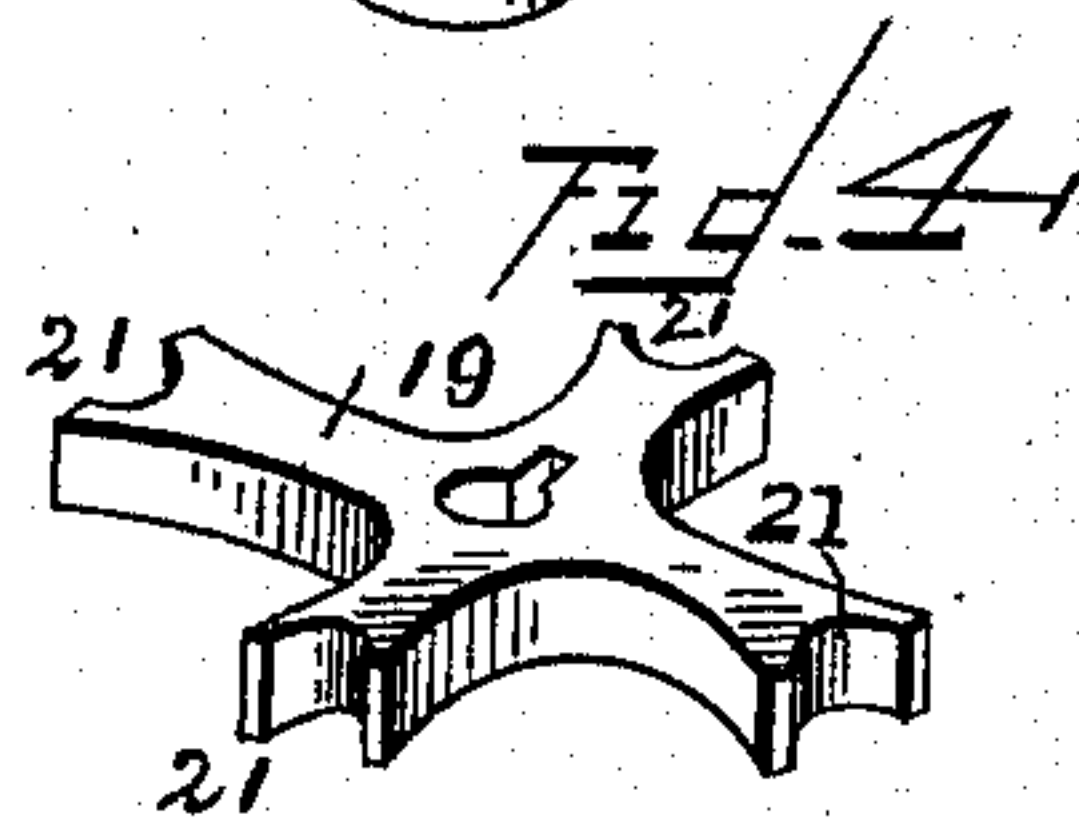
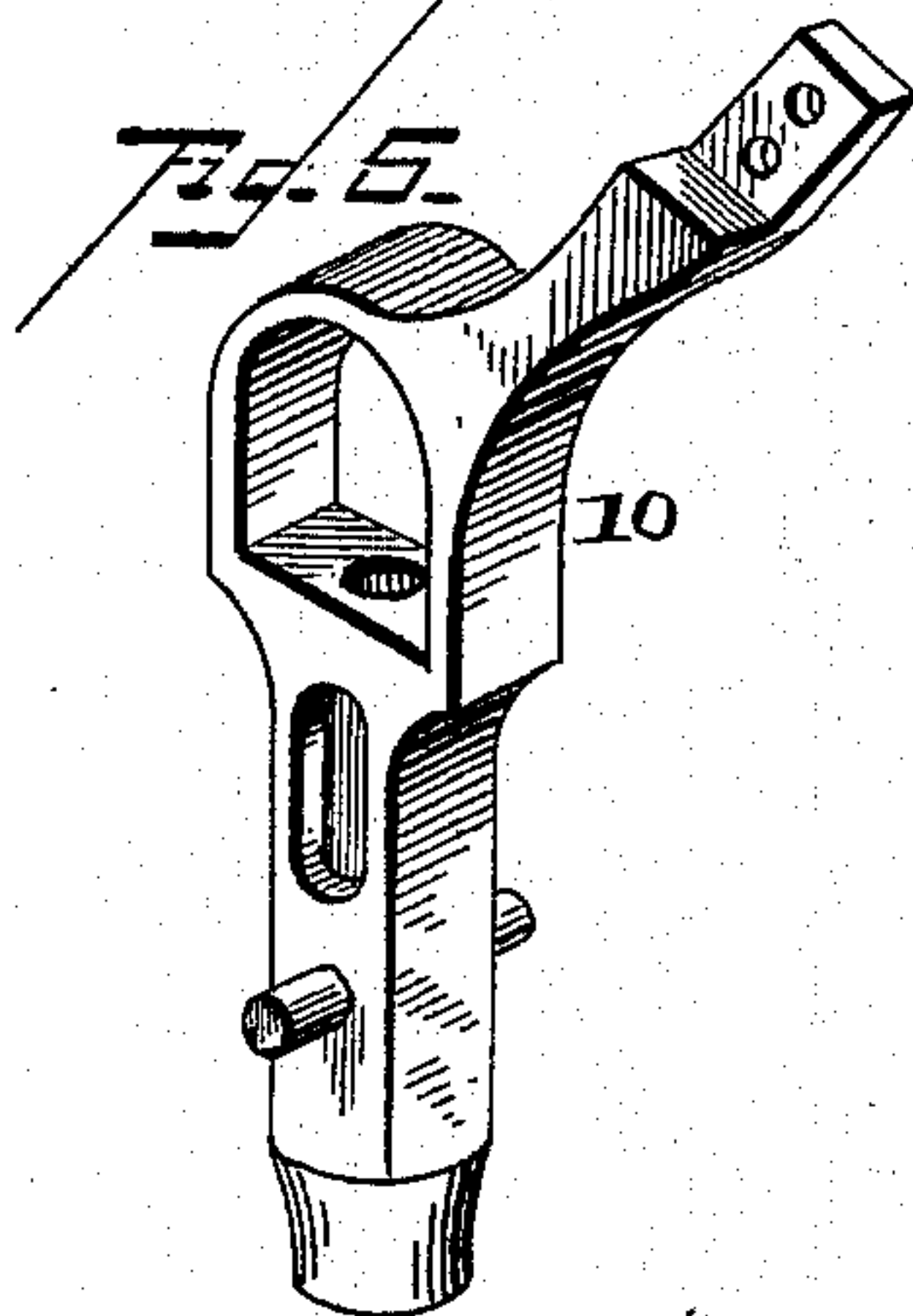
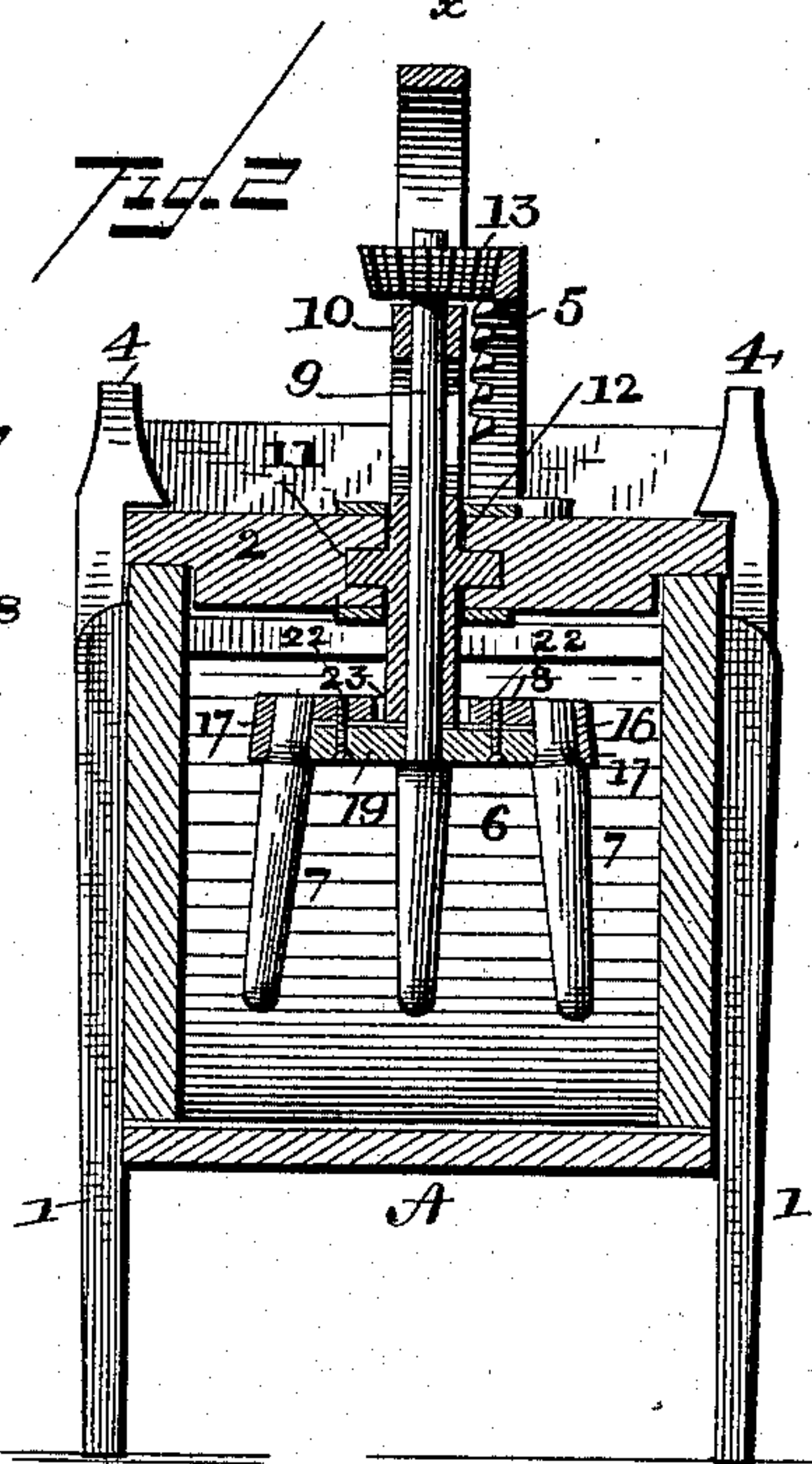
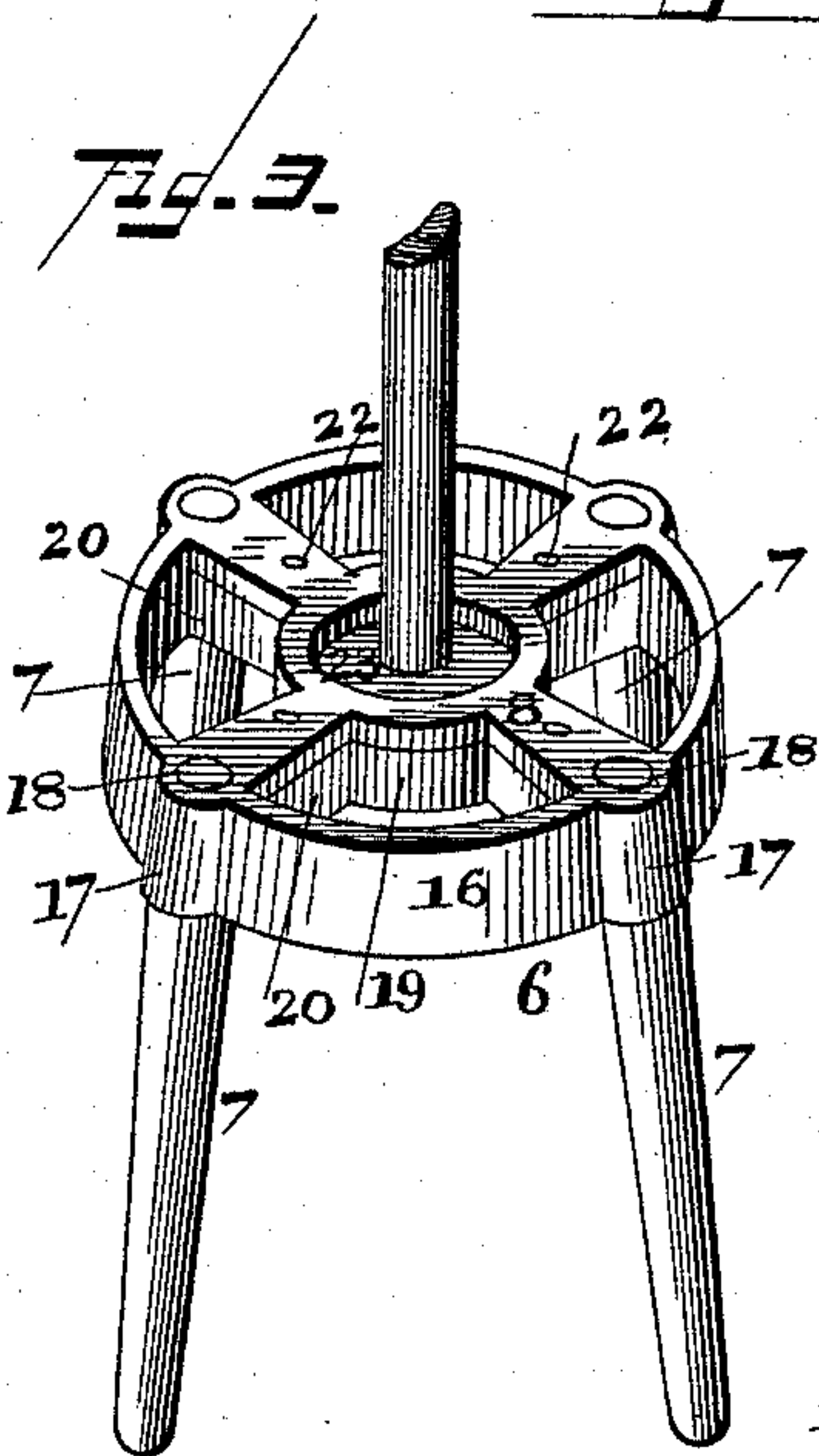
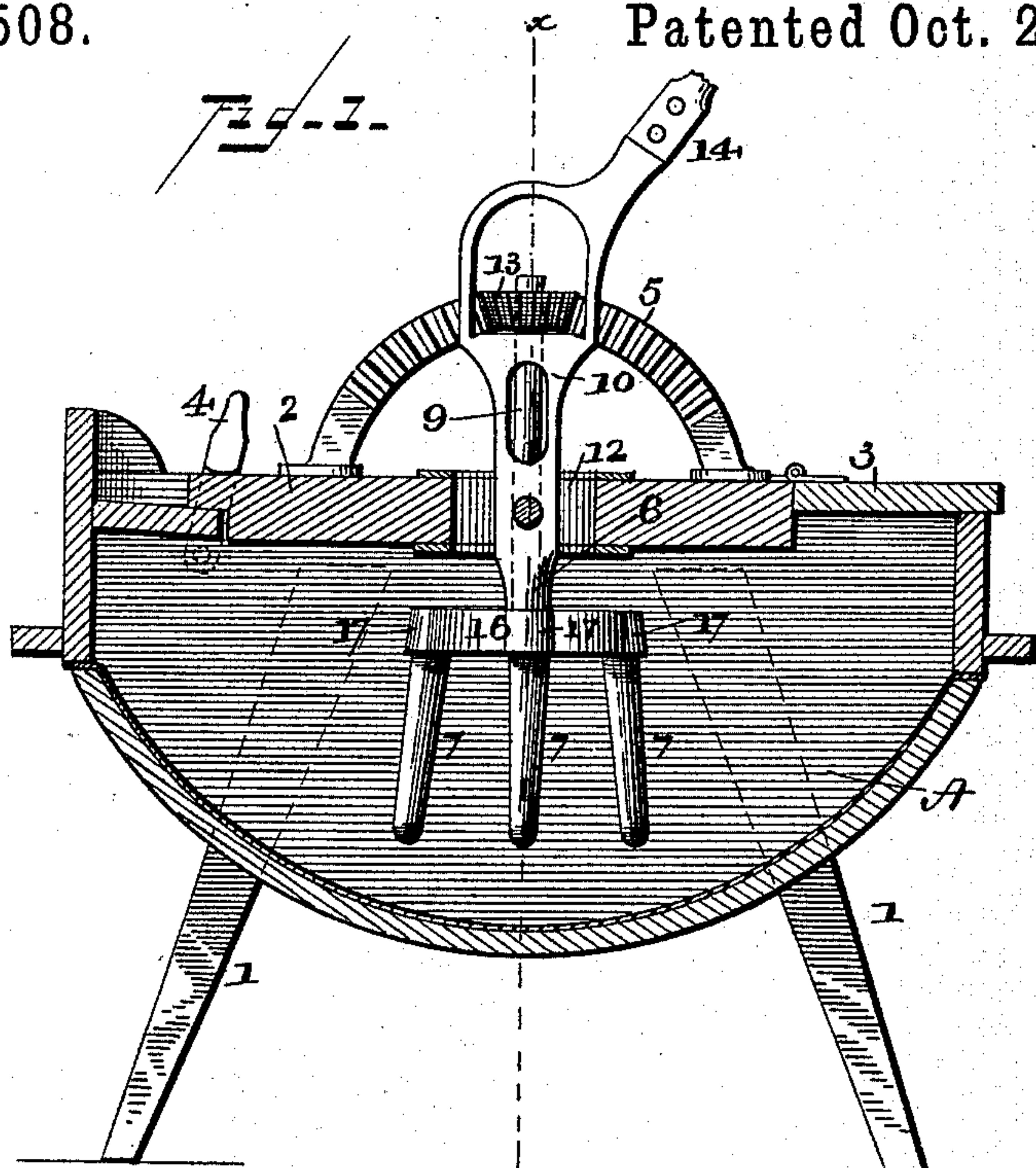


(No Model.)

J. HAUSE.
WASHING MACHINE.

No. 413,508.

Patented Oct. 22, 1889.



WITNESSES
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WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 413,508, dated October 22, 1889.

Application filed March 5, 1889. Serial No. 301,944. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH HAUSE, a citizen of the United States, and a resident of Maugansville, in the county of Washington and State of Maryland, have invented certain new and useful Improvements in Washing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to washing-machines.

The object is to produce a washing-machine which shall be of such construction that it may be operated with facility and ease to cleanse the clothes placed therein, and which shall be simple of construction, efficient and durable in use, and which may be constructed at but a slight expense.

With these objects in view the invention consists in a washing-machine provided with an agitator having a rotary and oscillatory motion, whereby when the device is operated the clothes will be violently agitated, thereby effecting their cleansing in a rapid manner; furthermore, in the novel construction and combination of parts of a washing-machine, as will be hereinafter fully described in the specification, illustrated in the drawings, and pointed out in the claims.

In the accompanying drawings, forming part of this specification, and in which like letters of reference indicate corresponding parts, I have illustrated one form of device embodying the essential features of my invention, although the same may be carried into effect in other ways without in the least departing from the spirit thereof.

In these drawings, Figure 1 is a longitudinal sectional view showing the construction of the device. Fig. 2 is a cross-section taken on the line *xx* of Fig. 1. Fig. 3 is a detail view of the cap to which the legs forming the agitator are secured. Fig. 4 is a detail view of a plate for clamping the legs of the agitator in place; and Fig. 5 is a detail view of the standard in which the shaft carrying the agitator is mounted, showing the peculiar construction of the same.

Referring to the drawings, A designates the tub of the machine, which is made, preferably,

with a curved bottom, as shown. This tub is provided with suitable legs 1 and lid 2, hinged to the top 3 of the tub and held in place against opening, when the machine is operated, by means of cleats 4, pivoted to the side of the tub. Upon the top of the lid is rigidly secured a semicircular rack-plate 5, designed to operate the agitator 6. The legs 7, forming the scrubber, are secured to a cap 8, mounted upon a shaft 9, moving in a vibratory standard 10, which is pivoted in a bearing 11, mounted within an opening 12 in the lid. The upper end of the shaft carries a bevel gear-wheel 13, which meshes with the teeth of the rack-plate 5, so that when the lever 14, secured to the standard 10, is operated the agitator will be caused to revolve first in one direction and then in another as the lever reaches the end of its stroke and is returned to its original position. In addition to the circular or twisting motion imparted to the agitator there is also an oscillatory motion, the two motions being synchronous. Thus the clothes will be violently agitated by a very slow movement of the lever, thereby causing them to be thoroughly cleansed at the expense of a very small amount of labor.

The cap 8, before referred to, in which the legs of the agitator are secured, is constructed with an open-work bottom 15, as shown, or with a solid bottom having an opening in the center for the lower end of the shaft 9 to extend through. The cap is formed with a flange 16, having a plurality of ears 17, which are by preference semicircular in form, as shown, and terminating in openings 18 in the top of the cap. The legs 7 rest in these semicircular ears and project through the openings 18. As will be observed, the legs are secured at a slight slant—that is, they extend outward from the plane of the flange. In order to secure the legs in position against working loose or falling out, a plate or clamp 19 is used, (made in this instance in the shape of a Maltese cross,) the ends of the arms 20 having a semicircular recess 21 cut therein to engage the legs of the agitator in the manner shown. Thus, when the clamp is placed in the position shown in Fig. 2 and the bolts 22 are turned home, the legs will be clamped

firmly in place, and should they work loose from long-continued use it will only be necessary to turn the bolts a little to take up any lost motion and render them firm again.

5 The center of the plate is provided with an opening 23, registering with the opening in the cap, and in this opening the shaft 9 is secured either by a key or by any other equivalent form of fastening device.

10 The many advantages of this form of a washing-machine will readily be seen by the above description. By its peculiar construction a large amount of physical labor will be saved, which will be highly appreciated by
15 those who have heavy goods—such as blankets and quilts—to wash. Moreover, on account of its great simplicity, it will not be liable to get out of order from use.

Having thus fully described my invention,
20 what I claim as new, and desire to secure by Letters Patent, is—

1. In a washing-machine, the combination

of a stationary tub, a standard journaled thereon, a shaft in the standard, and a rotary and oscillatory agitator on the shaft, substantially as described. 25

2. In a washing-machine, the combination of the tub, a vibratory standard journaled thereon, a shaft mounted in the standard carrying at its lower end an agitator and at 30 its upper end a bevel-gear, and a stationary rack-plate secured to the tub and engaging the said bevel-gear, whereby when the standard is operated a rotary and oscillatory motion will be imparted to the agitator, substantially as described. 35

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

JOSEPH HAUSE.

Witnesses:

M. L. MIDDLEKAUFF,
F. SCOTT ZEIGLER.