

ments carried out in Hertfordshire, he did not live to see the completion of the first commercial "telpher line" now being erected at Glynder in Sussex.

The building of houses on sanitary principles interested him largely, and the Sanitary Protection Associations in Edinburgh and in London owed their existence to his initiation, and their success was largely due to his constant exertions. His article on "Bridges" in the "Encyclopædia Britannica," his book on "Healthy Houses," and his primer on "Magnetism and Electricity," are well known to scientific readers, but not perhaps to the readers of his numerous articles in the quarterly reviews and monthly magazines, the last of which was his recent article on "Telpherage" in *Good Words*. His numerous scientific papers published since 1864 are to be found in the *Proceedings* of the British Association, the *Philosophical Magazine*, the *Proceedings* and *Transactions* of the Royal Societies of London and Edinburgh, the *Journal* of the Society of Arts, the *American Journal of Science*, and the *Journal* of the Society of Telegraph Engineers.

Technical education much interested him long before it acquired its present interest for the public, and he presided at meetings of the Society of Arts and other societies when papers on that subject were brought forward. As a director of the Watt Institute in Edinburgh for several years he helped to advance technical education in Scotland.

He was an enthusiastic admirer of ability in other men, and he was especially warm in his encouragement of beginners, whether they were his own pupils or not. To gain his help it was only necessary to let him see that it was anxiously wished for, and that the recipient was not likely to make a mean use of it. He had marked dramatic power, and the plays acted in his drawing-room will long be remembered by his friends; while to his conversation, his general reading and wide sympathies gave a charm which was as powerfully felt as it is now regretfully remembered by all who were fortunate enough to know him.

THE GEOLOGICAL SURVEY OF BELGIUM

ALL who are interested in the careful and methodical investigation of the geological structure of the European continent will be sorry to learn that the Belgian Chamber of Representatives has cut down the vote for the prosecution of the detailed Geological Survey of Belgium so seriously as practically to suspend the work. It is miserable to see personal dislikes, religious differences and political antagonism imported into the discussion of a scientific project. Every competent witness must bear testimony to the minute fidelity and conscientious labour with which M. Dupont and his staff have carried out their Survey. If any fault can be found with his maps it is that they are too complete. They give more information than any ordinary reader can assimilate. Each sheet, indeed, is a detailed treatise on the area which it depicts. There are certainly no such elaborately exhaustive maps published in any other country; and Belgium may justly boast that she has led the way in an important advance in the delineation of geological features. It is an open secret, however, that the official geologists have all along encountered the determined opposition of the "géologues libres" who were not so fortunate as to be entrusted with the control of the work. The Survey having been planned by the Liberal Ministry, and being stoutly supported by the authorities, has until now been able to hold on its course. Much time was, no doubt necessarily, spent by M. Dupont in perfecting his system of colour-printing, and the delay in the appearance of his maps, possibly also the difficulty found by the malcontents in understanding them, were used as arguments for a total reorganisation of the staff. The

opposition has recently been renewed under the clerical Government now in power, and unfortunately with more success. From the published debate it is clear that the Minister in whose department the estimate for the Geological Map was prepared, and who was officially bound to support that estimate, sat still without speaking in its defence, and the House, taking this silence, no doubt, as an expression of the inclination of the new Government, cut down the vote. We are sure that this retrograde step will be regretted by all who wish well to the progress of science. Into the personal squabbles connected with the subject we have no wish to enter. But as a public act of unwisdom the vote of the House of Representatives will, we hope, be rescinded and the prosecution of the Survey will be again allowed to proceed. If any fault is found with the way in which the map has been prepared, surely the Commission contains talent and energy enough to inquire into this and set matters right without practically bringing the Survey to a stand.

THE CONGO¹

THESE two welcome volumes from Mr. Stanley testify to the accelerated rate of events in these latter times. It is only twelve years since Livingstone died in the vain search for the sources of the Nile down by Lake Bangweolo, and under the belief that no river but the Nile could sweep past Nyangwe with such a breadth and volume as he found the Lualaba to have. He was not singular in cherishing such a belief; many geographers believed, like him, that the Congo could not fetch such a sweeping circuit, and that the Lualaba must make its way northwards in spite of differences of level and somehow add its waters to the Albert Nyanza. It is only eight years since Mr. Stanley dispersed the delusion, and solved the problem both of the Nile and the Congo; it is just about six years since he began operations as the agent of the International African Association. To judge from the narrative of his journey across the continent, there was no blacker part of the Black Continent than the river banks between Nyangwe and the Atlantic, and no more intractable people than many of the tribes through whom he and his men had to run the gauntlet. Yet already, almost solely by his exertions, this most unpromising region has become "A land of settled government," at least on paper. It has engaged the continued attention of diplomatists from all the great States of the world for months, and is the subject of as many treaties as if it had been founded a century ago.

In reality, however, it is something more than a paper State. No one can read Mr. Stanley's narrative without being convinced that all along the river from Vivi to Stanley Falls there already exists what may fairly be regarded as an organised Government, carried on from some twenty-four stations as centres. But with the merely political aspects of this successful undertaking we cannot deal here. It is certainly an interesting experiment, both from a political and social point of view, this attempt to raise into a State a region not yet redeemed from savagery. What the ultimate result will be it is hard to say; on the one side a great mass of savagery, and on the other the most advanced European influences in politics, in commerce, in industry, in religion. For already we find bands of missionaries everywhere, and as among them are many men of prudence, tact, and ability, Mr. Stanley acts wisely in encouraging their efforts; they will certainly be of service in helping him to accomplish the object he has in view.

Without the aid of the latest applications of science, Mr. Stanley could never have succeeded in accomplishing all he has done in the brief period of six years. Steam has been of infinite service to him, and engineer-

¹ "The Congo, and the Founding of its Free State." By Henry M. Stanley. Two Vols. (London: Sampson Low and Co., 1885.)