when warning of the dangers of the "suck and blow" resuscitators was the factor of negative pressure to the lungs and the impossibility to synchronize with the patient's respiration.

The first warnings on these features appeared in the report of the Bureau of Mines in 1914.[1] It was the report of the committee on resuscitation that "killed the Pulmotor," and Henderson from then on stood up for the findings then established. It would be of interest at this time to know whether the Bureau of Mines had any reason to alter their opinion since then and whether eventually they give the principle of "suck and blow" a right to be.

One of the committee of 1914 was the late Dr. S. J. Meltzer, of the Rockefeller Institute, and it was his disbelief in the safety of negative pressure to the lungs and his belief in the necessity to synchronize which led him to develop the simple, safe and inconspicuous method of resuscitation known as the Meltzer method. It is on the principle of pharyngeal insufflation with a limited safe pressure, leaving deflation to the natural contraction of the chest wall, first published in the *Journal* of the American Medical Association, May 10, 1913, and later adopted by Henderson and Haggard, by the Society for the Prevention of Asphyxial Death, by many specialists on respiration and, with modifications, used by many institutions all over the world.

Naturally an apparatus built on the principle of insufflation only is not as impressive as an apparatus built on the principle of positive and negative pressure. It is human nature, without sufficient thought, to be impressed by the performance of a device apparently so similar to the functions of human respiration. The fact that human respiration is just the reverse, that it is done with negative pressure at inspiration and positive pressure at expiration, while the pumping apparatus applies positive pressure at inspiration and negative pressure at expiration is not considered or I will say not even recognized.

With all due respect to the council, I still believe in Yandell Henderson.

RICHARD FOREGGER

NEW YORK, N. Y.

A NEW PRESIDENT FOR THE HARVARD APPARATUS COMPANY, INC.

IN 1898, three vital changes in the teaching of physiology were proposed:[1]

(1) Since physiology consists not of words but of basic experiments, the student must every day make such experiments for himself. (2) Experiments too difficult or time-consuming shall be dealt with by a separate committee of three students, which committee shall report to the class the account given by the discoverer; and the committee shall show to their mates the original source. (3) There shall be no more lectures in the old sense. The professor and his staff shall discuss with the class the student's experiments immediately after he has made them; and they shall discuss very difficult experiments only after the students have read the discoverer's own statement of the discovery.

Such instruction, based on experimentation, requires large stores of apparatus, accurate but inexpensive.

So the Harvard Apparatus Company was launched. New instruments were invented; old instruments were redesigned for "quantity production."

Forty-five years have now passed. The company has all this time been in the hands of its founder and his admirable associates.

The founder believes it is time to have a new president.

In our search for the new president we have been fortunate indeed. We have found a man of uncommon ability—a man who has earned the profound respect of our profession and our very real affection.

Dr. A. J. Carlson will be president of the Harvard Apparatus Company, Incorporated, beginning on June 1, 1944.

W. T. PORTER

DOVER, MASS.

GENERAL BIOLOGY

THE distinction between the "biological sciences" and the "physical sciences" emphasized by Professor Shull in a recent number of SCIENCE,[1] is a very excellent one. Since it raises the biological sciences to a level where each is commensurate with the exact ones, "physics, chemistry, mathematics, meteorology, geology, astronomy, etc.," the distinction has a most attractive sound to teachers and workers in the less exact, biological subjects. Carried to its logical conclusion, colleges and universities should be reorganized, either by amalgamating the physical sciences into one department or by elevating zoology and botany, perhaps also physiology, genetics, microbiology, ecology, etc., each to full departmental importance. Psychology and anthropology, already full departments in many institutions, might be considered parts of this group.

In the first alternative, it would undoubtedly be necessary to "concoct" a "hodge-podge" course as an "extraction of all" the physical sciences, presenting it as an introduction to these subjects. Since Professor Shull deplores "general biology," so too he would unquestionably object to such a course as "gen-

[1] U. S. Technical Paper No. 77.

[1] See footnote to page 2 of a paper on "The Teaching of Physiology," *Philadelphia Medical Journal*, September 1, 1900.

[1] SCIENCE, n.s., 99: 199, 1944.