

D. E. WELLMAN.
WASHING MACHINE.

No. 583.191.

Patented May 25, 1897.

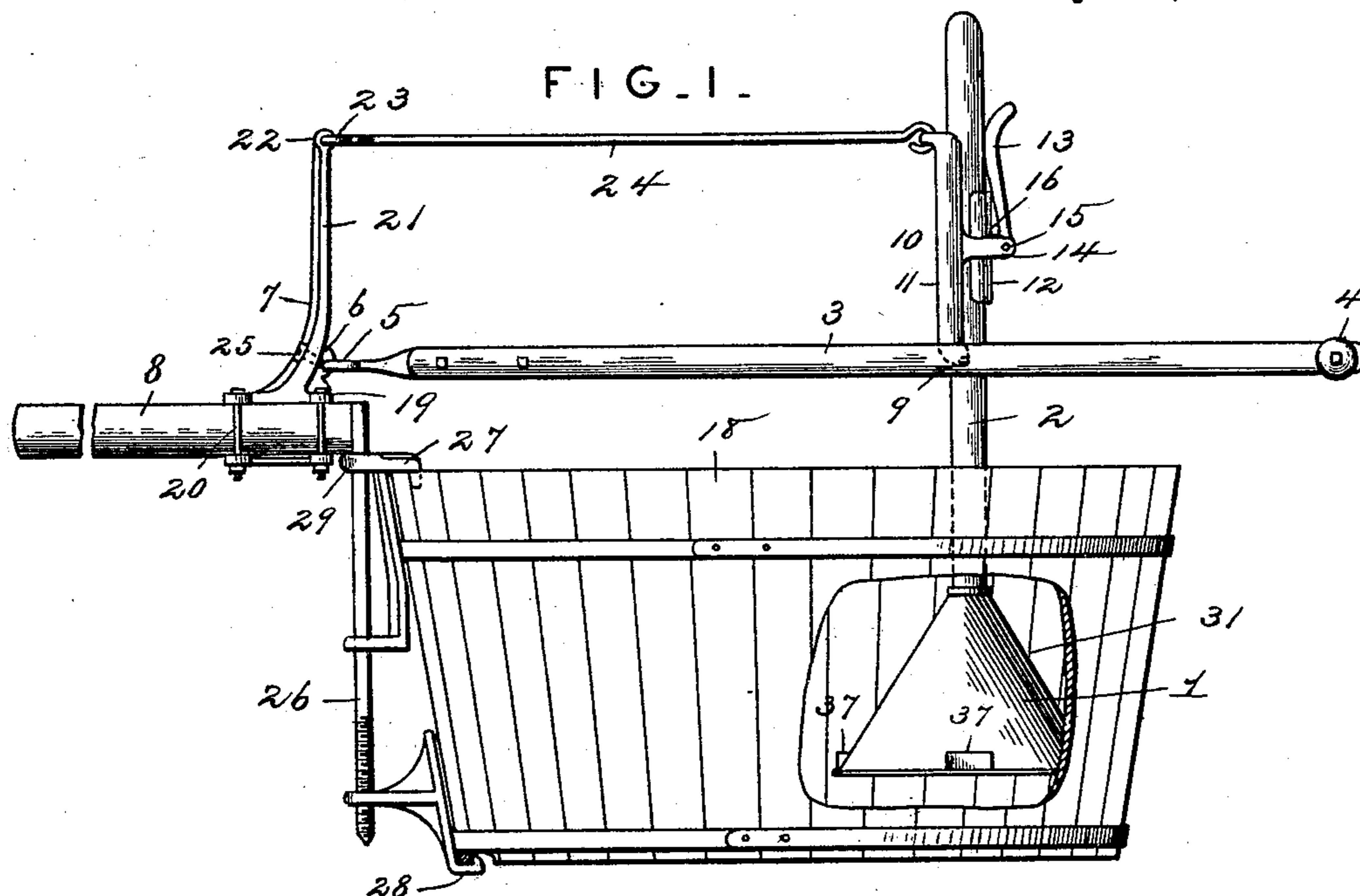
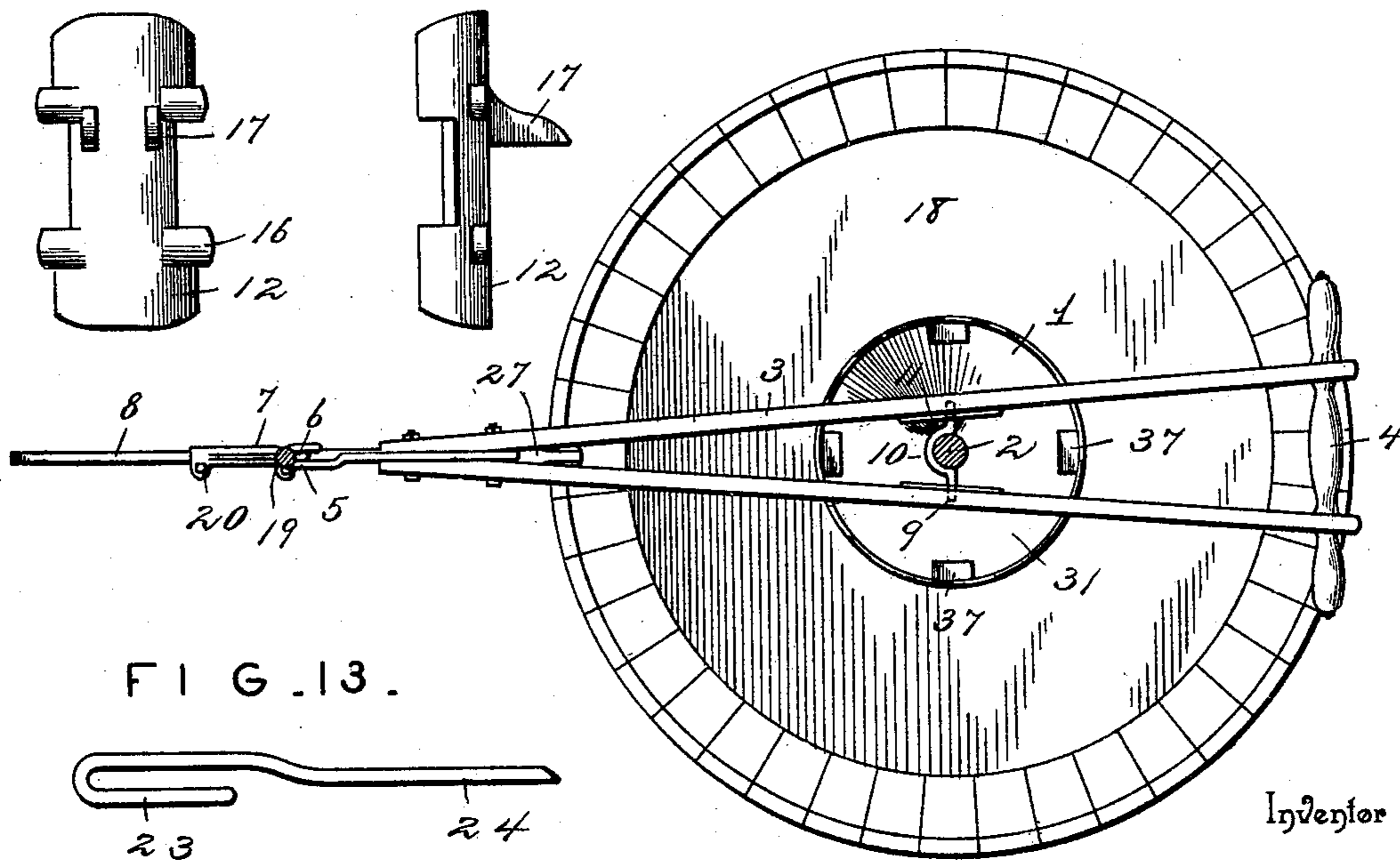


FIG. II.

FIG. 12.

FIG. 2.



Witnesses

Harry L. Ames.
J. F. J. Riley

By His Attorneys,

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C. A. Snow & Co.

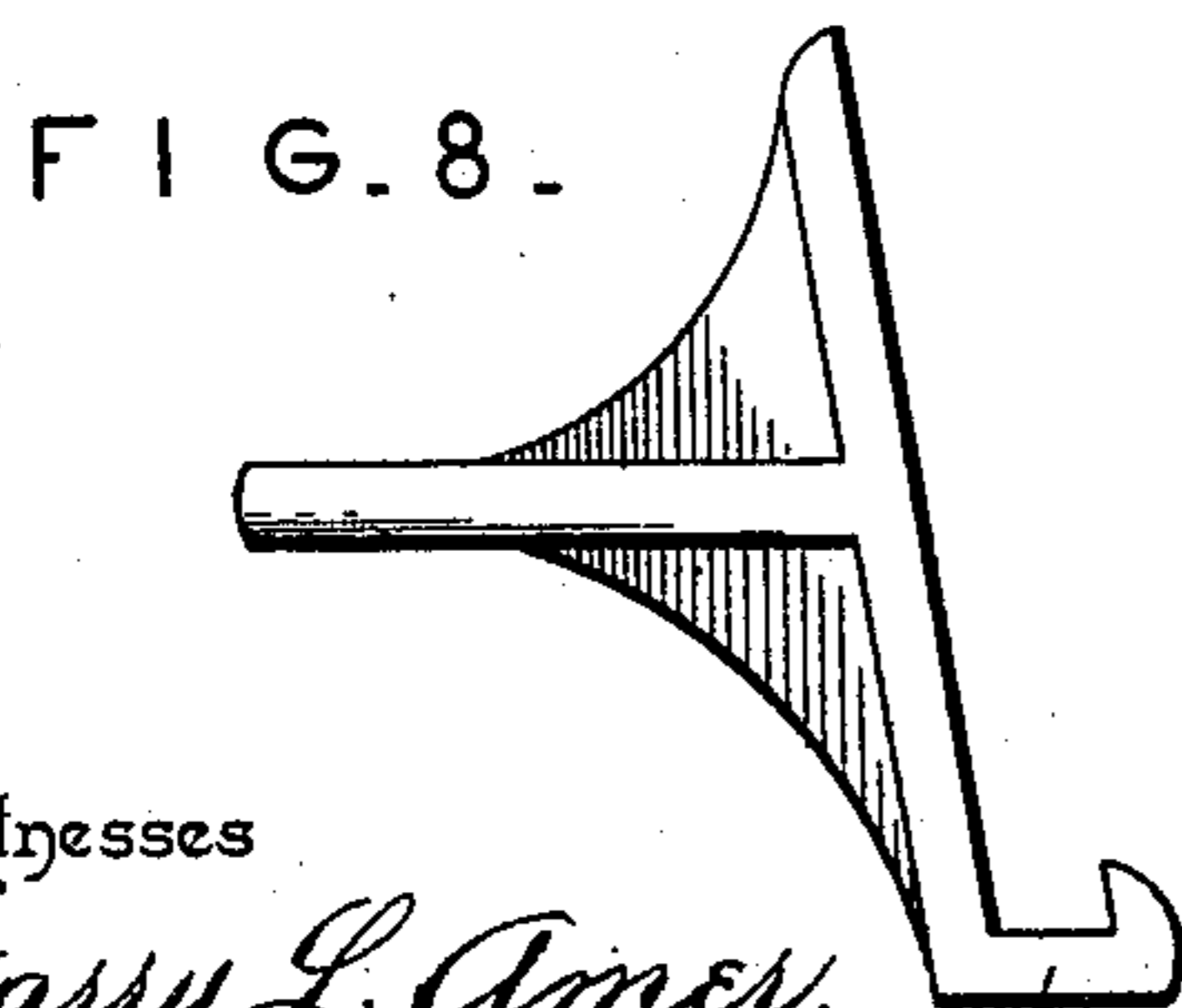
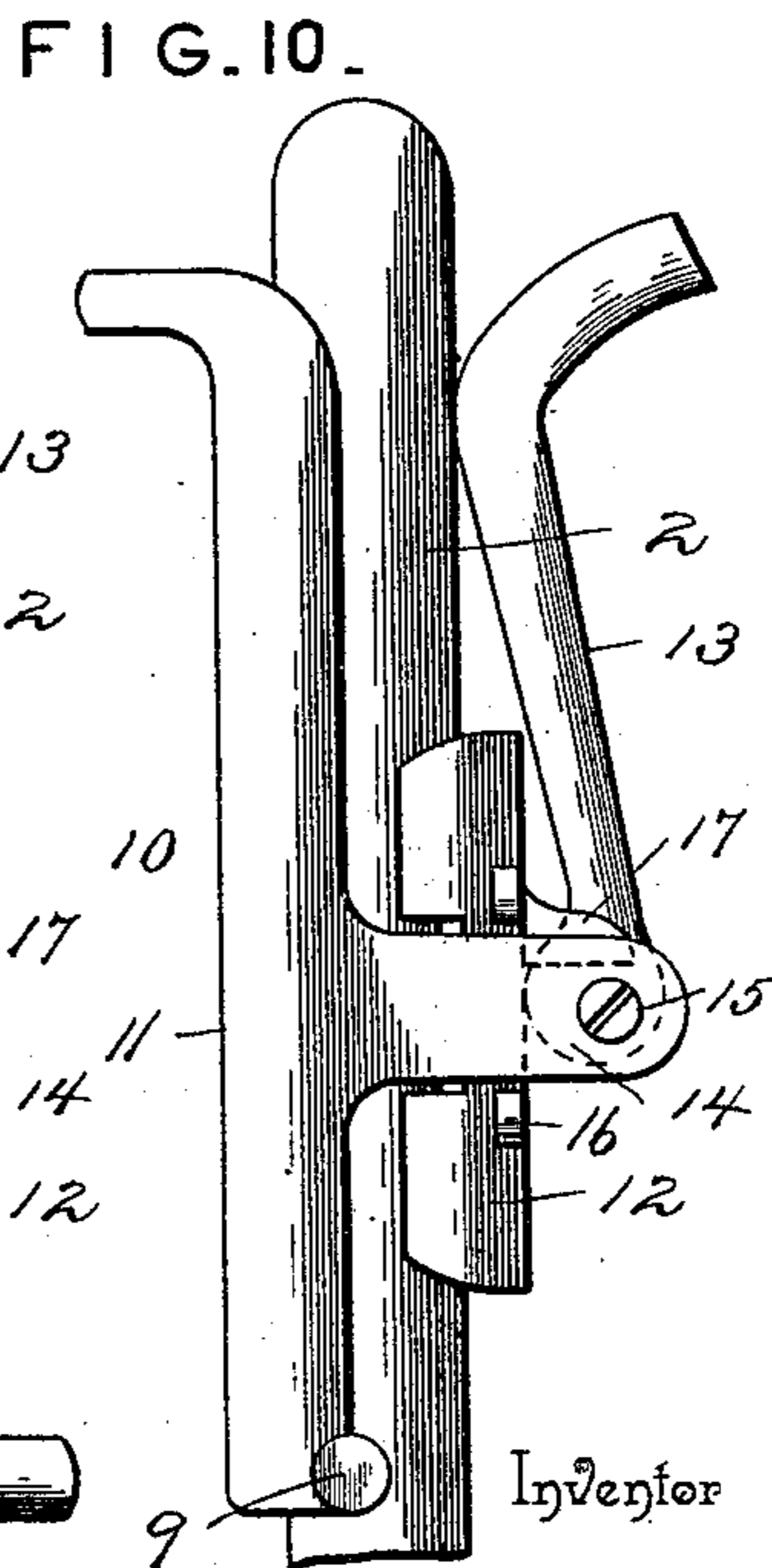
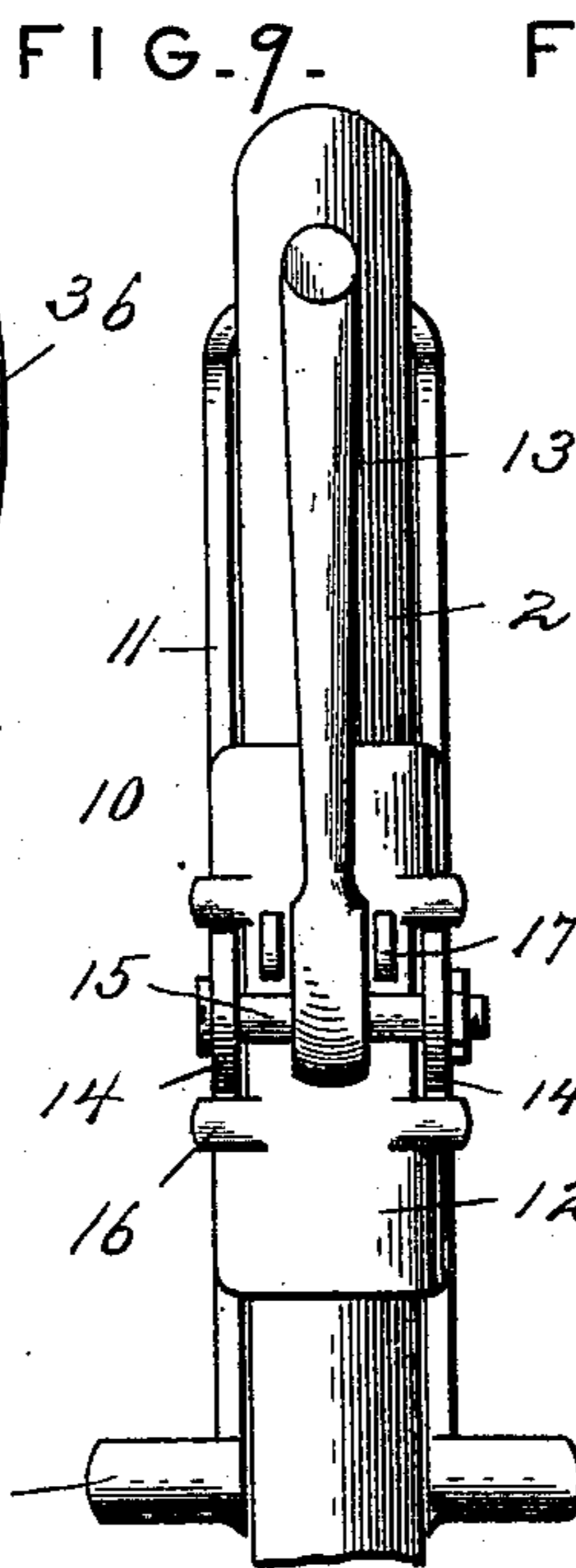
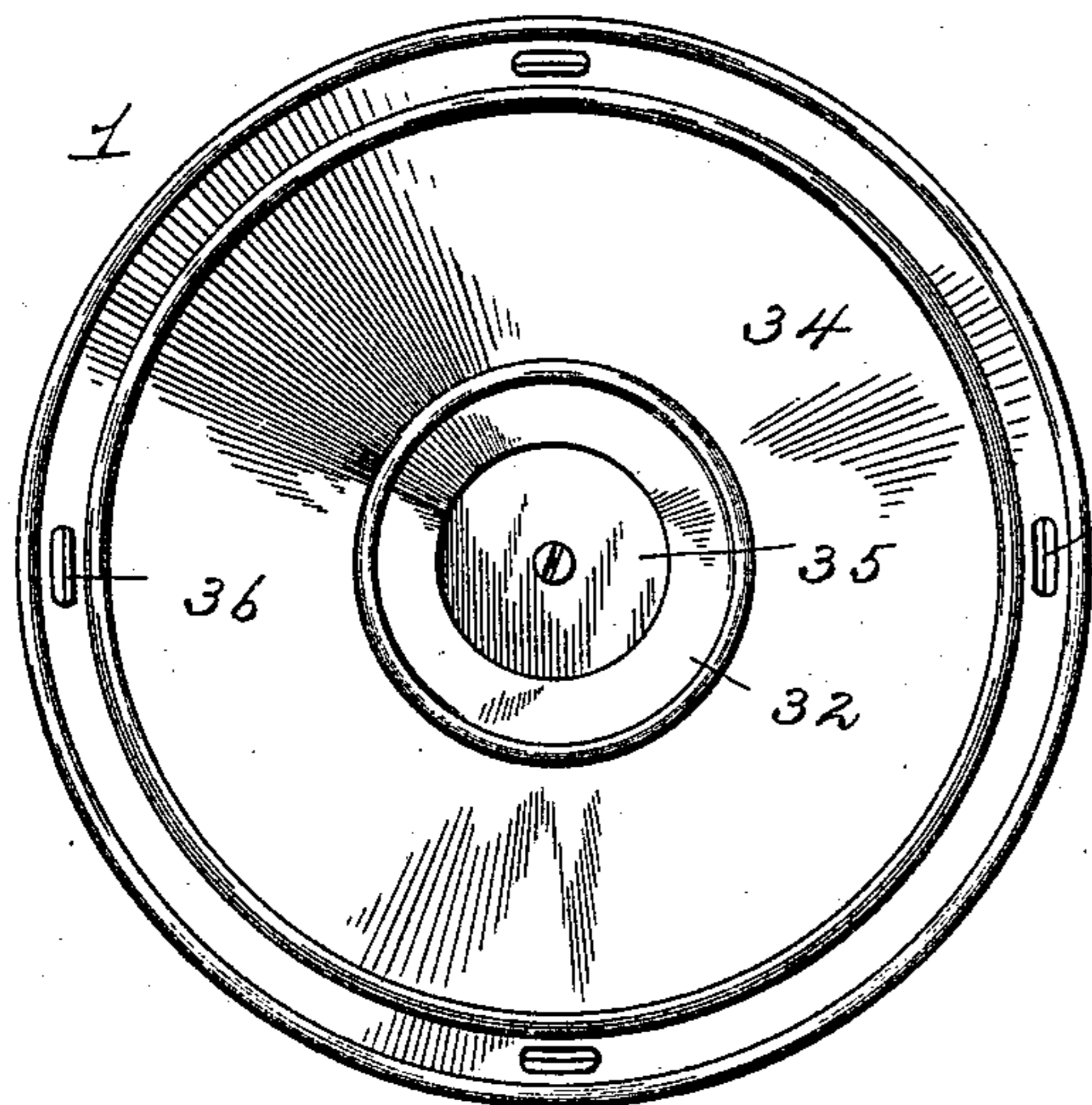
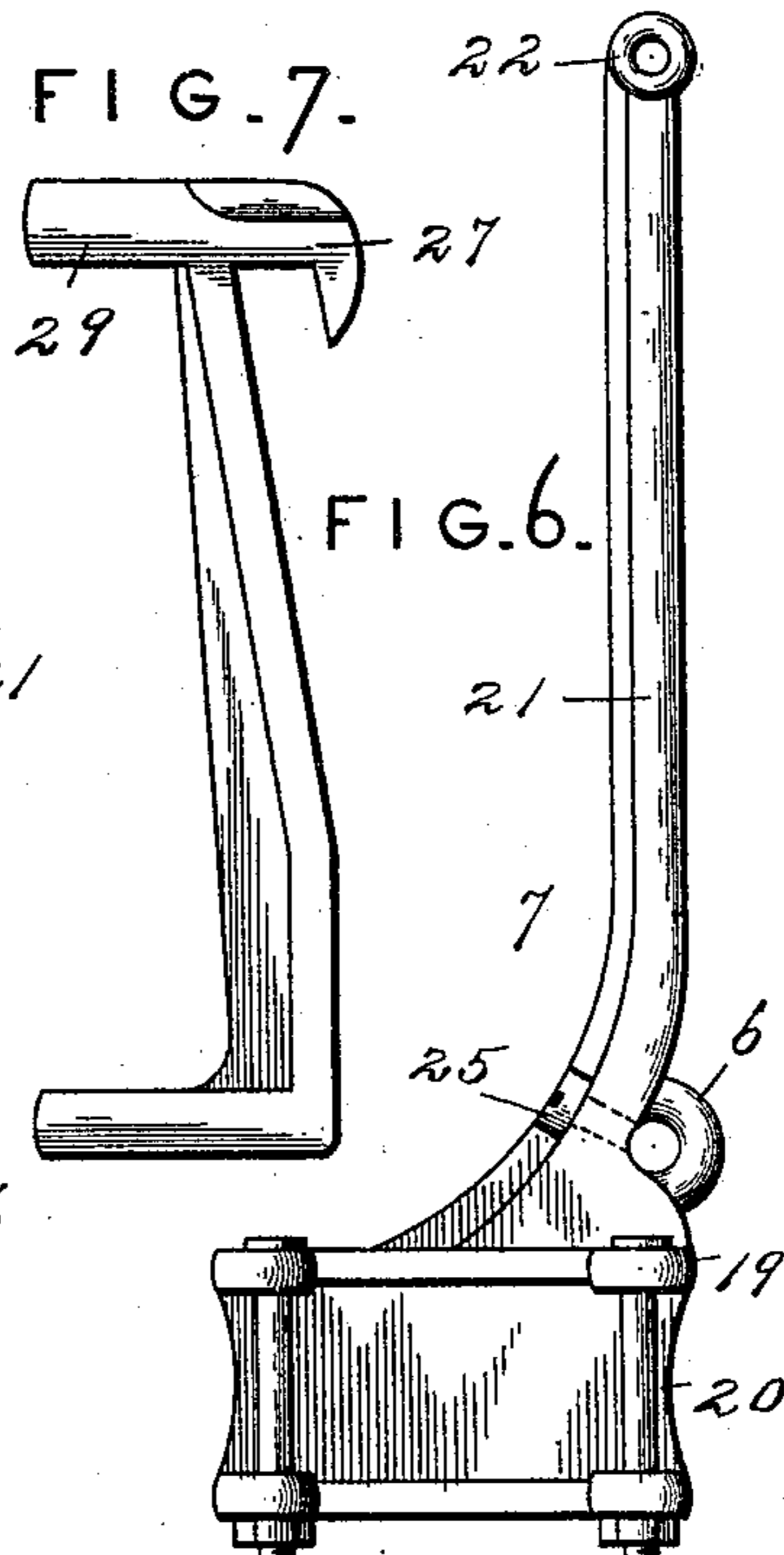
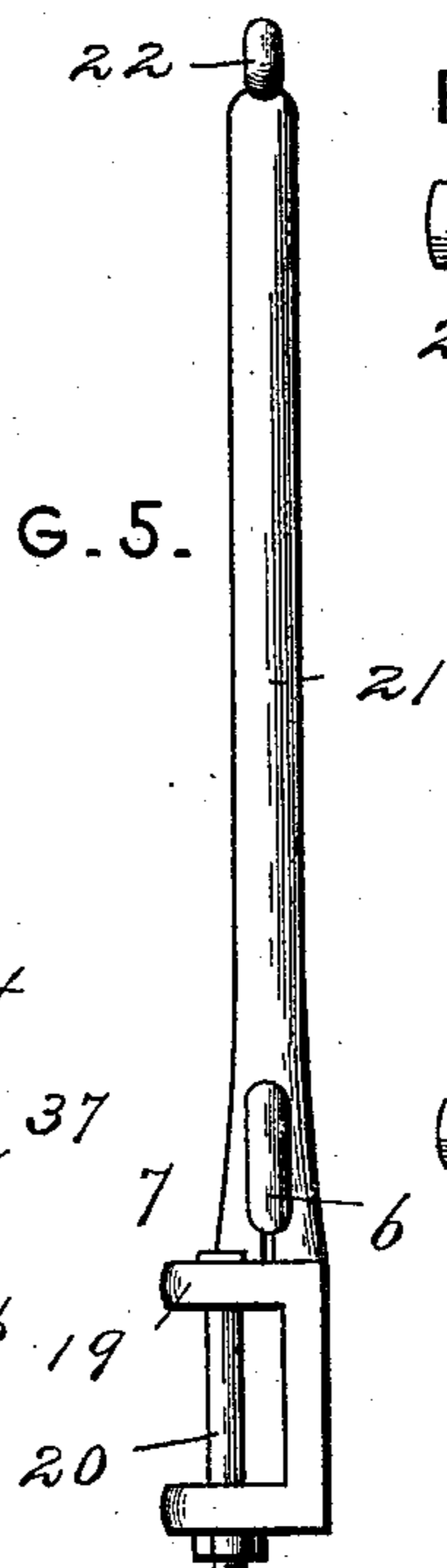
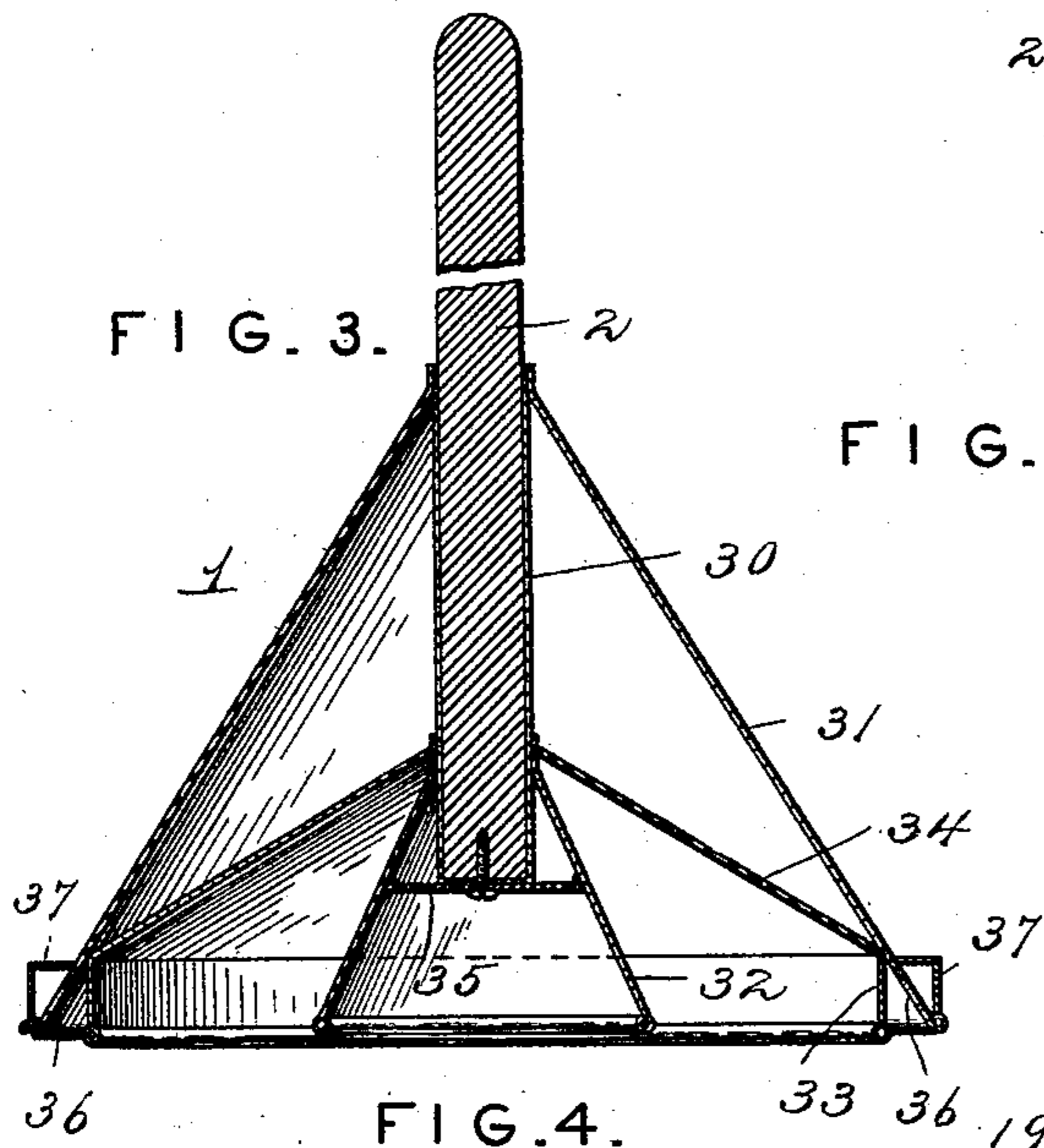
(No Model.)

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UNITED STATES PATENT OFFICE.

DELMER E. WELLMAN, OF DUNDEE, MICHIGAN.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 583,191, dated May 25, 1897.

Application filed January 16, 1896. Serial No. 575,756. (No model.)

To all whom it may concern:

Be it known that I, DELMER E. WELLMAN, a citizen of the United States, residing at Dundee, in the county of Monroe and State of Michigan, have invented a new and useful Washing-Machine, of which the following is a specification.

The invention relates to improvements in washing-machines.

The object of the present invention is to improve the construction of washing-machines and to provide a simple, inexpensive, and efficient one adapted to be readily applied to the ordinary washtub and capable of rapidly and thoroughly washing clothes without wearing, tearing, or otherwise injuring the fabrics.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a side elevation of a washing-machine constructed in accordance with this invention and shown applied to a tub, the latter being partly broken away to show the clothes-pounder. Fig. 2 is a horizontal sectional view. Fig. 3 is a vertical sectional view of the clothes-pounder. Fig. 4 is a reverse plan view of the same. Figs. 5 and 6 are detail views illustrating the construction of the slide. Figs. 7 and 8 are detail views illustrating the construction of the upper and lower clamping-jaws. Figs. 9 and 10 are detail views illustrating the construction of the clamp for securing the plunger-rod in its adjustment. Figs. 11 and 12 are detail views illustrating the construction of one of the members of the plunger-rod clamp. Fig. 13 is a detail view of the rear end of the connecting-rod.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a plunger or clothes-pounder mounted on a plunger-rod 2 and carried by a substantially horizontally disposed operating-lever 3, arranged to oscillate or swing vertically to reciprocate the clothes-pounder or plunger. The operating-lever is provided at

its front end with a transverse handle-bar, and it has at its rear end a hook or open eye 5, which is linked into an eye or opening 6 of a slide 7, which is mounted on a horizontally-disposed guide-bar 8 and is adapted to reciprocate thereon to carry the clothes-pounder or plunger to any desired position in the tub, in order that the operator may exert equal pressure on all of the clothes being washed. The operating-lever is composed of two rearwardly-converging side bars, and it receives the plunger-rod between them, and it is provided at the inner faces of its side bars with bearings receiving pivots or journals 9 of an adjustable clamp 10, which secures the plunger-rod to the operating-lever.

The plunger-rod is round, and the adjustable clamp 10 is composed of two substantially semicylindrical plates or members 11 and 12, and a cam-lever 13 is fulcrumed on the plate or member 11 and adapted to force the other plate or member 12 into engagement with the plunger-rod. The plate or member 11 is provided with oppositely-disposed arms 14, perforated for the reception of a horizontal pivot 15, on which the cam-lever is fulcrumed, and the plate or member 12 is provided above and below the arms 14 with laterally-disposed lugs 16, which prevent any longitudinal movement of the plate or member 12 independent of the other plate or member. The plate or member 12 is also provided with a pair of lugs 17, disposed at opposite sides of the head of the cam-lever, and the latter is adapted to be swung upward against the plunger-rod to carry its cam-head into engagement with the plate or member 12. The lugs 16 prevent the plate or member 12 from slipping upward or downward, and the lugs 17 keep the section from slipping around the stem of the pounder, and these lugs retain the plate or member 12 in proper position relative to the other plate or member 11 when the clamp is locked and unlocked. When the lever is swung outward and downward, the plates or members are released, and the plunger-rod may be adjusted vertically to arrange the clothes-pounder or plunger in proper relation to the operating-lever and the tub. The plate or member 11

is provided at its lower end with the said journals or pivots 9.

The guide-bar 8, which is disposed horizontally, extends rearward from a tub 18 during the operation of washing, and the slide is provided with horizontally-disposed arms 19, arranged in pairs located above and below the guide-bar and retained thereon by vertical fastening devices 20, located at one side of the guide-bar. The fastening devices 20 preferably consist of bolts, which detachably secure the slide to the guide-bar. The slide is provided with a vertical arm or post 21, provided at its top with an eye 22, receiving the open eye or hook 23 of a connecting-rod 24, which extends from the top of the post to the top of the clamp 10, the member or plate 11 being provided at its top with an eye linked into an eye of the adjacent end of the connecting-rod and forming a hinge-joint. The hooks 5 and 23 are laterally offset, as shown, and the shank of the former is secured between the inner or rear ends of the sides of the operating-lever. These hooks provide a hinge-joint and enable the plunger or clothes-pounder to be readily detached when desired, and during the operation of the machine the plunger-rod is maintained in a perpendicular position. The hook of the operating-lever is locked in the eye of the slide by a set-screw 25.

A vertical screw 26 is fixed to the inner end of the guide-bar. It operates as a pivot for the same to enable the guide-bar, after the operation of washing has been completed, to be swung inward over the tub in order to be out of the way, and it also adjustably connects upper and lower clamping-jaws 27 and 28 and holds them in engagement with the tub. Each clamping-jaw consists of a hook adapted to engage the edge of the tub and a substantially L-shaped arm bearing against the exterior of the tub. The upper clamping-jaw is provided in the outwardly-extending portion of its L-shaped arm with a smooth perforation, and the other clamping-jaw is provided at a corresponding point with a threaded perforation which is engaged by the screw. The upper clamping jaw or member is also provided at its top with a rearwardly-extending projection 29, perforated for the reception of the screw and forming support for the inner end of the guide-bar. The vertical screw 26 enables the clamping-jaws 27 and 28 to be adjusted to suit any washtub, and the washing-machine may be readily applied to the same.

The clothes-pounder or plunger is provided with a central tube 30 for the reception of the lower end of the plunger-rod, and it comprises an outer cone 31, an inner cone 32, and a vertical band or flange 33, arranged at the inner face of the outer cone and supported by a conical brace 34. A horizontal plate or diaphragm 35 is mounted within the inner cone

and supports the vertical tube 30, the lower end of the plunger-rod being secured to the same by a screw or other suitable fastening device passing through the center of the horizontal plate 35. The lower portion of the outer cone and the vertical band or flange 33 form an annular gutter at the periphery of the clothes-pounder, openings 36 being provided in the outer wall of the gutter for the escape of air. The cone 31, which forms the outer wall of the gutter, has mounted on it caps 37, substantially L-shaped and covering the openings 36 and preventing any water from being thrown outward from the openings 36 beyond the clothes-pounder. The caps 37 have horizontal portions arranged above the openings 36 and vertical portions arranged in front of the openings 36, and the sides of the caps are open. On the downstroke of the clothes-pounder water and air are forced through the clothes, removing the dirt and stains, and on the upstroke of the clothes-pounder a reverse operation takes place, caused by the water being drawn upward. The air in the lower portion of the clothes-pounder is displaced by the water and clothes on the downstroke, and the water is consequently lifted on the upstroke, producing the above result.

It will be seen that the washing-machine is simple and comparatively inexpensive in construction, that it may be readily applied to any ordinary washtub, and that it is capable of thoroughly and readily washing clothes without wearing, tearing, or otherwise injuring the fabrics. It will also be seen that the clothes-pounder may be readily transferred from one portion of a tub to another to operate uniformly on all of the clothes, and that after the operation of washing has been wholly or partially completed the plunger may be supported on the edge of the tub for the purpose of draining or for enabling a wringer to be conveniently used.

Changes in the form, proportion, and minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of the invention.

What I claim is—

1. In a washing-machine, the combination of upper and lower clamping-jaws adapted to engage a tub at the top and bottom thereof, a vertical screw adjustably connecting the clamping-jaws, a horizontal guide-bar fixed to the screw and pivoted by the same, whereby it is adapted to be swung inward over a tub, a slide, and a clothes-pounder or plunger connected with the slide, substantially as and for the purpose described.

2. In a washing-machine, the combination of the upper and lower clamping-jaws consisting of hook-shaped engaging portions and substantially L-shaped arms, the upper clamp being provided at its top with a projection, a horizontal guide-bar, a screw fixed to the guide-

bar and passing through the arms of the
clamping-jaws and also the projection of the
upper clamping-jaws adjustably connecting
the jaws and forming a pivot for the guide-
5 bar, a slide mounted on the guide-bar, and a
clothes-pounder or plunger connected with
the slide, substantially as described.

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

DELMER E. WELLMAN.

Witnesses:

R. V. LAREY,
DANIEL SMITH.