

22.
Babbage.

wealthiest of nations has shown to scientific genius is to be found in the history of Babbage's calculating engine. Yet this machine was approved by all experts—English and foreign—during the inventor's lifetime; and the Report of a Commission of the British Association appointed specially to examine into the matter, concluded by stating that the scheme was perfectly feasible, and might, if carried out, mark an invention as great probably as that of logarithms.¹ Who among us who has been interested in the promotion of institutions for higher education has not a story to tell of pecuniary troubles, continued through many a long year, whilst the wealth of the country seemed to exert its influence only in the direction of making the demands on a struggling establishment more formidable, the expenses more difficult to defray?²

¹ On Babbage see p. 233, note 1. The history of the "difference engines" and the "analytical engine" is given by Babbage himself in his 'Passages from the Life of a Philosopher.' See also Weld, 'History of the Royal Society,' vol. ii. p. 369, &c.

² Like the Royal Society, which for a century had to struggle with poverty, the Royal Institution has a story to tell of want of funds through a long period of its early existence. See Bence Jones, 'The Royal Institution,' London, 1871, pp. 202, 281. The Royal Institution was founded by Benjamin Thomson, Count Rumford (1753-1814), and had originally not a scientific, hardly even a higher educational object. The scheme arose in the mind of its founder after he had successfully exerted himself at Munich under the patronage of the Elector of

Bavaria in founding industrial work-houses, improving the state of the army, and putting down beggary and immorality in the capital and country. His principle was to make "vicious and abandoned people first happy and then virtuous" (p. 31). After leaving Munich in 1793 and spending two years in Italy, similarly occupied, he visited London in 1795 in order to publish his Essays, which appeared separately between 1796 and 1802. The first essay contained "a proposal for forming in London by private subscription an establishment for feeding the poor and giving them useful employment, . . . connected with an institution for introducing and bringing forward into general use new inventions and improvements," &c., &c. (p. 44). The first outcome of this was the formation of a society for encouraging industry and promoting