

No. 807,299.

PATENTED DEC. 12, 1905.

D. T. MARSHALL.
VIBRATOR FOR MEDICAL USE.
APPLICATION FILED OCT. 6, 1904.

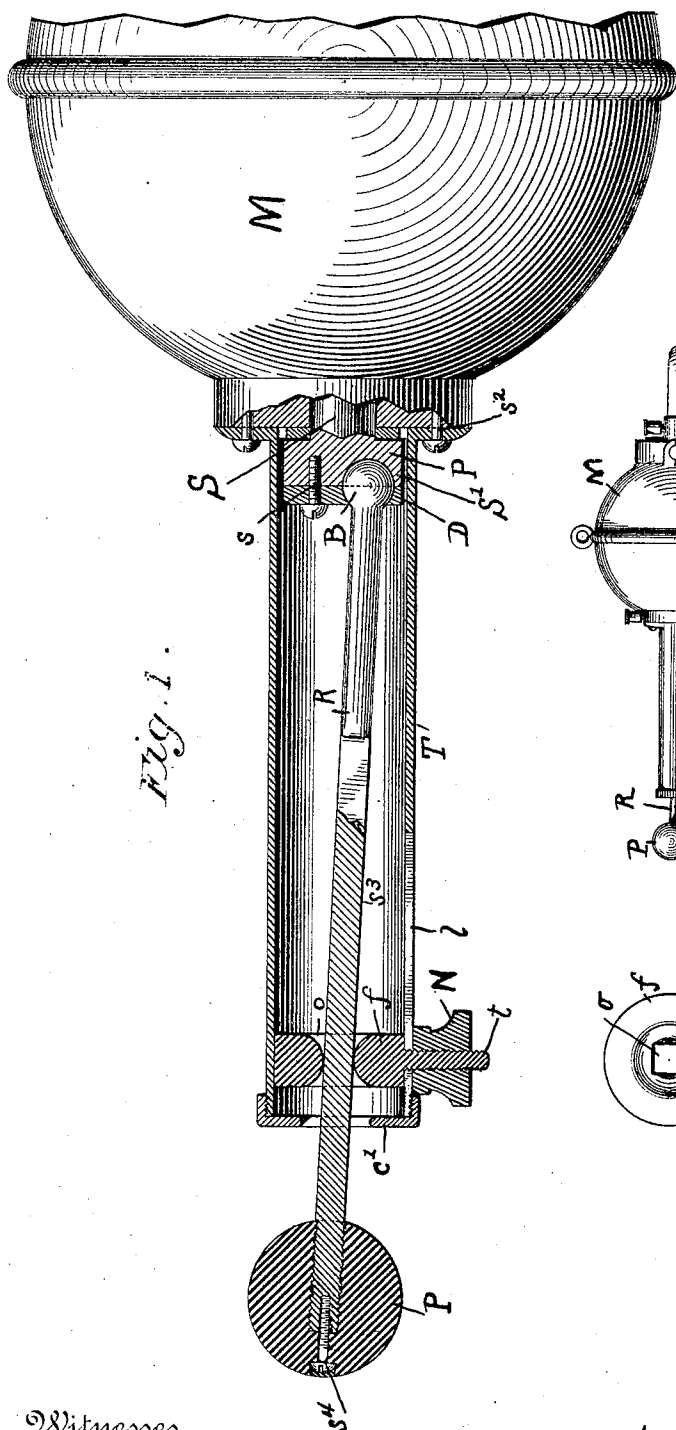


Fig. 1.

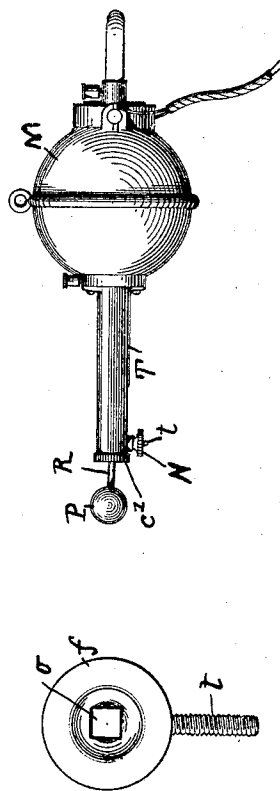


Fig. 2.

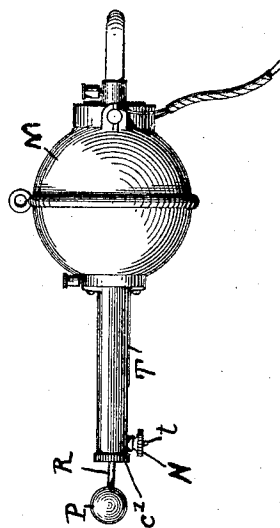


Fig. 3.

Witnesses
Edward Dowland.
F. W. Wright.

Inventor
David T. Marshall
By his Attorneys
Horton and Howard

UNITED STATES PATENT OFFICE.

DAVID T. MARSHALL, OF NEW YORK, N. Y.

VIBRATOR FOR MEDICAL USE.

No. 807,299.

Specification of Letters Patent.

Patented Dec. 12, 1905.

Application filed October 6, 1904. Serial No. 227,430.

To all whom it may concern:

Be it known that I, DAVID TRUMBULL MARSHALL, a citizen of the United States of America, residing in the city of New York, in the 5 county and State of New York, have invented an Improved Vibrator for Medical Use, of which the following is a specification.

The object of this invention is to improve the construction of vibrators for medical use, 10 to cheapen and simplify them, and to permit the use of a small motor for the same without liability of stoppage of the vibrator's action through undue pressure on the pad.

In the accompanying drawings, Figure 1 is a 15 sectional side elevation of my improved device, showing a portion of motor attached. Fig. 2 is a face view of the fulcrum-collar, and Fig. 3 is a side elevation of a complete machine drawn to a smaller scale.

20 As shown on the drawings, M is the motor-casing.

S is the motor-shaft, carrying a plate P at one end, fitted with a disk D, adapted to be secured thereto by a screw s. Both disk and 25 plate are provided with hemispherical recesses, which when placed together form a socket S' for the ball end B of the vibrator-rod R, out of line with the axis of the shaft, and thus constituting a form of crank motion.

30 A cylindrical casing or tube T, open at one end, is secured to the motor-casing M by screws s' and incloses the plate and disk of the motor-shaft. A slidable collar or movable fulcrum f is fitted within one end of the tube T, being 35 provided with a central opening o of polygonal outline with rounded edges and also with a depending threaded shank t, passing through a slot l in the tube T. A thumb-nut N is used to tighten said collar in the tube and secure 40 it in its various adjusted positions therein.

The vibrator-rod R is formed of a bar of polygonal cross-section for all or part its length, with which the central opening of the collar may engage. The rod is threaded at 45 its outer end and provided with a ball B at its inner end. A pad or rubber P' may be threaded on the rod R and secured additionally by a screw s'. An open-centered protective collar c' may be placed over the end of the 50 tube T, as shown.

In assembling the device shown the collar may be placed on the rod R after the same has been passed through the opening in the hemispherical recess of the disk D and the

disk then secured in place against the plate of 55 the motor-shaft. Then the tube T is slipped over the collar and the flanged end of the tube then secured to the motor-casing. The thumb-nut N can be attached at any time. The protecting-collar is then placed over the end of 60 the tube T and finally the pad or rubber P' placed in position and secured.

In operation it will be noted that a very small radius of throw is imparted to the inner end of the vibrator-rod from the motor-shaft, 65 while the motion of the pad may be even less, according to the position of the fulcrum f. The pad is given an orbital motion, which may be so slight as not to be as great as the limit of elasticity of its own body. Hence no 70 matter what pressure the operator applies it is practically impossible to stop the machine, the application of pressure to the patient, however, varying during each revolution.

I have shown my device as directly attached 75 to the motor-casing, as that is my preferred form of machine. However, so long as any driving-shaft is coupled to my vibrator-rod in the manner shown I consider it within the 80 scope of my broad invention.

From the foregoing description it is seen that I have invented a simple, cheap, and easily-manufactured device producing effective results in its intended use.

I claim as my invention—

85 1. A vibrator, comprising a casing, a revolvable shaft therein, a tube secured to the casing, a collar having a hole of polygonal outline, a rod of polygonal cross-section passing 90 freely through the opening, said rod having a cranked connection with the shaft and passing out of the tube and carrying a pad at its end.

2. A vibrator, comprising a casing, a revolvable shaft therein, a tube secured to the casing, a collar having a hole of polygonal outline and rounded edges, a rod of polygonal 95 cross-section passing freely through the opening, said rod having a cranked connection with the shaft and passing out of the tube and carrying a pad at its end. 100

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

DAVID T. MARSHALL.

Witnesses:

GEORGE G. SCHOENLANK,
F. WARREN WRIGHT.