

auger, bore down seven or eight feet for ground ends. If you have to dig, go down at least four feet, and have the rod at the end coiled into a flat spiral, throwing in also some old iron.

According to the best authorities, rods may be stapled directly to the building, if ground connections are good, but a cork may be put under, if desired, between the points of staple. Or two wire nails may be used in such a way that when driven far enough they look like an x, into the upper cross of which, like a stick in a saw-horse, the rod is laid. Just before being driven full distance, bend the heads of the nails over, and then drive down to hold the rod firm.

In conclusion, let me quote again from Sir Oliver Lodge, who thought "that a building whose highest lines and all projecting points were thus protected by single wires or loose cables terminating in damp ground would be well guarded."

T. BATY.

### Potato Rot and Digging-time.

The other day we received an inquiry similar to the following: "I have several acres of potatoes fairly ripe, but still growing. They show signs of rotting. Had I better dig and store in my cellar at once, or leave in the ground until fully ripe? If dug now they will rot in cellar. I want to save all I can for better prices than now ruling."

Last year the Maine Experiment Station grew, harvested at two different times, and stored in cool cellar, until January 1st, eight varieties of potatoes, four early and four late. Part of each were sprayed several times with Bordeaux mixture, and part were untreated. The shrinkage includes all loss due to rot, loss of moisture, etc. Potatoes that were all discolored, even though otherwise sound, were (as is the case of all experiments at this station) classed as diseased, and not included under sound potatoes.

Yield of sound potatoes from fifty-five hills at digging and per cent. of sound potatoes after storing until January 1st:

	Date of digging	Pounds sound potatoes from 55 hills at digging.	Per cent. of sound potatoes January 1st.
Early varieties	Sept. 8	41	39
Unsprayed	Oct. 7	54	86
Early varieties	Sept. 8	74	64
Sprayed	Oct. 7	76	87
Late varieties	Sept. 8	64	48
Unsprayed	Oct. 7	69	91
Late varieties, sprayed	Oct. 7	104	90

In each instance, as in the average results, there was a larger yield at the later digging, and the late-dug potatoes kept far better than the earlier dug. Experiments at the Vermont Station give the same general results. The conclusion seems to be justified that in case the potatoes show signs of rot, they should be left in the ground as late as possible before digging.

### Starting Beet-sugar Factory.

A Smith's Falls, Ont., subscriber writes, asking what the prospect would be for getting a beet-sugar factory started there.

In the first place, it would be wise to determine by actual experience that a success can be made of growing sugar beets of a sufficiently high percentage of sugar and purity, and in sufficient quantities, within a reasonable area of where the factory might be located. The two factories now in successful operation in Ontario are at Berlin and Wallaceburg, but it would not be very profitable to ship them from Smith's Falls even to the former. The freight rate is practically one cent a mile per ton. The extreme point from which beets have been shipped to Berlin is Newcastle, the rate being \$1.10 per ton, which cuts a large slice into the profits. In the meantime, it would be out of the question to think of starting a factory. We would suggest that a half dozen or more farmers grow a quarter of an acre each of sugar beets, as a test, and have them shipped as a carload to Berlin next fall for testing. The Ontario Sugar Company, at Berlin, would no doubt furnish seed and instructions for the purpose, and probably the manager of the Wallaceburg Company would do the same.

### No "Taffy."

Enclosed find my subscription to the end of 1905. I am not giving you taffy, but will just say I have been a reader of the "Farmer's Advocate and Home Magazine" almost continuously from the time it was started, but I lost a couple of years of it, and I believe it was a money loss to me to have been without it.

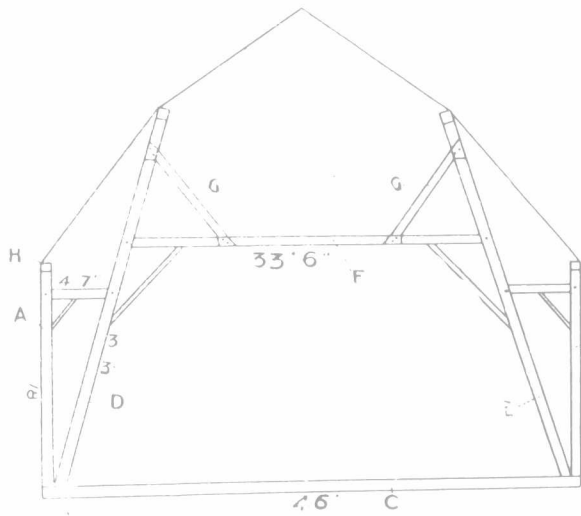
Prince Edward Co. H. H. DICKSON.

### The Kind of Bent to Use.

An Oxford, Ont., County reader sends the accompanying cut of a bent of a barn, and comments on it thus:

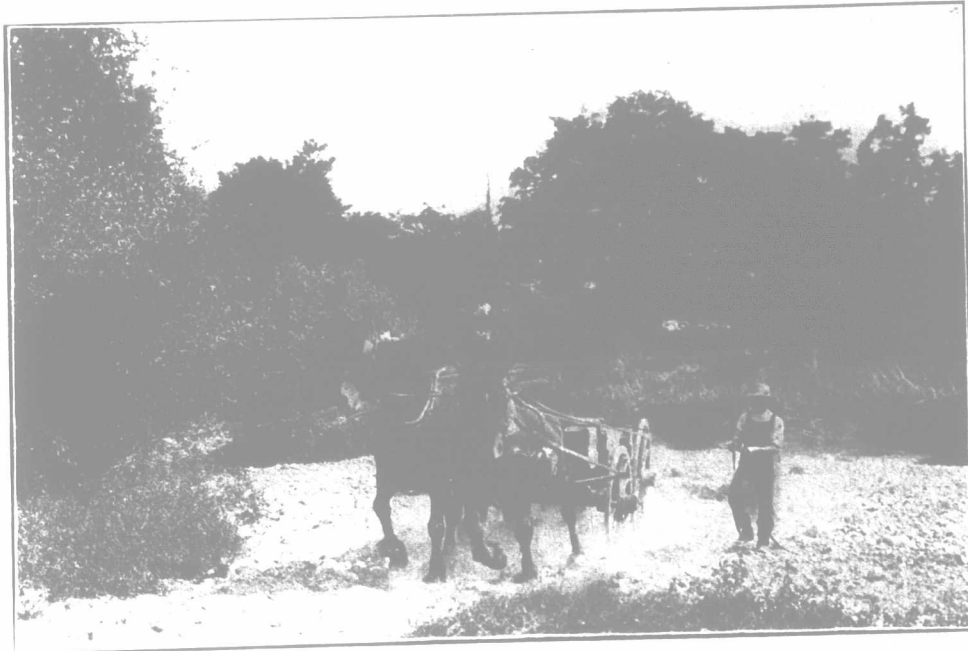
Owing to its slanting purline posts, the above plan is commonly called the bridge beam. In most of the barns the posts are vertical. We also know that too many upright posts in a barn floor are a hindrance especially in small barns built when timber was plentiful. According to the above plan not a single post is on the barn floor. A team and wagon is able to be turned at any spot.

Not only is a barn constructed in this way more convenient, but also stronger. A frame made on the square basis is more apt to give to one side. Sup-



posing we wanted to prop up something heavy, say a sawlog, we would not put a square under it, but a triangle. The slant purline posts serve the same purpose as do the slant ends of a bridge. We read a great deal of barns blowing down or being broken down by snow. The storms are becoming more and more severe as the forests are cut down, and the thinner the forests the weaker the timber used; thus we want to give each foot of lumber its proper place, where it has the greatest opportunity to resist pressure, and also place timber where it is most needed. The times are past when oak, pine and beach logs two feet in diameter and thirty or forty feet long were used.

The timber used in the above plan is 10x10 throughout the whole frame. The end posts A B are 18 feet long; the bottoms of these are framed into the ends of C D E; the purline posts are 33 feet long, and are slightly grooved in C, to prevent them from slipping at the bottom. It is necessary that C be one long log, or if in two pieces they must be well joined, so as to hold the bottoms of D and E firm. F, the cross-beam, is 33 feet 6 inches long. This beam is kept firm by double braces at the bottom; these braces



The Gravel Team.

should be about 8 feet long. G G are two plank draw-braces, inlaid in D and F and E F; then two bolts put through at each end. By having G G fastened in this way they have a double purpose, both as braces and draw-braces. The rafters are two feet apart and 16 feet long. The rafters only reach to the top of the plate marked H. Short rafters, 18 inches long, are nailed against the others, with a 4-inch rise at the bottom. After the sheeting and shingles are put on the end roof has a bell shape appearance.

The three or four inner beams of the barn should be made on the above plan, while the outside ones have to be made with upright purlines in order to nail on the sheeting.

Oxford Co., Ont.

ADAM EOTH.

### Sherbrooke Exhibition.

#### AGRICULTURAL AND DAIRY DEPARTMENTS.

Better weather could scarcely be wished for than that which favored, during the first four days, the Great Eastern Exhibition. The attendance fell short of last year's record, but this can be accounted for by several causes. Undoubtedly, the fatal wreck on the G. T. R. at Richmond, between Sherbrooke and Montreal, in which nine or ten lives were lost and thirty injured, had the effect of keeping hundreds at home. Then, the mistakes of the hotelkeepers last year of over-charging had to be atoned for, the influx of visitors from the North-eastern States being comparatively small, in spite of the hotel tariffs being regulated this year by the city council.

This year, 1904, is considered to be a year of marking time by the exhibition directors. Of late years, the extent of the exhibition has grown by leaps and bounds, until its scope has outgrown the building accommodation. This year the entries were the largest in the history of the fair, and all departments were crowded. In the vegetable section, it was necessary to erect a large tent to accommodate the extra entries, and in the horse section the Superintendent had to engage stalls in the city to accommodate the largely increased entries, and this in spite of the fact that additional stables had been already provided on the grounds. New buildings had been provided for the cattle and swine departments.

The Association having issued bonds to the extent of \$15,000, look forward to making all the necessary improvements during the coming year. For instance, the present dairy building is by no means in keeping with the importance of the industry which it represents. It will undoubtedly be the first thing to receive attention of the Association, and before another fair is held, there is good reason to believe that an up-to-date dairy building, after the model of that at Toronto, will be erected, and the present makeshift will be used for the horticultural and agricultural exhibits entirely, for which it is admirably suited.

The liberal prizes donated by the Eastern Townships Bank, and offered for competition to the butter and cheese makers, produced a large entry of either product. In fact, the cheese exhibit was larger than last year, comprising fifty-seven entries of three cheese each, whereas butter, with forty-three entries, showed a slight falling off. Mr. Warrington, of Montreal, judged the cheese and pronounced the quality, on the average, to be very fine, fully equal to the best Ontario. On the other hand, Mr. A. J. Brice, who scored the butter, expressed disappointment with the quality, flavor in many instances being especially faulty. The opinion was freely expressed among the factory men present that this deterioration in quality was due entirely to the introduction of the hand separator, and that they

must adopt methods to overcome these drawbacks. Mr. Brice is reported as saying that he had noticed a falling off in quality in a great part of the butter this season. If it were not for the shortage in the Danish make this season, England would not take our butter, except at very much lower prices.

Mr. Warrington pointed out that the cool-cured cheese took first place, which should be sufficient proof to the dairy-men and cheese-makers that without the cool-curing system they are knocked out of competition.

The prizes were awarded as follows: Cheese—1, Robert G. Gilderhouse, Sweetsburg, Q.; 2, D. J. Ingalls, Denborough; 3, J. G. Ward, E. Dunham, Q.; 4, E. Ruiter, Farnham, Q.; 5, W. Barrington, Kingsbury, Q. Butter—1, E. O. Booth, Waterloo, Q.; 2, Carleton Creamery Co., Woodstock, N. B.; 3, S. L. Deslaunier, Mont Dufresne; 4, N. E. Fish, Ayer's Flat, Q.; 5, W. W. Reed, North Hatley, Q.

Much unfavorable comment was heard owing to the score-cards being withheld, both for butter and cheese. The boxes of butter were allowed to remain throughout the entire exhibition with the linings over the butter, so that no butter was visible. If this was an oversight, it is to be hoped that it will be corrected in the new dairy building. The fruit exhibit was large; 800