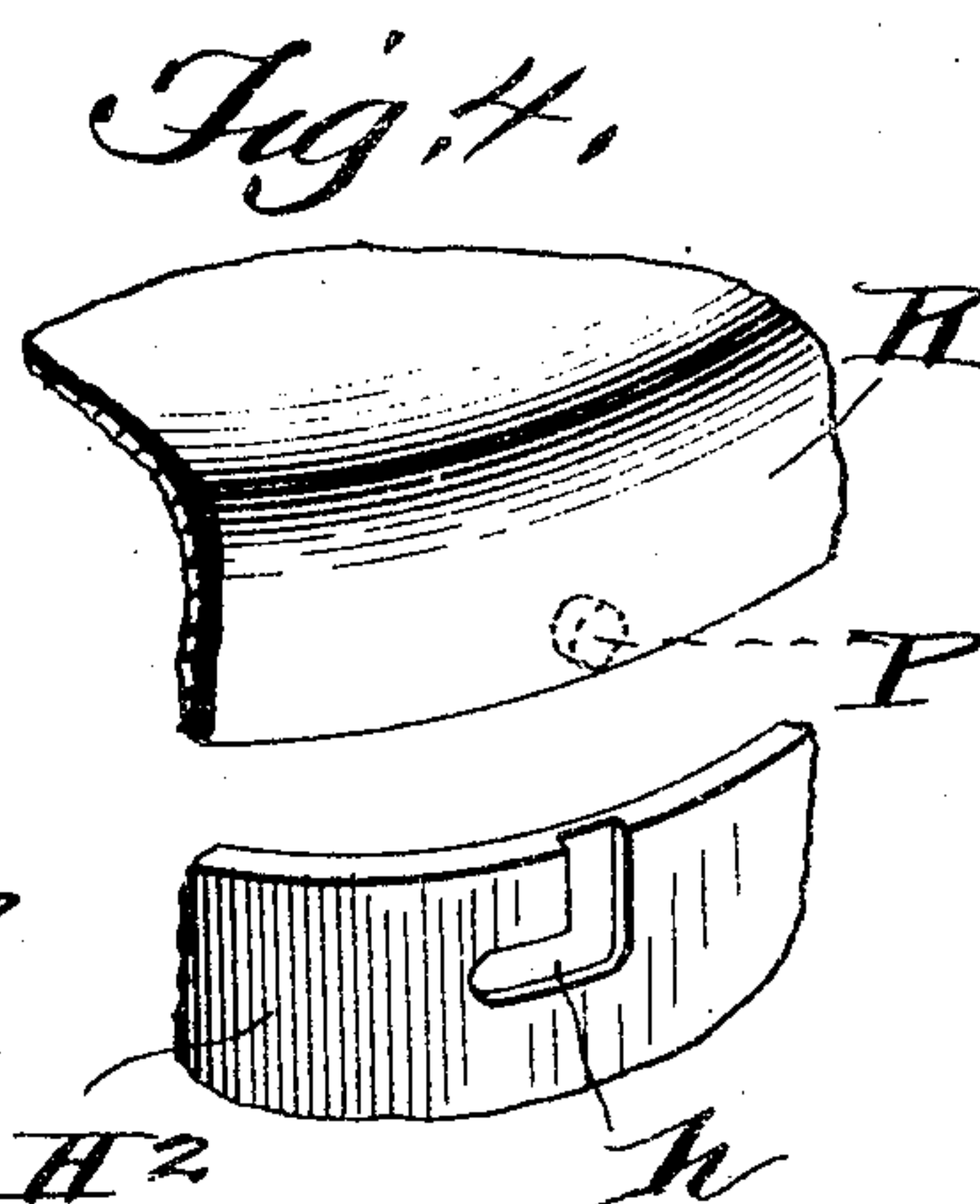
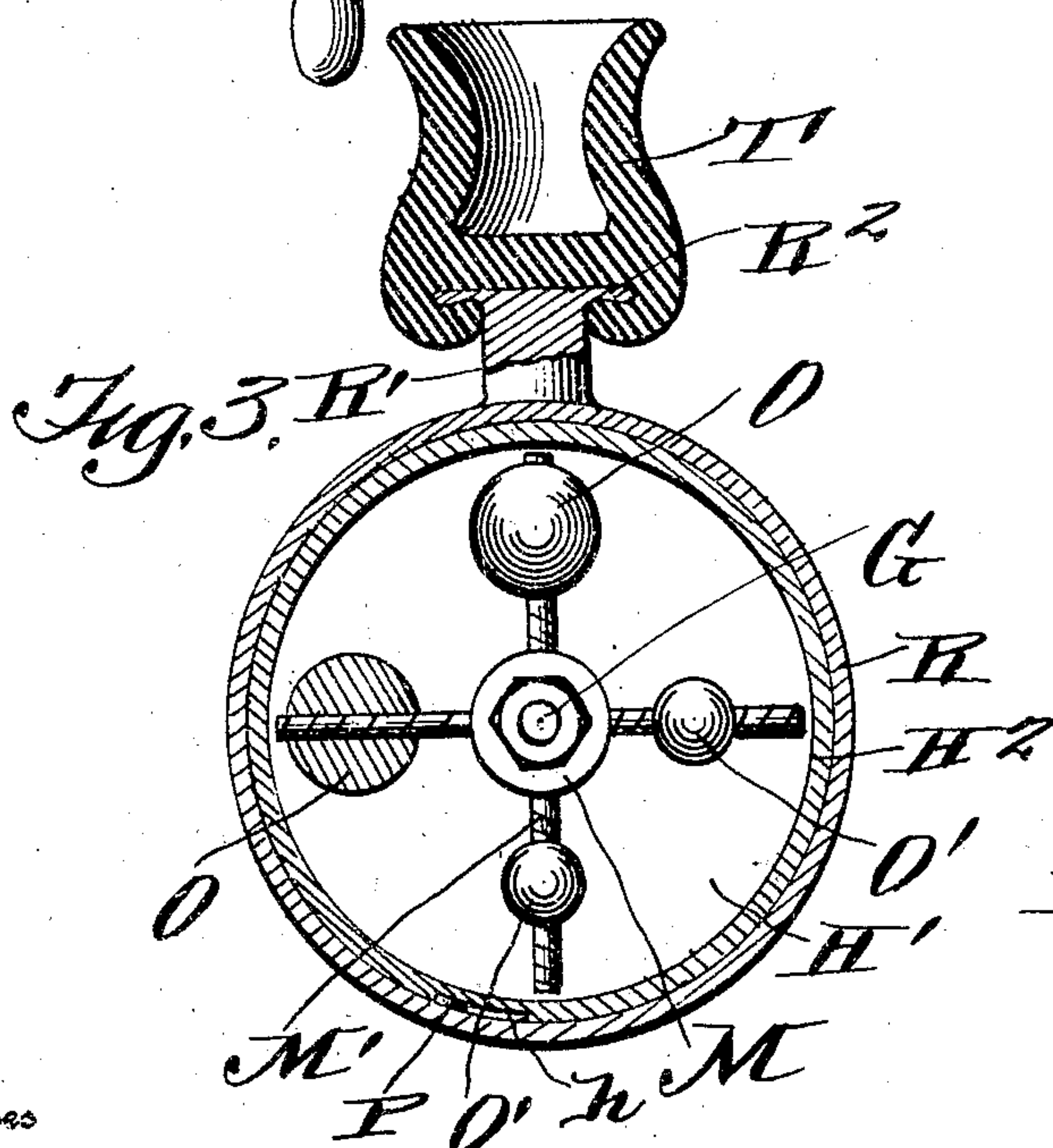
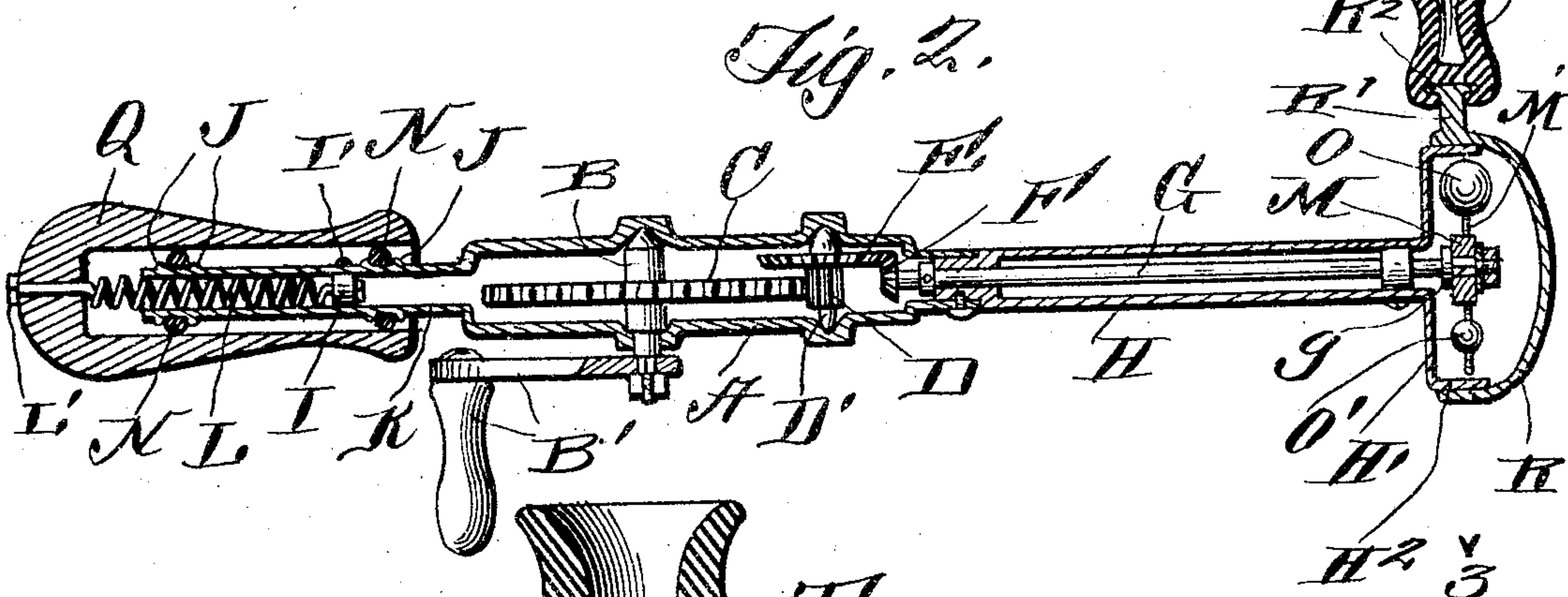
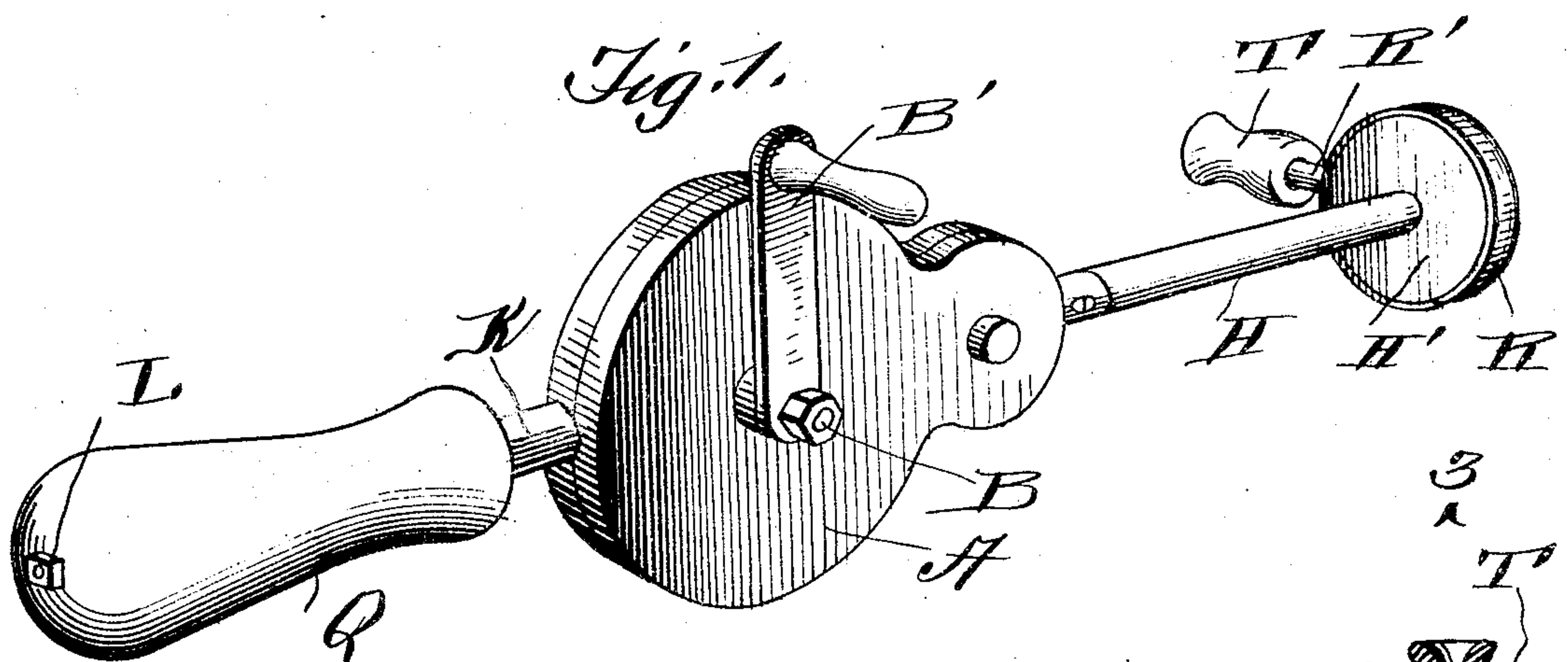


No. 878,078.

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G. R. MACOMBER.
VIBRATORY MASSAGE APPARATUS.
APPLICATION FILED AUG. 24, 1907.



Witnesses

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GEORGE R. MACOMBER, OF NEW YORK, N. Y.

VIBRATORY MASSAGE APPARATUS.

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Specification of Letters Patent.

Patented Feb. 4, 1908.

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To all whom it may concern:

Be it known that I, GEORGE R. MACOMBER, a citizen of the United States, residing at New York city, in the county of New York and State of New York, have invented certain new and useful Improvement in Vibratory Massage Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in vibratory massage apparatus and the object of the invention is to produce a simple and efficient device of this nature, comprising a series of radial arms which are made to rotate rapidly by any suitably geared mechanism and consists in the provision of adjustable weighted balls of different diameters mounted upon said arm, whereby the unbalanced weights may be moved farther from or nearer to the axis of rotation to regulate the strength of the vibratory movement.

The invention consists further in the provision of means in connection with the vibratory massage apparatus of taking up the vibration upon the handle of the device.

The invention comprises various other details of construction and combinations and arrangements of parts which will be hereinafter fully described and then specifically defined in the appended claims.

My invention is illustrated in the accompanying drawings, in which:—

Figure 1 is a perspective view of the apparatus. Fig. 2 is a central longitudinal sectional view through the device. Fig. 3 is a cross sectional view on line 3—3 of Fig. 2, and Fig. 4 is an enlarged detail view of two of the parts disassembled.

Reference now being had to the details of the drawings by letter, A designates a suitable casing in which the gear mechanism for driving the apparatus is positioned and contains a shaft B mounted in suitable bearings therein, and B' is a suitable handle fixed to a projecting end of said shaft whereby the latter may be rotated.

C designates a gear wheel which is fixed to the shaft B, the teeth of which wheel are

in mesh with the teeth D upon the shaft D', which latter is journaled in suitable bearings within said casing. A beveled gear wheel E is fixed to the shaft D' and is in mesh with a beveled gear wheel F keyed or otherwise securely fastened to the shaft G, which is mounted in bearings in the tubular member H which is fastened to said casing. The shank portion of said casing, designated by letter K, is tubular, as shown clearly in Fig. 2 of the drawings, and contains a collar I therein which is held in place by means of a screw I' and about the circumference of the said tubular shank portion are the annular ribs J arranged in pairs and spaced apart, and N designates rubber rings which are placed about the circumference of said hollow shank K and held in place by being positioned intermediate said annular ribs. A suitable handle Q is provided which is chambered to receive the hollow shank portion of said casing, the outer circumference of the rings preferably extending laterally against the inner surface of the chamber of the handle and allowing the handle to have a slight movement independent of said shank portion of the casing.

L designates a coiled spring, the inner end of which is fastened to the collar I in any suitable manner and its other end extending through said handle and engaged by means of a nut L'. Said spring and rubber rings, as shown, are provided for the purpose of taking up the vibration which would come upon the handle and which is found in devices of this nature to be objectionable, as the operator holding the apparatus ordinarily gets as much of the vibratory effect of the instrument as the party being treated. Said tubular portion H has its outer end flaring, as at H', and R designates a saucer shaped disk which telescopes over the circular flange H' of said flaring end H'. It will be noted that said disk shaped member R has a lug R' projecting from its circumference, the end of the lug having a flange R² over which a cup shaped member T, of rubber or other material, may be fitted. It will be understood that various forms of contact massage cups may be adjusted to the headed lug R'.

Mounted upon a squared portion of the shaft G is a disk M having four radial arms M' projecting therefrom, each of said arms being threaded, and O—O designate balls, each of which is mounted upon a threaded arm M', and O' designates balls which are of

smaller diameter than the balls O and upon each arm opposite an arm upon which a larger ball O is mounted a small ball O' is held, as shown clearly in Fig. 3 of the drawings. The purpose of having the balls of different sizes and mounted as shown and described is that in order that the weight upon the axis of the disk M may be thrown farther from or nearer to the center of the disk in order to increase or decrease the vibratory movement. As said balls have threaded apertures, it will be noted that they may be adjusted upon the arm as may be desired.

In order to hold the cup shaped disk R in place, a lug P projects from the outer surface thereof adjacent to its rim and engages a bayonet slot h formed in the outer surface of the flange H².

In operation, it will be noted that, by the multiplied gear, a very rapid rotary movement may be imparted to the shaft G by turning the crank B and by holding either the convexed surface of the disk R against any object to be massaged or the cup T projecting from the edge of the disk, the desired effect incident to the vibratory movement may be had and, by the provision of the coiled spring and ring upon the handle, the vibratory effect will not be imparted to the operator holding the instrument.

What I claim to be new is:—

1. A vibratory massage apparatus comprising a casing with a tubular shell connected therewith, a rotatable shaft mounted within said tubular shell, gear mechanism within the casing for rotating said shaft, a disk fitted to said shaft, radial threaded arms upon said disk, weighted balls of different diameters, each having a diametrically disposed threaded hole formed therein and mounted upon said threaded arms, a large and a small ball being mounted upon arms which are in alinement with each other, as set forth.

2. A vibratory massage apparatus comprising a casing with a tubular shell connected therewith, a rotatable shaft mounted within said tubular shell, gear mechanism within the casing for rotating said shaft, a disk fitted to said shaft, radial threaded arms upon said disk, weighted balls adjustably held upon said arms, one end of said tubular shell flaring and having a flange

about its edge, and a saucer shaped closure telescoping over said flange, as set forth.

3. A vibratory massage apparatus comprising a casing with a tubular shell connected therewith, a rotatable shaft mounted within said tubular shell, gear mechanism within the casing for rotating said shaft, a disk fitted to said shaft, radial threaded arms upon said disk, weighted balls adjustably held upon said arms, one end of said tubular shell flaring and having a flange about its edge, a saucer shaped closure telescoping over said flange, a lug projecting from the circumference of said saucer shaped member at right angles to the axis of the shaft, and a cup removably held upon said lug, as set forth.

4. A vibratory massage apparatus comprising a casing with a tubular shell connected therewith, a rotatable shaft mounted within said tubular shell, gear mechanism within the casing for rotating said shaft, a disk fitted to said shaft, radial threaded arms upon said disk, weighted balls adjustably held upon said arms, a chambered handle telescoping over the shank portion of the casing, the shank portion of said casing being hollow, a spring fastened at one end within said shank portion of the casing and its other end to said handle, as set forth.

5. A vibratory massage apparatus comprising a casing with a tubular shell connected therewith, a rotatable shaft mounted within said tubular shell, gear mechanism within the casing for rotating said shaft, a disk fitted to said shaft, radial threaded arms upon said disk, weighted balls adjustably held upon said arms, a chambered handle telescoping over the shank portion of the casing, the shank portion of said casing being hollow, a spring fastened at one end within said shank portion of the casing and its other end to said handle, flexible rings mounted about the hollow shank portion of the casing and interposed between said shank portion and the inner surface of the chamber of the handle, as set forth.

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

GEO. R. MACOMBER.

Witnesses:

ROBERT A. BOSWELL,
A. L. HOUGH.