

zealously supported in the extensive plans of observation arranged by him, by the other officers of the establishment. The great comet of 1874 was followed with the large refractor of the Argentine Observatory (which, Dr. Gould informs us, is an 11-inch by Fitz, of New York) until the 18th of October, the comet having been first seen there, in the morning twilight on July 27; at the last observation it was within about 12° of the South Pole. [Our last remarks on this comet should have been headed Comet, 1874 (III.).]

THE LATE W. J. HENWOOD, F.R.S.

THIS distinguished mining geologist, who died at Penzance last week, in his seventy-first year, was originally a clerk in the employment of Messrs. Fox, of Falmouth, to whose counsel he was considerably indebted in his early scientific work. By very great industry and careful observation he acquired an unsurpassed knowledge of the mineral deposits of Cornwall and Devon, and after fulfilling a succession of important mining appointments, he became Assay Master of tin to the Duchy of Cornwall. This post being abolished, Mr. Henwood's great experience was utilised in reporting upon and developing a number of mining districts in South America, Canada, &c.; and after the cessation of his travels, he lived at Penzance in comparative retirement. His great works are the fifth and eighth volumes of the "Transactions of the Royal Geological Society of Cornwall," devoted respectively to the metalliferous deposits of Cornwall and Devon, and to those of the foreign countries he had visited. But his scientific writings, besides these, were very numerous; a list of them occupies seven columns in the "Bibliotheca Cornubiensis."

As a scientific man Mr. Henwood was characterised by indefatigable labour, great caution, love of accuracy, and moderation of expression. In his publications he scarcely ever mentions a fact of any kind which had not come under his own experience, without giving the authority for it. Thus many of his writings are marvels of copious reference. He persisted in doing everything with this extraordinary amount of labour and care up to the last, notwithstanding that he suffered for many years from a very painful heart-disease. His scientific work ceased only with his death. So long as he could sustain even an hour's intellectual effort during the day, that was devoted to the arrangement of his stores of facts and observations. I believe that scarcely one of his cherished objects in this respect remains unfulfilled.

Mr. Henwood's address to the Royal Institution of Cornwall in 1871, extending, with references, to sixty-five pages, affords ample evidence of the value of his observations and of his scientific ability. It includes the most admirable and complete compendious account of the mode of occurrence of metalliferous deposits in Cornwall which has yet appeared, and is characterised by that absence of theoretical assumption which specially marked him as an observer. The orderly arrangement of accurately-observed facts was his object; theorising he had little affection for; suspended judgment on unproved theories was his consistent attitude.

In personal character Mr. Henwood won the high regard of all who knew him intimately. His acquaintance with men and manners was so great and varied, his memory so retentive, and his conversational style so simple and lucid, that to talk with him was one of the most delightful and instructive of intellectual recreations. His estimate of his own labours and merits was unaffectionately modest, although he would resist, if possible, any unfair representation of his work.

In the spring of the present year the Murchison Medal of the Geological Society was awarded to Mr. Henwood. An extract from a letter written by him to a friend on this subject may fitly close this notice: "Mr.

Evans's far too flattering estimate of my poor labours was most kindly intended. Although the distinction cannot but afford me pleasure, this is as nothing compared with the kind, and even affectionate, congratulations of yourself and my other friends. All these I carefully preserve, as they will show what I have done far better (though in an undeservedly favourable light) than the mere official record."

G. T. BETTANY

THE INTERNATIONAL CONGRESS AND EXHIBITION OF GEOGRAPHY

THE Geographical Exhibition continues to have increasing success, although the price of admission has been raised, except for schools, for which the original price, a penny a head, has been kept, and the galleries are crowded with children under the guidance of their teachers. It is said that all the soldiers of the garrison of Paris will be marched through the galleries under the guidance of their officers, when the Congress is over. The Exhibition will be prolonged to the end of the month.

Several improvements have been made in the English section since our last notice. Examples of the several maps published by the Ordnance Survey have been exhibited from an inch to ten feet per mile. Although completed only at a late period, the exhibition of the Geological Survey of Great Britain has been very successful; an immense number of maps have been exhibited, and are said to be the finest in the whole exhibition building. We might refer to a number of other exhibits honourable to English enterprise, but we must confess that Russia has carried the day, not on account of her private enterprise, but in consequence of the strenuous action of the Government. It is very likely that St. Petersburg will be chosen by common consent for the seat of the next geographical exhibition.

M. Glæsener, member of the Royal Academy of Sciences of Belgium, exhibits a chronograph available for registering the flight of projectiles as well as for recording astronomical observations for the determination of longitude. The cylinder can be put into rotation at the rate of four turns in a second or one turn in thirty seconds, according to the order of phenomena. It requires only the power of Daniell cells and ordinary magnet needles, without any electrical spark. It is very cheap, compact, and easy to set in operation.

The Rysseberghe self-registering meteorograph has been admitted, as we have already noticed, to supersede any similar instrument in existence. Copper plates engraved automatically can be used in printing, having turned into relief by the processes already described.

M. Lynström, of the University of Helsingfors, has sent to the Geographical Exhibition an interesting instrument invented by him to demonstrate that auroræ are produced by electrical currents passing through the atmosphere in the polar regions. The apparatus is put daily into operation by M. Mohn, the director of the Meteorological service of Sweden, and it was constructed at the expense of Mr. Oscar Dickson, the Gottenburg merchant, who has fitted out the Swedish Polar Expedition under Prof. Nordenskiöld. Our illustration will give an idea of the apparatus.

A is an electrical machine, the negative pole being connected with a copper sphere and the positive with the earth.

S S' are of ebonite as well as R R' d d', so that B is quite isolated as the earth in the space. B is surrounded by the atmosphere. d' d' d' d' d' are a series of Geissler tubes with copper ends above and below. All the upper ends are connected with a wire which goes to the earth, consequently a current runs in the direction of the arrows through the air, and the Geissler tubes become luminous when the electrical machine is set into operation.