eral others approved a request for voluntary pledges by their membership. All such contributions will be counted toward the subscription price of a section or the total edition, and no contributor is expected to make more than one such donation even though a member of more than one contributing society.

For the year 1938 such contributors have the option of either receiving the index to volume 12 or of deducting $2.00 from their personal subscription to that volume (provided their institution now subscribes). The same privilege is accorded to the contributors of past years; that is to say, a 1936 contributor, for example, can have his contribution applied to the purchase of volume 10.

Now that 1938 nears an end, it is desirable that each contributor inform the Business Manager of *Biological Abstracts* at the University of Pennsylvania what option he selects.

The Board of Trustees wishes to express its appreciation to the members of the five societies which have voted contributions this year:

American Physiological Society
American Society of Naturalists
American Society of Zoologists
Ecological Society of America
Genetics Society of America

as well as to those individuals of other societies who made a voluntary contribution or outright donation.

The Board of Trustees of *Biological Abstracts* consists of G. S. Avery, Jr., H. P. Barss, A. F. Blakeslee, P. R. Burkholder, A. J. Carlson, A. B. Dawson, H. B. Goodrich, A. P. Hitchens, D. D. Irish, M. L. Raney and G. W. Hunter, III, *President*.

INTERNATIONAL CONTEST OF THE SCIENTIFIC APPARATUS MAKERS OF AMERICA

ENGINEERS representing all industries, from every section of the United States and three foreign countries, sent in entries to the First Instrumentation Contest sponsored by the Industrial Instruments Section of the Scientific Apparatus Makers of America and conducted by Richard Rimbach, publisher of *Instruments* (the magazine of measurement and control). The contest closed on November 15 and the judging was held on December 6 at the Hotel Commodore, New York City.

Prizes were awarded as follows:

First Prize $200.—F. K. Vial, vice-president in charge of research, Association of Manufacturers of Chilled Car Wheels, Chicago, "Automatic CO_2 Compensator for Cupola Control."

Second Prize $100.—R. K. Hellmann, electrical engineer, Transatlantic Research, Inc., New York City, "An Audio Frequency Spectrometer."

Third Prize $50.—Wilton E. Stackhouse, technician, United Gas Improvement Company, Philadelphia, "A Hydrogen Sulphide Recorder."

Fourth Prizes $25 each.—George B. Bailey, president, Thermal Engineering Company, Boston, "Automatic Control Applied to the Diesel Engine"; H. A. Kleinman, engineer, United Power Manufacturing Company, Moline, "Application of a Multi-Pointer Gage for Speed Measurement"; M. G. Mastin, chemical engineer, Westvaco Chlorine Products Corporation, South Charleston, "A Sensitive Method of Flow Control"; Walter E. Smith, technologist, C. Brewer and Company, Ltd., Honolulu, "Sugar Boiling by Instrument Control."

Fifth Prizes $10 each.—Sherman Chase, steam engineer, Carnegie-Illinois Steel Corporation, South Chicago, "Relative Volumetric Gas Analysis by Cascaded Absorption and Oxidation Recorded by a Pressure Recorder"; Harry C. Gray, stress analyst, Wright Aeronautical Corporation, Paterson, N. J., "Sound Frequency Measurement"; G. J. Gross, transmission engineer, Pennsylvania Water and Power Company, Baltimore, "Ground Megger Signal Generator in Locating Buried Conductors"; Wm. B. Hess, test engineer, Safe Harbor Water Power Corporation, Conestoga, Pa., "The Steam Engine Indicator Differential Pressure Gage"; Charles Wasserman, technological assistant, Consolidated Gas, Electric Light and Power Company, Baltimore, "An Unusual Application of a General Electric Torque Balance Watt-Telemeter."

GRANTS-IN-AID FOR STUDIES IN SCIENCE INSTRUCTION

THE second meeting of the Committee for the Improvement of Science in General Education[1] of the American Association for the Advancement of Science was held in Chicago on December 3 and 4. A partial statement of the agenda upon which the committee worked will appear later. One of its responsibilities is assuming proportions which seem to warrant this separate statement.

It will be recalled that among other things the committee was charged with the following task. "To obtain and to use financial support for such work in the sciences as gives promise of being effective in improving the teaching of science in general education." At the Chicago meeting the committee considered the reception and preliminary evaluation of experimental projects on teaching of the sciences at college and university level. In all such cases the appropriations requested are likely to exceed the funds that are available for such purposes, a situation which will evidently develop in this case also. Nevertheless, the committee invites correspondence from teachers of science who have teaching experiments under way or seriously con-

[1] SCIENCE, 87: 454, 1938.

templated, which would be facilitated by grants-in-aid. Naturally, any one requesting such grants will expect to defend their necessity or appropriateness and to furnish evidence that the conditions under which the proposed experiments are to be performed are favorable to their advantageous prosecution.

The preliminary "blueprint" of the field that may be covered to advantage by a series of experiments in the teaching of the sciences will be completed by June 30. Projects to be considered must be in hand not later than May 20. Correspondence may be initiated with any member of the committee. There will be some advantage in selecting one of the members whose field of professional competence includes that within which the proposed project falls.

The fact should be borne in mind that only projects designed to improve the teaching of science in general education are to be submitted. Improvement in preparation of "majors" in the various sciences or, in general, the strengthening of specialist education is outside the purview of this committee.

The members of the committee, grouped by subjects, are as follows:

Botany: Professor H. C. Sampson, the Ohio State University; Professor P. B. Sears, Oberlin College, Oberlin, Ohio.

Chemistry: Professor C. C. Furnas, Yale University; Professor N. E. Gordon, Central College, Fayette, Mo.; Professor W. C. Johnson, University of Chicago; Professor O. M. Smith, Agricultural and Mechanical College, Stillwater, Okla.

Education: Professor H. J. Arnold, Columbia University; Professor R. W. Tyler, University of Chicago.

Geography and Geology: Professor Carey Croneis, University of Chicago; Professor Kirtley Mather, Harvard University.

Mathematics: Professor J. S. Georges, Wright Junior College, Chicago; Professor E. R. Hedrick, University of California at Los Angeles.

Physics: Professor C. J. Lapp, State University of Iowa; Professor L. W. Taylor (*chairman* of committee), Oberlin College.

Zoology and Biology: Professor Bert Cunningham, Duke University; Professor M. F. Guyer, University of Wisconsin; Professor A. C. Kinsey, Indiana University.

THE WASHINGTON MEETING OF THE INTERNATIONAL UNION OF GEODESY AND GEOPHYSICS

CHESTER R. LONGWELL, chairman of the Committee on Coordinated Interests of Yale University, reports that as one step in the arrangements for the approaching assembly of the International Union of Geodesy and Geophysics in this country, the following letter has been sent to more than two hundred institutions and organizations, including universities, colleges, research institutions, Federal and state scientific bureaus and commercial corporations. The letter is printed here with the thought of extending the invitation to other organizations and individuals who may be interested but have not been reached directly by the letter, which reads:

No international scientific association covers a broader field of interest than the Union of Geodesy and Geophysics. The union is made up of seven constituent associations, devoted to geodesy, seismology, meteorology, terrestrial magnetism and electricity, physical oceanography, volcanology and hydrology. Physicists, geologists, geographers, astronomers and many types of engineers, in addition to specialists representing the particular fields suggested in names of the associations, find a common meeting ground in the union, which owes its origin and its continued growth to the interlocking problems crossing the borders of the several physical sciences in all the countries. The meetings of the union, held at three-year intervals, not only promote international cooperation in scientific enterprises but also help materially to foster international good will.

The International Union of Geodesy and Geophysics will meet in Washington, D. C., September 4 to 15, 1939. Official host for the meeting will be the American Geophysical Union, in cooperation with the National Research Council. The twelve days of the Washington session will be occupied with assemblies of the union as a whole, meetings of the constituent associations and receptions. Before the session there will be three organized trips to various parts of the country. It is expected that a large number of foreign delegates will attend the session, representing the member countries, of which there are 36 besides the United States. Probably there will be an especially large attendance from all sections of this country, representing not only the Geophysical Union but also numerous scientific and educational institutions.

Professor Longwell writes:

Practically every institution in this country that supports physical science in any form has a logical interest in the Washington meetings of next year. The American Geophysical Union urges that you join as far as possible in playing host to our fellow scientists from other countries in making the session successful. In particular, we shall be happy if you will discuss this matter with individual scientists and departments of science in your institution, and name one or more delegates to represent your institution at the meetings of the union next September. We suggest that as far as possible the delegates selected be men who are actively interested in some aspects of geophysics, since such men will gain most from and contribute most to the meetings. It should be added that travel and other expenses of delegates will have to be borne by the individuals or by the institutions they represent, because the union does not have any funds for this purpose.

Information about the union and its constituent associations appeared in an article by N. H. Heck on the International Union of Geodesy and Geophysics in SCIENCE, April 22, 1938. Circulars giving detailed information concerning the coming meeting will be sent to any one on request.