

Dall gives a letter from R. McFarland, in which the death of Lockhart is mentioned.

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#### RESEARCHES IN HELMINTHOLOGY AND PARASITOLOGY

TO THE EDITOR OF SCIENCE: The Smithsonian Institution published in 1904, the collected "Researches in *Helminthology* and *Parasitology*" (1844-1891) by Joseph Leidy, M.D., LL.D. The issue was gratis, and is now out of print.

The writer has been applied to by a number of research laboratories in comparative pathology for reprints—he would be glad to know of any one to whom complimentary copies were presented, who would be disposed to donate any such, for use among those engaged in similar lines of investigation.

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#### SPECIAL ARTICLES

##### A SIMPLE DEVICE FOR GIVING ANESTHETICS

So often in giving anesthetics to an animal through the trachea cannula the student either covers the intake opening with several layers of gauze, or plugs the opening with absorbent cotton. To these he applies the anesthetic. When these substances are moistened, the air passages which exist between the fibers in the dry condition are almost wholly obliterated, and the animal is more likely to become asphyxiated than anesthetized. To prevent this almost universal failing I have devised a simple trachea cannula, adapted to both normal and artificial respiration and an appliance for anesthetization, which slips over the intake opening of the cannula.

The cannula consists of a metal T-tube, Fig. 1, *C*. In the long part a small tube extending the full length is soldered. At one end, *I*, all of the opening into the larger portion of this double-barreled tube is closed with solder, thus leaving only the smaller tube open, *sm*. This end is attached to the arti-

ficial respiration apparatus, which practically closes it during normal respiration. The other end, *T*, is inserted into the trachea. The end views of these portions of the tube are shown at the left and right of the figure.

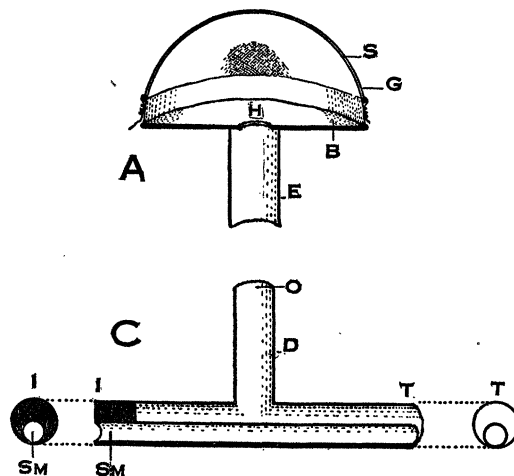


FIG. 1. *A*, anesthetic cone; *B*, circular base; *C*, cannula; *D* and *E*, intake and outlet tubes; *G*, gauze; *H*, hole into intake tube; *I*, end for attachment to artificial respiration apparatus; *O*, opening; *S*, wire screen; *sm*, small tube; *T*, trachea end of cannula.

The device for the administration of the anesthetic is made from a small hemispherical tea strainer (Fig. 1, *A*). The opening of the strainer is soldered to a circular metal plate (*B*) with a hole (*H*) in the center, and a metal tube (*E*) soldered on the lower surface. This tube is large enough to easily slip over the side tube (*D*) of the cannula. One or two layers of gauze (*G*) are spread over the wire screens (*S*) of the strainer and fastened by passing a string or rubber band around the lower margin. The gauze, which can be readily replaced, is thus held away from the intake opening and permits of free passage of air and the thorough vaporization and mixing of the anesthetic with good air. In this manner a few drops of the anesthetic at a time are sufficient to keep the animal in complete anesthesia.

In normal respiration the air passes freely in and out through the gauze and the tubes *E* and *D*. When artificial respiration is necessary all that is needed is to start the apparatus and the air going through the small tube (*sm*) enters the trachea with sufficient velocity to go well down into the lungs. With this device it is not necessary to closely approximate the volume of the normal tidal air, because any excess escapes at once through *O* without causing undue pressure in the lungs. An excess of air is therefore always desirable.

I have found that four different sizes of trachea cannulae suffice for our needs. This, however, requires only a variation in size of the trachea end of the cannula. These different sizes can be made, therefore, so that the anesthetic cone will fit each of them.

This device commends itself because of its simplicity, its effectiveness, its cheapness, and the ease of manipulation.

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## THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

### SECTION F—ZOOLOGY

THE Convocation Week meetings of Section F (Zoology) of the American Association for the Advancement of Science were held in conjunction with those of the American Society of Zoologists at Chicago, Illinois, December 28, 29 and 30, 1920.

At the business meeting of the Section, Professor M. F. Guyer was elected member of the council. Professor H. W. Rand was elected secretary of Section F for five years. Professor C. C. Nutting was appointed member of the general committee, and Professor M. M. Metcalf, member of the section committee for five years.

The sectional committee nominated Professor C. A. Kofoed, of the University of California, as vice-president of the Section for the ensuing year.

The officers for the Toronto meeting will be:

*Vice-president*—C. A. Kofoed, University of California.

*Retiring Vice president*—John Sterling Kingsley, University of Illinois.

*Secretary*—Herbert W. Rand, Harvard University.

*Member of the Council*—M. F. Guyer, University of Wisconsin.

*Member of the General Committee*—C. C. Nutting, University of Iowa.

*Members of the Sectional Committee in addition to the officers above:* Vice-president, St. Louis, W. M. Wheeler (1 year); V. E. Shelford (2 years); Herbert Osborn (3 years); H. B. Ward (4 years); M. M. Metcalf (5 years); H. V. Neal, Preceding Secretary; Ex-officio, W. C. Allee, secretary American Society of Zoologists.

The address of the retiring vice-president of Section F, Professor William Morton Wheeler, of Harvard University, upon "The organization of research," was delivered at the Biologists' smoker at the Ida Noyes Hall, Tuesday evening, December 28, at 8 o'clock. The address attracted an unusually large audience.

Under the rules of the association all arrangements for the program of the meetings were in the hands of the executive committee of the American Society of Zoologists. There were more than ninety papers on the program and it became necessary consequently to divide the program into two sections on Wednesday, the twenty-ninth, meeting simultaneously in the Harper Library and Room 14, Zoology Building.

The "popular interest" session of the meetings was a symposium on Fertilization, held in the Harper Library, at ten o'clock, on Thursday morning, December thirty. Papers were presented by C. A. Kofoed, F. R. Lillie, E. E. Just, O. C. Glaser, C. E. McClung (excused at personal request) and D. H. Tennant.

The attendance upon all of the meetings was so great as to tax the capacity of the rooms in which they were held.

H. V. NEAL,  
*Secretary*

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