abstract would be less than five per cent of the article on the average, and if the summary usually placed at the end were omitted, as could well be done because its function would be served by the abstract, the increase in length of the article would be little or nothing. But, on the other hand, the addition of abstracts would undoubtedly considerably increase the burdens of the already overburdened editors, and one would shrink from suggesting that they add to their labors the drudgery associated with securing and editing the abstracts if it were not clear that the gain to the many investigators would be many times the cost to the few.

At present, in addition to the *Astrophysical Journal, Physical Review,* and *Journal of the American Ceramic Society,* which require analytic abstracts, the following fourteen scientific and engineering journals give preliminary abstracts: The group of biological journals published by the Wistar Institute of Anatomy and Biology—*American Journal of Anatomy, American Anatomical Memoirs, Anatomical Record, Journal of Comparative Neurology, Journal of Experimental Zoology,* and *Journal of Morphology; Physiological Researches; Proc. of London Physical Society, Trans. of American Electrochemical Society, Trans. of American Institute of Electrical Engineers, Trans. of American Society of Civil Engineers, Trans. of American Society of Mechanical Engineers, Trans. of Society of Automotive Engineers,* and *Trans. of American Foundrymen's Association.* The abstracts now being provided by these journals are prepared as a rule by the authors and vary greatly in quality. It would be relatively easy for those journals whose abstracts are not as useful as is desirable to change their rules so as to require abstracts of the quality of analytic abstracts.

The directions and rules which have been formulated for the guidance of authors in the preparation of analytic abstracts may be found in current numbers of the *Astrophysical Journal* and also, somewhat abbreviated, in those of the *Physical Review* and of the *Journal of the American Ceramic Society.* With slight modification they would serve for any science. But while some authors will take the trouble to master the technique and prepare satisfactory abstracts, a uniformly high standard can not be maintained unless all the abstracts for each journal are checked and revised by a competent abstractor. Therefore, after deciding to require analytic abstracts, the first step taken by a journal should be the selection of a suitable man as abstract editor. If the man appointed should care to get in touch with me, I should be glad to give any assistance I can in getting the new policy started.

In conclusion, attention should be directed to the fact that those journals which provide analytic abstracts may easily combine an index of the subtitles in the abstracts with the usual index of author's titles, and thus greatly increase the completeness and precision of their subject indexes and hence the value of the journal for reference purposes.

It may not seem of much importance whether any particular journal provides efficient abstracts or not. Yet it is clearly the duty of each to do so. For when all have adopted this policy and the abstract journals promptly reprint all the abstracts and completely index them, we shall have gone far toward making our scientific information service really efficient. And because of the cooperation involved, it will require less effort to maintain than our present much less efficient service.

GORDON S. FULCHER
CORNING GLASS WORKS

SCIENTIFIC EVENTS

THE NATIONAL COMMITTEE ON MATHEMATICAL REQUIREMENTS

THE National Committee on Mathematical Requirements on September 5 held its last meeting under its present form of organization. The manuscript of a summary of the final report of the Committee has been sent to the U. S. Bureau of Education for publication. This summary, which will constitute a bulletin of some eighty pages, virtually presents the first part of the complete report. It contains the following chapters:

I. A Brief Survey of the Report.

II. Aims of Mathematical Instruction—General Principles.
III. Mathematics for Years Seven, Eight and Nine.
IV. Mathematics for Years Ten, Eleven and Twelve.
V. College Entrance Requirements in Mathematics.
VI. List of Propositions in Plain and Solid Geometry.
VII. The Function Concept in Elementary Mathematics.
VIII. Terms and Symbols in Elementary Mathematics.

It will also include a brief synopsis of the remaining chapters of the complete report. It is expected that this summary will appear late in November or early in December.

It was the original intention of the Committee to publish its complete report also through the U. S. Bureau of Education. It was found, however, that this would involve a delay of two or three years in view of the fact that it would have been necessary for the Bureau of Education to issue the report in parts extending over a considerable period of time. It is hoped at present that sufficient funds will be obtainable to print the report during the winter and to distribute it free of charge to all who are sufficiently interested to ask for it. The complete report will constitute a volume of about five hundred pages. In addition to the chapters listed in the summary, it will contain an account of a number of investigations instituted by the Committee. Among these may be mentioned:

The Present Status of Disciplinary Values in Education.

A Critical Study of the Correlation Method Applied to Grades.

Mathematical Curricula in Foreign Countries.

Mathematics in Experimental Schools.

The Use of Mental Tests in the Teaching of Mathematics.

The Training of Teachers of Mathematics.

There will also be included an extensive bibliography on the teaching of mathematics.

HENRY WOODWARD

We regret to record the death of Dr. Henry Woodward, F.R.S., which occurred on September 7 at his home in Bushey, England. Dr. Woodward was in his ninetieth year and in his long life had achieved very great distinction for his labors in the sciences of geology and paleontology. Dr. Woodward spent the early years of his life in business, but in 1858 he entered the British Museum, and in 1880 was made keeper of geology, a position which he held for 25 years. Though he was a profuse writer on various geological and paleontological subjects, his special interest lay in the study of the fossil crustacea, and perhaps his most keenly analytical work was in the field of the fossil merostomes. He was the president of the Palæontographical Society and had been the president of the Royal Microscopical Society as well as of the Geological Section of the British Association for the Advancement of Science and of the Geological Society of London. He was the president and founder of the Malacological Society and had been the president of the British Museums Association. In 1862, with the late Professor T. Rupert Jones, he founded the *Geological Magazine,* of which he remained the editor until the time of his death.

Doctor Woodward kept his intellectual vigor and his interest in his science up to the last and passed away peacefully after a very brief illness.

J. M. C.

PROFESSOR PAWLOW

Professor W. B. Cannon, of the Harvard Medical School, writes to the editor of the *Journal* of the American Medical Association as follows:

In *The Journal,* September 3, there is a letter from Budapest, dated July 12, 1921, in which it is stated that Pawlow, the great Russian physiologist, had died in January, 1921. You may know that several years ago there was a rumor that he had died, which proved to be incorrect. Apparently the statement from Budapest is likewise incorrect. I have a copy of a letter from Dr. Edward W. Ryan, commissioner of the American Red Cross to western Russia and the Baltic States, written from Riga, March 23, 1921, to Col. Robert E. Olds, commissioner of the Red Cross in Europe.