

POSITIVE SCIENCES AT THE
INTERNATIONAL CONGRESS OF HISTORY.

THE name of Rome and the favourable season gave to the congress recently held in the Italian capital an international character, evident, not so much in the numerous concourse of visitors from all parts, as in the nature of the subjects treated. The congress was interesting, not only with regard to the original communications on historical subjects, but still more so respecting the series of discussions on the necessity of collecting and putting in order the material for study so as to render it easily accessible. Bibliographical questions are of greater importance to the historian than to the man of science. The latter, who has at his disposal material in a great measure of recent date and easily accessible, has been able, with greater facility than the historian, to get up good indexes and catalogues; but the difficulties which stand in the way of those desirous of collecting historical data, and of those who have to put them in order, varying, uncertain, obscure as such data are, scattered here and there in innumerable archives and libraries, are very great indeed.

All, or nearly all, the resolutions voted by the congress refer persistently to the necessity of the publication of catalogues, bibliographies, of entire bodies of documents of a given kind, of atlases, reproductions, &c., and, contrary to what is customary amongst Anglo-Saxon peoples who rely more on personal initiative, an appeal is, of course, made to Governments and academical bodies.

The importance assumed by the eighth section—"History of the Sciences"—is a gratifying fact to the cultivators of positive sciences. At the historical congress of Paris in 1900 this section was less attended; in Rome, on the contrary, the students of the history of the principal sciences were represented, assembled in friendly unanimity for a common object.

Amongst the mathematicians I may mention Tannery, who traced the origin of the terms "analysis" and "synthesis" in mathematics; Loria, who, besides other communications, spoke in favour of the publication of the works of Torricelli; Vailati, who spoke on the theory of the lever according to Archimedes; Tornì-Bazza, who treated of Niccolò Tartaglia and of an inedited manuscript of Oxford, and others.

Pirota gave an account of the science of botany and its bibliography in Rome, Mattiolo spoke on Aldovrandi, Celani and Baldacci presented antique herbaria.

Camerano narrated the history of the doctrines of Lamarck in Italy at the beginning of the nineteenth century.

Guareschi, with the aid of documents, showed the accusations of plagiarism against Lavoisier, formulated originally in England, to be unfounded.

Sudhoff treated of Paracelsus and his writings; Blanchard, of the *jetons* of the members of the medical faculty of Paris; Barduzzi, of the University of Siena and of Andrea Mattioli; Pensuti, of the hospitals of antiquity.

Günther discussed the *Jacobsstab* (Jacobs's-staff or cross-staff), an ancient astronomico-geodetic instrument erroneously attributed to Regiomontanus; Millosevitch showed the necessity of promoting the knowledge of Ginzler's canon of eclipses as a means of ascertaining the dates of the period of classical antiquity. There were communications on the history of the tides (Almazia), on the mariner's compass (Moretti), and on seismology (Baratto).

On a motion of Giacosa, a catalogue of the writings on scientific subjects extant in the archives and libraries

of the kingdom was voted; the necessity of courses of lectures on the history of the sciences in the universities was discussed, the limits of these courses being then determined, and finally, a permanent international committee was appointed, to which was entrusted the care of the section of the history of the sciences at the future congress of Berlin.

Positive sciences were likewise dealt with in some other sections. Montelius demonstrated the extension of relations between Italy and Scandinavia, proved by the amber trade up to the Bronze age. The woollen industry, introduced principally from England, and its economic results were discussed (Schulte). An interesting communication by Bargagli-Petrucci related the measures taken in Siena in the thirteenth and fourteenth centuries to provide the town with drinking-water, and the deliberations on the subject.

Modern science with its positivistic ideas has likewise not been without influence on the history of methodics. Thus, Vailati treated of the applicability of the notions of cause and effect in the domain of historical sciences, whereas Hartmann argued that history must follow evolutionist methods, excluding consciousness as a causal factor. PIERO GIACOSA.

JULIUS VICTOR CARUS (1823-1903).

TWO generations of zoologists have been familiar with the name of J. V. Carus, who died in Leipzig on March 10 at the age of fourscore years. His name has come to be associated with zoological scholarship, with bibliographical and historical work, with the promulgation of Darwinism, and with the *Zoologischer Anzeiger*, which he edited for the last quarter of a century.

Julius Victor Carus was born at Leipzig on August 25, 1823; he came of a scientific family, represented by several famous names in the history of science. His father was an illustrious surgeon—for a time professor at Dorpat; his mother was the daughter of a renowned gynæcologist. From 1841 onwards, Carus studied medicine and natural science at the famous university of his birthplace, and in 1846 he became assistant physician at the Georgen-Hospital there.

But zoology had a stronger hold on him than medicine, and thus we find him pursuing comparative anatomy at Würzburg, at Freiburg i. Br., and at Oxford (autumn of 1849). At Oxford he acted as conservator of the Museum of Comparative Anatomy, and it was there that he perfected his wonderful command of the English language. In 1851 he returned to Leipzig as a docent, and there he remained, as professor extraordinarius of comparative anatomy, and as director of the zootomical collections, for more than half a century. There was, indeed, a notable break in 1873 and 1874, when he acted as *locum tenens* in the chair of zoology in Edinburgh for Prof. Wyville Thomson, then absent on the *Challenger* expedition. In Edinburgh memories still linger of his excellent lectures on comparative anatomy, which seem to have been somewhat in advance of the requirements and desires of the majority of his large constituency of medical students.

Carus was a man of extraordinary industry, with a high ideal of careful and scholarly workmanship, and instinctively interested in the history of his science. Thus he did more in the way of translation and bibliography, exposition and history than in the way of original research. It will be an evil day for natural science when this type of worker fails to be appreciated.

Among the works of Prof. J. Victor Carus we may note an early paper on alternation of generations