tion. With the exception of this isolated instance in one animal, there is no evidence, from our data on 8 other dogs, that faradic stimulation of either or both vagus nerves produces a hypoglycemia. From this we conclude that it is unlikely that vagal function influences insulin production.

The results were the same whether the animal was fasted 5 hours, 15 hours or fed just prior to the experiment.

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A Shaking Device for Multiple Containers.

SAM LAVIN, LEO E. FARR, AND J. HOWARD MUELLER.
From the Department of Bacteriology and Immunology, Harvard Medical School.

The need for simultaneous extraction of a series of fluids in separating funnels occasionally presents itself to the biochemist. In this department, for example, it has been necessary to carry out a number of separations by the Craig[1] counter-current method under conditions in which, either because of volume or tendency to emulsion, the stainless steel device used by Craig was inapplicable.

A piece of equipment has therefore been designed and constructed in the department workshop for the specific purpose of mixing the contents in 250-ml separatory funnels. In view of the comparative simplicity and low material cost of this shaker, as well as the interest it has aroused in workers from other departments, construction details are presented. Obviously, its design may be readily adapted to the use of containers other than separatory funnels.

This shaker (Fig. 1) has been built on a wooden table 24x47 inches, the legs of which are set on casters. Basically, the shaker consists of a frame bolted to a shaft which is turned by a small electric motor. The frame is designed to accommodate 12 separatory funnels in 2 rows, one on each side of the shaft. All structural material is ply-wood except for the half-inch shaft, its bearings, and bearing supports. A simple sheet metal cover over the motor switch has a nail soldered inside to act as a pin which passes through a hole in the shaft. By this device, the frame is held in an upright position when not in use, and accidental throwing of the switch is prevented.

The frame (Fig. 2) consists of 3 ply-wood pieces 9x34 inches. The top piece is removable while the lower 2 are fixed together and fastened to the shaft. The upper and lower pieces are cut from half-inch ply-wood, the center piece from quarter-inch ply-wood.

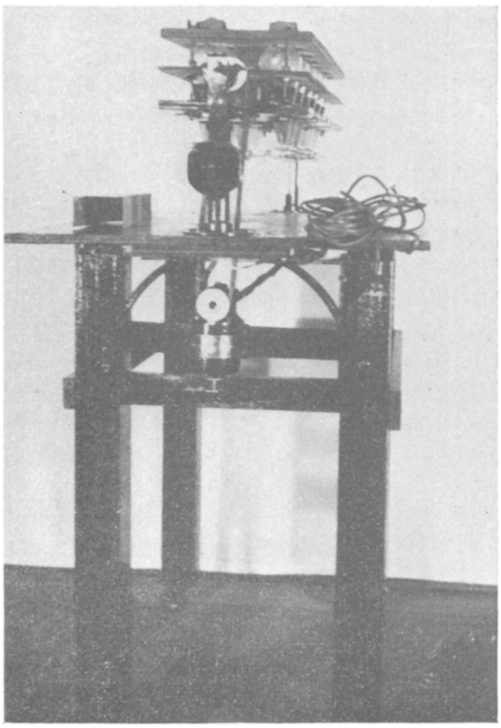

FIG. 1.

[1] Graig, L. C., *J. Biol. Chem.*, 1944, **155**, 519.

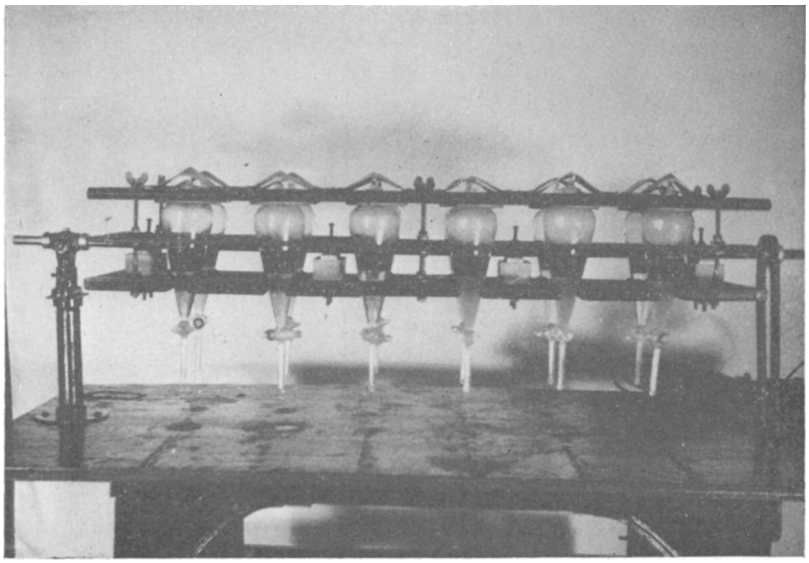

FIG. 2.

Assembled, the three pieces are spaced 2¼ inches apart. Six quarter-inch bolts 6 inches long are located at the 4 corners and midpoints of the 2 sides to hold the pieces together. Holes are cut in all pieces to serve as mountings for the funnels. The bottom frame piece is cut with key-hole shaped openings, which are lined with sponge rubber, to facilitate removal of the funnels with their stop-cocks. The upper piece is held in place by 6 wing nuts on the quarter-inch bolts. Rubber straps running across the circular holes serve to apply light pressure to the ground glass stoppers as the wing nuts are tightened. Assembled with funnels, the frame is a rigid unit reasonably well balanced about the shaft.

The motor, which is the most expensive part, is mounted below the table top in such a way that the drive pulley is directly below the shaft pulley. A leather V-belt connects the 2 pulleys, passing through a hole in the table top. The 115-volt DC motor (Type RNSH-12 R, Bodine Electric Company, Chicago) is rated at 1/70 horse-power. A gear train incorporated in the motor has a reduction ratio of 25:1, giving an output of 70 rpm.

Some minor design changes are indicated following the construction and use of this shaker. The motor and shaft should be equipped with composite pulleys to permit a selection of shaft speeds. The motor might preferably be turned 90 degrees from its present position so that its armature lies in a horizontal plane. Uniform wear on both armature bearings would result. In bolting the motor to the table, consideration should be given to the necessity of adjusting belt tension.

The total material cost of constructing this shaker, exclusive of the table, was $25 to $30. No special tools were needed that cannot be found in most workshops. Since put into use, the shaker has required a minimum of maintenance.