(VI) *Resolution on cosmic rays,* proposed by the Section of Terrestrial Magnetism and Electricity:

WHEREAS, The importance of studies of cosmic rays is steadily increasing and the need for their continuous registration has been demonstrated; therefore be it

Resolved, That the American Geophysical Union recommends that support wherever possible be given to the plan of the Carnegie Institution of Washington and cooperating agencies to establish at certain fixed observatories apparatus and equipment for recording cosmic rays photographically and continuously; and be it further

Resolved, That a copy of this resolution be sent to the President of the Carnegie Institution of Washington with the request that he furnish copies to the cooperating agencies.

(VII) *Resolutions proposing an International Commission on the Hydrology of Snow and Ice,* proposed by the Section of Hydrology:

WHEREAS, The hydrology of snow and ice and the methods of making snow-surveys constitute an important field in the science of hydrology, with a considerable number of research workers in the subject wisely distributed in different parts of the world, and

WHEREAS, There is at present no international commission that covers this field; therefore be it

Resolved, That the American Geophysical Union hereby expresses the hope that the International Association of Scientific Hydrology will take appropriate steps at the forthcoming meeting in Lisbon to create a Commission on the Hydrology of Snow and Ice; and be it further

Resolved, That a copy of this resolution be sent to the Secretary of the International Association together with copies of the annual reports for 1932 and 1933 of the Committee on Snow of the Section of Hydrology of the American Geophysical Union.

(VIII) *Resolution on appropriations for scientific investigations by the Federal Government,* proposed by the Section of Seismology:

WHEREAS, There are certain types of investigation which can be carried on effectively only by the Federal Government, and

WHEREAS, Large economies accrue to the Government itself from those investigations, and

WHEREAS, Private engineers, geophysicists, and others are almost absolutely dependent on the results of those investigations for the continuance of their own work; therefore be it

Resolved, That the American Geophysical Union expresses its hope that the scientific work of the Federal Government will not be too much curtailed under the stress of economic conditions; and be it further

Resolved, That a copy of this resolution be sent to the President of the National Academy of Sciences for such use as the Academy may think proper in its capacity as official advisor to the Federal Government.

(IX) *Resolution on Naval Observatory time-signals,* proposed by the Section of Seismology:

WHEREAS, Accurate time-signals sent out from a strong radio broadcasting station many times daily are necessary for seismological and other geophysical observations, and

WHEREAS, The United States Naval Observatory is now broadcasting such signals seven times daily; therefore be it

Resolved, That the American Geophysical Union expresses its appreciation and gratitude for this service; and be it further

Resolved, That this resolution be printed in the transactions and that a copy be sent to the Superintendent of the United States Naval Observatory.

The scientific session of the general assembly was devoted to a symposium on relations of hydrology to other branches of geophysics, and included the following papers: (a) "The Relation of Hydrology to the Botanical Sciences," by R. E. Horton; (b) "Relation of Meteorology to Hydrology," by N. C. Grover; (c) "Distribution of Precipitation in the Cumberland and Tennessee Basins," by M. W. Hayes; (d) "Glaciers and Geophysics," by Harry Fielding Reid; (e) "Some Relations between Ground-water Hydrology and Oceanography," by D. G. Thompson; (f) "Oceanography and Hydrology," by G. F. McEwen; (g) "Relation of Seismology to Hydrology," by N. H. Heck; (h) "Geophysical Interpretation of Ground-water Levels," by O. E. Meinzer; (i) "Associated Problems in Hydrology and Terrestrial Electricity," by O. H. Gish.

The marked success of the fourteenth annual meeting of the union and of its sections hinged largely upon the excellent program developed by the committee on meetings, consisting of Messrs. H. A. Marmer (*chairman*), R. M. Field, R. E. Gibson, F. W. Sohon, S.J., and H. F. Johnston.

The manuscript for the planographed volume of the complete *Transactions* of this meeting is already in preparation, and it is hoped that the volume may be issued during July.

JNO. A. FLEMING,
General Secretary

SCIENTIFIC APPARATUS AND LABORATORY METHODS

A MOUTH PIPETTE AND CONTAINERS FOR SMALLER ORGANISMS

A BIOLOGIST frequently encounters choice specimens for microscopic study in such materials as plankton, bottom deposits or mixed cultures of protozoa. But because of the time required to separate the desired forms from the mass of debris by the ordinary means at hand the specimens are usually sacrificed. For the same reason mixed cultures of protozoa are often tolerated. In my investigation of the soft parts of the foraminifera, many thousands of individuals ranging in size from 40 to 500 μ were isolated. In

the preparation of stained materials, it was necessary to change reagents without contamination. It was also necessary to avoid loss, or injury to the fragile protoplasmic parts after decalcification. The pipette illustrated (A) has given several years of satisfaction

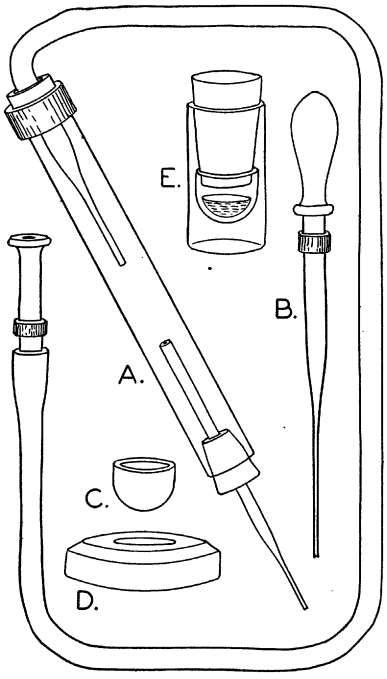

FIG. 1

and is to be recommended for the manipulation of living or fixed organisms of the magnitude mentioned.

The barrel is as convenient in size and weight as that of a fountain pen. Small organisms are drawn into the pipette by capillary attraction controlled by releasing the pressure of the tongue which is held against the end of the mouthpiece. The pipettes require a minimum of material, time and skill to prepare, and can be easily replaced in the barrel. Sterile pipettes of graduated sizes may be conveniently stored in test-tubes. Coating the pipette with paraffin prevents rhizopods and other adhesive organisms from sticking to the walls of the pipette.[1] While changing reagents the barrel constitutes a trap with a capacity of about 8 ml and may be held in any position without contaminating the mouthpiece, or filling the pipette with the contained fluid. By holding the barrel in a vertical position, pipette uppermost, the pipette stopper may be removed and the contents emptied.

At least three holders were necessary in my work. These were marked with bands cut from rubber tubing as follows: white for living material, red for general reagents and black for anhydrous solutions. It is very convenient to mark hand pipettes (B) in the same manner. A rack of suitable height and capacity for the pipette holders, attached to a ring stand or built above the microscope table, is very convenient.

Small or rare organisms were handled to advantage in containers made from the bottoms of bacteriological test-tubes (C) cut with a hot wire and ground flat on top with a carborundum stone. Supports (D) for these containers were made of plaster of Paris similar to the illustration. For storage these containers may be stoppered and placed in shell vials (E) as illustrated. Large or more abundant organisms may be collected in embryological watch glasses.

The following materials are necessary in the construction of the described pipette and holder: 5½ inches of 14 mm glass tubing; 10 inches 7 mm glass tubing; 18 inches ¼ inch rubber tubing; several 00 rubber stoppers; 4 mm thin-walled soft glass tubing is essential for the pipettes.

EARL H. MYERS

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MICROSCOPE LAMP FOR BIOLOGICAL LABORATORIES

THE lighting units used on the students' tables in the elementary botanical laboratories of the Life Sciences Building at the University of California have occasioned so much comment from visiting botanists and zoologists and have brought so many requests for specifications that publication of a brief description of these lamps seems advisable. Besides having proven so completely satisfactory as sources of artificial illumination for microscopic and other laboratory

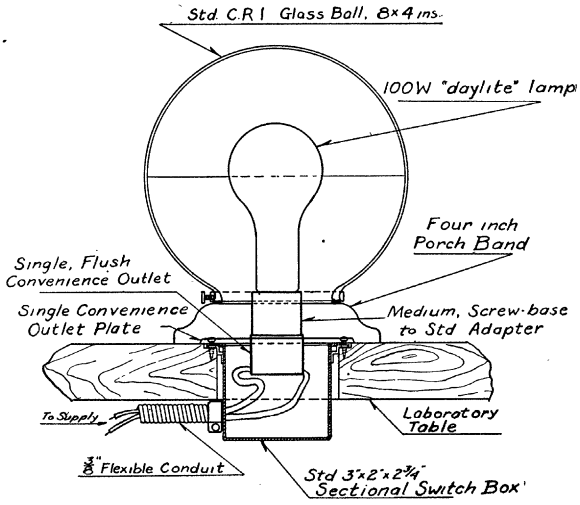

FIG. 1

[1] Suggested by Dr. Kofoid.