

MICHIGAN FARMER

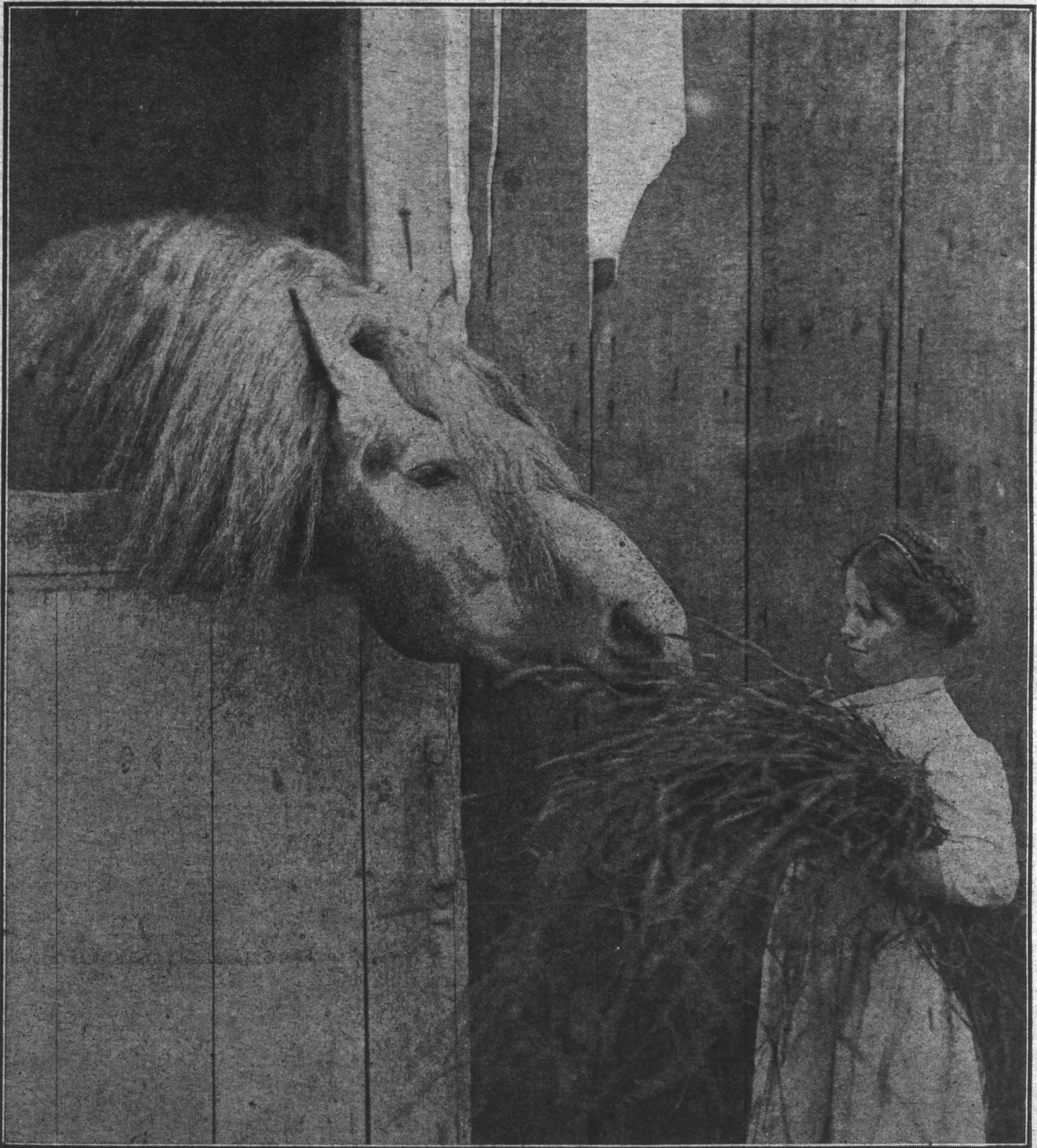
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Whole No. 4776



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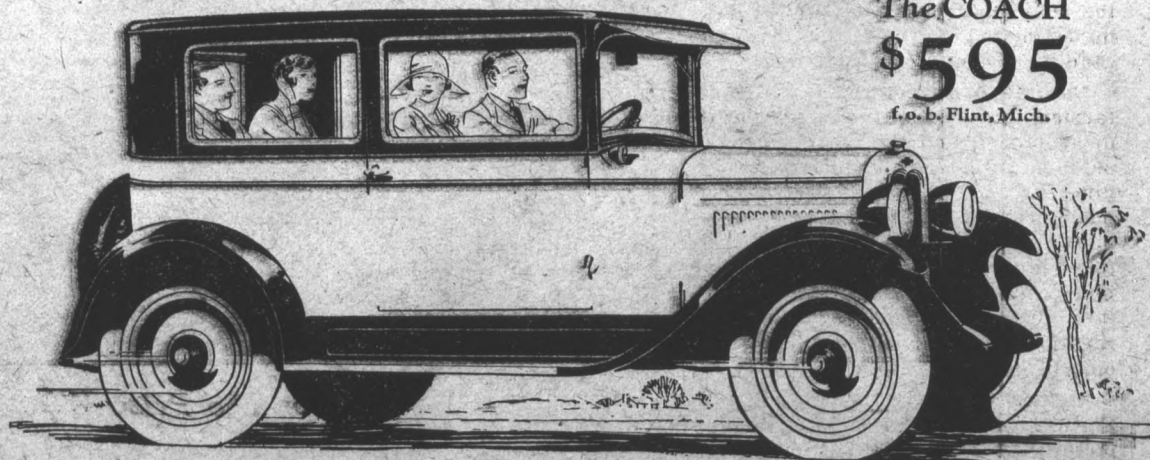
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MICHIGAN FARMER

AND LIVE STOCK JOURNAL
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A Practical Journal for the Rural Family
MICHIGAN SECTION THE CAPPER FARM PRESS

QUALITY
RELIABILITY
SERVICE
NUMBER X

The Combine in Michigan

Experiences of a Half Dozen Men Who Have Tried This Method of Harvesting

PRACTICALLY every Michigan farmer has heard of the big combines which were developed some years ago to harvest the grain crops of the Pacific coast states. These were developed in advance of the tractor and were operated by traction power

By I. R. Waterbury

combine, the machinery of which is operated by a four-cylinder gas engine mounted on the combine frame. In this illustration it is shown cutting a very heavy piece of wheat on the De-

Another type of combine adapted to small farm operation was seen last week on the farm of John Bidle, in Lenawee. This eight-foot Gleaner combine is mounted on, or rather around a Fordson tractor. It is suspended entirely from the tractor, which also furnished the motive power to run the machinery of the combine from the power take-off. As will be noted from the illustration, this is an extremely compact machine, and is a strictly one-man outfit. The cutting device is mounted directly in front of the tractor, the separator on the right side and the grain tank on the left side. It was operated by cutting the field in lands and swinging around the ends, although the flexibility of handling would make it easily possible to cut around the field if desired. When the grain tank is full, the wagon is run under an elevator spout, the elevator thrown in gear and, presto; the grain is in the wagon box.

This machine is a departure from the conventional type of harvester-thresher, in several respects. The threshing cylinder is of an entirely different type than the usual device for this operation, being made with

alternate bars and in operation, the device literally rolls the grain out of the heads, much as a head is rubbed between one's hands. It is claimed for this device that it handled weeds or other green materials better than the conventional threshing cylinders, and is equally efficient in operation. It was doing a clean job of threshing oats, in rather "tough" straw when we saw it in operation.

Another feature of this machine is that the cylinder is mounted low, at the end and just behind the conveyor, which is a steel "auger" mounted in a steel "trough" just behind the cutter bar, giving a very positive feed.

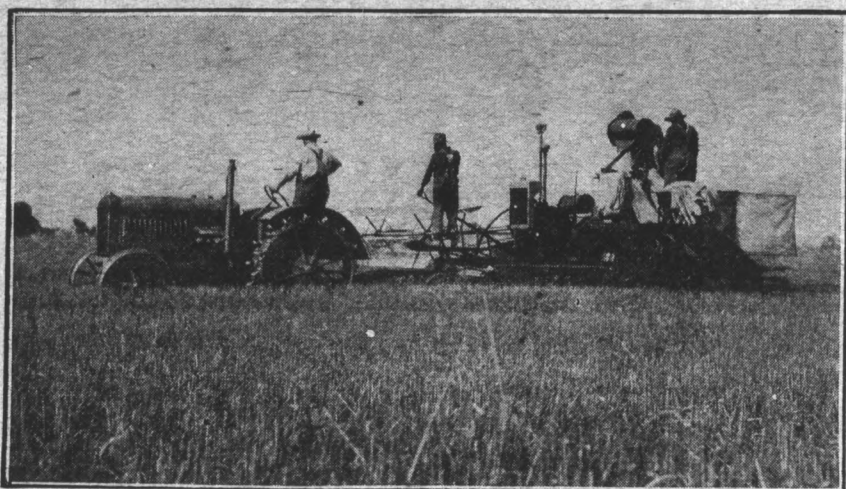
In the illustration of this machine on this page, it is seen as "snapped" while running. The man in the white shirt standing on the platform just behind the operator, was a spectator who came to see the machine in operation. In the other illustration, which shows the threshed grain being elevated into the wagon-box, Mr. Bidle stands on the platform, just after throwing in the elevator clutch.

Mr. Bidle roughly estimates that to have cut and threshed his grain crop in the usual way, would have taken a total of at least sixty-four days of man labor. With the combine, he thinks this will be reduced to not more than twenty days. Balancing the cost of twine and threshing against interest and depreciation on the combine, and cost of operating same, he is of the present opinion that he will save something like one-third of his investment in the equipment on his ninety-acre grain crop.

Mr. E. A. Smedley, of Shiawassee county, is an entirely satisfied combine owner. He has a McCormick-Deering ten-foot cut combine. He is operating a 200-acre farm without help, and feels that the combine will very materially aid in the solution of his problem. He cut about 125 acres of grain on his own and his brother's farm, and thinks the combine did a much better job in badly tangled oats than could have been done with a binder, and with practically no waste.

Mr. Smedley's machine is equipped with a grain tank and the grain was hauled to the granary in tank wagons, of which he has two. These are his own design and make, and have been in use for several years. A plat-

(Continued on page 210).



Harvesting and Threshing a Forty-acre Field of Wheat on the Detroit Creamery Farms at the Rate of Over Two Acres Per Hour.

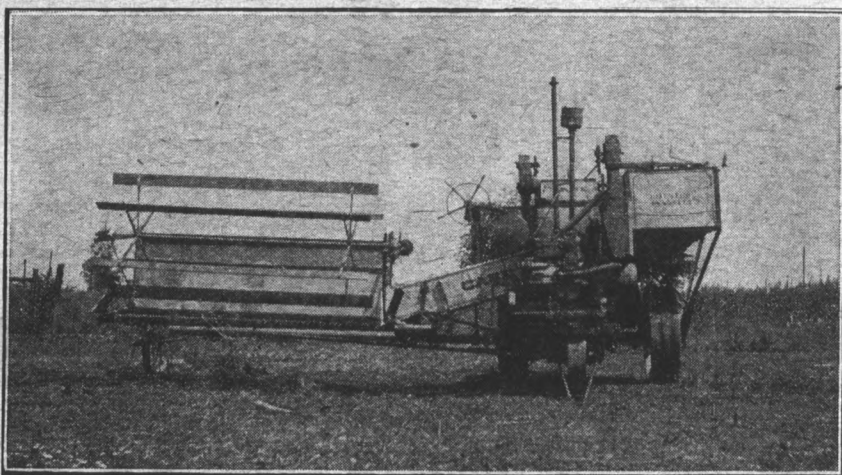
furnished by some thirty horses or mules, which were hitched to a frame at the rear of the machine and pushed the unwieldy device ahead of them. But the machine did the business, cutting and threshing the grain at one operation, leaving the straw on the field.

The combine remained a local institution for some years during its development period, largely because it was generally believed that it could not be successfully used in the more humid climates of the great mid-western grain-producing sections. But with the general adoption of the gas engine and the tractor for farm work, the gas engine was adopted to drive the machinery of the combine, and the tractor to pull it, and enterprising manufacturers invaded the middle-western grain belt to find a wider market for their product. Progress was slow at first, but gradually the combine was introduced in widely scattered communities. The object lessons, thus afforded, resulted in a rapidly increasing demand for these labor-saving machines. This year there was a greater demand for them than the manufacturers could supply, it being estimated that more than five thousand were sold in Kansas alone.

Naturally, a good many Michigan farmers have been interested in the development, and this year a number of them ordered combines. Several different makes and types of these machines have been tested in Michigan harvest fields this year. We are following the experiences of these combine owners carefully, and hope to give our readers definite information regarding the satisfaction and economy of operation enjoyed by them.

In the meantime, many Michigan Farmer readers will be interested in pictures and descriptions of the different types of these machines which we have recently seen and photographed in operation in Michigan grain fields. The machine shown in the first of these illustrations is a McCormick-Deering. This is a ten-foot cut

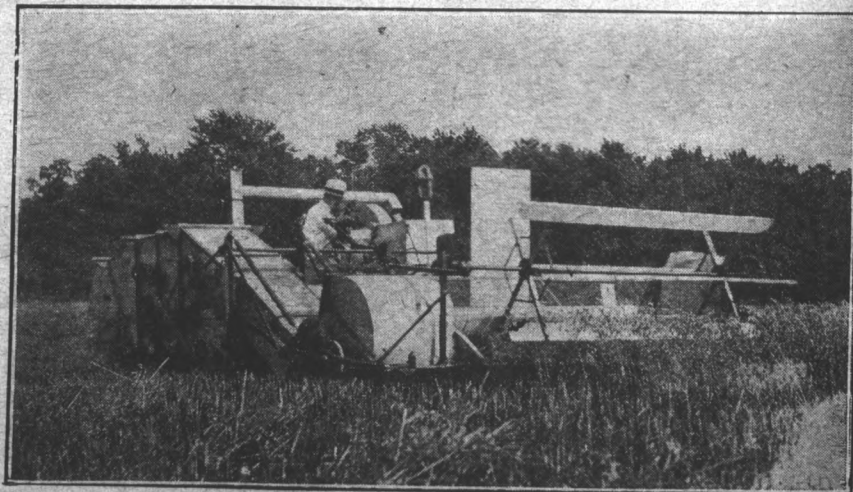
troit Creamery Company farm, in Macomb county. Mr. Shultz, the farm manager, estimated that the wheat would yield forty-five bushels per acre,



Mr. Smith's Case Combine was Used to Harvest a Crop of Wheat and Sweet Clover Combine, which it Did Successfully.

which we believe a fair estimate. Mr. Shultz purchased two of these combines to harvest 380 acres of grain grown on the farm. On account of lack of experience in operation and the heavy grain being cut, some difficulty was experienced at the outset, but when we saw them running, after the crews had had a day's experience in their operation, both machines were running along with as little, or less, difficulty than would have been experienced in cutting the same grain with a binder. In the operation of these machines, the grain was sacked on the machine and dropped off, four sacks in a place, then loaded on wagons and drawn to the granary. Mr. Shultz purchased tanks to mount on the machines for handling the grain in bulk, but had not installed this equipment at the time we saw the machines in operation. He believes that larger machines would have been better for his conditions, but expected to make a substantial saving over the old method of harvesting.

diagonally serrated bars which revolve directly above a "concave" of transverse steel bars mounted on a flexible steel bed. The diagonal serrations on these cylinder bars are reversed on



With Mr. Bidle's Machine the Cutting is Done Directly Ahead of the Tractor and the Cylinder is Located Close to the Ground.

MICHIGAN SECTION THE CAPPER FARM PRESS



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VOLUME CLXIX

NUMBER TEN

DETROIT, SEPTEMBER 3, 1927

CURRENT COMMENT

Wheat
Area
Expands

IN all probability the American wheat crop will sell on a world market basis in 1928, which will mean a return to low prices, should farmers carry out their intentions to increase winter wheat area 13.7 per cent, as indicated by reports to the department of agriculture.

This increase would run the total acreage of winter wheat up to 48,600,000 acres, a larger acreage of winter wheat sown in any season except 1918. With a ten-year average abandonment of 12.4 per cent, there would remain for harvest approximately 42,000,000 acres which, at the average yield of the past ten years, would give a winter wheat crop of around 626,000,000 bushels, or a gain of thirteen per cent over 1927, the preliminary estimate of which is 553,000,000 bushels.

The present tendency to expand wheat acreage is ascribed to several factors. For several years returns have been relatively higher from winter wheat than from competing crops like oats.

Also, for two years unfavorable weather east of the Mississippi river at planting time has prevented increases in the acreage seeded to winter wheat. And cold, wet weather last spring interfered with corn planting and resulted in a large increase in idle land. A part of this land will be used for wheat this fall. Partly for this reason, farmers in Ohio and Illinois now plan to sow more wheat than they planned to sow last fall.

From western Nebraska to Texas, a steady expansion of the winter wheat acreage is taking place. This is thought to be due to the reduction in cost of production by the use of combines and power equipment. During the four years, 1923 to 1926, the acreage in the four states of Nebraska, Kansas, Oklahoma and Texas increased from 18,509,000 to 22,612,000 acres, and the reports received indicates that

farmers in these states are planning to sow 24,326,000 acres this fall.

So, unless yields should fall below the average, wheat surpluses will be large again next fall, providing these intentions are realized. Perhaps it would be wise for the Michigan farmer to stick to their regular crop program in respect to fall crops, instead of expanding, as the government report indicates he intends doing.

Fight the
Borer
Now

WITH the arrival of the European corn borer on the west coast of Michigan, and the large increase of the insect in the infested area of the state, new fears are creeping into the minds of the officials who have expressed the hope of building a barrier to keep the borer from the corn belt, and much apprehension has come to the farmers of this state as regards the future of the corn crop.

Naturally, there is criticism of the clean-up campaign work of last spring on the basis that it has not resulted in diminishing the number of borers. In other words, we have engaged in a battle in which the borers have come off victorious. So, many contend, and their contention seems to be justified by this first skirmish.

On the other hand, no one can say what the results may have been, had no campaign been put on. The late start, the difficulties of organization, and the necessity of using in the organization many incompetent persons, the newness of the whole program, and lack of experience and definite information all gave the borer the advantage in the fight.

But this Bull Run engagement seems to be having a similar reaction upon the defeated, as the battle of Bull Run had upon the Union soldiers in the sixties—it is making us all understand that a war requiring the full use of our wits is upon us. The borer now has such a long start that we are obliged to learn how to fight him by fighting.

And we cannot have the 1928 engagement turn out any differently than the 1927 fight, if we let the borer dig in completely along the entire front line this fall and winter, and then expect to get up some morning next April and vanquish him. It is apparent from this year's experience that we must use a different type of warfare to conquer. We must gird ourselves now—start our bombardment with the harvesting of the corn crop, and then make life as miserable as possible for the pest, not for eight days, but for eight months.

A Chance
For
Milkweed

AN Iowa chemist, Dr. Gerhart, is making a plea for milkweed. He finds that this much despised plant has many promising virtues. And what he says should occasion a careful study of the plant to learn if the possibilities he suggests may not be realized in a practical way.

In the first place, this chemist states that the milk from this weed corresponds closely to that of the rubber plant, and it may in the future, prove a domestic source of this valuable product. According to his tests, the milkweed will produce, in the wild state, from two and one-half to three per cent of rubber.

Further, an acre of the weed will produce around 550 pounds of cotton floss. This is a greater production than is had from the cotton fields. A superior quality of upholstery can be made from this floss. At the same time the blossom is producing the floss, the stem of the plant is growing a fiber of high tensile strength. The fiber of the milkweed runs the entire length of the stalk. This chemist states that it would make an excellent substitute for hemp. In strength it compares well with manila hemp.

The fiber of the plant also produces

an excellent quality of paper and wall-board. The long, tough fibers make this possible. In producing wallboard, eighty-eight per cent of the plant was used.

Another product is the seeds. From fifty-five to sixty bushels could be harvested from an acre. This compares favorably with yield of corn. These seeds contain about twenty per cent of oil, and from thirty-five to forty per cent protein. The oil compares in quality with cottonseed oil, and the protein should make an excellent stock feed. About the only requirement in getting the seeds to reproduce is scarification.

This persistent plant, which all these years has been a liability to agriculture, may some time be placed on the other side of the ledger. Extensive research should be made promptly along the lines of the pioneer work by Dr. Gerhart. But, in the meantime, we shall continue to discourage the growth of the plant as we have been doing, except that, as we wield the hoe or scythe, we shall find a new interest and a bit of regard for this weed, once known as the "father of medicine."

On
Feminine
Finances

ALONG with many other things, the attitude of both men and women on money matters has changed. It wasn't so long ago that the average woman never thought of having her own money to spend. Whether equal suffrage or women's recent success in the business world has brought about this change, is difficult to determine. But nevertheless, it is granted by our most experienced advertisers through their copy appeal to women, that women in general are more and more coming to handle the family finances.

A few months ago two electric companies became interested in the occupation of their stockholders. Upon investigating they found that of their 13,856 purchasers, the occupation of the nine largest groups was, 3,347 housewives, 1,654 nurses, 949 clerks, 401 salesmen, 336 school teachers, 326 laborers, 250 stenographers, 237 farmers, and 178 grocery men. The housewives outnumbered the capitalists one hundred to one.

This is an interesting sidelight on feminine finances. The average home is in such constant need of so many things that it is surprising that the proportion is so large. For, after all, the safest and best investment lies in improving the comforts of the home, and in better equipment for one's business, whether one's job be managing a home or tilling the soil.

Good
Dogs
Needed

WHERE chickens are kept, and other products which are likely to attract thieves are produced, it is a good policy to have one or more good dogs about the premises. Although thieves occasionally are successful in pilfering from farms provided with such animals, the percentage is relatively small. These men give the good watch dog a wide berth.

This is the beginning of the chicken thieves' harvest time. Already many reports of raids on farmers' poultry yards have come to our attention. The total value of poultry and other property stolen from farms in most any wealthy agricultural counties is sufficiently large to justify a sentiment that is growing in a few localities. This sentiment is that county governments ought to provide rewards to persons responsible for apprehending the thieves. These rewards being general, should put the whole neighborhood on guard, which in turn would tend to discourage and make more difficult the carrying out of these criminal enterprises.

Further, the development of local

vigilance committees in established local farm organizations, and the cooperation of these committees with county and state police officials, should tend to reduce farm pilfering. While the laws enacted by our last legislature undoubtedly will aid materially along this line, the organized and individual cooperation of all groups and persons will be needed to make the farm flocks and farm property safe against the raids of an irresponsible and unlawful class. But with all these precautions, the dog remains a necessary adjunct.

Tests at the Minnesota experiment station show that a cow producing 27 pounds of milk daily consumed 9.6 gallons of water while one of the same breed giving 13 pounds of milk drank only five gallons of water.

Records of five years show that it costs \$43 a year to care for a cow.

Faired

WELL, I went to the fair alone, 'cause Sofie was inexpressed, and I don't blame her, because it's a awful job to get kids all dressed up to go anywhere. But as far as I am concerned, I kin dress myself, and that don't bother her, except to let me know where my socks, shirt, collar buttons, tie, collar and Sunday shoes are. I sure know where them shoes are when I got them on, 'cause I kin hear them, but when they're standing still I wish they'd squeak sometimes.

Well, I followed the crowd, and where do you think it went? Well, it just proves that crowds is intelligent, because they are always lookin' fer information. They went right to where them dancing girls was presenting some bare facts, and it looked to me like they was cold ones, too, because they looked kinda goose-pimply.

Inside the show I met Jim Smith and we went together. We tried a raffle wheel and I won one of them dolls with a skirt around the middle, and nothing else. We tried another raffle and Jim won a blanket. I told him he ought to give me the blanket so I could keep my doll warm, but Jim ain't the kind what's kind to the ladies. Then we went to the wild west show that was awful tame. When you do that wild stuff a dozen times a day, like them cowboys do, it does get kinda tame.

Jim was getting hungry, so we et and paid seventy-five cents apiece. I know if farmers could get prices like that fer what they sell, there wouldn't be no farm relief, except to relief them of their money, and taxes could take care of that.

Well, after dinner Jim stumped me to go on a Merry-go-Round. Being after dinner I wasn't very merry going around, but felt more like I was going to Europe on a rough sea. I wanted Jim to have his fortune told, but he said he didn't want anybody to dig into his private affairs and find out how little he's got.

Well, it was time fer the races so me and Jim went in. We set there eating peanuts and drinking pop until the races started, and I don't think any horse could go faster than Jim in shellin' and eatin' peanuts.

Horse races is always exciting, but not so exciting when your horse loses. Mine did, and I had ta pay Jim a dollar. Jim thought it was a dandy race.

Oh, yes, there was cattle, pigs, sheep, grains, fruit, etc., there, but I didn't get time to look them over, because I was givin' consideration to some other stuff. But I guess I faired pretty well at that.

HY SYCKLE.



The Farmer and the Pheasant

How Will the Grower of Crops Cope With This Protected Bird?

By R. G. Kirby

WHILE the Country Life Association were meeting recently at the State College they neglected one subject connected with the uplifting of the farming business. The pheasant ought to be boosted completely out of settled farming sections where the corn crop is of any importance.

Last spring we had a trio of grown pheasants parading across the back of our corn field and scratching up as many of the kernels as their appetites demanded. The field now shows the results of their presence in that section. Several neighbors report considerable loss from pheasants in the corn. One neighbor dragged up a field which was badly injured by crows and pheasants but claims that observation proved that the pheasants did more damage than the crows.

For the past two weeks it has been very dry in our section and there are no pond holes or wet low places where pheasants can drink. In one section of the field where a mother pheasant and her brood have been spending a large part of their time, I have noted young tender corn stalks with a hole eaten in the side about six inches from the ground. This damage is only present around the pheasant range.

Soon the stalk breaks over. The damage is not due to the corn borer as no borers are present. The pheasants are very thirsty and break a hole in the tender stalk to obtain the moisture. A good rain will stop the loss as the pheasants will drink from small water holes and not need to break open the tough stalks. According to my observation this diagnosis of the trouble is correct. I would be interested in knowing if other farmers

have observed injury of this kind due to pheasants starving for water during very dry periods.

Up to the present date the loss from pheasants in our section is much greater than any loss from the corn borer. Yet many days of valuable time were devoted to picking up bits of stalks and stubble last spring. No farmer wants to face the loss of his crop due to the corn borer and all farmers are willing to fight this pest. But at the same time it is difficult to understand why a pest which is causing us more damage than the borer should be forced upon us and protected by the law.

In the fall we have had some experience with hunters looking for

game. He did not find it and soon returned to his sedan and called it a glorious day.

Pheasants are beautiful birds and there seems little humanity in breeding them for slaughter at the hands of men who are generally poor shots due to lack of practice. It means too many wounded pheasants. Poultrymen who kill poultry do it quickly and mercifully. Just imagine a farmer who would shoot the leg off a Barred Plymouth Rock rooster and allow it to drag around the farm until it died. The bird would suffer no more than the male pheasant which has unfortunately crossed the path of an amateur hunter.

If the pheasant as a game bird,



pheasants. They climb our wire fences and stretch them out of shape. The firing of guns drives the Leghorns in from their corn field range. The unfortunate pheasants are sometimes shot into bloody rags. But more often they receive broken legs or wings and drag themselves away to die in the corn fields or fence corners.

I once heard a "beautifully dressed huntsman" say, "Oh, look at the beautiful male pheasant, quick, let's blow him all to pieces." He fired off both barrels of his gun, made the poor bird wobble in its flight and spent about five minutes looking for the

could be confined to wild land it would not have such a bad economic aspect. At present a large part of the pheasants in cultivated districts seem to delight in spending their time around corn fields. If those fields are also used as poultry ranges, the pheasants will come up at night and eat growing mash from the hoppers around the colony houses. This is a mixed material costing between three and four dollars per hundred pounds which is bought with the hope and faith of obtaining winter eggs. It is not practical to feed much of it to pheasants.

If it is necessary that cultivated farms should be producers of wild game it might be better to adopt the following improvised plan. First determine the pheasant quota for each cultivated farm. Every farmer would be compelled to raise so many pheasants each year for the city sportsman.

The farmer could pen up the pheasants to protect his corn crop and the sportsman could dress up in a hundred dollars worth of hunting costume and come out and shoot the pheasants through the wire fence of their run. This would save the pheasants a lot of misery and keep "ye noble huntsman" from tearing his pants on the barbed wire fences.

Lest the writer be misunderstood it might be wise to say that the above suggestion is nothing but sarcasm. Something constructive for the future might be done through an investigation of the injury done by pheasants on different farms. If the bird is then proven to be a menace, farmers might be allowed to shoot them on their own land at all seasons. This would tend to drive the remaining pheasants back to the wild lands which are the only lands which should be populated with game birds for the benefit of hunters.

At least many a farmer could save a lot of corn if he could legally shoot both the male and female pheasants which set up housekeeping in his cultivated fields. It is a well known fact among farmers that long worded papers on keeping the boy on the farm are not as beneficial as sensible laws and common sense information which helps to save farm crops and place the farming business on a safer basis.

Pepping Up Poor Soil

How the Unmanured Portions of the Farm Can be Improved

By R. D. Bailey

DOUBTLESS, every thoughtful farmer has noticed that when he has fed crops from the entire farm, he had a manure pile that would not cover more than quarter the area from which he gathered these crops. He then wondered how he was going to keep up the fertility of the other three-quarters.

This lack of anything to feed the other three-quarters worries some, and some it doesn't seem to worry. The way followed by the class who do not worry is to use the manure as far as it will go and then to "take it out of the hide" of the rest of the land, use the unfed land as long as it will stand it, take crops until the land will not give crops worth the time, seed and trouble, then abandon the field or the farm.

Some men don't like to do this. They are too proud to abuse a piece of land. They wouldn't do it any more than they would starve a horse, while trying to work the horse.

Neither do they wish to abandon a farm into which they have put some money, years of labor in clearing, the fencing, the well, the barn, the house, the home itself. They do not consent to see the work of a lifetime thrown away. Yet, what can they do to keep up fertility when the crops steadily grow less and the manure pile steadily covers less ground?

They are not helpless. They are not caught in a trap. They are not doomed to failure. There is a way to meet the situation. There is a means of

saving the farm so that the family can continue to live there, and to prosper.

It is a method that they can accept or refuse, just as they will. There is no compulsion. On their choice depends the family fortunes. They can use green manures, cheap, hardy, quick crops, plowed in. These will save the farm, the home, the life's efforts. It is strange, indeed, that more farmers, apparently quite sensible about other things, do not make far greater use of this quick, cheap, simple means of green manure crops.

When we speak of organic matter, we mean stuff that grows weeds, corn,

clover, soy beans, vetch, rye, buckwheat, etc. When we speak of vegetable matter, we mean the same. When we speak of humus, we mean rotting vegetable matter. Read a few of the following:

Cyril Hopkins, one of the great soil men of Illinois said: "The fact is that the most important and least appreciated method of maintaining or increasing the supply of organic matter in the soil is by the use of green manures and crop residues."

We have all heard of good farmers plowing under good stands of clover to help the soil and to make bigger crops. That's a form of green manure.

ing. A ton of clover plowed under will add nearly three times as much organic matter to the soil as can possibly be recovered in the manure if the clover is fed.

But few of us have any clover to plow under. We shall have to use something in place of it that is quick, cheap, sure and good, and that crop is vetch and rye.

Why Plow Anything Under?

Every settler knows that new land grows better crops than old land. That is because the new land is full of humus-decaying leaves, twigs and grass. Each time we raise a crop it uses up some of the stored-up humus, just as each time we feed the stock in winter there is less hay, and the mow is nearer empty.

If every farmer would remember that decaying vegetable matter or humus in soil makes it like a sponge, he would want to get lots of humus into his soil to hold more water so his crops would go through dry times better. You know that a handful of muck soil made of decayed grasses, as it is, will hold several times as much water as a handful of sand. So, the more decayed vegetable matter, humus, we put into our fields, the more water they will hold. Enough water is a big thing in growing crops here.

Besides, we know that decaying stuff in a soil makes it richer. This is because the decay throws off plant food, and because the bacteria that change plant food into a form that plants can use are more active, do



A Good Field of Oats in Northern Michigan on the Farm of Wilbur Frost.

better, in a moist soil full of decayed vegetable matter, or humus, as we call it for short.

Many of us know these things in a general way, but do not do anything about it. As a frightened child stands paralyzed before the oncoming auto or other danger, so, many who do know that something ought to be done to fields or whole farms that are yielding less and less, fail to do anything to stop coming disaster, and to put off the day when they shall have to abandon the field or farm.

They could easily do something that would cost very little in time or money. They could use green manure crops that are quick, cheap, sure, good, like vetch and rye. They both grow on soil that is poor, and a soil that badly needs lime. Thus, they fit the case of many farmers, and go easy on their pocketbooks.

There is probably not a better time in the year to sow these crops than now. This is going to give you a chance to get your vetch and rye seed, to sow them in the standing corn, or

on the piece you have been summer fallowing to clean it up, and to cultivate it into corn. Use a short whiffletree, a walking cultivator, a muzzle on your horse and go ahead. The writer has often cultivated vetch and rye into corn higher than his head. Cultivate shallow. You don't want to cut off millions of roots that the corn needs for growth, do you?

Use 20 pounds of winter or hairy vetch seed per acre. Inoculate it. Use a 25 cent bottle of inoculation for each bushel of vetch seed.

Use one and one-half to two bushels of cheap rye per acre. Mix the vetch and rye in a tub. Carry the mixed seed in a horse pail and sow the row you are walking in and one on each side of that. You will sow a big piece in a day. Cultivate both ways. Tramping and driving on the crop when cutting and shocking or gathering the corn will not hurt it at all. It will make a splendid cover crop for the land in the fall. Most of us don't know much, nor care much, about cover crops; but we will some day,

for cover crops keep soil from blowing the good top soil off, and the nitrates (plant food) from leaching and evaporating away.

Next spring, there is your good, thick, long growth of vetch and rye to plow under for the good of the soil, in time for ear corn, fodder corn, or potatoes, about the end of May.

In many cases oats, to be cut for hay, could be put in after plowing under the vetch and rye. A little more vetch could be sowed with the oats and all cut for a good hay. A self-sowed crop of vetch would probably follow. Plow it under the next spring.

The writer has used many acres of vetch and rye in building up his farm at Gaylord, where now we plow under alfalfa, as green manure.

He got quicker and cheaper results from vetch and rye in soil improvement than from anything else.

Vetch and rye should be used widely this fall throughout the state, it is so cheap, easy and good.

Fortunately, the use of this green manure crop is the right thing on light soil, or on clay, even of the heaviest kind. The light soil is thus given more tenacity, more body, more water-holding power, as well as more fertility. The clay is made less stiff, less liable to pack, more workable, as well as more fertile.

Begin now to hunt up your seed and inoculations. Attend to it all on time. Don't make the big mistake of thinking that a person can rush into the county agent's office or some warehouse the last minute and demand seed or inoculation of some one who did not know you were coming.

You will never regret the liberal use of vetch and rye if you inoculate and sow in time.

Lastly, when you see a splendid growth of it next spring, don't get weak-kneed and cut it, and thus rob the soil again. Plow it under when a foot to knee-high, and get started on the road to soil fertility and permanent agriculture.

Some Cheap Bushels of Wheat

Answers of Many Wheat Growers to Question, "Why Fertilize Wheat?"

By H. W. Warner

ANYONE familiar with the use of fertilizer knows that the practice has its foundation solely on the question of profit. The simplest and plainest answer to the question, "Why do you fertilize wheat?" is in the words, "Because it pays." That is reason enough, and three out of four men of whom I asked the question stated their answer in just so many words.

But most of us are not satisfied with such an answer when we ask why a thing is done or not done. In the case of fertilizing wheat, we want to know why it pays. Is it because of increased yields? Is it through better quality? Is it because of the effect of the fertilizer on clover seedlings made in the wheat? Is it due to escaping the Hessian fly? Is it for one, or more, or all of these reasons?

A tattered old pocket note-book, whose pages bear the soil marks of eleven middle western and east central states, contains the answers to the question asked of from one to a half dozen men in each state. The answers range all the way from plain to fancy, and from reasons of dire economic necessity to those of desire to make further profits on a crop which is already counted a fairly profitable cash crop.

Saves Plowing.

A Pennsylvania wheat grower was one whose answer probably fits a great many farms in the older wheat-growing states. "We can't grow wheat here any more without it," he said. Then he pointed out that the cheaper and newer lands of the west and north-west make it impossible for him to compete with wheat yields such as could be produced without fertilizer, and fertilizing wheat therefore becomes an economic necessity.

"Well, it saves a lot of plowing-up in the spring," is the way an Indiana farmer answered the question. He explained that before people in his neighborhood started treating their wheat land, winter-killing reduced the stands so seriously that often the fields had to be plowed-up in the spring and planted to other crops, with loss of seed, power and labor. Substantially the same answer was given by a number of others whose own experiences had shown that plowing-up of wheat seedlings could be reduced, and usually completely eliminated by providing conditions favorable to vigorous fall growth.

Any number of men mentioned the "fly" as a reason for fertilizing wheat. One man's exact words, as I recall them, were, "If we plant early, the

fly gets us. If we plant late to dodge the fly, winter-killing gets us. There you are, between the devil and the deep blue! So we fertilize to cheat the fly and still get enough growth to go into winter with."

Late planting of wheat is effective in controlling the Hessian fly, but unless the plants can make good growth before cold weather, another loss—that of winter-killing—may undo all that was saved by dodging the fly.

"It insures a wheat crop," an old gentleman near Martinsville, Illinois, told me, as we walked through a splendid field of wheat in which was an unusually fine seeding of sweet clover. "Before we started on this field it grew only eight to twelve bushels of wheat, about like that field over there," he said, pointing to a field not far away. "After liming to grow sweet clover and putting on 200 pounds of bone meal we are sure of a crop. It insures a crop that is always several bushels better than it would be without the fertilizer."

"It's about 50-50 with me—half on

account of the wheat and half on account of the clover—that I fertilize the wheat," an Ohio wheat grower said. "In fact, I don't know which gets the most benefit from the fertilizer, but I always figure that the fertilizer put on for wheat does double duty as I never fail to get a stand of clover following it."

A Few Cheap Bushels.

As might be expected, several gave as their reasons for fertilizing wheat, "lower production cost," "profit," and similar ones. It remained, however, for a farmer-banker-business man to express the same thing in a little different, but very effective way. I asked him why he fertilized his own wheat, and why he encouraged his bank customers to buy fertilizers for their wheat.

"Just this: to grow a few cheap bushels," he replied.

"Doesn't increased yield mean that all the bushels are produced more cheaply?" I asked.

"Oh, I suppose so, but I like to figure that the ten or fifteen bushels you

grow without fertilizer cost about what you get for them on the market. The extra bushels you grow with the fertilizer cost just what you pay for the fertilizer and the extra twine and work. Now, take my own wheat this year. I got at least nine bushels of wheat for \$2.75 worth of fertilizer, so each of those extra bushels cost only thirty cents, plus a few cents for twine, cutting and threshing. Now, those nine bushels are my money-makers. The other bushels only broke even or thereabouts, but on the increase I can see a long profit."

The foregoing are reasons for fertilizing wheat, expressed for the most part, in the words of men who grow the crop. Their statements are significant and typify the somewhat personal reactions of men who are successfully fertilizing their land for this crop. There is still another reason, or group of reasons, which I picked up here and there in county agents' offices, at agricultural experiment stations, and, in some cases, at fertilizer manufacturers' offices. I refer now to the hard, cold facts in black and white on the printed page of the experiment station bulletin. These pages, representing ten, twenty, and even thirty years of accurate field experimental work, offer reasons for adequate fertilization of wheat which cannot be refuted.

Proof in Figures.

"The fertilizer cost is about \$2.50, and the increase in the crops is worth four or five times that sum," from a bulletin of the Missouri College of Agriculture. The value of the increase was due to average gains of more than five bushels of wheat and over a half ton of clover hay following the wheat.

In a report by the Indiana Experiment Station covering experiments on the Soils and Crops Experiment Farm, I found: "On manured land, acid phosphate has been the most profitable fertilizer, returning \$6.46 at a cost of \$2.70 for the phosphate. Without manure, the use of 2-12-4 fertilizer on the wheat crop has been quite profitable, returning \$12.71 at a cost of \$4.94 for the fertilizer."

On the oldest fertilizer experiment plots in America, at the Pennsylvania Experiment Station, the average increase from fertilizer for more than a third of a century has been twelve bushels of wheat.

At the Ohio Experiment Station, at Wooster, the use of 500 pounds of fertilizer for wheat has given a thirteen-bushel increase in wheat yield, and more than one-third of a ton increase in clover hay as an average for eleven

(Continued on page 211).

A Flag Pole Sitter Who Has Been Sitting too Long



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WASHINGTON NEWS

EUROPE WHEAT CROP SMALLER.

EVERY indication is that the European countries and Russia will have less wheat for export than last year, with needs almost as great, says Harry B. Smith, special representative in London of the department of commerce. The weather has been unfavorable to crop growth. In central Europe short crops of both wheat and corn are reported. Sugar beets and potatoes need rain to yield normal crops.

PLAN NATIONAL SEED VERIFICATION SERVICE.

A SEED Verification Service for verifying the origin and identity of field seeds in commerce has been established in the Bureau of Agricultural Economics. Under this service the origin of a given lot of seed sold by an authorized dealer in inspected seed may, by an examination of records by a federal seed inspector, be traced back to the place where the seed was produced. Seedsmen who comply with the regulations and provisions of the department of agriculture governing the service, may issue United States verified origin seed certificates on seeds which have been previously verified as to origin by an authorized inspector.

This new service, which is designed to provide the farmers the means for knowing what kind and quality of seeds they buy, is the outgrowth of recommendations made at seed marketing conferences held last year in Chicago to devise and suggest means by which verification of origin may be accomplished. It should be especially beneficial to the purchasers of alfalfa, red clover and other farm seeds.

FARM RELIEF A LIVELY ISSUE.

THE farm relief program proposed by Secretary of Agriculture Jardine, and which is to form the basis of a bill to be introduced in Congress next winter, is attracting considerable attention.

Those farm organization leaders who insist upon the McNary-Haugen equalization fee scheme or nothing, are showing pronounced opposition to it. Senator Watson, of Indiana, de-

clares that "any measure of farm relief that does not provide for handling the surplus of agricultural products is absolutely valueless to the farmers, and the crux of handling the surplus is the equalization fee." Representatives of the western progressive group are even more outspoken against any proposition that does not include the McNary-Haugen bill plan.

Other farm organization representatives are showing a very friendly attitude toward Secretary Jardine's plan, evincing a willingness to give it their consideration. Fred Brenckman, the Washington representative of the National Grange, says he favors the secretary's plan for improving agricultural conditions.

"Secretary Jardine is standing on solid ground," says Brenckman, "when he observes that effective cooperation must be built up from the bottom and not from the top down. Nothing is more essential to the solution of the farm problem than to bring about more complete organization among farmers than we now have. We must have cooperation in production, as well as in the distribution of farm products, and this cannot be accomplished without thorough organization among the farmers."

In a trip of 25,000 miles covering most of the states from New Hampshire to Louisiana, and New York to Kansas, Chester Gray, Washington representative of the American Farm Bureau Federation, says he found the farmers in the east, south and west are standing for the equalization fee provision of the McNary-Haugen bill, which provides no subsidy. They want a federal farm board, with cooperating agencies to do the work of handling the surpluses, and for the return of the revolving fund, with interest, to the federal treasury. They are asking for no special favors from the government.

Farm Bureau members in New England favor the McNary-Haugen bill because they want middle west farming to be profitable in live stock and grain production so western farmers will not be in competition with the east in dairy products. Eastern dairymen are already threatened with a surplus of fluid milk in the New York milk shed, and are beginning to realize that dairy products should be incorporated.

MASTER FARMER HAS GOOD OAT CROP.

RECENTLY we called at the farm home of Paul Clement, of Monroe county, just after he had finished threshing 1,368 bushels of oats from a fourteen-acre field. These oats were of the Worthy variety, and from the sample examined, they should weigh out far above the measured yield.

News of the Week

Advocates of the Great Lakes-St. Lawrence Waterway are urging a treaty between the United States and Canada before Congress assemblies. It is hoped that the treaty may be completed and the work on the canal started the coming year.

Australia has more than doubled her budget allowance for developing its commercial air-ways.

President Coolidge made a recent trip through Yellowstone National Park. Besides fishing, he visited the usual points in the itinerary of tourists.

Maurice Bokanowski, French minister of commerce, who was the official host of Commander Richard E. Byrd on the latter's flight to France, was the guest of the city of Detroit last Friday.

Rioting is reported to be continuing in France as a protest of the French radicals against the execution of Sacco and Vanzetti in Massachusetts.

In an attack on a Southern Pacific train, south of Acaponata, Mexico, fifteen persons are reported killed or wounded, among whom was a Miss Anderson, an American citizen.

Twelve persons were killed and twenty seriously injured in a railroad wreck in London, England.

Government engineers of Switzerland have issued a warning to the inhabitants living on the northern base of Mount Arbin, 9,000 feet high, stating that huge crevices near the base indicate that the summit of the mountain is likely to topple.

Paul R. Redfern, of Georgia, is on a 4,600-mile airplane voyage to Rio de Janeiro. At the same time Edward F. Schlee and William Brock, of Detroit, are continuing to Harbor Grace, Newfoundland, where they will start a flight around the world. "Duke Schiller" and Philip Wood, also of Detroit, are preparing for a trip from Windsor, Canada, to Windsor, England.

Seven deaths, heavy damage to shipping, disruption to communication, and delay of trains and other traffic, were the results of one of the worst storms in the history of Nova Scotia last week.

Judge Sample, of Ann Arbor, is in charge of the investigation at Monroe, of an alleged collusion between public officials and a syndicate of bootleggers.

The village of Northville, in Wayne county, celebrated its one hundredth birthday.

Court action will be taken to get the three-cent gasoline tax petitions before the electorate of Michigan for a referendum.

Four Japanese warships engaged in night maneuvers collided last Thursday morning, and over a hundred lives are believed to have been lost.

Chicago plans a subway system which will be in reality, a lower street, with stores, brilliant illumination, and adequate ventilation at all times.

Colonel Charles A. Lindbergh visits his old home at Little Falls, Minn.

An earthquake which shook the island of Formosa, situated off the coast of China, is reported to have killed fifty-two persons.

The American Chemical Society will hold their seventy-fourth annual meeting in Detroit, from September 5 to 10. More than 2,000 chemists are expected to attend.

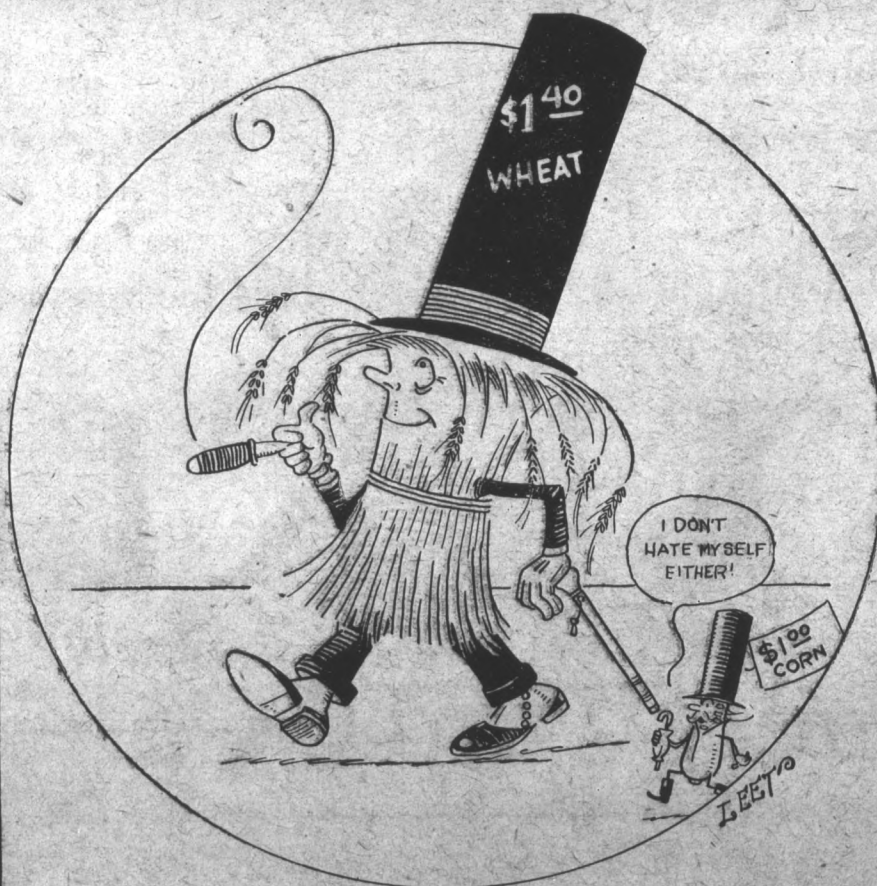
Spanish-American War veterans are holding their twenty-ninth annual encampment in Detroit.

The Mexican labor organizations announce a war on modern fads, including jazz music, latest dance steps, and fancy trousers.

Vice-President Dawes announces that he is not a candidate for president.

Professor Hayden, of the University of Michigan, declared in a recent address, that the United States must carry out definitely its pledge to the Philippines that when they are capable of self-government, it will be granted.

Conversation by radio telephone between airplane pilots and a test station of the bureau of standards, have been successfully maintained over a distance of 150 miles.



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Had Halitosis

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Face to face
evidence

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IS IT NECESSARY TO TRAMPLE SILAGE?

PRACTICALLY ever since silos came into use it has been one of the cardinal rules of silo operation that the silage must be very thoroughly trampled as put in, to prevent molding and spoilage. This job of trampling in the silo is one of the most disagreeable ones on the farm, and the good wages demanded adds quite a little to the cost of filling the silo.

The high cost and scarcity of labor led a number of farmers in different sections of the country to try the plan of filling without trampling, and several have used it the last three or four years with perfect success. Many claim that there is less loss from spoilage in silos filled this way, than under the old plan of two or three men trampling down the silage.

By not trampling the silage, and using a small ensilage cutter and tractor, and a binder with bundle-loading attachment, a farmer and his hired man or boys can fill the silo without extra help, greatly reducing the cost and labor of filling the silo.

The advocates of the non-trampling plan recommend cutting the silage in one-fourth-inch lengths, adding plenty of water if the corn is frosted and dry, and directing the filler pipe at the center of the silo, allowing the ensilage to fill up in a conical shaped pile, the center tending to push down and out, packing the ensilage tightly and eliminating air spaces.

Experiments carried on at some of the agricultural experiment stations indicate that these farmers are right, and that where the silage is cut rather fine and made rather wet, that there is little, if any, more spoiled silage than with the older and more costly method. It is important that the silage be quite damp, so that water can be squeezed out of a handful, that the silo not be filled too rapidly, and that it be refilled after settling. Also, it is recommended that the top two or three feet be even wetter than the average, and be trampled well.—I. W.

KILLS ANTS WITH HOT WATER.

THE question is frequently asked how to rid lawns of ant hills. An efficient and harmless way is to pour the boiling suds after the washing is done, into them. Make a funnel-shaped opening in the top so the water will run in readily, and turn in enough to thoroughly cook the eggs as well as kill the ants. One good application is usually sufficient. No doubt, hot water without the soap would do the job.—Edward Hutchins.

WHY NOT MORE TWO AND FOUR-ROW CULTIVATORS?

WHY do ninety-five out of one hundred farmers use the single-row cultivator instead of the much faster two-row and four-row types? Recently in making a 1,600-mile trip through four or five states, I saw at least a hundred farmers cultivating corn, but in the whole trip saw but two two-row cultivators, one at work and the other standing in the field that was obviously too wet to plow. In the whole trip, not one four-row cultivator.

I was not surprised at the entire lack of four-row cultivators, since this is still very much in the experimental stage, and many farmers have not even heard of it; but surely there ought to be a larger proportion of farmers using the two-row cultivator, since the corn was all high enough for the two-row cultivator to work nicely.

Man labor at the present time makes up about fifty per cent of the

cost of cultivating corn with a single-row cultivator, and by the use of a two-row cultivator this part of the cost can be cut just about in half, and the total cost of cultivation cut about twenty per cent. Since there is no noticeable difference in the quality of the work done, this twenty per cent saving would apparently be well worth while and it is rather surprising that a larger proportion of farmers have not taken advantage of it. No doubt some of it is due to a feeling that they cannot afford to purchase a two-row cultivator and let their one-row machine stand idle, but a little investigation might show that this would pay.—D. I.

CISTERN LEAKS.

A year ago I built a rain water tank in the basement. It is built of concrete. The walls are six inches through and the floor is four inches. There are no holes in the walls where the water could leak out. The water seems to soak through the concrete. What can I do to prevent this?—V. W.

The walls of a concrete cistern may be water-proofed in the following manner: First wash the walls thoroughly with water, then wash them with a ten per cent solution of muriatic acid in water, washing this off with clean water, and apply one or more coats of cream cement, which is made by mixing pure cement in water to the consistency of thick cream.

CREOSOTE FROM CHIMNEY.

We have creosote coming through our chimney into the wall. The chimney does not run down to the basement. Would running a pipe down from the chimney help?—E. N.

The condition that you describe as existing in your chimney, may be caused by water coming down the chimney and running through to the inside. From the description which you give, I assume that you have a bracket chimney with no clean-out below the place where the stovepipe enters the chimney. At this point soot and ashes are particularly likely to collect and partially stop the flue opening, and also make it easy, in fact, necessary, for water coming down the chimney to run through to the inside. The remedy would be to keep soot and ashes cleaned out of the chimney below where the stovepipe enters, and if the chimney is not provided with a thimble, a tight-fitting thimble should be cemented into the chimney. A pipe leading to the basement, as you have suggested, might alleviate the trouble somewhat, but if closed at the bottom would soon fill up with soot and ashes and if left open would, of course, be a direct opening onto the chimney, which would cut down the draft.

The trouble may be caused by the condensation of creosote, which is a distillate of wood, and is especially plentiful in beech wood, and would be more noticeable in green wood than in dry. If the difficulty is caused by creosote, it would show all along the pipe, rather than at the chimney only. A long horizontal stovepipe is not conducive to a good draft, and makes it possible for the gases of combustion to be cooled before they reach the chimney proper, and the creosote condensed would be more likely to occur when the stove was tightly closed, and the gases allowed to collect. A remedy would be to burn the wood which gives trouble, only when it could be burned on a hot fire. If it was necessary to close the stove tightly, some other fuel should be burned which would not produce the creosote.

Some experimenting in the kinds of fuel, and the control of the drafts in the stove will aid in a solution of the difficulty.—F. E. Fogle.

POTATO STUDIES MADE.

POTATO growers in the northern part of Michigan are growing more alfalfa and keeping an increasing number of dairy cows, according to opinions expressed by men who accompanied Michigan's first annual potato tour to Alpena. This does not mean that less potatoes will be produced, but it does mean that the soils will be maintained in a better state of fertility, and that the cows will help carry the growers through years when the returns from potatoes are low.

To assist growers in meeting problems of production, the Michigan State College will maintain a sub-station in a section where both table stock and seed potatoes are produced. Experimental work at the sub-station will begin next spring, according to the present plans.

Potato yields and quality have become better since certification work started in 1920. The average yield in 1920 for the entire state was 105 bushels per acre, and the fields certified for seed that year produced 138.5 bushels per acre. Last year the average yield was 120 bushels per acre, and the certified seed fields averaged 256 bushels per acre.

Although the disease requirements for certified seed stock are more strict now than they were at the beginning of the certification work, the percentage of fields which failed to pass inspection has decreased from 28.6 per cent in 1920, to eleven per cent in 1926. Growers are spraying more thoroughly and are roguing diseased hills from their fields.

Several of the growers visited during the tour say that there is an increasing interest in the use of power diggers to avoid slicing potatoes at harvest time. These diggers can also be used when the soil is too wet to permit the use of an ordinary digger.

Sixty potato buyers from eight states saw Michigan potato fields during the inspection trip, and they stated that the extent of the industry in this state was a surprise to them. They also said that their customers demand quality first, and discuss price second. Buyers from Indiana were the only ones who said that the price limited their market.

RADIO BRIEFS.

A COMPLETE revolution in the transmission of telegraph messages, to the extent of rendering obsolete the dot and dash code, is promised by a new radio device being perfected by Marconi. By this invention the person preparing the message conveys the message as he writes. Finger prints of suspected persons arrested in distant cities could be immediately studied in police headquarters. Even whole newspapers could be flashed from great distances and printed almost simultaneously in distant cities.

A new radio broadcasting chain of sixteen stations is being organized by the Columbia Broadcasting System, and plans to go on the air September 4. The stations have been selected at strategic points so as to insure reception in all parts of the country east of the Rockies.

Since the trans-Atlantic telephone has become established on a commercial basis, a plan for a radio chain hook-up between America and Europe has been presented to the International Advertisers' Association. Another twentieth century thrill that we can anticipate is that of tuning in on our European neighbors for a bit of variety.

Radios were installed in seventy railroad camps between Portland, Oregon, and San Francisco, California, to keep up the morale of the camps when the men were isolated from the rest of the world.

There are more DELCO-LIGHT plants in use than all other makes combined



ONLY a few years ago electric light and power on the farm was practically unknown. Then came Delco-Light—bringing a new contentment, a new freedom—bringing modern conveniences to the farm home.

Soon Delco-Light was known everywhere. Soon it was being recommended by users in almost every community. And now, today, though many makes of farm electric plants have been placed on the market, Delco-Light's position in the farm electric field is stronger than ever before.

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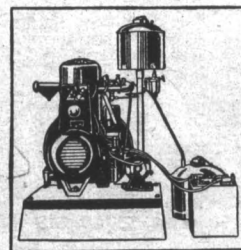
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I GUARANTEE the Witte Engine to do the work of 3 to 5 hired hands and to save YOU one half the time, labor and cost of any job on your place. It will increase your profits \$500.00 to \$1000.00 a year. Used all over the world—Guaranteed for a Lifetime!

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GRANDPA'S WONDER SOAP

Since '78

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FROM thousands of suggestions this name has been selected to represent the already famous Lee Buttonless Work Clothing. From every state, indeed from every county, the names came indicating interest beyond our expectations. The convenience, durability, appearance and time-saving features of the new Lee garments with the Hookless Fastener, have won nationwide approval. Thousands of working men have put them to the test and found them easy to put on or off and remarkably long wearing. Thousands of Mothers have saved time and trouble by dressing their children in the new buttonless play suits. Ask your nearest dealer to show you LEE WHIZIT UNION-ALLS, OVERALLS and PLAY SUITS.

THE H. D. LEE MERC. COMPANY
Factories: Kansas City, Mo., Trenton, N. J., South Bend, Ind., Minneapolis, Minn., San Francisco, Calif.



Lee Union-Alls, Overalls and Play Suits are also available in styles having buttons instead of Hookless Fasteners.

The winners in the Lee Prize Naming Contest were chosen only after consideration was given to every entry. Each prize was awarded on the basis of the name submitted together with the reason for the choice of the name. The Lee Company wishes to thank the thousands of persons who submitted names, for their interest in the naming of the new garments.

First Prize, \$250—Geo. W. Mook, Seattle, Wash.
Second Prize, \$125—Mrs. William Gallup, Casselton, North Dakota.
Third Prize, \$75—Mrs. Mildred Steele, Elkhart, Indiana.
Fourth Prize, \$50—Mrs. G. F. Ross, Brockton, Mass.

One Hundred Prizes of \$5.00 each awarded to the following:

J. Corry Baker, Pueblo, Colo.
Don H. Davy, Burlington, N. D.
Dean Hartzell, Klamath Falls, Ore.
Abraham Wolf, Alton, S. D.
Mrs. Dan Nyström, Worthington, Minn.
Mrs. H. Sater, So. St. Paul, Minn.
K. L. Brant, Webster City, Iowa
Edwin C. Savitz, Easton, Pa.
Mrs. H. W. Ries, Collinswood, N. J.
Homer V. Geary, Albany, N. Y.
Wm. Knesner, Danbury, Conn.
Herbert M. Snyder, Louisville, Ky.
H. B. Alexander, Minier, Ill.
James Mettel, Clinton, Mo.
J. C. Dodson, San Antonio, Tex.
J. Harris, Topeka, Kan.
O. E. Murry, Billings, Mont.
Alfred U. Erdmann, Stratford, S. D.
Mrs. W. H. Thompson, Three Forks, Mont.
Lewis Jaspersen, Ashland, Neb.
Roger R. Barber, Ft. Bayard, N. M.
Mrs. Pearl Weiss Evans, Birmingham, Ala.
Geo. F. Sale, Grandin, N. D.
C. P. Benning, Minneapolis, Minn.
E. R. Streifel, Thurman, Iowa
Frank O. Davis, Springfield, O.
Mrs. Adam Leslie, Georgetown, Ind.
Mrs. Rebecca Dvorine, Baltimore, Md.
Hans D. Steinberg, Milwaukee, Wis.
Amy K. Caswell, Minonk, Ill.
A. R. Hill, New Orleans, La.
Hugh N. Leiper, Dallas, Texas
C. L. Leighty, Newkirk, Okla.
Mrs. Paul B. Porter, Meena, Neb.
Mrs. Bessie Evans, Haverhill, Colo.
Harry T. Brown, Long Beach, Cal.
Mrs. M. H. Flint, Mt. Airy, Ga.
Tate Eugene Baldwin, North Tazewell, Va.
J. A. Stephenson, Chester, W. Va.
Miss Jennie C. Maine, Providence, R. I.
Richard A. Supple, Boyd, Wis.
Frank Anderson, Bagley, Minn.
Mrs. C. E. Gorton, Eugene, Ore.
H. Keith Gillespie, Lehighville, Iowa.
Mrs. Ethel Kline, Burr Oak, Mich.
Norman K. Reynolds, Altoona, Penn.
Flores Mosier, Adams, Ohio.
Leroy Jacob, Buffalo, N. Y.
J. T. Goscom, Nashville, Tenn.
Haskell Ostroff, Lowell, Mass.
Mrs. Frank M. Adsch, Richmond, Canada, Wis.
Bernard Brown, Wilmette, Ill.
Dan Church, St. Louis, Mo.

Guy W. Gitchel, Little Rock, Ark.
R. F. Rowe, League City, Texas.
Robert Verkuin, Watonga, Okla.
Mrs. Vera B. Watts, Beaver Creek, Neb.
Henry Allen, Miami, Ariz.
W. T. Menefee, Oakland, Calif.
Stanley C. Scott, Las Vegas, Nev.
Mrs. Edwin B. Kerah, Mount Olive, Miss.
Mara Spencer, Norfolk, Va.
Lawrence Nauman, Douglas, Wyo.
J. E. Anderson, Seattle, Wash.
Fred F. Feltham, Los Angeles, Calif.
Miss M. J. Sunda, Webster Groves, Mo.
Frances Sawyer, Ashley, Ill.
Mrs. Effie M. Clark, Merced Falls, Calif.
Leonard Bennett, Ortega, Mich.
Leslie J. Beldo, Neenah, Wis.
Lloyd I. Miller, Allentown, Pa.
Isabel Mosteller, Cuyahoga Falls, Ohio.
Mrs. Mary Mead, Fleischmanns, N. Y.
Martha Hart, Sandborn, Ind.
Mrs. Edna T. Saunders, Brewer, Maine.
William Nelson, Milwaukee, Wis.
James N. Lund, Neola, Iowa.
Mortie G. Harley, Kansas City, Mo.
J. Edmund Ullman, New Orleans, La.
Shelby Powers, Justin, Texas.
Bessie L. Kesler, Liberal, Kan.
Kenneth Mitchell, Carroll, Neb.
Ben Olerich, Case Outlaw, Wisc.
C. D. S. D.
Jess D. Sage, Denver, Colo.
Victor F. Agrell, Leavenworth, Kan.
Chester A. Griffin, Franklin, N. H.
L. K. Jones, Raleigh, N. C.
Mrs. L. C. Weaver, Huxon, S. D.
Mildred Koenig, Barnesville, Minn.
A. T. Pattons, Chicago, Ill.
Kenneth Reischman, Mendville, Pa.
E. W. Spring, Newark, N. J.
William L. Lewis, Hoon, N. Y.
Dan E. Barmele, Norwalk, Conn.
Mrs. Annie M. O'Malley, Clinton, Minn.
Adlai Alvin Brink, Donaldson, Minn.
T. A. Funk, Festus, Mo.
Mrs. J. R. Perot, Dallas, Texas.
Mrs. Jess Springer, Heavener, Okla.
Clarence J. Milhaub, Wichita, Kan.

ORCHARD AND GARDEN

APPLE STORAGE POINTERS.

A WELL insulated storage house, a damp floor, and a fan to force cool night air into the house, are found to be the essentials of successful apple storage on the farm.

The night air, on an average, is approximately twenty degrees cooler than the air in the daytime in the fall, when the apple crop is put in storage. The air, however, is not damp enough to keep the apples from shriveling. This is remedied by keeping the floor wet to allow the water to evaporate.

Evaporation is also a cooling process. The temperature is further cooled as the water evaporates. The floors must be kept wet continually, observes Mr. Overholt, to keep the moisture in the air high enough, and aid cooling by evaporation. Pans, or even a narrow trench filled with water are not sufficient.

PROPAGATING ALMOND AND QUINCE.

How and when should one start new plants from old plants of the flowering almond, and also the Japanese quince?—Mrs. H. E. R.

Both of these shrubs may be propagated, either by means of seed which should be sown in the fall, or by means of hardwood cuttings which should be made eight inches long from the same year's growth. These are placed in sand in the cellar, or even outdoors, where they will callus during the winter, and may be set out in the spring.—Alex Laurie.

FINDS SUCCESS WITH DEWBERRIES.

WHEN John Mavis came to Sherman township, Mason county, twenty-four years ago, he had his family and \$130. He settled on an eighty-acre farm of light soil, about two miles east of U. S. 31.

He found this soil vastly different than that of his old home in Ohio, and, for a number of years, found it a hard struggle to make a living.

He began to study the problem of what to do with sand—and ended by mixing it with brains.

He had often heard that the dewberry crop around Benton Harbor was most profitable. One day, traveling through the sandy Udel hills, north-east of Freesoil, Mr. Mavis noticed how luxuriant the wild dewberries grew.

"If they grow so well without care, what couldn't be done by cultivation?" thought he.

That year he bought 1,000 plants and set them out in well-prepared ground.

This was hard work, since quack grass was luxuriant, even in the hot, dry sand.

His land has both white sand and blow sand, as well as some clay. Some of the clay was hauled—and one hill given a light top-dressing to hold the blow sand. The first fall a number of dewberry shoots were turned down, and in the following spring enough had rooted to produce 9,200 new plants.

The land does not grow grain, so no time was wasted in the attempt. The land is high, and this is a decided advantage, since frost does not come at unseasonable times.

The Lucretia variety of berry is used. Plants are set four by eight feet, or about 1,000 to the acre. They are sprayed two, and even three, times each season with lime and blue vitriol.

When once set, the grower has practically a permanent crop, since by the second year the roots have grown straight down three feet, and continue even deeper. Mr. Mavis likens them

to the much better known alfalfa roots.

They should be set as early as possible in the spring and turned down in August for new plants. The first crop is produced in the second year. The field is plowed and disced, and the roots start up new shoots.

The second year of growth the plants are tied up to wire stretched between stakes.

"Keep the ground clean, and culti-

News and Views

From INGLESIDE FARM—By Stanley Powell

TAKE fair warning. If you are in search of a literary treat or emotional message, you had better look elsewhere, for in this article I'm going to offer just a plain, humble diet of hash. There are a good many loose ends to catch up, and now is as good a time as any to do it.

Probably you recall those lousy pigs that I wrote about in a previous article. I purchased them at the local stock yards two months ago and set out to divorce them from the blood-sucking tenants that crawled over them in swarms. Two sprayings with a strong solution of stock dip at an interval of about ten days, sounded the death knell of the vermin. In fact, after the last treatment we never discovered any more of the profit-robbing pests.

But that is only what we might term the negative side of the story. Getting rid of the lice was only preparatory to putting some fat under those scabby hides. We shipped them through our local live stock co-op on the twenty-second. Although some of these pigs were very badly stunted, we secured an average daily gain of two pounds per head for the two months that we fed them. This, of course, is not anything to get excited or puffed up about but under the circumstances, we were well pleased.

No expensive feeds or complicated methods were employed in their care. They were fed skim-milk and kitchen waste and a little corn, and for the last month or so treated themselves at a self-feeder containing ground oats and ground wheat in separate compartments. Of course, any hog man would know that the ground wheat disappeared considerably faster than the ground oats. This particular wheat was from a swamp, and the berries were not as plump as that from the rest of the field. However, with good wheat selling at our shipping point for \$1.20 per bushel (two cents per pound), it is about as cheap as most feeds that could be purchased.

Better Pigs This Time.

We are pleased to report that when we took these hogs to the stock yards we were able to bring home an equal number of hundred-pound shoats that are certainly an encouraging bunch. They are said to be pure-bred Poland Chinas, and they look the part. They have plenty of scale, bone and capacity, and have the appearance of young pigs that have never known a set-back. There will be a lot more satisfaction and probably more profit in feeding them.

Success with any kind of live stock is a complicated proposition, not dependent on any one factor. Breeding, feeding, housing, doctoring and marketing, all are vitally important. If any one of these elements is neglected, profits go glimmering, and failure and discouragement result.

In writing last week about the Ionia Free Fair, we might have mentioned that the young Milking Shorthorn bull that we purchased in Ohio last June,

vate continually," is Mr. Mavis' slogan.

There are nine acres of berries from three to seven years old. Three or four shoots are enough to tie up for each plant to produce the largest and most luscious berries. When the crop has been picked, old canes should be cut out and burned. This keeps plants disease-free.

Fruit is packed in twenty-four-pint cases, and three years ago they averaged \$2.65 per case, and the seven acres brought \$1,743. In 1926, nine acres brought \$1,900. The cost of production and marketing was around \$500, leaving \$1,400 profit.—G. P. Darr.

Horse Has Sore Shoulder.

You will also be glad to know that the veterinarian finally came and floated down the work horses' teeth. He didn't find any of them in bad shape, but all except one of them needed some attention, and I feel that his trip was very much worth while.

While the horse doctor was here I asked his advice about one horse that has bothered us a little all summer. His left shoulder persists in having a small gall right at the lower point. I have kept the collar clean, raised the draft as high as possible, and used several of my favorite remedies persistently and faithfully, but to no avail. I tried putting on a pad with a hole cut out to keep the pressure off the sore, but the pad wouldn't stay just where it belonged and it was a question whether it did more good than harm.

The doctor carefully studied the contour of the horse's shoulder and then advised me to take a strip about four inches wide from an old grain sack and wind it smoothly around the collar a few times just above the sore. This pad will come against a place on the shoulder where there is a slight depression, and it will take considerable of the draft off from the point of the shoulder where the trouble is. I am especially anxious to get this sore healed, as I have doctored it so long, and it is the only sore shoulder on the farm. We have fixed up the collar according to directions, and in a little while may be able to report complete success.

Waiting for Rain.

I certainly hope that you have had more rain than we have had for the past two months. Corn, potatoes and beans will not amount to much in this neighborhood. Worst of all, new seedlings of clover and alfalfa have been subjected to a terrible set-back which it is feared will amount to permanent injury. Plowing has been largely abandoned. One man got a little plowing done with his tractor by having two men ride the plows and hold them in the ground. My neighbor on the north had a man stand on the eyener and then couldn't really keep the plow down so that it would do a satisfactory job.

We have busied ourselves with a variety of miscellaneous tasks while waiting for the sadly needed moisture. We have cleaned out both silos, and have drawn all the manure and are now building fence and discing and harrowing the ground that we had plowed before the drought stopped us.

Of course, we could go on putting around like this indefinitely, and work hard, too, and not run out of a job, but we must soon do something more productive if we expect to pay expenses.

If you have a flock of breeding sheep (Continued on page 213).

FARMERS GRIND LIMESTONE.

SOME Presque Isle county farmers are grinding their own limestone. The fact that these men have access to lime rock when their fields are acid, due to the depletion of lime from them, shows the comparative rapidity with which this plant food is lost from the soil. Limestone is quarried commercially in the county and detached pieces of lime rock are common in several communities.

CERTIFIED SEED GOING 'STRONG IN CASS.

FIELDS planted with certified seed potatoes in Cass county last spring show up to much better advantage than the ones where home-grown seed was used. Six field meetings were held in the county recently, and C. M. McCrary, potato specialist, explained control methods for diseases and insect pests.

ANTRIM FARMERS PRODUCE SMALL SEEDS.

BANKERS, business men, and farmers mingled in a tour of inspection of the seed fields in Antrim county. The county has been widely advertised for the potatoes it grows, but little has been said about the small seeds produced there. Antrim grows a large part of the radish seed produced in the United States, and there are many acres devoted to the production of alfalfa and sweet clover seed.

Fourteen farmers in the county are growing Hardigan alfalfa for seed this year. Frank B. Post, professor of botany at the University of Wisconsin, accompanied the tour in quest of information on the blossoming and seeding habits of alfalfa.

ALBA ASSOCIATION OUT OF DEBT.

THE Farmers' Cooperative Association at Alba this year paid off their mortgage and all other debts. The association was \$20,000 in debt a few years ago. Apparently, it is possible for farmers to conduct a successful marketing organization for their products. Volume of business, and proper management, brought success to this Antrim county organization.

ASHES HELP GRAIN CROPS.

THREE Luce county farmers who applied ashes on oat and barley fields which were to be seeded last spring, have been pleasantly surprised by the results. They did not expect to see any difference in the grain yields; but, before the grain was harvested, the difference in height and vigor of the plants could be easily distinguished. They now expect that the increased yield of grain will pay for the application of the ashes, and that the benefit to the seeding will be all profit.

HARDY ALFALFA BEING DEVELOPED.

THE farm crops department of the Michigan State College is now attempting to develop a new hardy alfalfa. They are using Siberian stock in this effort. This alfalfa has yellow flowers. The strain also will be crossed with other well-known varieties to produce, if possible, other strains having the hardiness of the Siberian strain.

CURTIS ELECTED SEVENTH TIME TO HEAD POTATO EXCHANGE.

FOR the seventh consecutive year, Henry Curtis, of Cadillac, has been elected president of the Michigan Potato Growers' Exchange. Joseph Bussey of Lake Leelanau, was re-elected vice-president; O. E. Hawley, of Shelby, secretary, and Fred Sarger, of

Stanwood, treasurer. These, with Leon G. Vanliew, of Bellaire; George Herman, of Edmore, and E. A. Rasmussen, of Greenville, constitute the board of directors. The last two named were re-elected at the recent meeting of the board of delegates for another term.

BELIEVES CROP INSURANCE POSSIBLE.

SIR JOHN RUSSELL, director of the Rothamsted Experimental Station at Harpenden, England, states that it is now possible to draw up tables for the expectancy of crop yields, corresponding to the data now available for expectancy of human life, which forms the basis of life insurance. He believes, therefore, that farm crops can be insured against the hazards of weather.

STUDY FARM CORN TARIFF.

EXPERTS of the United States Tariff Commission are now in the middle west studying the cost of producing corn. Importation of corn from Argentina has prompted mid-western farmers to ask for this investigation to determine whether the present duty of fifteen cents per bushel equalizes the difference in production costs between Argentina and the United States.

WHEAT ACREAGE TO BE INCREASED

AN increased acreage of wheat and rye is to be sown in Michigan this fall, if weather conditions permit, according to a survey made by Herbert E. Powell, Commissioner of Agriculture and Verne H. Church, Agricultural Statistician for Michigan. The intended increase in wheat amounts to 15 per cent which would make the planted acreage 1,090,000 acres compared with 948,000 planted last fall and 920,000 harvested this year. In the fall of 1926, an intended increase of four per cent actually became a decrease of ten per cent because of unfavorable weather at seeding time. The present drought is making plowing difficult and much depends upon future weather as to the acreage that will actually be sown this fall.

For the North Central group of states, an increase of 16 per cent is intended and for the entire United States an increase of 13.7 per cent is reported. If the country's intentions were actually carried out, the total acreage would amount to 48,637,000, against 38,185,000 harvested this year.

Michigan farmers report an intention to increase their rye acreage by 13 per cent which would result in 220,000 acres being planted in comparison with 195,000 last year. For the entire country, an increase of about 20 per cent is intended which would give a total of 4,629,000 acres. Last year's acreage was 3,860,000, which was considerably less than intended because of continued and excessive rains at seeding time in several states.

Two potato rogueing demonstrations were conducted in Charlevoix county by Carl Behrens, potato inspector, and B. C. Mellencamp, county agricultural agent. All the certified seed growers in the county attended the demonstrations, and Mr. Mellencamp states that the appearance of the fields in the county listed for inspection show that the owners are rogueing out the diseased potatoes from their fields.

Cherries from Alpena county have been trucked 130 miles across the state to the Grand Traverse Packing Company at Traverse City for canning purposes. Carl Henry, an Alpena orchard owner, sent four trucks across this year.



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Very sincerely, J. C. FISHEL & SON,

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The Broiler Market

How Can We Induce Consumers to Eat More Broilers?

By R. G. Kirby

THE prices received for broilers this year have been rather low, and at present, broiler production does not rank as a very profitable business. At the same time, a motorist can drive about the state and not notice many large flocks of broilers on the general farms. It seems as if the low broiler prices may be due to under-consumption, rather than over-production. Of course, that only means that the production is too great because the consumption has lagged.

Recently, I visited with a dealer in East Lansing to whom I have never sold broilers, but who might be a good prospect for the future. I asked him why so few broilers were sold in that town, and what could be done to improve the market. He replied, "Too many broilers are sold without fattening. The fat broilers hold up well in the refrigerator until they are sold. Skinny broilers are more apt to become 'slippery' in a short time." That

is needed to stimulate broiler prices. We have had quite a few customers this year who have bought broilers direct, and appeared practically every Friday or Saturday all summer. That is the kind of repeat customers that the broiler industry needs.

Who Buys the Broilers?

I think that broiler eating is a habit that can be extensively developed in the north. Here is the reason. A lot of my best broiler customers have been southerners who have grown to like broiler meat from the time they were children. Then the industrial development of the north, and the floods in the south have combined to drive them north looking for work. They have a natural liking for fried chicken, and buy as much as they can afford, and this usually means at least one good chicken meal a week, and maybe two.

At present the broiler producer in the north has a lot of competition from pork chops, beef steak, hamburger



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In Lansing I visited with a prominent dealer who sells large quantities of broilers, and often supplies banquet orders. He is prejudiced against Leghorn broilers and will not take them as long as he can buy Rocks and Reds. He will make an exception in the case of certain banquets, where small, plump Leghorns of uniform weight prove satisfactory because they can be cut into small portions. He says that the thin Leghorn soon turns bluish in his refrigerators, and after that it is not an appetizing article to sell to his customers.

In visiting and corresponding with other dealers, I find that the great general complaint is the large production of thin broilers which do not aid in stimulating consumption. One producer asked me why poultry organizations do not advertise broilers as the "great game substitute for the American table." That might be a very good idea. The orange growers' advertisement with the glass of sparkling juice, has induced many homes to acquire the orange juice habit. But we must not forget that the juice is just as appetizing and healthful as it is described. The sale of oranges through such advertising develops hundreds of thousands of repeat customers.

It will never pay to extensively advertise broilers unless there is a tremendous production of quality poultry meat to back up the advertising. The family that buys one broiler for the Fourth of July, and no more for a year is not the kind of customer that

steak and fat hens. The articles of food with which consumers are most familiar, they are the most apt to buy. A few years ago farmers would never think of buying head lettuce in the winter time, and now a lot of them have found out its virtues and are regular customers. There are many families that never enjoy broiler meat because they look at broilers and fryers as luxuries which are too expensive for most folks. And yet, many people are buying the things that they want, almost without regard to price. The main point is to get them to want a thing. After that many people seem to provide a way.

Fattening Rations.

Fattening broilers is largely a problem of increasing the consumption of feed and decreasing the exercise. The lack of exercise causes the muscles to soften and the body becomes slightly padded with fat, and the meat is of better flavor. Aside from the increased cash returns for heavy broilers, the value of developing a larger number of satisfied customers is well worth considering.

A good fattening ration containing milk can be made of fifty pounds of corn meal, twenty pounds of middlings and ten pounds of ground heavy oats. This is mixed before each feeding, at the rate of one quart of milk to one quart of mash. This is equivalent to two pounds of milk with one pound of mash. If no milk is available the mash mixture can consist of fifty pounds of corn meal, twenty pounds of middlings, twenty pounds of meat scrap, and ten pounds of ground heavy oats. This is freshly mixed into a batter before each feeding, at the rate of one and one-half quarts of water to two quarts of mash. This is the equivalent of three pounds of water to two pounds of mash. The best results in broiler fattening result from using milk, and

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Hens quit laying in winter because glass windows stop the sun's ultra-violet rays. Give them a GLASS CLOTH scratch shed and they start laying like it was June. GLASS CLOTH admits ultra-violet light freely. The hens exercise. Egg paralysis disappears. Egg glands function. It is common for 400 hens to lay \$1000 worth of eggs in the cold months. A \$5.00 roll of GLASS CLOTH makes you tremendous profits. Half a million successful users. Try it this winter. Make big egg money. Order a roll at once. It will pay you.

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PULLETS

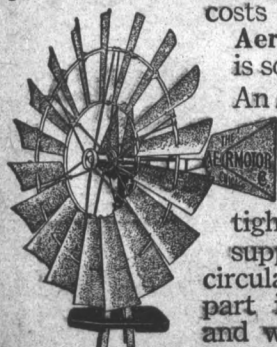
Contest winning blood Tancred mated W. Leghorns. 330-egg line. 11 to 15 weeks old. 70c to 90c. 34 wks. old B. Rocks, dark line, world's oldest and most famous laying strain. 90c. Satisfaction guaranteed. Ref., Haight Hatchery, Cedar Springs, Mich.

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S. C. Eng. White Leghorns, Brown Leghorns and Anconas. Even-sized, healthy, and well developed. 8 wks., 75c; 10 wks., 85c; 12 wks., 95c. Also 12 wks. old White Rocks \$1.00. BOS HATCHERY, R. 2-M, Zeeland, Mich.

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In conclusion, I might list some reasons responsible for low broiler prices, considering the cost of production. There are too many families that consider broilers luxuries, and seldom or never buy them. There are too many broilers of inferior quality shipped to market. Broilers are not as necessary to the family table as fresh eggs. A campaign of education is necessary to prove to consumers that really high-class broilers are a fine treat, and worth the money. Many buyers do not consider price when purchasing something that they really want.

Individual poultrymen can do a lot to stimulate the use of broilers among their personal friends, especially if they are marketing eggs and truck direct. No "National Broiler Week" is needed. What we want is regular customers that will use broilers because they like them as long as the season lasts. Some day a national campaign of education through the press may teach consumers more about broilers. At present there is a great under-consumption of this valuable by-product of the poultry business.

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Undoubtedly the cold storage egg will still have a place for many years to come. It would not be fair to underestimate the value of the cold storage business in furnishing a market for the heavy surplus of spring eggs. But the production of more quality winter eggs will help to make city consumers more friendly to eggs at all seasons. At present the eating of certain kinds of food seems to be more or less of a habit. Buyers who do not eat eggs during the fall and winter are often slow to take up fresh eggs, even in the spring when they are plentiful. There is a serious under-consumption of eggs at all seasons, considering their food value.

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I have 225 purebred barred rock spring chickens. Just this week I have lost seven from sudden death. I cannot find the trouble. I am feeding oatmeal, cornmeal, and middlings equal parts with skim-milk in their watering pans. The ones I have lost just drop away sick just a short time. They lie and hold their heads clear back on their backs as in great pain. Can you tell me what is the trouble? There are still several of my chickens that haven't any feathers and are much smaller. Have the same food as the rest. Just recently I was told these chickens had worms. What do you think?—Mrs. L. R.

The chicks which have died with their heads twisted over their backs may have had limberneck from eating some spoiled material on the range. Dead chicks or other birds may be eaten by the chicks. Sometimes dogs dig up spoiled material which is eaten by poultry. Perform a postmortem and examine the crop, gizzard and intestines for evidence of poisonous material.

While the Barred Rocks are among the most vigorous of breeds, in large flocks there are apt to be a few very slow feathering individuals even though the remainder of the flock are in fine condition and all are given the best of management. These slow feathering chicks are culls and it is best to kill them. They seldom grow rapidly enough to make good broilers and they are apt to have a weak spark of life. Such chicks are the most susceptible to disease and may spread infection to other members of the flock. If any slow feathering Rocks are allowed to slip into the breeding flocks there is a danger of producing more slow feathering chicks.

The rapidly feathering chicks are apt to be the best in vigor and laying ability. Even good looking pullets that feather very slowly should be classed as culls. Sometimes pullets of that type are very beautifully barred when their plumage is developed, but often they are slow growing sun burned culls of little value.

CONTROLLING TUBERCULOSIS.

Please tell me what can be done when TB is brought into a flock through a male bird purchased? Do not want to dispose of my flock and have about 150 pullets coming on. Would a disinfectant in the drinking water help? What would you use? Can hens be tested for TB? Why does the state not test hens as it does cattle. Is TB contagious through droppings? Are germs spread by feeding grain in scratch pen litter?—Indiana.

A disinfectant in the drinking water can hardly be recommended as a preventive of tuberculosis. A veterinarian can test flocks of poultry for tuberculosis and possibly your county agent could tell you about any work along that line which may be done in your community. The state authorities have not tested hens as they do cattle, possibly because of the great number of hens and the fact that flocks are largely replaced each year. And funds for such work do not appear available at this time.

Tuberculosis can spread through the droppings. Any grain that strikes contaminated droppings might be the means of infecting another bird. It might pay to feed all the scratch grain in low wooden troughs which can be kept fairly clean. This would reduce the danger of infection. Placing wire over the dropping platform so the hens cannot walk in the droppings helps in keeping a flock healthy.

The membership drive in the proposed Ottawa and Poultry Producers' Association is going forward with a high degree of satisfaction. Indications now are that the goal of one hundred thousand hens will be signed up before the campaign is completed.



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Get the Moults Over

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Every successful poultryman knows that ordinary feed does not supply ample bone, feather and body-building ingredients. He knows how vitally important proper feed is to maximum egg production and fertility—and that an easy, quick, dependable method of feeding is to mix Dr. LeGear's Poultry Prescription in all laying and feed mash. Get a

pail or package from your dealer. Use it up. If you are not fully satisfied with results, return empty container, and he will refund your money.

Dr. LeGear's Lice Powder—nothing like it for ridding nests, poultry, etc., of lice, mites, etc.

Dr. LeGear's Dip and Disinfectant—should be used regularly to keep poultry houses, barns, etc., sanitary. A positive exterminator of vermin, lice and many disease germs.

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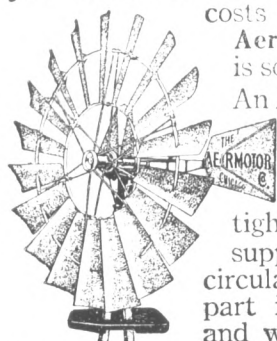
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SLOW FEATHERING ROCKS.

I have 225 purebred barred rock spring chickens. Just this week I have lost seven from sudden death. I cannot find the trouble. I am feeding oatmeal, cornmeal, and middlings equal parts with skim-milk in their watering pans. The ones I have lost just drop away sick just a short time. They lie and hold their heads clear back on their backs as in great pain. Can you tell me what is the trouble? There are still several of my chickens that haven't any feathers and are much smaller. Have the same food as the rest. Just recently I was told these chickens had worms. What do you think?—Mrs. L. R.

The chicks which have died with their heads twisted over their backs may have had limberneck from eating some spoiled material on the range. Dead chicks or other birds may be eaten by the chicks. Sometimes dogs dig up spoiled material which is eaten by poultry. Perform a postmortem and examine the crop, gizzard and intestines for evidence of poisonous material.

While the Barred Rocks are among the most vigorous of breeds, in large flocks there are apt to be a few very slow feathering individuals even though the remainder of the flock are in fine condition and all are given the best of management. These slow feathering chicks are culls and it is best to kill them. They seldom grow rapidly enough to make good broilers and they are apt to have a weak spark of life. Such chicks are the most susceptible to disease and may spread infection to other members of the flock. If any slow feathering Rocks are allowed to slip into the breeding flocks there is a danger of producing more slow feathering chicks.

The rapidly feathering chicks are apt to be the best in vigor and laying ability. Even good looking pullets that feather very slowly should be classed as culls. Sometimes pullets of that type are very beautifully barred when their plumage is developed, but often they are slow growing sun burned culls of little value.

CONTROLLING TUBERCULOSIS.

Please tell me what can be done when TB is brought into a flock through a male bird purchased? Do not want to dispose of my flock and have about 150 pullets coming on. Would a disinfectant in the drinking water help? What would you use? Can hens be tested for TB? Why does the state not test hens as it does cattle. Is TB contagious through droppings? Are germs spread by feeding grain in scratch pen litter?—Indiana.

A disinfectant in the drinking water can hardly be recommended as a preventive of tuberculosis. A veterinarian can test flocks of poultry for tuberculosis and possibly your county agent could tell you about any work along that line which may be done in your community. The state authorities have not tested hens as they do cattle, possibly because of the great number of hens and the fact that flocks are largely replaced each year. And funds for such work do not appear available at this time.

Tuberculosis can spread through the droppings. Any grain that strikes contaminated droppings might be the means of infecting another bird. It might pay to feed all the scratch grain in low wooden troughs which can be kept fairly clean. This would reduce the danger of infection. Placing wire over the dropping platform so the hens cannot walk in the droppings helps in keeping a flock healthy.

The membership drive in the proposed Ottawa and Poultry Producers' Association is going forward with a high degree of satisfaction. Indications now are that the goal of one hundred thousand hens will be signed up before the campaign is completed.



More Eggs Less Feed More Profit

There's the story of Quaker Ful-O-Pep Egg Mash in six words. It goes farther because it's chock-full of just the things hens must have to lay regularly. You use less feed—you make more money. These are facts demonstrated every month by some of the most successful poultry raisers in the country. Ful-O-Pep Egg Mash is *the economical feed* because it contains a generous quantity of pure, fresh oatmeal—a wonderfully efficient substance; to this are added the essential ingredients, including minerals and proteins, that a hen must have to make eggs. And it contains *Cod Liver Meal*—just the right amount to keep the hen's organs toned-up for steady production. Buy Ful-O-Pep Egg Mash now—this week—and prepare your flock for the most profitable winter you've ever enjoyed. See the Quaker Dealer in your neighborhood.

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Poultry Feeds	16% 20% 24%	Schumacher	Meal	Horse Feed

BUY THE FEEDS IN STRIPED SACKS

TRAILING a thief who had stolen Brown Rob, Henry Brown's prize colt, Big Judd and his friends had caught not only the thief, but had found Jack Miller with him. Believing both guilty, and determined to force a confession, Big Judd and his friends were about to make both prisoners "stretch hemp," when Beth Brown, who had followed the party, confronted them.

"Don't worry, Beth," said Jack Miller, as Beth tugged at the rope which held him. "These fellows haven't the

Adventures of the Brown Family—By John Francis Case

"Slippery Sam" In Safe Keeping

on our place again or speak to my sister," said Hal, "I'll beat your head off. I think you are a crook and a liar and I want you to stay away."

Jack's fists were clenched and his eyes blazed, but he failed to answer

with this hyar other trouble. Just follered youall here because he had a grudge at you."

So it seemed to Father Brown and Hal for "Slippery Sam" could hardly have had knowledge of the mystery farm or the missing treasure. Unable to give bail the former race track follower was held in jail until his trial could be held for he steadfastly protested his innocence. Moreover, the shrewd lawyer who had taken the case asserted that he would prove another person had taken the colt which admittedly had been stolen from the Brown's pasture. That person could be none other than Jack Miller insisted Hal, if the lawyer's contention was proved, and Father Brown's attitude toward the Miller's remained unchanged.

BIG Judd, enthused over his first venture in amateur detective work confided to Hal one day that he'd like to "take a whack" at solving the mystery of Lone Oak Farm. "Ef I can find that Black Neb," announced Big Judd, "I'll just skeer it all out of him. Boy, thar ain't no use in yore a workin' on this farm ef you ain't sure yore goin' to stay here. Ef the old captain is alive yore deed ain't good an you'd never get a penny from that tight-fisted old coot."

"Go to it, Judd," laughed Hal. "If you find anything we'll divide with you." That was enough for Big Judd and he began a systematic search of the surrounding hills. But it was not there that Big Judd made his first discovery. One night, showing great excitement, the amateur sleuth appeared at the Brown home and summoning Hal outside showed him a strange coin which proved to be a duplicate of the ancient Spanish piece Hal had found in the secret passageway.

"Jack Miller swapped it to one of my kin over on Camp Creek," announced Big Judd. "Swapped it fer food. Said he had to have food and had no other money. Don't that look as ef he knows whar Black Neb is and that they's got the old Cap's gold?"

(Continued next week.)

BITS OF HITHER AND YON.

Ribbons dyed with indigo have been found on Egyptian mummies 5,000 years old.

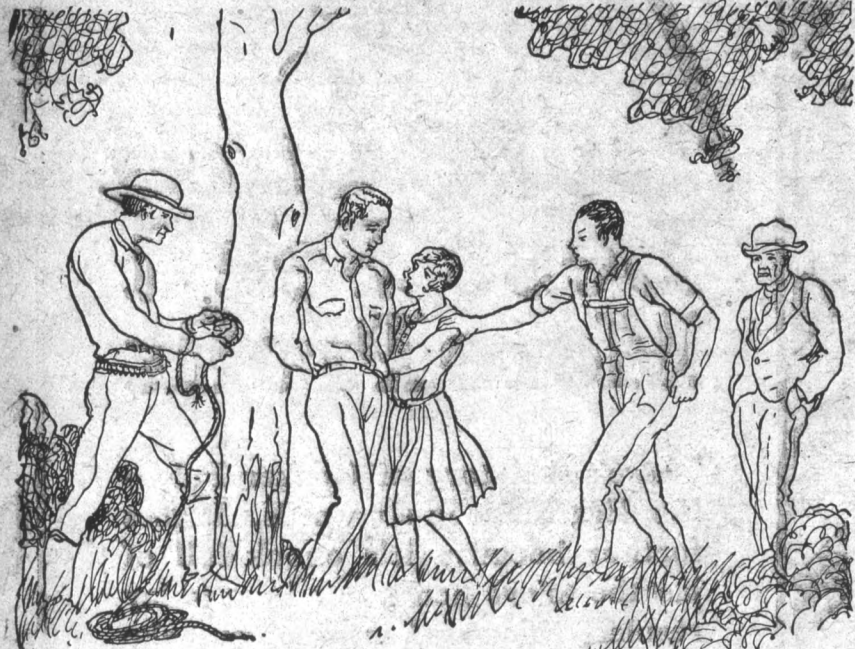
People in the United States carry 20,000,000 pounds of excess fat, according to estimate.

The state of Washington was one of the centers of population in pre-historic America.

Shellac is a resinous material secreted by an insect on the twigs of trees.

There has never been a real shortage of crude petroleum since the beginning of the industry in 1859.

Soot from the base of smoke stacks is sold by large agricultural retail firms for use in gardens.



"I'll Have You Know," cried Beth, and she flashed a defiant glance at Hal, "That My Brother Does Not Speak for me. I Believe in You."

nerve to string anyone up. They are only bluffing." There was contempt in the lad's voice, and "Red" Purdy, who had first suggested the hanging, muttered a savage oath. "If they had any sense," Jack went on, "they'd know that Sikes was trying to get away from me. I'd followed him here, but he got the drop on me, and was making his getaway when Big Judd fired."

"Sounds reasonable," agreed Big Judd. "What do you say about it, you shakin' thief, you?" Big Judd emphasized his inquiry with a well-placed boot as he turned to "Slippery Sam." But that worthy was sullen and silent, glowering in malevolent fashion at Father Brown and Hal.

"We've got the colt back," announced Father Brown, "and you've got the man or the men who stole him. After all, there's no proof that Jack had anything to do with it, and he may be telling the truth. Turn him loose, boys, and let's take Sikes here, to the sheriff. That \$50 reward I offered goes to Big Judd, and he can split as much of it among you as he likes."

The prospect of getting some "easy money," appealed to the volatile mountain men, who, after all, were much like children, and Jack was released, while "Slippery Sam," close guarded, was hustled away.

Father Brown was caressing his pet, and as Jack stepped forward to thank Beth for her defense and faith, Hal sprang before him. "If ever you come

and was turning away when Beth sprang forward and caught his hand. "I'll have you know," cried Beth, and she flashed a defiant glance at Hal, "that my brother doesn't speak for me. I believe in you, Jack, and I'll see you when I please."

"We'll see about that, young lady," flared Hal. "You know what dad told you."

"Don't let me make trouble in your family, Beth," said Jack. "I won't come to your home—now. But always remember that I appreciate your faith, and what you have tried to do for me." With dragging steps Jack made off in the direction of his home while Beth, alone, tears drenching her cheeks, turned back the way she had come. Would the mystery ever be cleared up and Jack Miller stand out as the real man they all had believed, and she still believed him to be? Only time could tell. Beth found herself wishing that she had never seen that advertisement of the mystery farm which had brought them to the House of the Lone Oak. But if they never had come she never would have met Jack. Beth blushed at the thought as she ran on.

"Well, neighbor," opined Big Judd. "One of yore troubles will be ended for a right smart while. That feller youall call 'Slippery Sam' will get about five years. Weall are dead set again hoss stealin' in these parts. I don't reckon he had anything to do

The Church Choir

By James Edward Hungerford

When Eli Higgins used to be a member of the choir,
To sing in op'ra was the goal to which he did aspire;
On Sundays, an' on Wednesday nights, his mighty bass would boom
Throughout the church, an' penetrate each corner of the room!

The other members of the choir, they didn't have a show,
When from his vibrant vocal-chords the notes began to flow!
They'd make a brave attempt to sing, an' make their hymning heard,
But Eli would drown them out, an' stifle ev'ry word!

The tenor's trill it sounded like a frightened mouse's squeak;
The alto rose to highest pitch, an' ended in a shriek!
The poor soprano did her best, an' wound up in despair,
But Eli made it plain that he was "on the job," an' there!

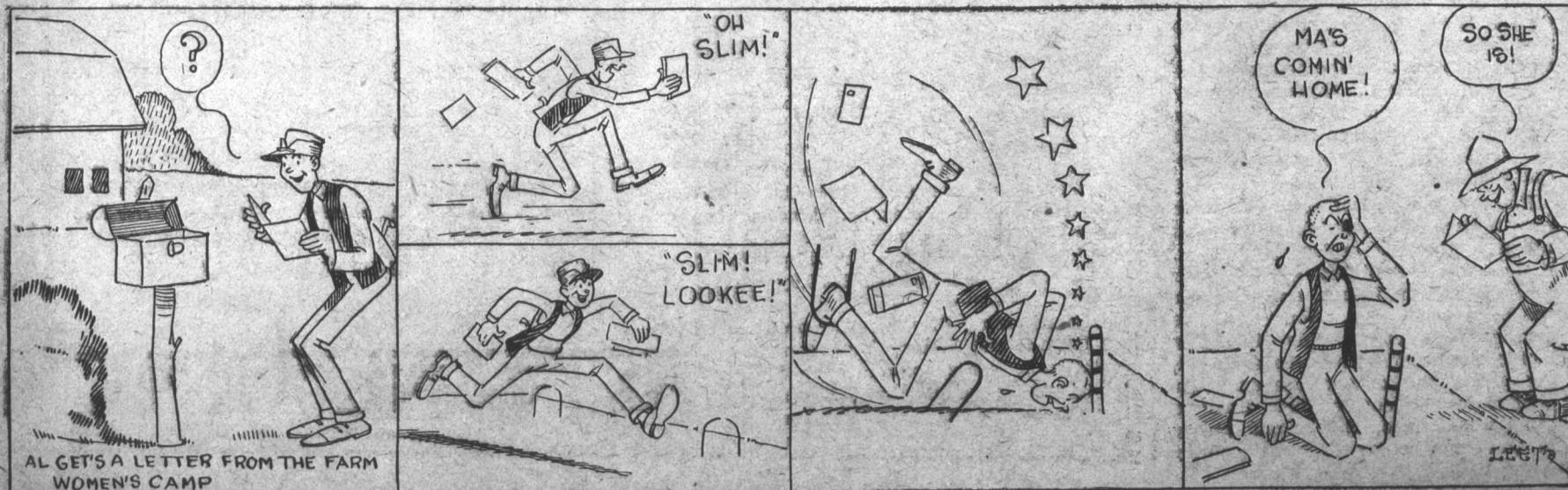
He fairly made the rafters shake, an' shook the window-panes,
As he poured forth in crashing waves, his avalanching strains!
The organ-loft would echo them, an' hurl them through the door,
An' they would roll an' rumble on—clean to the Golden Shore!

The years have passed; the little choir is scattered far and wide;
The tenor an' the alto sing in op'ra side by side!
The sweet soprano's vocal tones now issue from her throat
In concert, an' vast multitudes applaud each golden note!

But Eli never reached the heights to which he did aspire:
His dreams of operatic flights, as he sang in the choir,
Were never realized, an' yet—he practiced not in vain;
A thousand people hear his voice, when 'ere he calls a train!

Frank R. Leet.

Activities of Al Acres—Al Takes a "Wicket" Tumble



"By the Way"

UNDER THE RULE.

Mother, boarding a street car—"Do you charge for children?"
Conductor—"Not under six, ma'am."
Mother—"Good, I have only five."

RIGHT.

Bride—"I took this cake recipe out of my new cook book you got me."
Hubby, courageously eating the cake—"You did perfectly right, dear, it should never have been in there."

THE CRACKER GUARD.

Customer—"I don't want these crackers. Someone told me that rats ran over them."

Grocer—"That isn't true, because the cat sleeps in the box every night."

WHAT RATE?

Moses—"How's poor old Samuel?"
Mrs. Samuel—"He's pretty bad. Don't take any interest."
Moses—"Don't take any interest? He must be dead!"

DID THE DUE DO IT?

Customer—"That lawn mower that I bought was all rust."
Merchant—"That must be because there is so much 'due' on it."

NO BAIT FOR THE BANKER.

An up-state banker was noted for his success on angling expeditions, and had persuaded two cronies of the rod to join him on a fishing trip. Before starting it was agreed that the one to catch the first fish should treat the crowd.

Upon returning the banker was making use of the incident to show how mean some folks are. "Do you know," he said to a friend, "those cronies had a bite right off but they were both too mean to pull up."

"Did you lose then?" answered the banker, "I didn't have any bait on my hook."

ASK ME ANOTHER.

MENTAL gymnastics keep the mind in trim, just as physical exercise keeps the body physically fit. Read these questions and then think about them. Back in some almost forgotten corner of your mind, you may have the answer.

If you can answer seven of these questions, you are above the average. If you can answer eight, that's excellent. Read them and try. Write down the answers and then hunt for the answers on another page of this issue to see how many are correct.

1. Why is the lady beetle a friend of the farmer?
2. What is the dressing percentage of well-finished hogs?
3. What valuable plant food is lost when barnyard manure is allowed to leach?
4. What is meant by pasteurized milk?
5. Why are dark colored soils usually more fertile than light colored?
6. What government officials make up the state administrative board?
7. How many states in the Union when Michigan was admitted?
8. To which of the nine judicial circuits into which the United States is divided, does Michigan belong?
9. Who is chief justice of the supreme court of Michigan, and for how long are justices elected?
10. When does the state supreme court convene?

Portland's Tuberculosis Test

An Account of an Interesting Experiment

By Ransome Sutton

RECENTLY there was conducted near Portland, Oregon, a test to determine the value of a remedy for tuberculosis. The final examination of the cows entered was witnessed by more than fifty experts in tuberculosis, and at the close they all seemed to be of the opinion that it means a good deal to mankind.

The purpose of the experiment was to find out, definitely and officially, whether or not a particular remedy, discovered by Dr. George Kirkpatrick, really cures tuberculosis. Cattle were used. Biologists say there is no specific difference between the human and bovine types of the tubercle bacillus. The microbe becomes bovine in a cow, and it assumes the human type in a man, the difference being caused by the environment. When either type finds a weak spot in the tissues of men, or cattle, the result is the same—tuberculosis.

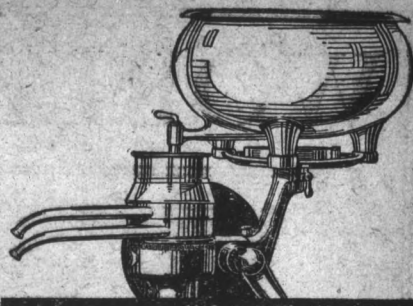
Five months ago, there were two herds of condemned cattle in the stock yards at Portland. From both herds,

the health officers of Portland picked twenty that were known to be afflicted, then from these the ten worst cases were selected for the test. No doubt about them being tuberculous. They were regular reactors, skin and bones, and if they had not been saved for the purposes of the test, they would have been killed and tanked.

They were removed from the stock yards to a farm, but before the treatment could be started, two died. Later on, a third one died, leaving seven to be treated. It was decided, however, to reserve two of the seven as "checks" in order that their condition might be compared with those that were placed under treatment.

The first dose was given to the five on March 25, 1927. Thirty days thereafter, due to the fact that the two "checks" were becoming very decrepit, it was decided to include them in the treatment. The last dose to all seven was given August 2, 1927. So five were treated 130 days, and two only 100

(Continued on page 213).

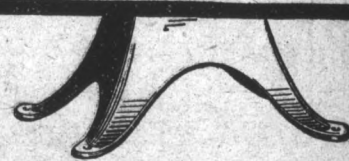


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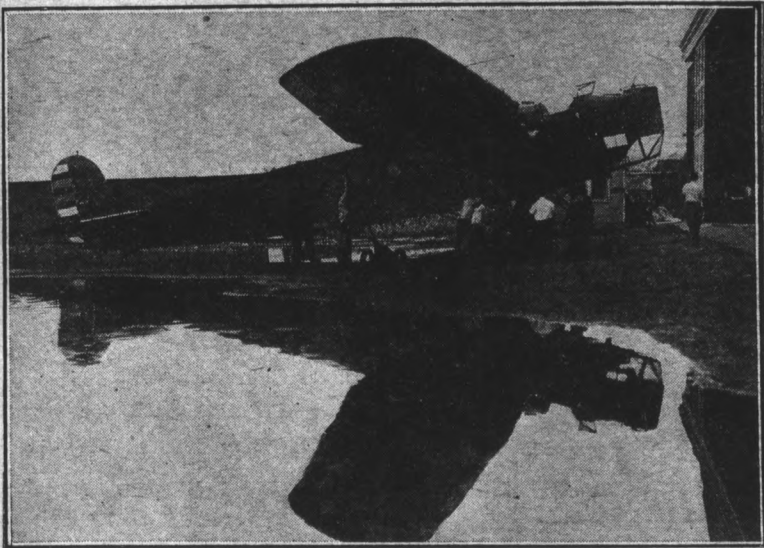
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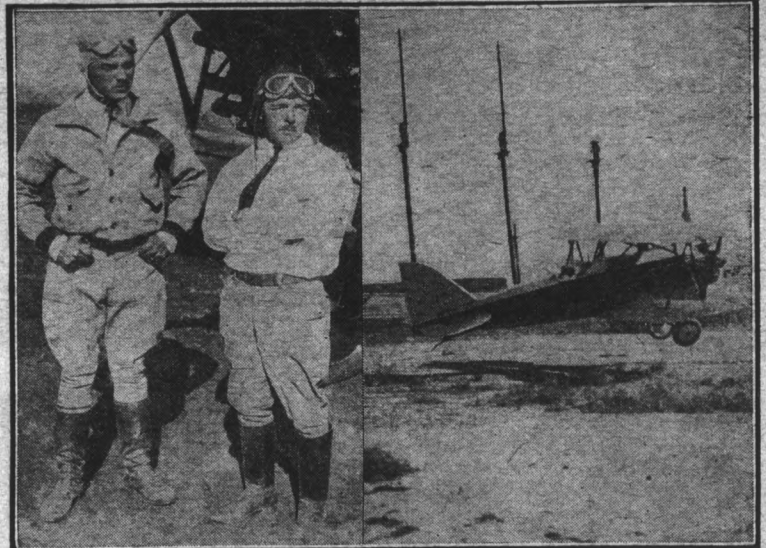
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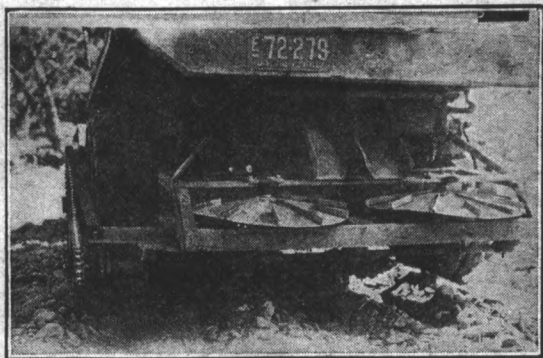
WORLD EVENTS IN PICTURES



The new giant Fokker army bombing bi-plane has ninety-foot wing spread and weighs, when loaded for military use, sixteen thousand three hundred and fifty pounds.



The "Miss Hollydale," an entrant for the Dole twenty-five thousand dollar prize, weighs fifteen hundred pounds and can lift four times that amount.



Engineers of the Oregon Highway Department made this unique device for spreading sand and gravel on roads.



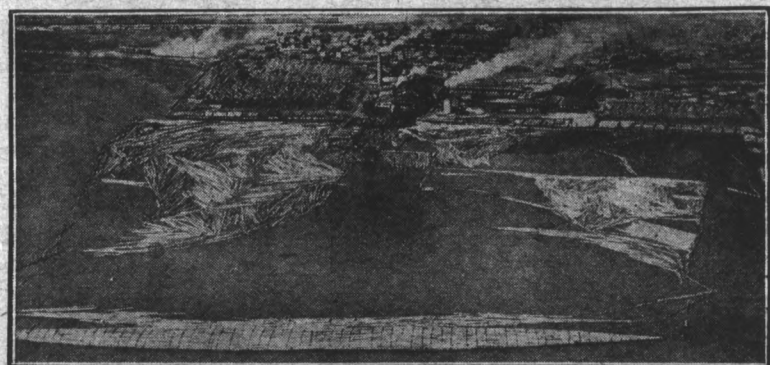
Mrs. Josie Lexon, 80 years old, has worked 63 years on one job in the fur industry.



The International Peace Bridge between Buffalo and Fort Erie, Ontario, was dedicated by a group of notables.



President Coolidge was initiated into the Sioux tribe and presented with a head dress by Indian Princess Rose Bud Yellow Robe. The President was given the name of Leading Eagle.



This huge raft, which resembles a long cigar, contains six million feet of timber, and was towed one thousand miles from Washington to San Diego, California.



Elizabeth Kugler, 89 years old, enjoys her first aeroplane ride and says she'll try again.



Crowds gather to see the demolished subway entrance at Twenty-eighth and Fourth Avenue, New York City. The explosion was thought to be the work of Sacco-Vanzetti sympathizers.



Frank Cole, endorsed commander-in-chief of G. A. R. for encampment at Grand Rapids.

RURAL HEALTH

By Dr. C. H. Lerrigo

DIARRHEA OF CHILDREN.

It is only rarely that a baby nursing the breast is troubled with serious diarrhea, but it is all too common with artificially fed infants in hot weather. The first step to be taken in a summer diarrhea, is to stop all food. The baby may drink all the cool, sterile water desired, but no food. Always get the help of a doctor if one is available for infant diarrhea is a very serious complaint. Here is the disease in which castor oil is effective. If the baby is six months or older, give a tablespoonful, if younger, give smaller amounts. Often the action of the castor oil is helped by giving a rectal enema of warm water, containing table salt in the proportion of one level teaspoonful to the quart. Keep the baby cool and quiet. Do not resume feeding until the stools and vomiting are checked. Then begin cautiously, feeding in very small quantities.

Let me urge again that you get the help of a doctor in summer diarrhea or other serious illness, if at all possible. Babies are frail and slip away easily. If a doctor can be obtained, have him advise you quite particularly as to the food you may begin with. I have had good success with barley water, and as it is often hard to get good pearly barley, I have come to depend very much upon Robinson's Prepared Barley.

There is not much nourishment in barley water and barley gruel, but it helps, and when you begin to give milk again the barley acts as a good modifier.

With older children who clamor for "something to eat," you may have even more trouble than with babies. Gelatin is a good food to consider for them. It can be prepared in many attractive ways, and serves to prepare the bowel for other food.

The diarrhea of children is apt to come in hot, sultry weather, and is more dangerous at such a season. Keep the sick child in the coolest place available. Bathe the skin of the whole body once or twice daily. Give a cool enema once daily. Allow plenty of drinking water, but to make sure it is good, boil it first and then cool it. And insist that the child stay quietly in bed during the whole illness. There is a strong temptation to let him get up and play whenever he feels a little better. But in doing this you take risks of a setback, and are sure to prolong the illness. Keep the patient in bed!

RULES OF MODERN DOCTORS.

Why won't doctors help out in the simple fashion of old days? Recently I sent to a doctor for some rheumatism liniment. Instead of sending it to me he said to come in and be examined. I suppose the difference is two dollars instead of one.—D. J. K.

Nowadays we scarcely expect rheumatism to yield to balms and liniments. We believe that it is most often due to some focus of infection and that this may be often found in pus concealed in diseased tonsils, decayed teeth, old abscesses of the appendix or the liver, or some other such source of poison. So the modern doctor tries to find the source and clear up the infection. This is not always possible but it works better than the old way, and is worth a lot more.

WHEN DOCTORS DISAGREE.

A throat specialist tells me to have my tonsils removed, but our home doctor says all specialists tell that to everyone. My doctor says catarrh is the cause of the trouble, and he can give me a course of medicine that will cure it. What do you say?—S. B.

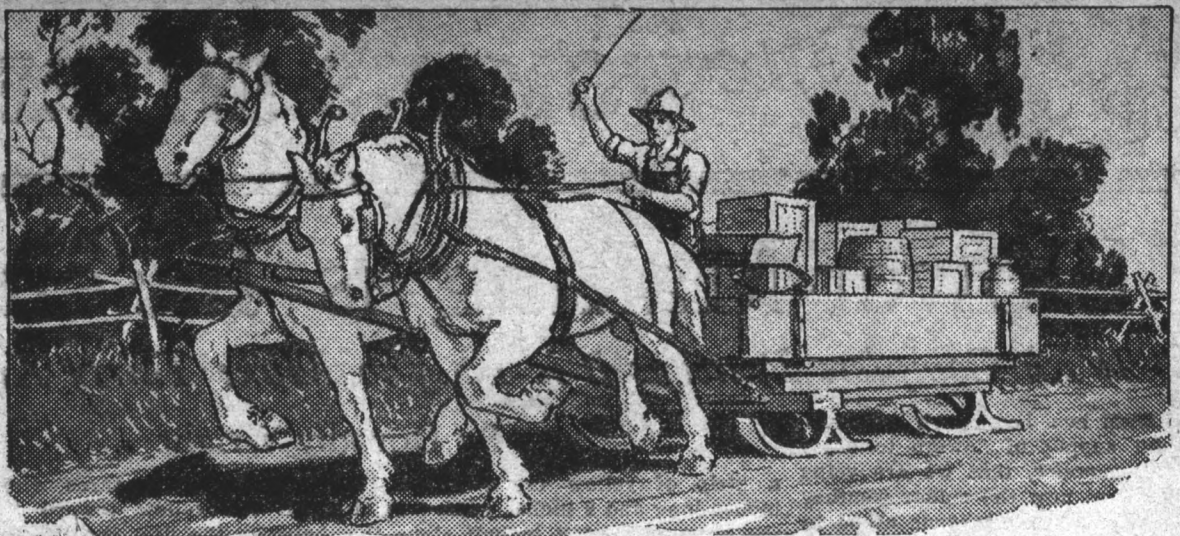
Who shall decide when doctors disagree?

I agree? I dislike to be called on to act as an umpire. There is something to be said on both sides, for doctors are very human and some of those who practice a specialty do become blind to everything else. If you know your specialist to be an honest man, take his word rather than that of the man who wants you to take medicine to cure catarrh. Catarrh is usually symptomatic of some deeper disturbance, and can seldom be cured by medicine. It requires the removal of any diseased tissues and then the general building up of the entire system.

TUBERCULOSIS.

If it is in your power, will you tell me of an Indian herb sure cure remedy of tuberculosis? I have been told of it, but haven't been able to get the remedy, or know of others that do. My husband has tuberculosis and has been in bed over three months. Have done everything that could be thought of, but without success.—Inquirer.

There is no "sure cure" remedy for tuberculosis. It is a wasting disease that can only be cured by building up the body with a long period of rest in the open air, good nourishing food, and freedom from all worry and work. Three months is not long enough for a cure. Get your husband into a sanatorium if possible.



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The WOMAN'S INTERESTS

Flower-Making is Fascinating Art

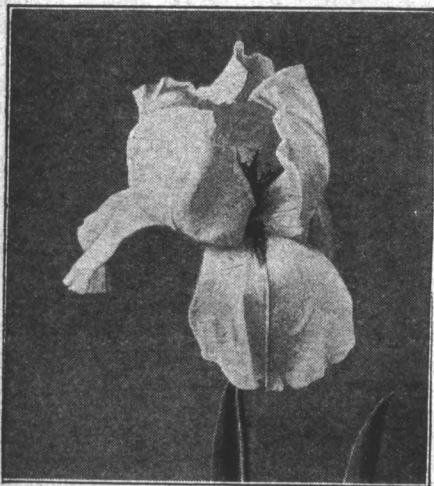
With Complete Patterns it is Easy to Make Thirty Kinds of Paper Flowers

THERE has been such a bountiful supply of flowers to enjoy all summer, that we are going to miss them now the colder weather approaches and our gardens cease to bring forth the joyful beauty of the past months.

But for those who are fond of flowers and always want to have some around, there is always a way to have them and with very little expense.

The joy and satisfaction of making lovely flowers is as great as raising them. In fact, the methods of making have been so perfected that crepe paper flowers are not now distinguishable at a glance, from natural flowers, and indeed, some crepe paper flowers must be handled to prove that they are not real.

Crepe paper comes in about fifty different shades and colors and is so pliable that it can be worked into any desired shape. Any flower that grows



The Fleur-de-lis is Really Very Easy to Make.

can be copied in crepe paper. One does not need to be an artist to make flowers artistically. Patterns are obtainable for flower-making, and the crepe paper that is accurately cut from these patterns will go together easily and quickly.

Many effects that seem difficult and complicated are obtained by the most simple means. Take, for instance, the Tiger Lily and the Japanese Lily both of which have spotted petals. The spotted effect is obtained by cutting brown or cerise crepe paper into fine particles, brushing the petals with paste and dropping the particles on the paste. Enough will cling to give the spotted effect.

And then to obtain a second color or a certain shading on a petal or in the center of a flower, the paper is tinted with coloring obtained by soaking a piece of the desired shade of crepe paper in a small amount of water. This is often done with the morning glory, carnation and fleur-de-lis.

To show how very easy it is to make flowers of crepe paper let us make one of the loveliest of flowers and one that looks difficult—a fleur-de-lis. You will need some heliotrope, violet, yellow, and moss green crepe paper and some No. 10 and No. 78 wire.

The fleur-de-lis has six petals, which must be wired so they will hold their shape, three crushed petals, and a center; with leaves and stem.

For the center, cut across the grain

a strip of yellow crepe paper, 2½ inches long and 2 inches wide. Stretch the strip and cut it in half along the grain. Now cut a fine fringe along the length of the strip ¼ inches deep. This is enough for two centers. Gather one of the strips along the unfringed edge into a bunch and fasten with a little paste.

For the large petals, cut strips of heliotrope and violet crepe paper, across the grain, 5 inches wide by 8 inches long. Fold with the grain into thirds, and using the petal pattern cut out six petals, three of each color.

For the crushed petals, cut across the grain a strip of yellow crepe paper 3¼ inches wide by 1½ inches long. Cut this piece into thirds along the grain. Make one end of each petal pointed. Now stretch these petals fully sideways, and then crush them between the fingers to a length of 2½ inches.

Cut two leaves from moss green crepe paper, two inches wide by 16 inches long, the grain running with the length of the leaf. Cut the end of each leaf into a point.

To wire the large petals cut six pieces of No. 10 wire, 5 inches long. Hold the six wires together at one end, on a flat surface, and brush the loose ends on all sides with paste. Place the petal on a flat surface, sheen side up, and lay the pasted wire in the center, from top to base, the extra length of the wire extending below the base. Press the wire down firmly; pick up petal; fold the petal around on all sides of the wire, and then open it out, creasing it over the wire and spreading it out. The wire should be completely covered. Now paste the crushed petals to the lower center of the three violet petals.

Place the three heliotrope petals around the yellow fringed center, the dull side out, the tops of the petals coming 2 inches above top of center.

By Dorothy Wright

Now place the three violet petals with the yellow toward the center, between the first three petals placed. Fasten all together with a strip of wire, one inch up from the lower end of the petals. Cut away the surplus wire ¾ inch below the fastening wire, add a 10 inch strip of No. 10 wire for the stem, and with a 1¼ inch wide strip of moss green crepe paper, cut across the grain, wrap the stem starting at the fastening wire, slanting the strip downward and stretching it smoothly over the wire. Add the No. 78 wire 3 inches from the base of the flower, and 18 inches down gather the leaves at their bases and insert them in the wrapping on opposite sides of the stem. Fasten the strip at the end with paste.

To shape the fleur-de-lis curve the three lighter petals upward and outward at the center and in at the tips so the tips meet and form the top of the flower. Curve the three darker petals outward and downward.

Our new bulletin, "How to Make Crepe Paper Flowers" gives complete instructions and patterns for making thirty different kinds of crepe paper flowers. For a copy of this bulletin, send ten cents to the Women's Interests Department, Desk L, Michigan Farmer, Detroit, Michigan.

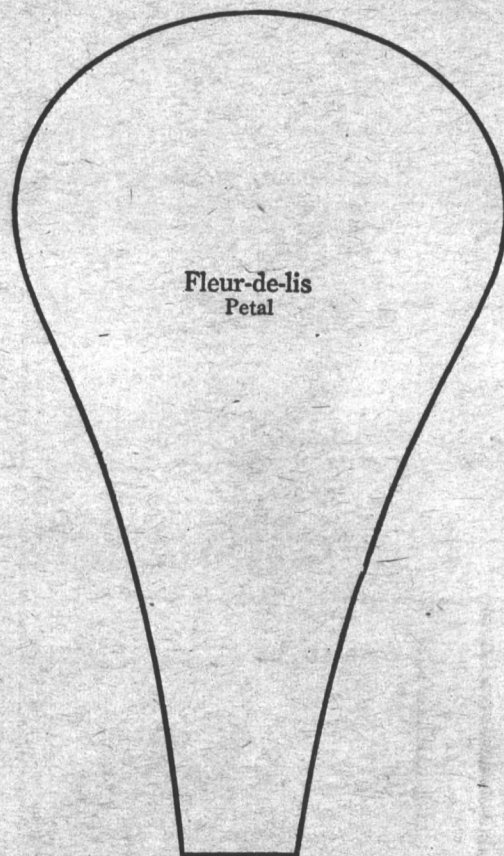
FILLING FOR THE CHILDREN'S SWEET TOOTH.

It is quite a common thing to hear women remark, when bemoaning their lack of time, "Dessert, you say? Well, they don't have dessert often at our house.

They are lucky if I get time to put plain food on the table."

This remark usually comes from a mother with several growing children, and you will notice that these are the children that are lunching all day on cookies and cheap candy. A child's sweet-tooth must be filled. They crave sweets and it is natural for them, as they require sugar as an element of heat and growth, but in the form of good nourishing food, not in cheap candy.

There are so many dainty, satisfying desserts that really require very



Pattern in Exact Size.

little time to prepare. Any fresh fruit, cut up with sugar, or any canned fruit, may be covered with cocoanut or marshmallow cream. Our healthful old friend, the prune, becomes a rich and festive dessert if cooked down thick and covered with marshmallow cream or chopped nuts, or both. Lady fingers or plain cake are good, covered with one egg custard and bits of red jelly. Corn starch pudding, plain or chocolate, take but a few moments to prepare, and are very nourishing and good, if served with sweetened cream or canned fruit.

Prepare bread, not too fresh, same as for sandwiches, cut off crusts, dip each two triangles quickly in fruit juice, lay on serving plate with crushed fruit between and on top. Pineapples, strawberries or peaches, either canned or fresh, are good. This dessert can be covered with cocoanut or marshmallow cream, or left plain, but when well covered with whipped cream it becomes a most delicious and glorified dessert, which I sometimes serve on Sundays or holidays, and no one, on eating it for the first time, ever guesses it is made of bread.

These and many more are so easily prepared, and so satisfying to the growing child's craving for sweets, that no mother should deprive her family of them for lack of time.

The Search for the Yardstick

EVERY home-maker has two tools in common with which to work, time and money. Time has a constant value for everyone, with twenty-four hours to the day and sixty minutes to the hour. But when it comes to money, this tool has by no means a constant value to each individual, even though there are one hundred cents to every American dollar.

Last week we had occasion to visit two farm homes in an average rural community in the eastern part of the state. The acreage of the farms were about equal, and the conditions of the outbuildings fair in both cases. The kitchen in the first home we visited, had a running water system of the gravity type, and the house was heated by a furnace. A bathroom was ideally located on the first floor. In the garage was an inexpensive, but serviceable automobile.

Down the road a mile, at the second home where we called, all the water used in the house was carried at least twenty-five feet, and all of the waste carried out. The house was heated by a furnace, but there was no bathroom. A high-priced sedan, a new model, beautiful in design, and with a speed capacity nearly twice that of their neighbor's, was parked in the garage.

And right here we did a bit of mental calculation. The difference between the price of these cars alone would have installed a running water system and a complete modern bathroom in any home, and even left a small balance on the credit side. These two neighbors placed a widely different value on the American dollar.

Economics are ever seeking for a permanent yardstick with which to measure the value of the American dollar, but such a thing is as elusive as a mirage. The measurement rests entirely with the individual, yet we feel safe in vouching that the members in the first home we visited, received more comfort, contentment, and real happiness per dollar invested than did their neighbors.

From My Table to Yours

PLEASING the palate and the eye is a problem that every home cook dares not lose sight of when feeding her family. She has found that old standby dishes must be varied occasionally with "something different" to tempt finicky and lagging appetites. But every now and then there comes a day when she sits down in her kitchen rocker, holds her head in her hands, and declares, "I just don't know what to cook today."

After similar puzzling moments, readers often write a letter to this department, sending one or two of their favorite recipes, and request others in exchange that will be a bit different. These are some that have been contributed recently:

Apple Dream.

1 dozen tart apples 2 pts. sweet cider
3 lemons 2 cups syrup
Stick cinnamon Cloves
Raisins

Core the apples. Fill the center with raisins, and bake in the oven until tender. Place the cider over the fire, adding to it the stick cinnamon and several cloves and the rind of a lemon. Simmer for half an hour and add the sugar syrup and the lemon juice. Place an apple in each glass and pour over the liquid.—Mrs. S. P.

Cheese Slaw, Buttermilk Dressing.

1 pt. shredded cabbage 1½ tsp. prepared mustard
5 lb. grated cheese 1 cup brown sugar
1 tsp. paprika ½ to 1 cupful fresh buttermilk
Few grains of cayenne 1 lb. vinegar
pepper 1 tsp. salt

Mix the cabbage and cheese together. Place all the other ingredients, except the buttermilk, in a bowl and blend thoroughly, then add the buttermilk, the quantity depending upon the thickness of the buttermilk. Pour over the cabbage and cheese and garnish with green pepper rings.—M. S. T.

Sausage Rolls.

1½ cups flour 1 tsp. salt
½ cup freshly mashed 1 lb. shortening
potatoes 1½ lbs. link sausage
3 tsp. baking powder Water

Sift dry ingredients and rub in the potato and shortening. Add enough water to make a dough that can be

rolled thin. Cut in small oblongs. Cook either pork or frankfurter sausage in water, then drain and cool. Wrap each sausage in the dough, lapping edges after wetting with cold water. Slightly grease baking pan and lay in rolls, and bake in quick oven for ten or fifteen minutes. If frankfurters are used, serve with mustard sauce. With pork sausage serve fried apples or tart apple sauce.—Mrs. K. D.

Stuffed Baked Tomatoes.

6 tomatoes 2 tb. butter
1½ cups bread crumbs 1 tsp. salt
¼ tsp. pepper

Cut a piece from the stem of each tomato, and remove the centers without breaking the walls. Make a stuffing of the centers of the tomatoes, crumbs, seasonings and melted butter, and mix well. Sprinkle each tomato well with salt and pepper, and fill with the stuffing. Place a small piece of butter on the top of each, arrange the tomatoes in a baking-dish, and bake in a moderate oven.—Miss W. K.

Chuck Steak with Onions.

2 lbs. chuck steak 1 tsp. suet
5 or 6 onions Salt

Place sliced onions in a shallow saucepan, cover closely and cook in two tablespoons of water over a slow fire until tender. When the onions are done, uncover and brown slightly. Heat a frying-pan smoking hot, and brown the steak quickly on both sides. Reduce the heat and turn the meat frequently until it is cooked through. Season the steak and salt the onions.—Miss D. C.

Cucumber Crisp.

6 qts. medium-sized 1 dozen dry onions
cucumbers 2½ qts. vinegar
4 large green peppers 7 cups sugar
Salt 3 tsp. tumeric
Few cloves ¼ cup mustard seed

Slice cucumbers. Chop onions and peppers. Salt in layers and let stand three hours. Then drain nearly dry. Add to vinegar the sugar, tumeric, mustard seed and cloves, and heat enough to melt sugar. Add cucumbers and scald, but not boil. Can in sterilized jars.—Mrs. W. M.

Short sleepers need the best of bedsprings

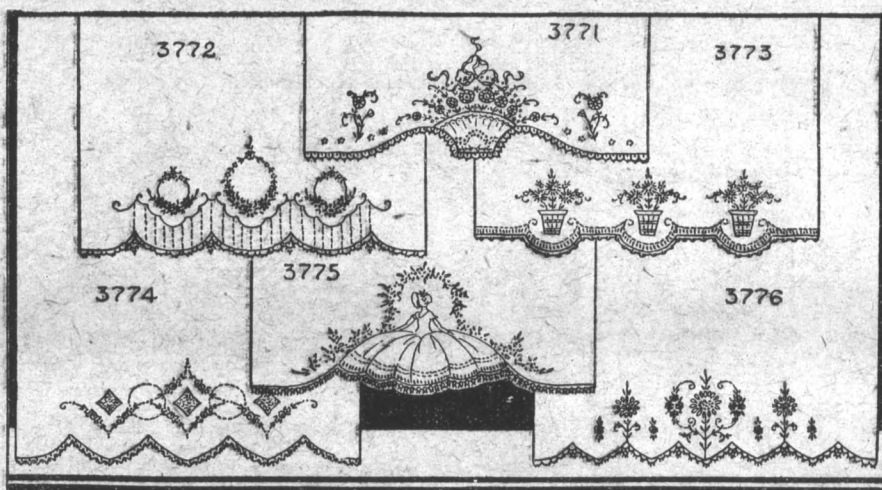
Little sleep should be quality sleep for into a minimum space of time Nature must put the maximum of recreation. Whether you sleep little or long, sleep on a Foster Ideal Bedspring. Do it because this bedspring will give your spine better support—it will keep your vertebrae in better alignment and give you finer nerve rest. Do it most of all because your health will benefit by the supreme rest you will get on the Ideal's 120 spiral springs.

FOSTER BROS. MFG. CO.
UTICA, N. Y.

Western Factory St. Louis, Mo.

Each genuine Foster Ideal Spring bears this trade mark on its side rail. If you don't see this trade mark it isn't a Foster Ideal.

Flowers Grow at Needle's Point



WHO can resist the daintiness that a cheery touch of embroidery expresses? And with her needle, woman has no better opportunity to exercise her own conception of color combinations than in these newest of stamped patterns.

The feature of these six attractive designs is that you can have dainty appointments that match, both for your bed, dresser and chifferobe, for these designs come made up in pillowcases and scarfs.

Design 3771 is most effective finished in shades of lavender and yellow flowers with shaded green stems and leaves, with baskets of yellow.

Design 3772 is individual if worked up in two shades of blue, with yellow and white flowered centers.

Design 3773 worked up in shades of lavender, yellow and green, is exceptionally pretty in bedrooms that have a tint of lavender in the decoration.

If design 3774 is done in orange, lavender and green, it is most unusual. Design 3775 is lovely when finished in shades of blue and pink flowers, with the colonial lady dressed in light and dark shades of yellow.

Shades of pink, rose, and yellow make an unusual combination for Design 3776.

The pillow cases in any of these designs come in sizes forty-two inches at \$1.45 a pair, and forty-five inches at \$1.50 a pair. Scarfs to match any of the pillow cases can be obtained in sizes eighteen by forty-five, price sixty-five cents each. Both pillow cases and scarfs are stamped on the finest quality white linen finished material. A detail working chart showing a suggested color scheme is enclosed with each design.

Send your orders for any of these designs to the Stamped Goods Department, Michigan Farmer, Detroit, Michigan.



The Bedspring that Supports the Spine ~

Michigan Farmer Pattern Service

Simplicity is the Keynote of Fall Fashions for Both Mother and the Kiddies

No. 2992—Unmistakably New. Pattern in sizes 18 years, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 36 requires 4 yards of 40-inch material, with 1 yard of 40-inch contrasting.

8 requires 1½ yards of 40-inch material.

No. 873—Matching Smartness. Pattern in sizes 6, 8, 10, 12 and 14 years. Size 8 requires 2 yards of 40-inch material.

No. 250—Sleeping Garment. Pattern is obtained in sizes 2, 4, 6, 8, 10 and 12 years. The 8-year size requires 2½ yards of 32-inch material.



No. 3038—Something Different. Pattern in sizes 16, 18 years, 36, 38, 40, 42 and 44 inches bust measure. Size 36 requires 3¾ yards of 40-inch material, with ½ yard of 40-inch contrasting.

No. 871—Peter Pan Collar. Pattern in sizes 6, 8, 10, 12 and 14 years. Size

The price of each pattern is 13c. Just enclose 13c extra when you order your pattern, and a copy of our New Fall and Winter Pattern Catalogue will be sent to you. Address all orders to PATTERN DEPARTMENT, MICHIGAN FARMER, DETROIT, MICH.

Household Service

Use this department to help solve your household problems. Address your letters to Martha Cole, Michigan Farmer, Detroit, Michigan.

SOME MORE NINE-DAY PICKLES.

I THINK the recipe for nine-day pickles that was published in the Michigan Farmer recently would be fine, but I would like to have some of the readers try this recipe.

Cover one peck of small cucumbers with a brine made by boiling one cup of salt in one gallon of water. Let this brine stand on the pickles for three days. Pour off, add fresh brine of the same strength and let stand three days more. On the sixth day pour off the brine. Boil two quarts of vinegar, two quarts of water, and two ounces of alum. Pour this over the pickles and let stand for three days more. On the ninth day pour off this brine and wipe the pickles dry. Boil together the following ingredients:

2 qts. vinegar	1 pepper, chopped fine
2 lbs. sugar	1 oz. cinnamon buds
1 cup horseradish, ground	1/4 oz. celery seeds
fine	1/4 oz. whole cloves

Pack the pickles in jars and pour this solution over them. Seal. I have kept these in jars for a year and they are just as fresh as when made.—Mrs. M. M.

A CORRECTION.

IN the August 20 issue there was a recipe for maple nut cake, which called for two tablespoons of baking powder. This should have read two teaspoons. One teaspoonful of baking powder to one cup of flour is always a safe rule to follow in mixing cakes.

HURRY-UP MAYONNAISE.

Please tell me how to make mayonnaise in a short and quick way.—Mrs. K. C. T.

This three-minute mayonnaise is unusually good. For it you will need:

1 tsp. salt	1 lb. lemon juice
1/4 tsp. mustard	1 egg
Dash of cayenne	1 cup salad oil
1 lb. vinegar	

Mix in bowl dry ingredients, add lemon juice and vinegar, mix well, add egg, without beating. Add one-third cup of oil, beat with wheel egg beater until the mixture begins to thicken (one full minute), add second one-third cup, beat one minute, add rest of oil and beat one minute.

It takes a little experience to know just the right point at which to add oil, but when this is gained the name is justified.

PICKLES AND MERINGUE BOTH SHRIVEL.

When I can small cucumbers, they shrink up and get soft. How may I can them so they will stay hard?

When I make a one-crust pie and use whites of eggs for frosting, as soon as it is browned and removed from oven, the frosting shrivels up. How can you make it so it will stay nice and fluffy?—B. S.

When canning pickles, it is always best to can them as soon as possible after they are picked. It may be that you are using too strong vinegar, or that you cook the pickles too long, but, if your trouble seems to be in the pickle shriveling, you might add a bit of alum, the size of a pea, to each quart of pickles. This will tend to keep them hard and brittle.

It takes a bit of practice to make good meringue for pie, especially one that will stand up until served. No meringue improves with standing, and it is best to plan to cook it just before serving.

Beat the white of eggs until very dry, and sift in the sugar, powdered sugar is preferable. By all means, do not add sugar before the eggs are beaten dry. Spread on the pie that has been cooked, and bake in a slow to moderate oven. Too high a temperature will shrink and toughen the meringue. The meringue should begin to

brown in about eight minutes, and then be left in two minutes while browning.

UNUSUAL TRIM WITH RICK-RACK.

A DECIDEDLY pretty trim, especially for a tight-fitting collar, is a new arrangement of rick-rack. Lay the points flat on the edge of the material and bind the two, leaving the upper points of the braid exposed. Fasten the exposed points to the material with three lazy-daisy stitches. Most any colorful idea can be worked out for both braid and floss can both be purchased in the new shades. Either bias binding or binding of the material may be used. This finish can be used to advantage on luncheon sets, vanity sets, and kitchen and bath room curtains.—Mrs. M. R.

PUT FIRST THINGS FIRST.

WHO hasn't noticed the advertisement of a mother with a child snuggled in her arms, while she reads it? It's an example, the advertisement suggests, of "putting first things first."

And who among us, amid the complexity of modern living, can be sure that she does it? It may seem impossible to stop and give little Fay

the explanation for which she asks if we are to get the freshly laundered curtains up before night. We'd "like to," we say, but we're "busy," or "too tired" so she must "run away and play."

If this is our habitual mental attitude, then are we not putting "things" like draperies ahead of such important treasures as a little child's confidence, affection, and even character?

Some neighbors discussing a little five-year-old remarked, "Yes, she needs care—sweet little thing!—but her mother is always so very busy, how can she give it to her?"

"What does her mother have to do?" inquired a newcomer. "I've seen Mary Betty playing around the neighborhood, and she always looks well cared for and very nicely dressed."

"Yes, and her mother makes all of her clothes!" said one neighbor.

"And they are beautifully embroidered and laundered," explained another.

"Um," said the newcomer, "I've noticed her mother changes her costume several times a day."

"Yes," chorused the admirers of Mary Betty's mother, "and she makes a lot of them herself. And then she is so dainty about the table. You know she embroiders all her luncheon sets, and other household dainties."

"Well, she's bringing Mary Betty up to love beautiful things, even if she doesn't have much time to spend with her. She works so hard!"

"Um," remarked the newcomer thoughtfully, remembering the ready little fibs she'd heard Mary Betty tell that day. "It is a question of relative values, isn't it?—care and ornamentation of the outside or of the inside—which shall come first?"—Marian Brownfield.

HINTS WORTH TAKING.

Do you know, if you will whitewash the inside of your window boxes, and let dry before putting in the dirt, it will keep the boxes from rotting, and, also, keep the insects out?

New kid gloves that are tight may be wrapped in a slightly damp towel for an hour, and they will slip on more easily.—Mrs. Ida Brown.

For Our Little Folks

Stories From Bugville

THE BLACK ANTS' BATTLE.

DADDY LONG LEGS, the grasshopper, was hopping along through the meadow one sunny afternoon and came to an open space among the clover blossoms. Here only a few blades of grass grew, and the soil was sandy. Right in the middle of the space was a heap of sand piled up loosely. In the center of this pile was a tiny hole, and there were several tiny holes on the sides.

Tiny black creatures, ever so much smaller than Daddy Long Legs, were hurrying in and out of these holes. Every one seemed much excited. This was the home of the black ants.

"I wonder what's going to happen," said Daddy Long Legs to himself, as he teetered on a clover stem nearby. While Daddy Long Legs waited, hundreds of the tiny black creatures came hurrying out of their sand house, and in one black, moving mass started toward another pile of sand that was on the other side of the open space.

"War is declared!" exclaimed Daddy Long Legs. "I'll keep at a safe distance and see what happens."

Daddy Long Legs was right, for the ants had really planned a war on a neighboring colony. As soon as the colony of ants neared the little mound of sand that was their neighbors' house, the guards of the neighboring colony rushed in to their sand house to spread the alarm. Soon the neigh-



The Battle Seemed Just a Mass of Tumbling Ants.

boring ants came hurrying out of tiny holes in the sides of their house, as fast as they could.

Then the battle was on. It is strange how one colony can tell their members from those of their enemy, for seemingly all black ants look exactly alike, but they never make a mistake. One ant would seize an enemy in his jaws and would not give up until one or the other was dead.

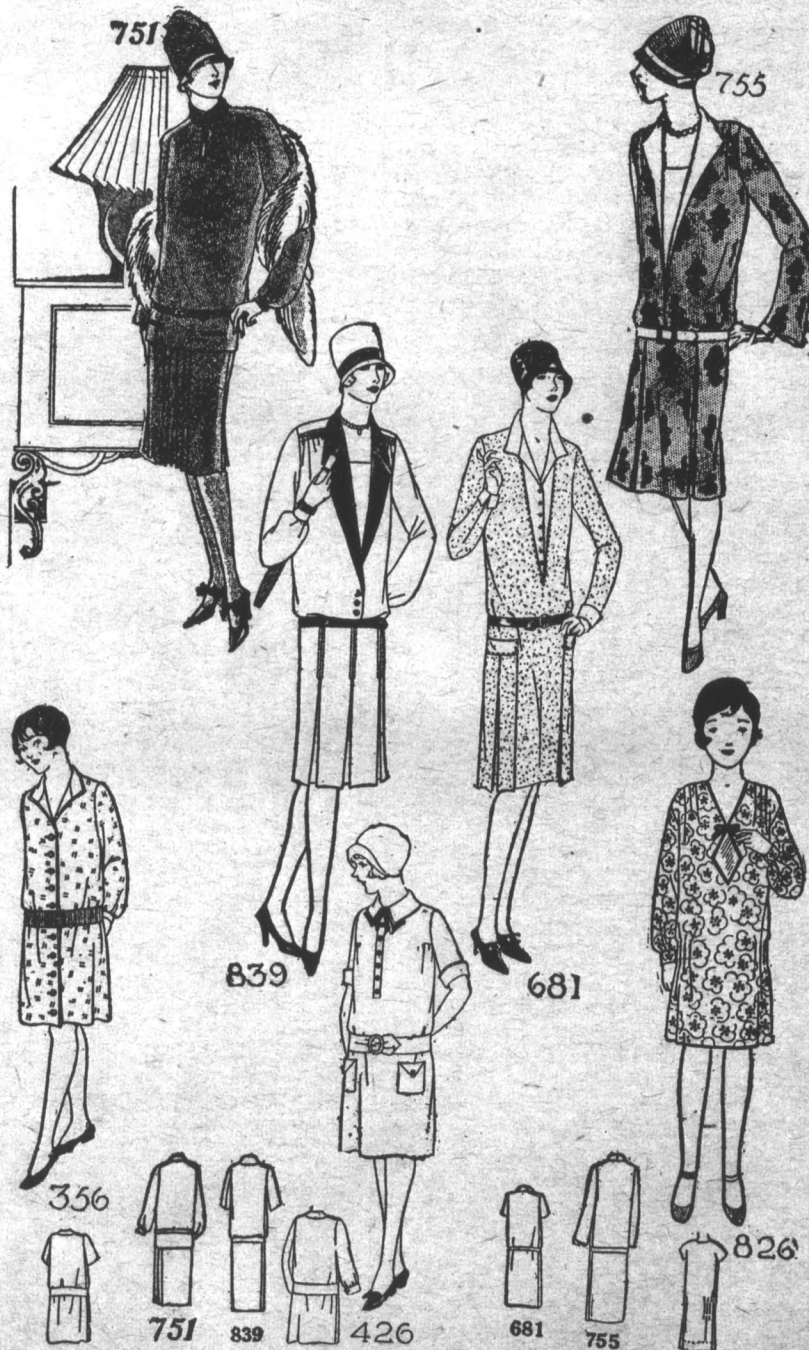
To Daddy Long Legs the battle seemed just a mass of tumbling ants. When the struggle was over, part of the victorious colony carried their wounded ants back home, and others carried the dead ants out among the clover blossoms. Still others filed into the enemy's house and carried what looked like tiny grains of rice, back to their own house. These tiny white objects were really what they had been fighting for. They were the larvae and pupae, or baby ants, of their enemy. These they would feed and care for until they had grown up, and then they would make slaves of them.

Sometimes when a colony of ants have a great many slaves, they make the slaves feed them, until they finally lose the power of feeding themselves and will starve when food is near, if the slaves are not there to feed them.

"I'm glad grasshoppers don't have such battles," sighed Daddy Long Legs as he hopped away to nibble at a clover blossom.

Plaits Conspicuous For Fall

Smart Waistlines Are Well Defined



No. 839—Distinctive Lines. Cuts in sizes 16, 18 and 20 years, 36 to 44 inches bust. The 36-inch size requires 3 3/4 yards of 40-inch material.

No. 751—Popular Sports Outfit. Cuts in sizes 16, 18 and 20 years, 36 to 42 inches bust. The 36-inch size requires 3 3/4 yards of 40-inch material.

No. 681—Attractive Sports Dress. Cuts in sizes 16 years, 36 to 44 inches bust. The 36-inch size requires 3 3/4 yards of 40-inch material.

No. 755—For Stout Figures. Cuts in sizes 36 to 46 inches bust. The 36-inch size requires 3 3/4 yards of 40-inch ma-

terial, and 1/4 yard of contrasting. No. 826—For the Beach. Cuts in sizes 2, 4, 6, 8 and 10 years. The 4-year size requires 1 1/2 yards of 40-inch material.

No. 426—Junior Sports Dress. Cuts in sizes 8, 10, 12 and 14 years. The 8-year size requires 2 1/4 yards of 32 or 36-inch material.

No. 356—Button-Down-the-Front. Cuts in sizes 6, 8, 10, 12 and 14 years. The 8-year size requires 2 yards of 36-inch.

The price of each pattern is 13c. Address your orders to the Pattern Department, Michigan Farmer, Detroit,

A Modest Young Man

Our Weekly Sermon—By N. A. McCune

AND I am but a little child; I know not how to go out or come in," said the youthful Solomon when he came to the throne. If he had only remained that way. But that seems to be asking a good deal of a king. We are all very human. But at least at first he was teachable and humble. Said Paul, when he came to Corinth, "I was among you in weakness and in fear and much trembling." And he accomplished much in Corinth. In the legend of the Round Table, when Percivale was seeking the Holy Grail, he expressed great disappointment to an holy hermit that he had made such small progress in his search. The old man said to him, "Thou hast not lost thyself to find thyself." Doctor R. F. Horton, who has been pastor of a great Congregational church in London, for forty years, says in his autobiography, "Luther said that he had noticed that whenever he was called to some work of exceptional importance he was beforehand prostrated with illness or sorrow, which he accepted as a discipline necessary to humble him and throw him wholly on God. I have



observed the same fact in my own life. I remember no piece of work unusually important which I had not to approach through the valley of humiliation."

"And I have given thee both riches and honor," (verse 13). The young king got more than he asked. Seeking only spiritual gifts he received also the material, which we all so appreciate and value. "Seek ye first the kingdom," said Jesus, "and all these things shall be added unto you." By-products, in other words. Of course one would not seek religion for the sake of its by-products, but if we seek it sincerely and without reservation there will surely be by-products, which we perhaps had not anticipated.

Spiritual values are the highest therefore other things which are of less value will follow in their path. What is the factor which makes you feel the safest, as you take your money to the bank? The new steel door with the time lock? The automatic burglar alarm? These are important, but the human features are the most so—the cashier, the tellers, the directors. All the time locks in the state will not prevent a dishonest cashier from using other people's money for speculation. Your new consolidated school is a tremendous addition to the community. But it will not accomplish much unless there are teachers of good character. That factor counts more than the big gym or the kitchen where the girls learn domestic science. (And don't get the impression from this that I undervalue the gym or the domestic science. I'm for them both. Deep chests and good salads are indispensable.)

It is a fact demonstrated many times that the right choice of religious values brings all other good things in its train. "By humility and the fear of the Lord are riches and honor and life," says the book of Proverbs. That there is a danger here must be admitted. It is easy to get the idea that if we trust in God, are religious, go to church, and all that, we will be prosperous, we will succeed in our undertakings. In other words, religion is cheap insurance, which guarantees against loss. Many people seem to regard it so. If a good man has trouble, loses money, or his son dies, or he contracts cancer, the neighbors whisper, "Why should he

have any such trouble? He is one of the most religious men in this town. He has always been a good man." As if religion were a lightning rod to set up, which will keep off all trouble. Religion is not intended for that purpose.

It is undoubtedly true that the habits of sobriety, sincerity, kindness, hard work, which religious faith induces all tend toward success. Such men very frequently outstrip others in business affairs. But that does not mean that one can use religious faith for promoting his money matters. If it did, every rogue and mountebank and confidence man in the land would be joining the church and pretending to be religious. Christian folk have trouble, and often very serious trouble, which is hard to explain. In fact, it cannot be explained.

To press this a bit further. It was an Old Testament belief for a good while that religion did mean success. To serve Jehovah meant long life, many children, and a goodly competence. As psalm 91 puts it, "Because he hath set his love upon me, therefore will I deliver him; I will set him on high because he hath known my name. I will deliver him and honor him. With long life will I satisfy him and show him my salvation." There are scores of other similar passages. But by and by something happened. The Hebrew nation was overtaken by calamitous trouble. Thousands were carried away to other lands. The thinkers and students began to ponder why this was. After all, you cannot use your religion as an insurance policy, they said. And off in Babylon a deeper phase of teaching came, as a result. The book of Job was written, which is a study on why a good man has trouble. The great chapters on the Suffering Servant in Isaiah were written, also. What was the conclusion of these inspired writers? We have to go on faith. The book of Job ends with Jehovah speaking out of the whirlwind, and saying that Job must not complain. He must trust in God. Some things cannot be plumbed in this life. Religion is more than a lightning rod to keep off trouble. It enables man to go through the worst of trouble, and know that he has God with him. "When thou passest through the waters I will be with thee."

SUNDAY SCHOOL LESSON FOR SEPTEMBER 4

SUBJECT: — Solomon's Wise Choice. I Kings 3:4 to 15.
GOLDEN TEXT: — Proverbs 3-13.

THE ANSWERS.

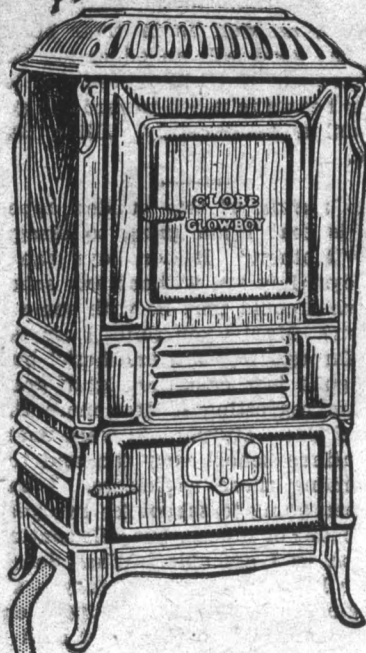
These are the answers to the "Ask Me Another" questions printed on a forward page of this issue.

1. Because it eats plant lice.
2. About seventy-five per cent.
3. Nitrogen especially, and some others.
4. Milk which has been held at a temperature of 142 to 145 degrees for thirty minutes to destroy the bacteria.
5. Dark-colored soils usually contain more humus and nitrogen.
6. The governor, who is designated chairman; the secretary of state; the secretary of the treasury; auditor-general; attorney-general; state highway commissioner, and the superintendent of public instruction.
7. Twenty-five, Michigan made the twenty-sixth.
8. Michigan is part of the sixth judicial circuit.
9. John E. Bird, of Adrian. Justices are elected for eight years.
10. On the first Tuesday after the first Monday in January, April, June and October.

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This job of heating homes the way they should be heated—clean, economically and well—is not difficult if your parlor furnace is designed and built right. Glow-Boy is the last word—the best word in home heating equipment. There's over fifty years experience behind and in him. He is built to do one job only; heat homes efficiently at a low cost. And he is doing it all over this part of the country. Glow-Boy is actually

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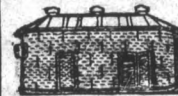
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OUR PAGE

More Opinions on Education

Some Answers to Mother's Comments

A MOTHER'S letter of some time ago on education disturbed me very much. I could not resist informing her that I do not think her remark very sensible when she said, "those who hadn't an education were grumblers, lazy, and never contented."

Education is almost a necessity, and perhaps will be more so in the future. The majority of the boys and girls who want a high school education and means to make use of it, get one. The others cannot afford it, and if "mother" thinks those who aren't fortunate enough to have it are grumblers, she ought to pity them. I was taken out of high school myself, owing to my mother's illness, and I'll bet from five to ten cents, "mother," you are a bigger grumbler than I am. I hope the day will come when "a mother" will be

A friend of mine has said, "we need to put something in the hearts of our children, as well as in their heads." Of what good will an education be if we have not the willingness and love in our hearts to use it toward the good of mankind?—Sincerely, Lillian Hammond.

The reason of this sudden appearance is that I am going to disagree with "Mother." If her boys can be the boys they are without any schooling, what could they be with some education? Maybe you think I am talking "through my hat, 'mother,'" but I have gone just past the eighth grade, and am regretting it now more than anyone else. My parents were unable to continue school very far, and they are among those regretters. I have not been going to school for two years on account of illness, but will continue as soon as I am able. What does it matter how long or how old you are, to begin again? I think this little verse strikes me right to the heart of it:

"I wish—I can—I will,
These are the three
Trumpet notes to victory."

One of the last letters in our paper written by one who was for "mother" suggested Christian teaching instead of school "junk." Of course, Christian training is a wonderful thing to have, but not many people get far unless they have other education. Our own missionaries have to have other schooling or they wouldn't let them go.

Sometimes it is hard to choose our paths in life, and more times than not, we choose the wrong one, or else too late to do any good. I think these words seem to fit our lives so well, and let's not choose our paths so we will regret it:

"All one's life is music, if one touches the notes rightly and in time."
—Geneva Kohlenberger.

As a teacher I had pupils who could scarcely master the three R's, due to some mental inefficiency as children but who, as men and women, have followed such natural abilities as they possessed, making them fair successes financially, and good citizens. But in no wise should an education be disparaged, even if many of the world's great men and women were not "graduates." The common schools have improved their methods of teaching very much since I was a child, and who has done it? Why, the teachers themselves, not the younger generation, who seem to think, some of them, that they are the only modern individuals. All that we are, or know, is due to the knowledge gained by those who have gone before. And it is up to us to add all we can to that sum of knowledge we pass on. The very fact of knowing something of the earth around and above us and beneath our feet; of the heavens above and the natural laws that govern it all, is a daily inspiration and enjoyment, for—

"Lowly living and lofty thought,
Adorn and ennoble a poor man's cot."

I fully agree with "another mother" in all she says in appreciation of the higher education. She surely has experienced its benefits, or she could not have described them so well.—Mrs. Nickerson.

When I read "Pesh's" letter recently, I really felt sorry for her. If she had gone on through high school, and perhaps college, she would be ashamed

to call her studies "worldly junk," as she does now, and would be ready to shake anyone else who did.

I think education and Christianity go hand in hand. I don't mean that you have to have an education to be a Christian, but if you are educated you want to be one.

I don't think that an education should be measured in dollars and cents, but from my two years in high school, I have learned much that will help me later in my life. But the greatest thing of all, I have gained many friends, many of whom I would never have known if I had quit at the eighth grade. I wouldn't take any amount of money for those friends. I have also gained many higher edu-

cated friends through my two older brothers and my sister, both fellows and girls who were their friends in college. A week hardly goes by without some of these young people visiting at our home, although their homes are scattered all over the United States. I enjoy their friendships very much, and these friends that make our life so happy would never have been heard of by us if we had quit at the eighth grade.

I think that it would be interesting to discuss the religions of the world. I would like to know more about the religions that are different from my own. Will send in my idea when I have time to think more on the subject.—Sweet Sixteen.

OUR LETTER BOX

Dear Uncle Frank:

This merry group does my heart good. I see Paul suggests a good point on the country vs. city topic. I see "Freshie" agrees with Hank on his attitude toward "Our Page," and "Bubbles" brings up that ever-inspiring topic, nature.

Ah, how I long to live near the mountains, among thick fir woods. How I'd love to climb in risky places, on crags and cliffs, etc., or to gather bergmenda, as a white feathery flower of the Alps is called in Germany. I must mention the mountain rose, and a flower named adelwissee, the rose, begroseline.

Ah, well, I'll have to be satisfied with our brushwood instead of fine old firs and violets so easily found and easily gathered, but then, I have excitement, too. Even though I am too old to climb around in trees, etc., you must not think I don't. That is, I do. I shinnny up ropes, and will do almost anything any reasonable minded person wouldn't. I like to play stump the leader, especially when I'm stumper. The boys seldom can beat me.

Oh, Unc., I know I've taken up considerable time with my incoherent lingo, but please let me come back and visit again, just the same. Let's discuss nature some more later, and music and entertainments, too. May I come again?—Christine.

You make me want a vacation. I have not even brushwood to remind me of nature. In the way of nature, the most unusual things we see are flappers, and they are about the most unnatural things there are.

Dear Uncle Frank:

I received my M. C. card and pin about a year ago. I wrote and thanked you for it then, but got my letter back "unclaimed," so will thank you very much for it now. We used to live in Delta county, Michigan, but moved to Oklahoma.

It is awfully nice down here, but I have often wished I was still up on the farm. I have lived in both the city and country, and I think the country is a better place to live in.

We still get the Michigan Farmer, so I can read Our Page when it comes. I am sending an answer to the contest for this week. I like what "a silent M. C." says about nature. I think she has a good opinion of nature.

Well, Uncle Frank, I will close for now, hoping Mr. W. B. has a "tummy ache." As ever, your niece, Hazel Bradway, Oklahoma City, Oklahoma.

It is fine that you are still faithful to the country and to Michigan. Hope that you will retain an interest in the M. C. for some time to come.

Dear Uncle Frank and M. C.'s:

I received my pin last week. I thank you very much for it. The pin has very appropriate colors for a club of boys and girls. If everyone lives up to their meaning, there won't be many members who are not going to be good citizens for Uncle Sam.

As for the use of tobacco, I am against it. I smoked a half of a cigarette once, but I did that for an experiment, more to see what it seemed like, than style. Smoking or chewing tobacco is just as bad as drinking. My

father chews and my brother smokes, but I don't like it one bit. My sister "paints up" once in a while, and it looks to me just as though she had used some red barn paint on her cheeks and lips. I tell her about it, too. I use powder three or four times a month, but never to any great extent. I never use rouge, lipstick, or eyebrow pencil. I have plenty of color in my face, as I have lived in the country all my life. I am over-weight a little more than twenty pounds.

If Mr. W. B. doesn't catch this I will be greatly surprised. In the club I'll go by the name of "Bright Eyes."

Well, Bright Eyes, I guess you are surprised now that W. B. didn't get fed. You have sensible views. I'm glad you like the membership card.

Dear Unk and Cousins:

I don't think I could have chosen a better ten that helped us achieve our marvelous civilization than "The Modern Farmer's Daughter" did. I think she was quite right.

I also think it a very good idea, the



Charlotte Phillips Can Boast of Her Dog's Smile.

way Mary Shoemaker and her twin sister earn money.

I think a very good discussion would be about the modern girls who run out with boys before they are old enough. I myself like a boy, but I do not go with him, because my mother says when one is fifteen or sixteen it is early enough to have one once in a while, and when you are nineteen or twenty it is time to have a steady fellow.

Although I think a girl can go with a boy a few times if she chooses, I would like some other boys' and girls' opinions if possible. Thanking you once again for the button, I remain, "Frenchy."

That was a good list of ten famous men. Your mother is quite right, I think. But I would advance the ages a bit.

I heard one father say that he preferred, above other educational advantages, that his children be accomplished in music. What do you think?



We Surmise that Ariel Denton is After Big Game.

glad to lend a hand to put a child through school and not make fun of those who cannot. Best wishes to the Merry Circlers.—"Weadock."

I have been especially interested in the discussions on Our Page which were begun by "A Mother." I believe that today a good education is necessary for everyone; but a good home training is just as important. If young people are not taught proper morals, and are given an extensive education, they will very probably be lounge lizards who pack hip flasks and smoke cigarettes. On the other hand, I do not believe that a good-moraled person who has never gone through high school will not be nearly so well prepared to influence people towards the good, in every way, as one who has gone through college, although he can do much.

"Mother's" sons did very well, better than some people of limited resources, but I wonder how much higher they could have climbed on the ladder of success, if they had had the advantage of an education. Despite their education, "Sweet Sixteen's" brothers would not have been so successful if their parents had not given them the right training and good comradeship which prompted their desire to "make good," and fulfill the expectations of their parents. I do not understand how anyone can be really happy and contented today without an education.

Some people believe in giving their children excellent educations and omitting the home training; while others give them helpful Christian training and say an education is not important. It takes an equal amount of both good home training and education to produce the right kind of citizens for today.

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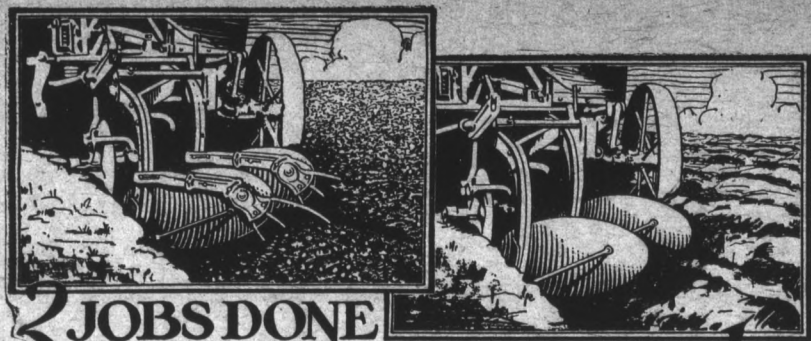
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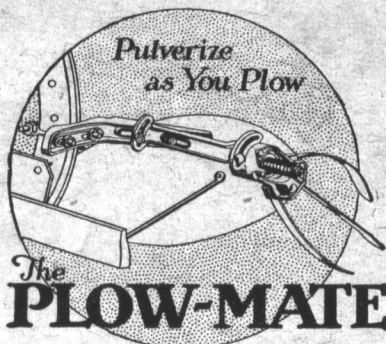
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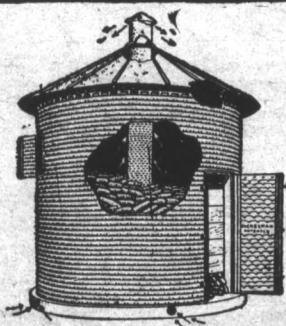
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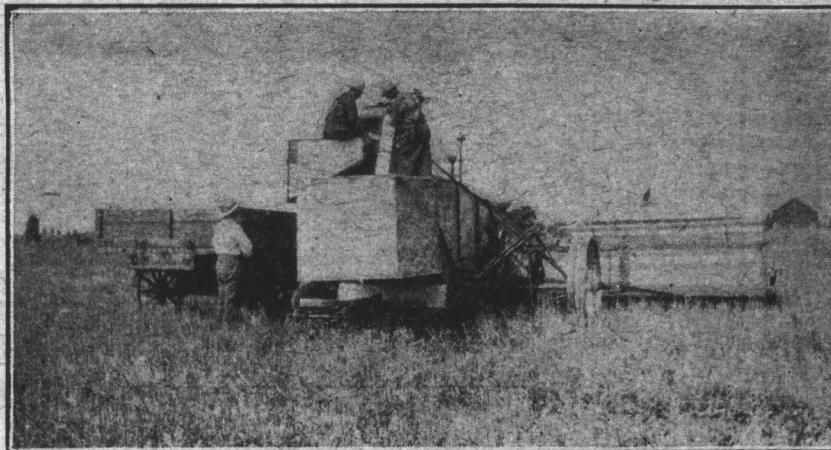
Combine in Michigan

(Continued from page 187).

form wagon bed, with a floor of matched lumber is equipped with nineteen inch sides and ends to form the tank. These are also made of matched lumber and are fastened to the bed by means of hasps which fit over staples in the cross sills of the bed and are held in place by wooden pins. This makes a tight tank for hauling grain, which holds one hundred bushels, level full. When hauling hay the sides are removed and the platform is used as a hay rack. Since he built these

then haul the grain to the barn. Mr. Shear thinks this is probably the smallest threshing crew ever operated in Michigan. He also says the combine will handle down grain better than a binder.

A member of our staff also called upon Norman Pattie, of Monroe county, who has a McCormick-Deering outfit on his 180-acre farm. This combine has harvested about 150 acres, about sixty acres of which was custom work for which Mr. Pattie is charging less



Mr. Smedley's Wagon is Driven Alongside the Combine, when the Accumulated Grain is Quickly Transferred from the Tank to Box on Wagon.

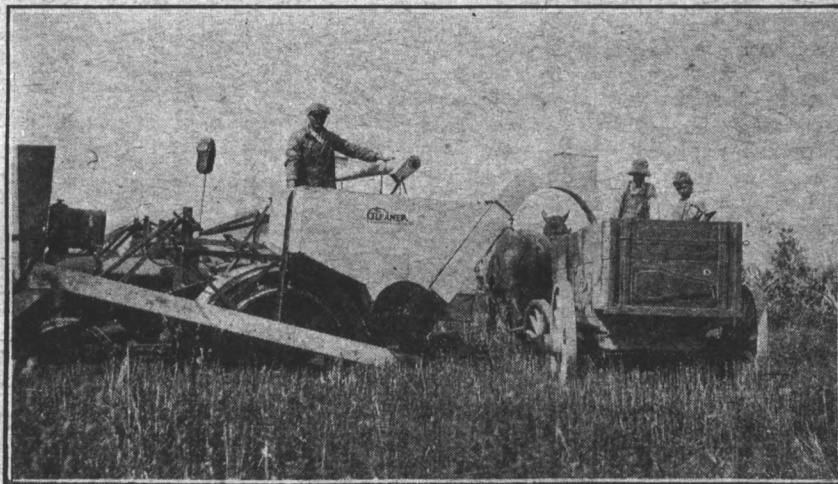
"tanks" several years ago, Mr. Smedley's job at threshing time has been hauling the grain for the neighborhood in these tanks. They served the same purpose in harvesting with the combine, by driving the wagon under the outlet of the tank and letting the grain run directly into the wagon.

Examination of the grain in Mr. Smedley's granary showed it to be keeping well. Moisture tests made at different times showed a range of thirteen per cent to seventeen per cent moisture content.

Mr. Smedley had no definite figures regarding the per bushel cost, but these will be available later, as careful records were kept of the operations of

than four dollars per acre. He states that the machine cuts from two and one-quarter to two and one-half acres per hour. There are very few days that one can put in full time, owing to the dampness in the morning, but he thought there was little difference between the combine and the binder in that respect.

This outfit has a power take-off from the tractor, which makes it possible for one man to operate the machine. The only help which Mr. Pattie needs is someone to haul the grain from the combine to the granary. He thinks it picks up down grain even better than does the binder, and a very good job of separation is done. Not needing all



Mr. Bidle Drives Under Elevator Spout, Throws in Clutch, and in a Jiffy the Contents of the Tank Are in the Wagon Box.

this and several other combines by representatives of Michigan State College. He estimated a cut of about two and one-half acres per operating hour.

Mr. Milton Shear, of Genesee county, is another well-satisfied combine owner. He has a Case combine of the power take-off type, on which he mounted a Fordson engine for auxiliary power. This operated satisfactorily as a temporary expedient, but he does not advise it as a permanent fixture. Mr. Shear cut about 125 acres of grain with his machine, and expects to harvest forty acres of sweet clover with it.

His operation furnished a striking example of how the combine helps out a labor shortage. With the aid of his twelve-year-old boy, he cut fifteen acres of barley in ten hours. They would cut until the tank was full, and

his straw, he is happy to have a method of harvesting which leaves this in the field. Straw needed for live stock is gathered from the windrow with a loader and hauled to the barn. Mr. Pattie was among the first in his community to start plowing his oat field. In our visit with this man he showed much enthusiasm for the combine, and indicated that others of the community were very much interested in the machine. We talked with neighbors who seemed to reflect the same enthusiasm. They said the machine was doing excellent work and would, no doubt, displace, to a large degree, at least, the binder and thrasher.

This same staff member also drove to the farm of Ralph Smith, another Monroe farmer. Mr. Smith has a Case nine-foot cut machine, provided with an auxiliary engine. He has harvested around 150 acres of wheat, barley, oats

and sweet clover. Some of this was custom work, for which he charged \$4.50 per acre. Neighbors were so anxious to have their grain harvested with the combine, that it was necessary to turn down about a hundred acres.

Mr. Smith also testified to the fact that the combine picked up down grain as well, or better, than does the binder. He was also pleased with work done in getting the grain from the straw, and in cleaning it. An interesting piece of work on this farm was the harvesting of a field in which sweet clover and wheat were growing together. This growth made a mass of material to run through the combine, but it was handled with comparatively little difficulty. The wheat and the sweet clover seed were run into the grain tank together, and then spread out thin on the granary floor to dry. This will later be taken to the elevator, separated and cleaned. The illustration served to demonstrate that it is possible to harvest sweet clover with the combine, a practice now quite common in some of the western states.

The experiences of this man served further to convince us that the combine is making good on Michigan farms. He stated that several farmers in that neighborhood were already talking of purchasing these machines in another year. One thing that convinced him and the neighbors of the utility of the combine in this humid territory, was that he could start the combine after a heavy rain quicker than grain could be threshed from the shock.

POTATO GROWERS' EXCHANGE HOLDS ANNUAL MEETING.

THE ninth annual meeting of the Michigan Potato Growers' Exchange was held at Cadillac on August 17-18. Quality was the keynote of the talks given by speakers. W. F. Hepps, of the Colorado Potato Growers' Exchange, told about cooperative marketing in that state and urged the delegates present not to judge the benefit of cooperative marketing solely by the comparison of prices secured through these pools with those secured by non-members, but to give due credit to the fact that general price levels have been raised by the operations of the association.

H. H. Henning, traffic manager and assistant sales manager of the association, discussed the many sales problems encountered by the association and outlined, in a remarkably clear manner, the policies and methods of the association in marketing the potato crop of its members. He emphasized the importance of quality as a factor in profitable sales operations, and urged the locals to "build up to quality and not down to price."

C. E. Atner discussed the field work carried on by the association in this connection. He exhibited charts showing the number of rejections by months, and the causes therefor. These charts showed a remarkable reduction in the number of rejections following the district meetings held in the territory covered by the locals to discuss this marketing problem.

That the delegates were in full accord with a better quality program was evidenced by the adoption of a resolution giving the officers of the exchange power to enforce the grades as adopted for shipment in Chief Petoskey sacks and the new "green label" sack adopted for U. S. No. 1's. Resolutions were also adopted urging the selection of the potato experiment farm provided for by the last legislature, this fall so it would be ready to start operations in the spring, and thanking the governor for approval of the appropriation for this purpose.

In his report as general manager of the exchange, F. B. Hibst gave the shipments for the past year as 3,031 cars, containing a total of 114,204,650 pounds, as compared with a total of 105,828,188 pounds in 1925. This vol-

ume represents about twenty-one per cent of the total crop of the state.

Messrs. E. A. Rasmussen and George Herman were elected as directors by unanimous vote. At a meeting held immediately after the general session, the directors selected the old officers for the ensuing year, as follows: President, Henry Curtiss, of Cadillac; vice-president, J. T. Bussey, of Provenom; secretary, O. E. Hawley, of Shelby; treasurer, F. J. Harger, of Stanwood.

SOME CHEAP BUSHELS OF WHEAT.

(Continued from page 190).

years. On fourteen Ohio experiment fields complete fertilizer has produced an increase of 10.6 bushels per acre as a twenty-five-year average.

At the Agronomy Farm of the Iowa Experiment Station, the use of limestone and acid phosphate has nearly doubled the yield of wheat on the five-year rotation plots, for the past several years. Most of this increase undoubtedly is due to the fertilizer.

Add to the foregoing the results obtained in Michigan, Virginia, Delaware, and other states where winter wheat is grown, and you will find more "reasons" why wheat is, or should be, well fertilized.

Again, why do farmers fertilize

wheat? It doesn't take a 2,500-mile trip through the wheat states to learn that "profit" is the answer. But in talking with those who are concerned with the actual growing of the bread crop, one will find a variety of experiences and observations as to why it pays to buy plant food for the crop.

It doesn't take long to give a summary of the answers to the second question: How? Nearly all use the fertilizer-wheat drill. After the first or second year of fertilizing wheat, the better results secured from the drill method, and the saving in labor, as compared to the broadcast-before-seeding method, influence most growers in favor of the drill.

In a few cases I found that a broadcast lime spreader had been used with fair success, the fertilizer being applied and disced-in just before wheat-sowing. One man said he started by scattering the fertilizer by hand on a four-acre field. The next year he used the grain drill. Another put the fertilizer in the hopper with wheat, but found that the wheat and fertilizer went through in varying proportions, with a resulting uneven stand of grain.

The Michigan State College poultry experts accredited more than 11,500,000 for the Michigan Poultry Improvement association. These chicks were the output of 111 hatcheries.

Wheel-Less Plow Wheel-Less Plow Wheel-Less Plow Wheel-Less Plow Wheel-Less Plow Wheel-Less Plow Wheel-Less Plow Wheel-Less Plow Wheel-Less Plow Wheel-Less Plow

Why can Ferguson Plow get right up to the fence line in tight places?

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Note the big features of Banner Posts. Frost does not affect them. Lightning hazard to your stock is greatly reduced. The fence line can be burned off every year. It's the practical post for clean fields with which to fight the corn borer. Buy Banner Posts from our dealer in your community. He has stock for quick delivery.

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All Banner Steel Fence Posts are made of railroad rail design with heavy backbone reinforcing. They are GUARANTEED to give the equal of or longer service than any other steel fence post of same weight which is used under similar conditions.

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Provide a wallow for your hogs. To each 25 gallons of water, add about one quart of Dr. Hess Dip. Your hogs will do the rest. Good night lice and disease germs!

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Wonder Ointment From Sheep's Wool Works Like Magic
The base of Corona is extracted from the Wool of the Sheep. An amazing ointment for Burns, Scalds, Cuts, Sore Teats and Caked Udder of Cows, or any flesh wound on man or beast, also for Eczema.
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ORION, MICHIGAN
W. E. SCRIPPS, Prop. SIDNEY SMITH, Sup.

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Guernsey Dairy Heifer Calves, practically pure bred \$25.00 each. We ship C. O. D. Write L. Terwilliger, Wauwatosa, Wis.

Registered Guernsey Bull Calves best of breeding, price \$25 each. E. A. BLACK, Howard City, Mich.

Leading Honor List Sire

Echo Sylvia King Model, 286177, heads the list again this year. He is the only sire to achieve this distinction two successive years. His daughters have made good. Ten of them have 30 to 34.7-lb. records and none of them over five years of age. His sons are making good also, in herds throughout the country. Echo Sylvia King Model died last January, but we still have a few of his sons to offer. Place your order now while there is still an opportunity to get a calf by this great sire.

"MICHIGAN STATE HERDS"



Bureau of Animal Industry
Department C,
Lansing, Michigan

Holstein Cows Can supply one or a car load. Some fresh. Others freshen soon. BEN REAVEY, Sales Manager, Tuscola Co. Holstein Association, Akron, Mich.

Holsteins Ormsby Sensation and Ona lines. Splendid foundation stock. Will sell all I have left. A. FLEMING, Lake, Michigan.

Choice Jersey Bulls ready for service, and bull calves, for sale from R. of M. dams accredited herd. SMITH & PARKER, Howell, Mich.

LIVE STOCK AND DAIRYING

The Place of the Pure-bred

By W. A. Freehoff

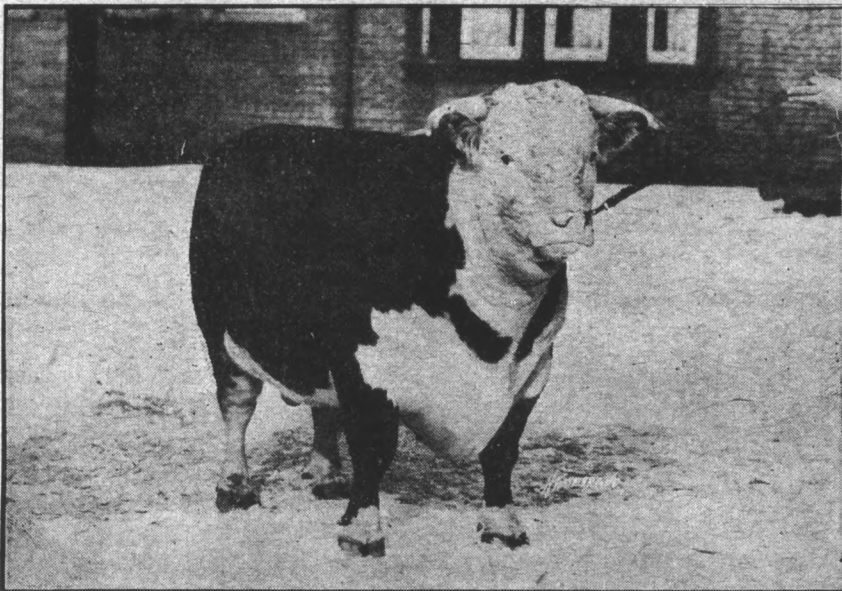
A RATHER heated argument between two dairymen regarding the present profits in, and the future of the pure-bred dairy cattle business gave me considerable food for thought. The one man insisted that the best program was to depend exclusively upon grade cows and a profitable milk production; the other admitted that milk production should be the first aim, but that pure-breds should be used.

The advocate of the grade pointed out that probably the majority of his neighbors who had "gone into" pure-breds made less money than those who never tried to do anything else than sell milk. Some of those who had failed with pure-breds were known as

"gloom," because to me the pure-bred business has always had a peculiar fascination. But I believe it to be a fact, none the less, that only a small percentage of farmers have the necessary capital, the breeding skill, and the business "flair" to make a financial success of the breeding business.

I still think, as I have said before, that much of the work of developing and improving herds of pure-breds must be, and will be, done by wealthy men of high ideals, who will take greater pride in the fine herds they can gather, than in the money their farms will make. It is not difficult to recall the names of such men, to whom every farmer owes a debt of gratitude.

That does not mean that the every-



For Centuries Man Has Known the Value of Good Breeding, Still it is Necessary to Preach the Gospel of Pure-bred Sires and Dams.

careful, hard-working men who left no stone unturned to assure success. The advocate of the pure-breds admitted all this, but insisted that hard work didn't necessarily take the place of management.

This discussion ended like most arguments, each man holding to his own opinion still. But it caused me to think back to 1914, when I traveled dairy sections in the interests of live stock, and when I had a real opportunity for three years to get first-hand knowledge of what the breeders of the leading dairy states in the Union were able to accomplish.

During this time I saw many impressive prices paid for registered live stock, single animals bringing thousands, in both real and paper money. I saw a coterie of breeders rise up almost overnight into the heights of stardom, to use a "movie" term; and then, when conditions became hard, they faded into oblivion. Just the other day I got out some old copies of farm papers and scanned the live stock advertising pages, comparing them with current issues. There has been a tremendous mortality of old names, and not so many new names have come up since the deluge.

I find that farmers and breeders of my acquaintance have been giving a lot of serious thought to the business aspects of raising pure-bred live stock for profit. Here and there one has gone so far as to sell out completely, but the most of them are holding on to their present herds. They are culling out severely, and not buying in very freely. The "old hands" are not expanding.

I don't want any reader to get the impression that I am the original "kid

day working farmer should not keep registered stock. Certainly there is now no argument over the proposition that the foundation of every stock farm should be pure-bred sires of all the classes of stock kept. It is only in this way that any improvement in the live stock of the country is possible.

In Great Britain, for instance, where stock farms remain in the same family for generations, the stockmen have been content to take a hundred years to accomplish what we are impatiently trying to do in five. That explains so many financial as well as breeding failures here. Upward progress, when dealing with live stock, is slow; the herds are like fruit unnaturally ripened: off flavor.

It is a fine and sensible ambition for every farmer to want to own nothing but pure-breds, and the ambition can be gratified. By starting with pure-bred sires, and then securing an occasional good pure-bred female, satisfactory progress is possible. The young man who is at the present time embarking upon the perilous enterprise of farming, may console himself with the idea that if he uses good judgment, and has at least a fair amount of "good breaks," he will enter into the serene and mellow years of retirement with a splendid live stock equipment, and some money in the bank. His sons, carrying on where he leaves off, have the priceless opportunity of fixing blood lines and building up families of stock.

The farmer breeder who never loses sight of the market, or utility values of his stock, irrespective of blood lines or pedigree, has overcome the greatest handicap to success.

BEST ROOT CROP FOR COWS.

Kindly advise me which is the best root crop for my dairy cows.—G. H. E.

There is a slight difference in the food value of the various root crops, but their great value is their succulency, which tends to keep the animal in a good healthy condition, and allow her to digest and assimilate more of the dry food stuffs. Animals can not do their best for long periods without a succulent food in the ration.

More tonnage can be secured from mangels, with less labor, than from any other root crop. They are considered the most economical root crop to grow for live stock.

TESTERS RETURN TO WORK IN BAY COUNTY.

BAY county once more is enrolled with the counties which have herd improvement associations. Testers will begin work in the two associations organized by W. E. McCarthy on July 22. One of the organizations is made up of farmers in the vicinity of Pinconning and the other of farmers in the Bay City area. The testers for the associations will be Kenneth Hayes, of Owosso, and Ford Hall, of Fairgrove.

SHEEP DOGS ACTIVE.

WE do not know whether there is any correlation between the dry weather and the depredations of sheep dogs; however, the dogs seem to be getting in their work on many flocks these days. The farmers in Missaukee county are desperate and have decided to take legal action against any person maintaining a sheep-killing dog.

FAVORABLE CATTLE OUTLOOK REPORTED.

RECEIPTS of grassers and short-fed cattle have increased recently and prices of these classes are pursuing a gradual downward course. Plain heavy steers, particularly, have been losing ground. Well-finished steers remain scarce, with yearlings now in the premier position.

While arrivals are larger than a month ago, they remain below normal for this season of the year. Fewer cattle and calves were slaughtered at public stock yards in July than in the corresponding month since 1919, and seventeen per cent less than in 1926. August also is running far behind last year. In this connection, the cattle outlook report of the United States Department of Agriculture is of great interest.

Prospects for the cattle industry during the next year or eighteen months appear decidedly favorable, but do not justify expansion in breeding herds, the report states. Market receipts of cattle and calves during the fall of 1927 are expected to be the smallest for any corresponding period in the past five years. The number of cattle on farms and ranges has decreased about 10,000,000 head during that period, most of the reduction being in cattle kept primarily for beef production. Feed and pasture conditions in most of the range states are unusually good. This abundance of feed, together with a relative scarcity of cattle in these areas, and the general optimism which now pervades the industry, is expected to result in holding back considerable numbers of breeding cattle and young stock, all of which will help to curtail market receipts. Consumer demand for beef is expected to continue good for several months, with a slight tendency toward decrease probable.

Although the price of corn this fall will probably be higher than in the fall of 1926, the August 1 crop report indicated a corn crop six per cent larger than in 1926 in the corn belt states west of the Mississippi river, and it seems probable that the demand



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GOOD FOR HUMANS, TOO

CATTLE

SERVICEABLE AGE

REGISTERED HOLSTEIN
Bull calves at prices the owner of a small herd can afford to pay. The sire of many of these calves is a Son of the highest record (30 lb.) two-year-old daughter of Creator. His sire is King Segis Alcartra Prilly, an undefeated Show bull with 70 A. R. daughters. Others sired by a 5 times 1200 lb. Champion Bull, the famous K. P. O. P. breeding.

Bred cows and heifers served by these sires are available for foundation stock.

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Telephone: 344

Reference: Northville State Savings Bank

BUTTER BRED JERSEY BULLS FOR SALE
CRYSTAL SPRING STOCK FARM,
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Shorthorns Best of quality and breeding. Bulls cows and heifers for sale. **BIDWELL STOCK FARM**, Box 5, Tecumseh, Mich.

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Calves, Yearling & Two; Hereford Steers & Heifers. Beef Type, dark reds, good grass flesh, most all bunches dehorned, each bunch even in size and show good breeding. Choice Herefords are usually market toppers when finished. Few bunches T. E. tested. Will sell your choice from any bunch. State number and weight you prefer 450 to 1000 lbs.

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Duroc Spring Pigs

Either sex, pairs or trios unrelated. Bred sows and service boars. All are registered, cholera immune and type.

LAKEFIELD FARMS, Clarkston, Mich.

DUROC PIGS, sows or boars, registered and transferred, \$12 each, cash with order. **WISCONSIN LAND & LUMBER COMPANY**, Hemansville, Mich.

REGISTERED Duroc Jersey Pigs for sale. July farrow. Either sex, \$10 each. F. O. B. Millersburg. **DEWEY HARTLEY**, Millersburg, Mich.

O. I. C. HOGS on time Write for Originators and most extensive breeders.

THE L. B. SILVER CO., Box 196, Salem, Ohio

For Sale—Reg. O. I. C. April & May Pigs best of breeding. Shipped on approval. **FRED W. KENNEDY & SONS**, R. 1, Chelsea, Mich.

A FEW choice Reg. O. I. C. boars of April farrow, shipped on approval. **GLENWOOD STOCK FARM**, Zeeland, Mich.

Reg. O. I. C. Pigs of May farrow for sale. **H. W. MANN**, Danville, Mich.

O. I. C's.—10 Bred Gilts for September farrow. 5 March sow pigs. **CLOVERLEAF STOCK FARM**, Monroe, Mich.

O. I. C's. good last fall gilts to farrow in Aug. and Sept. Also spring pigs. 1/2 mile west of depot. **Otto Schulze & Sons**, Nashville, Mich.

Choice Chester White Sows and litters, and a few spring gilts of good type and breeding. Prices right. Write **W. A. SCHRAMKE**, Swan Creek, Mich.

Chester White March Pigs of best type, quality and breeding. Express paid. **F. W. Alexander**, Vassar, Mich.

Large Type P. C. Bred gilts all sold. Thank you. Watch and wait for date of my public hog sale. **W. E. LIVINGSTONE**, Parma, Mich.

Some Extra Good big type Poland China bred gilts and spring boars, priced right. **WARD ESHENRODER**, Ida, Mich.

Large Type Poland Chinas spring boars and gilts, also bred sows. **JAMES G. TAYLOR**, Belding, Mich.

A Few good Hampshire spring boars at a bargain. Place your order for bred gilts. **JOHN W. SNYDER**, St. Johns, Mich., R. 4.

Registered Tamworths Bred sows and gilts. Best of Breeding. **DONALDSON FARMS**, Orion, Mich.

for feeder cattle from that area will be as great as in the fall of 1926. Heavy feeder steers are expected to be in better demand than the light weights.

Prospects favor a continuation of the general upward trend in cattle prices which has been in evidence for the past three years. Although a seasonal decline probably will occur late in the fall, the prospects are that it will be less than usual. With prospective supplies of range cattle this fall smaller than in recent years, and present prices of most classes and grades of cattle higher than at any time since early in 1921, prices of grass cattle this fall are expected to be higher than last year.

The department points out that the cattle industry now appears to be at about the same point in the production cycle as it was in 1897 and 1898, and 1911 and 1912. During these years beef production was beginning to be profitable after several years of heavy marketing and low prices. As prices advanced, breeding stock was held back and ranges were restocked, with the result that the number of cattle in the twelve western states, including Texas, increased from 14,500,000 in 1912, to 20,700,000 in 1917. This tremendous increase in numbers was followed by liquidation, a prolonged period of relatively low prices, and generally unfavorable conditions in the industry. It seems probable that the maintenance of numbers of cattle at a point only sufficient to provide market supplies of beef approximately equal to those of this year, making allowances for population increases, would tend to eliminate many of the violent swings which have characterized cattle prices in the past, and put the industry on a more stable and profitable basis.

PORTLAND'S TUBERCULOSIS TEST.

(Continued from page 201).
days. Only the five that had the full treatment were included in the test.

Because of the official character of the test, together with the fact that many human beings were claiming to have been cured of tuberculosis by Dr. Kirkpatrick, the experiment aroused national interest. And on the eighth of August, when the first three cows were killed, the "killing floor" of Swift & Company was packed with serious-minded veterinarians, bacteriologists, health officers from far and near, representatives of various federal bureaus, and scientists interested in seeing whether or not these cows had died in vain.

The post-mortem was conducted by Dr. Jacob Traum, of the Department of Veterinary Science, University of California. He was ably assisted by Dr. A. J. Dinse, United States Inspector at the Swift plant. It sounds simple to say that a post-mortem was held, but that does not tell what took place. Traum and Dinse explored every organ, within and without, from the beginning to the end of the alimentary canal. As microbe hunters, they were human hounds. And if a single suspicious-looking fleshspot escaped their scrutiny, it was pointed out by some of the scientists that crowded round the gory tables.

These gentlemen were further assisted by Professor T. D. Beckwith, bacteriologist of the University of California, who will carry the hunt for the deadly microbes into the laboratories at Berkeley.

Thus, one after another, all five cows were killed and combed. And what was the result? No need asking Traum, Dinse or Beckwith. With pleased faces and tight lips, they refused to answer questions in advance of their formal report. And that report cannot be rendered until the microscopic work has been concluded, and guinea pigs have been inoculated.

Since it takes guinea pigs nearly three months to react to the tubercle bacillus, a definite report cannot be looked for before next November.

But it did not take the United States inspector more than a minute to decide that the carcasses of all five cows would make first-class meat. He passed them all as fit for people to eat. And these same cows were, 130 days ago, in a dying condition, ready to be tanked. The difference between them then and now was apparently caused by a body-building fluid which Dr. Kirkpatrick gave them orally, in two ounce doses diluted in water. Once daily for five days the doses were given, then for five days the cows were given nothing but hay and grain. Again, from the tenth to the fifteenth day, the same dose was given, after which the "patients" were allowed a ten days' rest. Over and over, the same treatment was repeated. And what it did for one cow was this: At the beginning of the treatment, she weighed 1,120, and at the end of the treatment she weighed 1,460 pounds.

To the observers it appeared significant that those in charge of the post-mortem took from all five carcasses only nineteen small samples of various kinds of tissue for laboratory examination. If these bits of tissue were rolled together, they could all be carried in a person's vest pocket. Certainly a small haul for such capable, hard-working microbe hunters.

"I killed those other ten cows," said Nort Johnson, veteran killing floor foreman of the packing plant, "and I saw these cows at the same time. You wouldn't know these were the same animals. These cows might have had tuberculosis once, but they're fine, fat, healthy animals now—better than you will get in the average run. If this treatment they talk about did it, there is something in it."

Dr. A. M. Blackwell, United States inspector, declared: "These were typical tuberculous cows a few months ago. You could hang your hat on their bones. Look at 'em now. It is one of the most remarkable things I have ever encountered in my experience."

NEWS AND VIEWS.

(Continued from page 196).
we suggest that you watch them closely at this season of the year for stomach worms and maggots. We have tried about all the remedies ever suggested for stomach worms. The copper sulphate treatment recommended by the college is good, and fairly safe, but we have found a patented pill which seems to us to be the best thing for this purpose yet devised. It has a vitreous coating which does not dissolve until the pill reaches the portion of the digestive tract where the worms are making mischief. This means that the chemical and medicinal ingredients come in direct, full strength contact with the worms. There is no use running the risk of strangulation, or of burning out a sheep's first stomach trying to poison a worm located in the fourth stomach.

Sheep that are dirty behind, should be carefully tagged to prevent maggots, and if maggots actually get started, they should, of course, be expelled with stock dip or other disinfectant.

Wherever possible it is a good thing to change sheep from one pasture to another frequently. Too close grazing on the same field is a breeder of disease and disaster.

Galvanized Roofing & Siding



PROTECT—your barns—houses—sheds—silos—corncribs—grain buildings—tanks, etc., with old reliable "Globe" Brand Galvanized Roofing and Siding.

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Send me freight prepaid prices and sample.

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How much material will you require, or give us the size of your building for us to estimate.

ECONOMICAL SHEEP FORMULA

Used successfully for years by leading feeders and flock owners. Powder of Tix Ton can now be bought by the pound at drug stores, ready to mix with your own salt. Cost per hundred pounds, when mixed, including price of salt, \$1.75. Given for prevention or control of many sheep troubles, colds, indigestion, worms and ticks. Contains pine tar minerals, sulphur, charcoal, vermifuges, also tonics, laxatives and internal antiseptics. Guaranteed to give satisfactory results by drug and feeders' supply stores or direct from

R. C. PARSONS CHEMICAL WORKS, Grand Ledge, Mich.

SHEEP

IT PAYS TO BUY PURE BRED SHEEP OF PARSONS The Shepherds of the East. I sell and ship everywhere and pay express charges. Write for club offer and price list. Oxford, Shropshire and Polled-Delaine. **PARSONS**, Grand Ledge, Mich. R2

SHROPSHIRE

Offering an outstanding group of yearling and 2-year-old rams. Several very good stud rams for pure-bred flocks. See the show flock at State Fair. **D. L. CHAPMAN & SON**, So. Rockwood, Mich.

900 BREEDING EWES

400 good sized Delaines, 500 choice large black faces. All good ages, yearlings to solid mouths. **ALMOND B. CHAPMAN & SONS**, So. Rockwood, Mich., Telegraph Rockwood.

If You Want reliable information in regard to Karakul sheep, write **F. PERRY**, Davison, Mich., Sec'y National Karakul Fur Sheep Breeders' Registry Association.

Delaine Breeding EWES with coarse wool, lambs by side. Also good Delaine breeding ewes, young and in good condition. **BOYD & BUTLER**, Mt. Victory, Ohio.

For Shropshire Rams including the first prize lamb at Michigan State Fair and five other fairs, write or call **ARMSTRONG BROS.**, Fowlerville, Mich.

Delaine RAMS Polled and Horned, 40 yearlings and 2-year-olds. Big, husky fellows from good shearing stock. Write for prices or call and see them. **FRED J. HOUSEMAN**, R. 4, Albion, Mich.

FOR SALE Shropshire rams of excellent quality from imported foundation of Butter Bithy and Minton. Vreeland Stock Farm, Ypsilanti, Mich., R. 5. Phone 7124 F 42.

FOR SALE Oxford rams and ewes. Satisfaction guaranteed. **GEO. T. ABOTT**, Palms, Mich. Telephone Deckerville 78-3.

REGISTERED SHROPSHIRE yearling rams. Also yearling ewes. Have given satisfaction in 30 states since 1890. **C. LEMEN & SONS**, Dexter, Mich.

FOR SALE Sheep, Cotswolds, Lincolns, Karakuls and Tunis, rams and ewes. Recorded. **L. R. KUNEY**, Adrian, Mich.

ADDITIONAL STOCK ADS. ON PAGE 215



THE LATEST MARKET REPORT



GRAIN QUOTATIONS.

Tuesday, August 30.

Wheat.

Detroit.—No. 2 red at \$1.35; No. 2 white \$1.34; No. 2 mixed \$1.33.
Chicago.—September at \$1.34; December \$1.38½; March \$1.41½.
Toledo.—Wheat, No. 2 red at \$1.36 @1.37.

Corn.

Detroit.—No. 2 yellow \$1.16; No. 3 yellow \$1.14; No. 4 yellow \$1.12.
Chicago.—September at \$1.06½; December \$1.11½; March \$1.14½.

Oats.

Detroit.—No. 2 Michigan, old 53c; new 50c; No. 3, old 51½c; new 48c.
Chicago.—September 44½c; December 48½c; March 51½c.

Rye.

Detroit.—No. 2, \$1.02.
Chicago.—September 95½c; December 97½c; March \$1.01½.
Toledo.—\$1.02.

Beans.

Detroit.—Immediate and prompt shipment \$5.95 f. o. b. shipping points.
New York.—Pea domestic at \$6 @ 6.75; red kidneys \$6.75 @ 7.50 to the wholesalers.

Chicago.—Spot navy beans, Michigan choice hand-picked, in sacks, at \$6.40; dark red kidneys \$6.50 @ 7.00.

Barley.

Detroit.—Malting 86c; feeding 75c.

Seeds.

Detroit.—Cash imported clover seed \$14.50; October \$17.00; December imported \$14.50; December domestic at \$17.35; August alsike \$15.65; January alsike \$15.00; December alsike \$15.75; timothy \$1.70; December \$1.80; March \$1.95.

Hay.

Detroit.—No. 1 timothy \$15 @ 16; standard \$14 @ 15.50; No. 1 light clover, mixed \$14.50 @ 15; No. 2 timothy \$13 @ 14; No. 1 clover \$14.50 @ 15.50; oat straw \$12 @ 13; rye straw \$13 @ 14.

Feeds.

Detroit.—Winter wheat bran at \$38; spring wheat bran at \$37; standard middlings at \$44; fancy middlings at \$48; cracked corn at \$48; coarse corn meal \$47; chops \$41 per ton in carlots.

WHEAT.

Wheat prices declined practically to the lowest level of the season early in the past week, but are strengthening again as a result of improved export and milling demand. Forecasts of a larger crop in Canada than generally expected were responsible for the initial weakness. While the Canadian official forecast as of August 1 indicated a prospective yield of 357,000,000 bushels, and the crop was injured by rust and frost since that date, present unofficial forecasts indicate a yield of about 400,000,000 bushels. If the Canadian crop proves to be as large as present forecasts, the world wheat situation will be given a slightly bearish appearance unless new damage is done to crops in some part of the world.

RYE.

Rye prices displayed greater strength than wheat during the past week. A sharp advance in German markets, due to the delayed harvest caused by wet weather, coupled with fairly large export sales, offset the increased receipts at domestic markets and the gain in the visible supply.

CORN.

Corn prices have been marking time four or five cents below the high point reached early in August. Apparently, there is a tendency to wait to see how much damage will be done by frost. Weather conditions remain unfavorable for rapid maturity in most sections, and even with the best of weather from this time on, there is a large area in the heart of the corn belt which will have only about half a crop. Primary receipts have increased in the last few days, indicating that the country is selling rather freely at these prices in spite of the poor outlook for the new crop, and the fact that farm reserves are rather small.

OATS.

Reports of low yields of oats are numerous, so that the official estimate on the size of the crop is likely to be cut sharply. Since stocks of old oats on farms also are small, the oats situation points to farm prices during the crop year. Country elevators apparently are expecting higher prices and are placing oats in storage so that arrivals at midwestern markets are moderate, although this is the season when

the movement should be reaching its peak.

HAY.

Larger offerings from the new hay crop, and a continued small demand, were responsible for a decline in hay prices last week. As yet, little hay has been stored, with dealers buying only for actual current needs. Alfalfa hay markets were generally steady at unchanged prices. The prospective smaller supply of feed grains, and the prevailing higher prices for mixed feeds probably will lead to a heavier consumption of hay this fall so that prices are not likely to go much below present levels.

BUTTER.

Butter prices advanced sharply last week in quick response to a decline in receipts. Top grades, particularly, were limited and the strength was more pronounced on the higher scores. Production is showing the usual seasonal declines. Pastures are in need of rain. Storage "surplus" is gradually increasing. Consumptive demand has picked up in the past fortnight. Prices are now several cents higher than at this time last year, and if production continues to exceed 1926, it may be difficult to maintain the present quotations.

Prices on 92-score creamery were: Chicago 44c; New York 43½c; Boston 43½c; Philadelphia 44½c; Detroit 38 @ 39½c.

EGGS.

The market for fresh eggs moved into new high ground last week, largely because of less plentiful supplies. Receipts contain an increasing proportion of eggs which have been held for a time in country coolers, so that eggs grading as strictly fancy were scarce. Dealers are drawing upon their own stocks of short-held eggs, and the surplus in cold storage holdings as compared with a year ago is being reduced. Reports on probable fall egg production are highly varied, so that it is difficult to estimate how large receipts of fresh eggs during the next month or two will be. In any event, prices are expected to work gradually higher.

Chicago.—Eggs, fresh firsts 27½ @ 28c; extras 35 @ 36c; ordinary firsts 23 @ 25c; dirties 21½ @ 22½c; checks 20c. Live poultry, hens 23½c; springers

25c; roosters 17c; ducks 21c; geese 15c; turkeys 25c.

Detroit.—Eggs, fresh candled and graded 26 @ 28½c. Live poultry, heavy springers 27 @ 30c; broilers 20 @ 28c; heavy hens 25c; light hens 18c; roosters 16c; geese 18c; ducks 18 @ 20c.

WOOL.

Wool markets are quiet, but prices hold very steady. The present lull in buying is not surprising, in view of the large quantities taken by mills a few weeks ago, and the fact that this season of the year usually is a dull period. Dealers probably could move larger quantities of wool, but not without concessions in price, which they are unwilling to make in view of the strong underlying situation in the wool market for the balance of the year. Foreign markets continue strong, with prices too high to permit free imports into this country, and stocks of foreign wool at the seaboard are steadily dwindling. Pressure from new clip southern hemisphere wools will not be felt for some time yet. In view of the decline in the Australian crop because of drouth and the active demand for wool in European countries, it is evident that there is no surplus in world supplies of wool.

POTATOES.

The potato market has remained about steady. Rains have delayed digging in Kansas and Nebraska, but supplies in midwestern distributing markets are of liberal proportions. Carlot shipments generally are larger than at the corresponding period a year ago. Prices, on the whole, average lower than in 1926. Demand is rather slow. Kansas and Missouri Irish Cobblers, U. S. No. 1, are quoted at \$1.65 @ 1.75 per 100 pounds sacked, in the Chicago carlot market, with Minnesota Early Ohio, U. S. No. 1 bringing \$1.60 @ 1.65.

BEANS.

Dry weather is having adverse influence on the bean crop, although some sections report fairly satisfactory development. Trade is generally watching the situation keenly.

DETROIT CITY MARKET.

Apples \$1.50 @ 4.50 bu; bagas \$1 @ 1.50 bu; lima beans 75c qt; wax beans \$2 @ 3 bu; green beans \$1.75 @ 2.50 bu;

beets 35 @ 50c dozen bunches; cabbage 60 @ 90c bu; canteloupes \$2.50 @ 3 bu; carrots 35 @ 50c dozen bunches; cauliflower \$1.50 @ 4 bu; celery 25 @ 50c per dozen bunches; Kalamazoo celery 20 @ 50c dozen bunches; cucumbers \$2 @ 3 bu; pickles \$3 @ 5 bu; eggs, wholesale 32 @ 35c; retail 40 @ 45c; white eggs, wholesale 32 @ 34c; green corn 75c @ 1.25 per 5 dozen; lettuce 60c @ 1 bu; head lettuce 75c @ 1.25 bu; curly parsley 50 @ 75c dozen bunches; root parsley 40 @ 50c dozen bunches; peppers, hot \$2 @ 2.50 bu; sweet \$1.75 @ 2.25 bu; peaches \$1 @ 3.50 bu; pears \$1.50 @ 3.50 bu; peas \$2.75 @ 3.50 bu; plums \$2 @ 4 bu; onions 40 @ 50c dozen bunches; dry onions \$1.25 @ 1.50 bu; pickling onions \$3 @ 7 bu; potatoes \$1.25 @ 1.50 bu; poultry, hens, wholesale 25c; retail 28 @ 30c; broilers, Rocks, 31 @ 33c; Leghorns 23 @ 24c; retail 32 @ 35c lb; Rocks 35 @ 38c; ducks 24 @ 25c; radishes, long, white 50 @ 75c dozen bunches; round 75c @ 1.25 bu; rhubarb 40 @ 60c dozen bunches; spinach \$1.25 @ 1.75 bu; summer squash 75c @ 1 bu; turnips 50 @ 75c dozen bunches, 75c @ 1.25 bu; huckleberries \$6.50 @ 7.50 per 24 qts; live pigs \$8 each; kohlrabi 50c dozen bunches; veal 18 @ 20c; mustard 50 @ 60c bu; Swiss chard 50 @ 75c bu; leeks 50 @ 90c dozen; turnip greens 50 @ 75c bu; butter 60c; tomatoes \$3 @ 4 bu, 75c @ 1.25 per 16-lb. basket.

GRAND RAPIDS.

Potatoes \$1.10 @ 1.35 bu; onions \$1 @ 1.10 bu; apples, Duchess \$1 @ 2 bu; Wealthy \$1.75 @ 2 bu; Whitney Crab \$1.50 bu; peaches, St. Johns \$2.50 @ 3 bu; South Havens \$3 @ 3.50; Rochesters \$2.50 @ 3.50 bu; Carmens \$3 @ 3.50; Early Elbertas \$2.50 @ 4 bu; pears, Bartletts \$2 @ 2.50 bu; Clapp's Favorites \$2 @ 3 bu; various other varieties \$1.50 @ 2; plums, Burbanks \$1 @ 2 bu; Bradshaws \$2 @ 3 bu; Gold Drops \$2 bu; strawberries \$4.50 @ 5 per 16-qt. case; blackberries \$3.50 case; tomatoes \$2 @ 2.50 a bushel; canteloupes \$2 @ 3 bu; crates \$1.50 @ 2.75; cauliflower \$1.50 @ 3 dozen; cabbage \$1.25 @ 1.75 bu; spinach \$1.25 bu; wax beans \$1.50 @ 3 bu; cucumbers \$2 bu; pickles \$2 @ 3.50 bu; wheat \$1.16 bu; rye 80c bu; beans \$5.40 cwt; pork 11 @ 12c; beef 6 @ 14c; veal 18 @ 20c; chickens 14 @ 23c; hens at 15 @ 22c; ducks 18c; eggs 30 @ 32c; butter-fat 45c.

LAMB PRICES AT SEASON'S LOWEST POINT.

RECEIPTS of lambs are about forty per cent larger than a month ago, and prices have dropped back to the low point of the season. The Chicago top is \$13.50, or more than \$1.00 lower than at the high point of the recent bulge. The best natives are bringing around \$13.25. Arrivals continue to run smaller than usual at this season of the year, but the supply is due to increase further in the next month. Prices probably will rally from time to time, but the market is not ready for a sustained advance. At the same time, it is unlikely that declines will carry under the low points reached recently.

MICHIGAN CROP ESTIMATES.

The following crop estimates by government crop reporters for August are compared with the production of 1926.

	1926	Aug., 1927	Estimate
Corn, bu.	54,162,000	39,875,000	
Wheat, wnt, bu.	17,916,000	20,240,000	
Wheat, sp'g, bu.	82,000	153,000	
Oats, bu.	51,810,000	53,003,000	
Barley, bu.	3,790,000	5,055,000	
Rye, bu.	2,686,000	2,866,000	
Buckwheat, bu.	765,000	931,000	
Potatoes bu.	29,880,000	31,262,000	
Tame hay tons.	4,097,000	4,314,000	
Beans, bu.	6,624,000	6,792,000	
Sugar beets, tons	793,000	923,000	
Apples, bu.	9,045,000	5,129,000	
Peaches, bu.	1,564,000	561,000	
Pears bu.	889,000	554,000	
Grapes, tons	60,900,000	57,044,000	

SAYS ARNSTZ DEALS FAIRLY.

We have taken occasion to investigate some of the transactions of W. L. Arnstz, of Kent county, a dealer in breeding horses, against whom charges were recently noted, and find no justification for the attempt to discredit him in the eyes of the public. So far as we can learn, Mr. Arnstz deals fairly with his customers, and his methods and practices are thoroughly business-like.

Live Stock Market Service

Tuesday, August 30.

DETROIT.

Cattle.

Receipts 177. Market steady. Good to choice yearlings dry-fed \$10.00 @ 12.50
Best heavy steers, dry-fed 9.75 @ 12.00
Handy weight butchers... 8.00 @ 9.75
Mixed steers and heifers 8.00 @ 9.00
Handy light butchers 7.00 @ 8.00
Light butchers 6.00 @ 7.00
Best cows 7.00 @ 7.50
Butcher cows 5.50 @ 6.50
Cutters 4.50 @ 5.00
Canners 3.50 @ 4.50
Choice light bulls 6.00 @ 7.75
Bologna bulls 6.00 @ 6.75
Stock bulls 5.50 @ 6.25
Feeders 6.25 @ 8.00
Stockers 5.50 @ 7.75
Milkers and springers... \$65.00 @ 100.00

Calves.

Receipts 286. Market steady. Best \$16.50 @ 17.00
Others 8.00 @ 16.00

Sheep and Lambs.

Receipts 1,610. Lambs 25c higher; sheep steady.
Best lambs \$13.50 @ 13.75
Fair lambs 10.75 @ 12.00
Light to common lambs.. 6.00 @ 9.75
Fair to good sheep 5.50 @ 7.00
Culls and common 2.00 @ 3.00
Yearlings 8.00 @ 10.50

Hogs.

Receipts 1,130. Roughs 25c higher; others steady.
Mixed \$11.10
Roughs 7.75
Light yorkers 10.35
Pigs and lights 10.00
Good yorkers 11.35
Stags 6.25 @ 6.50
Extreme heavies 8.50 @ 9.50

CHICAGO.

Hogs.

Receipts 26,000. Market is fairly active, fully steady; fat and desirable

butchers 220-280 lbs. strong 25c higher; tops \$10.75 paid for 180-210-lb. weight; bulk 160-200-lb. average \$10.40 @ 10.75; 220-250 lbs. \$10.60; 260-300 lbs. \$9.50 @ 10.10; most packing sows \$8.15 @ 8.50; pigs in wide range from \$7 @ 9.

Cattle.

Receipts 13,000. Market-fed steers steady, 25c lower; most grades of natives show decline; trade uneven and slow; she stock weak; tops lower; bulls slow; vealers 25c higher; best fed steers \$14.25; grassers, 2,500 head grade in run, little done; vealers at \$14.40 @ 14.45; bulls \$6.50.

Sheep and Lambs.

Receipts 1,000. Fat lambs active, mostly 25c higher than Monday; bulk good natives \$13 @ 13.50, little sold at 13.25; few heavy lambs at \$11.50 @ 12; culls \$9 @ 9.50; early sales good; range lambs \$13.50, asking around \$13.75 for westerners; sheep weak; most good and choice weight fat ewes \$5.50 @ 6.50; heavy ewes \$4.50 @ 5; feeding lambs strong to around 15c higher; medium weight lambs \$13.25 @ 13.65; heavies down to \$12.75 and below; 82-lb. lambs \$14.

BUFFALO.

Hogs.

Receipts 300. Weights above 230 lbs. scarce; market steady to strong; pigs slow; bulk 160-230 lbs. at \$11.50; few 190 lbs. \$11.60; packing sows at \$7.75 @ 8.25; pigs \$10 @ 10.25.

Cattle.

Receipts 200. Market steady; tops \$17; culls and common at \$11.50 @ 13; few medium kind \$13.50 @ 15.

Sheep and Lambs.

Receipts 100. Market steady; good choice fat lambs \$14.25; culls and common \$9.50 @ 11.

COUNTY CROP REPORTS.

Benzie County.—A drought of six weeks' duration was broken on the twenty-second. Pastures dried up; farmers feeding hay; corn will probably not mature, as ears are just setting; spuds badly injured by the dry weather; apples are poor; stock looks well; beans very backward, and it is very doubtful if they will get ripe. This has been a hard year for farmers and, of course, they are badly discouraged and some of them are moving away. Eggs 36c; butter 50c; potatoes \$1.25@1.50 bushel; apples \$1@1.50 bushel. Not much wheat being put in; no beets grown here.—W. M. Macomb County.

Macomb County.—Peach crop is a failure here on over 600 acres in Bruce township; pasture is O. K. Potatoes need rain; poultry is overdone; base plan of milk-selling discarded, new plan seems better; every farmer's barn is full of hay.—H. G. S.

Ingham County.—The wheat and oat crop has been above average; beans and corn very poor, about fifty per cent of normal; potatoes are very poor, and so is the apple crop; lambs have increased; good beef cattle very scarce; too dry to plow for wheat and rye, and corn is drying up and will soon be ready for the silo.—R. E. W. Marquette County.

Marquette County.—The outlook for small grain is good; corn is below normal; pastures are good, but are getting dry; we have had no rain for three weeks; potatoes and small fruit are good; live stock are looking fine; prices on dairy and poultry products are about the same as last year. Cream 43c; eggs 32c. Farmers are selling eggs, cream, butter, lambs and veal.—J. C. F.

Gladwin County.—Grain is all cut; getting ready for fall seeding; corn is backward; pastures are drying up; fruit, beans, and potatoes are one-half crop; live stock is in fine condition; prices are good for fat stock; milkers scarce. Wheat \$1.10; beans \$4.75; fat hens 19c; young 23c; eggs 24c; butter-fat 43c. Oats and barley are one-half crop.—L. A. C.

Berrien County.—With warm weather, corn will make a good half crop; some corn is excellent and some is very poor. Potatoes are about in the same condition; there are some very poor stands; sugar beets are about the same; the fruit crop is nearly a failure and the grapes about a half crop; alfalfa and sweet clover about the same as usual; the rain last week helped out; stock is in good condition; farmers are selling wheat.—A. U. Bay County.

Bay County.—Farmers busy threshing; wheat turning out good; oats are a little light, corn is poor; beans and potatoes are suffering for rain; sugar beets also; pastures are dried up and some farmers are feeding; farmers are selling wheat and rye. Wheat \$1.20; corn 90c; oats 45c; rye 83c; barley \$1.50 per cwt; beans \$5.45; butter 41c; eggs 25c.—J. D.

Cass County.—Farm work is a little behind on account of dry plowing; pastures are short; stock is in good condition; it will take four or five weeks of warm weather to mature corn; grubs have been working in some fields of corn. Prices are about the same as a year ago, excepting that corn is higher.—F. E. G.

Branch County.—Threshing will be about completed in another week; it is too dry to plow for wheat; acreage will be short unless it rains soon; corn will be a small crop; pastures are short and fruit scarce; late potatoes will be a light crop unless rain comes soon; more farmers are going into the dairy business; poultry business is being overdone. Prices are a little better than a year ago. Wheat \$1.25; oats 42c; eggs 30c; butter 42c.—B.

CATTLE RECEIPTS INCREASE.

DUE to the influx of grassers, receipts of cattle at leading markets are a third larger than a month ago. Some increase in the supply of short-feds and half-finished steers has occurred also, and prices have lost ground along with grass cattle. Long-fed steers continue scarce, and prices are at the highest point of the season, with the Chicago top at \$14.65, the highest in two years.

Demand for stocker and feeder cattle is active, and prices have advanced in spite of the decline on lower grades of killing classes. With prospects of moderate receipts, and a fairly broad demand from the western half of the corn belt, where the crop is a fairly ample one, it is quite possible that feeder prices have passed their season's low points and that buyers can only hope for moderate dips.

LITTLE CHANGE IN HOG PRICES.

HOG prices have swung over a narrow arc in the last two weeks. The Chicago top on light hogs stands slightly under \$11, with the average slightly over \$9. Recently, the discount on heavy hogs has narrowed. The principal favorable factors in the hog situation include the large re-

ceipts which have been greater than last year nearly every week in recent months, the stocks of hog products in storage which are larger than last year by the equivalent of more than a million head of hogs and the poor export demand which is running smaller than in the last two or three months, and lighter than last year. The favorable influences are the indications that the number of heavy hogs on farms to be marketed is below last year, the improvement in domestic demand as a result of lower retail prices and the special effort of packers and distributors to stimulate the consumption of hams and bacon, some signs of betterment in the export trade, and the prospects of a smaller supply of cottonseed oil in the coming season, thus strengthening the lard situation. Hog prices seem likely to hold fairly firm in the next month, or until the fall run starts.

Veterinary.

CONDUCTED BY DR. S. BURROWS

Ailing Pigs.—Sow weighing 200 lbs. had discharge from vagina. Thought she had lost her pigs. She laid around a few days, seemed weak in her hind parts, lost her appetite, and finally died. Later lost a gilt in much the same way. D. A. H.—Am unable to say definitely what the cause of the trouble is with your sows. The older sow no doubt died from infection of the uterus or pig sack, though cannot understand the uterus of the gilt being in such a condition. It apparently is of a contagious nature. It would be advisable to put the other pigs on clean pasture and clean up and plow the old yards. If you have any further losses, call your local veterinarian and let him make a careful postmortem, as soon as possible after death. A correct diagnosis of the trouble could then be made.

Contagious Abortion.—I have contagious abortion in my herd. What would you advise me to do?—S. H. R.—Sanitation is one of the principal things in eradication of contagious abortion. Thoroughly clean the barn, then spray with a five per cent cresol solution. Clean up the barnyard, and do not store manure around the barns or any place frequented by the cows. Cows which abort should be isolated in a separate barn for sixty days or longer, if there is any vaginal discharge. Dead aborted calves and membranes should be burned or buried deep. In addition to this, it is recommended that the blood of each cow shall be given the agglutination test, so that the reactors can either be sold or kept in a separate barn. It would be advisable to consult your veterinarian with reference to this.

Poor Condition.—Mare has ravenous appetite, but fails to take on flesh, as does her mate on much less feed. She trembles when working. Does not pass whole grain, so feel her teeth

are good. W. E.—Not passing whole oats is no sign the teeth are not sharp. Have your local veterinarian examine and file the teeth. For worms, withhold food from noon until the following morning, then give three drams of tartar emetic in a quart of water, and follow in a few hours with a quart of raw linseed oil. Add four ounces of fluid extract of nuxvomica to one quart of water, and give two table-spoonsful three times daily.

FOR SALE USED MACHINERY

Two 15-25 Rumely tractors nearly new, 9-16 Heider nearly new, two 15-30 Hart-Parr, 16-32 Lawson, 15-25 Allis-Chalmers, 15-30 McCormick Deering, 15-27 Case, 18-32 Case, two Fordsons, 20-40 Rumely, 20-40 Case, 30-50 Four City, 17-22 Ann Arbor hay press, 17-22 Ohio, 17-22 Adco, 20-34 Racine thresher, 24-inch Russell, 20-inch Case, 28-inch Rumely, and many others. Write us what you need.

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Oldest and most reliable commission house in Detroit. Write for new shippers' guide, shipping tags and quotations.

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A large selection at all times of stocker and feeding cattle. Special attention given to filling orders. Write F. E. BERRY COMPANY, South St. Paul, Minn.

SHEEP

Delaine Merino Rams Bred for wool and mutton. Extra fine ones, shipped on approval. Prices reasonable, photos free. F. H. RUSSELL, Box 40, Wakarusa, Ohio.

Shropshires. A few choice rams for show and field use. Call on DAN BOOHER, R. 4, Ewart, Mich.

BREEDING EWES FOR SALE.—Hampshire, Shropshire grades as cross-breds. All yearlings. Car lots. V. B. FURNISS, Nashville, Mich.

Now Offering a few choice loads of Delaine breeding ewes. Also feeding lambs and wethers. F. M. Bahad, Woodstock, Ohio.

FOR SALE.—Registered improved Black Top Delaine Merino rams and ewes. J. H. HAYNER, Stockbridge, Mich., R. W. Hayner, Webberville, Mich.

REGISTERED HAMPSHIRE YEARLING RAMS. Call or write CLARK HAIRE'S RANCH, West Branch, Mich. Charles Post, Mgr.

THE MAPLES SHROPSHIRE'S For Sale—2 stock rams, yearling and ram lambs. Few ewes. C. R. LELAND, R. 2, Ann Arbor, Mich.

CLASSIFIED ADVERTISING

This classified advertising department is established for the convenience of Michigan farmers. Small advertisements bring best results under classified headings. Try it for want ads and for advertising miscellaneous articles for sale or exchange. Poultry advertising will be run in this department at classified rates, or in display columns at commercial rates. Rate 3 cents a word, each insertion, on orders for less than four insertions; for four or more consecutive insertions 6 cents a word. Count as a word each abbreviation, initial or number. No display type or illustrations admitted. Remittances must accompany order. Live stock advertising has a separate department and is not accepted as classified. Minimum charge 10 words.

Words.	One time.	Four times.	Words.	One time.	Four times.
10.....	\$0.80	\$2.40	20.....	\$2.00	\$5.24
11.....	.88	2.64	21.....	2.10	6.48
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13.....	1.04	3.12	23.....	2.32	6.96
14.....	1.12	3.36	24.....	2.40	7.20
15.....	1.20	3.60	25.....	2.48	7.44
16.....	1.28	3.84	26.....	2.56	7.68
17.....	1.36	4.08	27.....	2.64	7.92
18.....	1.44	4.32	28.....	2.72	8.16
19.....	1.52	4.56	29.....	2.80	8.40
20.....	1.60	4.80	30.....	2.88	8.64
21.....	1.68	5.04	31.....	2.96	8.88
22.....	1.76	5.28	32.....	3.04	9.12
23.....	1.84	5.52	33.....	3.12	9.36
24.....	1.92	5.76	34.....	3.20	9.60
25.....	2.00	6.00	35.....	3.28	9.84

REAL ESTATE

80 ACRES, EXCELLENT BLDGS.—Stock, Machinery and Crops—school, high school, churches, etc., nearby; phone service, good local markets; 60 acres fertile loamy tillage, stream-watered, wire-fenced pasture, woodland, abundance berries; excellent 6-room white house, pleasant shade, good barn, hen and hog houses, etc. Leaving country, will include team, 4 cows and heifer, 4 brood sows, 100 hens, long list implements and tools, 4 acres rye and 6 wheat, abundance hay and grain, all for \$6,500, part cash; bldgs. alone insured \$7,000. Wm. R. Jones, Strout Agency, Balcony Block, Holly, Mich.

120 ACRES, HORSES, 12 CATTLE.—Fine Lot New Equipment, including grain and corn binders, corn sheller, manure spreader, cream separator, plows, cultivators, vehicles, tools, stove, 30 acres corn, oats, potatoes, hay, barley, on improved road, milk and cream collected; handy all advantages, 90 acres smooth crop land, 20-cow spring watered pasture, woodlot, abundance fruit; good 10-room house and 34-ft. barn, garage, granary, etc. Retiring to small farm, price out to \$11,000 for quick settlement; part cash. James L. Cross, Strout Agency, 708 Smith Bldg., Flint, Mich.

FOR SALE.—140 acres all equipped, with 16 cows, stock, tools, crops. Write to Geo. Koch, R. 3, Beavertown, Mich.

IMPORTANT TO FARM BUYERS.—I have special farm bargains in Gladwin County, Mich., some to settle estates, others taken in by outside banks on mortgages. Take advantage of some of these wonderful bargains, some at less than the buildings are worth. Write me at once your needs. U. G. Reynolds, Gladwin, Mich.

FOR SALE.—Fully equipped dairy farm, 135 acres. Horses, milk cows, machinery, everything goes with the farm. A money maker. Write owner, Grant Disney, R. 2, Merrill, Wis.

EIGHTY ACRES on National Cement Highway, \$1,000. Enough wood to pay for place. A good winter job for a woodsman. Address Box 155, Lakeview, Mich.

FOR AN INVESTMENT buy land in the "Ozarks." Tracts 40 to 2,000 acres. \$2.50 per acre up. Box 66, Houston, Mo.

GROW WITH SOUTHERN GEORGIA.—Good lands. Low prices still available. Write Chamber of Commerce, Quitman, Ga.

FOR SALE.—A stock farm near St. Johns, 210 acres. Levi H. Sibley, DeWitt, Mich.

WANTED FARMS

WANTED.—To hear from owner of land for sale for fall delivery. O. Hawley, Baldwin, Wis.

MISCELLANEOUS

300 FULL SIZE, unruled letter heads, 300 good white envelopes, all neatly printed, for two dollars, postpaid. Money back if wanted. Shipping tags, stationery, business cards equally low prices. The Braytons, Freeport Herald, Freeport, Mich.

HONEY!—Choice Michigan Clover Honey by parcel post prepaid, 6 lbs., \$1.50; 12 lbs., \$2.75. Send check or money order to The Hoxie Apiaries, 327 Pleasant Ave., Alma, Michigan.

VIRGIN WOOL YARN for sale by manufacturer at bargain. Samples free. H. A. Bartlett, Harmony, Maine.

YARNS of Pure Wool Worsted for Hand Knitting—also Rug Yarns for Hooked Rugs. Write today for free Samples. Our stock is Large. 50c 4-oz. skein. Also Wool Blankets. Concord Worsted Mills, West Concord, New Hampshire.

FREE DOG BOOK.—Polk Miller's famous dog book on diseases of dogs. Instructions on feeding, care and breeding with symptom chart, 48 pages. Illustrated. Write for free copy. Polk Miller Products Corp., 1022 W. Broad St., Richmond, Va.

AUTO PARTS.—Radiators, Heads, Blocks, Transmissions, Drive Shafts, Rear Ends, Wheels, Bearings, good as new, half price or less. Satisfaction guaranteed or money refunded. Rocks Auto Parts, 12215 E. Jefferson Ave., Detroit, Mich.

KEEP YOUR LIVE STOCK HEALTHY by using absolutely pure Bone Mineral mixture in daily ration. Any quantity at low price. Write for particulars. James A. Benson Co., 332 So. LaSalle St., Chicago, Illinois.

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FARM MACHINERY

FORDSON TRACTOR and plow wanted in trade for complete acetylene welding outfit. James Kish, 12789 Corbin, Detroit.

FOR SALE.—One Port Huron Compound Engine, 16 Horse, and one Standard Bidwell Bean Thresher. Robert Walker & Sons, Harrisville, Mich., R. 1.

PET STOCK

TRAINED.—three-fourths English Fox Hound, 3 years old. Write for price. Leslie MacMaster, R. 3, Harrisville, Mich.

HIGH-CLASS COON, Opossum, Mink, Skunk, and Rabbit Hounds. Reasonable price. Catalog free. V. Langdon, Dressor, Ill.

FOR SALE.—A few choice pedigreed Flemish Giants. Prices right. Satisfaction guaranteed. G. E. Sparks, Carson City, Mich.

SEND TEN CENTS for individual description of fifty hunting hounds, photo group, fur price list. Lakeland Fur Hound Exchange, Salem, Mich.

GERMAN POLICE PUPPIES, born July 26, price \$8 and \$10. Pine Hill Farm, Howard City, Mich.

COON, OPOSSUM, SKUNK HOUNDS. Cheap. Trial. C. O. D. Ginger Kennels, Herrick, Ill.

REG. COLLIE PUPPIES for sale, natural heelers. Silvercrest Kennel, Gladwin, Mich.

HUNDRED HUNTING HOUNDS cheap. Supply catalogue. Kaskaskennels AW-71, Herrick, Ill.

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MAIL YOUR KODAK FILMS to us; we develop roll, make 6 good high gloss prints and return for 25c coin or stamps. Cowie Studio, 10 1/2 Fountain Ave., Springfield, O.

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MATTRESSES

MATTRESSES made any size, low factory prices. Catalog free. Peoria Bedding Company, Peoria, Ill.

FRUIT TREES AND NURSERY STOCK

PEACH TREES, \$5 per 100 and up. Apple Trees, \$7.50 per 100 and up. In large or small lots direct to planters, by freight, parcel post, express. Plums, pears, cherries, grapes, nuts, berries, pecans, vines; ornamental trees, vines and shrubs. Free catalogue in colors. Tennessee Nursery Co., Box 125, Cleveland, Tenn.

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SEED WHEAT.—Improved American Banner \$3.50 per bushel. Bags free. Lockshore Farm, Crossley, Mich.

SEED WHEAT.—Certified Improved American Banner, 1-9 bushels, \$1.95; 10 bushels or more, \$1.85. F. O. B. Owosso. Bags free. A. B. Cook, Owosso, Mich.

REGISTERED RED ROCK WHEAT.—write for yields and winnings. C. D. Flickbeiner, Clinton, Mich.

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HOMESPUN TOBACCO.—Write for samples and prices. Trout & Son, Dept. P-3, Hickory, Ky.

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TURKEYS, GERSE, DUCKS.—Finely bred Bronze Turkeys, White Pekin Ducks, Geese. Write for descriptive circular and price. State Farms Association, Kalamazoo, Michigan.

WHITTAKER'S MICHIGAN CERTIFIED REDS.—Both Combs, Cocks, Hens, Cockerels and Pullets, Michigan's Greatest Color and Egg Strain. Write for Price List. Interlakes Farm, Box 9, Lawrence, Mich.

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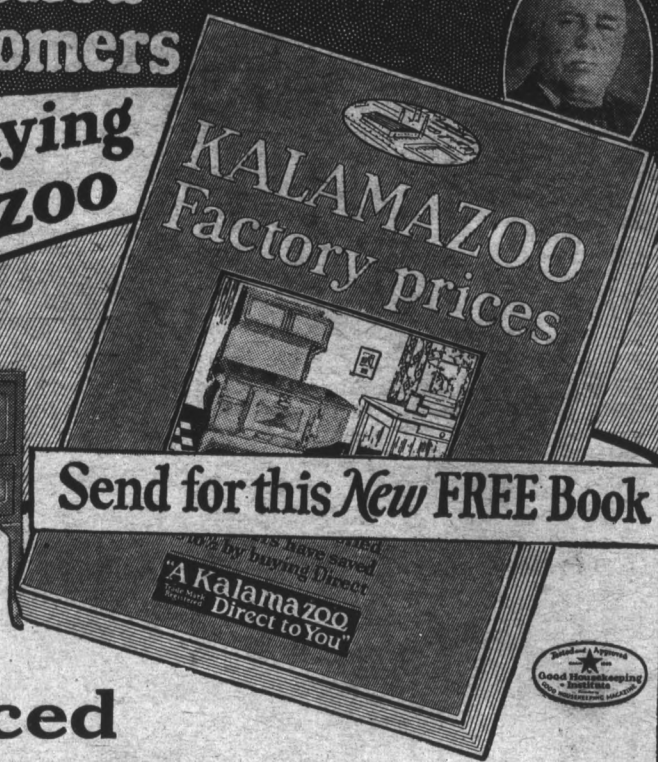
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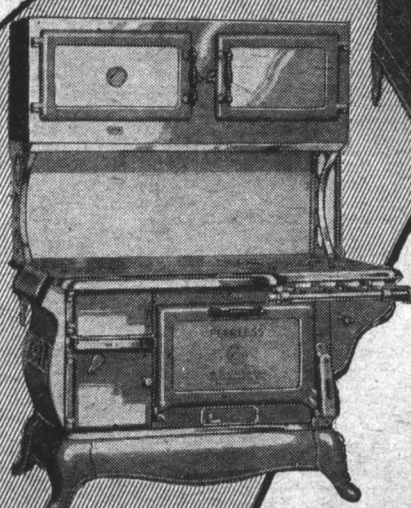
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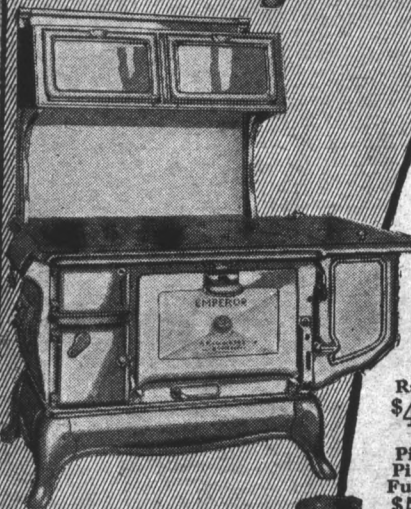
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