very well be one cause for the accumulation of fluid in them. The wall of the lymphatics of regions that are inflamed may become so permeable as to fail largely, if not entirely, in the function of drainage.

5567

A Non-Metal Cage for Small Animals.

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The increasing use of small laboratory animals, especially the albino rat, in studies involving precise measurements has emphasized the importance of the care required in the technic of caging and feeding. Largely in response to the demands imposed by the recent investigations of nutritional anemia, several suggestions have been made for the design of cages in which the experimental animal has no access to metal. In connection with metabolism studies with a dietary regime extremely poor in inorganic salts, the same need for a metal-free cage arose in this laboratory and, because of the difficulty in cleaning the cages of the designs already suggested, the one herein described was devised. It has the advantages of being simple in construction, easy to wash and sterilize and consisting of parts which are standard and easily replaced (see accompanying illustrations).

The main portion of the cage consists of a Pyrex cylinder 21 cm. inside diameter, 22 cm. outside diameter and 16.5 cm. high. This rests on a grid made of a circular collar of galvanized iron 22.8 cm. in diameter and 5 cm. high, across which are bars consisting of glass tubing 3 mm. outside diameter. Copper wire No. 20 is run through the tubing for support and added strength and passes through holes in the collar at a distance of 1.5 cm. below the upper edge. There is a space of 0.7 cm. between the tubes forming the grid; this, however, can easily be varied to suit experimental conditions. The tubes are slightly bent so that urine dropping upon them tends to flow towards the center. A similar grid forms the top of the cage. If care is taken to make the tubes touch the metal collar, the animal has no opportunity to lick or chew metal.

The glass cylinder with the grids above and below sets in a heat-resistant pie plate, "Save all pie plate, Glassbake 600". In this plate

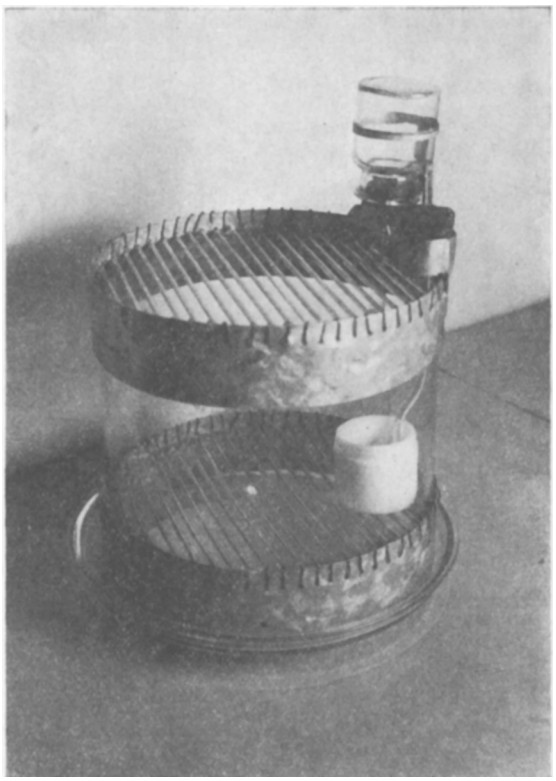

FIG. 1.

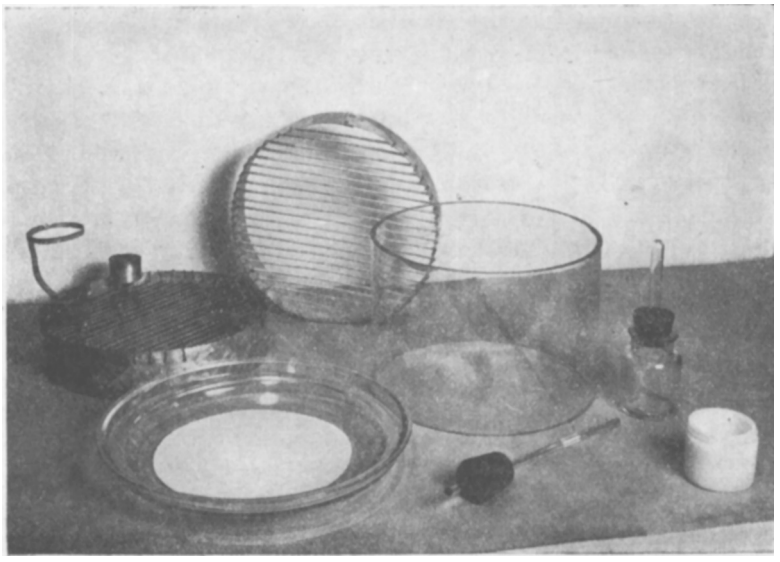

FIG. 2.

there is a shelf or flange half way up the bevelled edge; the cage rests on this shelf. The upper surface of the grid supporting the animal is 5.5 cm. above the bottom of the plate.

Food is provided in a glass cup kept in place by a glass rod, the upper end of which passes through a cork held in a ring on the upper grid collar. A water fountain of simple design is also supported from the collar of the upper grid. Urine and feces are collected on a double layer of acid-soaked filter paper. Satisfactory recovery of nitrogen, calcium and phosphorus has been obtained when the papers are changed at 3-day intervals. This cage prevents access to metals, eliminates coprophagy, consists of easily replaceable parts with relatively low cost and is readily cleaned and sterilized.

5568

Effect of Digitalis on Duration of Electrical Systole ("Q-T" Interval) in Cardiac Failure.

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Previous studies have shown that the "Q-T" interval of the human electrocardiogram is related to the duration of the cardiac cycle ("R-R" interval)[1] and that the "Q-T" interval is lengthened in relation to the cardiac cycle in cases of heart failure.[2] Since digitalis is the drug most successfully used in combating cardiac insufficiency, a study of the effect of this drug was made. It was found that adequate doses of digitalis almost uniformly produce a relative shortening of the "Q-T" interval and that a change in the same direction occurs in normal individuals[2] as well as in cardiac patients. Moreover, this effect of digitalis is seen at least as early as any other known change produced by its administration. A discussion with further details will be given in the complete paper.

The accompanying table gives a few examples of this effect of digitalis. Several hundred records, including those of 5 normal individuals, have been studied. In the table "K" is a constant in the

[1] Cheer, S. N., and Li, R. C., *Chin. J. Physiol.*, 1930, **4**, 191.

[2] Cheer, S. N., to be published.