

	Length.	Surface.	Capacity.	Weight.
Myria ...	10000	...	...	10000
Kilo	1000	...	1000	1000
Hecto ...	100	100	100	100
Deca	10	...	10	10
UNITS.	Metre.	Are.	Litre.	Gramme.
Desi .....	.1	...	.1	.1
Centi .....	.01	.01	.01	.01
Milli .....	.001	...	...	.001

Whatever objections may be made to the use of the learned languages for names which are to be learnt and most extensively used by the poor and the ignorant, there can be no doubt that they give the greatest facility in acquiring the system. In any country in which this system is introduced, even if the old names of the nearest corresponding weights and measures should in popular use be applied to the new, it is very desirable that, in public and private schools, the original nomenclature should be taught, as the means of firmly fixing in the memory, with the least expenditure of time and labour, the entire system."

It was shown from an inquiry that for a boy to learn our present system of weights and measures, with all the branches of Arithmetic thereon depending, would occupy nearly three years, whereas the probable time for a decimal system would be less than ten months. It has already been adopted in France, Belgium, Holland, Spain, Portugal, Greece, Italy and other countries, whose total population amounts to 150,000,000; and through the efforts of the International Decimal Association and other bodies, a Parliamentary Committee has investigated the subject and recommended its gradual adoption in England. In conclusion the author stated that "If the metric system be once legalised in this country we can hardly form an estimate of the immense benefits that would follow to the commerce of the world. Our colonies would naturally and for their own sakes, adopt the system of the mother country, with whom their trade principally lies. India, which has no common system of weights and measures, but under the varieties of native governments, is full of incongruous and absurd systems, by which it cannot be doubted the labouring classes especially are exposed to false weights and trade frauds, might by our influence gradually find one simple system prevailing throughout the whole of those vast dominions. The Americans, who have long agitated this question, would not, we are assured by the American delegates who have been sent to our European congresses, hesitate to make the change. They are only deterred now by the disturbance that would arise in their large trade with this country as long as our present system continues. An impetus would be given to Russia and Germany to

complete the work to which they are already half committed.

The expression in the old English statute "that there should be but one measure and one weight throughout the land," might be expanded into the grander idea, which would then be almost realised, that there should be but "one measure and one weight throughout the earth." Commerce, the real harmonizer of nations, uniting them in the bonds of mutual interest and growing esteem, would then receive a still greater development than has occurred even in the last few years, diffusing everywhere the blessings of peace, and causing all nations to pause ere they precipitated each other into the calamities of war.

A NEW OPHTHALMOSCOPE,

FOR PHOTOGRAPHING THE POSTERIOR INTERNAL SURFACE OF THE LIVING EYE:

The invention of Dr. A. M. Rosebrugh, Oculist, Toronto.

At a late meeting of the Canadian Institute, the President, the Rev. Dr. McCaul, in the chair, Dr. Rosebrugh read a paper on the theory of the Ophthalmoscope, and gave a description of and mode of using a new instrument of his invention for viewing and photographing the deep structures of the living eye. He also exhibited a number of photographs taken with this instrument, showing portions of the retina, vessels, optic nerve, &c., of the eye of a cat.

After reading the paper, he illustrated the mode of using the instrument as an ophthalmoscope, by demonstrating in a very satisfactory manner the retina of the eye of a live cat introduced for the purpose. As the instrument is undoubtedly a most valuable scientific invention, we take great pleasure in bringing before our readers in this number of the Journal the essential part of Dr. Rosebrugh's communication as read before the Canadian Institute.

In giving an outline of the optics of the eye, the doctor states that the blackness of the pupil under ordinary circumstances, and the invisibility of the parts behind it, do not depend (as was formerly supposed) upon the total absorption of all the rays of light that enter the eye, but solely upon the refraction the rays of light undergo in passing through the transparent media of the eye, and that part of these rays are reflected from the eye, which can be seen by an observer having his eye in the line of the light illuminating the eye that is being experimented upon; but this position is an impossible one, without some special contrivance for the purpose, as, if the experimenter places his eye beyond the light his eye is dazzled, and if it is