with the times?
ROBERT MARTIN, R. 3, Woodland, Mich.

CLEANING UP HERDS IN GRAND TRAVERSE REGION.

BOTH summer guests and permanent residents in Traverse Bay will be assured that all dairy products from Grand Traverse county will be free from tubercular infection, as soon as the fourteen federal and state cattle testers complete the work started Thursday.

Dr. M. P. Hunt, superintendent of inspection of tubercular eradication for the federal bureau, is in the city to check up on the work of testing cattle, and says that his office receives inquiry after inquiry from people in the cities seeking a summering place and asking if the milk in the section they are considering, is free from tubercular infection.

"It is remarkable how closely people have come to look for possible infection and infected cattle furnish an excellent source of transmitting tuberculosis," Dr. Hunt stated.

"We found Grand Traverse county one of the best prepared counties in the state, thanks to the missionary work of Frank Sleder," he continued. "All of the expense, such as salaries, living expenses and other expenses of the field forces now in your county are borne by the state and federal government. All the county is asked to do is to furnish drivers and get the men about the county. For instance, our field expenses in Jackson county were \$88,000 but Jackson county only paid \$8,000 of that amount, the rest being borne by the state and nation.

"As soon as this crew is finished with the inspection it will move on. We expect to clean up Grand Traverse, Antrim, Charlevoix and Emmet counties on this trip. One man will be left here to go over the herds again and test all reactors. As soon as Grand Traverse is rid of bovine tuberculosis a quarantine against shipping untested cattle into the county will be established."

Frank Sleder, in charge of the county work, recently received a letter from B. J. Killham, state veterinarian, in which he says:

"It has been definitely decided that whenever an obstinate owner is encountered in the area work and he has refused to have his herd tested, that steps will be taken to compel a test on such a herd."—R.

SILAGE REDUCES COST OF MILK.

(Continued from page 97).
Surprising dairymen are putting up small silos for summer use.

Erroneous Ideas Concerning Silage.
Some imagine because silage has many good features that it is a "cure-all"—a self-sufficient feed. "Man cannot live by bread alone," neither can cattle exist and show a profit on silage alone. Then, again, some think that the silo is a "new-fangled" idea. On the contrary, the early Romans and the Incas in Mexico used it. It is one of the oldest ideas in agriculture.

Another notion is that ill-effects are produced, such as decreasing the life period of the animal, causing the animal to be susceptible to tuberculosis, and to lose teeth. At the Michigan and other experiment stations it has been found that dairy cows which have been fed silage all of their lives are in the very best of health, have good teeth and are not tubercular.

Tainting of milk occurs only where silage is fed in poorly ventilated barns or during the time of milking. This can be avoided by feeding after the milking.

Few things are more valuable to a man than to be able to persistently apply himself to his task until it has been accomplished.



Every Prosperous Community Started With a Good Lumber Yard

IT is a popular mistake to under-estimate the value of a good lumber yard as a factor of growth and development of every community.

Do you appreciate what your lumber dealer does for you? He makes it possible for you to get the building material you need when you need it—without delay. He saves you time in selecting the material best suited for your needs.

He warehouses immense stocks, affords wide selection of grades and kinds and extends liberal credits, and, at all times, is ready to offer you suggestions, building plans and advice which will help you save money.

Of Course, you want the utmost in wear from the roofing you buy. That roofing is MULE-HIDE. If you don't know a MULE-HIDE dealer, write us and we will send you the name of a dealer who will give you the service you want.

Every MULE-HIDE dealer expresses his interest in his customer's welfare by offering him the best in building material that it is possible to buy.

Patronize the MULE-HIDE dealer because he deserves your patronage.

THE LEHON COMPANY of CHICAGO
Offices and Factory
44th to 45th Street on Oakley Avenue
"NOT A KICK IN A MILLION FEET"

HOGS

DUROCS WITH QUALITY
Spring pigs by Walt's Orion, First Sr. Yearling Detroit, Jackson, Gd. Rapids and Saginaw 1919
Phillips Bros, Riga, Mich.

Sows & Gilts
bred for July, Aug. and Sept. farrow for sale at reasonable prices. Also a few high class spring and fall boars ready for service and one 2 yrs. old boar, a grandson of Panama special, at a bargain if you can use him. We guarantee satisfaction. Write for prices and description or better come and see them. Visitors always welcome. Sows bred for spring farrow all sold.
Thos. Underhill & Son, Salem, Mich.

Collinsdale Duroc Farm, Lyons, Mich., P. I.
Greatest Blood Lines in Duroc Hogs
Herd Boars by Great Orion Sensation, Pathfinder, Duration and Great Wonder I Am. Now have for sale three yearling boars by Wolverine Sensation. For sale at all times, sows, gilts or boars registered. Sold under a positive guarantee and worth the money. Write for prices,
L. A. BURHANS, OWNER

DUROCS Extra Sow pigs, March 1st and later, 125 lbs. down; big bone, big litters, 75 to select from. \$10 up. Satisfaction or money back. B. E. Kies, Hillsdale, Mich.

AM SELLING
a great offering of bred Duroc sows and gilts March 4th. They are mostly bred to Orion Giant Col., son of Ohio Grand Champion. Get on mailing list for catalog. W. C. TAYLOR, Milan, Mich.

Woodlawn Farm Duroc Hogs
A well kept herd, best of blood lines, with size and breeding qualities, stock of all ages for sale at reasonable prices. W. E. BARTLEY, Alma, Mich.

DUROC JERSEYS: A few choice bred gilts for sale. CAREY U. EDMONDS, Hastings, Mich

Michigana Farm Durocs
Boars, open and bred sows and spring pigs. Satisfaction guaranteed.
MICHIGANA FARM, Pavilion, Mich.

Pure-Bred Duroc Jersey Hogs: we usually have good boars and sows of all ages for sale. Reasonable prices. Larro Research Farm, Box A, North End, Detroit, Mich.

Duroc Jerseys heavy boned, low down type breeding stock for sale. CHAS. BRAY, Okemos, Mich.

Westvie Duroc Bred Sows
all sold. Have two spring boars left at a reasonable price. Will book orders for April & May Pigs. ALBERT EBERSOLE, Plymouth, Mich

Duroc Jersey Bred sows and gilts bred for Aug. and Sept. farrow. A few choice ready for service boars. Shipped on approval. Satisfaction guaranteed. F. J. DRODT, R. 1, Monroe, Mich.

Oakwood Farm offers choice gilts of Orion Cherry King and Walt's Big Col. breeding bred to Pathfinder Orion for Aug. and Sept. farrow. RUSH BROS., Romeo, Mich.

DUROC-JERSEYS Do you want a good Pathfinder boar pig? E. D. HEYDENBERG, Wayland, Mich.

BIG TYPE CHESTER WHITES
The prize winner kind from the best prize winner bloodlines. Early developers, ready for market at six months old. I have started more breeders on the road to success than any man living. I want to place one hog in each community to advertise my herd. Write for agency and my plan. G. S. BENJAMIN, R. F. D. 10, Portland, Mich.

Big Type Chester White March boars. Sired by Model's King and Hill's Big Buster. Out of granddaughters of Alfalfa Wonder. LUCIAN HILL, Tekonsha, Mich.

O. I. C. and Chester White's. Strictly big type with quality. I have nothing to offer at present, as I have sold my largest herd and entire herd I was fitting for the large shows, to Earle Morrish, of Flint, Mich. I am confident Mr. Morrish, now has one of the very best herds in the State. Write for agency and my plan. ALBERT NEWMAN, R. 4, Mariette, Mich

O. I. C. December Gilts From Big Type Wonder's Oct. by Silver Horde. extra good young boar direct from Silver's. Booking orders for spring pigs. CHAS. H. STEEL, R. 8, Eaton Rapids, Mich.

CHESTER WHITES Start right Pig from MONSTER No. 10735. They are hard to beat. FRED L. BODIMER, Reese, Mich.

Chesters We are sold out of Boars. Bred sows and gilts. For immediate shipment of spring pigs, write WEBER BROS. Royal Oak, Mich., 30 mi. and Ridge Rds., Phone 408.

O. I. C. fall gilts ready to breed. Orders booked for spring pigs. Write or call and see our herd. We ship C. O. D. and Register free. GEO. M. WELTON & SON, Middleville, Mich.

O. I. C. Gilts to farrow in Aug. and Sept. and March boar pigs. CLOVERLEAF STOCK FARM, Monroe, Mich.

O. I. C. Bred gilts all sold. Orders booked for spring pigs. A. J. BARKER & SON, Belmont, Mich.

LATEST MARKET REPORTS

GRAIN QUOTATIONS

Monday, July 24.

Wheat.

Detroit.—Cash No. 1 red at \$1.11; No. 2 mixed and No. 2 white \$1.07.
Chicago.—No. 2 red \$1.10@1.11; No. 2 hard \$1.10@1.12¼; September at \$1.07¼.
Toledo.—Cash \$1.09¼; July \$1.09¼.

Corn.

Detroit.—Cash No. 2, 71½c; No. 3 yellow 70½c.
Chicago.—No. 2 mixed 63¼@64½c; No. 2 yellow 64@65c.

Oats.

Detroit.—Cash No. 2 white 40c asked; No. 3, 38c.
Chicago.—No. 2 white 33¼@37c; No. 3 white 32½@35c.

Beans.

Detroit.—Immediate and prompt shipment \$8.70.
New York.—Choice pea beans at \$10; common to fair do \$9.50@9.75; red kidneys \$9.25.
Chicago.—Michigan choice, hand-picked \$9.25@9.30; red kidney at \$8.75@9.

Rye.

Detroit.—Cash No. 3, 85c.
Chicago.—83½c.
Toledo.—86c.

Seeds.

Detroit.—Prime red clover, cash at \$13; alsike \$11; timothy \$3.
Toledo.—Prime red clover \$13; alsike \$10.50; timothy \$2.80.

Feeds.

Detroit.—Bran at \$25; standard middlings \$26; fine middlings \$30; cracked corn \$32; coarse cornmeal at \$29; chop \$24.50 per ton in 100-lb. sacks.

Hay.

Detroit.—No. 1 timothy at \$21@22; standard and light mixed \$19@20; No. 2 timothy \$18@19; No. 1 clover \$16@17; rye straw \$14@14.50; wheat and oat straw \$13.50@14 per ton in carlots.

Fruit.

Chicago.—Currants \$1.50 per 16-qt. case; sweet cherries \$1.25@1.50 per 16-qt. case; Tyson pears \$2@2.50 per bu; peaches per Climax basket 20@25c; blackberries \$2.25@2.50 per 16-qt. case; black raspberries \$2.50@2.75 per 16-qt. case; blueberries \$3@3.50 per 16-qt. case; red raspberries \$3.50 a 24-pt. case. The above quotations are all for Michigan fruit.

WHEAT

The long awaited export buying of wheat appears to have started last week with the largest sales made since the harvest of the new crop began. Great Britain and Italy were the chief purchasers. According to the department of agriculture, the total yield in thirteen countries of Europe and one of North Africa for which estimates are available will be 889,714,000 bushels compared with 1,016,083,000 bushels last year and 1,040,606,000 bushels during the five pre-war years 1909 to 1913 so that European requirements of foreign wheat in the next eight months are large. If this buying reaches the volume expected it will mean the purchase of an average of 1,500,000 to 2,000,000 bushels daily in North America right along. Besides the foreign demand mills are absorbing a fair share. Receipts at primary markets have more than doubled in two weeks and are about twenty per cent above the average for this season in spite of interference by the rail strike and the coal shortage which is retarding the movement of cars and checking threshing in certain sections. A shortage of empty cars is reported in the southwest and in parts of the middle west.

OATS

New oats are already arriving at middlewestern markets, most of them being light in weight like the old crop. Some improvement in the new crop has taken place in the northern states so that the final yield may be up to the average. Stocks of old oats remain heavy and with the movement of new oats starting prices dropped to the lowest level in years. An upward trend is improbable, even with rail troubles looming up.

CORN

Corn is encountering a broad demand. Exporters have bought freely

in the last few days and domestic shippers to the deficiency states have been active. But receipts at primary markets last week were the largest for the corresponding week in the last dozen years and prices were practically unchanged. The crop has improved since July 1, and barring frost or other-damage can easily reach 3,000,000,000 bushels again.

RYE

Rye is selling at a discount of about thirty cents below wheat at Chicago and sixty cents at Minneapolis. The carryover of old rye is larger than usual and one of the biggest crops ever harvested is coming on. Prices are apt to be low compared with wheat all season.

FEEDS

Although feed markets are quiet, the heaviest movement of wheat feeds is reported from Minneapolis. The rail strike is sustaining the market for prompt shipment but prices for deferred shipment are at a discount of \$1 to \$2 below prevailing prices. Cottonseed meal for shipment before December is \$3 to \$4 cheaper than old crop meal.

HAY

Hay markets are quiet with good quality hay readily absorbed and prices inclined to harden slightly. The receipts of new hay are increasing.

POULTRY AND EGGS

Egg prices at Chicago dropped one cent below the previous low point of the season. Receipts are falling off but weather has favored production and arrivals remain heavy enough to provide a small surplus for storage. In the three preceding years storage holdings have reached their highest

point in the last half of July, but they do not decrease much as a rule before the middle of September. Storage holdings of frozen poultry on July 1 were 34,751,000 pounds compared with a five-year average of 35,824,000 lbs. Receipts are above the average.
Chicago.—Eggs fresh firsts 20@21c; ordinary firsts 19@19½c. Live poultry, hens 21½c; broilers 24@27c per pound; roosters 14c; ducks 22c; geese 12@21c; turkeys 25c.
Detroit.—Eggs fresh candled and graded 23@24c. Live poultry, springers 28@30c; light springers 20@22c; heavy hens 25@26c; light hens 20@21c; roosters 13c; ducks 22@23c; turkeys 30c.

CHEESE

With good weather for heavy production of high quality cheese and with distributing markets well supplied, cheese prices declined further last week. Lower quotations failed to stimulate buying to a noticeable degree, most of it being on a hand-to-mouth basis. At the close of the week city markets were only slightly higher than prices quoted in the country. Cheese distributors are looking for lower prices and they are waiting as long as possible to take advantage of the decline.

BUTTER

Butter prices declined last week, reaching a point only slightly higher than the low point of the season. Receipts are gradually declining but remain considerably heavier than the average for this period of the year and with storage holdings equal to or above the average, buyers have been disposed to go slow in making further accumulations. That there is a large surplus in current receipts over immediate consumptive requirements is

shown by the fact that the net increase in cold storage holdings at the four leading cities on each of the last three or four market days has been approximately 1,000,000 pounds. At the lower level of prices both consuming and storing demand has been stimulated so that the market is regaining stability.
Prices on 92-score fresh butter were as follows: Chicago 34c; New York 36c. In Detroit fresh creamery in tubs sells at 32½c.

WOOL

A dull period in the wool market generally results in a material decline in prices but such has not been the case recently. Wool dealers who hold most of the supply not yet in manufacturers' hands are not making concessions because their stocks cannot be replaced in the country on a lower basis. The fact of a prevalent scarcity explains the behavior of the market. The London auction opened firm to higher last week, while the recent sale at Hull was slightly lower on Merinos but higher on cross-breeds than the preceding auctions. The American Woolen Company, the leading factor in the industry, opened its lines of lightweight goods, quoting some of them five per cent lower than the high point last month and practically in line with the present wool market. Thus far buyers have been rather slow to place orders.

POTATOES

Potato shipments from the producing sections are running about forty per cent above the average for this season of the year. Supplies are coming from as far north as Minnesota, but Virginia is shipping about forty per cent of the total for the entire country. Prices are down nearly fifty per cent compared with six weeks ago and the trend is slightly lower. Virginia Cobblers are quoted at \$3.25 to \$4.25 in middlewestern markets.

BEANS

The business in this commodity is very quiet, buyers taking only enough for their immediate needs. Domestic pea beans have been worked into such a small compass that the dealers will shade 10@10¼c. Roumanian pea beans have been offered freely from 7½@8c. Red kidneys are quiet with prices firm.

DETROIT CITY MARKET

The market here has moderate supplies with prices firm. The demand was best for peas, huckleberries, raspberries, corn and tomatoes. Potatoes, carrots, butter beans, radishes and leaf lettuce were draggy because of over-supply. Prices are as follows: Apples \$1.25@2.25 per bu; butter beans \$1@1.50 per bu; cabbage 30@50c per bu; cherries sour \$3.75 per 24-qt. case; eggs 30@35c; green corn 25@35c per dozen; huckleberries \$6@10 per bu; potatoes \$1.35@2; green peas \$2.50@4 per bu; radishes, red \$1@1.50 per bu; red raspberries \$7@10 per 24-qt. case.

GRAND RAPIDS

Heavy receipts of potatoes have unsettled the Grand Rapids markets and quotations have dipped to \$1@1.25 per bushel on No. 1's. R. Yonkers, local gardener, who is growing potatoes under irrigation, has been getting 25 cents premium on his offerings but the size of the tubers from Greenville territory began encroaching on his trade early this week, indicating that the spread between his product and that of ordinary spuds may be wiped out before the end of the week. Cabbage is a drug on the Grand Rapids markets but other vegetables continue fairly steady. Hothouse tomatoes were strong at 90c@1 a seven-pound basket. Apple shipments increased this week with more buyers in the market, paying from 75c@1 a bushel for the early varieties, packages returned. The Grand Rapids Growers' Association has purchased a grader and as soon as it is installed, its members will pool and ship through the association. Other fruit prices were: Red raspberries \$4.50 per case; black \$3; blackberries \$2.50@3 per case; huckleberries \$2.50@3.50 per case; cherries \$2@2.75 per case; dewberries \$2.50@2.75 per case; currants \$2@3 per case; peaches \$2.50@4 bu; plums \$2.50@3 per case.

Live Stock Market Service

Monday, July 24.

DETROIT

Cattle.

Receipts 1143. Butcher cows are 25c higher; other grades steady.
Best heavy strs, dry-fed... \$ 8.50@ 9.35
Handyweight bu., dry-fed... 8.00@ 8.25
Mixed strs, hfrs, dry-fed... 6.50@ 7.25
Handy light bu., dry-fed... 5.50@ 6.25
Light butchers... 4.00@ 5.00
Best cows... 4.50@ 5.75
Butcher cows... 3.75@ 4.25
Common cows... 3.25@ 3.50
Canners... 2.50@ 3.00
Choice light bulls, dry-fed... 5.00@ 5.50
Bologna bulls... 4.50@ 5.00
Stock bulls... 3.25@ 3.75
Feeders... 5.75@ 6.25
Stockers... 5.00@ 6.00
Milkers and springers... \$ 35@ 75

Veal Calves.

Receipts 682. Market slow.
Best... \$10.50@11.00
Culls and common... 5.00@ 9.00

Hogs.

Receipts 709. Market active.
Mixed hogs and pigs... \$11.30
Roughs... 7.90
Extreme heavies... 10.00

Sheep and Lambs.

Receipts 1,337. Market very slow.
Best spring lambs... \$12.00@13.00
Light to common... 6.00@ 8.00
Fair to good sheep... 6.00@ 6.50
Culls and common... 1.00@ 2.00
Yearlings... 5.00@10.00

CHICAGO

Hogs.

Estimated receipts today are 45,000; holdover 3,960. Market 5@15c higher on best grades; lighter grades and butchers, and others steady. Bulk of sales \$8.45@10.95; tops \$11.15; heavy 250 lbs up \$10.15@10.55; medium 200 to 250 lbs \$10.50@10.95; light 150 to 200 lbs \$10.90@11; light lights 130 to 150 lbs at \$10.45@11; heavy packing sows 250 lbs up \$8.35@9.10; packing sows 200 lbs up \$7.75@8.30; pigs 130 lbs down \$9.75@10.50.

Cattle.

Estimated receipts today are 18,000. Market slow, steady to weak. Beef steers medium and heavyweight 1100

lbs up \$10@10.85; do medium and good \$8.10@10; do common \$7@8.10; light weight 1100 lbs down \$8.80@10.40; do common and medium at \$6.90@8.80; butcher cattle heifers at \$5.15@8.85; cows \$3.90@8.15; bulls bologna and beef \$4.25@6.60; canners and cutters cows and heifers \$2.60@3.90; do canner steers at \$3.50@5.25; veal calves light and handyweight at \$8.25@9.50; feeder steers at \$5.65@7.75; stocker steers \$4.75@7.65; stocker cows and heifers \$3.50@5.75.

Sheep and Lambs.

Estimated receipts today are 23,000. Lambs 25c lower, sheep slow. Lambs 84 lbs down \$11.50@12.85; do culls and common \$7@11.25; spring lambs \$8@10.55; ewes \$3.50@7.25; ewes cull and common \$2@3.75; breeding ewes full mouths to yearlings \$5.50@11.50; yearling wethers \$11.75@12.65.

BUFFALO

Cattle.

Receipts 125 cars; market 25@50c lower. Choice to prime shipping steers 1,400 lbs and up at \$10@10.25; good to choice shipping steers \$9.50@10; heavy grass steers good quality \$9@9.50; light native yearlings of good quality \$10@10.25; best handy steers \$8.50@9; handy steers and heifers at \$7.50@8; western heifers at \$7@7.50; light Michigan butchering heifers \$6.50@7.50; best fat cows \$5.50@6; cutters \$3.50@4; canners at \$1.50@2.25; best heavy bulls \$4.50@5.25; heavy bologna bulls \$4.50@4.75; common bulls \$3.50@4; best feeders \$7@8; medium feeders \$5@6; stockers good at \$5@5.50; light common \$4@4.50; best milkers and springers \$6@7; common at \$25@40.

Calves, receipts 150 cars. Strong with tops at \$12.

Hogs.

Receipts 50 cars. Market is steady. Medium and heavy \$11@11.25; yorkers and pigs \$11.50@11.75.

Sheep and Lambs.

Receipts 125 cars. Market is lower. Top lambs \$10@10.25; yearlings \$9@10; wethers \$6.50@7.50; ewes \$5.50@6.50.

FARMERS' ROUND-UP IN UPPER PENINSULA.

ON August 11, and at the Upper Peninsula Experiment Station in Chatham, the Annual Farmers' Round-up of the Upper Peninsula will be held.

During the three days previous to that the Boys' and Girls' Club members will have their summer camp, which promises to be much larger than the one last year. The young folks will receive instructions along various agricultural lines and will engage in a final judging contest on the day of the round-up.

On August 10 the county agents and extension workers will hold a conference and will study the experimental work being done at Chatham.

A picnic dinner will be held on the day of the round-up at noon, which will be followed by the Boys' and Girls' Club parade. Speakers on the program in the afternoon will include David Friday, president of M. A. C.; Dean R. S. Shaw, and Clark L. Brody, manager of the State Farm Bureau.

Prof. E. C. Foreman, Prof. O. E. Reed, J. W. Weston, J. E. Kotila, H. R. Pettigrove, Dr. G. H. Coons, Prof. J. F. Cox, Prof. H. H. Musselman, and Miss Helen Simonson, all connected with college or extension work, will give demonstrations or otherwise show the work of their departments.

SILAGE FROM ACCLIMATED CORN GOES MUCH FASTER.

MR. D. M. STRINGER, of Eaton county, Michigan, during the cow-testing association year in 1918, planted special New Jersey silage corn. He fed sixty pounds a day of this material to his Holstein cows and Mr. Strange said it was well matured and well eared, but had big, coarse, heavy stalks when put into the silo.

The next season Mr. Strange again being a member in the Eaton County Cow-testing Association, put in just ordinary acclimated field corn. This also made a good growth and it was well eared when put into the silo. He fed to the same cows silage from this corn at the rate of twenty-five to forty pounds a day, and his cow-testing association records showed that he fed practically the same amount of hay and grain. The milk production was a trifle in favor of the acclimated corn. Mr. Strange remarked that the cows were also in better condition at the end of the year than they had been the year previous. Yet they had received scarcely one-half the amount of silage.—A. C. B.

MICHIGAN FAIR DATES 1922.

- Allegan County Agricultural Society, Allegan, Aug. 29-Sept. 1.
Antrim County Agricultural Society, Bellaire, no fair held this year.
Armada Agricultural Society, Armada, Sept. 19-22.
Baraga County Fair Association, Baraga, Sept. 20-23.
Calhoun County Agricultural Association, Marshall, Sept. 19-22.
Caro Fair and Night Carnival, Caro, Aug. 21-25.
Charlevoix County Fair, East Jordan, Sept. 11-16.
Cheboygan County Fair, Wolverine, Sept. 26-29.
Chippewa County Fair, Sault Ste. Marie, Sept. 5-8.
Chippewa & Mackinac District Agricultural Society, Pickford, Sept. 18-20.
Clinton County Fair, St. Johns, Sept. 5-8.
Cloverland Farmers' Fair, Stephenson, Sept. 5-8.
Copper Country Fair, Houghton, Sept. 27-Oct. 1.
Croswell Agricultural Society, Croswell, Sept. 12-15.
Delta County Agricultural Society, Escanaba, Sept. 19-22.
Dickinson County Menominee Range Agricultural Society, Norway, Aug. 31-Sept. 1-4.
Eaton County Agricultural Society, Charlotte, Sept. 26-29.
Emmet County Fair, Petoskey, Sept. 5-8.
Flint River Valley Fair, Burt, Sept.

- 3-6. Fowlerville Agricultural Society, Fowlerville, Oct. 3-6.
Genesee County Fair, Davison, Aug. 28-Sept. 1.
Gladwin County Fair, Gladwin, Sept. 12-15.
Gogebic County Fair and Agricultural Association, Ironwood, Sept. 13-15.
Grange Fair of St. Joseph County, Centreville, Sept. 18-23.
Grangers', Gleaners' and Farmers' Fair, Big Rapids, Sept. 26-29.
Gratiot County Agricultural Society, Ithaca, Aug. 29-Sept. 1.
Greenville Fair Association, Greenville, Aug. 22-25.
Hillsdale County Agricultural Society, Hillsdale, Sept. 25-30.
Huron County Fair, Bad Axe, Aug. 29-Sept. 1.
Imlay City Fair, Imlay City, Sept. 12-15.
Ionia Free Fair, Ionia, Aug. 15-18.
Iosco County Fair, Tawas City, Sept. 12-15.
Isabella County Agricultural Society, Mt. Pleasant, Sept. 5-9.
Jackson County Agricultural Society, Jackson, Sept. 11-16.
Lenawee County Fair, Adrian, Sept. 18-22.
Livingston County Fair Association, Howell, Aug. 29-Sept. 1.
Luce County Fair, Newberry, Aug. 29-31.
Mackinac County Fair Association, Allenville, Sept. 21-23.
Manistee County Agricultural Society, Onekama, Sept. 26-29.
Marquette County Agricultural Society, Marquette, Sept. 5-7.
Mason County Central Fair Association, Amber Township Grove, Sept. 27-29.
Michigan State Fair, Detroit, Sept. 1-10.
Missaukee County Agricultural Society, Lake City, Sept. 6-8.
North Branch Fair Society, North Branch, Sept. 19-22.
Northwestern Michigan Fair Association, Traverse City, Sept. 18-22.
Northern District Fair, Cadillac, Sept. 12-16.
Northeastern Michigan Fair Association, Bay City, Aug. 28-Sept. 1.
Oakland County Fair, Milford, Sept. 13-16.
Oceana County Agricultural Society, Hart, Sept. 19-22.
Ogemaw County Fair, West Branch, Sept. 6-8.
Otia Fair Association, Brahma, Sept. 16.
Otsego County Fair, Gaylord, Sept. 5-8.
Ottawa and West Kent Agricultural Society, Berlin, Sept. 26-29.
Presque Isle County Fair, Millersburg, Sept. 12-14.
Saginaw County Agricultural Fair, Saginaw, Sept. 11-16.
Sanilac County Agricultural Society, Sandusky, Sept. 5-8.
Schoolcraft County Agricultural Society, Manistique, Sept. 26-28.
Shiawassee County Fair, Owosso, Aug. 22-25.
South Ottawa & West Allegan Agricultural Society, Holland, Sept. 12-15.
Stalwart Fair Association, Stalwart, Oct. 5-6.
Tri-County Fair, Buckley, Sept. 6-8.
Tuscola, Huron and Sanilac District Fair, Cass City, Aug. 15-18.
Van Buren County Fair, Hartford, Sept. 18-22.
Washtenaw County Fair, Ann Arbor, Sept. 19-23.
Wayne County Fair, Northville, Sept. 27-30.
West Michigan Fair, Grand Rapids, Sept. 26-30.

American county agricultural agents worked with 1,065,098 farmers in getting cows tested for tuberculosis last year.

It pays a farmer to give his tractor the same care that his wife gives her sewing machine. Lubrication helps a lot.

If you know how, you can look over the flock now and pick out the poor layers. Somebody in your neighborhood knows how to cull, and can tell you how.

Big Profits Selling Hardy Michigan Grown Trees also grape vines, berry bushes, roses and shrubs, for Spring delivery. Our stock is just selling, healthy and true to name. Write now for our handsome color catalog and liberal Agency proposition. Prudential Nursery Company, Box 306, Kalamazoo, Mich.

PAINT—\$1.17 PER GALLON Get factory prices on all paints. We guarantee quality. We pay the freight. Write today. Franklin Color Works, Dept. M, Franklin, Ind.

For Sale Fordson Tractor used 3 stationary power plant. Has governor and pulley. Will sell for \$350 cash or terms. Can be seen at Detroit Motor Sales, 3655 Mich. Ave., Detroit, Mich.

CORN HARVESTER cuts and piles on harrow or binder. Man and horse cuts and shocks equal Corn Binder. Sold in every state. Only \$25 with solder tying attachment. Testimonials and catalog FREE showing picture of harvester. PROCESS HARVESTER CO., Salina, Kansas

NEWTON'S

For HEAVES, COUGHS, DISTEMPER, INDIGESTION

A Conditioner and Worm Expeller, Wind, Throat, Stomach and Blood. Use two large cans for Heaves; if not satisfactory, money refunded. One large can often sufficient.



Indigestion causes Heaves—and more troubles in horses than all other diseases combined. Keep Newton's Compound on hand.

Occasional dose keeps the horse in good condition. More for the money than anything obtained for similar purposes. Two pounds net in large can, or 75 doses; 13 ounces in small can. Economical and safe to use, dose is small. Powder form, in air-tight cans. On the market over 30 years. Used in veterinary practice many years before.

Equally effective for Cattle and Hogs. 65c and \$1.25 per can Sold by Dealers or by Parcel Post THE NEWTON REMEDY CO., Toledo, Ohio

Hoosier WOOD SILO advertisement with illustration of a silo and descriptive text about its benefits and availability.

MINERAL COMPOUND advertisement featuring a horse illustration and text describing its use for heaves symptoms.

FRUIT SHIPPERS FOR HIGHEST PRICES Quick Returns Con-ign to The E. L. Richmond Co., Detroit, Est. 1893.

American CREAM SEPARATOR advertisement showing a woman operating a separator and listing monthly payment options.

Limestone advertisement with text 'Knocks the acid and weakness out of sour dirt and puts good humor in grouchy farms.'

NATURAL LEAF TOBACCO, CHEWING, 5 lb., \$1.75; 10 lb., \$3; smoking, 5 lb., \$1.25; 10 lb., \$2. Send no money; pay when received. TOBACCO GROWERS' UNION, Paducah, Ky.

NATURAL LEAF TOBACCO, CHEWING, 5 lb., \$1.75; 15 lb., \$4; smoking, 5 lb., \$1.25; 15 lb., \$3. Send no money; pay when received. FARMERS' TOBACCO ASS'N., Paducah, Ky.

Homespun Smoking Tobacco Mild and Mel- low—10 lbs. \$1.50; 20 lbs. \$2.75; deliv- ery guaranteed. We furnish free recipe for pre- paring. Smoking Tobacco Exchange, Sedalia, Ky.

HOGS O. I. C. Bred sow's all sold. Booking orders for spring pigs. H. W. MANN, Dansville, Mich.

O. I. C. pigs at very reasonable prices for June and July shipment. C. J. THOMPSON, Rockford, Mich.

O. I. C.'S. last fall gilts due Aug. and Sept. Spring pigs not akin. Big Type. 1-2 mile west of Depot. Citizen Phone. OTTO B. SCHULZE, Nashville, Mich.

L. T. P. C. Boars ready for service also gilts, bred sows out of best of blood lines. They are right, so is the price. Nuf sed. M. M. PATRICK, Grand Ledge, Mich.

L. T. P. C. Fall Boars at bargain prices. Fall gilts open or with breeding privilege. Write or see them. A. A. FELDKAMP, R. 2, Manchester, Mich.

Pullets Cockerels Pullets Chicks—Eggs—Breeding Stock—From Proven Layers BARRED ROCKS ENGLISH WHITE LEGHORNS

ROCKS. Official Records 213 to 257 at M.A.C. In Dec. at Nat'l Laying Contest No. 4 Pullets averaged 24.5. I have won 5 specials so far at this contest, some records. WHITE LEGHORNS. Won cup best utility pen Zeeland [22 pens]. Mr. Foreman Judging. 1st and 2nd pens Holland Fair. 1st Hen West Mich. State Fair. Why take chances when you can buy stock of this kind at bargain prices. Special prices on May, June, July chicks. Write for catalogue. G. CABALL, Box M, Hudsonville, Mich.

Big Type Poland China Spring boars at \$15 each. Sired by Clansman Buster and Hovers Liberator. Also gilts bred for Sept. farrow at \$40 each. All stock shipped on approval. Come and see them or write. DORUS HOVER, Akron, Mich.

For 30 years we have been breeding Big Type Poland China hogs on the same farm. We have sold over 100 head each year for the last 15 years for breeding purposes. There's a reason! The farmer has found our kind very profitable. We now offer 25 sows and gilts bred for summer farrow \$30-\$50. JNO. G. BUTLER, Portland, Mich.

L. T. P. C. Gilts bred for Spring litters all sold. Am offering very choice Summer Gilts bred for June and July litters also Fall Boars and Spring Pigs. Clyde Fisher, R 3, St. Louis, Mich.

L.T.P.C. \$15, \$20 & \$25 Spring pigs with real breeding at the above prices. We are also offering a few choice fall gilts bred for summer farrow. Hart & Cline. Address F. T. HART, St. Louis, Mich.

LARGEST TYPE P. C. Largest in Mich. Pig ready to ship, why not order from the herd that has given so many their start in the hog business, the kind that makes good, they have quality as well as size. W. E. LIVINGSTON, Parma, Mich.

Big Type Polands We have a fine bunch of best blood lines and all cholera immune. We raise them to sell. If in need of a real herd boar prospect, come over. Visitors are always welcome. WESLEY HILL, Ionia, Mich.

Big Type P. C. some very choice boars double im- mune, ont 1100 lb. sire and minnmoth sows from Iowa's greatest herds. E. J. Mathewson, Burr Oak, Mich.

Large Strain P. C. nothing more for sale at present. I thank you. H. O. SWARTZ, Schoolcraft, Mich.

BIG Type P. C. Boar Pigs. Sows and Fall Gilts bred for Sept. to Big Bob Mastodon and Peter A. Pan, son of \$1075 Boar. C. E. Garnant, Eaton Rapids, Mich.

BIG TYPE Poland Chinas, leading strains at lowest prices. Both sex, all ages, and bred sows and gilts. G. A. BAUMGARDNER, R. 2, Middleville, Mich.

LEONARD'S B. T. P. C. Herd headed by Leonard's Liberator. Orders booked for bear pigs at weaning time. Call or write E. R. LEONARD, St. Louis, Mich.

P. C. Swine. Sows and pigs, sows bred for Aug. and Sept. farrow, spring and fall boars, best of breeding, satisfaction guaranteed R. W. Mills, Saline, Mich.

Hampshires book your order for spring boar pigs now. A few gilts, now ready for summer farrow. JOHN W. SYNDER, R. 4, St. Johns, Mich.

SHEEP Shropshires that will win at the State Fairs. I have them for sale. A big bunch of yearling rams as usual and priced reasonably. KOPE-KON FARMS, S. L. Wing, Prop., Coldwater, Mich.

Fine Bay Gelding weight 1800 lbs. Sound and a beauty. Also harness and wagon in good condition. Bargain no use for them. American Butter & Cheese Co., 234 Howard St., Detroit, Mich.

SHETLAND PONIES for sale at a bargain. B. B. REAVEY, Akron, Mich.

POULTRY JUST-RITE LOOK! Baby Chicks LOOK!

POSTAGE PAID, 95¢ live arrival guaranteed. MONTH'S FEED FREE with each order 40 Breeds chicks, 4 breeds ducklings, select and exhibition grades. Catalog free, stamps appreciated. NABOB HATCHERY, Dept. 15, Gambier, O.

PERFECTED WHITE LEGHORNS FREE! Lay 265 to 301 eggs per year. Winners at 50 shows. Chicks, eggs, pullets, hens and males shipped C.O.D. at low prices. Write today for catalog and complete information to the World's Largest Leghorn Farms. GEO. B. FERRIS, UNION, GRAND RAPIDS, MICH.

Bred-to-Lay White Wyandottes 59 hens laid 1120 eggs in Jan. Eggs \$2.00 per 15; \$10 per 100. EVERGREEN POULTRY FARM, Blanding & Sons, Greenville, Mich.

ANCONA PULLETS I have 300, 3 months old, utility selected Ancona pullets which I will sell at \$1.30 each. Order at once and avoid disappointment. Thomas Beyer, R. 4, Zeeland, Mich.

RHODE ISLAND WHITES win over all breeds at the egg laying contest. 30 eggs \$5; 50 \$8; 100 \$15 order from this ad. Some chicks. H. H. JUMP, R. 3, Jackson, Mich.

W. Chinese goose eggs 40c each. Pekin duck \$1.50 for 8. R. C. Br. Leghorn \$1.50 for 15 \$3.00 per 100. Mrs. Claudia Betts, Hillsdale, Mich.

WHITE WYANDOTTES 307 egg average. Eggs all matings, \$2.00 per 15, \$10.00 per 100. Cockerels, hens and pullets \$5.00 each. FRANK DELONG, R. 3, Three Rivers, Mich.

Bourbon Red Turkeys We have them. Order your Birds and Eggs now. SMITH BROS., R. 3, Augusta, Mich.



GRAIN QUOTATIONS

Monday, July 24.

Wheat.
 Detroit.—Cash No. 1 red at \$1.11; No. 2 mixed and No. 2 white \$1.07.
 Chicago.—No. 2 red \$1.10@1.11; No. 2 hard \$1.10@1.12½; September at \$1.07½.
 Toledo.—Cash \$1.09¾; July \$1.09¾.

Corn.
 Detroit.—Cash No. 2, 71½c; No. 3 yellow 70½c.
 Chicago.—No. 2 mixed 63¼@64½c; No. 2 yellow 64@65c.

Oats.
 Detroit.—Cash No. 2 white 40c asked; No. 3, 38c.
 Chicago.—No. 2 white 33¼@37c; No. 3 white 32½@35c.

Beans.
 Detroit.—Immediate and prompt shipment \$8.70.
 New York.—Choice pea beans at \$10; common to fair do \$9.50@9.75; red kidneys \$9.25.
 Chicago.—Michigan choice, hand-picked \$9.25@9.30; red kidney at \$8.75@9.

Rye.
 Detroit.—Cash No. 3, 85c.
 Chicago.—83½c.
 Toledo.—86c.

Seeds.
 Detroit.—Prime red clover, cash at \$13; alsike \$11; timothy \$3.
 Toledo.—Prime red clover \$13; alsike \$10.50; timothy \$2.80.

Feeds.
 Detroit.—Bram at \$25; standard middlings \$26; fine middlings \$30; cracked corn \$32; coarse cornmeal at \$29; chop \$24.50 per ton in 100-lb. sacks.

Hay.
 Detroit.—No. 1 timothy at \$21@22; standard and light mixed \$19@20; No. 2 timothy \$18@19; No. 1 clover \$16@17; rye straw \$14@14.50; wheat and oat straw \$13.50@14 per ton in carlots.

Fruit.
 Chicago.—Currants \$1.50 per 16-qt. case; sweet cherries \$1.25@1.50 per 16-qt. case; Tyson pears \$2@2.50 per bu; peaches per Climax basket 20@25c; blackberries \$2.25@2.50 per 16-qt. case; black raspberries \$2.50@2.75 per 16-qt. case; blueberries \$3@3.50 per 16-qt. case; red raspberries \$3.50 a 24-pt. case. The above quotations are all for Michigan fruit.

WHEAT

The long awaited export buying of wheat appears to have started last week with the largest sales made since the harvest of the new crop began. Great Britain and Italy were the chief purchasers. According to the department of agriculture, the total yield in thirteen countries of Europe and one of North Africa for which estimates are available will be 889,714,000 bushels compared with 1,016,083,000 bushels last year and 1,040,606,000 bushels during the five pre-war years 1909 to 1913 so that European requirements of foreign wheat in the next eight months are large. If this buying reaches the volume expected it will mean the purchase of an average of 1,500,000 to 2,000,000 bushels daily in North America right along. Besides the foreign demand mills are absorbing a fair share. Receipts at primary markets have more than doubled in two weeks and are about twenty per cent above the average for this season in spite of interference by the rail strike and the coal shortage which is retarding the movement of cars and checking threshing in certain sections. A shortage of empty cars is reported in the southwest and in parts of the middle-west.

OATS

New oats are already arriving at middlewestern markets, most of them being light in weight like the old crop. Some improvement in the new crop has taken place in the northern states so that the final yield may be up to the average. Stocks of old oats remain heavy and with the movement of new oats starting prices dropped to the lowest level in years. An upward trend is improbable, even with rail troubles looming up.

CORN

Corn is encountering a broad demand. Exporters have bought freely

in the last few days and domestic shippers to the deficiency states have been active. But receipts at primary markets last week were the largest for the corresponding week in the last dozen years and prices were practically unchanged. The crop has improved since July 1, and barring frost or other damage can easily reach 3,000,000,000 bushels again.

RYE

Rye is selling at a discount of about thirty cents below wheat at Chicago and sixty cents at Minneapolis. The carryover of old rye is larger than usual and one of the biggest crops ever harvested is coming on. Prices are apt to be low compared with wheat all season.

FEEDS

Although feed markets are quiet, the heaviest movement of wheat feeds is reported from Minneapolis. The rail strike is sustaining the market for prompt shipment but prices for deferred shipment are at a discount of \$1 to \$2 below prevailing prices. Cottonseed meal for shipment before December is \$3 to \$4 cheaper than old crop meal.

HAY

Hay markets are quiet with good quality hay readily absorbed and prices inclined to harden slightly. The receipts of new hay are increasing.

POULTRY AND EGGS

Egg prices at Chicago dropped one cent below the previous low point of the season. Receipts are falling off but weather has favored production and arrivals remain heavy enough to provide a small surplus for storage. In the three preceding years storage holdings have reached their highest

point in the last half of July, but they do not decrease much as a rule before the middle of September. Storage holdings of frozen poultry on July 1 were 34,751,000 pounds compared with a five-year average of 35,824,000 lbs. Receipts are above the average.

Chicago.—Eggs fresh firsts 20@21c; ordinary firsts 19@19½c. Live poultry, hens 21½c; broilers 24@27c per pound; roosters 14c; ducks 22c; geese 12@21c; turkeys 25c.

Detroit.—Eggs fresh candled and graded 23@24c. Live poultry, springers 28@30c; light springers 20@22c; heavy hens 25@26c; light hens 20@21c; roosters 13c; ducks 22@23c; turkeys 30c.

CHEESE

With good weather for heavy production of high quality cheese and with distributing markets well supplied, cheese prices declined further last week. Lower quotations failed to stimulate buying to a noticeable degree, most of it being on a hand-to-mouth basis. At the close of the week city markets were only slightly higher than prices quoted in the country. Cheese distributors are looking for lower prices and they are waiting as long as possible to take advantage of the decline.

BUTTER

Butter prices declined last week, reaching a point only slightly higher than the low point of the season. Receipts are gradually declining but remain considerably heavier than the average for this period of the year and with storage holdings equal to or above the average, buyers have been disposed to go slow in making further accumulations. That there is a large surplus in current receipts over immediate consumptive requirements is

shown by the fact that the net increase in cold storage holdings at the four leading cities on each of the last three or four market days has been approximately 1,000,000 pounds. At the lower level of prices both consuming and storing demand has been stimulated so that the market is regaining stability.

Prices on 92-score fresh butter were as follows: Chicago 34c; New York 36c. In Detroit fresh creamery in tubs sells at 32½c.

WOOL

A dull period in the wool market generally results in a material decline in prices but such has not been the case recently. Wool dealers who hold most of the supply not yet in manufacturers' hands are not making concessions because their stocks cannot be replaced in the country on a lower basis. The fact of a prevalent scarcity explains the behavior of the market. The London auction opened firm to higher last week, while the recent sale at Hull was slightly lower on Merinos but higher on cross-breeds than the preceding auctions. The American Woolen Company, the leading factor in the industry, opened its lines of lightweight goods, quoting some of them five per cent lower than the high point last month and practically in line with the present wool market. Thus far buyers have been rather slow to place orders.

POTATOES

Potato shipments from the producing sections are running about forty per cent above the average for this season of the year. Supplies are coming from as far north as Minnesota, but Virginia is shipping about forty per cent of the total for the entire country. Prices are down nearly fifty per cent compared with six weeks ago and the trend is slightly lower. Virginia Cobblers are quoted at \$3.25 to \$4.25 in middlewestern markets.

BEANS

The business in this commodity is very quiet, buyers taking only enough for their immediate needs. Domestic pea beans have been worked into such a small compass that the dealers will shade 10@10½c. Roumanian pea beans have been offered freely from 7½@8c. Red kidneys are quiet with prices firm.

DETROIT CITY MARKET

The market here has moderate supplies with prices firm. The demand was best for peas, huckleberries, raspberries, corn and tomatoes. Potatoes, carrots, butter beans, radishes and leaf lettuce were draggy because of over-supply. Prices are as follows: Apples \$1.25@2.25 per bu; butter beans \$1@1.50 per bu; cabbage 30@50c per bu; cherries sour \$3.75 per 24-qt. case; eggs 30@35c; green corn 25@35c per dozen; huckleberries \$6@10 per bu; potatoes \$1.35@2; green peas \$2.50@4 per bu; radishes, red \$1@1.50 per bu; red raspberries \$7@10 per 24-qt. case.

GRAND RAPIDS

Heavy receipts of potatoes have unsettled the Grand Rapids markets and quotations have dipped to \$1@1.25 per bushel on No. 1's. R. Yonkers, local gardener, who is growing potatoes under irrigation, has been getting 25 cents premium on his offerings but the size of the tubers from Greenville territory began encroaching on his trade early this week, indicating that the spread between his product and that of ordinary spuds may be wiped out before the end of the week. Cabbage is a drug on the Grand Rapids markets but other vegetables continue fairly steady. Hothouse tomatoes were strong at 90c@1 a seven-pound basket. Apple shipments increased this week with more buyers in the market, paying from 75c@1 a bushel for the early varieties, packages returned. The Grand Rapids Growers' Association has purchased a grader and as soon as it is installed, its members will pool and ship through the association. Other fruit prices were: Red raspberries \$4.50 per case; black \$3; blackberries \$2.50@3 per case; huckleberries \$2.50@3.50 per case; cherries \$2@2.75 per case; dewberries \$2.50@2.75 per case; currants \$2@3 per case; peaches \$2.50@4 bu; plums \$2.50@3 per case.

Live Stock Market Service

Monday, July 24.

DETROIT

Cattle.

Receipts 1143. Butcher cows are 25c higher; other grades steady.
 Best heavy str, dry-fed.. \$ 8.50@ 9.35
 Handyweight bu., dry-fed 8.00@ 8.25
 Mixed str, hfrs, dry-fed. 6.50@ 7.25
 Handy light bu., dry-fed.. 5.50@ 6.25
 Light butchers 4.00@ 5.00
 Best cows 4.50@ 5.75
 Butcher cows 3.75@ 4.25
 Common cows 3.25@ 3.50
 Cannors 2.50@ 3.00
 Choice light bulls, dry-fed 5.00@ 5.50
 Bologna bulls 4.50@ 5.00
 Stock bulls 3.25@ 3.75
 Feeders 5.75@ 6.25
 Stockers 5.00@ 6.00
 Milkers and springers....\$ 35@ 75

Veal Calves.

Receipts 682. Market slow.
 Best\$10.50@11.00
 Culls and common..... 5.00@ 9.00

Hogs.

Receipts 709. Market active.
 Mixed hogs and pigs\$11.30
 Rought 7.90
 Extreme heavies 10.00

Sheep and Lambs.

Receipts 1,337. Market very slow.
 Best spring lambs\$12.00@13.00
 Light to common 6.00@ 8.00
 Fair to good sheep 6.00@ 6.50
 Culls and common 1.00@ 2.00
 Yearlings 5.00@10.00

CHICAGO

Hogs.

Estimated receipts today are 45,000; holdover 3,960. Market 5@15c higher on best grades; lighter grades and butchers, and others steady. Bulk of sales \$8.45@10.95; tops \$11.15; heavy 250 lbs up \$10.15@10.55; medium 200 to 250 lbs \$10.50@10.95; light 150 to 200 lbs \$10.90@11; light lights 130 to 150 lbs at \$10.45@11; heavy packing sows 250 lbs up \$8.35@9.10; packing sows 200 lbs up \$7.75@8.30; pigs 130 lbs down \$9.75@10.50.

Cattle.

Estimated receipts today are 18,000. Market slow, steady to weak. Beef steers medium and heavyweight 1100

lbs up \$10@10.85; do medium and good \$8.10@10; do common \$7@8.10; light weight 1100 lbs down \$8.80@10.40; do common and medium at \$6.90@8.80; butcher cattle heifers at \$5.15@8.85; cows \$3.90@8.15; bulls bologna and beef \$4.25@6.60; canners and cutters cows and heifers \$2.60@3.90; do canner steers at \$3.50@5.25; veal calves light and handyweight at \$8.25@9.50; feeder steers at \$5.65@7.75; stocker steers \$4.75@7.65; stocker cows and heifers \$3.50@5.75.

Sheep and Lambs.

Estimated receipts today are 23,000. Lambs 25c lower, sheep slow. Lambs 84 lbs down \$11.50@12.85; do culls and common \$7@11.25; spring lambs \$8@10.55; ewes \$3.50@7.25; ewes cull and common \$2@3.75; breeding ewes full mouths to yearlings \$5.50@11.50; yearling wethers \$11.75@12.65.

BUFFALO

Cattle.

Receipts 125 cars; market 25@50c lower. Choice to prime shipping steers 1,400 lbs and up at \$10@10.25; good to choice shipping steers \$9.50@10; heavy grass steers good quality \$9@9.50; light native yearlings of good quality \$10@10.25; best handy steers \$8.50@9; handy steers and heifers at \$7.50@8; western heifers at \$7@7.50; light Michigan butchering heifers \$6.50@7.50; best fat cows \$5.50@6; cutters \$3.50@4; canners at \$1.50@2.25; best heavy bulls \$4.50@5.25; heavy bologna bulls \$4.50@4.75; common bulls \$3.50@4; best feeders \$7@8; medium feeders \$5@6; stockers good at \$5@5.50; light common \$4@4.50; best milkers and springers \$60@70; common at \$25@40.

Calves, receipts 150 cars. Strong with tops at \$12.

Hogs.

Receipts 50 cars. Market is steady. Medium and heavy \$11@11.25; yorkers and pigs \$11.50@11.75.

Sheep and Lambs.

Receipts 125 cars. Market is lower. Top lambs \$10@10.25; yearlings \$9@10; wethers \$6.50@7.50; ewes \$5.50@6.50.

FARMERS' ROUND-UP IN UPPER PENINSULA.

ON August 11, and at the Upper Peninsula Experiment Station in Chatham, the Annual Farmers' Round-up of the Upper Peninsula will be held.

During the three days previous to that the Boys' and Girls' Club members will have their summer camp, which promises to be much larger than the one last year. The young folks will receive instructions along various agricultural lines and will engage in a final judging contest on the day of the round-up.

On August 10 the county agents and extension workers will hold a conference and will study the experimental work being done at Chatham.

A picnic dinner will be held on the day of the round-up at noon, which will be followed by the Boys' and Girls' Club parade. Speakers on the program in the afternoon will include David Friday, president of M. A. C.; Dean R. S. Shaw, and Clark L. Brody, manager of the State Farm Bureau.

Prof. E. C. Foreman, Prof. O. E. Reed, J. W. Weston, J. E. Kotila, H. R. Pettigrove, Dr. G. H. Coons, Prof. J. F. Cox, Prof. H. H. Musselman, and Miss Helen Simonson, all connected with college or extension work, will give demonstrations or otherwise show the work of their departments.

SILAGE FROM ACCLIMATED CORN GOES MUCH FASTER.

MR. D. M. STRINGER, of Eaton county, Michigan, during the cow-testing association year in 1918, planted special New Jersey silage corn. He fed sixty pounds a day of this material to his Holstein cows and Mr. Strange said it was well matured and well eared, but had big, coarse, heavy stalks when put into the silo.

The next season Mr. Strange again being a member in the Eaton County Cow-testing Association, put in just ordinary acclimated field corn. This also made a good growth and it was well eared when put into the silo. He fed to the same cows silage from this corn at the rate of twenty-five to forty pounds a day, and his cow-testing association records showed that he fed practically the same amount of hay and grain. The milk production was a trifle in favor of the acclimated corn. Mr. Strange remarked that the cows were also in better condition at the end of the year than they had been the year previous. Yet they had received scarcely one-half the amount of silage.—A. C. B.

MICHIGAN FAIR DATES 1922.

- Allegan County Agricultural Society, Allegan, Aug. 29-Sept. 1. Antrim County Agricultural Society, Bellaire, no fair held this year. Armada Agricultural Society, Armada, Sept. 19-22. Baraga County Fair Association, Baraga, Sept. 20-23. Calhoun County Agricultural Association, Marshall, Sept. 19-22. Caro Fair and Night Carnival, Caro, Aug. 21-25. Charlevoix County Fair, East Jordan, Sept. 11-16. Cheboygan County Fair, Wolverine, Sept. 26-29. Chippewa County Fair, Sault Ste. Marie, Sept. 5-8. Chippewa & Mackinac District Agricultural Society, Pickford, Sept. 18-20. Clinton County Fair, St. Johns, Sept. 5-8. Cloverland Farmers' Fair, Stephenson, Sept. 5-8. Copper Country Fair, Houghton, Sept. 27-Oct. 1. Croswell Agricultural Society, Croswell, Sept. 12-15. Delta County Agricultural Society, Escanaba, Sept. 19-22. Dickinson County Menominee Range Agricultural Society, Norway, Aug. 31-Sept. 1-4. Eaton County Agricultural Society, Charlotte, Sept. 26-29. Emmet County Fair, Petoskey, Sept. 5-8. Flint River Valley Fair, Burt, Sept.

- 3-6. Fowlerville Agricultural Society, Fowlerville, Oct. 3-6. Genesee County Fair, Davison, Aug. 28-Sept. 1. Gladwin County Fair, Gladwin, Sept. 12-15. Gogebic County Fair and Agricultural Association, Ironwood, Sept. 13-15. Grange Fair of St. Joseph County, Centreville, Sept. 18-23. Grangers', Gleaners' and Farmers' Fair, Big Rapids, Sept. 26-29. Gratiot County Agricultural Society, Ithaca, Aug. 29-Sept. 1. Greenville Fair Association, Greenville, Aug. 22-25. Hillsdale County Agricultural Society, Hillsdale, Sept. 25-30. Huron County Fair, Bad Axe, Aug. 29-Sept. 1. Imlay City Fair, Imlay City, Sept. 12-15. Ionia Free Fair, Ionia, Aug. 15-18. Iosco County Fair, Tawas City, Sept. 12-15. Isabella County Agricultural Society, Mt. Pleasant, Sept. 5-9. Jackson County Agricultural Society, Jackson, Sept. 11-16. Lenawee County Fair, Adrian, Sept. 18-22. Livingston County Fair Association, Howell, Aug. 29-Sept. 1. Luce County Fair, Newberry, Aug. 29-31. Mackinac County Fair Association, Allenville, Sept. 21-23. Manistee County Agricultural Society, Onokama, Sept. 26-29. Marquette County Agricultural Society, Marquette, Sept. 5-7. Mason County Central Fair Association, Amber Township Grove, Sept. 27-29. Michigan State Fair, Detroit, Sept. 1-10. Missaukee County Agricultural Society, Lake City, Sept. 6-8. North Branch Fair Society, North Branch, Sept. 19-22. Northwestern Michigan Fair Association, Traverse City, Sept. 18-22. Northern District Fair, Cadillac, Sept. 12-16. Northeastern Michigan Fair Association, Bay City, Aug. 28-Sept. 1. Oakland County Fair, Milford, Sept. 13-16. Oceana County Agricultural Society, Hart, Sept. 19-22. Ogemaw County Fair, West Branch, Sept. 6-8. Otia Fair Association, Brahma, Sept. 16. Otsego County Fair, Gaylord, Sept. 5-8. Ottawa and West Kent Agricultural Society, Berlin, Sept. 26-29. Presque Isle County Fair, Millersburg, Sept. 12-14. Saginaw County Agricultural Fair, Saginaw, Sept. 11-16. Sanilac County Agricultural Society, Sandusky, Sept. 5-8. Schoolcraft County Agricultural Society, Manistique, Sept. 26-28. Shiawassee County Fair, Owosso, Aug. 22-25. South Ottawa & West Allegan Agricultural Society, Holland, Sept. 12-15. Stalwart Fair Association, Stalwart, Oct. 5-6. Tri-County Fair, Buckley, Sept. 6-8. Tuscola, Huron and Sanilac District Fair, Cass City, Aug. 15-18. Van Buren County Fair, Hartford, Sept. 18-22. Washtenaw County Fair, Ann Arbor, Sept. 19-23. Wayne County Fair, Northville, Sept. 27-30. West Michigan Fair, Grand Rapids, Sept. 26-30.

American county agricultural agents worked with 1,065,098 farmers in getting cows tested for tuberculosis last year.

It pays a farmer to give his tractor the same care that his wife gives her sewing machine. Lubrication helps a lot.

If you know how, you can look over the flock now and pick out the poor layers. Somebody in your neighborhood knows how to cull, and can tell you how.

Big Profits Selling Hardy Michigan Grown Trees also grape vines, berry bushes, roses and shrubs, for Spring delivery. Our stock is fast selling, healthy and true to name. Write now for our handsome color catalog and liberal Agency proposition. Prudential Nursery Company, Box 306, Kalamazoo, Mich.

PAINT—\$1.17 PER GALLON Get factory prices on all paints. We guarantee quality. We pay the freight. Write today. Franklin Color Works, Dept. M, Franklin, Ind.

For Sale Fordson Tractor used 3 weeks as stationary power plant. Has governor and pulley. Will sell for \$350 cash or terms. Can be seen at Detroit Motor Sales, 3655 Mich. Ave., Detroit, Mich.

CORN HARVESTER cuts and piles on harvester or winnowers. Man and horse cuts and shocks equal Corn Binder. Sold in every state. Only \$25 with fodder tines attachment. Testimonials and catalog FREE showing picture of Harvester. PROCESS HARVESTER CO., Salina, Kansas

NEWTON'S For HEAVES, COUGHS, DISTEMPER, INDIGESTION A Conditioner and Worm Expeller, Wind, Throat, Stomach and Blood. Use two large cans for Heaves; if not satisfactory, money refunded. One large can often sufficient. Indigestion causes Heaves—and more troubles in horses than all other diseases combined. Keep Newton's Compound on hand. Occasional dose keeps the horse in good condition. More for the money than anything obtained for similar purposes. Two pounds net in large can, or 75 doses; 13 ounces in small can. Economical and safe to use, dose is small. Powder form, in air-tight cans. On the market over 30 years. Used in veterinary practice many years before. Equally effective for Cattle and Hogs. 65c and \$1.25 per can Sold by Dealers or by Parcel Post THE NEWTON REMEDY CO., Toledo, Ohio

Hoosier WOOD SILO Prompt delivery from stock at special low prices. Yellow Pine or Oregon Fir, the best wood material for world's standard material for out hinged doors. Best anchoring system on the market. HOOSIER WOOD SILOS cost little to erect, give splendid service with least upkeep cost. Purchase NOW insures quick shipment at rock bottom prices. Write for illustrated descriptive literature. Special proposition now to agents. We sell also famous HOOSIER TILE SILOS and BUILDING TILE. Ask for circular. Hoosier Silo Co., Dept. M99, Albany, Ind.

MINERAL COMPOUND FOR SYMPTOMS OF HEAVES In use over 50 yrs. Booklet Free \$3 Pkg. guaranteed to give satisfaction or money back. \$1 Pkg. sufficient for ordinary cases. MINERAL REMEDY CO., 463 Fourth Ave., Pittsburgh, Pa.

FRUIT SHIPPERS FOR HIGHEST PRICES Quick Returns Come to The E. L. Richmond Co., Detroit, Est. 1893.

\$24.95 American Separator Upward CREAM On trial, Easy running, easily cleaned. Skims warm or cold milk. Different from picture which shows larger capacity machines. Get our plan of easy MONTHLY PAYMENTS and handsome free catalog. Whether dairy is large or small, write today. AMERICAN SEPARATOR CO. Box 7061 Bainbridge, N. Y.

Limestone Knocks the acid and weakness out of sour dirt and puts good humor in grouchy farms. It keeps the soil sweet and builds big crops. Get the story—write for bulk prices. The France Stone Co., Toledo, O.

NATURAL LEAF TOBACCO, CHEWING, 5 lb., \$1.75; 10 lb., \$3; smoking, 5 lb., \$1.25; 10 lb., \$2. Send no money; pay when received. TOBACCO GROWERS' UNION, Paducah, Ky.

NATURAL LEAF TOBACCO, CHEWING, 5 lb., \$1.75; 15 lb., \$4; smoking, 5 lb., \$1.25; 15 lb., \$3. Send no money; pay when received. FARMERS' TOBACCO ASS'N., Paducah, Ky.

Homespun Smoking Tobacco Mild and Melon—10 lbs. \$1.50; 20 lbs. \$2.75; delivery guaranteed. We furnish free recipe for preparing. Smoking Tobacco Exchange, Sedalia, Ky.

HOGS O. I. C. Bred sow's all sold. Booking orders for spring pigs. H. W. MANN, Dansville, Mich. O. I. C. pigs at very reasonable prices for June and July shipment. C. J. THOMPSON, Rockford, Mich. O. I. C'S. last fall gilts due Aug. and Sept. Spring pigs not akin. Big Type. 1-2 mile west of Depot, Citizen Phone. OTTO B. SCHULZE, Nashville, Mich. L. T. P. C. Boars ready for service also gilts, bred sows out of best of blood lines. They are right, so is the price. Nuf sed. M. M. PATRICK, Grand Ledge, Mich.

L. T. P. C. Fall Boars at bargain prices. Fall gilts open or with breeding privilege. Write or see them. A. A. FELDKAMP, R. 2, Manchester, Mich.

Pullets Cockerels Pullets Chicks—Eggs—Breeding Stock—From Proven Layers BARRED ROCKS ENGLISH WHITE LEGHORNS ROCKS. Official Records 213 to 257 at M.A.C. In Dec. at Nat'l Laying Contest No. 4 Pullets averaged 24.5. I have won 5 specials so far at this contest, some records. WHITE LEGHORNS. Won cup best utility pen Zealand [22 pens]. Mr. Foreman Judging, 1st and 2nd pens Holland Fair. 1st Hen West Mich. State Fair. Why take chances when you can buy stock of this kind at bargain prices. Special prices on May, June, July chicks. Write for catalogue. G. CABALL, Box M, Hudsonville, Mich.

Big Type Poland China Spring boars at \$15 each. Sired by Glandman Buster and Hovers Liberator. Also gilts bred for Sept. farrow at \$40 each. All stock shipped on approval. Come and see them or write DORIS HOVER, Akron, Mich. For 30 years we have been breeding Big Type Poland China hogs on the same farm. We have sold over 100 head each year for the last 15 years for breeding purposes. There's a reason! The farmer has found our kind very profitable. We now offer 25 sows and gilts bred for summer farrow \$30-\$50. J. N. C. BUTLER, Portland, Mich.

L. T. P. C. Gilts bred for Spring litters all sold. Am offering very choice Summer Gilts bred for June and July litters also Fall Boars and Spring Pigs. Clyde Fisher, R. 3, St. Louis, Mich.

L.T.P.C. \$15, \$20 & \$25 Spring pigs with real breeding at the above prices. We are also offering a few choice fall gilts bred for summer farrow. Hart & Cline. Address F. T. HART, St. Louis, Mich.

LARGE TYPE P. C. Largest in Mich. Pig ready to ship, why not order from the herd that has given so many their start in the hog business, the kind that makes good, they have quality as well as size. W. E. LIVINGSTON, Parma, Mich.

Big Type Poland Spring pigs representing the best blood lines and all cholera immune. We raise them to sell, if in need of a real herd boar prospect, come over. Visitors are always welcome. WESLEY HILE, Ionia, Mich.

Large Strain P. C. nothing more for sale at present. I thank you. H. O. SWARTZ, Schoolcraft, Mich.

BIG Type P. C. Boar Pigs. Sows and Fall Gilts bred for Sept. to Big Bob Mastodon and Peter A Pan, son of \$1075 Boar. C. E. Garnant, Eaton Rapids, Mich.

BIG TYPE Poland Chinas, leading strains at lowest prices. Both sex, all ages, and bred sows and gilts. G. A. BAUMGARDNER, R. 2, Middleville, Mich.

LEONARD'S B. T. P. C. Herd headed by Leonard's Liberator. Orders booked for boar pigs at weaning time. Call or write E. R. LEONARD, St. Louis, Mich.

P. C. Swine. Sows and pigs, sows bred for Aug. and Sept. farrow, spring and fall boars, best of breeding, satisfaction guaranteed R.W. Mills, Saline, Mich. Hampshires book your order for spring boar pigs now. A few gilts, now ready for summer farrow. JOHN W. SYNDER, R. 4, St. Johns, Mich.

SHEEP Shropshires that will win at the State Fairs. I have them for sale. A big bunch of yearling rams as usual and priced reasonably. KOPE-KON FARMS, S. L. Wing, Prop., Coldwater, Mich.

HORSES Fine Bay Gelding weight 1800 lbs. Sound and a beauty. Also harness and wagon in good condition. Bargain no use for them. American Butter & Cheese Co., 234 Howard St., Detroit, Mich. SHETLAND PONIES for sale at a bargain. B. B. REAVEY, Akron, Mich.

POULTRY JUST-RITE LOOK! Baby Chicks LOOK! A Hatch Every Week All Year POSTAGE PAID, 95¢ live arrival guaranteed. MONTH'S FEED FREE with each order 40 Breeds chicks, 4 breeds ducklings, select and exhibition grades. Catalog free, stamps appreciated. NABOB HATCHERY, Dept. 15, Gambier, O.

DEBIBED WHITE LEGHORNS FREE MORE EGGS Lay 265 to 301 eggs per year. Winners at 50 shows. Chicks, eggs, pullets, hens and males shipped C.O.D. at low prices. Write today for catalog and complete information to the World's Largest Leghorn Farms. GEO. B. FERRIS, UNION, GRAND RAPIDS, MICH.

Bred-to-Lay White Wyandottes 59 hens laid 1170 eggs in Jan. Eggs \$2.00 per 15; \$10 per 100. EVERGREEN POULTRY FARM, Blanding & Sons, Greenville, Mich.

ANCONA PULLETS I have 300, 3 months old, utility selected Ancona pullets which I will sell at \$1.30 each. Order at once and avoid disappointment. Thomas Beyer, R. 4, Zeeland, Mich.

RHODE ISLAND WHITES win over all breeds at the egg laying contest. 30 eggs \$5; 50 \$8; 100 \$15 order from this ad. Some chicks. H. H. JUMP, R. 5, Jackson, Mich.

W. Chinese goose eggs 40c each. Pekin duck \$1.50 for 8. R. C. Jr. Leghorn \$1.50 for 15 \$8.00 per 100. Mrs. Claudia Betts, Hillsdale, Mich.

WHITE WYANDOTTES 207 egg average. Eggs all matings, \$2.00 per 15; \$10.00 per 100. Cockerels, hens and pullets \$5.00 each. FRANK DELONG, R. 3, Three Rivers, Mich.

Bourbon Red Turkeys We have them. Order your Birds and Eggs now. SMITH BROS., R. 3, Augusta, Mich

Radio Department

Conducted by Stuart Seeley

ABOUT VACUUM TUBES.

ANYONE who has examined the vacuum tube of the ordinary receiving set closely, knows how they are constructed on the inside. There are three main parts: The filament, the grid and the plate. These are enclosed in an evacuated glass cylinder and leads are brought out through the glass to prongs to make connections with the socket contacts.

The principal operation is very simple and can be understood by anyone. It depends for its action upon several fundamental facts which were discovered long before the audion or vacuum tube as it is called, made its appearance.

First, if a small wire (filament) is heated to incandescence inside an evacuated glass cylinder, three things will be projected from it out into space. These are heat, light and electricity (in the form of electrons). The first two we may detect by our natural senses but the third was long undiscovered merely because the eye could not perceive it and it caused no effect upon the sense of feeling. It is the third characteristic that is made use of in the audion.

Second, after this discharge of electrons from a hot filament was discovered it was found that if a cold plate was placed inside the vacuum bulb, near the filament, and a lead brought outside the glass quite an appreciable flow of electric current would take place from the filament to the plate. It was also found that if a battery was placed in the circuit this action could be greatly accelerated.

Third, Dr. Lee DeForest, of this country, made the discovery that if a small screen or network of wires is placed between the filament and the plate and a very small negative charge placed upon it the flow of electrons from the filament, and consequently the passage of current from the filament to the plate, would be blocked.

In this way the audion is made to act as a sort of a valve in which minute impulses control comparatively large currents of electrical energy. In England "Vacuum Valve" is the common name for this piece of apparatus. Its principal application in the radio receiving set can be explained about as follows:

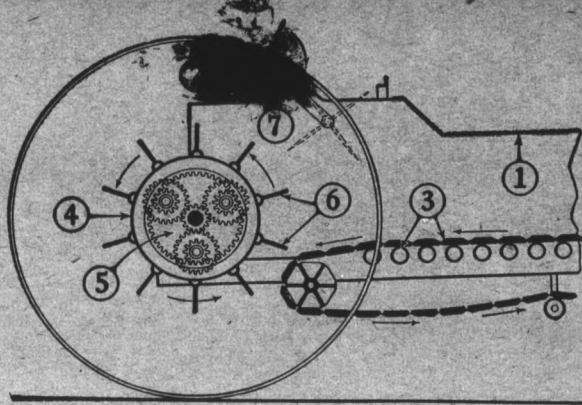
The ether waves act upon the aerial and cause an electrical current to flow up and down through the tuning coils and in and out of the ground. This current reverses its direction very rapidly, about one million times per second and it would be impossible to construct a set of head 'phones that would operate with alternating current at such a high frequency. However, these impulses may be made to flow back and forth onto the grid of a vacuum tube and thus control a comparatively large direct current which in turn operates the 'phones.

Of course, only negative charges will stop the plate current in an audion, but since the radio waves set up a current which flows first in one direction and then in the other, half of the impulses are negative and the positive charges have very little effect.

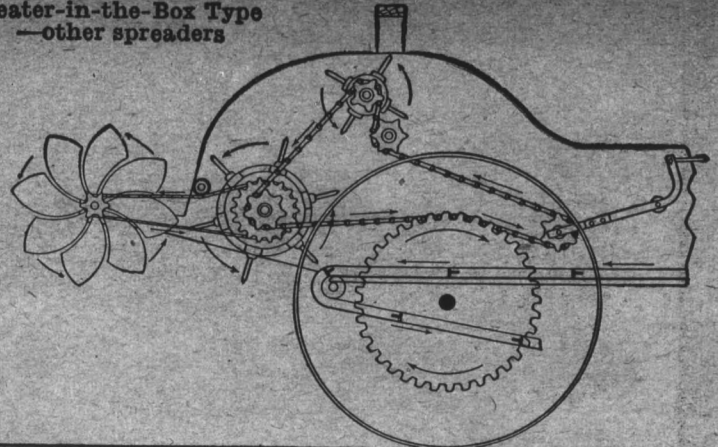
The audion was not an invention. It is the development and combination of several principals into one piece of apparatus. Dr. Fleming, an Englishman, was the first experimenter to use anything similar to the present-day vacuum tube. However, DeForest and Armstrong, of this country, are the ones who developed it to its present state of perfection.

Health suffers when we think too much about it.

Beater-on-the-Axle Type
—the John Deere



Beater-in-the-Box Type
—other spreaders



SEVEN JOHN DEERE ADVANTAGES

- ① Only 36 inches to top of box—6 to 10 inches lower than beater-in-the-box type. In loading 100 loads of manure, this feature saves you in energy the equivalent to that of raising a ton of manure on the end of the pitchfork to the height of an 8- to 12-story building. The manure is in the box before the hard part of the lifting comes.
- ② High drive wheels—4 to 8 inches higher than others. This advantage saves your horses. You know how much easier your horses pull a high-wheel wagon than a low-wheel truck.
- ③ Manure moves back to beater on apron mounted on 48 rollers. It is not dragged back. You know how much easier it is to move a ton weight on rollers than it is to drag it. This is another horse-saving feature.
- ④ Beater and important working parts are mounted on the axle. Beater is near the ground—manure is not thrown high in air—side winds do not cause drifting and uneven spreading. There is only one beater on the John Deere.
- ⑤ Simple beater drive gears are enclosed and operate in an oil bath—they last for many years. No chains or clutches on the John Deere, and only about half the parts used on others. No adjustments for you to make.
- ⑥ Beater teeth enter manure in a horizontal position. They do not work against the manure. Ten rows of teeth tear the manure apart and spread it evenly.
- ⑦ Revolving rake, another patented feature, has sharp-pointed teeth that penetrate deeply into the manure and revolve as the load moves back. This rake prevents bunching and decreases the draft.

You Must Choose Between Two Types of Spreaders

There are only two general types of manure spreaders—the beater-on-the-axle type—the John Deere, and the beater-in-the-box type, which includes all others. The John Deere is in a distinctive class because mounting the beater on the axle is patented construction—others cannot use it.

The illustration above shows comparisons of the business end of these two types. Study this. It shows clearly a few of the exclusive features on the John Deere made possible only by mounting the beater on the axle.

This illustration shows why the John Deere is easier on you, why it is easier on your horses, why it is a real manure

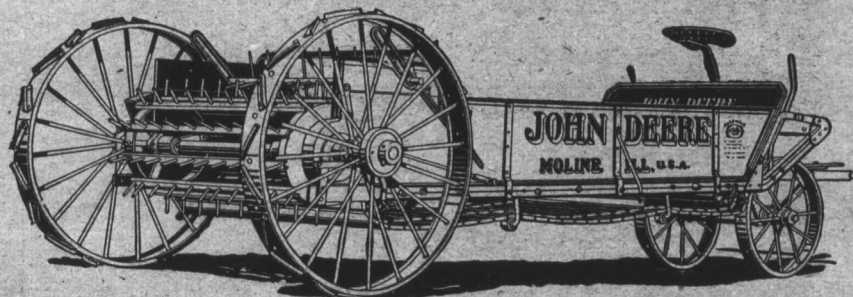
spreader—not merely an unloader, and its extreme simplicity which results in extra years of money-making service at unusually low repair expense.

To the left the seven features brought out in the illustration are described. These are the features that have appealed to thousands of users. They are the big reasons why you will find, in most agricultural sections, more John Deere Spreaders in use than any other make.

See this spreader at your John Deere dealer's—look it over carefully. You will find many other superior points about it to further convince you that the John Deere is the most profitable spreader investment you can make.

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This book contains a world of interesting and valuable facts about manure, how and when to spread it. Gives results of a number of experiments. Tells about lime, green manures, etc. A book you will want. Free. Simply address John Deere, Moline, Ill., and ask for Booklet M-422.

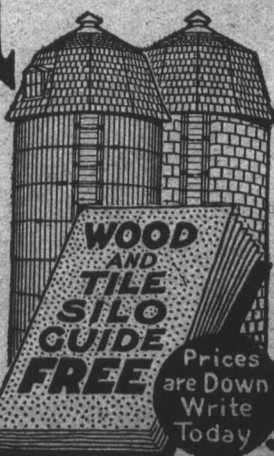


JOHN DEERE

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