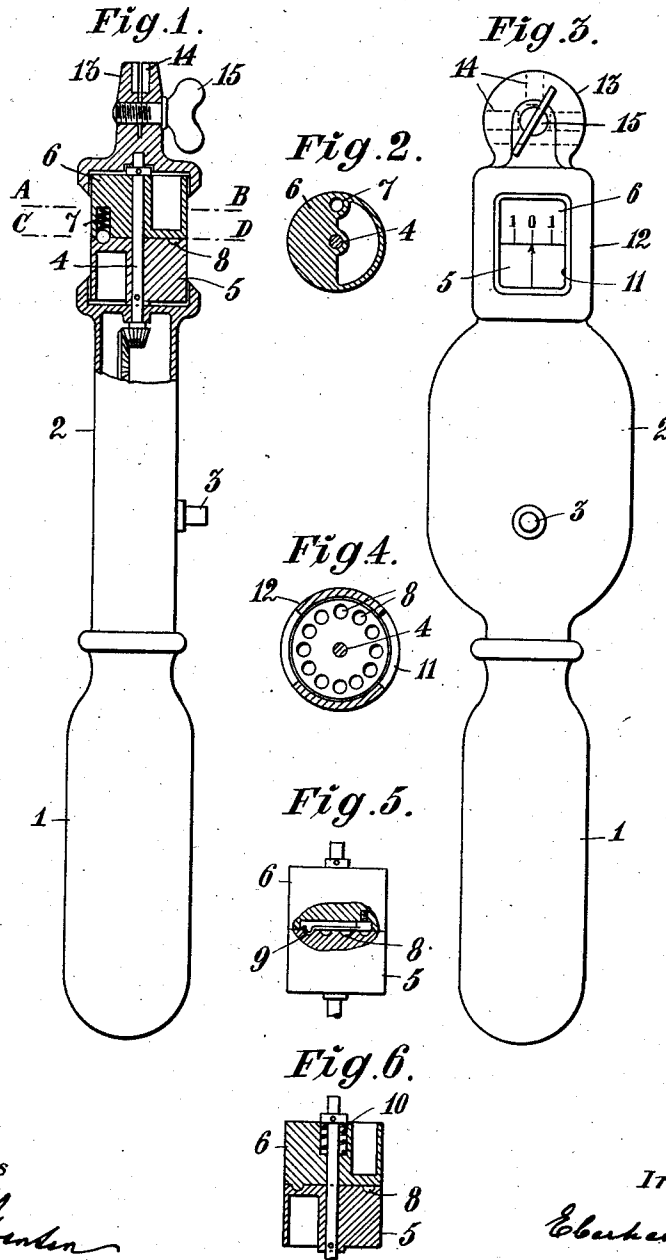


E. SEGER.
VIBRATORY MASSAGING APPARATUS.
APPLICATION FILED FEB. 20, 1909.

1,009,588.

Patented Nov. 21, 1911.



Witnesses

Aug. Lorentzen
Fred. Nordstj.

Inventor

Eduard Seger

UNITED STATES PATENT OFFICE.

EBERHARD SEGER, OF STOCKHOLM, SWEDEN.

VIBRATORY MASSAGING APPARATUS.

1,009,588.

Specification of Letters Patent.

Patented Nov. 21, 1911.

Application filed February 20, 1909. Serial No. 479,103.

To all whom it may concern:

Be it known that I, EBERHARD SEGER, a subject of the King of Sweden, residing at Stockholm, in the Kingdom of Sweden, have invented new and useful Improvements in Vibratory Massaging Apparatus, of which the following is a specification, reference being had to the drawing accompanying and forming a part hereof.

This invention relates to vibratory massaging apparatus of the kind wherein the vibrations are created by a rapid rotation of an eccentrically balanced body placed on a rotary axle. Apparatus is known in which the said body consists of a pair of thin circular disks which are placed eccentrically on the shaft or otherwise eccentrically balanced. For regulating the strength of the vibrations, said disks are adjusted by a sliding or turning movement relatively to each other, whereupon they are locked in adjusted position on the axle by means of a nut or the like. This nut or locking device is placed outside the apparatus and forms an outwardly projecting rotary part in which the hair, dress etc. of the person to be operated upon may easily become entangled.

The object of the invention is to remove this drawback and at the same time to enable an easier adjustment for different vibratory effects.

A further object of the invention is to diminish the gyroscopic actions arising at greater speeds of rotation when thin disks having relatively large diameters are employed.

The invention consists in the construction and combination of parts hereinafter described and pointed out in the claims.

In the drawing I have shown, by way of example, a vibratory massaging apparatus embodying the invention.

Figure 1 is a side elevation and partial longitudinal section of the apparatus. Fig. 2 is a cross-section on line A—B of Fig. 1. Fig. 3 is a side elevation at right angles to that shown in Fig. 1. Fig. 4 is a cross-section on line C—D of Fig. 1. Fig. 5 is a side-elevation and partial section of a detail showing a modified form of the locking device between the two bodies by the adjustment of which relatively to each other the vibratory strength of the apparatus may be varied. Fig. 6 is a similar view of a second modification of the locking device.

In the embodiment illustrated in Figs. 1-4 1 is the handle carrying a casing 2 inclosing a gear for transmitting power from a pin 3 adapted to be rotated by a crank, or from a motor through the intermediary of a flexible shaft, to an axle 4 journaled in the upper part of the casing. Attached to the axle 4 is a lower body 5, suitably consisting of a cylinder or other solid of revolution, and loosely placed on the said axle 4 is another body 6 which is prevented, by an outer stop ring, from moving in axial direction. These two rotary bodies are eccentrically weighted, one half of the same being solid, while the other is made hollow (Figs. 1 and 2). Obviously, the eccentrical distribution of weight may be obtained otherwise, for instance by making the one half of lighter material than the other. It is obvious that, when the said bodies are adjusted in such a position relatively to each other that their heavier parts are in alinement with each other, the vibrations will be greatest, whereas the same will be weakest, when the two bodies take up the relative positions shown in Fig. 1.

According to this invention, the two bodies 5, 6 are provided, at the ends thereof adjacent to each other, with a device making it possible to lock the two parts in position relatively to each other, by which the outer locking device hitherto usual is avoided.

In the embodiment shown in Figs. 1 to 4 the locking device consists of a ball or pin placed in a bore 7 in the loose part 6, said ball or pin being pressed by a spring against the other part 5 attached to the axle 4 so as to be able to snap into one or the other of a number of cavities 8 in the end of the said body 5. By turning the upper body 6 in relation to the other the ball or pin may be forced out of a cavity 8 into another and thereby caused to lock the two bodies 5, 6 in a desired position relatively to each other corresponding to the desired strength of vibration.

In the modified arrangement shown in Fig. 5 the springy ball or pin is replaced by a spring having a bend 9 at its free end, said spring being attached, at its other end, to the body 6.

In the embodiment shown in Fig. 6 the upper rotary body provided, at its lower side, with a pin is actuated by a spring placed in a cavity 7 in the part of the body

6 adjacent to the axle 4. Obviously, the cavities 8 may be arranged in the body 6 and the pin at the body 5.

In order to facilitate the adjustment the rotary body 6 may be graduated, as shown in Fig. 3, and provided with a number or mark for each cavity 8 provided in the other body. The numbering is the same at both sides of a middle mark 0 and may be seen through two diametrically opposite openings 11 in the casing 12, the body 6 being, thus, adjustable by inserting the fingers through the aforesaid openings and turning the said body.

At its outer end the casing 12 carries a contact head 13 having bores 14 adapted to receive the massage-pad or contacts. The contact head is slit at the middle through the said holes, as shown in Fig. 1, so that it may be divided into halves adapted to spring toward each other, when tightened by a clamping screw 15, and, thereby, secure the contact in position.

I claim:

1. In a vibratory massaging apparatus, the combination of a rotary axle, two eccentrically balanced weights placed on the said axle with their adjacent ends abutting against each other, one of said weights being connected to the said axle while the other is loosely placed thereon, one of said weights being graduated at its circumference in both directions from a certain zero-mark and the other being provided with an index, one of said weights having a series of recesses in the surface thereof facing the other and the latter having a cavity in the surface thereof facing the former, and a locking member yieldably placed in the said cavity and adapted to snap into the recesses in the other body, said locking member and recesses having a form allowing the two weights to be turned in either direction relatively to each other.

2. In a vibratory massaging apparatus, the combination of a rotary axle, two weights placed on the said axle with their adjacent ends abutting against each other, one of said weights being connected to the said axle while the other is loosely placed thereon, both said weights having cavities situated eccentrically in the same, one of said weights having a series of recesses in the surface thereof facing the other and the latter having a cavity in the surface thereof facing the former, and a locking member yieldably placed in the said cavity and

adapted to snap into the recesses in the other body, said locking member and recesses having a form allowing the two weights to be turned in either direction relatively to each other.

3. In a vibratory massaging apparatus, the combination of a rotary axle, two eccentrically balanced cylindrical weights of equal radius placed on the said axle, coaxially to each other, and having their adjacent ends abutting against each other, one of said weights being connected to the said axle while the other is loosely placed thereon, one of the same being graduated at its circumference in both directions from a certain zero-mark and the other being provided with an index, one of said weights having a series of recesses in the surface thereof facing the other and the latter having a cavity in the surface thereof facing the former, and a locking member yieldably placed in the said cavity and adapted to snap into the recesses in the other body, said locking member and recesses having a form allowing the two weights to be turned in either direction relatively to each other.

4. In a vibratory massaging apparatus, the combination of a rotary axle, two cylindrical weights of equal radius placed on the said axle, coaxially to each other, and having their adjacent ends abutting against each other, one of said weights being connected to the said axle while the other is loosely placed thereon, both said weights having cavities situated eccentrically in the same, one of said weights having a series of recesses in the surface thereof facing the other and the latter having a cavity in the surface thereof facing the former, and a locking member yieldably placed in the said cavity and adapted to snap into the recesses in the other body, said locking member and recesses having a form allowing the two weights to be turned in either direction relatively to each other.

5. In a vibratory massaging apparatus, the combination of a rotary axle, two eccentrically balanced bodies, one of which is connected to the said axle, while the other is loosely placed thereon, and a spring-actuated ball placed in one of the said bodies and adapted to snap into a series of cavities in the other body.

EBERHARD SEGER.

Witnesses:

AUG. SÖRENSEN,
FREDR. NORDSJD.