A GRAVITY WRITING LEVER FOR RESPIRATORY TAMBOURS

THE superiority of tambours with gravity writing levers is quite apparent to all who have supervised laboratories in pharmacology or physiology. We have found a very simple and inexpensive modification of the Marey tambour to be a satisfactory substitute for the more expensive instruments now on the market.

The principle of the gravity writing arm is secured by making a simple carrier into which is fitted the ordinary writing arm in such a manner that gravity will hold it in contact with the drum. This carrier is made from a piece of 30-gauge metal (we use aluminum) about 1½ inches square, plus about 3 inches of 18-gauge

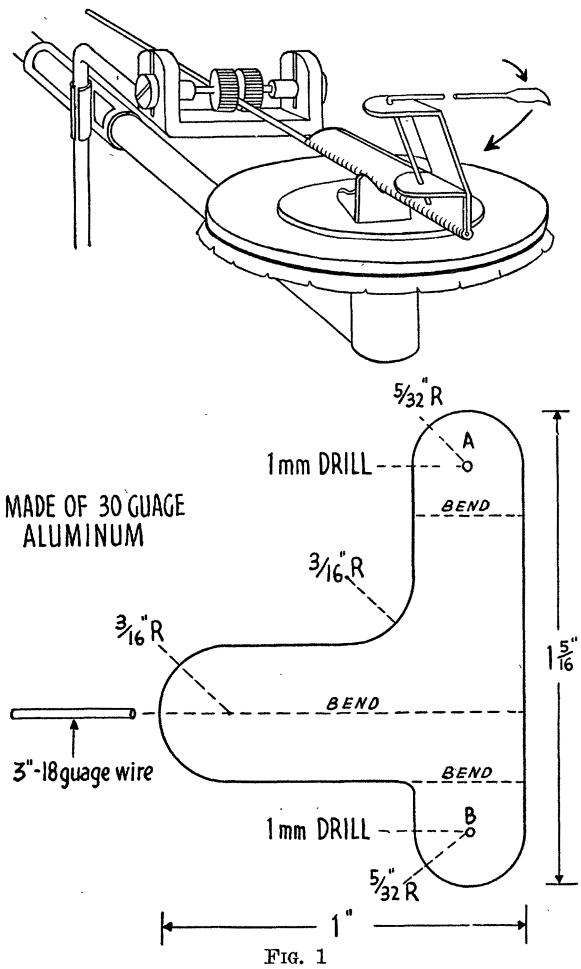

FIG. 1

wire. The figure shows the pattern for the carrier. The metal when thus shaped is folded over one end of the 18-gauge wire and crimped so as to hold. The wire is then placed in the spindle in the same manner as the old lever wire. The old writing arm is cut to the desired length and about one-half inch bent to nearly a right angle. The short arm of this right angle is inserted in the holes A and B, as shown in the figure. To adjust the swing of the arm to gravity it is only necessary to tilt the carrier a little toward the face of the drum. The pressure on the drum may be varied by the amount of tilt given the carrier and by increasing or decreasing the weight of the writing arm.

This slight modification of our stock of Marey tambours has enabled us to salvage a large number of them at a cost of but a few cents each, and at the same time obtain practically all the advantages of expensive tambours equipped with gravity writing levers.

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A FURTHER IMPROVEMENT IN THE HARVARD KYMOGRAPH

SUPPLEMENTING the three improvements in the Harvard kymograph already described,[1] the writer has made one change which has definitely improved the kymograph drum and solved the problem of cutting off the paper.

The aluminum drums of the Harvard kymographs become badly scratched by instruments used for cutting the paper until the surfaces are no longer smooth enough for careful work. The drums may be turned down on a metal lathe until they are perfectly smooth again and while still in the lathe a narrow, shallow groove may be cut across the drum directly opposite one of the four spokes just deep enough to take a few strands of thin copper wire. A hole is then drilled one half inch from the groove into the spoke at both ends of the drum with a number 35 drill, the hole tapped with a 6 × 32 tap and a set screw one quarter inch long inserted into each hole. The wire is fastened securely to the bottom set screw and the other end of the wire is wrapped around the top set screw. Attach the paper and smoke in the usual manner. After a record is made the wire is loosened from the top screw and pulled out and down with one hand, while holding the cut ends of the paper with the other hand. In order to avoid cutting through the record paste the two ends of the paper directly above the wire and start recording just beyond that point.

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[1] H. B. McGlade, SCIENCE, 91: 412, 1940.

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