to accomplish the purposes described by Osborne. These drugs were studied in a thorough way in order to determine which of the group would be most satisfactory for clinical trial. One of these vasopressor local anesthetics of Alles and Knoefel, β-benzoyloxy-β-phenyl-ethyl-demethylamine hydrochloride, came to clinical use and was reported upon by E. W. Ferber.[5] The purpose of this present note is not to detract from the merit of the report of Dr. Osborne and his associates. It does seem, however, that his statement in SCIENCE would have given a more correct impression had it referred to previous work of the same character.

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THE ACTION OF ESERINE AND ITS ANALOGUES ON SKELETON MUSCLE

IN SCIENCE for December 18, 1936, p. 551, Morison and Rosenblueth deal with the cause of their earlier failure (Rosenblueth, Lindsley and Morison)[1] to detect the potentiating effect of eserine and its analogues on the response of a mammalian muscle to a motor nerve volley. Brown, Dale and Feldberg[2] had suggested that the anesthetic might have been responsible for the absence of this action in Rosenblueth, Lindsley and Morison's experiments; but Morison and Rosenblueth have now found that the length of the interval between successive motor nerve volleys is a much more important factor. This observation we had made ourselves even before the paper by Brown, Dale and Feldberg was published, and we have dealt fully with the point in a paper which has for some months been awaiting publication in the *Journal of Physiology*. A preliminary account of the observation had, indeed, already been given by one of us (Z. M. B.) in a review published as long ago as October 11, 1936, in *Liége Médical*.[3] The journal in question has probably not a wide currency, and we welcome the note by Morison and Rosenblueth, as showing that they had independently confirmed our observation.

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SCIENTIFIC BOOKS

RECENT PHYSICS

The Renaissance of Physics. By KARL K. DARROW, pp. 306, $3.00. The Macmillan Company, 1936.

THE author of this volume is no stranger to the world of physics. Eight or ten years ago a stream of luminous essays poured forth from the Bell Telephone Laboratories under the title of "Some Contemporary Advances in Physics." These immensely helpful papers, directed mainly to his professional colleagues, disclosed not only a remarkable grasp of the various fields of recent physics but also a rare mastery of the art of exposition.

The present volume, however, is the outgrowth of a series of Lowell Lectures, greatly amplified but still addressed to the intelligent reader whether with or without laboratory experience. It is indeed one of those rare messages which contain much for the beginner and much for the expert, reminding one, in this respect, of Maxwell's "Matter and Motion" and Tait's "Recent Advances in Physical Science."

If the merits of a volume are to be appraised upon the matter which is chosen for discussion, upon the worthiness of the treatment and upon the tenacity with which it holds the interest of the reader, Dr. Darrow's "Renaissance of Physics" must take high rank. For the task undertaken is the explanation, in words of one syllable, of the rapid evolution of physics during the last fifty years; but this is to be done by building upon foundations already firmly established; and there is to be no discontinuity with the classical physics. "The continuity of thought," he says, "the partial adequacy of old ideas to new discoveries—these have outrun anything which the physicists of the past could reasonably have foreseen." The entire discussion is based upon the solid ground of mechanics, heat and waves. The spirit of the author is well exemplified at the very outset by the manner in which he wisely detours the definition of physics, with all its metaphysical quagmires, and, in its stead, defines a physicist as "some one who uses his senses for observing; mechanical and thermal instruments for measuring; and mathematics, especially the mathematics developed in the service of physics, for reasoning. I say nothing about a limitation of the subjects of his inquiry; there is none—he is authorized to use his methods and his mathematics on anything whatsoever."

The second and third chapters lead up through Gilbert Faraday, Hittorf, Crookes and Edison to J. J. Thomson and "the release of electrons from matter . . . an event . . . of transcendent importance." Here again I quote a thoroughly pragmatic definition to illustrate the beautiful accuracy with which the author fits his language to his purpose. "May we say," he

[5] Ferber, *Jour. Amer. Dental Assoc.*, 23: 788, 1936.
[1] A. Rosenblueth, D. B. Lindsley and R. S. Morison, *Amer. Jour. Physiol.*, 115: 53, 1936.
[2] G. L. Brown, H. H. Dale and W. Feldberg, *Jour. Physiol.*, 87: 394, 1936.
[3] Z. M. Bacq, *Liége méd.*, No. 41, p. 1173, Oct. 11, 1936.