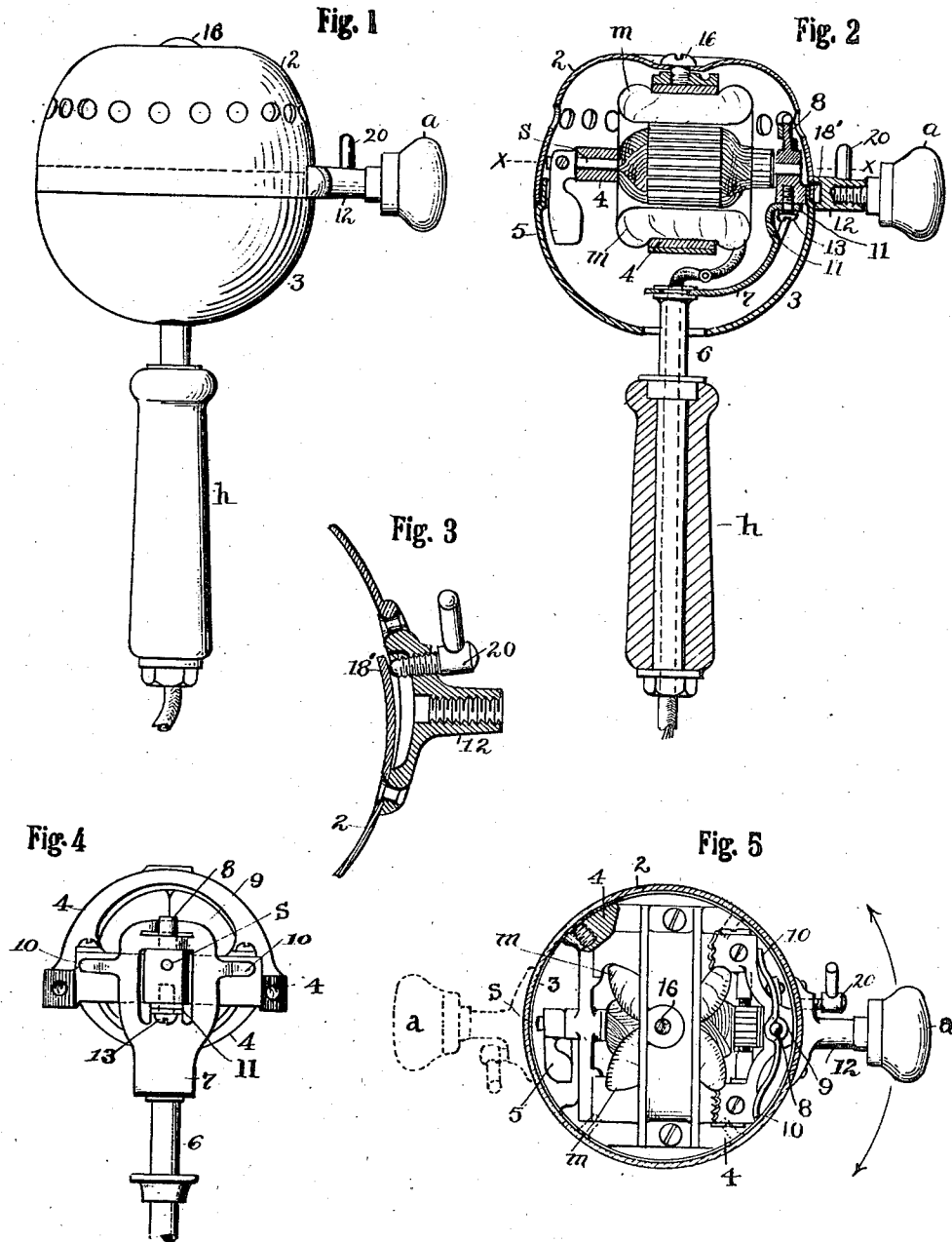


W. I. MILLER.
ELECTRICALLY OPERATED MASSAGING DEVICE.
APPLICATION FILED MAY 13, 1912.

1,043,957.

Patented Nov. 12, 1912.



ATTEST
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UNITED STATES PATENT OFFICE.

WILLIS I. MILLER, OF CLEVELAND, OHIO.

ELECTRICALLY-OPERATED MASSAGING DEVICE.

1,043,957.

Specification of Letters Patent.

Patented Nov. 12, 1912.

Application filed May 13, 1912. Serial No. 696,862.

To all whom it may concern:

Be it known that I, WILLIS I. MILLER, citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Electrically-Operated Massaging Devices, of which the following is a specification.

This invention appertains to electrically operated massaging devices, and is an improvement on the machine patented to me October 22, 1907, No. 868,795.

In the accompanying drawings, Figure 1 is a plain elevation of the machine complete, and Fig. 2 is a sectional elevation thereof vertically through the axis as viewed in Fig. 1. Fig. 3 is an enlarged sectional elevation of a portion of the shell and the nipple which receives the stem of the applicator. Fig. 4 is an elevation of a portion of the handle stem and the spring connecting the same with the motor frame. Fig. 5 is a plan view looking down on Fig. 1 with the upper half of the shell sectioned horizontally just above the nipple for attaching the applicator.

Several material improvements appear in this case over the above patent as will be seen in the course of this description, and the present mechanism comprises a two-part shell, or shell in semi-spherical sections, or halves as indicated by 2 and 3 respectively and overlapped at their edges in a plane at right angles to the axis of the motor shaft *s* and the inner section fastened by screws to the motor frame 4 while the outer section is rotarily supported as hereinafter described. The coils *m* for the motor are arranged within this frame and an eccentrically mounted weight 5 is fixed on the extremity of the motor shaft outside of said frame as seen in Figs. 2 and 5.

The handle *h* by which the device is held in use has a tubular stem 6 through which the conducting wires are passed, and the said stem is connected with the said frame 4 by means of a spring 7, Figs. 2 and 4. The said spring is of segmental or bowed pattern as seen in Fig. 2, and is rigidly attached to the extremity of stem 6 at one end and pivotally connected with the frame 4 at the other, the pivot means comprising a stud 8 on frame 4 over the inner bearing for the motor and projecting through a loop 9 thrown up from the outer portion of the spring 7, while a lip 11 struck from said

spring is fixed by a screw 13 to the lower portion of said bearing but in such way as to form a pivot for said lip. Thus the two points 18 and 13 constitute a pivot support for the spring on frame 4. The spring 7 also has spring fingers 10 projecting laterally from its body and bearing on the substantially flat side surfaces of frame 4 and operatively related to the pivot 18 and 13. The action of the body of the spring and its fingers 10 are at right angles to each other and one may be defined as vertical and the other as horizontal, the latter resulting particularly from the spring fingers 10. With the speed of the motor and the throw of the weight 5 the whole effect is substantially equivalent to a universal joint movement. This is evidenced because in addition to the vertical and horizontal movements above referred to there is also a more or less direct axial movement in the motor shaft, or a sort of pounding effect in that direction as expressed in short successive strokes.

A feature of construction in this device is the location of the weight 5 on the end of motor shaft *s* while the spring 7 is applied at the opposite end of said shaft, and since the shaft and the motor frame have the spring 7 as their sole support and the said spring comes at one end of shaft *s* and the eccentric weight 5 at the other the vibratory effects must necessarily be pronounced. The outer shell section 2 is rotatably secured upon the frame 4 by pivot screw 16 at its center and is rotatable in respect to the inner section 3 on said pivot according to the position it is desired to give to the applicator *a* as, for example, the full lines or the dotted lines thereof Fig. 5, or any intermediate position, and the outer section is locked in place by the tongue 18 struck from the rim of said section and adapted to be pressed against the rim beneath or within by hand controlled screw 20 and thus frictionally lock the said outer section in place. The screw 20 obtains bearing by passing through the comparatively deep base of the nipple 12, and the applicator has a threaded stem adapted to be removably screwed into said nipple. Of course various forms of applicators may be interchangeably used according to the service desired.

What I claim is:

1. In a massaging apparatus, a main frame and a motor therein, a shell having semi-spherical parts overlapped at their

edges, the inner part fixed on said frame and the outer part having a pivot on the said frame and rotatable in respect to the inner part to any desired position, an applicator
5 support on said outer part and means to frictionally lock the said part in adjusted position.

2. A massaging apparatus having an internal frame and an electric motor mounted therein, a handle and a spring supporting
10 the frame on said handle, in combination with a two-part shell having one part fixed rigidly to said frame and the other part rotatably supported over the edge of said
15 fixed part, means to lock said shell parts together at their meeting edges, an applicator on said rotatable part, and the said fixed part having an opening relatively larger than said handle through which the handle
20 engages with said spring.

3. In a massaging machine, a main frame

and a motor therein, a handle and a segmentally curved spring support therefor connecting the said handle with said frame opposite the axis of said motor, the said
2 spring provided with bowed lateral spring portions bearing against said frame and the said handle located at right angles to the axis of said motor.

4. In a massaging machine, a main frame
3 and a motor therein, a handle and a curved spring supporting said handle having pivot connection with said frame and said spring having spring extensions laterally from said
pivot connection and bearing against said
3 frame.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIS I. MILLER.

Witnesses:

E. M. FISHER,

F. C. MUSSUN.