

MICHIGAN FARMER

AND
LIVE STOCK
PUBLISHED WEEKLY.

JOURNAL
ESTABLISHED 1843.

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

VOL. CXXXIII. No. 23.
Whole Number 3480.

DETROIT, MICH., SATURDAY, DEC. 4, 1909.

75 CENTS A YEAR
\$1.50 THREE YEARS

FARM NOTES.

Crops for Green Manure.

I have a sandy farm, and this being my first year here I have to learn how to handle this farm. I have an old field that is badly run. I planted corn on part of it and beans on the other part this year. Neither crop amounted to much and not having any manure to put on this field I wish to green manure it. Where I need advice is as to what I can plant on this field to plow down as a fertilizer? It will have to be some persistent grower. From what I have read in The Farmer I am of the opinion that sweet clover would be good because it is a persistent grower and it is said to properly inoculate the soil for alfalfa, but if there is anything better I would like to know what it is. How would crimson clover or rape do? I have another field of new land. This was plowed last spring for the first time and was planted to corn and beans. Both crops did fairly well considering the dry weather. Now I wish to sow this field to either alsike or mammoth red clover. I would like to know which of these two would be likely to do best on this kind of land, when it should be sown and whether or not the seed should be harrowed in. Both fields are sowed to rye now.

Newaygo Co.

J. F. LAURENT.

It is a difficult proposition to improve worn, sandy soil by the methods ordinarily used. It needs humus or vegetable matter and this plan of sowing some crop to be plowed down for this purpose is a good one. This should, of course, be a leguminous crop for best results, as actual plant food as well as humus, will then be added to the soil. Sweet clover is in that class and might solve this problem. But sweet clover is inclined to become a weed, and is not that well of by most farmers. Personally, the writer is of the opinion that the possible agricultural value of this plant is greatly underestimated. Unquestionably it would prove a good soil improver, and if it is found growing along the roadside in this locality, it is probable that the bacteria peculiar to it will be present in the soil. This bacteria is said to be the same as that essential to alfalfa, and there would be the advantage in its use which the inquirer notes, in that the soil would become inoculated with this bacteria for later sowing to alfalfa. But while sweet clover grows luxuriantly in waste places, it is not certain that it will grow as thriftily under every field condition, unless the bacteria is present in the soil, hence it might be a wise precaution to inoculate the seed if it is sown the same as is sometimes done with alfalfa. There are instances in which sweet clover has been utilized to advantage as a forage crop. If cut before it develops too much woody fiber, it is said to make a good stock feed, after the stock learns to like it. If this should prove true on trial, we do not believe one should be very fearful of it as a weed. However, it should be used only in an experimental way until its usefulness is well established.

Another leguminous plant which is undoubtedly of great value as a soil improver, is sand vetch. This plant is open to the same objection from the standpoint of becoming a weed, and the seed is also somewhat expensive, but it will grow on a comparatively thin soil, better than the clover.

Cowpeas and soy beans are also used

successfully as crops for green manure upon worn soils, and are not open to the objections above mentioned. Clover may also be successfully grown on such soils by properly fitting the land and seeding to it alone. The rye that is already sown could be plowed down in preparing for the crop selected from this list and will aid some in soil improvement, but whatever crop is used, a year's time must be devoted to the process as the crop should be allowed to mature or go back on the land, and the land be plowed the following spring for best results, when it may be put to some crop in the regular rotation.

On sandy land, mammoth clover or June clover is better adapted than alsike, and better results are generally secured when the seed is harrowed in in the spring than when sown as the frost is going out, as is generally practiced on heavier soils.

Concrete vs. Stone Wall for Cement.

Kindly advise me with regard to building a root cellar under a granary which is 12 ft. wide and 16 ft. long; the cellar will be 8 ft. high. I was thinking of making grout wall but have plenty of stone. Which would you prefer, a grout wall and work stone in between, or a solid stone mass? It will be about 4 ft. in ground; the soil is heavy clay. Also give me an estimate of how many yards of sand and how many barrels of cement it will require, including floor. How much cement would you use to 100 shovels of sand and what would the cost be? The

mixture is properly made and the concrete properly placed. For this kind of construction, one part of good Portland cement should be used to two and one-half parts of sharp sand, and five parts of gravel. When mixed in these proportions, the sand will just nicely fill the interstices between the gravel stones and the cement will fill the spaces between the grains of sand, thus making an ideal mixture which will harden into a solid wall. With a wall of this size, 12 bags of cement, 29 cubic feet of sand and 58 cubic feet of gravel will be needed for every 10 feet in length of the wall. Where bank gravel is used, some should be screened to determine whether the proportion of sand and gravel is about that given above. The material should be thoroly and carefully mixed and tamped into the forms at a proper consistency for best results.

At the bottom of the wall the foundation should be somewhat wider below the surface of the cellar bottom; this is called a "footing" and is good insurance against the settling and cracking of the wall. Some small stones may be worked into a wall of this kind at a slight saving of cement. The 9-foot wall under the house should be a little heavier, say 14 inches at the bottom and 10 at the top, and will require nearly double the material given for the lighter and lower wall for the root cellar. In building a root cellar under a granary as suggested, it would be ad-

LAYING CONCRETE FLOORS.

We have been improving some of the mild fall weather to put concrete floors in our stables, shed and hog pen. We find that these floors are cheaper than plank, and can be laid with little more labor where gravel is convenient. As we have our own gravel within forty rods of the barn the materials are easy to get.

The most particular and difficult part of the work is to get the grades and set the forms for the cement. When this is ready putting down the floors will go quite fast if there is plenty of help for mixing. We put in the cement floor four to five inches thick, including a number of grades and two gutters, using 13 barrels of cement, in one and one-half days. The crew consisted of one to make the forms, one to lay the floor, three mixers, and one to haul the sand and gravel.

The barn in which the floor was laid was originally 34x48 with a quarter-pitch roof. At one side of the driveway was a small cow stable and a granary, on the other the mow went to the floor, or a little below it, there being no floor in this part. Last summer we lengthened the barn 16 feet and put a gambrel roof over the whole. This more than doubled the mow space tho a basement was arranged above the ground under the entire barn. The part at the left of the driveway, which is 34 feet square, is being converted into stables. A feed alley leads from the driveway floor thru the center of this space to the opposite end where there is a chute for hay. At the left of this alley are six stalls for horses, and on the right seven stanchions for cows and a box stall. As we have a box stall in a shed adjoining the horse stable, and a partially covered barnyard this will accommodate all the stock we expect to keep.

In laying the floor we first set the forms and laid the feed alley, laying this on a level and troweling it smooth. The cow stable was then laid off, making an inch slant from the mangers to gutter and from the wall back of cows to gutter. Gutter is sixteen inches wide by six feet deep and runs slightly diagonally, making the shortest stall four feet six inches long and the longest one five feet three inches to accommodate cows of different lengths. We have planned on three feet as width of cow stanchions. Wood swing stanchions, or at least wood-lined, will be used. Half-inch bolts were put in the cement

where partitions are to come and allowed to reach two and one-half inches above the floor. Two-by-fours can be bolted to these to receive the partitions. The only timber below the cement is a line of two-by-fours under the horses' mangers to which planks can be nailed if we wish to plank the stalls.

A box form was made for the gutter, the grout about the sides being deep enough to extend three inches or more below the bottom of the gutter. After this had become firm the form was removed and the bottom of the gutter laid.

The horse stalls were next laid, making a two-inch slant in nine and one-half feet from front of mangers to gutter. Bolts were set in the cement to hold the



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callar under the house is 25x26 ft. and 9 ft. high. How thick should the walls be for the root cellar and under the house? Give me estimate and cost separate. Cement 35c sack, gravel 20c per yard, or load.

Van Buren Co.

W. R. KAHL.

The relative merit of a concrete or stone wall for this purpose will depend not a little upon local conditions. Both are good, but an expert mason must be employed to build the stone wall, and the concrete wall can easily be built with the home labor.

For an 8-foot basement wall where the foundation is six feet below the ground level, a wall 10 inches thick at the bottom and eight inches at the top will prove of sufficient strength, provided the

visible to have the cellar deeper in the ground than above suggested, as it will make it much safer from frost. Such a cellar should go at least six feet into the ground instead of four, as suggested.

Where a concrete wall is built, the earth should not be filled in behind it until it is well seasoned, say for three weeks after it is completed, unless the inside forms and braces are left in, as the pressure is considerable and may crowd it in before it is thoroly set.

Cement has a wide field of usefulness as a farm building material. Its adaptability and the fact that almost no skilled labor is required for very satisfactory construction work makes it deservedly popular in farm construction.

partitions. The stalls were five feet in width. The gutter is about one inch in depth and fourteen inches wide, rounded on each edge, being just deep enough to insure a trap for any urine escaping thru the bedding and prevent it from reaching the alleyway behind the horses. This gutter was made by imbedding an inch board of proper width in the cement. The alleyway behind this gutter is about five feet wide and has three-fourths inch fall from wall to gutter. There is no lengthwise fall to this gutter and very little to the one behind the cows, and no provision is made for draining them, making it necessary to absorb all liquids with bedding. Stalls are made slightly lower in center to turn liquids from stall partitions, and floor is raised a little about sills to insure their being kept dry.

This floor is laid from four to five inches thick over a foot of gravel, well compacted, and is made in one coat mixed five to one. Some use a foundation coat about seven to one, and a top coat of two or three to one, but we have known of cases where the top coat has cracked and peeled off, it is likely to be more slippery, and is more expensive and difficult to lay. Six of gravel to one of cement is generally used in one coat floors, but we wanted to be sure of a firm floor, and went one better. Floors were not grooved in or behind stalls, but were given a rough finish.

Perhaps some will be interested in the cost of this floor. An itemized statement follows:

Thirteen barrels cement at \$1.60.....	\$20.80
Hauling gravel for filling and floor.....	7.50
Labor in making forms, grading, mixing and laying.....	10.50
Lumber used in forms.....	.75

Total cost.....	\$39.55
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This is less than half of what a good plank floor could be built for, as it would require over 2,000 feet of planking, which would cost \$40 per thousand for oak and \$25 for hemlock, making a cost of from \$50 to \$80 for the planking alone, to say nothing of the sleepers or labor.

We also cemented a shed to be used as a box stall. This was 10x18 ft. A floor three inches thick over this required one and a quarter barrels of cement, and was filled and laid in about two hours.

Two pens in the hog house, each about 12 feet square, were cleaned out and cemented. This was quite a job to get ready and fill, as the old plank floor was about two feet above the original ground, and the space below it was filled up completely with material that had sifted thru the cracks. Nine loads of gravel were required to fill up this space, but the fertilizer secured by cleaning out the pens will repay all labor, as it is rich and fine, and should be good dressing for strawberries. About two and one-fourth barrels of cement were used in laying these floors, five to one, and three inches thick.

We also made cement approaches to two barn doors. These are only about 18 inches high but it had bothered in keeping the soil from washing away. A three-quarter inch board was put against the closed sliding door on the outside, the top being slightly below the floor inside, and the grout put against it. Wings angled from this to hold the dirt at the sides.

The Barnyard Drain.

The drain which we wrote about digging some weeks ago to drain a sag at the edge of our barnyard is now completed and working nicely. We used six inch tile and gave it quite a fall, at least an inch to the rod, so the water shoots thru rapidly, and the yard is dry in an hour after a hard rain. A small cement abutment was made at the yard end in which were set No. 8 galvanized wires, vertically and about the width of the wires apart. This keeps all large articles out of the drain and at the same time allows straws and such substances to drop to the bottom of the grate and leave the top open.

At first much of the water soaked into the sill between the tile, but this is gumming up so it will soon be nearly impervious to water, and the fertilizer therein will be delivered to the field where the drain empties without toll for transportation.

Calhoun Co.

S. B. H.

PAINTING ROUGH LUMBER.

I think if Mr. Packard, who inquired about painting rough lumber, in a recent issue, will use whitening and glue on his old siding, before painting with lead and oil, he will be very much better satisfied with his job than he would to put lead and oil on the old rough surface. One coat of this mixture will save one-half

of the paint and will make just as good a coating. Take 1 lb. of glue to 10 lbs. of whitening. Melt the glue with warm water, then add the whitening and stir thoroughly, using enough water to make it thin enough to apply easily. This fills up all cracks and makes an easy surface to paint on. And you need have no fears as to the paint staying on. It will stick better on this surface than on the bare wood, and even better than on new work, unless the first coat is put on very thin. Shiawassee Co. B. S. FOSKET.

MAKES FARMING PAY.

Seeing the mournful story of A. G. H., of Allegan county, who says that farming does not pay, I will give you the figures on one field of 15 acres on which I had a variety of crops so will have to treat it as a whole. I will say that I am an old man of nearly 75 years of age, and have to hire all my work done.

Cost Charged Against Crops.

Rent of 15 acres at \$10 per acre.....	\$150.00
Plowing, harrowing and drawing of stone, 15½ days.....	46.50
Marking and planting corn and potatoes.....	10.00
Cultivating corn and potatoes.....	39.00
Paris green and spraying potatoes.....	1.50
Cutting and shocking corn at \$1.00 per acre.....	14.00
Digging one acre of potatoes.....	5.75
Husking and cribbing corn.....	52.06

Total.....\$318.81

This is quite an array of figures to overcome with the proceeds of one crop and leave a balance for living, taxes, etc.

Proceeds From Crops.

1,335 bu. of ear corn at 25c per bu.....	\$333.75
2,376 bundles of cornstalks at 2c each.....	47.52
One acre of fodder corn, estimated at 50 bu.....	12.50
132 bu. of potatoes at 25c per bu.....	33.00
Four large wagon loads of pumpkins at 50c.....	2.00

Total.....\$428.77
Less Expenses.....318.81

Profit.....\$109.96
Thus, deducting rent of land and all other expenses, I have this sum for taxes and profit on the 15 acres of land.

Oceana Co.

A. C. GOWDY.

DOES FARMING PAY?

The above caption is the title of an article in your issue of November 6, written by A. E. H. He seems to think farming don't pay. My experience reaches back to the close of the Civil War. During that time every part of our country has had its bad years and its good ones. All have had the same conditions to contend with. Some have failed, others have succeeded. Looking back over my somewhat extended acquaintance, I find many of our best farms and finest homes are owned today by men that began farming on rented farms. Surely they have made it pay. As I ride thru the county surrounding my home, and in other counties, I see many substantial farm buildings being erected, old ones being painted, miles and miles of the best wire fences being put up and many other improvements going on, which shows plainly that the farmers are making money.

But money is not the only way in which the farm pays. A. E. H. says we are losing our boys, because we send them to college. But they are not lost. It pays to let some of them go to fill the places where good and great men are needed. They nearly all have to come from the country. Don't that pay? But I call to mind a good many college educated boys that return to the farm and almost universally honor their profession.

The farmer that puts his mind as well as his muscles into his work, as men of other callings do, if they are successful, is bound to win, and the number that are doing it is rapidly increasing and they will tell you farming pays.

St. Joseph Co.

B. Q. GOODRICH.

NATIVE VARIETIES OF OAK TIMBER.

We have in this section a considerable quantity of young timber called yellow, black and red oak. Now, I can easily distinguish the red from the other oaks, but the difference between the yellow and black oak is not so discernable to me. Would be pleased to know the distinguishing marks between them. Have they, or are they likely to have, any commercial value for lumber?

Jackson Co.

SUBSCRIBER.

The oaks are all included in the genus Quercus the most important genus of the hardwood trees found in the Northern Hemisphere. There are about 275 species; 52 that occur in the United States and five do not attain the size of trees.

Approximately 50 per cent of the total hardwood lumber cut in the country in the past twenty years has been oak. The

genus is very clearly marked and distinct and can be easily recognized by the fruit. Of the forty-seven American species which reach the size of trees two groups may be made—white oak and black oak, the distinctive characteristics by which you can always separate the two is in the fructification—the length of time for the fruit to mature. The white oaks embrace all species in which the fruit matures at the end of the first season, with one minor exception.

The black oak group fruit matures at the end of the second season, with the single exception of Quercus agrifolia, which occurs in California and whose fruit matures at the end of the second season. The leaves of the black oak always have points and those of the white oak are lobed or rounded.

The term "Yellow Oak," as used by your subscriber, is doubtless a local name. If he will kindly supply me with a specimen of the tree which he mentions, I shall be glad to identify the same.

Agl. College.

J. FRED BAKER.

FREE BOOK ABOUT CANCER.

The Leach Sanatorium, of Indianapolis, Ind., has published a book on cancer, which gives interesting facts about the cause of cancer; tells what to do in case of pain, bleeding, odor, etc., instructs in the care of the patient, and is in fact a valuable guide in the management of any case. The book is sent free to those interested who write for it, mentioning this paper.

Free Pail of Stock Tonics.

The effect of the pure food laws and regulations put into force during the past few years has been to the benefit, not only of the buyer and consumer, for whom they were primarily intended, but to the advantage of every reputable manufacturer as well.

The Wilbur Stock Food Company has been for twenty-five years the most persistent advocate of publicity of ingredients and the plain statement of facts as to the effects of their tonics and the correct proportions to use. They not only recommend the use of the smallest amount of tonic required, but they offer to demonstrate at their own risk the beneficial results they claim, by giving away a 25-pound pail to feeders and owners of stock in every locality where they have no agent. They consider this an inexpensive method of introducing their tonic, since they know, from past experience, that the tonic will satisfy and therefore secure repeat orders. Any live stock owner who will simply send his name and address, together with a statement of the number of live stock of various kinds that he owns, to the Wilbur Stock Food Company, 663 Huron St., Milwaukee, Wis., will be sent a free trial pail. This is an opportunity of which enterprising stock owners will take advantage. Simply fill out coupon in their advertisement or write them a letter and get your pail free.

Good Shoes for Mother, Father and the Children.

There is nothing that adds more comfort to mother, father, or the children, than well made shoes that are really comfortable. Poorly made, ill fitting shoes are always unsatisfactory because they soon go to pieces and are not comfortable even while they do last—the first cost may be a little less, but always more expensive in the end. On the other hand, shoes that are well made and fit well always give satisfaction from the moment they are first put on, until completely worn out, and it pays both city man and farmer when buying shoes to buy good shoes. The M. D. Wells Company of Chicago, enjoy a national reputation for quality, comfort, fit and style. This firm takes especial pride in the quality of the Malden Brand of rubber boots, arctic and rubbers which they manufacture. Their advertisement appears for the first time in this week's issue—we trust that a good many of our readers will look it over and make inquiry for Wells Shoes and Malden Rubbers next time they buy foot wear. The M. D. Wells Company of Chicago, has published a booklet entitled, "Mother, Father and the Children," which fully covers the shoe question for the entire family. A copy will be mailed gratis to any of our readers asking for it.

Keep Feet Warm and Dry.

At this season of the year you no doubt commence to think of the cold, slushy, snowy weather that is approaching and the necessity for keeping the feet warm and dry. The Gold Cross brand of Iowa Arctics and Iowa Moscovs is the best grade, not only for actual comfort but also for good wear. They wear longer and look better because of the high quality of the material used, and the exceptional care taken in every part of their construction. Their manufacture is not controlled by any combination or trust. They all have the famous Samson extension heel and the Armor plated toe cap. If you cannot find them at your dealers, we suggest you write the Beacon Falls Rubber Shoe Co., 236 Monroe St., Chicago, for information regarding the Gold Cross brands. They will write you immediately where you can procure these serviceable goods.

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THE DAIRY

CONDUCTED BY COLON C. LILLIE.

CORN FOR SILO.—BEST CREAM SEPARATOR.—MILK FOR CALVES.

I should like to know what you consider the best corn for a silo. Is Stowell's Evergreen a good variety? I should also like to know what you consider the best cream separator. What would you use to replace the fat of skim-milk for feeding calves?

Shiawassee Co.

FARMER.

The best corn for the silo is the largest variety of good dent corn, which will fully mature in your neighborhood. You do not want to grow a small variety of corn for the silo, because you cannot get tonnage enough. On the other hand, you do not want to grow a large southern variety which will not mature in this climate. We want well matured corn for the silo. It should not get dead ripe, ready to husk, but only allowed to become glazed, or past the roasting season, when many of the kernels are fully matured and contain a large per cent of digestible nutrients. Then plant this corn thicker than you would if you wanted to husk it, perhaps twice as thick. If you use four quarts of corn to the acre in planting for husking purposes, then you would want to use eight or ten quarts to the acre for ensilage.

I confess I do not know which is the best cream separator. There are a number of these machines on the market that give excellent satisfaction. You might just as well ask me which is the best kind of a grain binder. I don't know. I never used all of them. I have used several kinds and every one of them were good machines. One binder might excel another in some minor point, but lack in others, and I think this is probably the way with separators. They must all be good or they could not hold their position on the market. Do not purchase a separator until it is tested, till you know that it skims clean. Then, if it is strongly built and durable, you do not care particularly what the name of it is.

The best grain I have ever used to replace the butter-fat in milk is flaxseed meal. Not linseed meal after the oil has been taken out for commercial purposes, but the raw flaxseed ground into meal. This contains 30 per cent of fat and this is just the element that you want to put into the milk to take the place of the butter-fat the separator has taken out. The best way to feed it is to cook it into a jelly, and then at first give a tablespoonful of this jelly to the calf in his milk. This can be gradually increased until you give him a gill or more. The calves like it and do well upon it. As they grow older, you can substitute ground oats, cracked corn and other feeds until gradually you do away with the flaxseed jelly entirely. But for the young calf, so far as I know there is nothing better to substitute for the butter-fat in milk.

GUERNSEY CATTLE.

Please give us a portrait of a Guernsey cow. I am thinking some of going out of the sheep business and going into the dairy business. I think I would like Guernsey cows. One of my neighbors has a herd of Jersey cows and they are nice. Another neighbor has a herd of all Durham and they, too, are nice. Another neighbor has a herd of Holsteins of which he is proud. Just to have something different from all the rest of my neighborhood I would like some Guernsey cows. Will you please tell us something about the Guernseys? Are they real good milkers and good butter makers? Would you call them good dairy cows?

Mecosta Co. J. D. BRADLEY.

Guernsey cattle have been bred pure on the Isle of Guernsey for many years. No other kind of cattle have been allowed to be imported into this island for breeding purposes, consequently they have kept the breed pure. The Guernsey's colors are red and white, while Jerseys are fawn and white. Guernseys are, as a general thing, larger than Jerseys but smaller than Holsteins. Speaking generally, they give a little larger flow of milk than the Jerseys, but not so much milk as the Holsteins; while their milk on the average is not as rich as the Jerseys' and considerably richer than Holsteins'.

Now, as to the propriety of Mr. B. getting Guernsey cattle because he wants something different from his neighbors, I think his idea is radically wrong. What we want to encourage is community breeding, have the farmers in a given neighborhood breed the same kind of cattle. Breeders should co-operate and work together to produce definite results. In several communities in this country

and this state people have co-operated and bred the same kind of cattle, and those communities have become noted for this. They can sell their cattle to better advantage than a community where many breeds are kept. The reason is obvious. The whole community breeds Guernsey cattle or Jersey cattle or some other dairy breed. When buyers want to buy a carload of stock, they can go to this community and get their whole carload with very little effort, because everybody has surplus stock to sell. On the other hand, if only one or two farmers raise cattle of a certain breed, the buyer can only get a few in each neighborhood and it would cost him considerably more in time and money to get together a carload of cattle.

Furthermore, if all the farmers of a community bred the same breed of cattle they could and would have breeding clubs thru which they would get better ideas about breeding. They could exchange bulls. An extraordinary good bull could be used on more than one herd and his descendants could be used on other herds just as they do in the Island of Guernsey and the Island of Jersey. There you have community breeding on a large scale. Any one who has read the history of these islands knows the phenomenal results which have been produced by this co-operation in breeding. If I were Mr. B. and going into registered dairy cattle, I would make myself like some one of the breeds already being bred in that neighborhood. Then I would co-operate with that man and breed the same kind of cattle. I would use my influence to form an organization and would try to get the other fellows to think likewise and have them get rid of other breeds and stock up with the favored kind. In that way you can have better results in breeding, make more money. You can rest assured that one breed of dairy cattle is just as good as another. No one breed has a cinch on anything, for there are others.

NOT THE CONVENTIONAL PLAN OF STABLING COWS.

While I am not a dairyman only so far as keeping sufficient cows to supply our table, I think if I were to make dairying a specialty, I would handle the cows in the same manner.

I use stanchions for my cows, and other cattle when I have any, and confine them only while eating their grain and while milking. The cows are then released and have the freedom of the stable, are dehorned and do each other no damage. By this method I think the cows can be kept cleaner and more comfortable than by any method of fastening I have ever seen.

The cows should be kept well bedded and the manure allowed to accumulate until a convenient time for cleaning out when it should be hauled direct to the field. I sometimes leave mine until a foot or more in depth. In order to do this the mangers should be placed quite high so the cows can eat easily when the manure becomes deep.

I have kept my cows in this way for a number of years, as well as my horses and all other stock, and never move a forkful of manure until it goes to the field, and I know of men who are making dairying a specialty who handle their cows in this way, who say they never knew before how to keep cows clean.

Over bedding of horses or sheep handled in this way sometimes causes the manure to heat but cows can be kept bedded a foot deep and it will not heat, and the cows will be clean and the stables free from odor.

Cass Co. F. E. SMITH.

REMARKABLE GUERNSEY COW.

Official report of the remarkable record of the Guernsey cow, Dolly Dimple, has recently been made public. She gave during the twelve months from October 14, 1908, to October 14, 1909, the total of 18,458.80 lbs. of milk which showed an average test of 4.91 per cent, producing 906.89 lbs. of butter-fat for the year. Dolly Dimple was dropped January 21, 1905, making her three years and nine months old at the beginning of the record. This is the best official record of any Guernsey cow and excels that for any cow of any breed at the age. She also is credited with the following records: One day, 68.4 lbs. of milk; 3.625 lbs. butter-fat. One month, (30 days), 1960.4 lbs. milk; 89.99 lbs. butter-fat. Three months, 5614.6 lbs. milk; 265.62 lbs. butter-fat. Six months, (182 days), 10390.2 lbs. milk; 805.13 lbs. butter-fat. The tests were conducted under the supervision of the Massachusetts Agricultural Society.

Pans Tell

One dishpan shows the only piece used inside Sharples Dairy Tubular Cream Separator bowls. The other dishpan shows the disks from a common separator bowl.

Is it not easier to handle, wash and turn the light Dairy Tubular bowl? Is it not common sense to expect the simple Dairy Tubular bowl to run steadier and resist rust, knocks and wear longer than a common bowl with a dishpanful of disks inside? Of course it is.

World's biggest separator factory. America's oldest separator concern. Branch factories in Canada and Germany. Sales easily exceed most, if not all, others combined. Tubulars probably replace more common separators every year than any maker of such machines sells.



THE SHARPLES SEPARATOR CO.

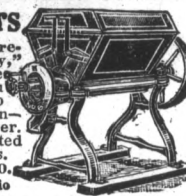
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165-167 BROADWAY, NEW YORK. 42 E. MADISON ST. CHICAGO.

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Which One Will You Test on Your Farm for Ninety Days?

Freight Prepaid

Which will you try, 30 Days' Free or 90 Days' Approval Test?

—Any capacity from 200 to 950 pounds per hour, according to your needs, and I'll save you from \$25.00 to \$50.00 on the price.
—The only Separator whose gearing runs in a "Bath of Oil" like a \$5,000 automobile—Feature worth \$50.00 alone.
—Automatically oils itself—Pour oil at the top, once a month from your oil jug or can—No danger of running dry, or ruining it like others—No oil cups to remember to fill or turn up twice a day.
—Dust-proof—Danger-proof—All gears enclosed—simple but standard built and absolutely dependable.

GALLOWAY'S New "Bath in Oil" HIGH GRADE STANDARD CREAM SEPARATORS

—Has the only revolving supply tank—worth \$15.00 alone.
—Easiest to clean and the few parts come out easy and can't get back out of place.
—Easiest to run—high crank—low tank. With no high lifting and no "back-breaking" cranking.
—Gets the finest quality cream and all of it—no lumps or churning, as Nature's true principle is followed without forcing either the milk or cream the wrong way up or down.
—Skims cleanest in any climate or season, no matter whether your milk is warm or cold.
—Is as handsome a machine, compact and substantial, as you ever saw or could find. Beautiful finish.

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That's just what you are doing, sir—wasting your grain because you don't grind it before feeding. You're losing corn-cob profits, too! For ground cob is an important ration ingredient. Post yourself. Order the Booklet, "The Right Way to Feed Grain," which is free to practical farmers. Gives briefly, in bold-down form, latest facts on feeding hogs, cattle, milk cows, horses, sheep and poultry—a wealth of information free.

Let us tell you, too, about the New Holland FEED MILL that dealers everywhere sell at low prices on a free trial offer. It's a money maker—grinds corn, cobs, small grain—makes stock food or table meal coarse or fine. Easy to run. Can't "fill up." Uses any kind of power. Five sizes. Write for book on Grain Feeding now. If no local dealer handles the New Holland please advise us. We will then supply you and give you an extended free trial. New Holland Wood Saws, too!

NEW HOLLAND MACHINE CO., Box 11, New Holland, Penn.

UNICORN DAIRY RATION Enables you to make 6 lbs. of feed do the work of 8 or 10 lbs. of any other ration. Send us copy of ration you are now feeding and let us tell you how to save money on your feed bills.

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

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

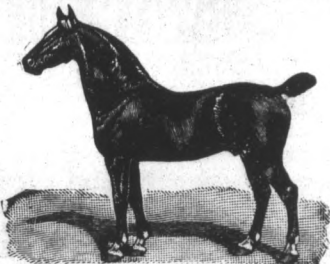
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Has Imitators But No Competitors.

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Seldom See

a big knee like this, but your horse may have a bunch or bruise on his Ankle, Hock, Stifle, Knee or Throat.

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will clean them off without laying the horse up. No blister, no hair gone. \$2.00 per bottle, delivered. Book 10-B free. **ABSORBINE, JR.**, for mankind, \$1.00 Bottle. Removes Soft Bunches, Cures Varicose Veins, Allays Pain. Genuine mfd. only by

W. F. YOUNG, P.D.F., 268 Temple St., Springfield, Mass.

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A Sure Remedy for **INTESTINAL WORMS** in Horses, Sheep, Cattle, Hogs

DOSE—One tablet for lamb or goat; two for sheep or hogs; three for horses and cattle.

Box of 100 Tablets, \$1.50, Postpaid
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Just Say "Saw your ad. in the Michigan Farmer" when writing advertisers.

LIVE STOCK

FEEDERS' PROBLEMS.

Will the Available Feed Carry the Stock?

I have 4 head of horses and a colt, 40 head of sheep, 4 cows, 3 yearling heifers, and 4 spring calves. I have the straw from 16 acres of wheat that yielded better than 20 bu. to the acre, and the straw from 12 acres of oats, together with 18 acres of corn fodder which is pretty fair. My grain is corn, oats and spring rye grown together, and about 100 bu. of cull potatoes. Now as I am a farmer with but a limited experience, and I wish to know whether I have feed enough to carry all my stock thru the winter without being put to the necessity of buying more roughage. My hay I wish to use in doing my spring work. I have plenty of early pasture for cattle. Any suggestions thru the columns of the Michigan Farmer will be thankfully received.

Cass Co.

E. C. DAVIS.

In the writer's opinion the supply of roughage mentioned in this inquiry should be sufficient to carry the live stock enumerated thru the winter in good condition, provided the grain ration is sufficiently liberal and adapted to the needs of the animals fed this kind of roughage. A simple mathematical calculation is, however, a safer means of determining this point, than any man's opinion.

First let us consider how this roughage should be fed to the kind of stock mentioned. By way of providing a variety and avoiding the troubles which are apt to attend the feeding of an exclusive straw diet to any kind of stock, all of these animals should be fed corn fodder once each day. The cows should be fed the corn fodder twice a day, since they will not consume a large amount of straw and maintain a profitable milk flow, and the yearling cattle should be fed the corn fodder twice a day for the reason that they cannot make a good growth and keep in good thrift on a straw diet. The horses may be fed oat straw for roughage required above the one feed of corn fodder a day, and the cows and yearlings will eat quite a considerable amount of the oat straw in addition to their two feeds of corn fodder each day. The sheep will get one good feed a day from the wheat straw if scattered in their yard liberally and with one feed of corn fodder and an occasional feed of oat straw by way of variety, they should not suffer materially for other roughage until well along toward the lambing season. The calves should have a feed of hay once each day in addition to a good feed of corn fodder, since if it pays to keep them at all it will pay to keep them in a thrifty growing condition, which can not be done on a straw diet. The potatoes will be most beneficial, supplying a needed succulent food. If more were available it would be better, because some could be used to advantage for all of the stock each day, but as the quantity is limited it would be better to feed a small amount to the cows each day, and an occasional feed to the horses, and some to the sheep toward spring.

Now, as to the sufficiency of this supply of roughage for the stock maintained. By estimating the weight of the sheep and young cattle, it will be easy to figure their equivalent in number of average horses or cattle. For the purpose of getting at this problem, let us estimate that the whole number would about equal 18 cows in aggregate weight. Now, if this 18 acres of corn is a fair crop there should be around 4,000 bundles of corn fodder, each one of which would make a fair feed of roughage for an animal; by a simple computation we find this amount, so fed, would just about last thru an estimated feeding period of 160 days, which would carry the cattle to the time when the early pasture would be available, and the wheat and oat straw could, in the meantime, all be worked into manure and its more digestible portion utilized as feed. Some hay should be fed, as noted, to the calves and to the sheep after the lambs are dropped, and an occasional feed to the cows if it can be spared.

But if the stock is to be carried thru the winter on this kind of roughage, they should be provided with a liberal and suitable grain ration. It would be profitable to use some concentrate containing a high percentage of protein in combination with the oats and spring rye and corn. If clover hay was available as a factor in the ration, this would not be so essential, but it will prove good economy to balance up the grain feed in this way where this kind of roughage is to be fed. Of course, other concentrates can be used with good results, but oil meal was mentioned for the reason that it will prove a cheap source of protein, and at

the same time will have a desirable laxative effect upon the animals, which is essential where straw is a factor in the roughage, and where plenty of succulent feeds, such as roots, is not available. Some wheat bran would also be desirable in the grain ration for this purpose, as it will increase its palatability, but it is a more costly source of protein than many other feeds, and for this reason should be used sparingly.

This inquirer is doing just what it would pay a great many other farmers to do at this season of the year. It pays to figure closely on the available supply of feed in relation to the stock maintained and it pays even better to figure closely on the compounding of grain rations for economical results in connection with the roughage used. As a logical conclusion, it will also pay to feed liberally after these problems are figured out. It never pays to feed a maintenance ration which just takes care of the bodily waste. The profit is all derived from that portion of the ration fed over and above that required for the maintenance of the animal machinery, and the more liberal the feeding, providing there is no waste and keeping in mind the relation between the condition of the animal and the purpose for which it is kept, the greater will be the profit from its maintenance upon the farm.

SLOBBERING HORSES.

I purchased a three-year-old mare about six weeks ago and she slobbers terribly when she eats, especially her oats. There is quite an amount of water in her oat box when she is thru eating. What can I do for her?

Alger Co.

D. BECKER.

Frequently I receive letters from readers of this paper stating that their three-year-old filly or their four-year-old horse, or even their old horse slobbers; some of them doing so much of it that it weakens the animal or is quite unpleasant to drive them during windy days on account of the discharge from the mouth blowing in the driver's face or on his clothing. Now, in order that our readers may obtain a better understanding of the causes of this ailment, let it be understood that some kinds of food cause an unnatural flow of saliva, causing salivating or frothing at the mouth. Irregular teeth very often cause more or less extra secretion of saliva, eating fresh second crop clover or eating fresh crimson clover hay, a foreign substance lodged in the mouth always causes slobbering; an inflammation of the mouth or tongue caused by the administration of strong, irritating drugs always produces an excessive flow of saliva. Besides, colts between two and five years old, while teething or when becoming accustomed to the bit in their mouth, are apt to slobber.

Treatment.

Now, in order to correct an ailment of this kind, it is well to ascertain the cause and if brot on by eating clover, change the feed at once; then the animal recovers without the assistance of drugs or, if necessary, use astringent washes, such as are made by dissolving 1 oz. of powdered alum or borax in a quart of water, wash out mouth four or five times a day. If caused by giving irritating drugs, lime water or sweet oil or linseed oil are proper applications to make to mouth. Sometimes it is necessary to give 6 drams of Barbadoes aloes, 1 dram bicarbonate of soda, 1 dram ground ginger or ¼ dram powdered capsicum at a dose in the form of a ball or as a drench in a pint of warm water. In some cases it is necessary to limit the supply of water for a day or two and stimulate the kidneys into action by giving citrate of potash or buchu in one ounce doses as often as necessary. Many cases of slobbering are corrected quickly by filing off the sharp edges of outside of upper grinders and inside of lower.

W. C. FAIR, V. S.

New Gasoline Engine.

A high grade gasoline engine of one horse power at a moderate price has at last been placed within the reach of every farmer. There are a thousand and one things for which a one horse power engine can be used to great advantage. Fairbanks, Morse & Co. have placed on the market the "Jack Junior" engine (little brother of "Jack of all Trades.") It is a one horse power horizontal evaporator tank engine entirely self contained. It is a 4-cycle engine practically frost proof. All parts are accessible. This engine is large enough to do very effective work pumping, running cream separators, churns, and other small machines. It is durable and will give excellent service. Fairbanks, Morse & Co. are probably the largest manufacturers of gasoline engines in the world. They will be glad to send the book describing fully the New Jack Junior one horse power engine to all interested parties. See advertisement in this issue.

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doesn't crack, rot, rust or break. How long do you suppose roofing lasts that's made of—who can tell?

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Fourth large importation within the year arrives November 23rd., which, added to our present stock, offers intending purchasers the finest collection in America. If you want the best horses, horses with bone, quality, size, action, and best breeding, stallions or mares; if you want fair and liberal treatment; if you want lowest prices consistent with good merchandise, visit Oaklawn. Catalog shows the place and the horses. W. S., J. B. & B. Dunham, Wayne, Ill.



Prairie Stock Farm

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

Symptoms of Worms



Your horse has worms if he has any of these symptoms: Nervousness, itching, rubbing tail, rough coat, hide-bound, dandruff, unthrifty condition, bloating, dusty rectum and passing worms.

DR. FAIR'S NEW WORM REMEDY

is given in feed—it kills worms in two ways: by suffocation or absorption, but never hurts the horse or brood mare.

60 Horse Doses Delivered \$1.00 By Mail

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MINERAL HEAVE REMEDY

NEGLECT Will Ruin Your Horse Send to day for only PERMANENT CURE SAFE CERTAIN. Mineral Heave Remedy Co., 483 Fourth Ave., Pittsburg, Pa.

One Quick Sharp Cut

and the horn is off—does not worry cattle or stop milk, but increases supply—best is better too.

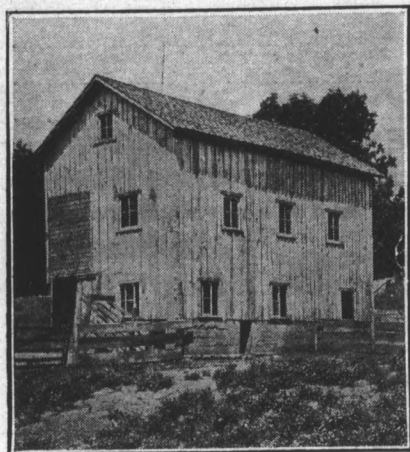
Keystone Dehorner is handy, humane and a money saver—write for booklet and know all about it. M. T. PHILLIPS, 125 Main St., Pomeroy, Pa.

CONVENIENT HOG HOUSE AND WORK SHOP.

Having, after some study and much work, secured a convenient hog house and work shop combined, I send you photo and plans of same, hoping it may prove of interest to those among your readers as are in need of such a building.

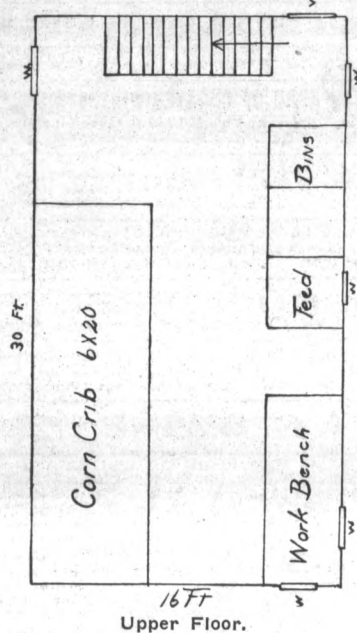
As will be noticed by the half-tone cut, the building stands on a side sill, the ground sloping to the east and south. This gives room for a 7½-foot basement while the ground in front slopes away from the upper floor only enough to turn water readily, there being also plenty of slope on lower side to let water run away from the basement.

The building stands in an old apple orchard of two acres, the land being di-

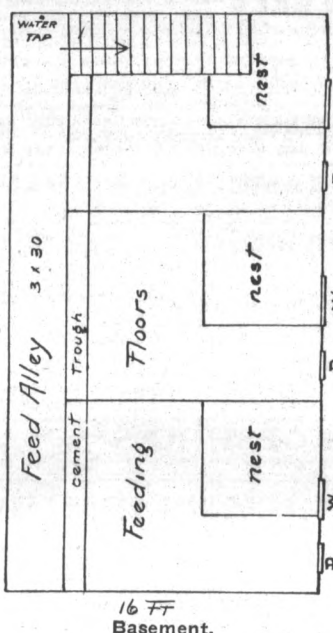


vided into three yards of nearly equal size, one of which opens into each of the pens in the basement.

The partitions between the pens and feed alley are all hung on hinges and can be swung back into the pen and up as high as desired to permit driving hogs from any of the pens into the feed alley and thence into other pens or to chute placed at door at end of alley for loading. Altho these partitions swing back and up, they strike on edge of trof next to feed alley when let down, so that they



Upper Floor.



Basement.

cannot be forced out into alley by the hogs. A lever in center of each partition enables the feeder to instantly throw the partition to back side of trofs, thus keeping hogs away from trof while the feed is being put in.

The entire basement floor and walls are of cement, the cement walls on south end and east side being but half walls, or four feet high, thus giving plenty of room for windows above.

The four windows in basement slide back and forth so that any or all of them may be opened or closed instantly.

Scantlings are imbedded in the cement floor to which the nests are hinged, the nests being made of 2-in. plank with a 2x4-inch ledge to hold bedding in nests. They may be swung up against the walls out of the way while cleaning the pens.

The cement floor in the pens all slope to east and south so that all water spilled upon the floor of pens runs out the doors. The small doorways in the walls thru which the hogs pass in and out are all fitted with doors which slide up and down in grooves and are raised or lowered instantly from the alley by means of ropes and pulleys. It is thus easy to shut the old sows out until the pigs have eaten what feed they wish, when a pull of the ropes permits the old sow to enter and clean the trof. It is also the work of an

instant to shut up the pigs whenever it is desired to catch one or more of them.

At the head of the stairs leading from basement to first floor is a trap door operated by weight and pulleys, so it needs but a touch to open or close the door and it is kept closed to make the basement warmer in winter, also to prevent poultry getting to the first floor from basement.

Water is piped from tank at windmill thru wall at north end of alley so that water for hogs may be had at all times by merely opening a valve or faucet.

The first floor of building is divided into corn crib, 6x20x8 feet high, and carpenter shop, feed bins, etc., as will be seen by plan.

An attic above also furnishes a large room for storage or for use as an oat bin, as may be desired.

The outer door to first floor and to attic are at north end and not shown in the picture.

The outside dimensions of building are 16x30 ft., with 12-ft. posts. All the lumber, including black ash siding, battens and shingles, were sawed from the farm. The total cost of building, including carpenter work, hardware, mill work, saw bills, cement and cement work, not including hauling stone, cement, lumber, etc., or common labor in mixing mortar, was about \$175.

So satisfactory has this proven that were I to build another hog house it would be on the same general lines, but perhaps larger.

Branch Co. O. L. DOBSON.

LIVE STOCK NOTES.

In some quarters farmers are fattening heifer calves for the market, and those who have experimented in this way have usually made it pay well. Fat heifers are usually good sellers in western and eastern markets nowadays, and it does not take long to fatten them, which is an important consideration. It seems a little surprising that more farmers do not produce this kind of "baby beef."

Everything at the present time looks extremely encouraging for sheep and lamb feeders who understand how to carry on the industry, the great thing necessary after the feeders are purchased being to feed them well, shed shelter being an important item in northern climates as a matter of course. The shipments of feeder stock to sheep sections

this season have not been in the least excessive, and most sections report fewer shipped in than usual. The main trouble in other years has been the failure of many sheepmen to make their flocks fat enough, and there are still many who hasten on the first appearance of stormy weather to sell off half-fat natives and westerns, regardless of the fact that by doing so they sacrifice the good profits that would be derived by holding on until the stock could put on plenty of fat. Well fattened offerings have sold at high prices recently and are almost sure to all the winter, for there is no probability of large supplies. It may be stated positively that there will be a wide spread in prices between choice and common muttons on the hoof.

A word to farmers who are feeding cattle that they are in doubt whether to feed longer or not. The best authorities believe that it will pay to feed cattle in partly fattened condition for thirty to fifty days longer, but it is a good plan to top off the good fat kinds from time to time and thus divide any risks. A larger corn crop was raised than last year, while corn reserves on the farms are much greater than a year ago, and everything indicates that putting corn into cattle, with hogs to follow them, will pay out better than selling off the corn. It does not appear probable that buyers will be able to lower prices for well finished cattle this winter to a level where longer feeding of partly fattened lots will fail to show a reasonable profit, there being far too many farmers who are making short feeds. It is best not to follow the crowd, and short feeding is too popular at the present time.

In '49 men crossed the plains on speculation, hoping to find success—willing to suffer hardship and discomfort for the sake of possibility.

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offers certainty to the settler. He'll reach it comfortably and find comfort after he arrives. Profits are sure to the worker. Opportunities are uncounted. Rich land, equal to the finest soils of any state in the Union, can be bought in Oklahoma, Texas, Southern Missouri, Arkansas, New Mexico and Louisiana for less than worn-out farms in the thin-soiled sections. The climate never stops working. Crops can be harvested at all periods of the year.

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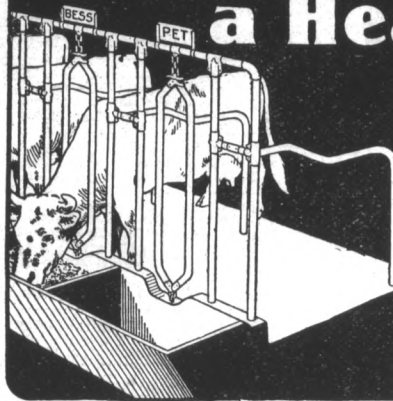
BLACK PERCHERONS
AND ENGLISH HACKNEYS

These Horses are all Prize-Winners

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

Every horse guaranteed, and all at low prices.

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Cow comfort and cow sanitation result in more cow profits, and that alone should induce any farmer or dairyman to seek these conditions. Louden Sanitary Steel Stalls and Stanchions double the light and air in a barn and insure perfect ventilation, perfect sanitation—a result impossible with any wooden equipment. Yet

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are actually cheaper. Louden stalls of heavy tubular steel, with malleable fittings, have no flat surfaces for dust to accumulate—easy to keep clean and almost indestructible. Louden stanchions give cows more comfort than other makes, yet keep them perfectly lined up. Throat chains prevent cows from lying down when milking. Simple and very durable. Latch easily opened or closed with gloved hand, but can't be opened by animal. Send today for free catalogue of sanitary, money-saving barn equipment.

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Pull Your Stumps With This All-Steel Triple-Power

30 Days' FREE TRIAL Hercules Stump Puller



No excuse for stumpy fields. This Hercules is now sold on 30 days' Free Trial. Test it on your place at our risk. Pulls stumps out, roots and all. 400% stronger than any other puller made. Triple power attachment means one-third greater pull. The only stump puller guaranteed for 3 years. Only one with Double Safety Ratchets. Only one with all bearings and working parts turned, finished and machined, reducing friction, increasing power, making it extremely light-running. Hitch on to any stump and the

STUMP IS BOUND TO COME

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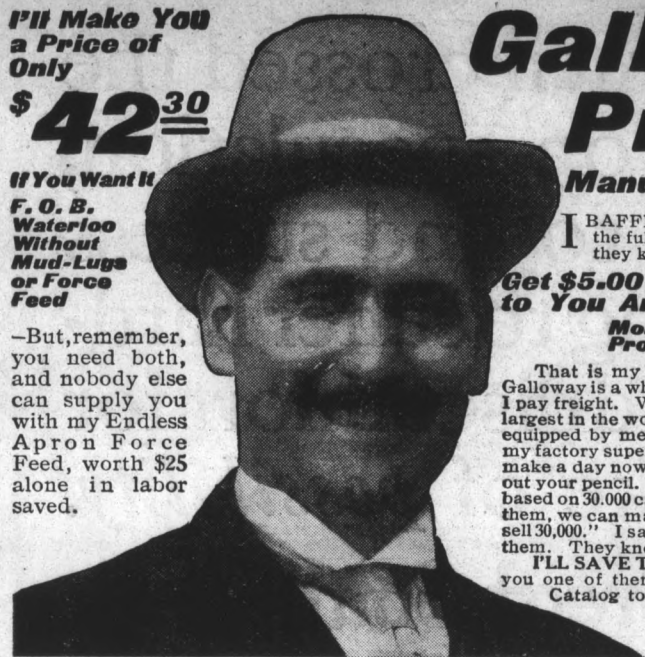
HERCULES MANUFACTURING CO., 137 17th Street, CENTERVILLE, IOWA

**I'll Make You
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\$42³⁰

**If You Want It
F. O. B.
Waterloo
Without
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—But, remember,
you need both,
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can supply you
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Apron Force
Feed, worth \$25
alone in labor
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Wm. Galloway, The Farmer's Manufacturer

Galloway's New Clincher Proposition for 1910

Manure-Spreader Prices Now Based on 30,000 a Year Capacity

I BAFFLE all competition combined to equal my new 1910 Proposition. Get it today. I will crack the whip to the full extent of the law on infringers and imitators. They haven't got the spreader nor the patents, and they know it. I have 11 patents on the Galloway and will protect them. Nobody can get around them.

Get \$5.00 Cash Off the Price at Once, Freight Prepaid (E. of Rockies) to You Anywhere Direct from Factory ON 90 DAYS' FREE TRIAL

Money Back at 6% Interest After 360 Days, If My Spreader Does Not Prove a Paying Proposition to You. Quick, Prompt Delivery Now.

That is my selling plan. Nobody can beat it. Nobody can touch it. It has them all on the run. Galloway is a whole race-track ahead of all competition in spreader proposition and price. Remember, I pay freight. When I added to my factories the Kemp Manure Spreader Factory, conceded to be the largest in the world, formerly owned by the International Harvester Company, now owned and equipped by me with the very latest automatic machinery throughout, I did this: I called in my factory superintendent and I said to him—"How many Galloway Manure Spreaders can we make a day now?" He said: "We can make 100 a day—30,000 a year." I said, "All right—get out your pencil. The first thing you do, figure how much we can save farmers on price, based on 30,000 capacity." He figured it out mighty quick. He says to me: "If you can sell them, we can make them. We can save \$5.00 apiece in cash to the farmers if you can sell 30,000." I said, "That is the idea. That's the stuff. We will do it. They will buy them. They know me and they know my spreader."

I'LL SAVE THE FARMERS \$150,000 THIS YEAR IN CASH MONEY. Are you one of them? Try me. Get my new Clincher 1910 Proposition and my Catalog today.

Wm. Galloway, President
THE WILLIAM GALLOWAY CO.
649 Galloway Station, Waterloo, Iowa

**Spend
1 Cent
and Make
50 Dollars
Here is \$5.00
to Start on.**

**William Galloway
649 Galloway Sta.
Waterloo, Iowa**

Rush your special 30-day, pre-paid freight proposition to me with your big Galloway free spreader catalog. This coupon is good for \$5.00 on any one of your spreaders for 30 days, at catalog price.

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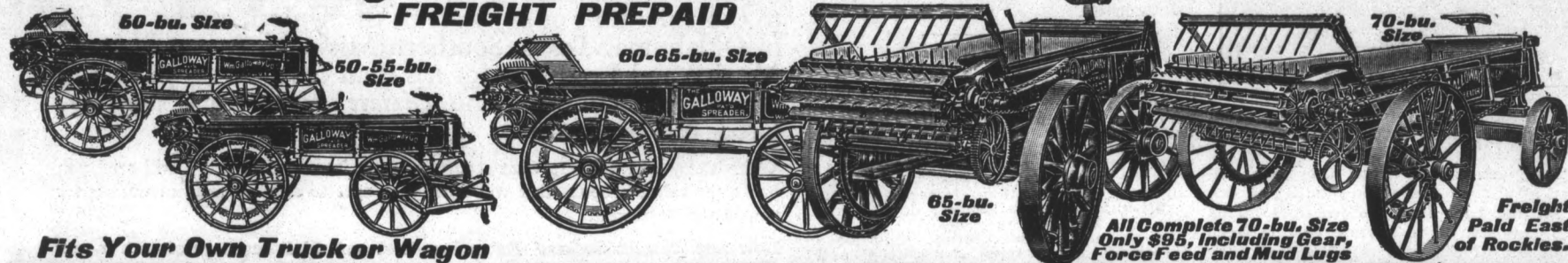
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The Great Galloway Line of Spreaders **Five Sizes**
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Fits Your Own Truck or Wagon

**All Complete 70-hu. Size
Only \$95, Including Gear,
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**Freight
Paid East
of Rockies.**

FUR SHIPPER! Cut out the middleman this year. Deal with the house that Exports its Furs to the great Markets of the World. **IT WILL PAY.**

Send for it today, also Price List K. They may be worth a fortune to you. Don't ship a skin till you hear from us. Shipping tags and full information free. Ask your nearest Bank about us. Write today to **WEIL BROS. & CO., (Est. 1871) Fort Wayne, Ind.**

**OUR TRAPPERS
GUIDE FREE**

Death to Heaves Guaranteed
Or Money Refunded.

NEWTON'S
Heave, Cough and Distemper Cure.
\$1.00 per can at dealers, or express paid. 18 years' sale. Send for booklet, Horse Troubles.
THE NEWTON REMEDY CO., Toledo, Ohio.

254 PAGE CATALOG FREE
TELLING HOW TO SAW LUMBER, SHINGLES, WOOD, GRIND CORN AND WHEAT, ALSO DESCRIBING FULL LINE OF ENGINES, BOILERS, GASOLINE ENGINES, WATER-WHEELS AND MILL GEARING.
DELOACH MILL MANUFACTURING CO. Box 357 Bridgeport, Alabama.

CALVES RAISE THEM WITHOUT MILK
BOOKLET FREE.
J. E. Bartlett Co., Jackson, Mich.

Pair of Young Bay Mares for Sale,
weigh 2,400 lbs. Will take one or two cheap light horses.
J. W. SLATER, Traverse City, Mich.

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

BREEDERS' DIRECTORY.

CATTLE.

ABERDEEN-ANGUS.
Herd headed by **UNDULATA BLACKBIRD** TD 3836, one of the best sons of **PRINCE ITO 50066**, and Grand Champion Bull at the Detroit and Grand Rapids Fairs of 1907, 1908 and 1909. Herd consists of Friesas, Blackbirds, Prides, etc.
WOODCOTE STOCK FARM, Ionia, Mich.

ABERDEEN-ANGUS AND POLLED DURHAM
BULL Bargains. Choice registered Show Bulls. Blue-blooded pedigrees. No reasonable offer refused. The Clover Blossom Farm, Port Austin, Mich.

AYRSHIRES—A Dairy Breed of much merit. Young stock for sale—also Berkshire Pigs, and ten varieties highbred Cockerels. Eggs in season. **Mich. School for the Deaf, Flint.**

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

LONG BEACH FARM.
40 HEAD HOLSTEINS All Registered.
All highly bred. One \$30; three at \$45; one at \$100.
F. S. KENFIELD, Augusta, (Kalamazoo Co.) Mich.

HOLSTEINS

Butterboy Ella De Kol No. 49509 is for Sale. Also three extra good bull calves, 5 yearling heifers, 8 good young cows. Must be sold before winter.
L. E. CONNELL, Fayette, Ohio.

HOLSTEINS—\$300 buys two fine registered heifers, due in Dec. Write for description etc. **I. M. SHORMAN, Fowlerville, Mich.**

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

Northern Grown Jerseys.
ROYCROFT FARM, Sidnaw, Mich.

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

Jersey Bulls, Cows and Heifers
Island and St. Lambert breeding. Also some choice grade heifers.

DUROC JERSEY SOWS
Choice individuals and popular blood lines. Inspection invited. Full information cheerfully furnished. If you cannot visit our farm at once write

BROOKWATER FARM, Ann Arbor, Mich.
A. W. MUMFORD, Manager.

BLACK MEADOW FARM
JERSEYS
ROYAL OAK, MICH.

Pure St. Lambert JERSEYS and some nearly pure. **CLARENCE BRISTOL, Fenton, Mich. R.F.D. No. 5.**

LILLIE FARMSTEAD JERSEYS
We have some splendid young bulls for sale. Some of them are old enough for service. They are from cows with records of 300 to 425 pounds of butter last year. Write for description and prices.
COLON C. LILLIE, Coopersville, Mich.

JERSEY BULL CALF born Mar. 13, '09. 2nd calf of a heifer that gave 224 lbs. of milk in 1 year; first calf as 2-year-old, fine individual. **THE MURRAY-WATERMAN CO., R. 6, Ann Arbor, Mich.**

DAIRYBRED Shorthorn Bull Calves For Sale. Also a few heifers, good notes as good as cash. (Citizens Telephone). **J. B. Hummel, Mason, Mich.**

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

HOLSTEIN FRIESIANS headed by Canary B. Rock cockerels. **W. B. JONES, Oak Grove, Mich.**

BOARDMAN STOCK FARM, Holstein Cattle.
JACKSON, MICH.
Has more imported Holstein-Friesian Cows than any farm in the Middle West. Registered BULL CALVES of the most fashionable breeding. 30 fine, registered, Duroc Jersey sows due to farrow soon.

EXTRA good SHORTHORN BULL 9 months thoroughbred
S. J. BELCHER, ROLLIN, Lenawee Co., Mich.

SHEEP.

PARSONS OXFORDDOWNS
Hornless delaine, Black tops.
ROMEYN C. PARSONS, Grand Ledge, Mich.

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

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

OXFORD DOWN EWES
bred to imported rams for sale at farmers prices.
B. F. MILLER, Flint, Michigan.

Rockland Farm Delaines—A few choice rams for the 1909 trade. Prices right. **D. E. TURNER & SONS, Mosherville, Mich.**

FOR SALE—Registered Rambouillet. 30 ewes and 42 ram lambs, **THOS. FLETCHER & SON, Chelsea, Mich.**

HIGH-CLASS Merinos & Delaines; ewes shear up to 24 lbs., rams to 30 lbs., large size, well covered. **S. H. SANDERS, Ashtabula, Ohio.**

REGISTERED Von Homeyer Rambouillet Rams at Farmer's Prices. **THOS. WYCKOFF, Rambouillet, U.S.A., Orchard Lake, Mich.**

20 RAMBOUILLET RAMS (reg.) left at a bargain. **J. Q. A. COOK, Morrice, Mich.**

KOPE-KON FARM, Kinderhook, Mich., offers yearling and two-year-old Shropshire ewes and bucks at prices you can afford to pay.

Shropshire Rams—Good ones from imported and Canadian stock. Also eight ewes. **Willis S. Meade, R. No. 3, Holly, Mich.**

SHROPSHIRE YEARLING RAMS \$16 (sixteen) each. Express paid to quick buyer. **ROBT. GROVES, (Shepherd) R. D. 3, Pontiac, Mich.**

SHROPSHIRE CHOICE RAMS AND EWES. \$10 to \$16 each. **C. J. THOMPSON, Rockford, Mich.**

SHROPSHIRE HALL STOCK FARM.
Will make special prices for thirty days, on ewes from 1 to 3 years old, all bred to imported Cooper and Mansell rams to lamb in March and April, also on very choice ewe lambs, this is to make room for an importation that is going to arrive this spring.
L. S. DUNHAM & SONS, Concord, Michigan.

HOGS.

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

LARGE ENGLISH BERKSHIRES.

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

Boars—Berkshire—Boars

Two, weighing 400 lbs. each, one 350, good ones, too, and cheap. Other smaller ones. They must go at once. **Guernsey bull calves, Pekin Ducks, and Barred Rock cockerels. HUPP FARM, Birmingham, Michigan. G. C. HUPP, Manager.**

BERKSHIRES Young stock from champion State Fair prize-winners, at moderate prices. **M. D. & G. B. JOHNSON, R. No. 3, Plymouth, Mich.**

BERKSHIRE sows bred for spring farrow. Premier Longfellow & Masterpiece families Extra choice individuals & the best breeding on earth. Also 2 very fine young boars. **C. D. Woodbury, Lansing, Mich.**

BERKSHIRES of the most fashionable type and strains. **C. S. BARTLETT, Pontiac, Mich.**

NORTHERN GROWN BERKSHIRES.
ROYCROFT FARM, Sidnaw, Mich.

Two Boars, do for fall service. A few gilts left. Also a fine lot of fall pigs ready for weaning. Either sex or pairs no kin. **A. A. PATULLO, Deckerville, Michigan.**

DAMS BROS. Improved Chester Whites, Litchfield, Mich., won 125 premiums in '09. Booking orders for bred sows; boars ready for service. Buff Rock, W. Orpington, W. Leghorns cock'ls. Shorthorn bulls ready for service.

IMPROVED CHESTER WHITES. A fine lot of spring pigs, either sex, farrowed in March and April. Price \$15. Satisfaction guaranteed. **Colon C. Lillie, Coopersville, Mich.**

IMPROVED CHESTERS. Choice young Boars ready for service. Sows bred or open. Also choice Holstein Bull Calves, of the best of breeding. **W. O. Wilson, Okemos, Mich. Both phones.**

PURITAN HERD OF CHESTER WHITES—None better sold. Sows and gilts bred for April farrowing for sale. **WILL W. FISHER, Watervliet, Mich.**

DUROC JERSEY SWINE, Shepherd Dogs. B. for 15. **J. H. BANGHART, Lansing, Mich.**

DUROC-JERSEYS—50 bred and open sows, plenty of growth and quality. Boars ready for service. Prices right. Write **J. C. Barney, Coldwater, Mich.**

DUROC JERSEYS
CAREY U. EDMONDS, Hastings, Mich.

DUROC BOARS for sale—Also 1 Reg. Percheron Stallion sucking colt, gray, weight 700 lbs. **M. A. BRAY, Okemos, (Ingham Co.) Mich. Indpt. Phone.**

O. I. C. SWINE—Grandson of Jackson Chief, the World's Champion and Grand Champion O. I. C. Boar, heads my herd, he is also a grandson of Tutesy, the World's Champion sow. I am sold out of spring and June farrow of both sexes. **A. J. GORDEN, R. F. D. No. 2, Dorr, Mich.**

O. I. C. swine of spring farrow, both sexes. Some Aug. and Oct. pigs. All of right type and breeding. **Geo. P. Andrews, Dansville, Ingham Co., Mich.**

O. I. C's—50 HEAD of Fine Spring Pigs for Sale, either sex. Large, strong stock. **OTTO B. SCHULZE, Nashville, Mich.**

O. I. C. SWINE—Spring farrowing, either sex, not akin. **E. E. BEACH & SON, R. 3, Brighton, Mich.**

FOR SALE—O. I. C's—2 extra good boars. Some choice pigs. Rose Comb Brown Leghorns, April hatch, standard bred, at prices that will move them. Satisfaction guaranteed. **J. R. Inskeep, Holly, Mich.**

Nov. 13 I will Public Sale 75 Poland-Chinas sell at including Imp. Spell and Memphis, the Grand Champions at State Fair. Write for catalog. Have a few boars left at farmers' prices. **WM. WAFFLE, Coldwater, Mich.**

POLAND-CHINA BOARS—Big, western type, big litters, \$10 up. Shropshire Bucks, lambs \$10; yearlings \$15. **J. C. BUTLER, Portland, Mich.**

P. C. BOARS—Bony, growthy fellows. Your money's worth. **WOOD & SONS, Saline, Mich.**

POLAND-CHINAS—Perfection strain. Choice young boars ready for use. Also sows. **E. D. Bishop, R. 38, Lake Odessa, Mich.**

POLAND-CHINAS Long bodied, spring boned, pigs, both sex, at low prices. Send for snap-shot photo. **Robert Neve, Pierson, Mich.**

Poland-Chinas—A few choice young boars ready for use. The best breeding. Satisfaction guaranteed. **R. W. MILLS, Saline, Mich.**

P. C. BOARS of great quality and of the best breeding. Satisfaction guaranteed. **R. W. MILLS, Saline, Mich.**

LARGE IMPROVED YORKSHIRES—Young boars ready for service, \$18. Young sows bred to farrow next spring \$25. Fall pigs either sex \$10. Satisfaction guaranteed. If you want the most economical feeders possible, breed your sows to a Yorkshire boar. Yorkshires are sure to be the most popular breed of the future.
COLON C. LILLIE, Coopersville, Mich.

POULTRY

AN ECONOMICAL POULTRY HOUSE.

All summer we had planned on a good new poultry house, to be built as soon as the rush of summer work was over. However, the old saying about man's proposing in this case proved true. First, the early frost shortened the money crop; next the serious illness of the head of the family finished up the rest of the spare cash, and still the poor hens were roosting in two old, leaky, drafty coops.

For a time it seemed that nothing could be done to help matters but on looking around I discovered enough 2x6 and 2x8 material to make a frame 10x16 ft. Going still farther it was decided that by using the best of what could be saved out of the old coops we could make a tight roof and have enough material to double board the sides, thus making it fairly warm. Here is where the housewife had an idea. I had been wishing for some building paper to put between the layers of siding, as it would make the house so much warmer. Asking me to wait a moment she hurried into the house and soon returned with an armful of old Michigan Farmers, magazines, etc., that had done their full duty, having been read and reread, but still they were good. Taking a box of tacks she soon showed me how those papers could still be made useful. By lapping the edges liberally a thick heavy covering of paper was soon on which the wind will not find it easy to get thru.

Next we wanted to leave a large opening in the south wall and not having any new netting ready, a discarded woven-wire bedspring was brot out and made use of. It makes a strong and durable screen, covering an opening about 5x6 ft. in size. Then a curtain, made of some canvas that had passed its first usefulness, was attached at upper edge of the screen, to be rolled down and fastened in stormy weather. A sash window in the east gives added light and also helps out on the days that are too stormy to have the south curtain raised. The door was placed in the east side.

The sides of this house are 5 ft. to the eaves. Then a double pitch roof, running rather steep, gives plenty of breathing space and the 50 hens now occupying it seem as happy as if they were living in the more substantial and larger coop we had at first thought necessary. Now, while I would not advise anyone to build such a poultry house if the means for building a better one are available, there are some perhaps in need of more room for their fowls this winter who may be helped by this article. The time spent in building was very short, two young boys doing most of the work, the hens being in their new home at the end of three short days. The actual money outlay was only the cost of a few pounds of nails. Perhaps the editor will smile at learning to what use the good old Michigan Farmer is sometimes put, but no matter; it is always good and helpful to A FARMER.

OLD HENS FOR EARLY WINTER EGGS.

The other day I passed a place where a man was feeding a large flock of Brown Leghorn hens. Upon my remarking that he had a large number of hens, he said that there were too many and he was going to sort out and dispose of many of them. Knowing the size of his poultry house, I was sure there were too many hens for good winter laying, but with another building for them they could be made profitable all winter.

This suggests the fact that in this and many similar cases it would probably pay someone to buy the discarded hens from such flocks and make egg producers of them this winter. Their age will not stand in the way of getting eggs, if they have not passed too many winters. Most persons who want to buy hens for laying are heard inquiring for pullets which are always hard to find. Altho having to be fed several months longer than old hens before laying, they might pay as well in the long run, but my point is that for early winter eggs on a small investment for layers and feed, old hens are the thing.

CLARKE M. DRAKE.

He Is Selling Poultry.

H. H. King, Willis, Mich., the popular breeder of Orpingtons, in writing to have his advertisement changed, adds the following: "I am getting good results from my ad. So far I am more than pleased."

Read the new serial story started in this issue. It is wholesome and entertaining.

Poultry Facts

YOU can't shut a laying hen in a closed coop; limit your responsibility to a few handfuls of grain a day, and continue (for long) to collect eggs. You can't leave growing chicks to dew, and wet and sour feed and count them all next winter. But you can—by practicing "The Dr. Hess Idea" of poultry feeding—keep the hen laying and the chick growing, even under most discouraging conditions. A little of

DR. HESS Poultry PAN-A-CE-A

fed once a day in soft feed to hens and chickens, works wonders for both. Poultry Pan-a-ce-a is a tonic; it aids digestion and assimilation, so that the hen gets the greatest benefit from her feed. It goes far toward restoring natural conditions to the shut-up fowl and thus—feeling natural and being well nourished—she lays abundance of eggs. In the same way, by aiding digestion, it helps the chick and all other fowls receiving it. It also cures Gapes, Cholera, Roup, etc. Poultry Pan-a-ce-a gives vitality to resist disease and, where consistently given, adds immensely to the profits in the poultry business. A penny's worth feeds 30 fowls one day. Sold on a written guarantee.

1½ lbs. 25c; mail or express 40c; 5 lbs. 60c; 12 lbs. \$1.25; 25 lb. pail \$2.50.

Except in Canada and extreme West and South.

DR. HESS & CLARK, Ashland, Ohio.

Send 2 cents for Dr. Hess 48-page Poultry Book, free.

DR. HESS STOCK FOOD

Stock raisers often face a serious problem. Cows shrink in milk and "feeders" are slow about fattening. Usually the trouble is over-taxed digestive organs. When cow or steer seems to be "off feed" and doing poorly, give a small portion, twice a day, of Dr. Hess Stock Food. That will restore appetite and give tone to every organ. Then if the same simple practice is followed out consistently, the profits at both pail and scale will be more satisfactory. Sold on a written guarantee.

100 lbs. \$5.00. 25 lb. pail \$1.60. Except in Canada and extreme West and South.

Smaller quantities at a slight advance.

Send 2c for Dr. Hess Stock Book, free.

INSTANT LOUSE KILLER KILLS LICE



TRADE MARK
SAL-VET
SAL-VET CO. INC.



Destroys Worms—Increases Your Profits

It's at marketing time that you reap the full benefit of feeding Sal-Vet. It rids your stock of worms and all worm troubles—prevents loss of lambs by parasitic infection—enables you to raise healthier lambs, finer sheep with more wool and better mutton. Especially effective against stomach worms in sheep.

We Prove it Before You Pay — Send No Money

Sal-Vet saves your shoats and enables you to raise big hogs. It makes bigger steers and puts cows in condition to give more and richer milk. It will keep the digestive organs of all your stock in perfect condition, so that what they eat goes to make profit for you.

Animals cannot fatten and thrive when they have worms. These parasites eat the feed that should go to nourish the animal. Get rid of the worms—Sal-Vet kills worms. It will put your stock in prime condition and keep them immune from parasitic infection.

Sal-Vet is a highly medicated salt that is easily fed—the animals take it so readily that with it they doctor themselves. Every cent you spend for Sal-Vet will be returned to you ten fold by your stock.

Feed it to your stock and get the big profits your hard work entitles you to.

PRICES—100 lbs., \$5.00; 200 lbs., \$9.00; 300 lbs., \$13.00.

Testimonial from A. T. Gamber, the well-known breeder of American and Delaine Merinos.

"Your Sal-Vet is all you claim for it. I am pleased to state that as a preventive of worms it does the business; as a conditioner it can't be beat, and is a fine tonic for fitting show stock." (Signed) A. T. GAMBER, Wakeman, Ohio.

We will send you enough Sal-Vet for sixty days use. Don't pay us if it fails to do what we claim. Just fill in the coupon and mail it to us.

The S. R. Fell Company,
Dept. M. F. Cleveland, O.

CUT OUT—MAIL TODAY
Send me enough Sal-Vet to feed my stock 60 days. If it does what you claim I will remit. If not you are to cancel the charge. M. F. December 4.
Name.....
P. O.
Shipping Sta.
No. of Sheep.....
Cattle.....
Horses.....



READ WHAT THIS WOMAN DOES
"Made over 11,000 yards of carpet on my loom in spare time the past three years," writes Mrs. Sadie E. Taggart, Waukomis, Okla. "I never weave a day that I don't make 20 yards and I do my own housework. I weigh only 115 pounds—don't tire of weaving. Loom as good an investment as an 80-acre farm."

Start NOW —I'll Show You How \$25 Per Week You Can Easily Make At Home

Now is just the time—start this easy work at home in your spare time—you'll soon be wanting to run your loom all the time—for the very easy profits. I will tell you how you can make your time most profitable—how you can engage in a delightful and fascinating occupation in your own home, that will not interfere with your other duties and assure you big profits for as much or as little time as you may be able to devote to it. I promise that you'll be interested. I say, and I know that every word I say is true, that you can make more money and make it more easily by weaving on a Newcomb Automatic Loom than at any other kind of home employment. My 20 years' experience with others and their letters prove what you can do.

THE NEWCOMB AUTOMATIC LOOM

is made especially for home workers. Unlike any other loom, it practically works itself. A simple movement of the hand is all it requires of the operator. No treading—no stooping—no shuttle throwing. Just the easy work that thousands of old and young are making big money at today—at home.

No experience is necessary. You will be delighted with the ease with which you can make the finest and most durable carpets, rugs, mats, draperies of every kind, and even beautiful portieres, chenille curtains and hammocks. Bear in mind also, that no cash outlay for supplies is required. Old carpets, sacks, cast-off clothing and rags all furnish material for the loom. And the results you get with such material are simply wonderful. You can be sure when you own a Newcomb, that you will have more than enough work to keep you busy. Many of our customers make from \$25 to \$30 a week weaving with the Newcomb, and you can do likewise.

Do not neglect this opportunity. Write me today for my free catalog, "Weaving Wisdom," which tells all about our looms and the extremely reasonable terms on which you can obtain one of them.

W. B. STARK, Sec'y, NEWCOMB LOOM CO.,

24 Taylor St., Davenport, Iowa.

\$750 FREIGHT FOR 120-EGG INCUBATOR

at once. Other sizes priced very low. Always hatch most and strongest chicks. Metal covered; safe. Delivered free east of Missouri River, north of Tenn. Write for delivered price beyond—Big Free Book; best guide to success and economy. J. W. MILLER CO., Box 300 Freeport, Ill.



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DETROIT, DEC. 4, 1909..

CURRENT COMMENT.

The annual report of the Secretary of Agriculture for 1909, was made public on December 1. In it are figures and comparisons with regard to agricultural production which show an apparent increase in the remarkable prosperity which has attended this industry during the last decade. From this report it appears that the total value of the agricultural production of the country for 1909 approximates \$8,760,000,000, a gain of \$869,000,000 over 1908. It also shows that the value of the agricultural production of the United States has nearly doubled in 10 years; the total production 11 years ago being \$4,417,000,000, but little more than half of that for the current year, the total production for the 11 years aggregating the almost incomprehensible sum of \$70,000,000,000.

The production for 1909 expressed in the relative value of principal crops shows that corn leads in importance, as usual, with a total farm value of \$1,720,000,000. This crop exceeds in value the average of the corn crops for the five preceding years, by 36 per cent. Cotton ranks second in value of the country's crops, having a farm value of \$850,000,000. Wheat is third in value, the crop being worth \$725,000,000 on the farms of the country, which exceeds all previous crop values for this cereal, altho the crop is third in point of size with a total of 725,000,000 bushels, the average November farm price being an even dollar a bushel. Next in value comes the hay crop worth \$665,000,000, next the oat crop, valued at \$400,000,000; then potatoes, worth \$212,000,000; and tobacco with nearly \$100,000,000. The sugar production of the country, including beet and cane sugar and molasses, aggregates about \$95,000,000. The barley crop is estimated at about \$88,000,000, flax seed \$36,000,000 and rice \$25,000,000.

Taken in groups, the production of all cereals combined is estimated at \$4,711,000,000 bushels, an amount considerably greater than for any other year except 1906, and exceeding the average of the preceding five years by six and one-half per cent. The value of all cereals for all current years, has never been equaled in any previous year, being almost exactly \$3,000,000,000, or 34 per cent above the five year average. The report also shows

that this is the year of highest production for potatoes, tobacco, beet sugar, and rice and next to the highest production for corn, oats and all cereals.

Secretary Wilson concludes his review of the production of 1909 as follows: "The agricultural production of 1909 must add much to the prosperity of farmers. The record is unexampled in wealth production and tells of abundance in quantity. Year by year the farmer is better and better prepared to provide the capital and make the expenditures needed to improve his agriculture and to educate his children for farm life and work."

Several subscribers have recently asked if there is a bounty on sparrows.

This year. For their information we will state that the legislature for 1907 enacted a law which provides that every person, an inhabitant of this state, who shall kill an English sparrow in any recognized township, village or city in this state, during the months of December, January, and February of each year, shall be entitled to receive a bounty of two cents for each sparrow thus killed. Briefly stated, the method of the payment of such bounty as follows:

Every person applying for such bounty shall take such sparrows in lots of not less than ten to the clerk of the township, village or city, within which such sparrow shall have been killed, in a state of good preservation. If satisfied with the correctness of the claim, said clerk issues a certificate stating the amount of bounty to which the applicant is entitled, and destroys the sparrows. These certificates may be presented to the county clerk by the claimant or his agent, and said clerk will then draw a warrant for the amount which will be paid by the county treasurer, upon presentation, from the general or contingent fund of the county. A penalty is provided for any attempt to collect bounty on other birds or in any other manner than above specified.

The opinion is expressed by some of the persons who have inquired with regard to this law that the sparrows do more good than harm and by others that the payment of a bounty is unwise, since it can hardly result in the extermination of the birds. Probably the first view is erroneous so far as the common English sparrow is concerned, as he seems to be an undesirable bird from the standpoint of the damage which he does to other birds as well as to crops; but the last opinion conforms with that of our best authorities on the subject, whose opinions have been published in this paper. However, it is the law, and as such must stand until repealed.

This is a subject of importance to every reader as a tax payer as well as a farmer, and is worthy of his careful consideration previous to and during the next legislative session.

As heretofore noted in these columns, the federal census is to be taken next year, but while the date for

which the value of farms and farm equipment will be taken is April 15, 1909, the questions which will be asked relating to farm production will be for the calendar year of 1909.

For this reason, if the census is to be an accurate one, it will be necessary for every farmer to keep some kind of a record or memorandum of his farm operations for the present year which will enable him to give accurate answers to the questions which he will be asked. In order that every farmer may have that at hand, Census Director Durand has had prepared a list of questions which will be asked by the census enumerators, and an outline of a simple method of making a written record of farm operations and equipment which will, if acted upon, enable every farmer to answer those questions with a desirable degree of accuracy. The following is the list of questions and the comments thereon, which will give every reader advance information with regard to this census:

The advantages of always having on hand for ready reference a detailed written statement of one's farm property are readily understood by everyone and will be most keenly appreciated when the census enumerator calls with his list of questions next April. The value of the census figures of farm wealth depends upon their accuracy, and accuracy can only be secured thru the co-operation of the farmers themselves. In no way can the farmer extend more practical assistance to the census bureau, and in no way can he render himself a greater service than by getting out his pencil and note book on the evening of April 14 next and making up a statement of his farm property. The questions to be asked concerning farm property are as follows:

1. Total value of farm, with all buildings and improvements.
2. Value of buildings.
3. Value of all improvements and machinery, including tools, wagons, carriages, harnesses, etc., and all appliances and apparatus used in farming operations.
4. Number and value of domestic animals, classified as follows:

Cattle:—(a) Born before January 1, 1909; Cows and heifers kept for milk; cows and heifers not kept for milk; steers and bulls kept for work; steers and bulls not kept for work. (b) Born in 1909: Heifers; steers and bulls. (c) Calves born in 1910.

Horses—All horses born before January 1, 1909; colts born after January 1, 1909; colts born after January 1, 1910.

Mules—All mules born before January 1, 1909; mule colts born after January 1, 1909; mule colts born after January 1, 1910.

Asses and burros—(all ages). Swine—Hogs born before January 1, 1910; pigs born after January 1, 1910.

Sheep—Ewes born before January 1, 1910; rams and wethers born before January 1, 1910; lambs born after January 1, 1910.

Goats and Kids—(all ages). 5. Number and value of poultry over three months old:

Chickens, ducks, geese, turkeys, guinea fowls, pigeons.

6. Number and value of swarms of bees.

The census will not ask the value of household goods, nor that of hay, grain, or other farm crops on hand on April 15. These items should be included, however, by all desiring a complete inventory of their farm property.

The value given to the farm should be, as nearly as can be judged, the amount that could be obtained for it if offered for sale under normal conditions. Current market prices should be carefully considered in estimating the value of live stock. Altho the census merely requires a statement of total value of all implements and machinery, it is believed that a classification of these items under the following four heads will be found valuable:

1. Vehicles. This class comprises automobiles, wagons, carriages and sleighs, and equipment used in connection with them, as harnesses, blankets, whips, etc.
2. Heavy farm implements, comprising all implements and machinery operated by any power other than hand power, as plows, harrows, rollers, reapers, mowers, hay-loaders, feed grinders, etc., etc.
3. Hand machinery and tools, including carpenters' tools, hoes, shovels, scythes, forks, grindstones, fanning-mills, etc.
4. Miscellaneous articles, including all such minor equipment as kettles, pails, barrels, baskets, ladders, ropes, chains, etc., not included in the first three classes.

Many farmers greatly underestimate the total value of their possessions of this character when considering them in the aggregate, and it is only by preparing an itemized list as suggested above that an accurate estimate of their worth can be made. The value assigned this class of property in the inventory should be the estimated amount it would bring at public auction under favorable conditions.

No special blanks or forms are necessary for preparing an inventory. An ordinary notebook answers all purposes, but it should be large enough to admit of carrying the figures for at least five years in parallel columns. This facilitates comparison of the figures for different years. Some may find it more convenient or desirable to take stock on January 1, than on April 15. It will be a simple matter to bring such an inventory up to date when the census enumerator calls, as it will only be necessary to take into account the changes that have taken place during the brief intervening period.

As in the case of the farm inventory, no special blanks are required for the record of farm products of 1909. An ordinary notebook with leaves at least six inches wide will be found convenient. The following information will be called for:

1. Farm expenses in 1909. (a) Amount spent in cash for farm labor (exclusive of house work). (b) Estimated value of house rent and board furnished farm laborers in addition to cash wages paid. (c) Amount spent for hay, grain, and other produce, (not raised on the farm), for feed of domestic animals and poultry. (d) Amount spent for manure and other fertilizers.

No inquiry is made regarding household or personal expenses or expenditures for repairs or improvements. Each of the four questions asked is of fundamental importance in its bearing on agriculture as an industry.

2. Live stock. (a) Number of young animals of each kind born on the farm in 1909. (b) Number of animals of each kind purchased in 1909 and the amount paid; number sold and amount received; and number and value of those slaughtered on the farm.

3. Dairy products. (a) Quantities and value of milk, butter and cheese produced on the farm in 1909. (b) Quantities of milk, butter, cream, butter-fat and cheese sold in 1909 and amounts received.

4. Poultry and eggs. (a) Value of poultry of all kinds raised in 1909, whether sold, consumed, or on hand. (b) Amount received from poultry sold in 1909. (c) Quantity and value of eggs produced in 1909. (d) Quantity and value of eggs sold in 1909.

5. Wool and mohair. Number and total weight of fleeces shorn in 1909 and amount received from sales.

6. Crops. For each crop harvested on the farm in 1909, give the number of acres, the quantity produced, and the value of the products. The number of acres of each crop to be planted for harvest in 1910, will also be called for by the enumerator. This cannot be determined much before the date of the enumeration. Instead of giving the number of acres in orchards and vineyards, give as nearly as possible the number of trees and vines of bearing age. The quantity of certain fruit products, as cider, vinegar, wine, and dried fruits produced in 1909 will be required, as will also the quantity and

value of sugar, syrup and molasses produced from cane, sorghum, sugar beets and maple trees.

7. Sales of specified products in 1909. A considerable part of the annual production of corn, oats, barley, kafir corn, milo maize, hay, flax-fiber and straw, other straw, cornstalks and cottonseed is usually consumed on the farm. Owing to this fact, a report will be asked concerning the quantity of each of these products sold in 1909 and the amounts realized therefrom.

8. Forest products. The value of all forest products cut or produced in 1909 for farm consumption will be asked, as will also the value of similar products cut or produced for sale, including receipts from the sale of standing timber.

9. Irrigation. Farmers who irrigate their land will be asked to report the source from which water is obtained, the number of acres of pasture land irrigated, and the total irrigated acreage.

This outline covers every important question that will be asked concerning the farm products of 1909. American agriculture is so diversified and so highly specialized in many of its branches, that any schedule designed to secure a fairly complete exhibit of its resources and operations must necessarily contain a large number of inquiries. The average farm operator will not be called upon to answer one-seventh of the printed questions, hence the somewhat formidable appearance of the schedule should occasion no alarm.

More than four months remain in which to review the results of the year 1909 and prepare for the visit of the enumerator. But preparation of a written record should be commenced at once. No one should attempt to complete it in one evening but the work should be divided as indicated in the above outline, one evening being given up to farm expenses, a second to live stock, a third to dairy products and so on thru the list. In this way, each topic can be given the consideration it deserves, and the resulting figures are certain to be more accurate than if compiled hastily.

HAPPENINGS OF THE WEEK.

Foreign.

The recent activity of the volcanoes near Santa Cruz, Teneriffe, one of the Canary Islands, is, at least, temporarily suspended so far as the lava flow is concerned.

The cotton crop of Egypt for the year has been estimated by the best authorities at 6,000,000 cantars, compared with 7,500,000 cantars for 1900. A cantar is about equal to the English hundred weight.

King Manuel of Portugal, is in Paris.

The heavy demand for lumber from concerns in the United States caused an advance in quotations for rough lumber thruout Western Canada.

Plans are under consideration for holding a celebration at The Hague, in honor of the opening of the Palace of Peace.

The Spanish government will not pursue further the campaign in Morocco. Already the troops have conquered such territory as will tax the capacity of the government to regulate which, with the demand upon the federal machinery from the home country, has convinced the authorities of the foolishness and danger of further effort to lay siege to new territory.

As the term of Lord Minto, viceroy of India, draws to a close the British government is becoming anxious about who will be selected as his successor, in that much opposition to English rule is at present shown in India.

It is reported that James Bryce is to be withdrawn as English Ambassador at Washington. Sir Morris D. Bunsen is mentioned as his successor.

The French Parliamentary Commission is revising the rules of procedure in the French courts.

It is evident that the contest between the Houses of Lords and Commons of England will demand an election early in the coming year. It seems imminent from the stand taken by the former body, that the electorate will be called upon to settle the matter.

The Trans-Andine Railway which will connect Lapaz, Bolivia, with the Pacific Ocean, has the tunnel completed thru the backbone of the Andes Mountains. This tunnel is five miles long and is the highest in the world. The road is 300 miles long and will cost \$15,000,000 to complete. American capital is doing the work which was begun shortly after the Chilean government gave permission in 1903.

A resolution has been introduced into the Italian Parliament for a speedy reconstruction of Messina. The large number of refugees that are without shelter demand quick action on the part of the government.

Report comes from Japan that a sugar fraud has been discovered there and that prominent government officials are implicated.

A recent review of the agricultural possibilities of Panama shows that the Central American republic is likely to become a menacing competitor to Jamaica, especially now that the attention of so many people and different countries are being attracted to it.

Two bandits who are said to be responsible for some 34 murders were hunted down by peasants in Serbia after a chase extending nearly across that country.

A farewell banquet was given by President and Mrs. Diaz, of Mexico, to American Ambassador Thompson last Tuesday.

News comes from the Russian government that the announcement to the effect that an American syndicate will develop the Trans-Siberian Railway is erroneous.

The German reichstag reconvened on Tuesday of this week. It is likely that the present session will have much to do with American relations growing out of our new tariff law.

An order has been issued by the Mexican government (Continued on page 481).

Magazine Section

LITERATURE
POETRY
HISTORY and
INFORMATION



The FARM BOY
and GIRL
SCIENTIFIC and
MECHANICAL

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

THREE horsemen were riding slowly up a California foothill. As they reached the summit, the eldest of the trio drew rein and said: "There it is, boys. There is your new home, Ortega Ranch."

His companions likewise stopped their horses. The three men sat still, looking at the valley below them, which sloped from the mountains to the sea. On the opposite side could be seen the little village of Capistrano. It looked out to the sea from between two spurs of broken and uneven hills, with mesas and canyons in the background. Not far from the village stood the ruins of a grand old mission church, the broken cloister walls of the quadrangle gleaming yellow-white, like an opal, in the sunlight.

But it was at the foreground of the scene that the two young men gazed intently. There stretched rolling fields which were beginning to take on a tinge of velvety green, for the first autumnal rains had come a fortnight before. A great adobe house, with outbuildings at the back, was surrounded by trees and vines that were apparently uncared for.

John Martin, the taller of the two young men, nodded his head. "It looks exactly as you said, Mr. Smith. All the way out here I've been saying to myself that a man—even two men—were fools to buy so big a tract of land without seeing it."

The real-estate agent smiled reassuringly. "But this was an excellent case, you and your cousin were desirous of buying a tract of land large enough to permit you to work out your theories, while at the same time you felt that you could not get away from railroad facilities that would enable you to place the productions of your ranch upon the city market. And the forced sale of Ortega Ranch had to be closed in a single day."

By that time they were riding down the hill. Guy Cross, the shorter but heavier of the cousins, asked: "Has this always been a cattle ranch?"

Mr. Smith shrugged his shoulders. "For a hundred and fifty years. The primitive methods of ranching that were employed at the beginning of that time were all that the present Senor Ortega seemed capable of comprehending. And that was his ruin, altho the estate was heavily encumbered when it came to him."

"But is not the land adapted to stock raising?"

"The soil is unsurpassed; with plenty of water it will raise anything. Years ago the Ortegas made money from their immense herds, but times have changed, and so have methods of handling stock. The old senor could not adapt himself to the change. You will not find him a pleasant neighbor, I fear."

"I can't say I blame him for feeling resentful," John said with a whimsical smile. "Imagine giving up a home that had been in your family for a hundred and fifty years and going to live at what in the east we would call the tenant house of the farm!"

"How did it come about that Ortega had this house and the five acres of land exempt from the mortgage?" Guy asked.

"It seems that years ago his father—or was it his grandfather?—deeded that bit out of the ranch to a faithful servant who had saved his master's life. At the servant's death it came back to the Ortega family. A separate deed was made, and the mortgage did not cover it. It's a shame, for it spoils your lines, taking a piece out of your land. Besides that dilapidated old 'dobe house stands directly in front of the ranchhouse, with only the road between them."

"I should think Ortega would be glad to sell the place. It must be humiliating for him to live on there."

"It is, but he swears he'll never leave the spot. The old man is unreasonable, adding something of the long-ago resentment of the Spaniard to the American to the feebleness of age. Then he is very poor. I hardly know how he and his daughter live. The girl is pretty and well

THE ORTEGA GOLD BY HOPE DARING.

educated. You see, her mother was an American. Ortega broke with his church to marry her, and she broke with her family to marry him. It is said that they were rapturously happy, altho he was twenty years her senior. They were married ten years before the Senorita Carina was born, and her mother died when the girl was twelve. The American relatives sent her to a Los Angeles boarding school for two years, but she came back to the ranch a year ago. There! Now you can get a good view of the old ranch house."

It was only a short time before the horsemen turned from the highway to the drive that led up to the house of Ortega Ranch. The building was of adobe, large and low, with a wide veranda across the front. This was shaded by a row of stately magnolias and palm trees and by matted and unpruned vines. On one side of the house lay what had once been a fine flower garden, but trees, shrubs, vines and flowering plants grew in a tangle, and the empty basin of the fountain was overgrown with grape vines. The house was built round three sides of a court, and the fourth side was planted with trees which screened the outbuildings.

As the horsemen were dismounting, the front door opened, and a Chinaman, whom the cousins had sent out that morning, came down the steps.

"Hello, Sin Le!" John Martin called. "Take our horses. How's everything going? You'll have dinner for us in an hour?"

"Everything all lite. Dinner is being made," and Sin Le led the horses around the house, leaving the new masters of the place to enter unattended.

Within the big rooms looked bare, for John and Guy had sent out only such furniture as they must have. However, they remained in the house but a few minutes, going out to inspect the barns and corrals until Sin Le called them in to an excellent dinner. The meal was served in the large dining-room which opened both upon the inner court and the front veranda.

The meal over, the three men went out on the veranda. Smith smoked, but the two easterners contented themselves with the plate of oranges which Sin Le had placed upon a curiously carved bench that sat back against the wall.

For a little time no one spoke. Off to the west, from whence came the fresh salt air of the sea, the sunset's afterglow painted the sky with golden and rosy splendor. John Martin turned his eyes from that radiance to the east where the purple-gray shadows of night were beginning to shroud the mountains and their skirting foothills. Then the young man looked thru the branches of the trees that shaded the veranda to where, on the opposite side of the road stood a small adobe house. It had been recently re-roofed, and it was apparent that a feeble and ineffectual effort had been made to put the grounds surrounding it in order. At the rear there was a rude stable, and back of that a garden, some trees, and a pasture.

"Pretty dreary home for a boarding-school miss," said John to himself. "Eh! What was that, Smith?"

"I asked if either of you gentlemen had ever had any practical experience in ranching—farming I suppose you call it in the east."

John laughed. "You wonder if we are genuine tenderfeet. Now, I'm not sure but we are. I graduated from the agricultural college of the state where I have always lived, five years ago. Since then I have taught in the college, but it has been the dream of my life to test some of my theories. Here I know I'll have the handicaps of a new climate and soil, but we'll win, if it does take time."

"I hope so," the real-estate agent said

in a politely incredulous voice. "Perhaps Cross knows more of the work."

"Guy? Why, he grew up on a farm, as all great and good men do, but he has been a bank employe ever since he graduated from the high school."

Smith laughed. "Well, you'll find California all right. Sin Le is a good cook, but you will find this house lonesome, with no woman. I believe you said that neither of you were married."

"No, but Guy has expectations."

"More than expectations—realities," Cross said good-humoredly. "We've got to win out, Smith, for I am making a home for the bonniest little girl in all the land. You'll see."

"I hope so. Did you not tell me that you were going to put on cows, start a dairy farm?"

"We have bot twenty-five cows which are to be delivered tomorrow. They all give milk, and we have made arrangements to ship our cream to Los Angeles. Our separator is among some of those boxes piled in the court, for we bot that in the east. But we are going to put out fruit trees, some this very year."

"You will have to make some arrangement about irrigation. The well here is a good one, but you know I told you that the old windmill was out of order. Besides, the water supply was never adequate to the needs of the ranch."

"We are going to replace that antiquated old mill by a gasoline engine. Yesterday I talked with an agent of the Hill-Dam Company. They will put in their cement border ditches for us at any time, if we'll agree to take a certain amount of water for five years. It will put us in debt a little, but we'll have to do it."

"It's the only way you'll get big returns from your ranch," Mr. Smith said gravely. "Of course, you fellows will make mistakes, but I believe you've got the right idea. There's lots of money to be made here. Ortega might have paid his debts if he would have waked up and stopped dreaming about the hidden gold that has been the family's curse."

Guy Cross sat up, staring thru the gloom into Smith's face. "Eh! What's that about hidden gold? If there is that romantic feature about the place it may tempt the little girl at home to come west at once."

Smith chuckled. "I believe you're getting a wee bit homesick for 'the little girl at home.' Well, there's a romantic story all right, and Senor Ortega declares that there is gold hidden somewhere about the place. Perhaps that is the reason the old man refuses to leave."

"Tell us the story," John said, stretching himself leisurely on the bench. "I'm of the opinion that we'll win the gold of our yellow cream and oranges by hard work, but it is well to know the possibilities of our new possession."

"If the traditions of the country are true, there is some foundation for the story, for a great sum of gold mysteriously disappeared. Ortega Ranch once comprised three times as much land as now, and was rich in flocks and herds. Then the Ortegas were staunch supporters of the church and the secularization of the missions, which was accomplished in 1843, after years of threatening, was a blow to the family. It was thirteen years later that California came under the United States government. The head of the Ortega family—the grandfather of the present senor—foresaw trying times for the Spanish-Mexican settlers. On one point he was safe; his title to his land was unimpeachable. He sold a great tract of land and many of his cattle. Instead of investing the money or even paying his debts, he hoarded the gold. No one knew where it was hidden, so when a

horse threw the senor, killing him instantly, the secret of the gold's hiding place was lost."

"But do you mean that it was never found? Surely a thoro search would be made for it."

"I presume that the Ortegas searched for it, but they are so confoundedly proud that they never talked of the matter. Others have searched the grounds, and even broken into the house, to look in vain for the hidden treasure. It's been a curse to the family, for the present senor and his father were contented to sit still and see their fortunes go to ruin, expecting that by some miracle the gold would be returned to them."

"How much was there of it?"

"No one knows," Smith said with a laugh. "Some versions of the tale put it at a round million, but I've an idea that thirty thousand dollars would be a conservative estimate."

Guy whistled. "I say it's hard luck for the old senor and his daughter. When I have time I'll do a little exploring. It seems to me there are plenty of hiding places in the old house. Now I'm for bed; my ride made me sleepy."

John rose early the next morning. He found that Sin Le had fed the horses and was at work getting breakfast.

"More to cook for bimeby maybe?" the Chinaman asked.

"Not for a time; we expect to care for our own cows and milk. We will have to have help, tho, to fit the ground and put in more fruit trees, and we may have to board the men."

"All lite," was Sin Le's cheery response.

John left the house by way of the court. He crossed over to the arbor, deciding that the grape vines must be pruned and cut back.

"It should have been done before," he murmured impatiently. "I believe these leisurely Spanish people never did anything until they had to do it. Now I know nothing about these fruit trees. If Ortega would only prove neighborly I'd be glad to make the information he could give me well worth while to him."

After a stroll thru the orchard John entered the highway which was shaded by a row of tall eucalyptus trees. He scanned them with keen interest. Not until he heard a bell, which he knew signified that breakfast was ready, did he start to retrace his steps. As he approached the house where the Ortegas had taken refuge, the front door opened and a girl stepped out. She walked down the path, not seeing John until she was within a few feet of him. He had stopped, involuntarily removing his hat.

Carina Ortega was of medium height, slender, and willowy. Her complexion was olive but much lighter than many of her compatriots, and her features were delicately chiseled. She had large luminous brown eyes, and the heavy hair that was piled high on her uncovered head was jet-black and reflected the gleam of the sunlight. The rose-pink of perfect health flushed her rounded cheeks. She wore a simple frock of pink gingham, and, altho John had a due share of masculine ignorance regarding feminine attire, he was vaguely aware that the dress was made in the mode of the present day and fitted perfectly.

For an instant the eyes of the two met. A dull red flush colored the girl's face and neck. John concluded that it was the flush of resentment rather than that of embarrassment. Feeling sure she knew who he was, John bowed politely, saying: "Good morning."

Carina gave no response, save a stately inclination of the head. Turning around she walked back to the house which she had just left.

Chapter II.—Getting Under Way.

As John walked on to the ranch house he found his own face flushing. "She is angry at our coming here," he thot. "Now that is like a child. Well, it will be easy

enough to let them alone. I wish the old man would sell that piece of land; it would be better all around for them to move away."

He found Smith and Guy waiting for him. They talked of various matters over Sin Le's fine breakfast, for both the easterners were eager to learn all they could of the region where they had come to make their home. The meal over, Smith mounted his horse and started for Los Angeles.

That was a busy day for the owners of Ortega Ranch. They started out to tramp thoroly over the place. Two hours later they saw their herd of cattle coming, and hastened to meet the drivers and make arrangements for the disposition of the cows. The run-down condition of the ranch was brot anew to their notice by the discovery that, unless some repairs were made at once on the corrals and the few fences, the cows would have the range of the entire ranch.

"One of us must ride over to the village and see if we can get a man to help with the work," Guy said. "You go, John, for you are a better judge of men than I am. I will work at the corral while you are gone and, at the same time, play cow-boy."

John saddled Dick, his spirited black, and started for Capistrano. The ride was a delightful one, for the sky arched over the valley, a dome of pale, clear blue, and the sunlight swept in masses of golden, unbroken light, from the sparkling sea to the distant hazy mountaintops.

The village was picturesque but squalid, many of the adobe houses being in ruins. John's keen eyes saw that a few modern buildings were being erected, all grouped near the station. He was interested in the town; its growth and prosperity would add to the ranch's value.

First, John rode to the station where he completed the arrangements for shipping the cream that had been commenced over the telephone. Then he asked the agent if he knew of a man who could be hired, to commence work at once.

"I know of a dozen Mexicans who need work right bad, but I am not sure how much they can be depended on. Pedro is as good as any of the lot. That's him coming down the street. I'll call him over here."

In response to the call of the station agent the Mexican leisurely approached. When he learned who John was, Pedro's face brightened.

"The new senor from Ortega Ranch," he repeated. "It is hard for Senor Jose Ortega. It is hard to be poor and viejo."

"It is hard for any of us to be poor, and we will all be old some day," the agent said a little flippantly. "What Mr. Martin wants is a man that he can depend on."

Pedro asked many questions, not only about the work and the price to be paid for it, but also about John's plans for the ranch. At last the Mexican promised to start for Ortega Ranch as soon as he had eaten his lunch. John offered to furnish him with his meals, but Pedro shook his head.

"I will each day bring my lunch in a basket. The Chinaman—Bah! It would be rice and rats, while a Mexican can work only when he has frijoles and chilli."

John laughed good-naturedly. "I am willing that you should feast on beans and pepper. Yes, I know a little Spanish, altho I am not sure but mine is the stilted language of the library, rather than the conversational medium of the marketplace."

"What does Senor Ortega say because he is driven from his home?" Pedro asked suddenly.

"What? Now see here, Pedro. We—my cousin and I—bot the ranch all fair and square. Senor Ortega has no right to feel aggrieved, and it's no other person's business."

"Si, senor. But it has been the home of the Ortegas, always. When they find the hidden gold they will buy it back. Or it may be that you will find it."

"Perhaps you will find it yourself, Pedro, if you dig postholes enough this afternoon," John said as he turned away.

The day was all too short for the many tasks which the two young men tried to crowd into it. One of the things they did was to unpack the cream separator and set it up in one of the various rooms that adjoined the kitchen. When the milking was done and John began to separate the milk, Pedro's astonishment was unbounded.

"It is magic, senor," and the Mexican slyly crossed himself. When John had given a somewhat lengthy explanation, Pedro asked, "But why does not the senor fasten the wonder machine to the cow?"

Then I am sure there would be no need to milk the waste milk."

John's ringing laugh caused even the stolid Sin Le to glance in at the open door.

"Mr. John be velly glad. That all lite," he muttered, going back to his cooking.

Again the next morning John was the first one up and dressed. He started for the corral where the cows had been kept all night, a milk pail on each arm. As he walked along he saw a figure moving around among the trees west of the house. John skirted the arbor and entered the orange grove, to find a tall, spare Indian woman standing on a box, deliberately selecting the ripest oranges from the low-growing limbs of a tree. A basket stood at the woman's feet, and in it were a half dozen grapefruits, evidently picked from the only tree on the ranch, and a quantity of lemons. Beside the basket lay a bouquet of the best of the flowers that grew among the weeds in the garden.

"Now what's the meaning of this?" John cried testily.

The Indian woman waited to pick one particularly fine orange before she descended to the ground. Then she faced John. It was impossible for him to arrive at any conclusion regarding her age; her face was wrinkled and worn, but she carried herself proudly erect, and the eyes that met John's gaze were clear and steady.

"What do you want?" she asked in a slow, monotonous voice.

The question was so incongruous with John's state of mind that, notwithstanding his vexation, he smiled. "I want to know what you mean by helping yourself to my fruit and flowers. I am one of the new owners of Ortega Ranch and, while I would be willing to give you some fruit, I do not care to have you helping yourself in this manner."

"But it is for the Senor and Senorita Ortega. Wana would not touch it for herself, but surely the Ortegas—Why, all is theirs."

"Now there is where you are mistaken," John said in a firm voice. "Do you live there?" and he pointed to the old adobe house on the other side of the road.

The Indian woman threw out her hands with a sweeping gesture. "Where else can Wana live? Have you not drove the Ortegas—even the blessed Senorita Carina—to dwell in that hovel?"

"No, I've not. We bot the ranch, paying a fair price for it. And now that we have bot it, it is ours."

"But do you expect the Senorita Carina to go without the fruit that she loves and the flowers, too? Why should you care? The Ortegas always gave to whomever needed."

"That may account for their present poverty. Take home what you have there, but, when you want more, come and ask for it."

John turned on his heel and strode off. At breakfast he related the incident to Guy. When they left the table, Pedro was in the court, waiting for directions. John asked him about the Indian woman.

"She was born here, and her mother was a mission Indian that the Ortegas took in when the church was taken from the padres. Old Wana would die for the Ortegas. Why, senor, I do not see how they could live without her. She cares for the cow that feeds in the single little pasture and for the senorita's pony. She cooks and scrubs."

"What does the senorita do?" Guy asked.

"Ah, the poor senorita! All day she toils at the drawnwork, such as the women of her race have made for ages. When it is done she sells it at the stores of the city, so that her father may have bread. And he is an Ortega, one whose family has lived here in plenty, always."

"There is no use talking, John, we are interlopers," Guy said, as the two young men walked on to the corral, after giving Pedro orders for the day. "I wish the Ortegas were a thousand miles away."

Just then John caught his companion's arm. "There he is—the old senor. It is the first time that I have seen him."

The old man was walking along the highway. He was tall and stooping. His wide-rimmed hat gave the on-lookers only a glimpse of a pale, smoothly-shaven face and long gray hair.

"I say it's hard lines for him," John murmured. "Let Wana take the fruit."

"And we might send them over some cream. Oh, they have a cow of their own. Well, we'll try to make friends."

That proved impossible: it was evident that both the senor and his daughter avoided meeting their new neighbors. John accosted Wana when she was milk-

ing the cow and bade her come for the fruit when she pleased.

"Of course I shall come," was the old Indian woman's cool reply. "Why should I not? It is for the Ortegas."

Two weeks went by. In that time there were several rainy days that interfered with the work that John and Guy were carrying on with so much energy. They built fences enough so that the cows could be kept in the fields selected as pastures. Already they had commenced the pruning of the trees and the clearing up of the ground surrounding the house. Realizing their own ignorance on many points, the young men called upon Sam Marshall, a native-born Californian who had lived upon a ranch in the valley for many years, to ask his advice.

Mr. Marshall was most cordial. "I'll be glad to tell you anything about fruit-raising that I know, and I've got a mighty fine young orange grove coming on. I want you to know that every ranch-owner within a radius of twenty miles rejoices to see Ortega Ranch in new hands. Why, that's the best piece of land in the valley, if it was properly irrigated and fertilized."

"We are happy to learn that," Guy said cheerily. "You see we've got to make a success of the ranch, for every dollar that we are worth is going into it and our stock. It's hard luck for that old man, tho."

"Ortega is to blame himself. You see, friends, the world does move; if a man can't keep up with the procession he had better get out of the way. Ortega would do neither, and he was run over. He has always made us fellows that take off our coats and work feel that he tho' we were dirt. It's hard for the girl, tho; she's good stuff. Now about those trees."

When the two ranchers went home they carried a list of the trees that Marshall had advised them to put out. Their enthusiasm had been quickened by the interview. Already each saw, as in a vision, the fine home that he hoped to make for himself in the golden west.

They worked hard, but the beauty of the valley, with its encircling hills, often tempted them to mount their horses and go for a long ride. Twice they went down to the sea, going for a plunge into the salt water. Both were enthusiastic fishermen, and they began to look for a row-boat that they could purchase.

The gasoline engine, to replace the windmill, had been ordered and arrived in due time. One night the cousins went to bed, expecting to remove the old windmill the next morning.

They woke to find the mountains obscured by mist. While they were at the breakfast table, rain began to fall.

"No out-door work today," Guy said, rising and sauntering to the window. "See how the dark, tumbled cloud-masses seem to drop lower and lower!"

They busied themselves with various tasks during the forenoon. At noon the rain had ceased. Soon the clouds parted, and the sunlight kindled into life myriads of brilliants in the drops that were pendant from twig and leaf.

Guy left the house, while John sat down at his desk to complete a letter he had begun. He was signing his name when he was startled by a loud crash.

"What's that?" John cried, springing up. "That was not far away."

"It was windmill. Mr. Guy pushed it over on him," Sin Le said in a matter-of-fact voice.

John ran from the house. The windmill had fallen, and Guy was not to be seen.

"Guy! Guy! Where are you?" John called, even as he ran forward.

There was no reply. Ere John could reach the spot where the ruined mill lay, Carina Ortega came running down the path. She had been about to mount her pony just as the old mill fell, and had seen it strike Guy to the earth.

"He is under there. We must get him out. Have the Chinaman come, and I will call Wana, for she is as strong as a man," the girl said in a calm voice.

Her calmness steadied John. He saw that he could not lift the timbers that pinned Guy to the earth without assistance. There was no need to call; both Wana and Sin Le came running to the spot. By their united efforts the timbers were lifted away, but Guy Cross was unconscious, the blood trickling down from a wound upon his head.

"I fear he is seriously hurt," John said, unable to keep his voice steady. "We must get him to the house and have a doctor."

"I will ride to the village for Doctor Encino," Carina said, laying one hand upon John's arm, to attract his attention. "Nay, do not protest. My pony is sad-

died, and I will be glad to go. Let Wana go to the house with you and minister to the injured man. She is skilled in the use of restoratives."

Without waiting for either thanks or refusal she ran away. As John, Wana, and Sin Le carried the unconscious man to the house they heard the sound of the pony's galloping hoofs. Carina had started after the doctor.

(To be continued).

IN SCHOOLDAYS.

BY APPRECIATIVE TEACHER.

"A little nonsense now and then, Is relished by the best of men," and by women, too. "The most thoroly wasted of all days is that on which we have not laughed," said George Elliot. Some of my days have been "thoroly wasted" if measured by that standard, and I doubt not you could count an equal number—days when the body was too utterly weary for laughter and days when the heart was too heavy for mirth; days when we added some tears to the portion of the earth's surface which we learned at school was composed of salt water.

I have often been asked to tell some of the funny things which have happened in my schoolrooms. Children certainly do and say laughable things. I once heard a lecturer say that a thing which a child said was often amusing when if a grown person had said it, it would not have provoked a smile.

Some of the things which sound comical to us grown-ups were very real to the little folks. For instance, there was the little fellow who didn't see why teacher had to put a new word on the board every day, and the case of the small boy who came early one morning and talked to me while the other pupils were sliding on a near-by pond. This was part of the conversation: "Teacher, I ain't doin' down on the pond adin'." "Why not?" I questioned. "'Cause I promised ma I wouldn't." "Then you shouldn't go, of course," I replied. There was a pause, and then, since there was something more, he asked, "Do you know why?" "No." "I got a yickin' last night!"

One afternoon a wee mite stepped in the middle of a sentence on the black-board and pointing solemnly to my glasses inquired, "Teacher, can you take them things off?" I assured him that it was possible, illustrated it to his satisfaction, and the reading continued.

One morning in early fall a primary number class was reciting. "There is a wagon out there," I said; "how many wheels has it?" "Four." "If one should be broken how many would be left?" At this juncture in the proceedings two little hands were waved violently, and their small owner cried out excitedly, "That ain't a wagon, it's a threshing machine!" One had passed on the opposite side from where the wagon stood in the next yard, and of course the busy eyes had spied it.

A mouse tormented us one term. He was evidently an educated mouse and had not been to school for naught. He shunned strychnine and rough-on-rats, but devoured with relish the backs of any books that had been mended with paste, and ate bait from traps with impunity. One day in desperation the children chased him into a hole, stopped securely every opening into the room and then—waited breathlessly with brooms, shingles and erasers for him to come out.

The word "wait" occurred in a first grade reading lesson, and no one could tell it. "What do you say to a man going past when you want to ride with him?" "Hey!" cried a shrill voice triumphantly.

One boy in describing "an old field school," of Washington's time, said, "The schoolhouse was built on a field that wouldn't raise crops of anything else."

A boy in the third grade began Longfellow's poem, "The Children," in a characteristic way: "Come to me, O ye children, and whistle in my ear." It was also a third grader who rendered the sentence about a baby watching the moon, "He wanted to play with it as one of his toys," in this wise: "He wanted to play with it as one of his toes."

Hearty indeed was the laugh which followed the reading of a story about seeking gold at the end of the rainbow. A boy with a deep, strong voice read the sentence, "I lost all my treasures," but as he rendered it, it became, "I lost all my trousers!"

One Friday afternoon we had a list of trees to guess. One was "the school-master's tree." The correct answer was "the birch," but teachers in Michigan counties where a certain commissioner is known will appreciate the answer of

a fourth grader: "The Wagner apple."

One day several boys and girls were playing school. They had poor lessons, of course. That seems to be the fun of play school, and the folly of real school, and the teacher said, "If you don't have better lessons tomorrow I'll bring a raw-hide." "I hain't afraid of that," declared one. "Then I'll bring a cooked hide."

Before I taught school I thought that the compositions of school children published in papers were made by someone who was paid by the line, but I've changed my mind a good deal. Here is a sample that I received when I asked a third grader to write about some bug:

A Stinking-Bug.

A stinking-bug stinks very bad and is about the size of a bean. They have four legs and a three-cornered body, and they stink just awful bad. They stay down south in the winter.

A boy said, on History examination, that "Webster and Ashburton signed the boundary line between Maine and New Brunswick." The Physiology class has furnished many funny remarks. I have heard the joints in the head called both "dove-winged" and "duck-tailed," the mineral foods "iron and steel, salt and pepper," and learned that color-blind persons can't tell black from white.

Here are two particularly witty answers: "Why can we bite harder with our back teeth than with our front ones?" "Because they're double." "Why does a cigar make a man's mouth smart?" "Because smarties smoke 'em."

The children used to love to watch me draw, and have me make outline pictures for them to color, often doing some work for me in order that I might have time. Once as I was so engaged a little tot asked what kind of flowers I was drawing. I replied, "Harebells." A little later, as I drew some more on another paper, she cried, "There's some more cowbells!"

I hope the uninitiated will not imagine that life in a schoolroom is one beautiful dream, and the initiated will be far from such an idea. There are clouds and storms and reefs as well as smooth water and sunny weather. What could you expect but occasional fermentations and explosions when so many diverse spirits are confined in such small space? But these flashes of fun come and the air is always clearer afterward. They make life livable, for "a merry heart doeth good like a medicine." And somehow as the years go by we forget the trials and discouragements, and remember these little amusing episodes, and the big red apples on our desks, (I had eighteen, all too hard for any mortal to consume, on the cellar shelf one winter). We remember these things that stirred the surface of the school life, even as the ripples are visible on the water long after the pebble that set them in motion lies quietly on the bottom.

"Memory stands sidewise, half-covered with flowers,
And reveals every rose but secretes the thorn."

"I wrote down my troubles every day
And after a few short years
When I turn to the heartaches passed away

I read them with smiles, not tears."
"I remember the children who loved me
In the beautiful village of Yule."

STILL AHEAD.

BY MAY ELIZABETH WHITE.

Professor Pratt was young and shy,
When first he taught in Manks,
And teasing pupils used to try
His patience with their pranks.

They liked to hear his harrassed "hem,"
And see his blushes red;
But when he tried to punish them,
They somehow got ahead.

Lucile, Gracie Gale and Nellie Wright,
The leaders of the set,
He kept till five o'clock one night,
With problems hard to get.

At their quotation hour next morn
The room became so still
The restless rustle of the corn
Was heard upon the hill.

The silence seemed to grow until
Lucile looked in his face:
"With all thy faults I love thee still,"
"Tis sweet to love," said Grace.

Professor gave an anxious start,
As Nell looked in his eye:
"The hours I spend with thee, dear heart,"
She gave a gentle sigh.

"Are as a string of pearls to me."
A chuckle came from Ned,
The room was full of muffled glee,
The girls were still ahead.

THE PINNATED GROUSE OR PRAIRIE CHICKEN.

BY HATTIE WASHBURN.

With the exception of that disagreeable little foreigner, the English sparrow, the Pinnated grouse is the only bird which, having braved the long, cold winter on the frozen, wind-swept prairies, remains to enjoy our temperate summers. Strictly a bird of the prairies, it is still seen in most of the prairie states at all seasons, and its melodious booming is one of the most pleasant harbingers of spring.

During the winter these birds live in flocks, some consisting of a hundred members or more. When the mating season arrives a flock may be heard on some booming place morning after morning, the males booming forth their love songs with a harmony that sounds not unlike the low notes of a great organ which can be heard in the still morning air for a distance of two miles or more. Some valorous male, erecting his long pinnates or neck feathers, inflating the orange-colored sacs upon the sides of his neck and uttering a loud booming sound, rushes upon a rival. If the bird thus challenged lacks the courage to meet the onset, he passes underneath his assailant as the latter bounds into the air. This gives their contest the appearance of play, and by some it is thought to be such; but, tho these sham battles may be repeated many times, they often become battles in earnest. Two rival males will fight long and desperately, until the heads and necks of both are dripping with blood, while the innocent cause of this strife looks on and adds her excited cackling to that of other females.

The same booming places are used year after year. One is known to the writer which has been trodden smooth each season for more than twenty years, tho the low hill on which it is situated has been cultivated during a part of that time.

At nesting time the female chooses a

site and makes the nest—a slight depression in the earth, lined with leaves and grasses and sometimes a few feathers from her own breast. It may be concealed by a low brush or thick clump of prairie grass, but often it might be plainly seen did not the plumage of the sitter so closely resemble the dry grass about her. Unaided she carries on incubation and cares for her chicks—sturdy little fellows resembling beautiful balls of brown and yellow down.

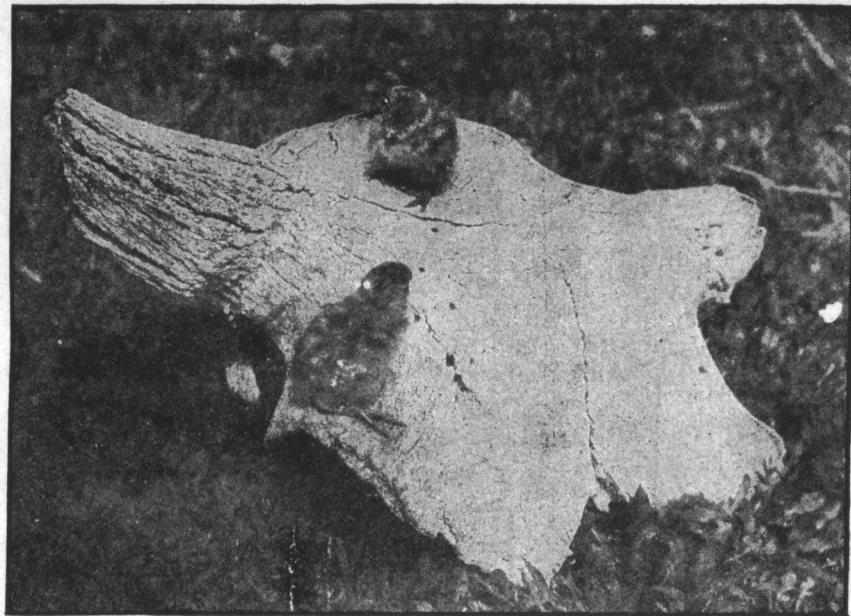
Few of the feathered kindred of the wild have more sturdy young. The prairie chicks leave the nest in a few hours after hatching. At that tender age, when most birds are able only to raise their heads on frail, unsteady necks and open their mouths in a silent appeal for food, those beautiful little balls of fluffy brown and yellow are eager to begin the journey of life, under the guidance and protection of the prairie hen.

For many years the writer has been a

domestic hen. While wild ducks and geese are quite frequently raised in captivity, prairie chicks, so far as I have known, under the same treatment will pine away and die, unless they escape and wander away to meet their fate.

From a prairie chicken's nest which was accidentally destroyed by the plow, the farmer rescued seven eggs. They were about to hatch, and incubation was completed by a domestic hen. Three chicks came as her reward but the poor foster mother found little comfort with her adopted children, tho she lavished upon them all the fussy attention instinct prompted her to devote to her progeny. They refused to eat and remained with her only because close captivity compelled them to do so. Human agency attempted to aid the bewildered hen, but despite all efforts the cute little pets pined away and died.

Ere their early decease the prairie chicks were photographed on an old bison



Prairie Chicks Inspecting one of the Bison Skulls which Strew the Western Prairies.

close observer of bird life on the prairies, and tho I have seen countless prairie chickens and found many nests, in one instance only have I seen the chicks within the nest. That was not by chance, but the result of many trips to the spot after having flushed the hen from her new-laid eggs. The beautiful sight of the fluffy prairie chicks struggling among the newly rejected shells was ample reward for all my painstaking. Even then, when some of their number were scarcely dry, they frequently dashed from the nest and began pecking at the leaves as tho gathering insects. But for my restraining hands they would have wandered forth into the long grass, and perhaps have strayed beyond recall before the startled mother returned to claim her own.

The Chicks in Captivity.

The restless spirit of the prairie chicken shows in a marked degree in captivity, even tho the chicks are hatched under a

skull, an old time-worn relic of a race that once in vast numbers roamed the prairies that shall know them no more. All uncomprehending the grim significance of the skull, the restless chicks, offspring of a race that may know the same fate unless the hunter stays his hand, glided away and attempted to escape.

A prairie chick was once captured in a poultry yard. Cold, hungry and alone at the approach of night, captivity for such a waif would seem a blessing, but he died, as have all other captive prairie chicks I have ever known. The cause of that chick's misfortune was never known. Perhaps he was a survivor of a brood attacked by a bird of prey or prowler of the plain. Perhaps he strayed too far from the prairie hen, who, unaided by the cock, rears her numerous family amid all the dangers which beset them and, unable to hear and answer her call of maternal concern, wandered on and on in exhaustion to meet captivity and death. That tiny waif was a stray paragraph from one of the closed chapters in the great book of nature.

The prairie hen is a devoted mother and will allow an enemy to approach very closely as, apparently limping painfully and dragging a broken wing, she entices him from her young. Upon hearing her cackle of maternal concern, her offspring conceal themselves so quickly and effectually, even where there seems to be small chance for concealment, as to cause the intruder to wonder.

The food of the prairie chicken consists of grasshoppers and other insects, with grass and the buds and leaves of plants, until the grain has ripened in the fields, at which time they make slight inroads in the crops. In winter they gather rose fruit, weed seeds and the scattered grain in the fields. When the snow lies deep on the prairie the grouse are often seen about the stacks in the farm yards.

Their flight is swift, considering the size of the body, and consists of a rapid beating of the wings succeeded by a long, graceful sail. They are quite often killed or wounded by flying against wires. I once saw one that had flown against a telegraph wire with such force as to meet instant death and entirely sever one wing from the body.

A great many eggs are destroyed each season by skunks, badgers and other four-footed robbers, by fires and by the plowshare. The young, also, meet with many disasters, since they must pass the first week of their lives upon the ground,



Nest of Prairie Hen with its Brood of Fluffy Brown Chicks. The Chicks remain in Nest Only a Few Hours.

protected only by the similarity of their plumage to their surroundings, their instinct of concealment and the cunning and devotion of their mothers. But despite these hardships the prairie chickens would undoubtedly increase steadily were it not for the hunters who pursue them with such relentless slaughter that their extermination is but a question of time.

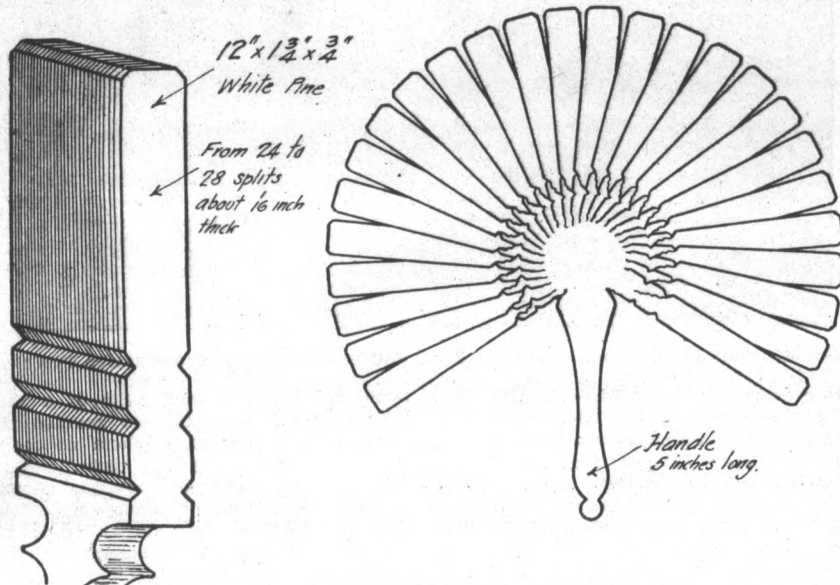
The open season for these birds varies in the different states. In some, threatened extermination has been stayed by laws prohibiting their term of slaughter for a term of years. In some instances the number of birds which a sportsman may kill is limited, but despite such precautionary measures these birds are disappearing at a rate which is truly appalling to the bird lover, and these interesting creatures which are quite confiding during the nesting season soon become so wild as to arise in swift flight the moment a human being is sighted.

Picturesque in their native haunts and ever in keeping with their surroundings, the passing of the Pinnated grouse will lose to the prairie another of its charms. Another interesting page will have been torn from the books of nature by a heedless and blood-stained hand.

SUGGESTIONS FOR WHITTLERS.

BY I. Z. Y.

The illustration shows a fan whittled out of one piece of wood, generally soft white pine. It should be free from knots, and well soaked in warm water before



you begin on it; 12 in. long by 1 1/4 in. by 3/4 in. makes a good size. Five of the 12 in. should be for the handle. Make 26 splits, about one-sixteenth inch thick. When bending them into shape, commence at the middle and bend one-half the splits, one behind the other, overlapping and locking into each other, then do the other half the same way, and finish off the handle, smoothing all over with sand-paper.

UNAVOIDABLY DETAINED.

BY HARRIET LUMMIS SMITH.

The pleasantest part of Corinthia's day's work was when, at twenty minutes past two, she pinned on her hat and went to the bank to make her deposit. The short, brisk walk was grateful after the atmosphere of the office which steam heat kept to July temperature even in January. The black bag on her arm gave her the agreeable sensations of a capitalist. Yet neither of these facts explained in full the sense of anticipation with which Corinthia waited for twenty minutes past two.

Jimmy Webb, in the employ of Otis & Company, went to the bank about the same time. So methodical were the two young people that nine times out of ten they met on the corner of Somer and Lincoln streets and walked together the three blocks to the Commercial. If by any chance one reached the bank ahead of the other, the necessary business was transacted with a deliberation antagonistic to the theory that hurry is an essential American trait. There were days when they passed like ships in the night with but a hasty word, "Awfully sorry, but I couldn't get away. See you tomorrow." Such days were marked in the calendar with black.

On this particular afternoon Corinthia had left the office at the usual time and walked briskly as far as Lincoln street. Then for three blocks she loitered shamelessly, stopping to read the newspaper bulletins, to gaze into the shop windows, and to waste time by other innocent devices. Yet there was no trace

of Jimmy, and she fell into the row of depositors who shortly before three o'clock lined up in front of the receiving teller's window.

There was only one man at the window of the paying teller, a very ordinary man Corinthia thought him, tho in sheer justice it should be stated that in Corinthia's estimation men were divided into two classes—Jimmy and the rest. And when she was vainly looking for Jimmy, Apollo himself would have assumed disappointing proportions.

But those restless eyes of Corinthia's, intent upon anything but the business of the hour, suddenly perceived something that was not ordinary. For as the paying teller turned his head a moment she saw a flash of green, as tho one of the piles of bank notes upon the counter had suddenly been endued with life and darted thru the opening of the cage. Then the teller turned, and the ordinary man leaned forward to hear what he had to say. It had happened so quickly that for a moment she suspected herself of being the victim of hallucination. Then that doubt passed, and she realized the need of instant action.

Jimmy was at her side as she stepped out of the line. "Sorry, girlie, but the old man held me up. I—What?"

Corinthia's lips were close to his ear. "Get a policeman," she breathed. "I'll keep the man till you come." How she was to do it she did not know. The plan took shape as she crossed the floor.

There were several in line at the pay-

ing teller's window now. The man on whom Corinthia had fixed her eye was striding toward the door. With a little spring she overtook him, catching him by the sleeve, and he turned, white, and startled, to meet a smile and a pair of eyes archly uplifted.

"I really believe you were going to go without speaking to me," laughed Corinthia. "Now I call that mean of you." She held out her hand with such persistence that the man had no choice but to take it. He was in a desperate hurry, but he fully realized the necessity of seeming at his ease.

"I rather guess you've got hold of the wrong man," he said, with a glance intended to be expressive of gallantry. "My name's Huckins."

"Even if I'd forgotten your name I should remember you," Corinthia laughed, and I'm real mad if you've forgotten me." She put her head a little to one side as she regarded him, her bright eyes brimming over with mischief. "Then of course you can't remember the fun we had at the restaurant that night. O, I see by your looks you've forgotten that, too."

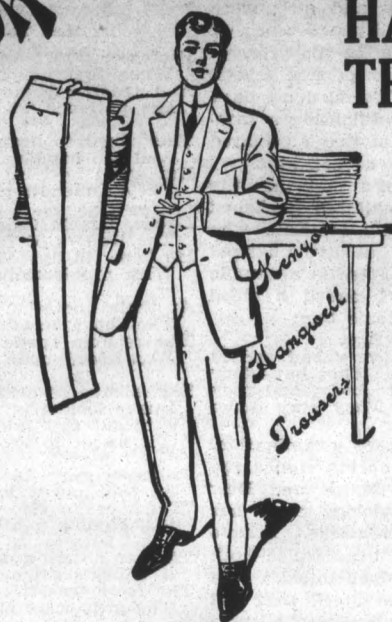
"You've got me," said the man with an uneasy laugh. He was honestly puzzled. Whether the girl had really been a sharer in one of the more innocent adventures of his crowded life, or whether she had mistaken him for someone else, he did not know. But he realized with a sense of irritation that she was delaying him unwarrantably.

"See here, I'm in a hurry. I ought to see a man at three. But I'll look you up some day and we'll talk it over."

"I'll give you a card with my address then." Corinthia opened her bag and began to hunt. A young fellow, one of the bank clerks, and a friend of Jimmy's, regarded the pair disapprovingly. He had always taken it for granted that Corinthia was the sort of girl Jimmy believed her to be, a girl who went about her business, and kept her smiles for those who had a right to them, and here before his eyes she was trying to scrape an acquaintance with a fat man who

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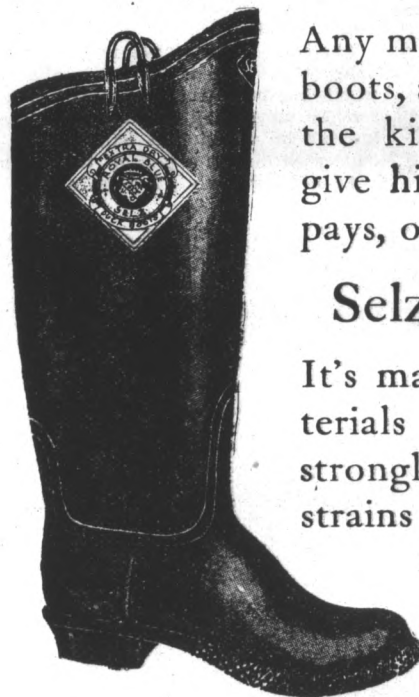
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looked as if he wanted to get away. "And it wouldn't do any good to give Jim a tip," thot the bank clerk with a sigh. "He's too far gone for that, poor old chap."

Corinthia's protracted search, had as yet failed to produce results. The man, whose nervousness was getting beyond his control, spoke impatiently. "I can't wait any longer. Tell me where I can find you and I'll show up in a day or two."

"You want to make me think you've got an awfully good memory, don't you?" Corinthia's arm slipped thru his arm, and he realized that there would be something suspicious in his pulling away from the detaining clasp of so pretty a girl. "You know if I told you my address you'd forget it before you turned the corner, just as you've forgotten my name. Lend me your pencil and I'll write it down."

The pencil came out with a jerk. "Quick then," said the perturbed Mr. Huckins. At any minute the alarm might be given, tho he thot it unlikely that the discovery of the loss would be made until after three o'clock. And once he was safe outside, the fact that he had lingered chatting with a girl would help to turn aside suspicion from his direction.

Corinthia rested the piece of paper against his arm and wrote a name and address, the first that occurred to her, in a slow and painstaking fashion. "Say, are you making out a directory?" growled the man, annoyance getting the better of his assumed politeness.

"Almost done," Corinthia assured him. Thru the revolving door she had caught a glimpse of a familiar figure. She gave the slip of paper into Mr. Huckins' hands, and he thrust it into his pocket without stopping to read it. He took a step forward and faced a big policeman.

"That's the man," Corinthia cried. Then she put her fingers in her ears and ran into a corner, where she could neither see nor hear the rest.

A very brief examination revealed in the pocket of Mr. Huckins' overcoat a package of bank notes which had no business there. In the explanations that ensued Corinthia was brot out of her corner and thanked and congratulated by all, with the solitary exception of Mr. Huckins, whose vengeful glance haunted her dreams for many a night. It proved that he was wanted by the police in several cities and it did not need Corinthia's testimony to secure him accommodations at an establishment whose boarders are noted for their permanency.

It was a year before Jimmy and Corinthia went to housekeeping. A long time they thot it, but it was not long enough for the girl's plucky and timely action to be forgotten. A certain check, conspicuous among Corinthia's wedding gifts, spoke eloquently of remembrance and gratitude.

TWO POINTS OF VIEW.

BY EUGENE C. DOLSON.

The school-course done, he often turned in thot to all that he had learned; in later years it was not so—He thot of all he did not know.

KINKS.

Kink I.—Four-letter word square. To approach. Above. Soldiers' mealtime. Before.

Kink II.—Conundrum. When is a tree like a book?

Kink III.—Beheadings. 1, Behead a wild animal and leave part of the body. 2, Behead a domestic animal and leave a king mentioned in the Bible. 3, Behead a bird and leave a measure. 4, Behead a fish and leave disorder.

Prizes for Straightening Kinks.—To the sender of each of the ten nearest correct answers to the above Kinks, we will give choice of a package of 50 post-cards representing a trip around the world, a copy of "Concrete Construction on the Farm," or a fountain pen. Where contestant or some member of his family is not a regular subscriber a year's subscription (75c) must accompany answers. Answers must not reach us later than Dec. 25, as correct solutions will be published in issue of Jan. 1. Address answers to Puzzle Dept., Michigan Farmer.

Answers to Kinks of November 6.

Kink I.—Word square.
D R A W
R A C E
A C R E
W E E D

Kink II.—Biblical conundrums.
1, Lot's wife. 2, Jonah in the whale.
Kink III.—Riddle—Clock.

Prize winners—Edith Katherine Gillett, Arthur Goodman, Lena Troost, Pearl Tittsworth, Mrs. Gorton V. Jones, Harry Farley, Walter L. Gorton, Charlotte Allen, Belle Pritchard, Myrtle Post.

OUR YOUNG MEN'S COLUMN.

This is a restless age we're living in, and its restlessness is nowhere more seen than in the realm of dress. In our own boyhood, fashion changed slowly. Men were content to go on, year in, year out, with little variation in the style of the clothes they wore. In these days they almost seem to vie with the fair sex in their eagerness for variety in coloring, and in change of fashion, and the question, as a man comes to buy a new suit or overcoat, is, what is being worn now?

You have probably observed that where a really decided change does take place in style, certain young men seem bent on going to the extreme limit of that style. This is particularly true immediately after its introduction. Presently, however, the more conservative forces assert themselves and the new mode, which at first took on so extreme a form, is adopted on modified lines by the majority of men. It is here that we would caution our readers in the selection of their clothes. Never choose the decidedly extreme, for, while it may please you temporarily, before the month is out the chances are that you will regret your selection, as the more conservative dress will then be considered better form.

Now, we want to take up a question, more as a matter of instruction than anything else, for the time has come when the young man of the farming community is about as well posted on good form as his city brother.

Firstly, the materials. Tailors, wherever you find them, talk smoothly about thoroly shrunk fabrics, as tho ready-to-wear clothing were made by insane men who would risk their trade on anything else. Then, they rave about the superior quality of the inner trimmings, when, as a matter of fact, the finest canvas, hair cloth, linings, etc., are today consumed principally by the big clothing manufacturers, and this is the only logical outlet for them, as is plainly to be seen, when such a great majority of the best dressed men today are wearing ready-for-service garments. Clothes keep their shape because they are hand-made of good materials, correctly put together, following masterfully designed specifications. It is clothing architecture and building. It is quite absurd for any tailor to claim that, at the prices the great majority are willing to pay, they can furnish better workmanship than is offered by the high grade ready-to-wear garments of today, for every part in the construction of clothes by these great manufacturers is the work of a high salaried specialist.

Now, as to the price, for this is a consideration with at least 95 per cent of men. In this the tailor is absolutely without argument. He must buy his piece of goods in small cuts and from a jobber who is about three or four times removed from the source of material. That means 50 per cent profit every time the goods change hands. You may figure for yourself the difference in cost as against the purchase by manufacturers direct from the mills in enormous quantities.

It is only in the last ten years that this wonderful advance in the production of men's clothing has been made, and while we do not attempt to influence the man who insists upon having the merchant tailor make his clothes, we do feel that those who buy ready-made clothing should know the value of the clothes they do buy. Be it understood, however, that there are some clothes on the market today that will bear pretty close scrutiny. Your safety lies in selecting those makes bearing the label of some one of the larger manufacturers who are exerting every effort to establish a reputation and are therefore anxious that every purchaser shall know his name. A man may pay \$20 for a suit of clothes nowadays and not find it necessary to be a judge of materials in order to get quality. If you deal with a reliable retailer that is sufficient.

BOOK NOTICES.

Pupil's Notebook and Study Outline in Oriental and Greek History. By L. B. Lewis, teacher of ancient history, high school, Syracuse, N. Y. Manila, 144 pages, 7 1/4 x 8 1/2 inches. This book aims to help the pupil in understanding the relations between cause and result, and in distinguishing the landmarks of history from the minor details. Price, 25 cents. American Book Company, Chicago.

Human Body and Health—Intermediate. By Alvin Davison, M. S., A. M., Ph.D., professor of biology in Lafayette College. This volume includes a sufficient amount of technical anatomy and physiology and devotes special attention to the subject of personal and public health. Cloth, 12mo, 223 pages, illustrated. Price, 50 cents.

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OF INTEREST TO WOMEN

Why Not Teach Girls How to Raise Babies?

Why is it that a lot of time and not a little money are spent on teaching girls things which it does not matter much whether they know or not; while things of vital importance to their future happiness and well being are carefully omitted from their curriculum, under the mistaken impression that they do not need to know such things, or that it would be immodest to teach them.

Take the subject of the care and bringing up of babies. No more important or vital subject could be that of for girls to understand, and yet not one young woman who marries has a bit of information along that line unless she has been a trained nurse.

For some reason babies are never counted on the list of things girls must know about, and I suppose I shall be that horribly indelicate for mentioning them in this column. It is all right for a girl to know how to raise Angora cats and lap dogs, but to expect her to know how to bathe and dress a baby and the proper sort of diet for a growing child, is asking altogether too much. The subject of childraising is never mentioned between mother and daughter, no matter how much they may discuss other subjects. They talk of dress and cookery, dances and sleighing parties, beaux and husbands, but never of babies. Indeed, the feeling seems to be that the daughter is never to have any babies. Of course, she will marry. Heaven forbid that any girl should live and die in single blessedness. But the mother seems to think that in some way the laws of nature will be changed for her daughter, that her child will be spared the trials and sorrows which come to mothers, and thus be cheated out of the crowning glory of womanhood. Of course, all this talk of mine is very shocking. But it is high time that American mothers and daughters were shocked in a righteous cause. And if I can succeed in arousing even one woman to a sense of her duty, I shall feel that I have not lived in vain. Babies are bound to come to homes so long as homes exist. Then why not be sensible about the matter and teach the girls who are to be the mothers of the next generation, the best way to take care of them?

No criminal about to be executed, or soldier walking into the jaws of death is so much to be pitied as the young mother left alone for the first time with her own child. Nurse and mother gone, she has no one now to look to for advice, and nothing but her own immature judgment and pitiful ignorance to guide her. What wonder that infant mortality is so great! The only wonder is that so few babies die. Every time the infant cries, it is either overfed or dosed with some drug or concoction of herbs recommended by an over-zealous, tho well meaning, neighbor. Happy is the young mother who feeds her infant in the natural way. She escapes a tremendous lot of worry. The baby who is fed artificially may thrive all right, but he is quite likely not to, and before the mother learns how to feed

him properly, he is all too often so near death that it is a surprise to everyone when he really begins to mend. As the child grows older, the mother having never been properly taught, is most apt not to pave the way for future indigestion and its attendant ills. The good old way was to bring the child to the table at about six months of age and give it a "taste of everything." And the "good old way" is still practiced by many young mothers.

Mashed potatoes, vegetables that a child of ten years should not eat, frosting from cake and even bits of pie are offered these poor helpless babies, who, of course, eat everything which is put into their mouths. The greatest amount of sinning is done in the feeding of sugar. Mothers who would never think of offering their babies a bit of scraped apple or a spoonful of orange juice, will give them as much sugar in a day as an adult should eat. And yet, the fruit would be beneficial to them, while too much sugar is as baneful in its results as a mild poison. At the age of two or three years, instead of being fed largely on eggs, toast, crackers, bread, potatoes, with beef and mutton as the principal meats and, of course, fowl, the children are eating cake, cookies, pie and other rich and indigestible foods and drinking tea and coffee. And the mother excuses herself by the explanation that Johnny or Susie doesn't like milk and eggs and simply will not eat them. Well, if Johnnie and Susie will not eat what is good for them, dear mother, it is your own fault. If you had started them in on wholesome foods instead of on pastries, they would not know anything about liking or disliking simple foods. Had they been brot up to milk, eggs and bread they would cry for bread now as insistently as they demand cake. Indeed, children who have been brot up simply will lay down a cooky any time for a slice of good bread and butter.

Mothers make their great mistake in asking children what they want to eat. A child knows no more about what is good for him to eat than he knows what is good for him to play with. You would not give him your scissors or the carving knife to play with simply because he said he wanted them and did not want a rubber ball.

Young mothers, begin right in dieting your baby. And you mothers who have started wrong, turn over a new leaf. You say your child will not eat plain foods. Try the experiment of letting him go hungry for a day. It will not hurt him in the least, and it will give him a good keen relish for the sort of food that makes robust men.

DOROTHY HUDSPITH.

(Mrs. Hudspith, who is a mother and has been trained by one of the leading child specialists, will be glad to answer any query regarding the feeding or proper care of children which mothers may care to ask. In fact, any question of interest to women will be gladly received and answered in the women's department of the Michigan Farmer).

BUTTERMILK WITH BAKING POWDER.

BY E. E. R.

Something which every housewife may not know is that baking powder biscuit are much more delicious when buttermilk is used, instead of sweet milk, for wetting up the dough. Baking powder biscuits are a bugbear to the inexperienced cook whose success is often a matter of luck. Too much flour makes them hard. They must be made as soft as it is possible to handle them. Insufficient baking powder for the amount of flour makes them soggy and heavy, while too much shortening renders them greasy. The exact and correct proportions of each of the ingredients secures a product which delights all by their delicacy and is satisfying to the cook.

Here are some suggestions for those whose attempts have not been entirely successful.

First, secure good baking powder. Do not try to work with a cheap article which is sure to be disappointing. The best brands cost more but are altogether better in their results. Have pastry flour, not bread flour, unless you have a brand

which is good in both capacities. Winter wheat makes pastry flour, while bread flour, specially prepared and sold as such, is a blend of different varieties, largely made up of spring wheat.

Measure into a sifter two cups of the flour, using a measuring-cup which holds half a pint, and four rounding teaspoonfuls of baking powder. Add one-fourth teaspoon of salt and sift into a bowl. Take a rounding tablespoon of lard and with a silver fork work it into the flour until the whole is blended. A fork is far better than the fingers. Now have ready a half cup of buttermilk and into it put baking soda the size of a bean, or a little more, fill the cup with cold water and pour slowly into the other ingredients, stirring steadily with the fork. It may not require all of the cupful of wetting and it may take a little more, depending on the flour, but the dough should be just soft enough so it can be turned out on the molding board with only flour enough to prevent sticking. Work quickly into shape with the hands, without the addition of more flour, if possible, roll half an inch thick, cut in rounds with a half pound baking powder can, place, not too close together, in a baking pan and put

in a very hot oven. They will begin to rise at once and at the end of 10 to 15 minutes should be nicely browned, top and bottom. This amount makes about 16 biscuits.

By following these instructions even the novice should succeed. Bear in mind that no more flour must be used than the recipe calls for, unless to prevent the dough sticking to the board, and do not attempt to scrimp in the amount of baking powder as the success of the whole operation depends upon that.

WHAT THE SHOPS ARE SHOWING.

Fads and Reliable Models, what to Buy and What Not.

Everything is long coats in wraps for this winter and they are wearing them to the ankles instead of three-quarter lengths, as heretofore. The fad for the season is the coat modeled after the Moyen age, with a pleated skirt effect from the knees down, on either side, or clear around. Some have wide bands just above the pleats running from the front panel to the back. While these coats are very stylish they are undoubtedly just for the season, and if one is contemplating purchasing a heavy coat to last them several winters, it would be well to choose a plain semi-fitting one, with little or no trimming, and common-sized buttons, as these coats are always in style and if one picks a good material in the darker colors, it can be worn two or three seasons and never look out of date, where the extreme styles look like a back number the second year.

It is always good to remember this when buying suits also, especially if the wearer intends them to last more than one season. The plain, tailor-made coats, semi-fitting, are what the shops are showing in the winter styles, with the skirts pleated, either all the way from band to hem, or from the knee to hem. In fact, this style skirt is about all that is selling in separate skirts, or with suits.

Black is the leading color and is now prevailing in New York and other eastern fashion headquarters. Dark blue and grey are also good. Very little brown is seen. Red is worn considerably and most of the dresses are heavily trimmed in braid and buttons.

The one-piece dress is still holding its own and all the new models are cut that way. They look well on almost any one, and have considerable style. Another thing in their favor is that the wearer does not have to bother with belts or collars, or making the waist and skirt stay together in the back.

Long military capes are new and are shown plain and trimmed with buttons. Sleeves are long except on evening dresses. Now is an excellent time to buy silks as most stores are having their annual silk sales. Dark colors and heavy weight silks are preferable for waists and dresses, except for evening use, when light colors are in demand.

CHRISTMAS BARGAINS.

This term has no reference whatever to the throngs crowding the store counters, but to the commercial value of so-called "presents" between friends—a sorry misnomer for the debts that force us to empty our purses to keep our credit good. Some mercenary souls, who expect full return, or a little more, for value received, have been known to sit down and count the cost of their gifts (?) and sigh at how little they got in return, or, on the other hand, to exult over the profit on their side. And this in memory of the birth of that Christ who drove the sordid money changers out of the temple.

Of course, the "gentle reader" does not do this—knowingly. But are you not often more influenced by the price of the gift you usually get from so-and-so, than by your love for the giver, and what you can afford, when choosing your present?

There are many well-to-do people who distribute real Christmas gifts among their less fortunate friends and are inexpressibly hurt to have their generosity paid in full by the recipients, who were obliged to make a sacrifice to do so, thus destroying all the pleasure on both sides. More than one has said, "Oh, if they would not try to pay me back, it would be such a pleasure to remember them at Christmas-time, when one could give so gracefully some needed article—or a luxury." It is like a slap in the face to such people to have their gifts counted only in dollars and cents, and flung back—as much as to say, "Thank you, we are able to buy such things ourselves."

How much sweeter some little token, made by our own hands, if possible, or

Making Merry

At Mealtime Means Good Appetite,
Good Digestion, Good Cheer, Good
Heart and Stuart's Dyspepsia
Tablets.

You Use Them? Do If Not, Why?

DYSPEPSIA is the skeleton at the feast; the death's head at the festive board. It turns cheer into cheerlessness, gaiety into gloom and festivity into farce. It is the ghost in the home, haunting every room and hitting at every fireplace, making otherwise merry people shudder and fear. If there is one disease more than another that should be promptly attacked and worsted, it is DYSPEPSIA. It is the very genius of unhappiness, unrest and ill nature. In time it will turn the best man almost into a demon of temper and make a good woman something to be dreaded and avoided.

It is estimated that half of ones troubles in this world comes of a stomach gone wrong—of Dyspepsia, in short. Foods taken into the stomach and not properly cared for; converted into substances that the system has no use for and hasn't any notion what to do with. It is irritated and vexed, pained and annoyed, and in a little while this state of things becomes general and directly there is "something bad to pay." The whole system is in a state of rebellion and yearns to do something rash and disagreeable and a fine case of Dyspepsia is established and opens up for business.

If you were bitten by a mad dog, you would not lose a day in going to a cure; do you know you should be just as prompt with Dyspepsia? Rabies is a quick death, dyspepsia is a slow one; this is about all the difference. There is a cure for rabies and so there is for Dyspepsia and one cure was about as difficult to discover as the other. Pasteur found out one and the F. A. STUART COMPANY the other, and it is no longer a secret, as it is made public in the wonderful Tablet, which so many are using and praising today. One writer says of it:

"Stuart's Dyspepsia Tablets are little storehouses of digestion which mix with the stomach juices, digest food, retingle the mucous membrane and its nerve centers, give to the blood a great wealth of digestive fluids, promote digestion and stays by the stomach until all its duties are complete."

Some cures are worse than the disease; they demand this, That and the Other and the patient despairs at the requirements; but not so with the Stuart Dyspepsia Tablet; they are easy and pleasant to take and no nausea or ill feeling follows. There is none of this "getting all-over-the-mouth" like a liquid and making the remedy a dread. Another writer says:

"It matters not what the condition of the stomach, Stuart's Dyspepsia Tablets only improve the juices and bring quiet to the whole digestive canal, of which the stomach is the center."

Forty thousand physicians use these tablets in their practice and every druggist sells them. Price 50c. Send us your name and address and we will send you a trial package by mail free. Address F. A. Stuart Co., 150 Stuart Bldg., Marshall, Mich.

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The Crosby Frisian Fur Company,
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MENTION THE MICHIGAN FARMER when writing to advertisers.

just a cheery letter—a heart-felt greeting.

But do not carry the home-made gifts to extremes. Don't sit up nights wasting precious eyesight over too much ornamented uselessness, that nobody needs, or particularly cares for. Don't say you have to give this, that or the other one something. Don't be "held up" by anybody's opinion. The writer broke away from that tyranny years ago, and has had a happier Christmas ever since.

The true spirit of the day is to give most freely to those from whom we expect not to receive. Those of whom He, whose birthday it is, says, "Inasmuch as ye have done it unto one of the least of these, ye have done it unto me."—E. R. L.

GERMAN CHRISTMAS CAKES.

BY CHARLOTTE BIRD.

Even more than the American, the German loves the Christmas festival and with him the celebration lasts a full week. It is the season when the scattered members of the family are again united under the parental roof-tree. For a long time beforehand all have been secretly busy making and buying Christmas presents, for everybody must have something. But all presents are made in the true Christmas spirit and in money value may be so slight as lightly to tax even a very meager purse.

The repast which accompanies the tree is not the real Christmas feast. It is only a simple supper whose principle dish is boiled fish with melted butter. But it does seem as if a little more pains than usual is taken to make it good.

The real feast comes on Christmas day or some convenient day within the week. Instead of a turkey a roast goose is likely to be served. As prepared by a skillful German cook, this is not too greasy, but is rich and delicious and loses little, if anything, when compared with the turkey of other homes.

In Germany, candy like ours, is almost unknown. There are, however, three sweets essential to a German Christmas: Marchpane, or marzipan, as the Germans call it, springerle and lebkuchen, or German ginger cakes.

In America marchpane is practically unknown, probably because almonds, its principal ingredient, are comparatively scarce. It is so delicious, tho, that one always regrets not being able to eat more. But its richness limits the quantity to a very small allowance.

Here is the recipe from a German cook book: To thirty ounces of blanched sweet almonds add one ounce of bitter ones. Pound fine in a mortar. Then add twenty ounces of pulverized sugar. Place over a slow fire and stir the mass till no more adheres to the spoon. Then scatter pulverized sugar over a moulding board, place the marchpane on it and knead like bread. Roll thin and mould into any form desired. Place upon paper and bake in a slow oven to a yellowish red. The Germans mould it into a form like our loaf cake and, after it is baked, ornament the top with jelly or with fruit of the same material. It is often packed into tiny baskets and so makes very acceptable Christmas presents. Sometimes the marchpane is made to take the form of tiny animals. The favorite of these is the gluckschwein or luck pig. To insure his good fortune the owner should keep his gluckschwein till the following Christmas. In the Christmas season the shop windows are well supplied with every form of marchpane.

The springerle have now been imported into America and have become so common that they can be bot in many bakeries. Nevertheless, there is no reason why they should not be made at home after this method:

With the Dover egg-beater, beat together twelve eggs one hour. Add butter the size of a walnut, four pounds of pulverized sugar, one teaspoon of baking powder, mixed with the flour, and enough flour to make a dough which will not stick to the fingers. Then place in the ice chest for one hour. Then roll out to one-half inch thick, cut into sheets and press them upon the lightly floured moulds. These moulds can now be bot in this country. Remove the moulds carefully, cut the pictures apart with a sharp knife and set on a table to dry and rise over night. The next morning bake in slightly buttered tins in a very slow oven. Packed and put away in a dry, cool cellar, these cakes will keep a long time and improve with age.

A substitute for the lebkuchen, especially in communities largely German, can now be bot in almost any American

Home Queries Exchange

Column Conducted By
Elisabeth.

Every day there are questions arising in the home that perplexes the wife, mother and daughter, and they wish for some one to advise them. We receive many such queries and for the benefit of our readers we are going to conduct this Exchange Column. Write us what puzzles you and we will do our best to help you. We are going to publish the questions and ask our readers to answer them. No doubt there will be several of you who know just what to do in each case and can give the desired information. In return we will print your questions. Any little points of etiquette, dress or general information, we will answer as soon as possible. Address all communications to Editor Home Queries Exchange Dept., The Michigan Farmer, Detroit, Michigan.

Mrs. G. S.:—To remove mildew from white cloth, dampen it, then cover with powdered French chalk and lay it in the sun, when the chalk dries repeat the operation until the spots are removed.

Mrs. Kate R.:—Dye your faded table cover over a dark red or a brown, but red will give the best results as that was the original color. Be sure and have it perfectly clean and free from grease or the dye will not take well.

J. E. N.:—Chickens crave a certain amount of meat food and if your hens are penned up that is the probable reason for them eating the eggs, as they do not get enough of it. Feed them meat scraps occasionally. A safety nest will insure the eggs. Make it with a chute to let the eggs roll down into a lower box.

Miss Cora:—If pies are not thoroly cooked they will become damp on the bottom when they stand, or if placed on a cold plate immediately after being taken from the oven they will sweat on the bottom. Let them cool gradually then place on plate. You might lay a clean, white cloth under the pie which would absorb the dampness.

Dear Editor:—Is it proper for the bride's two sisters and the groom's two brothers to stand up with them at the wedding?—Reader.

Certainly, why not?

Dear Editor:—Please tell me the proper pronunciation of the word "Collie."—L. F. The word is pronounced as spelled, with the sound of "o" as in Mollie.

Dear Editor:—I would like to have some reader tell me how to take iron scorch out of cloth.—Kittie M.

Dear Editor: Will someone tell me how to make an English plum pudding.—Housewife.

bakery. But in comparison with the native product any German housewife worth her salt would scoff at these. In quality they are too cheap for her. In fact, not many Germans themselves are acquainted with the real original lebkuchen. These are produced in Nuremberg alone and, packed in boxes, are sent from there out into the world. But a very acceptable substitute is made in every German household and without it no Christmas would be complete. The genuine lebkuchen, as made in German families, is always cut into oblong squares of a certain size and decorated on top with a design formed of whole blanched almond kernels. There is also no painful economy of materials. Here is the recipe for a generous quantity: One half gallon New Orleans molasses, one pound of brown sugar, one quart sour cream, four tablespoons soda, one-half pound each of chopped almonds, citron and orange peel, one-fourth pound chopped lemon peel, one quart nutmeats broken, one pound of raisins, one tablespoon each of cloves and cinnamon, two tablespoons each of nutmeg and anise seed. Heat the sugar and molasses to a boil, put raisins and nuts into an iron spider and brown, add one cup sugar from the supply already measured out and last, add the soda to the flour. Mix as stiff as possible with a spoon and then let stand all night. In the morning roll out to a little more than half an inch thick, cut into oblong squares about three and a half inches by five and a half. Then ornament the tops with the blanched almond kernels. Packed in a crock and kept in a dry, cool place, these cakes will also keep a long time and improve all the while.

Read the new serial story started in this issue. It is wholesome and entertaining.



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AMATEUR MECHANICS DEPARTMENT contains 8 pages monthly. Things a boy can make with a few simple tools. In one issue is told "How to Make a K. H. P. Gas Engine," "A Wooden Fan," "The Diving Bottle," "Combination Telegraph and Telephone," "Crossbow and Arrow Sling," "A Good Mouse Trap," etc., etc. To introduce **POPULAR MECHANICS** into new homes, we will send **ONE SAMPLE COPY FREE** to every person upon request to let you see what this intensely interesting monthly is like. It places you under no obligation whatever. We never send a second sample copy to the same person. Neither will you be "bothered" into subscribing. The sample copy tells its own story. We offer no premiums. When you want to subscribe you can give your order to any newsdealer, or send it direct to us. The subscription price is \$1.50 per year. Just send your name and address on a postal card today and a free sample copy will be sent you promptly. Address: **POPULAR MECHANICS** 601 Cecil Bldg., Chicago, Ill.

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Some Useful Helps for Christmas Gifts.

A MOVABLE TRELLIS.

BY EVA RYMAN-GAILLARD.

Vines and heavy branching plants need support of some sort and a movable frame makes a fine gift for a plant-loving friend. The accompanying illustration shows a trellis in which the lower piece of base is 15x10 inches; the middle one 13x8 inches, and the top one 11x6 inches, each inches thick. The piece being two uprights are an inch and a half wide by three-fourths of an inch thick, and three feet high. May be higher if wanted.

The cross-rods are about an inch in circumference and four inches apart, with the lowest space high enough to allow pot to stand in it. The rods are simply run thru holes bored in the uprights.

Castors under the base make the entire frame easily movable. Stain to imitate cherry, walnut, or any wood liked, or paint with moss-green paint. The base may be of one, two or three pieces as preferred, and the size may be anything wanted. I have had them more than twice as large as the one described. A boy can easily make this handy gift.

NOVEL PIN CUSHION.

BY CANDACE STOW.

Take two pieces of cardboard, each five inches long and four inches wide. Place together and cover with velvet. Take a small doll that will cost a nickel, and make it a silk waist and three silk skirts and a little pointed hood. Glue the doll to velvet covered cardboard. Place on the outside skirt a row of black headed pins, on the next a row of white-headed pins, and on the third skirt a row of blue-headed pins. You can place a penny doll, neatly dressed, on both sides of the larger doll if you care to.

CURTAIN HOLDBACKS.

An easily made, acceptable gift is a pair of curtain hold-backs of the color prevailing in the recipient's room. Where white is to be introduced, as in a blue and white set, ivory rings may be utilized. If unusual colors are needed buttonhole or crochet around small brass rings, using floss of the required color. The ribbon with which to run the rings may be of blue if used with the white, or of such color as is desired in the other. Two lengths are used, and they may be of different colors. Place one on top of the other and fasten one end into a ring. Thread one length into six other rings, bringing the ribbon thru each

pair in turn to form links. Thread the same number with the other ribbon, and then thread both ribbons thru one and the same ribbon. Proceed again with single ribbons, and continue thus until the required lengths are made, ending with a single ring, adding a bow if liked. The rings are thus made to form a pattern of ovals thru the entire length.—M. M.

WHAT THE CHILD CAN MAKE.

Children like to make Christmas presents but they must usually look for something that is inexpensive and it is of these little things I want to tell. Procure some water-color paper, cut out a large flower such as a pansy, poinsetta, an autumn leaf or anything of that character, and color it prettily. Then cut two or three pieces of blotting paper the same shape and tie them together with a baby ribbon and you have a pretty blotter. By using a small piece of white velvet and being careful in the tinting, then adding leaves of white, or dainty colored flannel you have a pretty needle book.

Pretty calendars are made by taking a piece of heavy brown mounting board, painting a tiny scene on water-color paper and mounting it on the board, then add a calendar and a cord to hang it by.

For another use a piece of mounting board with a penny tablet fastened to it and a tiny pencil. At the top letter, "I'll remember what you want in town, if you will only write it down." Its use is very plain. Whenever the housewife thot of something she wanted she wrote it down and when she went to town she tore the leaf off. IRMA B. MATTHEWS.

DAINTY HAND-BAG.

A pretty and simple hand-bag for carrying fancy-work is made with a piece of silk the size of a gentleman's handkerchief, or a silk handkerchief makes a nice one. Run a drawstring of ribbon around it and put a small gilt tassel, or ornament, on each corner and it is done. It can also be used for soiled handkerchiefs, as a hair-receiver, or work-bag.

DO I KNOW MRS. B.?

BY EMILY L. RUSSEL.

You ask—"Do I know Mrs. B.?"
Very friendly at least are we;
I've been her guest at lunch and tea;
We have met at many a ball,
In theatre and lecture hall,
And at our club—but still with all,
I must declare—'tween you and me,
That I do not know Mrs. B.

Together we have been at dinners,
And at the races cheered the winners,
In same church confessed as sinners;
We often meet and sweetly smile,
Discuss the news and latest style,
With friendly chat the time beguile,
Yet I must say—'tween you and me,
That I do not know Mrs. B.

"Why? Well, when there's a family squall
Careless servants let china fall,
Or, for her help the needy call;
If dinner must for hubby wait,
And her dressmaker is too late,
Or, worried by any freak of fate,
In trying times as these you see,
Never have I 'met' Mrs. B.

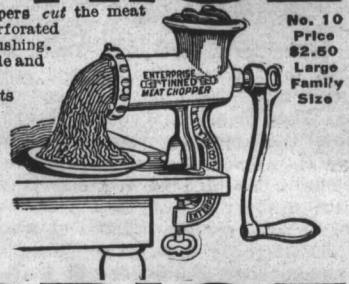
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Price \$5.50
4 sizes
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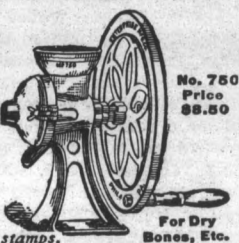
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Shell
and
Corn
Mill

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Grind up dry bones, oyster and other shells, corn, etc., for your hens and watch results. Other famous "Enterprise" household specialties are: Coffee Mills; Raisin Seeders; Fruit, Wine and Jelly Presses; Cherry Stoners; Cold Handle Sad Irons, Etc., Etc.

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This extra high quality adds not a whit to the looks of the goods, but how it does count in the wear!

We could easily save this enormous expense this year, and not one of our 45,000 dealers or the 8,000,000 wearers of "Ball-Band" Footwear would know the difference until after the Arctics and Rubber Boots themselves "let the cat out of the bag."

The making of honest, dependable rubber footwear means more than mere form and appearance.

It requires the proper kinds of crude rubber, fresh from the rubber plantations, carefully selected by experts, blended, compounded and handled with consummate skill, through a multitude of intricate processes.

It requires a knowledge of rubber that can only be gained by years of practical experience. It calls for immense factory facilities, and a well-trained army of workers.

All this, behind "Ball-Band" Arctics, has pushed them far to the front. Such is the secret of "Ball-Band" success—a business approaching \$10,000,000 a year, built on the bed-rock of Quality.

Get Them of Your Dealer

MISHAWAKA WOOLEN MFG. CO., Mishawaka, Ind.

"The House that Pays Millions for Quality"

Our product is uniform and as perfect as skill and brains and machinery can make it. We could not make it better if we got double its present price. Yet your dealer asks about the same as for ordinary footwear.

Some dealers also handle other lines, possibly bought at a special discount, and sell them at the regular "Ball-Band" price. As the profit is greater on inferior brands, you should be careful to look for the little Red Ball which we place on every pair of our Rubbers and Arctics. It's there for your protection.

An absolute Guarantee of Quality. Insist on seeing the "Ball-Band" Trade-Mark and you're sure of your money's worth.

This same Trade-Mark identifies our famous All-Knit Wool Boots and Lumbermen's Socks—the most durable woolen footwear in the world.



POPULAR RECIPE

This Home-Made Cough Syrup
Stops Coughs Quickly.

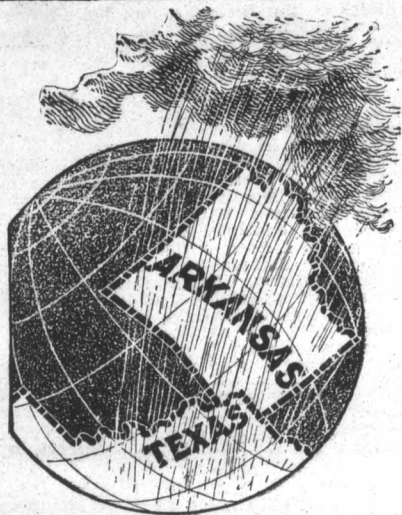
Make a plain syrup by taking one pint of Granulated Sugar, add one-half pint of warm water and stir for two minutes. Put two and one-half ounces of pure Pinex in a pint bottle and fill it up with the Granulated Sugar Syrup. Take a teaspoonful every one, two or three hours. Keep well corked and it will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

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

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

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

Strained honey can be used instead of the syrup, and makes a very fine honey and pine tar cough syrup.



Plenty of Rain

in Arkansas and Eastern Texas. There is no "dry season"—no arid land to irrigate. You don't have to learn a new method of farming. Rainfall is always 30 to 40 inches and a serious drouth is unknown. You can grow the same crops, in the same way you do now, but here's the advantage—you can raise far bigger crops on much cheaper land. Land that will yield \$35 per acre in corn, \$25 in wheat and as high as \$75 in alfalfa can be bought now.

In Arkansas and East Texas at \$5 to \$25 per acre. Farmers there live in a mild climate. They work outdoors every month and often raise several crops a season. They have no expensive barns to build for there is very little winter and stock can graze all year. With bigger crops, cheaper lands, good markets and no winters to eat up their profits, it is easy to see why farmers there become independent in a few short years.



You will never know how big the opportunities really are until you investigate. Send for free copies of our books about Arkansas and Eastern Texas. Post yourself on conditions. Take advantage of the low fares offered twice each month by the Cotton Belt Route. Make a trip down there to look around. It will be a start on the road to prosperity. Write today—tomorrow you may forget.

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MENTION THE MICHIGAN FARMER when writing to advertisers.

(Continued from page 472).

can government commanding the Pullman Car Company to replace American conductors and porters by Mexicans.

National.

It is almost certain that Judge Lurton will be nominated as Federal Supreme Court Judge. Luke E. Wright, former governor of the Philippines, will be named to succeed Judge Lurton, as judge of the sixth United States Circuit. These nominations will be sent for the confirmation of the Senate next week.

The early reports indicate that the electors of Alabama failed to make the proposed amendment to the constitution for prohibiting the manufacturing and sale of intoxicating liquors, a part of their fundamental law. The statute enacted recently by the legislature of that state was not repealed by this election, and the state will therefore continue to prohibit the sale and manufacture of intoxicants, but such prohibiting will not be a part of the fundamental law of the state.

Material is being collected to present to Congress for the purpose of impressing the necessity of an investigation being made into the recently discovered sugar frauds in the custom house of New York. The recently dismissed officials and clerks are now before the criminal branch of the United States Circuit Court of New York City, answering to charges against them.

The Attorney General of Missouri has asked its supreme court to investigate the character of the recent telephone merger in that state. The application charges that three different concerns are endeavoring to gain full control of the telephone business and to thereby destroy competition.

The United States Circuit Court has been asked to restrain Oklahoma from collecting a one-half per cent tax on the gross revenues of the different railroad companies.

A recent decision of the federal courts show the government to have power to bring criminal proceedings against any person conspiring to assist alien laborers to come to this country contrary to the immigration laws.

A loss of \$100,000 was caused by a recent flood on the Nooksack river, of Washington, where two steel railroad bridges and three wagon bridges were carried away.

Contracts for the new \$7,500,000, 25-story municipal building of New York City, are about ready, and bids will soon be asked, for constructing the building.

A panel of 300 men has been ordered at Union City, Tenn., from which to select a jury for trying the "night riders," charged with the murder of Captain Rankin.

A triple investigation is being conducted at Cherry, Ill., this week, by the state investigating committee, the state mine inspectors, and the coroner of that place, in inquiring into the cause of the recent disastrous fire in the mines.

Because the charter of a railroad company violated a section of the state constitution of South Carolina the courts of the commonwealth refused to permit the railroad company to extend its lines within the boundary thereof.

The recent test of guns built for opposing attacks by balloons during war, have failed to make a good showing at the experiments conducted recently at Sandy Hook. An anchored balloon was fired at 20 times without a single shot taking effect.

An order has been issued by the secretary of the interior, permitting residents along the Rio Grande River, to construct dams providing a water supply to irrigate from forty to fifty thousand acres of land.

A loss of \$150,000 was sustained by the Boston Gear Works at Quincy, Mass., last week when their plant was consumed by fire.

The United States Government is negotiating with Mexico to form a joint commission whose purpose will be to investigate conditions in the Central American republics.

CROP AND MARKET NOTES.

Emmet Co., Nov. 29.—Weather for the month has been quite favorable for farm operations, making it possible for farmers to finish potato and beet harvest. The yield of potatoes was better than anticipated. Fall-sown grain is looking fine and a larger acreage sown than usual. Snow during Thanksgiving week (about 3 or 4 in.), and a drop in temperature made it possible to use sleighs for two or three days, including Thanksgiving day. Hay, \$15@16; straw, \$8 per ton; fowls, dressed, 13c; springs, 14c per lb; eggs, 30c per doz; feed stuffs, \$1.45@1.60 per cwt. Snow now gone, making it possible to resume fall plowing.

Oseola Co., Nov. 29.—Ideal weather now; a heavy snow storm Nov. 22 brot several inches of snow and cold weather for a couple of days, which put a stop to plowing. Snow all gone now but the ground is frozen. Farmers are having it a little easier. Repairing fences and buildings, getting ready for winter and doing chores comprise their present activities. Fall grain looking well; very little wheat sown. Potato market easy with not many moving. Most everyone who is not compelled to sell is holding for a little higher price. Farm produce selling at the local market as follows: Beans, \$1.65 per bu; rye, 60c; oats, 40c; potatoes, 25c bu; cattle, 2 1/2@3 1/4c per lb; veal, 6 1/2@7 1/2c; hogs, dressed, 9c; sheep, live, 5c; chickens, live, 8c; butter, 23@25c; butter-fat, 30 1/2c; eggs, 24c per doz.

Education Through Music. By Charles Hubert Farnsworth, Adjunct Professor of Music, Teachers' College, Columbia University. A valuable text for instruction in the art of music teaching, setting forth clearly methods of presentation applicable to any system. Cloth, 12mo, 208 pages. Price, \$1.00. American Book Company, Chicago.

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The best—most practical—not complicated like others, but most simple, dependable and easiest to operate gasoline engine, of 2 to 22 H.P., in the market today. Only 4 quick, simple operations to start instantly. Comes complete to start working—(1) turn the gasoline on—(2) turn on oil—(3) turn on battery—(4) give fly wheel a whirl—that's all. She's started. Ready to work day and night. Stops by twist of your thumb. No smoke. No steam. No soot, cinders, fire or flame. Perfectly safe. Women, boys or girls can run it. Just investigate.

GALLOWAY

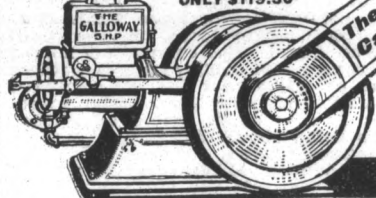
GASOLINE ENGINES
2 TO 22-H. P.

5 Years' Guarantee—30 Days' Free Trial—Highest Quality—Interchangeable Parts—All-Steel Heavy Crank Shaft—All-Steel Connecting Rod—Hard-Oil Cups, etc. See Free Catalog.

Save all dealers, jobbers and supply-house profits. We turn them out in such tremendous quantities, all alike, by automatic machinery, that we can sell you any Galloway engine, direct, at less money than merchants, dealers, jobbers, etc., can buy inferior or similar engines for, in car-load lots for spot cash. Buying from us you get the material at actual cost, labor at just what we pay on pay-roll and one very small profit, based on our tremendous output.

You do not think anything of buying a horse. Be practical, then, and join the Galloway crowd of practical farmers (over 40,000 strong) and let me send you, for only \$119.50, the best all-around 5-H. P. gasoline engine made on the American Continent. I recommend my 5-H. P. Do not make the mistake of buying too small an engine. Never buy a cheap-built engine. I can send thousands of testimonials. Here is one:

A. C. Anderson, Spencer, Ia., wrote me Aug. 15—
"My Galloway 5-H. P. will do any farmer's work—would rather have it than other makes that cost \$250 for same power, as it is so simple, not so many trinkets to get out of order, like others.
Sell Your Poorest Horse and Buy My 5-H. P. ONLY \$119.50



The Way To Big Profits—You Can Make \$5 To \$10 Per Day

Get Galloway's
Biggest and Best
FREE GASOLINE BOOK

Write today for my beautiful, new, 50-page engine book in 4 colors, nothing like it ever printed before, full of information, showing how I make them and how you can make more money with a Galloway gasoline engine on your farm. Write—

Wm. Galloway, President
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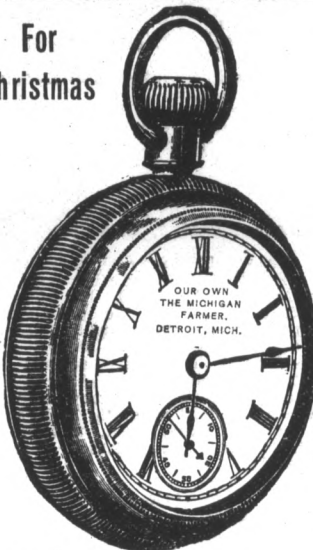
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COLD BLAST
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The darkest night comes before you buy a Prisco—after that any night will be light enough to work by.

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It will tell you everything about lanterns—why the Prisco is so much better than others. How to get the best light and how to use it to the best advantage.

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18 Circle Street, Rochester, N. Y.

If your boy would buy a watch, this is the watch your boy would buy

Because it is a man's watch, and keeps good time. It looks like silver and always will. It is nickel silver thrust, only 95 cents, postage prepaid, but worth more.

Not a toy but a regular man's watch, 18 size, open face, lever escapement, short wind and runs 30 to 36 hours with one wind, snap bevel. Stem wind and stem set.

If your hired man hasn't one this will please him as a Christmas gift. All sent carefully packed, postage paid.

Watch and the Michigan Farmer one year with any class A premium free, for only \$1.45; with the Michigan Farmer three years, and any class B premium free, for only \$2.25. The Michigan Farmer five years with any class B premium free, only \$2.75.

A watch will be sent FREE, with all postage paid, for only three subscriptions to the Michigan Farmer, either one year, three years or five years; at 75 cents for one year, \$1.50 for three years, or five years for \$2.00. All subscribers get a free premium. Anyone can get a club of three subscriptions in an hour. Watches sent by registered mail, 10 cents extra. Address all orders to the Michigan Farmer, Detroit, Michigan.

WESTERN CANADA

Prof. Shaw, Well-Known Agriculturist, Says:

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

70,000 Americans will enter and make their homes in Western Canada this year.

1909 produced another large crop of wheat, oats and barley, in addition to which the cattle exports was an immense item.

Cattle raising, dairying, mixed farming and grain growing in the provinces of Manitoba, Saskatchewan and Alberta.

Adaptable soil, healthful climate, splendid schools and churches, and good railroads. For settlers' rates, descriptive literature, "Last Best West," how to reach the country and other particulars, write to Sup't of Immigration, Ottawa, Can., or to the Canadian Government Agent.

M. V. McInnes, 176 Jefferson Ave., Detroit, Mich.; C. A. Laurier, Marquette, Mich.

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MARKETS

DETROIT WHOLESALE MARKETS.

December 1, 1909.

Grains and Seeds.

Wheat.—The past week has seen an easy wheat market with a slight tendency downwards. The feature of the week's trade have been heavy primary receipts in the northwest, liquidation of December holdings in the chief wheat centers, and a falling off in the demand for flour. News from abroad was also bearish—Argentina has been favored with fair weather, Liverpool had an easy trade, but the general visible supply of European countries showed a slight decrease. In the United States there was an increase of 1,788,000 bushels. The price paid for No. 2 red wheat one year ago, was \$1.06 per bushel. Quotations for the week are as follows:

	No. 2	No. 1	Dec.	May.
Thursday	1.21	1.21	1.21	1.23½
Friday	1.20	1.20	1.20	1.22½
Saturday	1.20	1.20	1.20	1.22½
Monday	1.20	1.20	1.20	1.22½
Tuesday	1.20	1.20	1.20	1.22½
Wednesday	1.19½	1.19½	1.19½	1.22½

Corn.—Activity in this deal is centered around the new corn offerings which are increasing steadily. Prices are a little easier than a week ago, being influenced by the easier wheat trade. Liquidation of December holdings has also been a weakening feature in this market. The increased receipts are not making a material change in the visible supply, indicating that consumers are taking the grain in rather liberal amounts. One year ago, we were paying 63c per bushel for No. 3 corn. Quotations for the week are as follows:

	No. 2	No. 2
Thursday	61½	62½
Friday	61½	62½
Saturday	61½	62½
Monday	61	62
Tuesday	61	62
Wednesday	60	61

Oats.—The range of oat prices has been narrow, but in spite of the weakness indicated above in corn and wheat, there has been an advance in oats due to supply and demand. The local market has not been real active altho a healthy demand is everywhere evident. One year ago the price for No. 3 white oats was 52½c per bushel. Quotations for the week are:

	Standard.
Thursday	42½
Friday	42½
Saturday	42½
Monday	42½
Tuesday	43
Wednesday	43

Beans.—A glance at the quotations given below will show the change in bean quotations the past week. It appears that there were some offerings at the changed values, but no buyers were ready to accept the legumes. The market is lifeless and the figures given are but nominal quotations. They are:

	Cash.	Dec.
Thursday	\$2.10	\$2.08
Friday	2.10	2.08
Saturday	2.10	2.08
Monday	2.10	2.08
Tuesday	2.05	2.05
Wednesday	2.05	2.05

Clover Seed.—A new basis has been established for values in this department of the market. The advance is due to the fact that farmers' offerings are decreasing since the hulling season is practically over and the size of the crop is pretty well known to local buyers. Quotations for the week are as follows:

	Prime Spot.	Mar.	Alsike.
Thursday	\$8.50	\$8.75	\$7.75
Friday	8.60	8.85	7.75
Saturday	8.60	8.85	7.75
Monday	8.75	9.00	7.75
Tuesday	8.75	8.95	7.75
Wednesday	8.75	8.95	7.75

Rye.—A half cent advance was made the past week. Demand is good and trade firm. Cash No. 1 is quoted at 77c per bu.

Visible Supply of Grain.

	This week.	Last week.
Wheat	29,418,000	27,630,000
Corn	3,288,000	2,631,000
Oats	13,686,000	13,919,000
Rye	918,000	832,000
Barley	3,282,000	3,353,000

Flour, Feed, Provisions, Etc.

Flour.—Market steady, with prices on last week's basis. Quotations are as follows:

Clear	\$5.80
Straight	5.85
Patent Michigan	6.25
Ordinary Patent	5.95

Hay and Straw.—Market is unchanged and firm. Carlot prices on track are: No. 1 timothy, new, \$14.50@15; No. 2 timothy, \$13.50@14; clover, mixed, \$13.50@14; rye straw, \$7@7.50; wheat and oat straw, \$6.50@7 per ton.

Feed.—Market unchanged and steady. Bran, \$24.50 per ton; coarse middlings, \$25.50; fine middlings, \$29.50; cracked corn, \$27; coarse corn meal, \$27; corn and oat chop, \$23.50 per ton.

Potatoes.—The recent heavy deliveries of potatoes are quite well cared for now and the market tone has considerably improved altho dealers have not made any change in their quotations. Michigan grown are selling in car lots at 35c per bu. in bulk, and in sacks at 38@40c.

Provisions.—Family pork, \$26; mess pork, \$26.50; medium clear, \$26.50; pure lard, 14½c; bacon, 16½@17c; shoulders, 12½c; smoked hams, 15c; picnic hams, 12½c.

Dairy and Poultry Products.

Butter.—Following the advance of 1½c a week ago for creamery butter, the past period has witnessed another rise of 1c.

The product is firm at the new high price, and evidences are that the present figure will be maintained for some time. Quotations are: Extra creamery, 32½c per lb; first do., 31½c; dairy, 24c; packing stock, 22½c.

Eggs.—The trade in fresh eggs is firm at last week's price. While storage eggs are being called out, on account of the limited supply of fresh eggs from the farm, the amount is not large and the prices rule about 4c below those for fresh receipts. Current offerings, cases included, are quoted at 27½c per dozen.

Poultry.—There has not been much life in the poultry trade since the holiday, but quotations are little reduced and the trade may be considered firm at the figures given below. Quotations for the week are: Live—Spring chickens, 13c; hens, 12c; ducks, 14c; geese, 12c; turkeys, 16@17c. Dressed—Chickens, 13@14c; ducks, 14@15c; geese, 12@13c; turkeys, 17@18c per lb.

Cheese.—Higher. Michigan full cream, 16½c; York state, 18c; limburger, 17c; schweitzer, 21c; brick cream, 18c per lb.

Calves.—Choice to fancy, 12c; ordinary, 8@9c per lb.

Fruits and Vegetables.

Cabbage.—Higher. Home-grown, \$1.25 per bbl.

Onions.—Domestic offerings 65@70c per bu. Spanish, \$1.40 per crate.

Apples.—Snow, \$5.50@6; Spy, \$2.25@3.50; common, \$1.50@2.50.

Cranberries.—Cape Cod berries selling at \$2.25@2.50 per bu.

Vegetables.—Beets, 45c per bu; carrots, 45c per bu; cauliflower, \$1.25 per doz; hothouse cucumbers, 75c@1.25 per doz; green onions, 12½c per doz; green peppers, 75c per bu; mint, 25c per doz; parsley, 25@40c per doz; spinach, 60c per hamper; turnips, 30@35c per bu; water-cress, 25@30c per doz.

OTHER MARKETS.

Grand Rapids.

Wheat is 1c lower this week, the mills paying \$1.16 for the best grade. Other grains are unchanged. In dairy products creamery butter advances 1c. The egg market is steady, dealers paying the country trade 27c for fresh stock. The poultry market continues firm since Thanksgiving and is likely to do so, at least, until after New Years. The commission houses report a very dull cabbage market, prices ranging around \$5 per ton, as compared with \$22@25 a year ago. The potato market is also quiet, prices at loading stations being about 25c.

Quotations follow:
Grain.—Wheat, \$1.16; oats, 42c; corn, 66c; buckwheat, 60c per bu; rye, 68c.

Beans.—Machine screened, \$1.80.

Butter.—Buying prices, Dairy, No. 1, 25c; creamery in tubs or prints, 31½c per lb.

Eggs.—Case count, 27c.

Apples.—45@65c.

Vegetables.—Potatoes, 35@40c; onions, 50@60c per bu; cabbage, 30@40c doz; cauliflower, \$1.50@1.60 per doz; beets, 50c per bu; carrots, 40c; turnips, 35c; Hubbard squash, 1c lb; celery, 12½c; parsley, 20c doz; cucumbers, 80c doz.

Hogs.—Dressed, 9½@10c.

Live Poultry.—Fowls, 10½@11c; roosters, 8@9c; spring chickens, 11@12c; spring ducks, 10@12c; young geese, 9@10c; young turkeys, 17@18c.

Chicago.

Wheat.—No. 2 red, \$1.20; December, \$1.06½; May, \$1.06½.
Corn.—No. 2, 62c; December, 58½c; May, 61½c.

Oats.—No. 3 white, 40@40½c; December, 39½c; May, 42c.

Butter.—Best creamery is 1c higher with trade of sufficient volume to give steadiness to the market. Dairy goods show wider range. Creameries, 26@32c, dairies, 24@28c.

Eggs.—Prices unchanged and market steady. Prime firsts, 30½c; firsts, 28½c; at mark, cases included, 20½@25½c per dozen.

Hay and Straw.—Timothy higher. Straw steady. Quotations: Timothy, choice, \$16@16.50; No. 1, \$15@15.50; No. 2 and No. 1 mixed, \$13.50@14.50; No. 3 and No. 2 mixed, \$11@12; rye straw, \$8.50@9; oat straw, \$6.50@7; wheat straw, \$5.50@6.

Potatoes.—There is a fair volume of business with prices unchanged and the trade steady. Choice to fancy quoted at 45@48c per bu; fair to good, 35@40c.

Beans.—Choice hand-picked, \$2.15@2.17 per bu; fair to good, \$2.05@2.10; red kidneys, \$2.35@2.70.

New York.

Butter.—Market firm with all grades sharing in the general advance. Western factory firsts, 24½@25½c; creamery specials, 34c.

Eggs.—Firm for best grades. Western firsts to extras, 33@35c; seconds, 26@28c; fancy refrigerator stock, 21@25c per doz.

Poultry.—Dressed, firm. Western chickens, broilers, 16@22c; fowls, 13@16c; turkeys, 22@24c per lb. Live—Dull. Fowls, 15½c; western chickens, 14½c; turkeys, 14@18c.

Potatoes.—Market showing dullness under liberal supplies. State and Michigan potatoes in bulk now selling at \$1.50@1.75 per 180 lbs.

Hay and Straw.—Market in good condition with timothy especially strong. Demand sufficiently active to clean up all receipts at steady prices. Hay, timothy, prime, large, bales, per 100 lb., 97½c; No. 3 a 1, 85@95c; shipping, 80@82½c; packing, 50@55c; clover and clover mixed, 90@92½c; straw, long rye, 80@90c; short and tangled rye, 60c; oat and wheat, 50@55c.

St. Louis.

Grain.—Wheat, No. 2 red, \$1.24@1.25½; corn, No. 3 white, new, 58c; No. 3 yellow, 58½c; oats, No. 2, 40½c; rye, No. 2, 75½c.

Hay.—Timothy and clover mixed continue strong; under light offerings prices on timothy have advanced. High-grade clover and alfalfa also in good demand at advanced figures. Timothy No. 1 is selling at \$15.50@17 per ton; No. 2, \$13@15; No. 3, \$9@10; clover, No. 1, \$15@17; No.

2, \$13; clover mixed, \$14@14.50; alfalfa, quotable at \$17.50@18 for No. 1 and \$15@17 for No. 2.

Potatoes.—While quotations show practically no change from last week, liberal receipts have taken the edge off the market. Fancy, well-matured stock, in car lots on track, quoted at 43@50c per bu; good to choice, 43@45c; common to fair, 30@35c.

Boston.

Wool.—Nothing has transpired the last week to awaken interest in this trade. The local holdings are so small that little basis is furnished for any considerable activity. The interest is divided between watching these small holdings and giving attention to contracts for new wool, now on the sheep's back, in the wool growing districts. High prices are still maintained and few contracts are being made because wool growers are well informed on the value of the raw material. The leading quotations are as follows: Ohio and Pennsylvania fleeces—XX, 37c; X, 34@35c; No. 1 washed, 40@41c; fine unwashed, 27@28c; fine unmerchantable, 31c; half-blood combing, 36@37c; three-eighths blood combing, 34@35c; delaine washed, 39@40c; delaine unwashed, 32@33c. Michigan, Wisconsin and New York fleeces—Fine unwashed, 25@26½c; delaine unwashed, 31@32c; half-blood unwashed, 34@35c; three-eighths blood unwashed, 34@35c; one-quarter blood, 33@34c.

Elgin.

Butter.—Market firm at 32½c per lb., which is 1c above last week's price. Sales for the week aggregated 641,600 lbs., compared with 649,600 lbs. last week.

THE LIVE STOCK MARKETS.

Buffalo.

November 29, 1909.

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

Receipts of sale stock here today as follows: Cattle, 230 loads; hogs, 20,000 head; sheep and lambs, 22,000; calves, 1,250 head.

We had a good strong cattle market here today on all grades. There were two loads on the market today good enough to bring 7c. That was the extreme top for the day. We are getting but few good cattle on this market now. What we get are mostly the half fat kinds. We look for a good steady trade right along now. Stockers and feeders sold strong, some good ones a shade higher. Fresh cows and springers sold from \$3@5 per head lower than last week.

We quote: Best export steers, \$6.50@7; best 1,200 to 1,300-lb. shipping steers, \$6.25@6.50; best 1,100 to 1,200-lb. do., \$5.50@6; medium 1,050 to 1,150-lb. steers, \$5@5.25; light butcher steers, \$4.75@5; best fat cows, \$4.50@5; fair to good do., \$3.50@3.75; trimmers, \$2.50@2.75; best fat heifers, (some fancy as high as \$6), \$5@5.25; fair to good, \$3.75@4.25; common, \$3.25@3.50; best feeding steers, 950 to 1,000 lbs., \$4.75@5; best feeding steers, 800 to 900 lbs., \$4.50@4.75; 700 to 750-lb. dehorned stockers, \$3.75@4; 600 to 650-lb. do., \$3.60@3.75; little common stockers, \$3.25@3.50; best bulls, \$4.25@4.75; bologna bulls, \$3.50@3.75; stock bulls, \$3@3.25; best fresh cows and springers, \$4.50@5; fair to good do., \$3@4; common do., \$2@2.50.

The hog market opened 5@10c higher than Saturday and closed steady with a good clearance. Prospects look fair for the near future.

We quote: Choice heavy, \$8.35@8.40; mixed and medium, \$8.30 to \$8.35; best yorkers, \$8.25@8.30; light yorkers and pigs, \$8.10@8.20; roughs, 7.50@7.60; stags, \$6.50@7.

The lamb market this morning opened higher with the best lambs selling at \$7.75. Around noon the price was raised and the same kind of lambs sold at \$7.85. We look for firm prices the balance of the week.

We quote: Best lambs, \$7.75@7.85; fair to good, \$7.50@7.70; culls, \$6.25@7; skin culls, \$4.50@5.50; yearlings, \$6@6.25; wethers, \$5@5.25; ewes, \$4.75@5; cull sheep, \$2@3.50; best calves, \$9.50@9.75; fair to good do., \$8@9; heavy do., \$4@4.50; grass do., \$3@3.25.

Chicago.

November 29, 1909.

Cattle. Hogs. Sheep.
Received today 31,000 31,000 30,000
Same day last year 22,169 41,126 33,582
Received last week 76,940 140,556 92,404
Same week last year 71,669 206,017 92,996

Cattle made a very bad start last week, with Monday receipts of 41,268 head and sales largely 15@25c lower, prime lots excepted. There was a 10@15c rally on Wednesday under moderate offerings, while Thursday, Thanksgiving, was a holiday. The week was a marked one in respect to the quality of the offerings, with steer receipts largely of the 5.25@6.50 class, and a greatly decreased percentage went above 7. The Monday top was \$8.65, with two cars of 1,140 to 1,164-lb. yearlings bringing \$8.40, but on Wednesday nearly a dozen loads of heavy prime beefs, most of them weighing from 1,600 to 1,725 lbs., brot \$8.75@9.20. Inferior light steers have been selling at \$3.85@4.85, but even these comparatively low prices are higher than those paid in most former years at this season. This is the time of year when farmers are disposing of such cattle as they do not care to winter, and it will be several weeks before much stock is all shipped in. As usual, the choicest beefs were reserved for the International Live Stock Exposition. Butcher stock was largely 15@25c lower under large offerings, with a moderate demand at \$3.15@6.25, while canners and cutters went at \$2@3.10 and bulls at \$2.75@5 as a rule. Stags brot \$4.50@6, and calves had a better outlet at \$3@8.75 for inferior heavy to prime light vealers. There was a fair demand for stockers and feeders, with the better class firm under moderate offerings and others largely lower. Stockers sold for

\$2.75@4.75 and feeders at \$3.80@5.20. Milkers and springers had a moderate sale at \$25@65 per head for eastern shipment.

Another week opens today, and the receipts are around 31,000 head. The choicer lots are firm and active, with a few sales at \$9.25, but less attractive lots are plentiful, slow and largely 10c lower.

Hogs came to market with a rush at the beginning of last week, 41,800 head being received on Monday, and 5,347 being purchased by shippers, prices averaging a dime lower. On other days receipts were within more moderate bounds, and there was the usual strong demand, prices having good rallies. The eastern shipping demand this fall is an important strengthening influence and promises to continue so, as there is known to be fewer matured hogs in eastern feeding sections than in recent years. Hogs remain very much higher than in other years, with a narrow range of values and fluctuations within small limits. There is a smaller discount for the better class of light weights than earlier in the season, and even good weight pigs sell comparatively high, while the best heavy stags still fetch a big premium over barrows, sales being made subject to 80 lbs. dockage per head. Hogs were a dime higher today, with active trading at \$7.80@8.40. Receipts are averaging 224 lbs. in weight.

Sheep and lambs underwent some sharp advances in prices at times last week under smaller receipts, sheepmen having kept back stock in numerous instances, as they feared a bad market around Thanksgiving. Prime mutton lambs sold extremely well, and there were nowhere near enough western feeder lambs of the prime \$7@7.10 class to satisfy the big eastern demand, Michigan and Ohio sheepmen being especially clamorous to buy. Such offerings were mainly made up of "warmed-up" westerns. The sheep exhibits at the International, both breeders and fat flocks, beat all past records. Trade was active today at generally unchanged prices, altho there were weak spots. Lambs went at \$5@7.65, the top being 20c lower than last week. Wethers were salable at \$4@5.25, ewes at \$2@5 and yearlings at \$5@6.75. Breeding ewes were wanted at \$4@5.10.

Fortunately, country shippers shipped in very few horses for Thanksgiving week, and sellers were able to avert bad breaks in prices, with a very fair early eastern and southern demand. Southern chunks had a good outlet at \$70@150 per head, while drivers were mostly slow of sale at \$150@300. Common and blemished horses went at \$60@100, while sales were made of heavy drafters at \$170@277.50. Feeders sold for shipment to Ohio and Pennsylvania at \$175@225. There is no horse market during the stock show. F.

LIVE STOCK NOTES.

Twenty thousand lambs were sold on a recent day by New Mexico breeders to Rocky Ford, Colorado, feeders, ruling prices being 50 cents to \$1 higher than a year ago, with sales at \$5@5.50. This was the beginning of the annual movement of feeding lambs from New Mexico, and it is estimated that by the middle of December such shipments will reach about 450,000 head. Owing to the drought of the spring and early summer, there was a light lamb "crop," and it is reported that not over half the usual volume of sales will be made.

A few feeder lambs and sheep have been received at the Chicago stock yards recently, where ready purchasers from feeding sections were found, and extremely high prices were paid for good lots. The winter season holds out encouragement for sheep feeders, providing they make their holdings good and fat and take pains not to glut the market with stock. They should watch the market reports and also get the opinion of first class commission firms as to a good time for marketing their stock. Advice from most feeding districts state that much less feeding is being carried on than usual, and of late Michigan and Ohio stockmen have been eager buyers of feeder sheep and lambs, in many cases failing to obtain as many as they desired. Leading sellers in the Chicago stock yards report that the recent demand for breeding ewes has been much better than it was a month ago, contrary to the experience of other years, and the country is evidently awakening to the fact that good breeding ewes are the cheapest investments a farmer can make. A Missouri farmer says that when his cattle are matured for the market, he will replace them with ewes, and he will want 200 western ewes for one of his farms.

Montana and Wyoming cattlemen are, according to late reports, going to feed more cattle on hay this winter than in past years, the industry being a steadily growing one, since it has been found to be extremely profitable. Many of these cattle when finished will be shipped, it is understood, to the Pacific coast, where there is an increasing outlet for good cattle. Many of these northern stockmen have extremely choice cattle, having taken the greatest pains to secure prime bulls and one of the prominent Montana cattlemen has at last gotten the cows on his ranch up to where they are one-half to two-thirds Herefords. He regards it as money well spent where the ranchman heads off his herds of cattle with the best bulls to be had, as it means a bigger calf crop and a better class of beef cattle. "In addition to this the ranchman who wishes to stay in the business must feed and care for his calves during the most inclement weather of the winter and see that the cattle are given good attention," says this successful northern range stockman. And all this applies equally to farmer-stockmen thruout the country. There always will be enough scrub cattle, but it will be many years before there are enough prime beefs, in all probability. A better time for improving the beef cattle of the country could not be imagined, and some of the more successful stockmen are buying high-grade steers with this view.

THIS IS THE LAST EDITION.

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

DETROIT LIVE STOCK MARKETS.

Thursday's Market.

December 2, 1909.

Cattle.

Receipts, 1,296. Good steers and handy butcher grades steady, all others 10@15c lower and dull.

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

Roe Com. Co. sold Hammond, S. & Co. 13 butchers av 950 at \$4.25, 9 cows av 966 at \$3, 1 do weighing 1,110 at \$3.75, 1 do weighing 720 at \$3, 10 butchers av 779 at \$4, 3 do av 803 at \$3.75, 2 do av 900 at \$4.75; to Goose 3 cows av 986 at \$3; to Rattkowsky 6 heifers av 550 at \$3.25, 4 butchers av 570 at \$3.40; to Mich. B. Co. 21 do av 757 at \$3.60; to Newton B. Co. 23 do av 770 at \$3.90, 4 do av 925 at \$4.25, 1 cow weighing 1,000 at \$3; to Goose 3 butchers av 400 at \$3, 2 do av 675 at \$3.25; to Bresnahan 4 cows av 970 at \$2.50; to Hammond, S. & Co. 1 bull weighing 1,550 at \$4.25; to Lachalt 5 butchers av 760 at \$3.50, 1 bull weighing 620 at \$3; to Bresnahan 4 canners av 970 at \$2.50; to Mich. B. Co. 9 butchers av 655 at \$3.25; to Rattkowsky 6 do av 691 at \$3.60; to Thompson Bros. 13 do av 650 at \$3.25.

Bishop, B. & H. sold Hammond, S. & Co. 9 cows av 916 at \$2.75, 28 butchers av 888 at \$4.50, 7 do av 863 at \$4.25, 5 do av 700 at \$3.50, 1 bull weighing 1,280 at \$4; to Kamman B. Co. 4 steers av 930 at \$4.50, 8 butchers av 800 at \$3.50; to Hopp 17 do av 672 at \$3.45; to Goose 6 cows av 925 at \$3.15, 6 do av 990 at \$3; to Newton B. Co. 2 bulls av 650 at \$3.85, 6 butchers av 555 at \$3.60, 2 steers av 1,135 at \$5, 6 do av 961 at \$4, 5 butchers av 842 at \$3.25; to Bresnahan 3 cows av 800 at \$2.25; to Rattkowsky 4 heifers av 630 at \$3.60; to Regan 4 do av 600 at \$3.25; to Markowitz 3 butchers av 860 at \$3.25; to Sullivan P. Co. 6 cows av 883 at \$2.40; to Mich. B. Co. 3 steers av 933 at \$4.75, 4 cows av 1,037 at \$3; to Kuchta 2 steers av 1,200 at \$6.

Spicer & R. sold Bingham 16 stockers av 582 at \$3.60; to Case 10 do av 733 at \$3.75, 2 do av 650 at \$3.60; to Hammond, S. & Co. 1 bull weighing 680 at \$3.50, 2 cows av 900 at \$2.75, 31 butchers av 800 at \$4, 3 cows av 800 at \$3.25, 3 heifers av 756 at \$4; to Mich. B. Co. 29 butchers av 862 at \$4.15; to Bresnahan 2 canners av 890 at \$2; to Hammond, S. & Co. 5 cows av 814 at \$2.50, 3 do av 910 at \$2.50, 1 bull weighing 830 at \$3.50; to Goose 4 heifers av 420 at \$3.25; to Bresnahan 2 cows av 1,210 at \$4.50, 3 bulls av 516 at \$3; to Rattkowsky 2 cows av 1,050 at \$3.25; to Regan 4 heifers av 490 at \$3.25, 2 steers av 725 at \$3.50; to McBride 16 stockers av 618 at \$3.75; to Bresnahan 1 steer weighing 1,020 at \$5, 4 cows av 862 at \$2.60, 10 do av 1,028 at \$2.90, 3 do av 850 at \$3, 6 canners av 941 at \$2.10; to Regan 5 heifers av 534 at \$3.25, 2 do av 490 at \$3.25; to Kull 9 butchers av 653 at \$5.85, 3 do av 813 at \$4, 2 cows av 1,125 at \$3.50.

Haley & M. sold Goose 4 heifers av 400 at \$3.25; to Regan 1 do weighing 530 at \$3.50, 6 do av 483 at \$3.35; to Mich. B. Co. 10 butchers av 957 at \$4; to Hammond, S. & Co. 3 cows av 1,093 at \$2.60, 1 do weighing 920 at \$3.25, 1 do weighing 1,050 at \$3, 14 heifers av 734 at \$4, 3 cows av 1,166 at \$2.80; to Regan 8 butchers av 532 at \$3.50; to Newton B. Co. 38 do av 642 at \$3.85; to Rattkowsky 1 cow weighing 1,200 at \$3.25; to Fronn 6 butchers av 753 at \$3.60, 5 heifers av 554 at \$3.40; to Mich. B. Co. 2 cow and heifer av 970 at \$4, 23 steers av 920 at \$5; to Schlischer 13 cows and bulls av 713 at \$3.25; to Schuman 1 steer weighing 850 at \$4.50; to Rattkowsky 2 bulls av 590 at \$3.40; to Sullivan P. Co. 4 cows av 880 at \$2.50; to Vermander 10 stockers av 648 at \$3.60; to Lingeman 17 butchers av 835 at \$3.10; to Thompson Bros. 2 cows av 1,050 at \$3.25, 4 do av 900 at \$3.60.

Allen sold Newton B. Co. 3 steers av 1,016 at \$4.75, 4 do av 842 at \$4.

Johnson sold same 1 ox weighing 1,560 at \$4.65.

Tubbs & Son sold Lingeman 5 cows av 976 at \$3.50, 2 heifers av 725 at \$4.

Kalaher sold Hammond, S. & Co. 6 cows av 700 at \$3.50.

Johnson sold Mich. B. Co. 18 steers av 817 at \$4.

Same sold Daronie 17 stockers av 600 at \$3.75.

Young sold McBride 4 stockers av 732 at \$4.

Same sold Kull 4 steers av 892 at \$4.75.

Veal Calves.

Receipts, 400. Market steady at last week's prices. Best, \$8.50@9; others, \$4@7.50; milch cows and springers steady.

Roe Com. Co. sold Nagle P. Co. 5 av 125 at \$8.25, 4 av 115 at \$7; to Thompson 8 av 150 at \$8.50.

Wickman sold Newton B. Co. 14 av 135 at \$8.

Bishop, B. & H. sold Nagle P. Co. 1 weighing 170 at \$9, 2 av 130 at \$8; to Newton B. Co. 4 av 100 at \$5.50, 8 av 130 at \$9; to Parker, W. & Co. 6 av 150 at

\$8.75, 6 av 145 at \$8, 7 av 145 at \$8.50; to Sullivan P. Co. 3 av 140 at \$8.25; to Hammond, S. & Co. 11 av 145 at \$8.50; to Breitenback Bros. 6 av 150 at \$7.50.

Spicer & R. sold Newton B. Co. 3 av 150 at \$6, 7 av 135 at \$8; to Breitenback Bros. 8 av 140 at \$7.25, 3 av 100 at \$6.50; to Sullivan P. Co. 4 av 120 at \$8.50; to Fitzpatrick Bros. 11 av 125 at \$7.50, 3 av 170 at \$3.50, 8 av 140 at \$7.75.

Haley & M. sold Nagle P. Co. 8 av 140 at \$7.75; to Sullivan P. Co. 7 av 145 at \$8.50, 2 av 180 at \$5, 4 av 115 at \$7; to Smith 1 weighing 180 at \$5, 1 weighing 150 at \$8.

Wagner sold Thompson Bros. 3 av 150 at \$8.50.

Sheep and Lambs.

Receipts, 4,424. Market 25c higher than last week on good stuff or steady with Wednesday. Common grades dull and no higher.

Best lambs, \$7.25; fair to good lambs, \$7; light to common lambs, \$6@6.50; yearlings, \$5.25; fair to good sheep, \$4@4.50; culls and common, \$2.75@3.25.

Bishop, B. & H. sold Sullivan P. Co. 58 lambs av 75 at \$7, 22 sheep av 100 at \$3.15, 34 lambs av 65 at \$5.50, 40 sheep av 120 at \$4.40, 10 do av 118 at \$4.25, 9 do av 80 at \$4.50, 12 lambs av 95 at \$7; to Stoker 23 do av 65 at \$6.50; to Thompson Bros. 16 sheep av 85 at \$3; to Nagle P. Co. 5 do av 100 at \$4.25, 13 do av 125 at \$3.50, 63 lambs av 70 at \$7, 13 do av 80 at \$6.50, 38 do av 85 at \$6.75, 76 do av 70 at \$6.25, 17 sheep av 70 at \$4, 26 do av 105 at \$3; to Eschrich 17 lambs av 50 at \$5.75; to Newton B. Co. 173 do av 70 at \$6.90, 82 do av 75 at \$7.25, 10 do av 74 at \$5.25; to Sullivan P. Co. 10 sheep av 112 at \$4.25; to Barlage 37 lambs av 65 at \$6.50; to Haise 61 do av 75 at \$7.25, 21 do av 60 at \$6.50; to Breitenback Bros. 23 do av 60 at \$6.50; to Nagle P. Co. 31 do av 67 at \$7, 38 do av 83 at \$7.25, 105 do av 67 at \$6.80; to Fitzpatrick Bros 53 do av 75 at \$7.25; to Sullivan P. Co. 44 do av 70 at \$7; to Thompson 31 do av 65 at \$6.50, 5 sheep av 110 at \$3.50.

Spicer & R. sold Mich. B. Co. 8 sheep av 100 at \$2.50, 30 lambs av 73 at \$6.90; to Nagle P. Co. 62 do av 75 at \$7.15, 15 do av 55 at \$6, 18 do av 67 at \$6.75, 10 sheep av 113 at \$4, 3 do av 105 at \$4, 5 do av 80 at \$2.50, 5 do av 95 at \$2.75, 23 lambs av 57 at \$6, 63 do av 77 at \$7.10, 28 do av 83 at \$6.60, 6 sheep av 100 at \$3.50; to Bement 5 sheep av 108 at \$4, 40 lambs av 57 at \$6, 67 do av 75 at \$7.25.

Haley & M. sold Nagle P. Co. 1 buck weighing 160 at \$3.50, 3 sheep av 130 at \$4, 6 do av 100 at \$3.50, 4 lambs av 70 at \$7.15, 8 do av 70 at \$6.50; to Sullivan P. Co. 38 do av 75 at \$7.25, 24 sheep av 90 at \$4, 4 lambs av 70 at \$6, 14 do av 80 at \$7.25, 98 mixed av 90 at \$4.50, 2 sheep av 115 at \$3, 17 do av 110 at \$3.75; to Thompson 14 do av 70 at \$3; to Smith 5 do av 90 at \$3.25, 9 mixed av 60 at \$5.50; to Sullivan P. Co. 26 lambs av 80 at \$7, 33 do av 70 at \$6.75, 10 sheep av 94 at \$3.50; to Smith 67 lambs av 80 at \$6.25.

Roe Com. Co. sold Newton B. Co. 12 lambs av 60 at \$5.50, 74 do av 75 at \$7; to Sullivan P. Co. 14 sheep av 115 at \$4.20, 14 do av 100 at \$3; to Thompson Bros. 35 do av 90 at \$3.25; to Erwin 53 lambs av 80 at \$7.25; to Breitenback Bros. 50 do av 50 at \$5.75, 9 lambs av 105 at \$3.50; to Nagle P. Co. 87 lambs av 72 at \$6.75; to Eschrich 53 do av 70 at \$6.75, 6 sheep av 105 at \$3.50.

Johnson sold Nagle P. Co. 15 sheep av 110 at \$3.50, 48 lambs av 75 at \$6.75.

McLaughlin sold same 30 do av 85 at \$7.25.

Wickmann sold same 83 do av 70 at \$7, 17 sheep av 90 at \$3.25.

Wagner sold Thompson Bros. 9 sheep av 110 at \$3.75, 21 lambs av 70 at \$6.75.

Robb sold Fitzpatrick Bros. 3 sheep av 100 at \$4, 20 lambs av 65 at \$7.12½.

Carmony sold same 17 do av 77 at \$7.25.

Hogs.

Receipts, 5,500. Market steady at last week's closing prices.

Range of prices: Light to good butchers, \$8.10@8.20; pigs, \$7.85@7.90; light yorkers, \$8@8.10; stages ¼ off.

Bishop, B. & H. sold Parker, W. & Co. 355 av 150 at \$8.05, 744 av 170 at \$8.15, 568 av 200 at \$8.20, 1,034 av 160 at \$8.10, 32 av 160 at \$8.

Same sold Sullivan P. Co. 175 av 200 at \$8.20, 257 av 160 at \$8.10, 63 av 170 at \$8.15.

Sundry shippers sold same 640 av 170 at \$8.15.

Haley & M. sold Hammond, S. & Co. 87 av 200 at \$8.20, 390 av 180 at \$8.15, 480 av 170 at \$8.10, 280 av 160 at \$8.

Spicer & R. sold same 360 av 180 at \$8.15, 220 av 200 at \$8.20.

Roe Com. Co. sold same 150 av 180 at \$8.15, 250 av 170 at \$8.10.

Sundry shippers sold same 680 av 180 at \$8.15.

Friday's Market.

November 26, 1909.

Cattle.

The run of cattle at the Detroit stock yards Friday was light and the market on all grades steady with the close on Thursday. Milch cows and springers were also steady.

Dry-fed steers and heifers, \$5@5.50; steers and heifers, 1,000 to 1,200, \$4.50@5; steers and heifers, 800 to 1,000, \$4@4.50; steers and heifers that are fat, 500 to 700, \$3.50@3.75; choice fat cows, \$4@4.25; good fat cows, \$3.50@3.75; common cows, \$2.25@3; canners, \$2@2.25; choice heavy bulls, \$4.25; fair to good bolognas, bulls, \$3.50@3.75; stock bulls, \$3@3.50; choice feeding steers, 800 to 1,000, \$4@4.50; fair feeding steers, 800 to 1,000, \$4@4.25; choice stockers, 500 to 700, \$3.75@4; fair stockers, 500 to 700, \$3.25@3.75; stock heifers, \$2.50@3.15; milkers, large, young, medium age, \$4@5.50; common milkers, \$2@3.50.

Sheep and Lambs.

There was a large number of sheep and lambs on sale that arrived too late Thursday to be sold and had to go Friday. The quality was hardly as good as Thursday and while steady prices were paid the close was dull and draggy.

Best lambs, \$7; fair to good lambs, \$6.50@6.75; light to common lambs, \$6@6.25; fair to good she 3.50@4; culls and common, \$2.50@3.

VETERINARY

CONDUCTED BY DR. W. C. FAIR, CLEVELAND, OHIO.

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

Pigs Unable to Use Hind Quarters.—I have some young pigs that are unable to use their hind quarters and I would like to know how to treat them. C. M. J., Provemont, Mich.—You have been feeding your pigs an unbalanced ration. Instead of giving them so much corn, feed some oats, oil meal, some skim-milk, adding a little air-slacked lime to their food every meal.

Lump Jaw.—Is there any cure for lump jaw in cattle and would it affect the meat of a cow that had it? Would she be fit for food? W. E. V., Sandusky, Mich.—The government and local meat inspectors do not condemn carcasses unless the disease is generalized or in a suppurative condition. A bunch such as your cow has should not make her unfit for food purposes. Incipient cases of lump jaw are curable.

Indigestion.—I have two horses that are in an unthrifty condition and have been so ever since last spring; they are rough coated and low in flesh. What had I better give them? W. L. C., Fruitport, Mich.—First of all, your horses should be well groomed, fed all the food they will eat; they should also have a few vegetables every day. Give a tablespoonful or two of the following condition powder: Mix powdered sulphate iron, gentian, fennugreek and resin in feed two or three times a day to each horse.

Torpid Kidneys.—My 4-year-old gelding has weak kidneys; his sheath and hind legs are swollen. I applied a solution made from wood ashes but it was too strong. I also applied air-slacked lime to heal the sores and later applied iodine. What had I better apply to reduce the swelling? E. W. B., Orion, Mich.—You have managed the case badly and made him worse instead of better. Give 1 dr. iodide of potassium and 2 drs. hyposulphate of soda at a dose in feed twice a day and apply one part tincture iodine and three parts glycerine to bunch once a day.

Toxic Poison.—I would like to know the cause of my young pigs' death. When about two weeks old, one died; a few days later another died; and so on until I had only five left. Then I took them away from the sow, thinking that her milk might be the cause. Two more of them soon died. What can be done in a case like this? Do you think it advisable to breed her again this fall? So far as I can tell they show no symptoms of sickness. B. J. T., Holland, Mich.—I would not advise you to breed her again. Her food supply or the condition of her blood no doubt caused the death of her pigs. Drugs will not help you out in a case of this kind.

Hogs Have Worms.—I would like to know what to give hogs that are troubled with worms. A. B., Gaylord, Mich.—Give ½ oz. doses of fluid extract of spigelia and senna every four hours until purging commences; then discontinue treatment. This is a dose for a hog weighing between 100 and 200 lbs. A younger hog should be treated according to their weight; of course, there are other very good remedies and not knowing the kind of worms your hogs are troubled with, I suggest that you treat them for large round worms.

Infectious Abortion in Cattle.—I bot a Holstein heifer of a cattle buyer who told me that she dropped her calf last April and is due to be fresh again next May; I am told that she aborted, and if so, will she not be likely to infect the balance of my herd? E. H. B., Romeo, Mich.—Doubtless you have noticed in this column prescriptions and suggestions regarding this ailment, therefore, I shall briefly repeat some of the most important things for you to do. Give your cow ½ dr. carbolic acid in 2 qts. of water mixed in feed three times a week for four weeks. If she has a vaginal discharge, dissolve 2 drs. permanganate potash in 3 qts. of tepid water and wash out vagina once a day three times a week. You should, of course, use disinfectants in stable and it would be good judgment to separate her from your other cattle.

Indigestion—Garget.—Have profited by advice thru veterinary column; now come to you for additional advice. Have a Durham heifer that will be four years old in March, 1910. Bot her 17 months a o with a calf a week old by her side. She freshened again last June; the first six months we had her she would chew bones; had one attack of acute indigestion. I had a prescription filled which I took from Michigan Farmer that seemed to help her. Six weeks ago her bag caked and gave bloody milk from one quarter, small obstruction came in one feat which appears to remain; besides, the cow is quite thin and out of condition. F. M. L., Charlotte, Mich.—Apply iodine ointment to bunch once a day and give 1 dr. iodide of potassium at a dose in feed night and morning; also give 1 oz. ground ginger, ½ oz. powdered cinchona and 1 oz. powdered charcoal at a dose in feed three times a day.

Acidity of Stomach.—In your paper of November 6, you advise treatment for acidity of stomach but do not say how long to give the remedy and as I have two cows which show the same symptoms, I would like to know how long to feed your remedy. W. N. S., Crosswell, Mich.—In prescribing treatment thru this department, let it be understood that the remedy should be given or applied until

such time as the symptoms begin to disappear and the animal indicates improvement; then give less medicine at a dose but as often, gradually tapering off the treatment until recovery takes place. Some cases are mild, others more severe, some acute, others chronic; therefore, I cannot safely lay down any definite or fixed rule for reader to follow. However, it is generally a good plan to keep up the treatment until the desired results are obtained.

Cow Constantly Bellowing.—Please advise me what to do for a cow that constantly stands bellowing no matter what I feed her or how much or where I keep her; it's all the same. R. R., Grand Rapids, Mich.—If she is without company, supply her with it, for she may be lonesome; if this does not satisfy her, give 1 oz. doses chloral hydrate as a drench in a quart of water two or three times a day.

Indigestion.—I have a horse that is bothered with indigestion and has a weak stomach; he is young and a very hearty eater but has had these spells all summer. Recently he had a bad attack of acute indigestion and at one time I thought I should lose him; his hair looks bad. During the sick spell I gave him two qts. raw linseed oil and one pound of epsom salts, also enemas of soap and water. I also gave him some exercise before getting any action of the bowels. As he is subject to such attacks I wish you would tell me what to keep on hand in order that I may be able to treat him successfully. O. J. H., Millington, Mich.—Where there is much flatulence give 2 drs. salicylic acid and 1 oz. aromatic spirits ammonia in one pint of warm water as a drench and repeat the dose every thirty or forty minutes until relief comes.

Chronic Indigestion.—I have a cow seven years old that seems to be in fairly good condition during the summer when on grass, but as soon as she is stabled and fed dry feed acts as tho she felt badly, and appears to lose flesh. W. H. C., Shelby, Mich.—Your cow no doubt suffers from chronic indigestion and as she does fairly well on grass you should feed her plenty of vegetables and well cured clover and corn fodder. Mix with each feed a tablespoonful of baking soda, a tablespoon of ground ginger, a tablespoonful of gentian and two tablespoonfuls of powdered wood charcoal. She should also be furnished with a little salt every day.

Garget—Warts.—I have a 2½-year-old heifer milking, whose udder is at times quite swollen and tender. Her teats are also covered with small warts. I would like to know what treatment you would advise me to administer. G. R. S., Tower, Mich.—Apply equal parts witch hazel, alcohol and warm water to udder when it is inflamed, three or four times a day. Are you sure that she does not bruise her udder? Give your cow 1 oz. doses of fluid extract of phytolacca two or three times a day while she is suffering from an inflammation of udder. For the warts apply one part salicylic acid and two parts vaseline daily or apply acetic acid daily.

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A COTTON SEED FEED

Contains 15 to 18 per cent protein, 6 per cent fat; three times more protein than corn; 50 per cent more than wheat bran.

It's an excellent milk producing feed; a flesh producer for steers and sheep.

It's cheaper than bran. Costs \$10.00 to \$15.00 ton less than oil meal.

E. A. Stevenson, of Port Huron, who fed one car load of Cuddomeal last year and has bought two car loads so far this season, says "excellent results are obtained from feeding Cuddomeal both to milk cows and to growing steers."

A. E. Pierce, of Tecumseh, Mich., a sheep feeder who tried one ton in October, then bought a full car load, says "Cuddomeal is a satisfactory sheep feed."

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and also give you a share of the profit we make when we resell. Our new Profit-Sharing Plan makes Kamm Returns larger than you would get elsewhere. Fair treatment guaranteed by our 20 years of fur buying. Express charges paid and settlements made immediately. Write today for Price-list and Profit-Sharing Plan.

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We want to hear from shippers of Hay and Grain—Our direct service to large consumers in this district enables us to get top prices for good shipments. Liberal advances to consignors.

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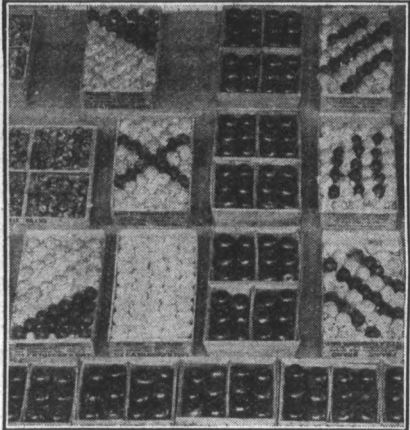
Ref.—Washington Nat'l Bank. Duquesne Nat'l Bank.

HORTICULTURE

SOIL CULTURE IN THE ORCHARD.

There are numerous methods of taking care of the orchard soil, and still more numerous methods of no care at all. As we all know that orchard culture needs attention, we will not consider the different kinds of neglect.

The two principle methods that stand out prominently are the cultivation and cover crop method, and the sod mulch method. All of the other methods are varieties of these two. There has been considerable discussion, pro and con, respecting the value of each, especially within the last few years. This is due to the fact that clean cultivation with cover crop was, until the last few years, the only authorized proper way to take care of the orchard soil, and that now the sod mulch method has disturbed the



How You May Make Your Fruit Appeal to the Consumer.

peaceful sway that the cultivation method had over the minds of the authorities.

The fact that sod mulch has so claimed our attention and that its advocates and users are making a financial success are proof that it has value.

The soil care of the orchard that is a success must conserve the soil moisture, add humus and plant food to the soil and make it available to the tree. The dollar and cents return from properly cared for sod mulch orchards is proof enough that it fills the above qualifications.

This article is not an endorsement of sod mulch or any other method irrespective of conditions. The writer believes that each method has its good points and that there are certain conditions where one would be better than the other.

It would be folly to try the sod mulch method in old neglected orchards or anywhere where the humus has been depleted by neglect or by cultivation without sufficient turning under of cover crops. When it is tried in such places it takes the soil years to get back its normal amount of

of humus in the shape of cover crops or manure and then cultivated to make it quickly available is the quickest way to get the soil in good shape. In fact, the cultivation and cover crop method is the quickest to bring any soil in shape. Nature's method of bringing things back to the normal is slow and unstimulating. Sod mulch very closely resembles Nature's method. Cultivation and cover crop is man's method and is stimulating. It may be likened somewhat to stimulating drugs. They bring quick relief but if not used with discretion produce bad after effects. One of the great faults of those practicing cultivation is that they do not turn under enough material to keep up the normal amount of humus. The result is that the soil is in time "dead" or "burned out." This is the most common among the small fruit growers and especially so with the grape growers.

In conclusion, either method is good, provided they are properly carried out. Half-way practice in either case does not work. Cultivation and cover crop method has the advantage in that it can be used under more conditions than sod mulch. Where sod mulch can be used it is the cheapest and most labor saving, the ground is in better shape to get on early in spring, and the fruit grown in sod mulch is conceded to be of better color.

F. A. WILKEN,
Supt. South Haven Exp. Sta.

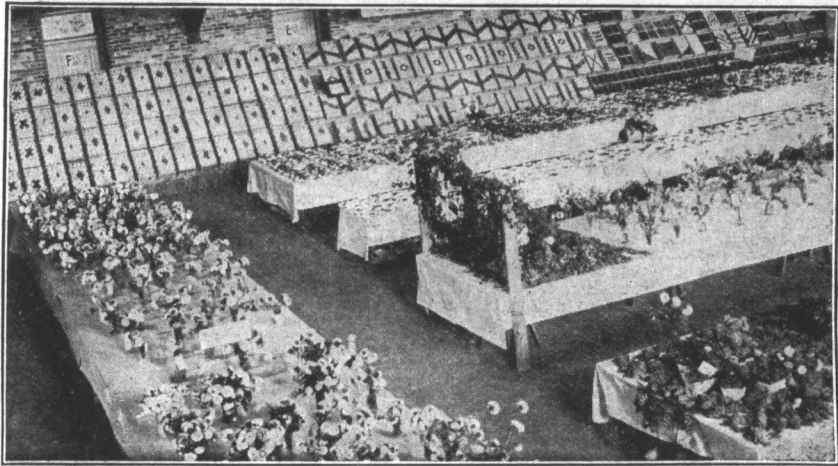
MICHIGAN AS AN APPLE STATE.

It has been my privilege to travel over a very large portion of the lower peninsula of Michigan, and converse with the people in regard to the crops best adapted to, and most profitable in their particular localities. Strange as it may seem, the majority of people who live in the state, do not know that there is grown here a better quality of some of the popular varieties of apples, when the orchards have the proper care, than can be produced in any other part of the known world. The peculiar soils and the climatic conditions are different than can be found elsewhere.

While on a protracted visit in New York city a few years ago, I had the privilege of testing, in the late fall of the year, fruits of various kinds from nearly all parts of the country. In conversation with some of the large dealers the matter of quality of fruit, as to flavor, and texture of flesh that makes the fruit satisfactory to the consumers, came up, and the credit for fine, desirable quality was readily accorded to the Michigan fruit. Some other parts of the country can outdo us as to size of apples and keeping qualities and can equal us as to color and general appearance of fruit, but when the fine quality of flesh and sweet savory flavor of the juice is considered, Michigan apples are in the lead by a long ways.

Apples in Our Markets.

With the exception of a small proportion of consumers in our large cities and



One Corner of Splendid Fruit Exhibit Displayed by Niagara District Hort. Society.

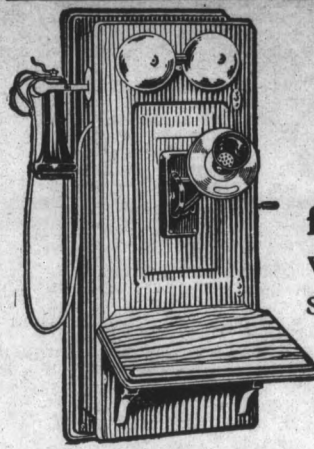
humus and in all that time the trees suffer. Humus can be put into the soil much more quickly by cultivating and turning under large amounts of vegetable matter.

After the soil has got its normal amount of humus it can be kept in good condition by the sod mulch method, provided, enough mulching is put on the ground, at least as far out as the drip of the leaves, to kill out all growth of grass, weeds, etc., and to conserve the soil moisture.

Light sandy and heavy clay soils which are deficient in humus are not very suitable for the sod mulch method. In these cases the turning under of large amounts

towns who are willing to pay a high price for first-class apples, the people of our state, away from the farms, rarely, if ever, taste of first-class Michigan apples. With a few exceptions the best fruit raised in the state is hot up by jobbers and speculators, and taken to the large cities in distant parts of the country.

I am aware that people right here in our own state decry Michigan apples and say that they can not get any good fruit. The fact is, it is only the seconds and culls that get into the hands of the majority of the dealers and grocers in our state; they are not willing to put up the price necessary to secure them. I have known of growers on the east side



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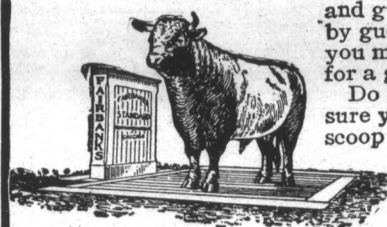
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Flexible double disc
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the soil in the best condition for seed and for holding the moisture. Let us prove to you that the Imperial is a money-maker on any farm. Any dealer who handles the Imperial double disc Harrow will let you test it on your farm, free. Write us to-day for the proof.

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and guess you had paid the right amount? Yet, by guessing the weight of your stock and produce you may lose enough money every year to pay for a good scale.

Do your weighing as you do your paying and be sure you are right. Does your grocer give you a scoop full of sugar and guess at the weight? Hardly. He carefully weighs everything you buy from him. Employ the same methods of economy when selling your products. Know the weight of your produce and get pay for all you raise.

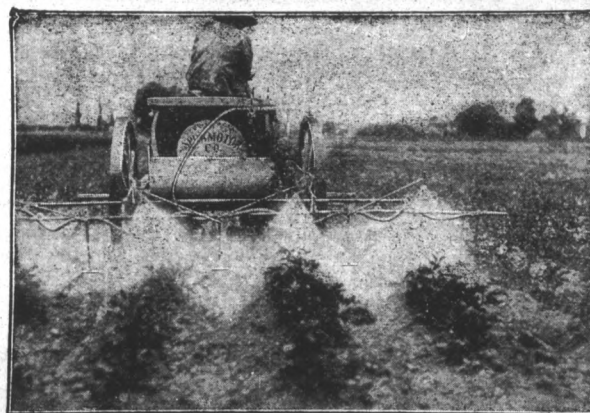
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to protect and save money for you and help you get ahead. They will last an average lifetime, and be as reliable and accurate the last day as when they were bought. We can refer you to many Fairbanks Scales put in over sixty years ago, which while weather beaten and old looking are still accurate and giving good service. Cut out complete advertisement and send for Scale Catalog No. 2A 601

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ARRANGED FOR
SPRAYING POTATOES,

three nozzles to a row and four rows, two spraying from the sides and one from the top, adjustable as to height and width up to 40-in. rows. Nozzles absolutely will not clog. 12-gallon air tank, automatic and hand controlled; 100 lbs. pressure guaranteed with 12 nozzles open. An acre can be sprayed in 20 minutes. Has agitator clean-out pressure relief into tank, and nozzle protector all under control of the driver from seat. For 1 or 2 horses. Fitted for orchard, vineyards and grain. This ad. will not appear again in this paper.

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Please mention the Michigan Farmer when you are writing to advertisers and you will do us a favor.

Nature makes the cures after all.

Now and then she gets into a tight place and needs helping out.

Things get started in the wrong direction.

Something is needed to check disease and start the system in the right direction toward health.

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It strengthens the nerves, feeds famished tissues, and makes rich blood.

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before you buy a rod of fence. Take my word for it, it will pay you to give me the chance. It's a book about

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All-No.-9 Big Wire Fence

I've had my say about fence in this book and I want you to read it. Most profitable fence in the world to buy, as I'll show you.

THERE'S A NEW THING ABOUT IT

It's now sold delivered to fence-buyers everywhere—not just in certain sections, but everywhere in the U. S. Plainly priced in the book (factory prices) and the factory pays the freight to your railroad station.

Send me a card or letter for book right away. I'm going to send out 45,000 of these books to farmers this fall, but I'll get them out promptly. Address FARMER JONES, Fence Man for

BOND STEEL POST CO.

16 E. Maumee St. Adrian, Mich.

Send for Sample of PAGE WOVEN WIRE FENCE

We offer to send, free of charge, an actual sample of Page Woven Wire Fence, just as it comes from the big looms. Each one is "a sermon in steel." The tremendous success of Page Fence which is now on its Quarter Centennial Year, is due to the fact that its makers have always given full measure of honest value. It is the old reliable time-tried wire fence that outlasts them all. Admitted to be the strongest wire fence in existence.

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Extra heavily galvanized. Sold direct to farmers at manufacturers' prices. 30 days' free trial. Also Poultry and Ornamental Wire and Iron Fences. Catalog free. Write for special offer.

The Ward Fence Co.

Box 544, Decatur, Ind.

of the state selling the whole of their crop of one kind of red apples this year for two dollars per bushel. Another grower sold his entire crop of No. 1 Steel Red apples at \$1.50 per bushel delivered at his nearest station in crates.

In setting trees there is a tendency toward setting too many varieties, and too large a proportion of the plainer kinds that have to be sold at a moderate price. On the east side of the state, as an early fall apple the Duchess of Oldenburg sells well. It looks well and people seem to take to it. On the west side of the state they do not give satisfaction as they do not stand up well to ship. As a fall and early winter apple, there is never enough to meet the demand of good Canada Snows, anywhere in the state.

As an early winter market apple the Wolf River is a fine apple to look at and sells well on its appearance. The trees are good annual bearers, and perhaps as profitable to raise as any variety yet developed. There is never enough of the real good Northern Spy apples to meet the demand. The Steel Red is the popular market apple on the eastern side of the state. The trees are good bearers every other year and the supply is always too limited. They are good keepers.

Methods of Marketing Faulty.

The methods of marketing apples is faulty and does not bring to the growers of the fruit the just recompense for their labors bestowed. It is quite generally the custom for speculators from some of the distant large markets, to appear as soon as the prospects can be judged, and begin to barter in an effort to buy all the fruit in certain orchards at a stated sum. If several buyers appear



Four-year-old, Northern Grown English Walnut Tree.

In the same locality they get together and agree on the bids they will make, and thereby establish the buyers' prices. The early ones only buy from the best and most desirable orchards, and thereby secure the cream of the crop before the farmers fully realize what the real good apples are worth.

As a result of the operations of the speculators farmers do not, in most cases, get the full value for their fruit. They own the ground, set the trees, raise the orchards, prune and spray, and the dealers come around and name the price at which the apples are to be sold, and walk away with the lion's share of the profits. In many cases the speculators double on the money invested. In other words, the farmers raise their own crop of apples on shares—the speculator getting half for marketing the crop.

Wayne Co. N. A. CLAPP.

THE SCIENCE OF HORTICULTURE.

Horticulture occupies a position only second to agriculture. For centuries the art and skill of gardeners have been steadily worked in all parts of the world where horticulture is practised. There has been a ready interchange of ideas and knowledge by means of the press, the literature of the garden being now very considerable, whilst there are dozens of publications devoted exclusively to gardening matters. Among the more ardent votaries of the calling there are mutual improvement societies and classes, chiefly for the younger professional gardeners mutual improvement in this case being solely in the art and practice of gardening.

It is customary to link horticulture with botany to the disadvantage of the former. The gardeners are themselves to blame

for this, as they show their readiness to call their higher, or scientific work, botanical rather than horticultural.

The late Dr. Lindley who, altho a botanist by profession was also the editor of the "English Gardeners Chronicle" for many years, showed in his "Theory of Horticulture," a work of quite more than ordinary interest, how largely science entered into the work of the gardener. I do not mean botanical science, but the science of cultivation; in other words, certain knowledge arranged under general truths and principles, which enables those who possess it to control the growth and behavior of cultivated plants. The influence of plants upon temperatures, light, soils, and manures, water, air, drainage, the why and wherefore of the manifold operations in the market garden and nursery, such as grafting, budding, seed sowing, layering, cuttage and other means of reproduction; plant breeding; pruning, transplanting, forcing, retarding, storing, the diseases and pest of plants; the formation of gardens, commercial as well as decorative—these surely are matters of importance sufficient to entitle horticulture to rank as a science quite as much as agriculture or forestry.

In England they have a State Board of Agriculture, and when the horticulturists asked for recognition they were officially informed that agriculture included horticulture. It would be just about as accurate to say that cows included horses because they both eat in the same field. There is a very wide difference between the methods of agriculture and those of horticulture and whilst it could be urged that the farmer might, with advantage, copy the gardener in some of his ways the two are as yet quite distinct. The fact is, that horticulture has for some reason been treated as an outside or subsidiary calling, and it has been said that gardeners have deserved no better because they have never shown any determination to push forward and take their proper place. There can be no doubt that commercially, horticulture is a really big thing. I do not attach much importance to the gardening of the amateur, which is, as a rule, mere embellishment and not always even that. It would be difficult to show that horticulture has suffered more from the interference and lowering influence of the amateur than any other calling. It is when one turns to the great nurseries, fruit-growing establishments, and market gardens that the importance of horticulture is perceived. It is the science of horticulture that calls for the fostering care of the national centers of education.

W. R. GILBERT.

LEGISLATURE PROTECTS USERS OF SPRAY MATERIALS.

For a number of years considerable trouble has been experienced with Paris green and other insecticides from what has been attributed to their adulteration. With the idea of controlling this, the last legislature passed two laws, one which related only to Paris green and the other to all materials used as insecticides or fungicides for the spraying or fumigating of fruit trees.

This law requires all manufacturers in the state and dealers who handle goods made without the state to file with the director of the State Experiment Station at the Agricultural College a statement showing the names of the brands handled, the name of the manufacturer and his address, as well as the weight of each package and the percentages of its essential ingredients, together with the chemical combinations in which they occur. This is to be a guarantee to the purchaser of the weight and purity of the contents of each package.

Whenever a manufacturer has filed the above statement, dealers who handle the goods are relieved from all responsibility.

Every original package of insecticide or fungicide sold in the state must have upon it a label showing the above facts. The director of the experiment station is also required to have samples of the different brands analyzed and report the results.

The violation of any of the provisions of the act and the selling of spraying substances that have not been labeled is made a misdemeanor for which a fine of fifty to one hundred dollars, together with the cost of the action, may be imposed.

I find that very few dealers or manufacturers are aware of this law and desire in this way to bring it to their attention as at the present time any one who sells insecticides or fungicides in Michigan render themselves liable to prosecution.

Ag. College, Mich. L. R. TAFT.
State Insp. of Nur. and Orchards.

BLADDER TROUBLES NEED PROMPT ATTENTION.

Perhaps you don't know how much work is required of your kidneys and bladder or of how much importance they are. Do you know that on these important organs hinges good health? Many an apparently strong, healthy man or woman has been stricken without notice by serious kidney and bladder disease only to realize too late what might have been prevented with proper care and attention.

Some of the early symptoms of weak kidneys and bladder are lumbago, rheumatism, catarrh of the bladder, pain or dull ache in the back, joints or muscles, at times have headache or indigestion, dizziness, you may have a sal-low complexion, puffy or dark circles under the eyes, sometimes feel as tho you had heart trouble, may have plenty of ambition but no strength, get weak and waste away.

If you find you have some of the symptoms mentioned, you need then a remedy that will reach the seat of the disease and at the same time build up the system generally.

Such a remedy is Swamp-Root, the great kidney, liver and bladder remedy. In thousands of cases it has accomplished just the work you need performed now.

Sample Bottle of Swamp-Root Free by Mail.

Send to Dr. Kilmer & Co., Binghamton, N. Y., for a sample bottle. It will convince anyone. You will also receive a booklet of valuable information, telling all about the kidneys and bladder. When writing, be sure and mention the Detroit Michigan Farmer. For sale at all drug stores. Price fifty cents and one dollar.

Champion Evaporator

For Maple, Sorghum, Cider and Fruit Jellies.

Easy to operate; Saves labor and fuel. Write for descriptive cata.

Champion Evaporator Co., Hudson, Ohio.

and Rutland Vermont.

Give number of trees you tap.

DIRECT FROM FACTORY BOB \$9.50

All standard styles at prices \$9.50 to \$15. Complete.

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No delays—2,000 Bobs and Boxes, all styles standard, heavy, strong, ready to ship. Double Elgin Wagon Boxes, \$9.75 to \$11.75.

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9 CORDS IN 10 HOURS



BY ONE MAN with the FOLDING SAWING MACHINE. It saws down trees. Folds like a pocket-knife. Saws any kind of timber on any kind of ground. One man can saw more timber with it than 2 men in any other way, and do it easier. Send for FREE illustrated catalog No. A34 showing Low Price and testimonials from thousands. First order gets agency.

FOLDING SAWING MACHINE CO., 158-164 E. Harrison Street, Chicago, Illinois

THE GEM WIRE WINDER

Will wind barb wire as fast as two men can walk, using the same reels as the wire came on. When one reel is fully wound you can easily remove same and replace with an empty one in a very short space of time. It can be used for unreeling the wire by simply removing the handle.

AGENTS WANTED. MANUFACTURED BY PAUL V. AUSTIN, Attica, N. Y.

Seeds Wanted

Michigan Grown Cow Peas, Soy Beans, Broom Corn, Millet, and Green Peas. State Quantity and price. Send Samples. EDWARD E. EVANS, West Branch, Michigan.

SEEDS—CLOVERS, TIMOTHY, BLUE GRASS, Orchard Grass, Red Top, etc. Send for prices and samples ZACK DAVIS CO., Delaware, Ohio.

Black Locust, Catalpa Spectosa and all forest trees, cheap. Oldest grower of reliable stock. Also all kinds fruits and berries. 1/2 & 3/4 Wild Turkeys, very fine. Catalog. T. G. BROSIUS, Tiffin, Ohio.

WHEN writing to advertisers just say "Saw your ad. in the Michigan Farmer."

THE BEST TIME TO PLAN.

There is no better time of the year to plan an orchard than during the four months beginning with December. One can hardly know too well the requirements of a business before he launches upon it. And to get the best idea of these requirements demands time for consideration.

It is the limit of foolishness to go into a business without knowing what those before have done. The man can expect to accumulate knowledge by experience that will amount to an insignificant fraction of the great supply of information that has been gathered during the decades past on the growing of fruit trees and the handling of the crop. Much of this knowledge has been gathered in volumes, and bulletins and periodicals and are available to persons who wish to become informed. To get hold of and read, at least, the latest publications along the line of fruit production that the party intends to take up, is the first step toward the successful organization and management of an orchard.

But the past is only the foundation upon which one is to establish a business that is to meet the conditions of today. As the attorney fits himself by studying much law that is obsolete because it furnishes a historical reason for many things that would not be understood without such reading, so the orchardist must know the past in order that he might deal intelligently with the present. Hence it is an opportunity to get acquainted with practical growers and learn directly from them. It is fortunate for the beginner that fruit growers are magnanimous and ready with information. They know that the business will be prospered should more men of the community go into it. One need not apprehend a stampede, black-hand letters or anything of the like should he announce an intention of becoming a horticulturist. The man actively engaged in the business will welcome him if this man is a well-informed horticulturalist. Become acquainted with as many men growing the same kind of fruit that you desire to produce, as you can, and keep in touch with them by correspondence or better, by making visits to their plantations to gather information and to bring about that fraternal feeling that should exist in every business. Learn the man and seek to find the secret of his success, if he has made a success, and the key to his failure if he has had discouraging experiences.

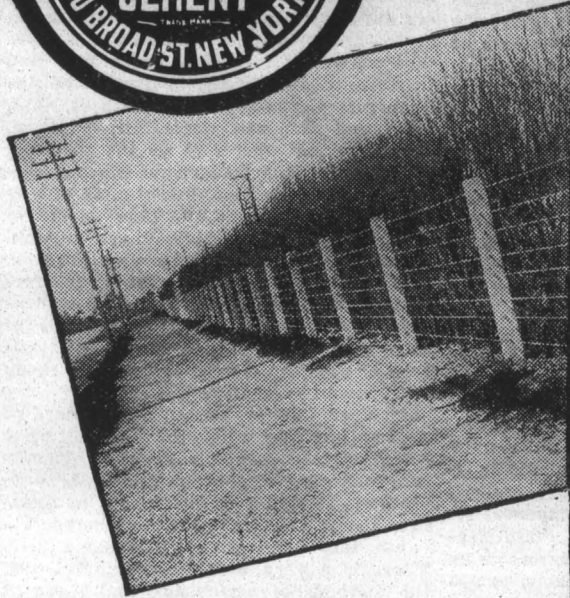
Current literature should also be provided, as thru it one keeps in touch with the business in general. He here has the experience of men who are working under present day conditions but out of reach, possibly, of personal association, thus giving a wider range to the information that is brot to use in the orchard.

All of these things can be started or provided for now. Some of the problems that one desires to solve could not be attempted if he were to devote but a few days to them. Beginning in December he can undertake their solution. Then, too, when he has determined upon a plan he yet has time to go into the market for needed supplies. The most important matter in this regard is the purchase of nursery stock. If one unwittingly puts into the ground poor trees, or canes, or vines, he cannot expect to get the maximum of results with whatever diligence he exercises in fitting the ground and in caring for the crop after the plants have been established. The very best stock is none too good. Its extra cost should not interfere with its purchase. One can well afford to pay high interest on the extra money needed to get the best stock, rather than spend his time bothering with second class material. A reliable firm should be dealt with. One that is not responsible might give varieties not true to name. You would not discover this till the trees are bearing, and consequently a large loss would accrue if the substitute varieties are inferior to the ones wanted. The warranty that the trees are true to name and a guaranty to replace any that should prove otherwise, will not cover the loss, for one is then compelled to wait till grafts can be developed and brot into bearing after he has waited for the tree, before he can get the fruit his efforts were directed to produce.

In all, it will be seen that the prospective grower cannot take too much time to study problems that will come to him in the course of his work and that to get at those problems and inform himself as well as he can is no more wisdom than a normal man would exercise if he was about to enter some mercantile or manufacturing business of the day.



NONE
JUST
AS
GOOD



One of the 150
illustrations in our
new Cement Book
Sent Free

Progressive Farmers Use Concrete

A fence-post made of concrete never rots, or wears out. Any farmer can make concrete fence-posts indoors during the dull Winter season, and have them ready for use when Spring comes.

Our FREE Cement Book

"Concrete Construction About the Home and on the Farm" tells all about concrete. It gives directions for making and handling this economical and everlasting building material in over a hundred ways. It tells how to mix concrete in proper proportion, and includes specifications, sectional drawings, and photographs of the smaller constructions that can be made by any farmer himself. There are 168 pages and over 150 illustrations.

ATLAS Portland Cement
Makes The Best **CONCRETE**

In making concrete it is important that ATLAS Portland Cement be used. ATLAS is the standard American Brand of cement. It was bought by the U. S. Government for the Panama Canal. There is only one quality of ATLAS manufactured—the best that can be made and the same for everybody.

Ask your dealer for ATLAS. If he cannot supply you, write to

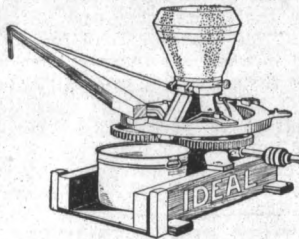
The ATLAS Portland CEMENT Co.

Dept. 12 30 Broad Street New York

Daily Productive Capacity, over 50,000 barrels—the largest in the World.

Ideal Feed Grinders

Standard of the World



Twenty-five years of experience behind our complete line of Feed Grinders and Feed Mills. Improvements and new attachments added which have doubled the output.

Results have been highly satisfactory. Every mill manufactured with extreme care and tested before leaving the shop. Power required to operate them known to a fraction. Write for information concerning Mill No. 15, which is four machines in one. We make Grinders for doing all kinds of grain grinding.

Complete illustrated catalogue sent free upon request.

Shipments immediate.

We are also manufacturers of the world-famous
SAMSON WINDMILLS and STOVER GASOLINE ENGINES.

Stover Mfg. Company. 28 Ideal Avenue, Freeport, Ill.

Your Stock Fairly BEG for COOKED Feed

They need its warming, strengthening, fattening power. Cooked food tastes as good, is as good for them as for you. More easily digested, quicker assimilated and has double the fattening power of raw food. Costs little and makes money for you. Try it. Buy a

HEESEN FEED COOKER

Hog Cholera and other stock diseases unknown where Heesen Cookers are used.

The Heesen is the simplest, strongest, easiest operated of all cookers. Heats up quickly; burns any fuel. Lasts forever. Only two parts; cast iron kettle and seamless sheet steel jacket. Sets right on the ground—anywhere; requires no foundation. All sizes, 15 to 75 gallons, full measure guaranteed.

Prices Low
Quick shipments.



Besides cooking feed for cattle, hogs, horses, cows, sheep, poultry, etc., is invaluable for boiling syrup, rendering lard, heating water, making soap, scalding hogs, etc.

Get a Heesen—you need it.

Try One 10 Days FREE

Write and learn how you can try a Heesen Cooker for ten days free—any size. Investigate for your stock's sake. Postal brings full information.

HEESEN BROS. & COMPANY,
Box 41
Tecumseh, Mich.

RAW FURS WANTED

SKUNK	Northern and Eastern	Central Sections	I	II	III	IV
RATS	Northern and Eastern	Central Sections	\$3.50	\$2.20	\$1.10	.50
			3.00	2.00	1.00	.40
			Winter.	Fall.	Small.	Ketts.
			.48	.36	.25	.10
			.45	.35	.25	.10

Will allow extra 3% on lots of \$100; 4% on \$200; 5% on \$300.
Ship now while prices are high. Send also other furs. No commission or expressage deducted. Daily remittances.
M. F. PFAELZER & CO., 6 East 12th St., (Desk 4), NEW YORK.

The Combination Tool You Need



It is so handy every man, boy and housewife wants one when they see this convenient, light and strong combination tool.

Handle and pin vise made from solid bar steel body. Sleeve knurled so will not slip in the hand. Consists of set of ten oil-tempered well finished, forged steel tools adapted for mechanics' use. Indispensable in the household or on carpenter's bench.

Chisel, gouge, screw driver, gimlet, scratch and brad awls, etc., held in the cap screw handle. Sent free for a club of three subscriptions to the Michigan Farmer either one year at 75 cents, three years at \$1.50, or five years at \$2.00. They will count the same if in combination with other papers. The subscribers will all get a regular premium free as well. Cash price \$1.00. Send orders to the Michigan Farmer.

THE IMP



Do Your Own Soldering

With a

Gasoline Blow Torch

Not a toy, but a practical torch of small size, which will do as much work as a large one. For any purpose where cheap, clean, and intense heat is desired either in hand work or bench. Perfectly safe and cannot get out of order. All brass and nickel plated. Starts with a match, has no pump or valve; is entirely automatic and burns with a perfect Bunsen flame of over 2,000 degrees Fahrenheit, for two hours on one filling. FREE for four subscriptions to Michigan Farmer for one year. Michigan Farmer for one year, and blow torch, \$1.60. Price only \$1.25 postage paid.

MICHIGAN FARMER,
Detroit, Michigan.

THREE DAILY PAPERS

For those who would like to have three daily papers a week, we have arranged with the New York Thrice-a-Week World so that we can offer it with the Michigan Farmer a year for only \$1.40; that is, both papers a year each for that price. Send orders to us or thru our agents.

THE MICHIGAN FARMER, Detroit.

FARMERS' CLUBS

Address all correspondence relative to the organization of new Clubs to Mrs. W. L. Cheney, Mason, Mich.

A LAST WORD FROM THE ASSOCIATIONAL SECRETARY.

In Behalf of Annual Meeting of 1909. Prospects are perfect for the program to be carried out as printed in the issue of November 13. Club workers, did you study the program carefully? Did you notice that the first session is to be called on December 7 at 10:30 a. m., and did you read that the last session was the evening of December 8? The last speaker comes from Washington, D. C., and no one interested in Farmers' Institutes should fail to hear him. We are still hoping to see every club represented. If there are any new clubs that have not reported to the associational secretary, come to the annual meeting and there make yourselves known.

The president and secretary will be at their desks early on Tuesday morning to receive all delegates.

Yours for a successful meeting.

Mrs. W. L. CHENEY, Sec.

HAS THE FARMER ANY PUBLIC DUTIES?

Paper read at the November meeting of the Essex Farmers' Club, by J. T. Daniels, and published by request.

The program committee of this Club has asked that I present some thots on the above subject. Would that I had the ability to elucidate this subject in such manner as its great importance demands.

If the farmer has no public duties devolving upon him, then most surely has no one any public duties. "What is the greatest need of this nation?" was asked an earnest patriot of a government official, who had been a close student of conditions. "A stricter honesty and a high sense of public duty," was the reply. With this nation going "money-mad"—with those two interdependent, giant forces—capital and labor—antagonizing, more and more, each the other's well-being—with greed and graft controlling, to so large an extent, the motives and acts of public officials; can it be possible, with such conditions existing, that the farmer has no public duties demanding his considerate thot and wise, fearless action? Without question, a nation's welfare is dependent, in large degree, upon the intelligence and patriotism of its rural population.

It has been stated by competent authority that the cities, if left to themselves, would perish ere long, victims of their own corruption. The infusion of new blood and the promulgation of more pure principles, from the rural districts, alone saves our cities from becoming like "The Cities of the Plain," of Holy Writ; and whose sad fate should be as a "beacon light," warning the dwellers within the cities of this 20th century, against a like terrible fate.

Most emphatically then, has the farmer many and important public duties to perform, and he has no moral right to shirk these duties, for it is within the home—the christian home, and these largely in the rural districts—that the real source of a nation's strength and safety is found.

Would that it might be impressed indelibly upon the consciousness of every citizen, his obligation to help make and maintain a worthy public sentiment. While, unfortunately, the cannon is "the dernier resort of Kings," intelligent, consecrated citizenship is ever the safety of a republic. And you and I are a part of this republic and a part of the responsibility for its welfare devolves upon us.

The farmer, living near to nature, investigating her laws and recognizing their beneficence, ought, thereby, to be among those best qualified of all to perform his full part in the support of that public sentiment which shall protect and advance the cause of right and righteousness in the world. It is most unfortunate that so many are entirely willing to be but "passengers," and often "drowsy"—if not entirely asleep—during "life's voyage." Let me recall to your remembrance, those wise words of Ex-President Theodore Roosevelt—"It is righteousness and not peace, which should bind the conscience. A man, as a nation, is disgraced if the obligation to defend the right is shirked."

Oh! what a lot of "shirks" there are in this world of ours, and when the roll is called shall you and I be lined up in

that class? Shame on him who parts company with his manhood and banishes his individuality in exchange for a little brief time of "ease" and semi-nonnentity. If I may be permitted to refer to a matter of a somewhat local nature, I would say that in the near future the people of this county are to be called upon to determine a very important question—that question, being no less than the determining whether this beautiful county of Clinton, after having been freed for two years from the blighting influences of the saloon, shall again be brot under its destructive power. Farmers of Clinton county, in this matter you have a duty to do, and for the manner and faithfulness in which you and I discharge this duty we shall be required to give account on that day when every act and every motive will be known as it truly is. Fellow-members of the Essex Farmers' Club, we may and we must exert our atom of helpful influence which shall make for better citizenship, and thereby for a purer national life, if we would enjoy the happiness of a clear conscience and the approval of Him, who holds each individual accountable for the right and full discharge of his individual duties, no less than He holds accountable the na-

GRANGE

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

THE DECEMBER PROGRAMS.

State Lecturer's Suggestions for First Meeting.

Often do the spirits
Of great events stride before the events
And in today already walks tomorrow.
—Coleridge.

10:00 a. m.—Call to order in fourth degree.

10:30 a. m.—Election of officers.

Noon recess—Dinner served by young people.

Toasts—(Members of guests remaining at table).

2:00 p. m.—Adjourn to hall. Song service.

Address, "The Grange's Declaration of Purposes," by the best speaker available.

General discussion on "Good of the Order."

AN "ALL MICHIGAN" STATE GRANGE.

The coming meeting of the State Grange, which opens at Traverse City on December 14 and continues four days,



The Young People's Exhibit, the Result of the Contest Described Below.



The General Exhibit at the Wixom Grange and Farmers' Club Fair.

tion's of earth for the discharge of national obligations.

God grant that we may be true and faithful, not only in our private obligations, but also in our public duties.

GRANGE AND FARMERS' CLUB FAIR.

As is well known, there is generally a lively interest manifested in the Wixom Farmers' Club. During the last year there was a Grange organized at that place, and the idea was put into practice of holding a union fair late in the fall. Prizes were offered for children to enter a corn-growing contest. Seed corn of the white cap dent variety was furnished. The number entering the contest was not large, but it is a starter, with hopes that more will be induced to take up the work next year.

At the fair, which occurred October 30, the farmers their wives and children, came out in great numbers all laden with exhibits. Of grains, fruits and vegetables there were about seventy exhibits. The little folks had their exhibits by themselves, and the older ones filled the space left with products of excellent quality.

In the hall there were exhibits from seven different schools. A great variety of exhibits of needlework etc., were shown by the ladies of both Grange and Farmers' Club.

After the prizes were awarded, a program was carried out, consisting of music, instrumental and vocal, readings and recitations. The carrying out of the program was interrupted by a house in the village being set on fire by a passing locomotive.

The result of this, the first fair, was so gratifying that the managers will take steps soon to hold another one next year, to surpass, if possible, the one just held.

will be a notable one—beginning, as it were, a new epoch in Michigan Grange history. For the first time in the history of the organization every county in the state is entitled to representation upon the floor, and if the Patrons in each of Michigan's 84 counties perform their duty in the matter of sending delegates, this meeting will go down in history as the first "all Michigan" State Grange.

When the delegates at Saginaw last December, voted to hold the next meeting of the State Grange "up north" they did not realize that before the date of that meeting should arrive the point which they had chosen—Traverse City—was destined to become the approximate Grange center of the state, as it was already the approximate geographical center. One year ago Grand Traverse county truly was "up north" in the minds of most Michigan Patrons; today it is very close to the center of the Michigan Grange map. The wonderful growth of the organization in the Upper Peninsula during the past year is responsible for this change, and while the coming trip to Traverse City will be a new and interesting experience for many Patrons, none can escape the realization that the Grange in this state is not an institution of any particular district or section; all of Michigan is now Grange territory and the helpful influence of the Grange is felt and appreciated in even the most remote sections.

Grand Traverse Patrons are preparing to give their guests a royal welcome. Surrounding counties have lent a hand in furnishing interesting exhibits of the products of that region, which will constitute an educational feature of value. The sessions will be held in the Grand Traverse opera house and the city is making preparations to care for what will undoubtedly be the largest assemblage of Patrons ever seen at a State Grange in Michigan.

NATIONAL GRANGE NOTES.

Next year's National Grange goes to Atlantic City, N. J.

The Grange voted to put its greatest energies behind its demand for an efficient parcels post, and Congress was urged to enact a postal savings bank law with a provision for the investment of the funds in county or territory in which deposits are made.

In respect to denatured alcohol distilleries the Grange expressed its belief that the most practical way to establish commercial distilleries is at selected agricultural experiment stations in different parts of the country, and by a resolution urged Congress to make special appropriation for this purpose.

The officers elected at Des Moines for the ensuing two years are: Master, N. J. Bachelder, Concord, N. H.; overseer, T. C. Atkeson, Morgantown, W. Va.; lecturer, Oliver Wilson, Magnolia, Ill.; steward, C. D. Richardson, West Brookfield, Mass.; assistant steward, L. H. Healey, So. Woodstock, Conn.; chaplain, C. F. Smith, Morrisville, Vt.; treasurer, Mrs. E. S. McDowell, Wellesley, Mass.; secretary, C. M. Freeman, Tippecanoe City, O.; gatekeeper, D. C. Mullen, Nampa, Idaho; Ceres, Mrs. Elisabeth H. Patterson, College Park, Md.; Pomona, Mrs. Grace E. Hull, Dimondale, Mich.; Flora, Mrs. Ida Judson, Balfour, Iowa; lady assistant steward, Mrs. Mary A. Smith, Morrisville, Vt.; executive committeeman to serve three years, S. H. Messick, Bridgeville, Del.

A committee consisting of Messrs. Raine, of Missouri, Black, of Kansas, Creasy, of Pennsylvania, Wilson, of Illinois, Jones, of Indiana, Pettit, of California, and Stetson, of Maine, was named and charged with the heavy responsibility of presenting, at the next meeting of the National Grange, a plan for national co-operation which shall be fair and equitable to both producer and consumer.

Anticipating an attempt this winter by congress to repeal the Groat bill, which places a tax of 10 cents a pound on oleomargarine colored in imitation of butter, the National Grange instructed its legislative committee to use every effort to prevent such action, and, furthermore, to keep each subordinate Grange in the United States acquainted with the progress of the campaign and to secure its co-operation and influence.

The committee on public highways took the position that the market roads should have first attention later the trunk lines may be connected up. In other words, give first attention to those highways used every day of the year by the great producers of the country, instead of giving first consideration to pleasure seekers. The Grange has always contended that the improvement of the market or local roads was of more importance than that of the trunk lines of highways, and that the highways of the country are of vastly more importance than its waterways, which are receiving so much attention.

The Grange did not see fit to recommend the new tariff law, and in the report of the committee on agriculture the Grange was criticised for not acting as an organization to protect farm interests when the tariff was being revised. The committee believed the Grange should stand by the following principles: First, equal protection for persons of all classes, labor of all kinds, capital of all amounts, and products in all forms and volumes. Second, No protection for monopolies and those who sell in foreign markets for less than is demanded in our own for the same article. Third, Heaviest duties on imports most used by those best able to bear the burden of taxation. Fourth, A differential rate which may be used to open the markets of the world to all our products on equal terms.

When the centralized bank proposition came up Mr. Creasy, of Pennsylvania, offered the following resolution which was placed upon immediate passage and unanimously adopted:

Whereas, From its very start and all thru the years of its existence the Grange has unswervingly opposed all class legislation and the granting of special privileges to any individuals or interests, and Whereas, A project is now being actively promoted to establish a great centralized banking institution, and believing this to be a revival of a dangerous proposition, which once before in our country's history raised its threatening head, but which danger was averted by the veto act of a brave President, therefore be it

Resolved, By the National Grange in forty-third annual session assembled and representing one million conservative, liberty-loving people, that we are unalterably opposed to any legislation by Congress looking to the establishment of a great centralized bank.

COMING EVENTS.

Michigan State Grange, Thirty-seventh Annual Session, at Traverse City, December 14-17.

Pomona Meetings.

Charlevoix Co., at Ironton, Friday, Dec. 3. Special meeting for conferring fifth degree.

Ionio Co., with Banner Grange, Thursday, Dec. 30.



I Want to Send You This \$3.50 Pail Free

I want you to know for yourself why

WILBUR'S STOCK TONIC

is fed by 500,000 stock raisers daily. I want you to see what it does for your horses, your milch cows, your hogs, your sheep and poultry. I want to prove to **you** beyond all doubt, that Wilbur's Stock Tonic is a wonderful feed saver, fattener and positive preventive of disease. I want you to find out by actual

test that my tonic **makes money for you** every time

you feed it and there are **1240 feeds** in the pail I want to give you **free**. I don't want you to pay me one cent for this free pail. That's why I will send a 25-lb. pail absolutely free to you and to every reader of this paper, where I have no agent, who fills out and sends me coupon below.

Is my offer fair? Do you risk one cent by accepting this \$3.50 pail **free**? Is it worth a 2-cent stamp to make \$3.50? If so, just fill out this coupon and mail **today**.

What Others Say

Wilbur Stock Food Co. Milwaukee, Wis.
Gentlemen:—I have been feeding Wilbur's Stock Tonic for some time with best results I feed it daily to horses, cows and hogs, and find it does everything you claim for it. I have fed other kinds but they are nowhere to compare with yours. I never expect to be without Wilbur's Stock Tonic.
Yours truly,
F. E. FOX
Perryburg, O.

Wilbur Stock Food Co. Milwaukee, Wis.
In regard to Wilbur's Stock Tonic, I can say I think it is all right. I have had two or three horses die and several sick ones but since I commenced using your Stock Tonic I haven't lost a horse or had one to be sick that I know of. I have been using it for the past two years.
Yours truly,
(Signed) G. W. BEAVERS
Hurst, Ill.

Wilbur Stock Food Co. Milwaukee, Wis.
Dear Sir—Your Stock Tonic is the best I ever used to bring up run down horses. I could not get my horses to improve until I commenced to feed your tonic. They are fattening up and I feed only half the grain I did before and my cattle are doing well. In fact everything I feed it to. Would not be without it again.
Yours truly, I. O. McNUTT
Warrens, Wis.



This Beautiful Picture Free

Champion six-horse team of the world. Fed on Wilbur's Stock Tonic. Awarded First Prize at St. Louis World's Fair. I mail you this beautiful picture **FREE**, size 15 x 31 inches, in exquisite colors, if you mail coupon without delay.

J. P. Wilbur
President

WILBUR STOCK FOOD CO., 663 Huron St., Milwaukee, Wis.

FREE \$3.50 PAIL COUPON

F. P. WILBUR, Pres.,
Wilbur Stock Food Co.,
663 Huron St., Milwaukee, Wis.

Please send me the 25-lb. pail of Wilbur's Stock Tonic and the large colored picture, **both free**.

I own _____ horses _____ cattle _____ hogs _____ poultry.

My Name _____

P. O. _____ R. F. D. _____

Freight Sta. _____ State _____