They will simply go on using the chains or tapes they now have, but express the results of their measurements in feet and decimals, and when they are worn out or broken get a new one divided into tenths and hundredths. With regard to our scales, they are now decimally divided, and no difficulty will arise in plotting surveys made in feet and hundredths with them. Of course, as they wear out or break, supply their places with ones divided in tenths instead of inches. We would then use the expression on our plans, "I tenth equals 50 feet," or as the case may be. The surveyor who is also an engineer should welcome the change with rapture, from the fact that all measurements for length are now made in feet and tenths, so he will not have to carry two tape-lines with him.

We now come to the subject of calculations under this system. First, as to measures of length now expressed in inches, etc., it may be said that mechanics generally use inches and eighths, and to convert them into feet and hundredths would be too much trouble. The following rule I have found to be quite close enough for practice :--"First express the inches and eighths in eighths. Place this number to the right of the decimal point. In the tenths or hundredths place according as the number of eighths is tens or units. Multiply the number by four and place the product below in the hundredths, thousandths, or tens of thousandths, place as the case may be. The sum will be the required decimal of a foot."

Thus, express $6\frac{1}{8}$ inches in decimals of a foot :--

 $6\frac{1}{8}$ inches = $\frac{49}{8}$ '49 49 x 4 = 196

Should be .5104.

Again, as to converting square feet into acres and hundredths, 43,560 is a big divisor. But the figures are easily multiplied, and for ordinary purposes where a few acres only are in question, multiplying square feet by 2 and cutting off the last six figures will give a sufficiently close result.

.5096

I cannot think that any difficulty will arise when foot-rules, divided as I suggest, are placed in the hands of the workmen. The reason that I have taken up the Dominion standard before the standard which we, as Ontario surveyors, are bound to verify our chains by, is this:—That, in my opinion, the Ontario standard is only binding on us when making surveys under the authority of the Commissioner of Crown Lands. But when making surveys for private individuals, who are selling their land by the acre or by the foot, the Dominion standard is the one by which we are governed. Another reason is this:—The Dominion standard is very much more accurate. The changes due to temperature have been carefully observed, and means for making these observations are provided for, whereas, in the Provincial standard the means are not so accurate. Let me read to you the legal description of the former: