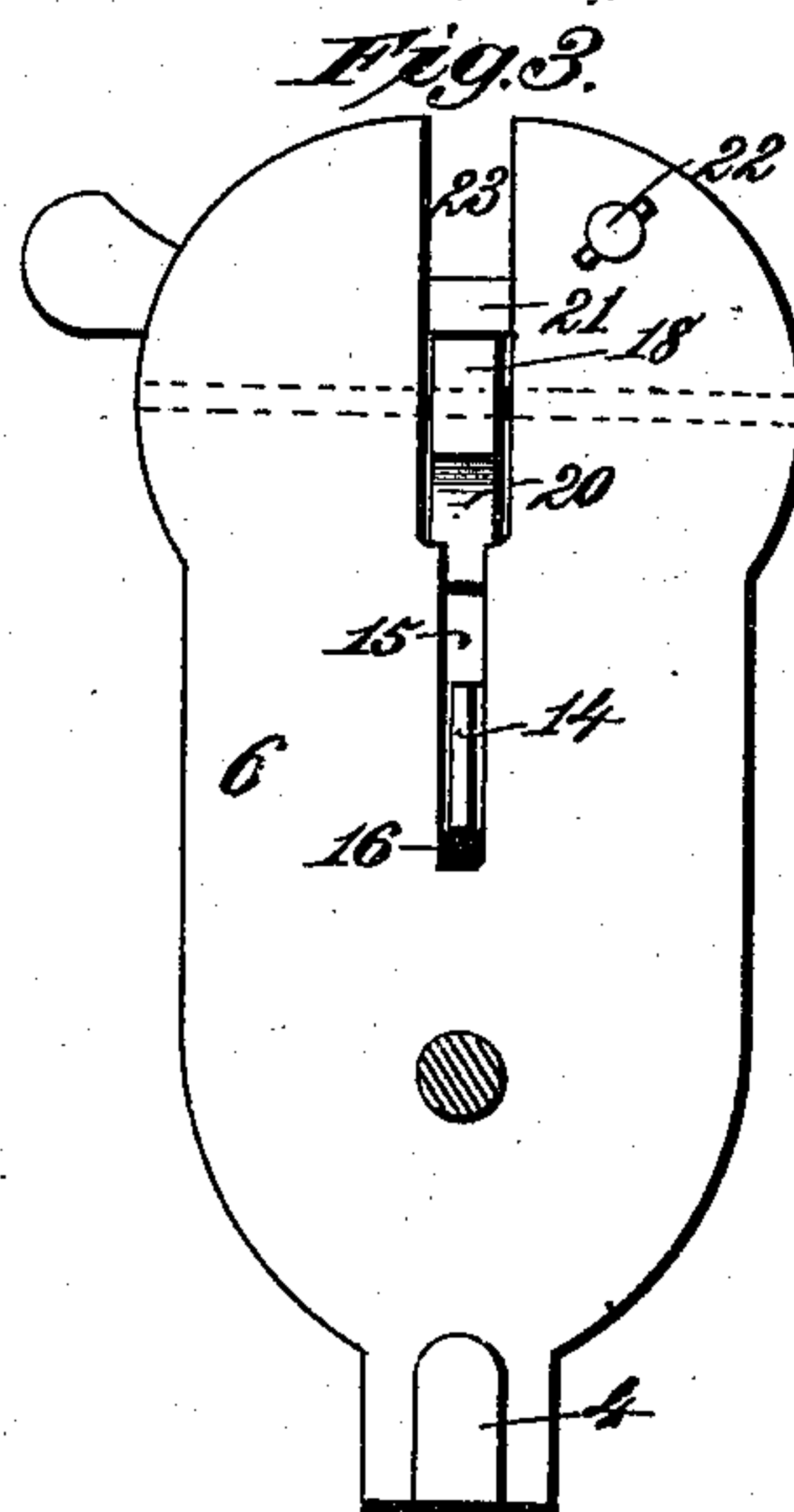
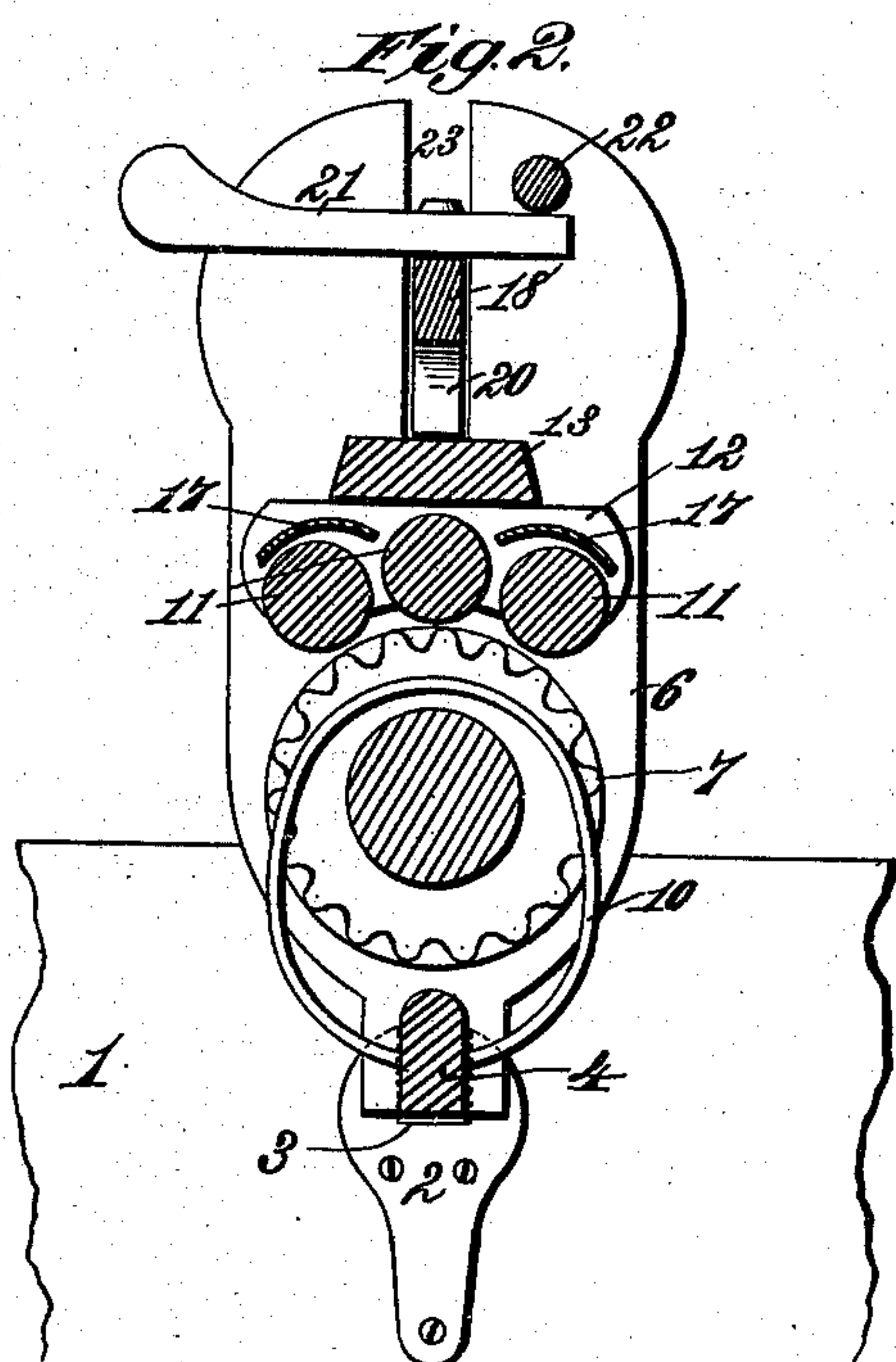
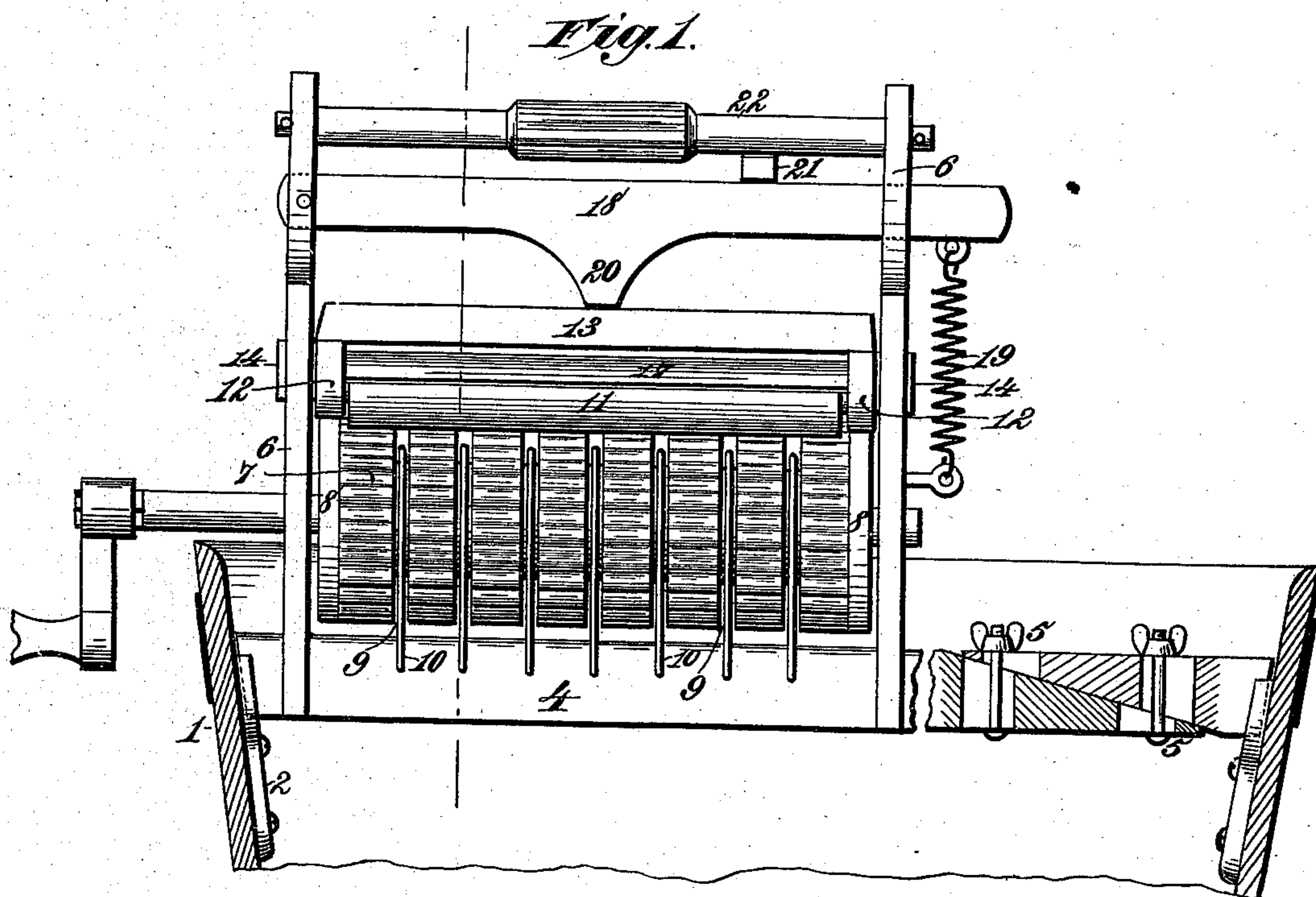


(No Model.)

J. S. BEAZELL.
WASHING MACHINE.

No. 412,587.

Patented Oct. 8, 1889.



Witnesses:
Phet Gratt.
Dennis Sumby.

Inventor.
John S. Beazell.
By *James L. Norris.*
Atty.

UNITED STATES PATENT OFFICE.

JOHN S. BEAZELL, OF SOUTH BETHLEHEM, PENNSYLVANIA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 412,587, dated October 8, 1889.

Application filed December 13, 1888. Serial No. 293,482. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. BEAZELL, a citizen of the United States, residing at South Bethlehem, in the county of Northampton and State of Pennsylvania, have invented new and useful Improvements in Washing-Machines, of which the following is a specification.

This invention relates to improvements in washing-machines of the general construction shown in Letters Patent No. 321,782, granted to me July 7, 1885; and it consists in certain novel features and combinations of parts hereinafter set forth.

In the annexed drawings, illustrating the invention, Figure 1 is a central vertical section of tub, showing the washing mechanism supported therein in side elevation. Fig. 2 is a transverse vertical section of Fig. 1, and Fig. 3 is an end elevation of my improved washing-machine.

The reference-numeral 1 designates the tub, within which are secured vertical cleats or supporting-posts 2, that are provided at their upper ends with recesses or mortises 3 to receive the base-bar 4 of the washer mechanism. This base-bar 4 is made in two parts, having adjacent beveled ends connected by set screws or bolts 5, whereby said bar can be lengthened or shortened to suit the diameter of the tubs.

To the base-bar 4 are secured the end pieces or standards 6, in which the large fluted roller 7 is journaled. This fluted roller 7 is provided with smooth or unfluted end portions 8 adjacent to the standards 6, for the purpose of preventing the clothing in the tub from being carried between said standards and the ends of said roller and from becoming entangled in the roller-journals. The roller 7 is formed with a series of circumferential channels 9, that receive guard rods or wires 10, which are secured to the base-bar 4 and extend over the fluted roller from side to side, as shown in Fig. 2, for the purpose of preventing the clothing from being carried beneath said roller. Above the large fluted roller 7 are arranged two, three, or more smooth-surfaced pressure-rollers 11, which are of comparatively small diameter. These pressure-rollers are journaled in vertically-

movable blocks 12, attached to the under side of a bar 13, and each block is provided with a vertically-flattened tongue 14, that engages a vertical slot 15 in the adjacent standard. In the lower part of each slot 15, as shown in Fig. 3, is placed a rubber bushing or bearing 16 for the tongue to rest on. The object of this rubber or elastic bushing is to lessen the friction of the rollers when the clothes run to either end of the machine, thereby making it noiseless.

In the operation of the machine the clothes will have a tendency to run toward either end of the pressure-rollers 11, thereby slightly moving the latter lengthwise, and with them the blocks 12, causing the tongues 14 to slide to a limited extent through the vertical slots 15. By providing the rubber cushions or bearings 16, on which the tongues rest and can slide, all noise is avoided, which would occur were the tongues to slide upon the wood at the lower ends of the slots.

In order to prevent fringed garments from lapping around the small rollers 11, a concavo-convex covering-strip 17, of wood or metal, is attached to the blocks 12 immediately above each outer roller and in close proximity thereto, as shown in Figs. 1 and 2.

The pressure-rollers 11 are held down with a constant elastic force by means of a lever 18, pivoted to one of the standards 6, and having its opposite end connected to a spiral spring 19, arranged as shown in my above-named former patent, the lever 18 being provided with a lug 20, that rests upon the bar 13, and through it and the blocks 12 communicate the force of the spring to the pressure-rollers.

In order to regulate the pressure between the rollers 7 and 11, a hand-lever 21 is pivoted on top of the lever 18 at a point between the bearing-lug 20 and spring 19, as shown. By turning this hand-lever 21 into a position transverse to the spring-actuated lever 18 one end of the hand-lever will lie just beneath and in bearing contact with a strengthening-bar 22, which connects the upper ends of the standards 6, and downward pressure upon the opposite end of the hand-lever 21 will exert a force upon the lever 18 in addition to the

force of the spring. When not in use, the hand-lever will be turned parallel with the lever 18, to which it is pivoted.

It will be observed that the narrow slots 15 communicate with the wide slots 23, in which the spring-actuated lever 18 is placed, so that by detaching the spring 19 and throwing the pivoted lever 18 to one side the bar 13, with attached blocks 12, tongues 14, and pressure-rollers 11, can be lifted vertically out of engagement with the standards whenever desired.

The peculiar construction of the fluted roller 7, with the smooth end surfaces 8, in connection with the guards 10, yielding pressure-rollers 11, blocks 12, and covering-strips 17, facilitates the movement of the clothing above the fluted roller and beneath the pressure-rollers, which yield at either end as required, and results in effecting a smooth and easy operation of the machine, whereby the clothing is thoroughly cleansed without liability of injury.

What I claim is—

1. The combination of the pressure-rollers 11, the corrugated roller 7, located beneath the pressure-rollers, the standards having vertical slots 15, terminating at their lower ends above the journals of the corrugated roller, the elastic cushions 16, arranged at and supported by the lower ends of the said slots, the horizontal bar 13, having pendent end blocks 12, supporting the pressure-rollers and pro-

vided with horizontally-projecting tongues 14, extending into the slots and resting and adapted to slide on the elastic cushions, substantially as and for the purposes described.

2. The combination of the standards 6, having vertical slots 15, the corrugated roller 7, the pressure-rollers 11, located above and resting upon the uppermost side of the corrugated roller and having supports projecting into the said vertical slots, and the series of concavo-convex strips 17, extending, respectively, over the entire length of the outer pressure-rollers, substantially as described.

3. The combination of the standards 6, having the vertical slots 15, the corrugated roller 7, the pressure-rollers 11, located above and resting upon the uppermost side of the corrugated roller, the horizontal bar 13 above the pressure-rollers, having pendent end blocks 12 supporting the latter and provided with horizontal tongues 14, extending into said vertical slots, and the series of concavo-convex strips 17, supported at their ends by the pendent blocks and extending over the entire length of the outer pressure-rollers, substantially as described.

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

JOHN S. BEAZELL.

Witnesses:

G. P. ROWLEY,
J. W. STERNER.