

of its meridian) that to raise an objection against the practical reception of the metre, either *per se*, or as a substitute for the yard, on this score, would savour of hypercriticism. A more serious objection is the choice made of the circumference of the meridional or generating ellipse of the terrestrial spheroid in preference to its axis of revolution. This is a blemish on the very face of the system—a sin against geometrical simplicity. Still, were the length of the metre as determined by the French geometers rigorously exact, or correct within limits which the much more extensive measurements of meridian arcs since made elsewhere than in France have proved to be attainable, this would be only a matter of regret, and could hardly, of itself, be drawn into an argument for its rejection. But this is far from being really the case. The metre, as represented by the material standard adopted as its representative, is too short by a sensible and measurable quantity, though one which certainly might be easily corrected. To show this it will be necessary to enter into some detail.

(22.) In effect, that standard is declared, in the Annuary of the Bureau des Longitudes, to be equal to 39·37079 British imperial standard inches. The quadrant of the French meridian then ought, if this be correct, to be 393,707,900 such inches, or 32,808,992 feet. And by whatever aliquot part of its whole length the true quadrant exceeds this, by that same aliquot of *its* length is the metre, so stated, erroneous.

(23.) Mr Airy, by a combination of the whole series of meridian arcs whose measures had been obtained in