AN AUTOMATIC SPINNING DEVICE FOR THE HARVARD KYMOGRAPH

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The object of the device is to provide a cheap, simple and accurate means of automatically spinning a kymograph drum for one revolution. The essential parts of the device consist of a "trigger" to release and arrest the drum and an ordinary rubber band, 6 mm. wide. The trigger (Fig. 1) consists of a brass rod, 1 cm. in diameter and 18 cm. long, near the center of which is soldered a strip of spring brass 1.5 mm. thick and 10 mm. wide, shaped as shown in the diagram. A copper rivet 12 mm. long is passed through a hole in the spring at

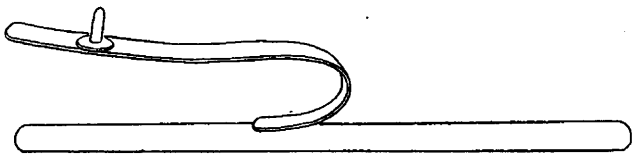

Fig. 1.—Trigger.

a distance of 30 mm. from its free extremity. In order to insure strength and rigidity, the burr is driven in and solder made to flow to all points of contact. Three slight modifications are made in the Harvard drum, namely, the spring clip which serves to hold the drum to the axle is replaced by a sleeve and thumb screw (seen above the drum in Figure 2); a steel pin 5 mm. in diameter and 20 mm. long is screwed into the bottom of the drum near the periphery; finally, a bent wire is soldered to the top of the base of the kymograph overhanging the edge, or this bent wire may be held in a binding post as shown in Figure 2.

The trigger is firmly mounted on a stand in such a position that the pin at the base of the drum will pass along the

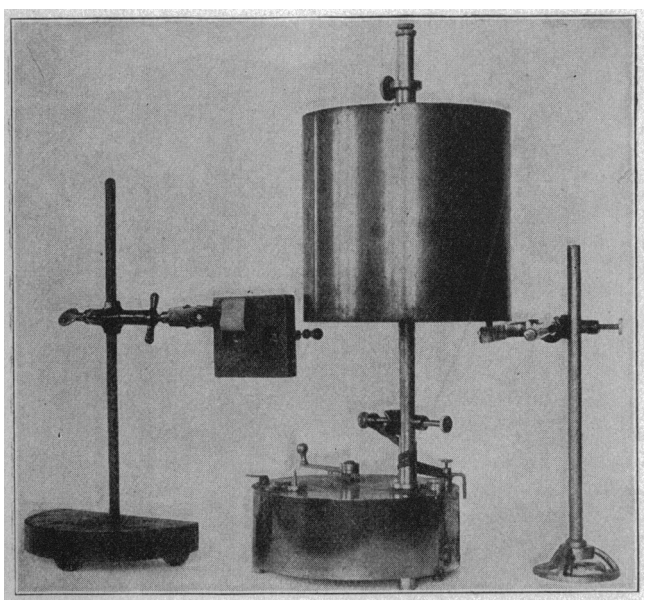

Fig. 2.—Kymograph with automatic spinning device.

curve of the spring with slight friction and be stopped by the projecting rivet. One end of the rubber band having been placed in the jaw of a double clamp fixed to the drum axle and the other end passed under the bent wire, the drum is rotated by hand from left to right until the pin has passed the rivet. This rotation twists the rubber band as seen in Figure 2. The drum can then be allowed to spin for one rotation by simply pressing on the trigger with the thumb and then releasing it. Automatic stimulation by a break induction shock can be obtained by placing the hard rubber handle of Porter's simple key in the path of the pin projecting from the bottom of the drum, the simple key being, of course, in circuit with the primary of the inductorium. The key is held by means of a buret clamp.

As it is absolutely necessary that the apparatus shall be perfectly stationary, the kymograph and the stand holding the trigger must be fastened either to the table or, when this is objectionable, to a board of appropriate size. The simplest way of making the kymograph stationary is to bore three holes adapted in position and size to the feet of the base. Holes of the proper size can be made with an auger-bit seven-sixteenths inch in diameter. When the feet are placed firmly in these holes, rotation or tilting cannot take place. The stand holding the trigger is made of what is known in the electric fixture trade as a crow's foot and a piece of one-eighth inch pipe (internal diameter). The crow's foot is fastened to the table or board by means of stove bolts.

This device can be used for recording superimposed curves. The recording points must, of course, be removed from the smoked surface after each curve is recorded before rotating the drum "backward" for the purpose of twisting the rubber band as explained above. In order to insure a return of the writing points to their starting position on the smoked surface, a perpendicular line should be drawn on the latter with a kymograph T-rule after the apparatus has been adjusted as shown in Figure 2. The writing points should be made to fall on this perpendicular line. The recording levers having been mounted on an adjustable stand, it is then an easy matter to move the levers to and from the smoked surface with accuracy as to position and degree of pressure.

Excellent spinning devices for the Harvard kymograph have been described by Jackson (A Drum-Spinning Attachment for an Ordinary Kymographion, THE JOURNAL, June 10, 1911, p. 1705) and by Guthrie (Contributions to Practical Physiology and Pharmacology, published by the author, pp. 51-65); but the one here presented, it is believed, is simpler in design and has given very satisfactory results in the hands of our students.

A DIRECT ROUTE FOR DRAINAGE OF THE PANCREATIC AREA

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A case of acute pancreatitis was diagnosed as appendicitis and a McBurney incision made. The appendix not being at fault, a high right rectus incision determined the diagnosis. Drainage was provided through the foramen of Winslow and also through the McBurney incision. The lower incision was chiefly depended on for the drainage, as it could be seen that this line was very direct, the pancreas being exposed by lifting the great omentum and transverse colon.

This procedure is recommended for conditions of the pancreas demanding drainage.

The advantages are:

1. Its simplicity (as compared with the costovertebral incision).
2. It is more direct than the tract through the foramen of Winslow, and is more in the line of gravitation.
3. By drainage through the foramen of Winslow or through the costovertebral angle, the lower abdomen, if contaminated, might not be drained.
4. It is anatomically the correct line, as fluids from the pancreatic region (if in the peritoneal cavity) are directed to the right iliac region by the oblique shelf-like attachment of the mesentery.

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Water Pipes of Ship Polluted.—Surgeon J. Oliver Cobb has announced that hardly a single steamer in interstate commerce on the Great Lakes has an unpolluted water supply. The intake system is polluted while the ships are in port and even after hours of steady pumping, pure water taken in mid lake is contaminated by the bacteria in the polluted tubes and water tanks.