

PART I.—DOMINION STANDARDS.

"The Dominion standard for determining the length of the Dominion standard yard is a solid square bar, thirty-eight inches long and one inch square in transverse section, the bar being of bronze or gun metal (known as Baily's metal); near to each end a cylindrical hole is sunk (the distance between the centres of the two holes being thirty-six inches) to the depth of half an inch; at the bottom of each hole is inserted in a smaller hole a gold plug or pin, about one-tenth of an inch diameter, and upon the surface of each pin are cut a fine line transverse to the axis of the bars, and two lines at an interval of about one-hundredth of an inch parallel to the axis of the bar; the measure of length of the Dominion standard yard is given by the interval between the transverse line at one end and the transverse line at the other end, the part of each line which is employed being the point midway between the longitudinal lines; and the said points are in this Act referred to as the centres of the said gold plugs or pins, and such bar is marked "Mr. Baily's Metal," standard yard, "A," "Troughton & Simms, London." There are also on the upper side of the bar, two holes for the insertion of the bulbs of suitable thermometers for the determination of the temperature."

This bar is standard at a temperature of $61^{\circ}.91$ Fahrenheit.

The Ontario standard may be described thus:—A metal bar of rectangular form and about a yard in length, across which lines are cut to denote feet and links. There is no provision for inserting thermometers, and the divisions are coarse. It is supposed to be standard at about 60° Fahr. I will not discuss the subject of deriving a standard for weights and measures from the lineal standard, though I think the connection would be most advisable. With regard to angular measurements, the benefit of dividing the degree decimally, and having our instruments similarly divided, needs no comment. In conclusion I hope this paper will have the effect of inducing this Association to take the matter up with such energy that the matter may become an actual fact and not remain a visionary theory.

DISCUSSION.

Mr. Gibson—What steps do you suggest we should take?

Mr. Sankey—I think we would not require legislation. The way is to go slow. If all the surveyors would start to make their measurements in hundredths I think there would be no difficulty in carrying the matter out. The public would soon understand it, there would be no difficulty in that. The advantages would be so great and the disadvantages so small. The metric system is law in Canada. Mr. Bates, of Arkansas, advocates that system. The metric system would be difficult to bring into common use. The only way would be for some fairy to obliterate the feet and inches and for us to waken up some morning and find the metric system in vogue.