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The Sanguet tacheometer supplied by Mr. Cabasson which bears the order number 115, is all that could be desired, both in point of construction and finish, as far as can be judged from a close indoor examination and a few verifications made on Parliament Square. It is what may properly be termed a universal surveying instrument, being admirably contrived for measuring, in all positions, distances automatically reduced to their horizontal projections, and that more accurately and expeditiously than these horizontal distances could be measured under the most favourable circumstances, with either chain, tape or any other measuring device, besides which the tacheometer is equally serviceable for levelling and taking horizontal and vertical directions and compass readings. I have no doubt that when tested in a practical manner in the field, our new tacheometer will prove satisfactory in every way for carrying on expeditiously and economically, not only the precise levelling and surveying operations, this particular instrument is more especially destined to be used for; but also all ordinary engineering field operations.

The new geodesic rods, of which there are three, were manufactured at Ottawa, inclusive of all the accessories, viz.:—in accordance with the drawings I furnished, and under my direct supervision; for being of home manufacture, the rods are none the less artistic pieces of workmanship. The woodwork was executed at the government workshop under the superintendence of Mr. F. Breton, clerk of works, the metal mountings and fittings by Mr. Geo. Bailey, of Wellington Street, and last but not least, the painting, inclusive of scale divisions, under the direction of Mr. Alfred Côté, who is in charge of the government paintshop; although not machine divided, the scales are remarkably neat and accurate, and the figuring is very distinct and striking.

I must confess that, notwithstanding many elaborate reports made on various occasions, by prominent engineers in different countries, to show the advantages to be gained by the regular and extended use of the ordinary stadia wire tacheometer for engineering field work generally, I was never favourably impressed by the results obtained with such instruments, taking into consideration the troublesome and bulky reductions, etc., which have to be attended to, and failed to see how such tacheometers could ever really be of much service to the engineering profession, except for reconnaissance work, running trial lines and other operations of a similar nature. I now feel satisfied, however, that in a comparatively short time we shall see the improved self-reducing Sanguet tacheometer or some similar apparatus take the place of nearly all other surveying instruments used at present for engineering purposes, and that chain or tape measurements of long horizontal distances will soon be a thing of the past.

With a view of verifying, in this country, all the good points claimed for this tacheometer, and at the same time affording the engineers of the Department an