

H. M. SCIPLE.
VIBRATOR.

APPLICATION FILED AUG. 27, 1907.

Patented Apr. 27, 1909.

2 SHEETS—SHEET 1.

919,649.

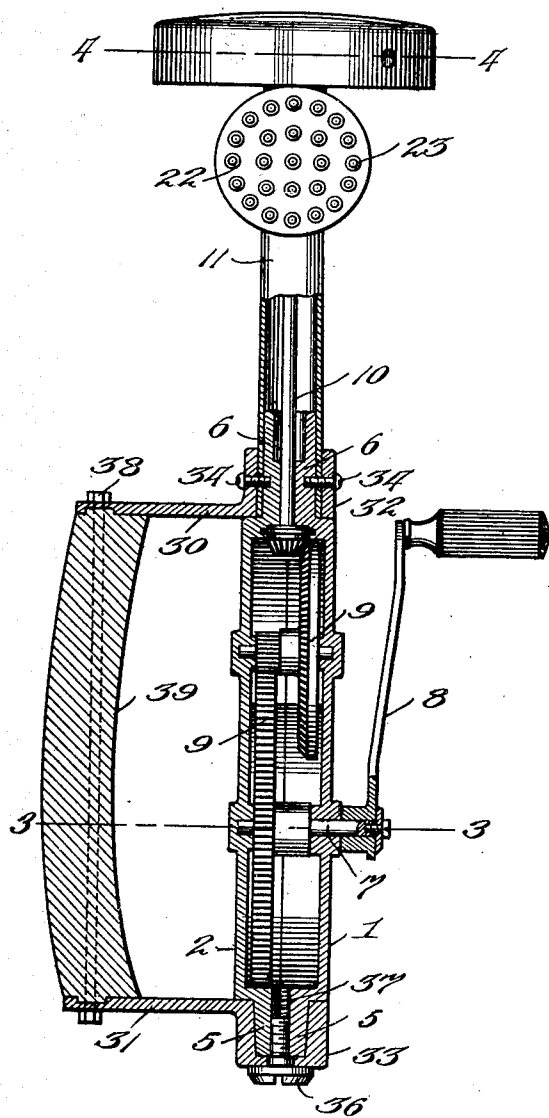


Fig. 1.

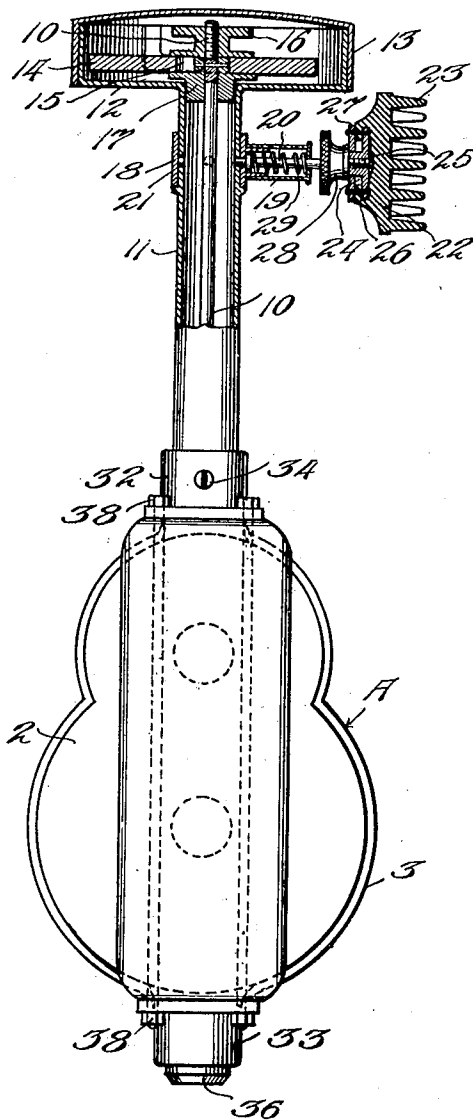


Fig. 2.

Witnesses

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Fig. 3.

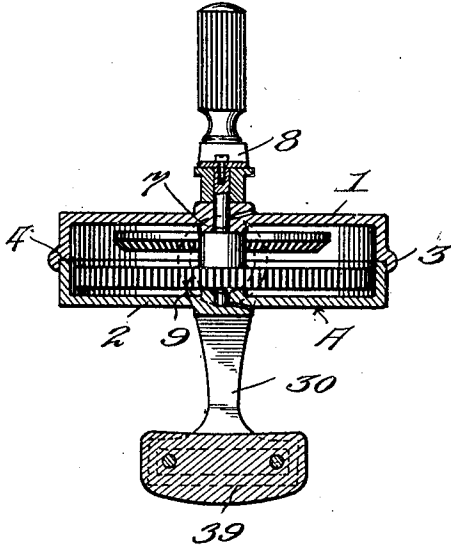


Fig. 4.

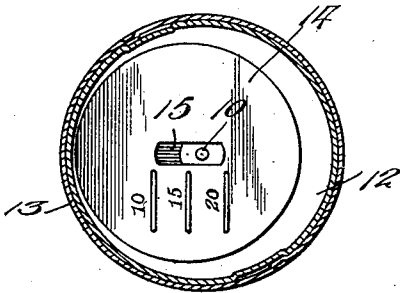
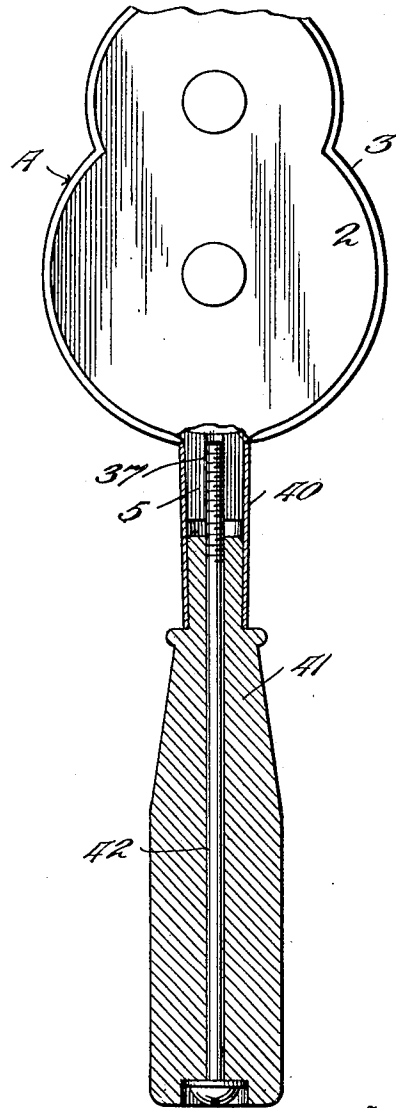


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE.

HENRY MADISON SCIPLE, OF MINNEAPOLIS, MINNESOTA.

VIBRATOR.

No. 919,649.

Specification of Letters Patent.

Patented April 27, 1909.

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To all whom it may concern:

Be it known that I, HENRY MADISON SCIPLE, a citizen of the United States, residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented new and useful Improvements in Vibrators, of which the following is a specification.

This invention relates to that class of devices which are known as vibrators and which are used for the treatment of various nervous and other disorders by transmitting to the body of the patient a rapid vibratory movement generated by the implement; said vibratory movement being produced by the rapid rotation of a shaft carrying at one end an eccentric disk.

One object of the present invention is to construct the implement with a casing, any portion of which may be placed in contact with the body of the patient for the purpose of imparting the desired vibration. Devices of this class, as heretofore constructed, have usually been provided with so-called applicators made of rubber or similar material, said applicators being designed to be placed in contact with the body of the patient and to serve as a medium for the transmission of the vibrations; while it is not intended to dispense entirely with the applicator, it is to be hoped by the present invention to present an implement, the working parts of which shall be completely housed and guarded and any portion of which may be placed in contact with the body of the patient without danger of injury and with eminently satisfactory results.

A further object of the invention is to improve the construction of the casing.

Another object is to improve the construction of the applicator and the means for connecting the same with the implement in such a manner as to prevent its being loosened by the vibration to which it is subjected.

Still further objects of the invention are to provide an improved handle which will also be utilized for assembling the parts of the casing.

Further objects are to simplify and improve the construction and operation of the class of devices to which the invention relates.

With these and other objects in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which

will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of the invention; it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the invention may be resorted to when desired.

In the drawings, Figure 1 is a side elevation, partly in section, of a vibrator constructed in accordance with the invention. Fig. 2 is a front view, partly in section, of the same. Fig. 3 is a transverse sectional view taken on the plane indicated by the line 3—3 in Fig. 1. Fig. 4 is a sectional detail view taken on the plane indicated by the line 4—4 in Fig. 1. Fig. 5 is a sectional elevation illustrating a vibrator equipped with a modified form of handle.

Corresponding parts in the several figures are denoted by like characters of reference.

The casing A, of the improved vibrator, is composed of the separable members 1—2, the former of which is provided along the side edges thereof with a flange 3 overlapping the seam 4 between said members, and providing a neat and dust-proof finish. The side members of the casing are provided with longitudinally disposed lugs 5—6, cooperating to form approximately cylindrical extensions in the ends of the casing. The latter is provided with suitable bearings for the main shaft 7 which is equipped with a driving crank 8 and which is connected by a train of gearing 9 with a longitudinally disposed shaft 10 which is supported for rotation in a suitable bearing formed in the lugs 6—6 at one end of the casing, said shaft being arranged to be driven at a high rate of speed.

11 designates a tube which is fitted exteriorly upon the lugs 6—6 which are thereby connected together; this tube carries at its outer extremity a casing 12 for a removable lid or cover 13 detachably connected therewith in any convenient manner. The casing 12 constitutes a housing for an eccentric disk 14 having a slot 15 adjustably engaging the shaft 10 upon which said disk is secured by means of a clamping nut 16; the shaft 10 being provided with a cylindrical bearing member 17 interiorly engaging the tube 11 in which the said shaft is thereby steadied.

Supported for rotation upon the tube 11 is a sleeve or collar 18 having a radially ex-

tending tube 19 wherein is fitted a spring actuated slidable stem 20, the inner end of which is adapted for engagement with any one of a plurality of apertures 21 in the tube 11, and the outer end of which carries the applicator 22, which latter is molded or otherwise formed of rubber or other suitable elastic material, and is preferably provided with a plurality of projecting flexible prongs 23 for application to the body of the patient. The applicator has a recess 24 for the reception of the attaching nut 25 which is seated in said recess, as will be seen in Fig. 2 of the drawings; the body of the applicator being provided with a flange 26 which projects over the edge of said attaching nut; a washer 27 is also provided, said washer being interposed between the attaching nut and a flange 28 upon the stem 20. When the applicator is connected with the stem 20, by adjusting the attaching nut upon said stem, the flange 26 of the applicator will be compressed between the nut and the washer; and it is found by practical experience that the applicator will in this manner be held with absolute security against displacement owing to the vibration to which it will be constantly subjected in practice; experience having proven that ordinary lock nuts and securing devices have been inefficient for this purpose. The stem 20 carrying the applicator may be pulled outward against the tension of the spring 29 whereby it is actuated, to disengage the inner end of said stem from the apertures 21, and the sleeve 18 may thus be turned so as to cause the applicator to be extended radially in any desired direction from the housing or casing of the implement.

The preferred form of handle for holding the vibrator while the latter is being manipulated, is shown in Figs. 1, 2 and 3 of the drawings. Said handle is composed of two brackets 30 and 31 each provided with a sleeve or ferrule designated respectively 32 and 33. The sleeve 32 is fitted exteriorly upon the tube 11, adjacent to the casing members 1—2, and it is secured by means of screws 34 extending through the tube 11 into the lugs 6 of the casing members; the sleeve or ferrule 33 of the bracket 31 is fitted exteriorly upon the lugs 5 which are thereby connected or clamped together, and said sleeve or ferrule is secured by means of a headed screw 36 engaging a longitudinally threaded perforation 37 which is formed longitudinally in the meeting faces of the lugs 5—5. The brackets 30—31 extend laterally from the casing or housing, and are connected with each other by means of bolts 38 extending longitudinally through a grip piece 39 which is interposed between the brackets. It will be seen that the sleeves or ferrules of the brackets perform an important function in assisting in assembling the parts of the casing or housing; it is also

found that by locating the handle adjacent to the side of the casing or housing the implement will be under perfect control and may be operated very easily and efficiently. It is, however, at times desirable to provide a handle that extends longitudinally from the casing or housing; under this construction which is illustrated in Fig. 5 of the drawings, a sleeve or collar 40 is fitted exteriorly upon the lugs 5—5, and said sleeve is utilized to hold one end of the handle 41, which latter is secured by means of a bolt 42 extending longitudinally therethrough and engaging the threaded aperture 37 formed in the meeting faces of the lugs 5. I reserve the privilege to use this form of handle whenever it shall seem desirable to do so.

It is preferred to provide the adjustable eccentric disk 14 with gage marks, as indicated in Fig. 4, to indicate the relative force of the vibrations attained in different positions of the disk.

From the foregoing description taken in connection with the drawings hereto annexed, the operation and advantages of this invention will be readily understood by those skilled in the art to which it appertains.

The construction is simple, inexpensive, and thoroughly efficient for the purposes for which it is provided.

Having thus fully described the invention, what is claimed as new is:—

1. In a vibrator, a casing consisting of two separably connected members having longitudinally extending lugs, in combination with a handle including brackets having sleeves or ferrules surrounding the lugs.

2. In a vibrator, a casing consisting of two parts or members having oppositely disposed longitudinally extending lugs arranged in pairs and connected tubular members, each engaging and connecting one pair of said lugs.

3. In a vibrator, a casing consisting of two members having longitudinally extending lugs, a main shaft supported for rotation in the casing, a driven shaft supported for rotation between the meeting faces of two of the longitudinally extending lugs, means for transmitting motion from the main shaft to the driven shaft, and tubular members engaging and connecting the longitudinally extending lugs of the casing members.

4. In a vibrator, a casing consisting of two members having longitudinally extending lugs, tubular members engaging and connecting the lugs, a driven shaft supported for rotation between the meeting faces of the lugs at one end of the casing and extending through the tubular member connecting said lugs, a casing upon said tubular member including a detachable lid, and an eccentric disk mounted adjustably upon the driven shaft within said casing.

5. In a vibrator, a casing consisting of two

separably connected members having longitudinally extending lugs, tubular members engaging and connecting said lugs, laterally extending brackets connected with the tubular members, and a hand grip secured between said brackets.

6. In a vibrator, a casing consisting of two separably connected members having longitudinally extending lugs, tubular members engaging and connecting said lugs, a driven shaft supported for rotation between the meeting faces of the lugs at one end of the casing, a connecting bolt engaging a threaded aperture formed in the meeting faces of the lugs at the opposite end of the casing, means for operating the driven shaft, an eccentric disk supported adjustably upon the latter, and a casing or housing for said eccentric disk including a detachable lid.

7. In a vibrator of the character described, a casing including a tubular member, a sleeve supported for rotation on said tubular member and having a laterally extending tube, a spring actuated stem seated in said tube and adapted for engagement with apertures in the tubular casing member, a flange upon the

spring actuated stem, an elastic applicator having a recess, an engaging nut seated in said recess, said applicator having a flange partly overlying the engaging nut to secure the latter in the recess, and a washer interposed between said elastic flange and the flange upon the spring actuated stem when the engaging nut is applied to the latter.

8. A vibrator including a casing, a tubular member projecting therefrom, means for imparting vibration to said member, a sleeve supported for rotation on the member, a tube extending laterally from the sleeve, a spring actuated stem mounted in the tube, and means for securing an applicator to said stem, one end of said stem being adapted for engagement with anyone of a series of openings formed in the member, whereby the applicator may be arranged in different radial planes with respect to the member.

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

HENRY MADISON SCIPLE.

Witnesses:

M. J. MADISON,
CARL A. YOUNGQUIST.