Since the above-mentioned meetings of American psychologists it has been learned that the Council of the British Psychological Society has unanimously recommended the 1941 meeting of the congress be not held in Vienna.

The International Committee is comprised of 69 psychologists from all parts of the world. The executive committee is as follows: Edouard Claparède, of the University of Geneva, *permanent secretary;* Herbert S. Langfeld, of Princeton University, *secretary;* C. S. Myers, of the National Institute of Industrial Psychology, London, Henri Pieron, of the University of Paris, Mario Ponzo, of Rome, E. Rubin, of the University of Copenhagen, and Emilio Mira, of Barcelona, *members.*

CORRESPONDENT

SCIENTIFIC BOOKS

RESPIRATION

Adventures in Respiration. Modes of Asphyxiation and Methods of Resuscitation. By YANDELL HENDERSON. The Williams and Wilkins Company, Baltimore, Md. Pp. xi + 316, frontispiece, 15 figs. in text. June, 1938. $3.00.

IN 1905 Haldane and Priestley published a noteworthy paper on lung ventilation, ending with the well-known conclusion that "the regulation of the rate of alveolar ventilation in breathing depends, under normal conditions, exclusively on the CO_2 pressure in the respiratory center." These words had great weight with a young assistant professor of physiology in the Yale Medical School who was teaching his students that respiration is chiefly controlled by the vagus nerves and is relatively little influenced by oxygen or CO_2. The young man, Yandell Henderson, constituted himself "as an active propagandist for the Haldane doctrine, confident that the conception of CO_2 as a factor in the control of respiration must lead to a recognition of a similar part in the control of other functions as well, and particularly of the circulation."

During the next 15 years numerous papers came from the author's laboratory dealing with shock, respiratory regulation of the CO_2 capacity of the blood and hemato-respiratory functions. In "Adventures in Respiration" some attention is paid to venous return in relation to muscle tonus, but the principal thesis of the book and of the investigations just mentioned is that acapnia, or inadequate pulmonary ventilation, "is a factor in the depression of vitality after anesthesia, surgical operations, physical injuries and severe illness."

The 15-year campaign to win from fellow physiologists approval of his thesis of acapnia by laboratory experiment and theoretical discussions failed. We now know that in many respects Yandell Henderson was right and his critics wrong. In other respects, however, he was wrong, and the proof of his error was in some instances so convincing that the experimental foundations of his thesis were shaken.

At the end of the first campaign he shifted his attack to a front on which there had been but desultory firing. In 1909, before a distinguished gathering at Johns Hopkins, he had stated that administering 5 per cent. CO_2 in air or oxygen benefited apneic anesthetized animals. He suggested that medicine might advantageously adopt such mixtures for treating anoxial acidosis and he proposed that manufacturers prepare mixtures in cylinders for this purpose. This proposal brought such a devastating criticism from a distinguished professor of physiology in the audience that the speaker was left speechless; instead of a rebuttal, he offered good-humoredly to meet his critic outside.

In beginning his second 15-year campaign, Yandell Henderson decided to brush aside theoretical objections and to return to the attack on this neglected front. Here he very skilfully achieved victory. "Adventures in Respiration" records his success in persuading surgeons to provide their anesthetists with the CO_2-oxygen mixture, in teaching clinicians to use it in pneumonia, obstetricians in childbirth, and first-aid crews in resuscitation from carbon monoxide poisoning. The most dramatic success achieved has been in the treatment of carbon monoxide poisoning. An essential element in this is the H.H. inhalator designed by the author during the war and developed by the Mine Safety Appliances Company. It is estimated that the administration of CO_2-oxygen mixtures by means of this device saves annually more than 10,000 lives from carbon monoxide asphyxia in America alone. The treatment is also used abroad; it is officially sanctioned by the Mines Department of the British government.

Although brought up a physiological chemist, the author turns his back on biochemists. Their currently accepted idea of acid-base balance adds to his difficulty, and he finds a clear passage, "by steering contrary to their directions. . . . At critical points their latitude and longitude are erroneous, and even the points of the compass are reversed." While many will find other interpretations for his unhappy experience in attempting to follow the sailing directions of biochemists, none will dispute the eloquent confirmation he has given to the wise conclusion of Miescher that, "Over the oxygen supply of the body carbon dioxide spreads its protecting wings."

D. B. DILL