

## SCIENCE:

A WEEKLY NEWSPAPER OF ALL THE ARTS AND SCIENCES.

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Attention is called to the "Wants" column. All are invited to use it in soliciting information or seeking new positions. The name and address of applicants should be given in full, so that answers will go direct to them. The "Exchange" column is likewise open.

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IN THIS NUMBER we print the extracts from recent letters of Stanley that have reached this country. They show, that after getting back to the shores of the Victoria Nyanza, after his long journey back to the Kongo, after his first meeting with Emin Pacha in the early part of 1888, he found that the Pacha's authority had been considerably impaired; in fact, that at one time he had actually been a prisoner in the hands of his own troops. But, in spite of this, Emin showed some signs of hesitation about leaving the Sudan, which resulted in considerable of a strain on Stanley's patience. The rebellion was checked by a southern movement of the Mahdist forces, and Emin was once more free. The country, however, was in so disorganized a state, that Stanley finally set a date on which he must start for the coast, and is now on his way, with Emin as a doubting and reluctant companion. Whether Emin's vast stores of ivory and valuable collections are being brought out to civilization seems doubtful; but it seems likely that this long-lost army of southern Egypt will soon be a thing of the past, and that the region will be given over to barbarism till stronger forces are brought to bear.

THE OPINION EXPRESSED by the eminent engineer Mr. Towne, quoted in another column, as to our ability to properly prepare for an international exposition in 1892, because of the limited time at our disposal, will not be shared by many who have given attention to the subject. Ample time is, of course, necessary; but one or two years' time, in the present highly developed state of the architectural and engineering arts, and in what may be termed "the art of promoting expositions," is ample for doing what could not be done in double that time when the exposition of 1876 was planned. The opinion of Mr. Towne is worthy of consideration, but we think it is also worthy of reconsideration.

## AMERICAN SOCIETY OF MECHANICAL ENGINEERS.

THE tenth annual meeting of the American Society of Mechanical Engineers was held in this city on Nov. 18, 19, 20, and 21. The meeting was opened by an enjoyable evening reception at the society's rooms, at 64 Madison Avenue, on Monday, the 18th; and the business sessions began on Tuesday at the rooms of the Academy of Medicine, 12 West 31st Street, about a hundred and thirty members being present. Mr. Henry R. Towne, the retiring president, delivered the opening address, which consisted mainly of an account of the recent engineers' excursion to Europe, with some remarks on the Paris Exposition and the projected world's fair in this city, followed by an account of the present condition of the society. He briefly compared the time which had been found necessary to prepare for the Paris Exposition with that now left in which to prepare for an exposition in this city in 1892, and expressed the opinion that at least a year's postponement would be found necessary, and perhaps two years, if the fair was to be at all adequate to the occasion. Four years and a half were given to preparations for the Paris Exposition, while we have but little more than half that time in which to get ready. He congratulated the society on its vigorous growth, from a membership of 189 at the end of the first year (1880), to 1,049 at present. Mr. Towne concluded his address by hoping that the many local societies of mechanical and civil engineers would in time be converted into chapters or sections of a national society, and that there would be some one organization soon formed to include the best portions of all the societies.

The address, which was well received and heartily applauded, was followed by the reading of reports of the various officers and committees, and the discussion and adoption of resolutions on securing legislation to provide a government bureau of record, "wherein may be entered respectably recognized and approved standards, for the promotion of uniformity in the products of the arts, in technical customs, and in nomenclature." Other resolutions concerning the management of the society were also adopted.

The reading and discussion of papers were then taken up. The first paper was on "Properties of the Vapor of Water," by V. Dwelshauvers-Dery, which was followed by a paper on the "Theory and Design of Chimneys," by Horace B. Gale; one on the "Philosophy of Multiple Cylinders or Compound Engines," by R. H. Thurston; "Flow of Steam through Orifices," and "Experimental Study of the Different Types of Calorimeter," by C. H. Peabody; "Cost of Lubricating Car Journals," by L. S. Randolph; "Steam-Pipes for Collieries," by E. F. C. Davis; "Rolling Steel Rails," by D. K. Nicholson; and "Methods of reducing the Fire Loss," by C. J. H. Woodbury. In the evening many of the members, accompanied by ladies, discussed a subscription dinner.

Wednesday was devoted by the members to their annual excursion, in the course of which they visited the government instruction and proving ground at Willet's Point, as well as other places of interest. At Willet's Point, sight-seeing commenced by a visit to the torpedo laboratory. Every thing was investigated, and obliging officers were found ready to explain the workings of the intricate apparatus used in the experiments.

The instruments attracting the most attention from the visitors were a Thomson galvanometer, a galvanometer with a reading telescope, a Thomson electric-current balance, a Thomson multicellular electrostatic voltmeter, a British post-office standard galvanometer, and an English "shutter" apparatus for operating and exploding torpedoes from shore. The general use of electricity in all these systems interested the observers at once. If our naval officers wish to fire a mine, they employ the electric spark. If they desire to drive a fish torpedo, they transmit to a motor within it a current of electricity. In steering it so as to strike the object to be destroyed, they employ the same means. If they wish to find a torpedo of their own which was lost, or to discover one concealed by an enemy, they make use of inductive effects as illustrated in the telephone, and actually use the telephone, which informs them of their approach to any metallic mass; also when they set torpedoes in channels to be defended, or have arranged submerged mines, electricity enables them to determine whether they are in order for use, or when they have been injured by accident or decay.