called forth renewed complaints. The opinions thus set forward were endorsed by Prince Albert at the London meeting of the International Statistical Congress; and in 1861, the Associated Chambers of Commerce, including representatives of the most influential towns and the most important branches of industry, unanimously passed the resolution "That it is highly desirable to adopt the Metric System, which has been introduced into many European countries with great advantage to the saving of time in trading and other accounts." I will not stop to enumerate the men of scientific and commercial celebrity who have borne similar testimony; a few examples will suffice. In a memorial on Decimal Weights, presented to the Chancellor of the Exchequer by the International Decimal Association in 1859, it is stated, on the authority of the official returns, that 72 per cent. of our merchant navy was in 1857 (three years before the French treaty of commerce) engaged in transactions more or less dependent ont the Metric System; this, of course, including vessels of every size and capacity; and in 1861 the declared real value of goods exported from the United Kingdom to countries using the Metric System in whole or in part amounted to nearly one-half the total value of all our exports. It was stated in evidence that the estimated saving to a single railway company, by the employment of a decimal system, would be 10,000*l.* per annum, and several merchants estimated their probable annual saving in amounts varying from 500*l.* to some thousands. Sir Rowland Hill notes many complexities in postal arrangments which arise from the difference between our system and that in use on the continent. With regard to all other countries except our own colonies and America, special weights are required in the Post Office. Since this evidence was given, the latter country has been removed from the list of exceptions, the Metric System having been adopted in the United States by a recent act of Congress. Passing to scientific matters, it may be observed that the Metric System has been almost universally adopted by chemists in their scientific papers, on account of its intrinsic advantages no less than its wide application throughout the world. The eminent chemist, Professor Hofmann, who has recently published a text book of Chemistry, has even introduced into his work a sketch of the Metric System, in the opinion that this study is much facilitated by the application of the decimal scale in calculations of atomic value, combining proportion, volume, and specific gravity. Professor Hughes, the distinguished geographer, remarks, that in the scale on which our maps are constructed, we are isolated from the community of nations; since, in all the countries of continental Europe, the scale bears a decimal ratio to the actual measure of the earth's quadrant. The value of all maps, he says, would be largely increased if a uniform principle of decimal measurement were employed in their construction. The Registrar General for the City of London strongly recommends the use of the Metric System, and adopts it in his official returns. It will be found introduced into nearly all recent text-books of arithmetic. I have here given only a very few instances out of many to the same effect, which may be found in the Report of the Parliamentary Committee on Weights and Measures which sat in 1862, and in the publications of the International Decimal Association.

The Metric System of Weights and Measures owes its rise to the earlier days of the great French Revolution, when a commission of scientific men was formed for the purpose of deciding upon a reliable unit of measurement. A formal invitation was forwarded to the British Government, with the view of procuring the co-operation of the Royal Societies of London with the French Academy of Sciences, that by the united labours of their members, the length of the seconds' pendulum at a given latitude might be accurately determined, and form an invariable model for an international system of measures, and hence for weights. The state of our continental relations at this time (1790) rendered it impossible to accept this proposal. The National Assembly, however, continued its effort in this direction at home; and having caused copies of all the standards used in the several communes to be forwarded for the consideration of the Academy, received in March of the next year a report on the most desirable unit, which contains the following highly creditable reflexion: "The Academy has endeavoured to exclude every arbitrary condition, everything which might lead to a suspicion of partiality for the interests of France in particular; it has desired, in a word, that if only the principles and details of this operation could be transmitted to posterity, it should be impossible to guess by what nation it was ordered and carried out. The operation of the reduction of measures to uniformity is of such great utility, it is so important to choose a system which will suit all nations, the success depends so much upon the universality of the bases upon which this system is supported, that the Academy has concluded that it is not possible to refer to measures already in existence, nor to be contented with the simple observation of the pendulum." Following this resolution, the number of sources of measurement was reduced to three: the second pendulum, the quadrant of the equator, and the quadrant of the meridian. Of these, the first was rejected for the reasons stated above, and the second as affording fewer facilities for accurate measurement than the third, which was therefore adopted by decree of the Assembly. Two eminent mathematicians, Mechain and Délambre, were then entrusted with the execution of a measurement of the meridional arc from Dunkirk to Barcelona; a task which was accomplished after many remarkable obstacles, surmounted by the indefatigable ardour of these true men of science. Meanwhile the French nation was prepared for the contemplated change by an Act passed in 1793, establishing the decimal system of weights and measures, based upon the *mètre provisoire*, an approximate unit deduced from the previous measurement of a meridian by Lacaille. At length, in 1798, Méchain and Délambre presented their report, which was followed by a law establishing the new metre as the definite unit, in place of the temporary standard. A copy of this final base was prepared in platinum, and deposited in the national archives on the 22d of July, 1799. From this all stantard metres throughout the world have been derived; but the new system was considerably delayed in its progress by an unfortunate attempt to effect a compromise with the old nomenclature. Its operation was still further retarded by an equally unsuccessful plan for introducing the principle of duodecimal subdivision. Finally, yielding to the strong pressure of the more enlightened sections of the people, the Government of Louis Philippe, by a law enacted in July, 1837, restored in its entirety the metric system with all the divisions as originally established in 1795. This law, which came into force on the 1st of January, 1840, still exists; and the system has since that time rapidly extended the area of its adoption. It had been legal in Holland from 1821, and in Belgium and Greece from 1836: and it is now in use in Spain, Portugal, and their colonies, in nearly all the South American States, and the greater part of Italy, while it bears a modified form in Switzerland, Germany, and Denmark. Scientific men and public as well as private engineers have long employed it extensively in Sweden, Norway, and Russia, as well as in Great Britain; by an Act of Parliament of the year 1864, it was permissively legalised here; and in the present year the United States, after avowedly waiting in vain for England (as Russia does now,) have established it as the legal system for the future.

In our own country, as in others, a vast amount of inconvenience has been felt from the incongruous nature of the numerical elements of which our tables are made up; and many projects have from time to time been advanced, recommending the adoption of various units, as the foot, the inch, the fathom, and others entirely new, the fruit of special theories and calculations. It is worthy of remark, that as regards subdivisions and multiples, the decimal ratio has received by far the greatest amount of favour from the designers of the various systems proposed. Many of these have been collected and compared under the auspices of a society composed of leading men of science and commerce belonging to several nations, and including official representatives of most of the European Governments. This society, formed in 1855, under the presidency of Baron James de Rothschild, is called the International Decimal Association. It has branches or representatives all over the world, and has been actively engaged since 1855, in the advocacy of the two principles expressed in its name. The first step in their proceedings was the consideration of the best unit of length. Their extensive inquiries led them to the conclusions that a unit already in use would be preferable to any as yet untried; that it should have a philosophical authority, admitting of accurate verification; that it should be of universal rather than local value; and that its dimensions should be such as to admit of easy manipulation, to allow convenient multiplication and subdivision, and to be readily appreciated by the eye. The seconds' pendulum was necessarily excluded from their recommendation, on account of the fact that its length not only changes in different latitudes, but varies even in the same place under the modifying influences of atmospheric and other conditions not subject to the control of observers. The metre alone appeared to possess the qualities considered desirable. It has been tested by extensive usage, not only in France, where it first appeared, but in many other lands, in which it is still employed: (and here it may be observed, that no country having once adopted it, has abandoned it, or failed to derive extensive advantage from its use;) its original source was one to which no exception can be taken on the score of national partiality; its standard exists in numerous copies, of unquestioned accuracy, as well as in the prototype, which has remained unaltered since its adoption in 1799, its size is such that it may be easily used when, as in measuring textile fabrics, both hands have to be stretched to the ends of the measure; while even its thousandth part is a quantity readily perceived and remembered by the eye.

The question of next importance was the scale of the multiples and subdivisions of the unit. There seems to have been no question but that a constant ratio should exist between them; in other words, that