THE METRIC SYSTEM.

Measures and Weights.

During the last session of the Dominion Parliament the Hon. Thomas Ryan moved a resolution in the Senate, which carried, to appoint a committee to enquire into the steps taken and the progress made in the United Kingdom towards establishing an uniform international system of decimal measures, weights and coins, and to report in how far such a system may be applied to this Dominion.

The question of Weights and Measures first occupied the attention of the Committee. The metric system was introduced in France, eighty years ago, by a commission of scientific men from the different states of Europe, actuated with the generous object of discovering a common and simple international system, to take the place of the old, numerous and confused systems in use. "It is based upon a measurement of the earth. The metre is "estimated to be a ten-millionth part of a meridian line from the pole to the equator, and "was decided by the report of the English Royal Commissioners, in 1820, to be equal to "39.37079 English inches. The unit of length being thus fixed, a square of ten metres long, "or 100 square metres, becomes the standard of surface for land measure, called the *are*, "which is .0988, or very nearly one-tenth of an English rood. The standard of capacity for "liquids is equal to a cubic decimetre called the *litre*. For the standard of weight the *gram* "is a cubic centimetre of distilled water = kilogram, which is a unit of weight much used in "commerce, and a little more than 2.2 English avoirdupois pounds." This description of the metric system is taken from the report of Mr. Samuel Brown to the International Statistical Congress held in London in 1860. The units of length, surface, capacity and weight are thus connected with each other, and harmonize together. They are purely decimal, and simple in all their combinations, and capable of universal application.

The Congress recommended that all international statistics should be expressed in this system.

The Greek and Latin nomenclature applied to the system in France would be useful for an international understanding. But it is not an essential part of the system. If the units are preserved the old names may be applied. It is not uniformity in names, but in the weights and measures themselves, and a pure decimal system, that are the objects to be attained.

A committee of jurymen and commissioners at the Paris Exhibition, in 1855, made the following recommendation, which has been quoted by the Senate Committee:—"They deem "it their duty earnestly to recommend to the consideration of their respective Governments, "and of enlightened individuals, friends of civilization, and advocates for peace and "harmony throughout the world, the adoption of an uniform system of weights and "measures, computed decimally both in regard to its multiples and divisions, and also in "regard to the elements of all the different units."

In 1855 an International Association was formed, which thus declared its objects:—"The "undersigned have determined to form an association, composed of members chosen from "the different civilized nations, who shall engage to devote themselves, each in his own "country, by means of committees corresponding with one another, to the establishment, in "all civilized countries, of an uniform decimal system of weights and measures, and, as far "as possible, of moneys."

The Senate Committee state, with respect to this Association, that "amongst the "branches formed in different countries the most active from the commencement has been "the British. After mature deliberation this Association decided that the metre, with its "decimal system, is the best unit of length, and has since strenuously advocated its "introduction, and mainly contributed to place it in the position which it now holds in the "United Kingdom, where nearly 60 per cent. of the total export and import trade of the "country is carried on with people using the metric system."

In 1835, the Imperial system was established, by law, in Great Britain, which is now in use; but, in 1864, the metric system was made permissive, by the Act 27 and 28 Vic. cap. 117. The preamble of that Act recites—"Whereas, for the protection and extension of an internal as well as foreign trade, and for the advancement of science, it is expedient to legalize the use of the metric system of weights and measures." We subjoin the schedule appended to the Act, setting forth the terms of the weights and measures in force, and their equivalents in the metric system:

Measures of Length.

Metric Denominations and Values.		Equivalents in British Denominations.				
	Metres.	Miles.	Yards.	Feet.	Inches.	Decimals.
Myriametre	10,000	6 or	376 10,936	0 0	11 11	.9 .9
Kilometre	1,000	.....	1,093	1	10	.79
Hectometre	100	.....	109	1	1	.079
Decametre	10	.....	10	2	9	.7079
Metre	1	.....	1	0	3	.3708
Decimetre	$\frac{1}{10}$	.....	.....	.....	3	.9371
Centimetre	$\frac{1}{100}$	.....	.....	.....	0	.3937
Millimetre	$\frac{1}{1000}$	.....	.....	.....	0	.0394