"American Year Book," succeeding Professor E. B. Wilson, who was recently appointed head of the department of physics in the Massachusetts Institute of Technology.

DAVID WENDELL SPENCE, for twenty-seven years a professor of civil engineering, and for the past ten years dean of the school of engineering and professor of civil engineering in the Texas College, died at Galveston on June 28.

DR. CHARLES BASKERVILLE, professor of chemistry in the College of the City of New York, has been appointed by the Ramsay Memorial Committee to organize a committee in the United States for receiving subscriptions to the fund from Americans.

UNIVERSITY AND EDUCATIONAL NEWS

ANNOUNCEMENT is made that a gift of $50,000 from George W. Brackenridge of San Antonio, Tex., will enable Columbia University to open its doors to women students this autumn. Work will be begun at once on the addition to the present building to provide extra laboratory facilities in the departments of chemistry, pharmacology, pathology and bacteriology.

PROFESSOR BENJAMIN T. MARSHALL, of Dartmouth College, has been appointed president of Connecticut College for Women at New London, to succeed President Frederick Sykes.

DEAN W. G. RAYMOND, head of the College of Engineering of the State University of Iowa, has declined the presidency of the Colorado school of mines situated at Golden, Colo.

DR. HUGH MCGUIGAN, professor of pharmacology in the Northwestern University, has accepted the position of professor and head of the department of pharmacology, materia medica and therapeutics in the college of medicine of the University of Illinois.

DR. H. R. CROSLAND of the department of psychology of the University of Minnesota, has been elected assistant professor of psychology in the University of Arkansas.

LORD CREWE has accepted the invitation to become chancellor of the University of Sheffield, in succesion to the late Duke of Norfolk.

DISCUSSION AND CORRESPONDENCE

REPLY TO DR. ERLANGER

ON p. 384 et seq., Vol. XLV, of this journal Dr. Erlanger criticizes an abstract of my paper which he did not stop to hear and which is not yet published.

Dr. Erlanger completely misses the point of my paper and somewhat radically changes some statements in his own paper.[1]

Dr. Erlanger stated that the pressure oscillations are in direct numerical ratio to the *manometer* pressures in the compression chamber; I showed that the ratio is determined by the barometric plus the manometric pressure —*i. e.*, Boyle's Law.

He says:[2]

Inasmuch as the volume of incompressible fluid entering the artery is practically the same throughout the diastolic-systolic range of compression and since at this time, as premised above, the compression pressure is nearly twice that which obtained at *D*, the pressure in the compression chamber will be raised almost twice as high by the

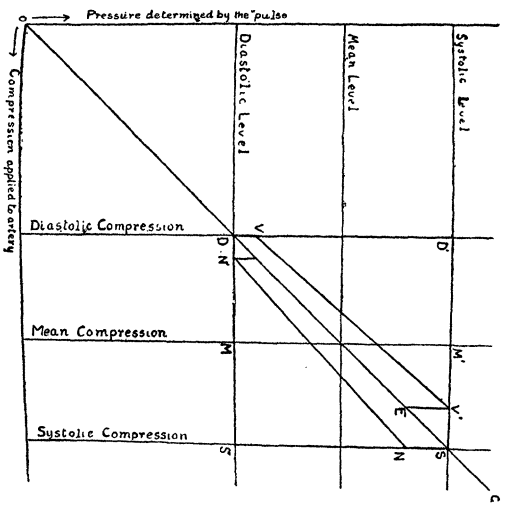

FIG. 1.

[1] Erlanger, *Am. Jour. Physiol.*, 1916, XXXIX., 401.

[2] *Loc. cit.*, 409.

pulse at E as at D; for the rise of pressure determined by the addition of a given volume of incompressible material to a confined gas-filled space is proportional to the pressure of the gas filling the space.

This statement is also expressed in the diagram[3] which is here given in photographic reproduction. The beginning pressure is marked zero—*i. e.*, ignoring barometric pressure—the "diastolic pressure" marked on the ordinate is just half way between zero and the "systolic pressure." The ordinates drawn to represent the extent of oscillations are in the same ratio, that is the "systolic rise"—EV'—at double the *manometer* pressure is just twice that marked at N near DV for diastolic pressure—a ratio of 1:2.

Boyle's Law shows that the ratio would be P'/P where P is the original *total* pressure; P' the new pressure produced by the addition of a constant volume of fluid. Accordingly: introducing V and V' as the respective volumes of the gas with K as the constant it was found in a concrete case where V was 100 c.c. and where 1 c.c. of fluid was added with the barometer at 747 mm. that the ratio of the size of the oscillations at 50 mm. (manometer) beginning pressure as compared with 100 mm. (797 mm. and 847 mm. total pressure) was 8.05:8.55 or 1:1.06 plus instead of 1:2 as per Erlanger hypothesis.

The ratio at 0 mm. (manometer) beginning pressure as compared with 100 mm. (manometer pressure was 7.54:8.55 or 1:1.13 instead of 1: *infinity* as demanded by the Erlanger hypothesis.

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FAUNAL CONDITIONS IN SOUTH GEORGIA

Regarding Mr. Luke's note on the rats of South Georgia,[1] it may be of interest to record that his question as to "what characteristics the rat would develop after a few years of such a specialized habitat" has been at least provisionally answered by the Swedish zoologist, Dr. Einar Lönnberg. This author in 1906 described the South Georgia rat as a new subspecies,[2] and noted that it apparently differed from the typical brown rat in having a thicker skin, denser and longer fur, and a more rusty color.

Several of Mr. Luke's observations would be hard to substantiate, for instance the statement:

> Until about thirty years ago there were no rats on the islands.

It is much more probable that these ubiquitous rodents were introduced in sealing vessels not long after American and British sealers first began to exploit South Georgia on a large scale, which was in the year 1800. Klutschak, who visited South Georgia in 1877, transcribed and published an American sealer's chart of the island, and designated as "Rattenhafen"[3] the bay known to modern Norwegian whalemen as "Prince Olaf Harbor," but called "Port Gladstone" on the latest British map. Rats are still exceedingly abundant about this inlet, as I found in 1913. Within recent years rats are known to have been reintroduced repeatedly at Cumberland Bay.

The rats at South Georgia can not fairly be accused of having "devastated the few small animals living on the island," unless the birds are meant; there are no other native land vertebrates. Rabbits were introduced about 1872 by a sealer coming from Tristan da Cunha, and perhaps two or three times since, but they never gained a foothold. A few horses and reindeer have been thriving there in a feral state for a number of years.

The whaling industry was started at South Georgia not "a few decades ago," but in 1904. Although the rats do feed upon the whale carcasses, as Mr. Luke writes, it would be a mistake to suppose that they are at all dependent upon this source of food, for the creatures appear to be very nearly as abundant about the uninhabited fiords as they are along the shores of the carcass-strewn bays. I observed at Possession Bay, the Bay of Isles, and elsewhere, that the rats eat the young

[1] Science, N. S., XLV., 502, 503, 1917.

[2] *Kungl. Sv. Vet. Akad. Handlingar.*, Bd. 40, No. 5, 21–23, 1906.

[3] *Deutsch. Rundschau f. Geogr. u. Stat.*, Bd. III., 522–531, 1881.

[3] *Loc. cit.*, 407.