

No. 633,178.

Patented Sept. 19, 1899.

A. J., J. B. & W. D. ZIEGLER.

WASHING MACHINE.

(Application filed May 25, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 4.

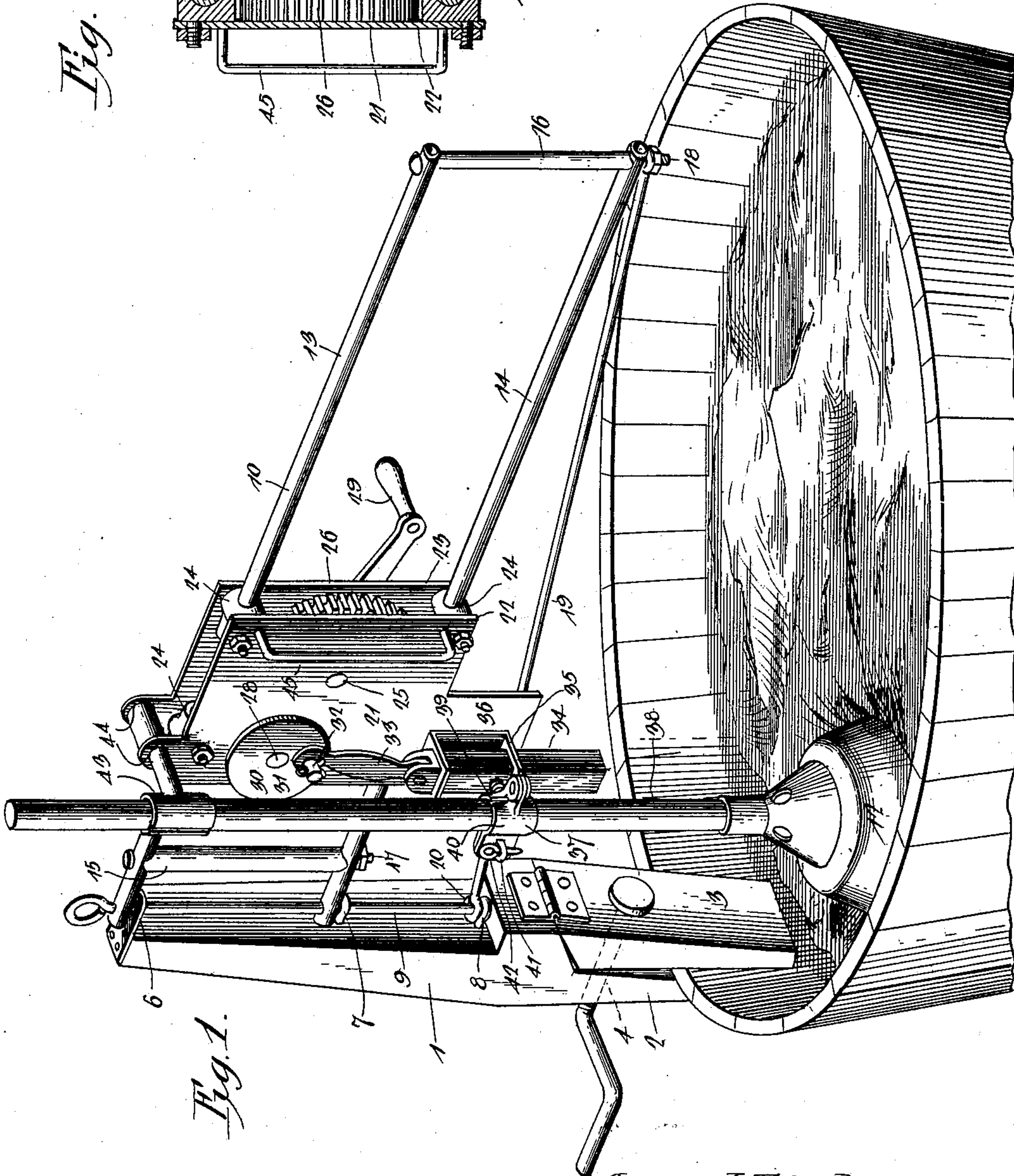
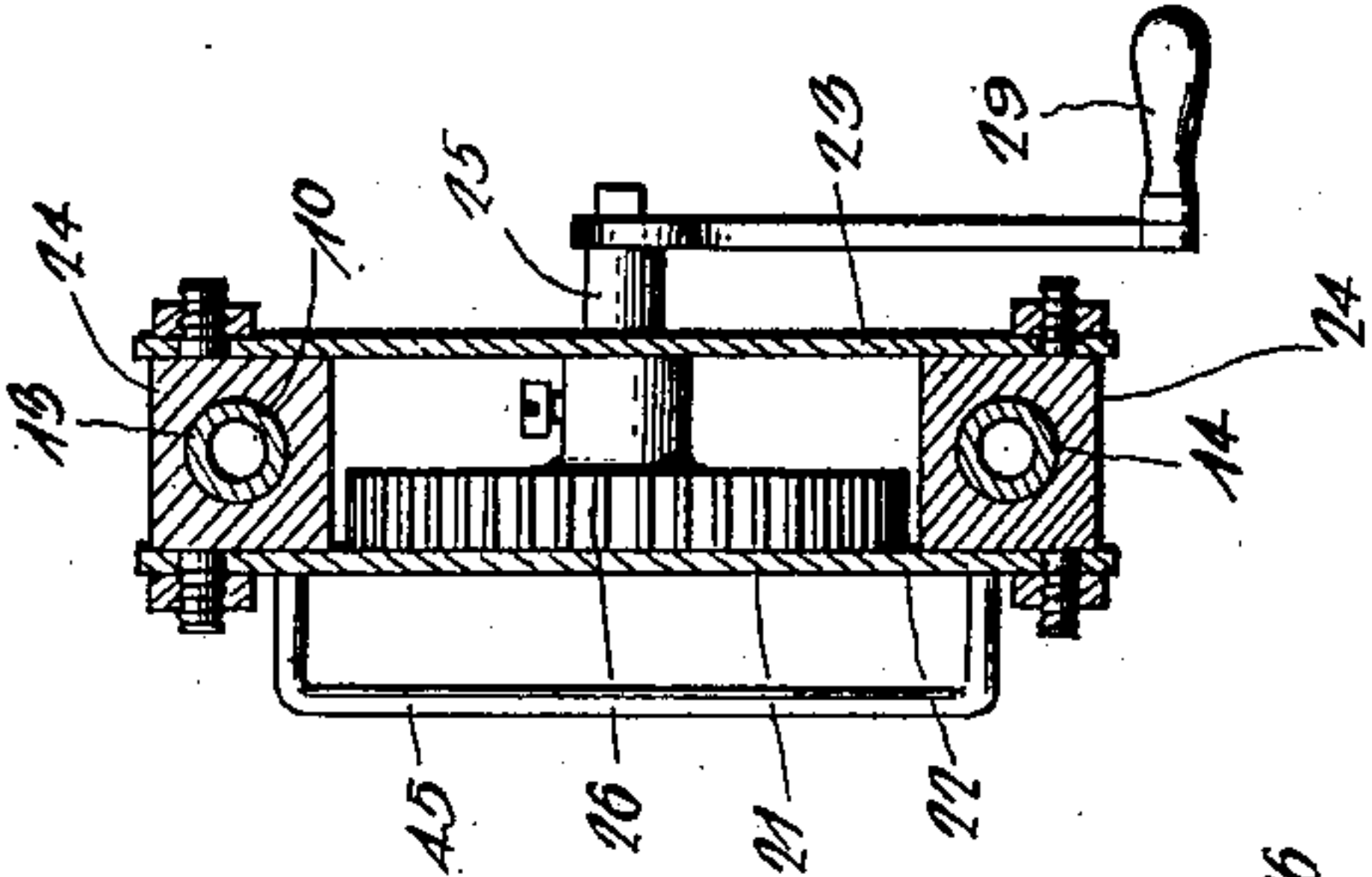


Fig. 1.

Witnesses
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By their Attorneys, Jacob B. Ziegler & Co.
William D. Ziegler.
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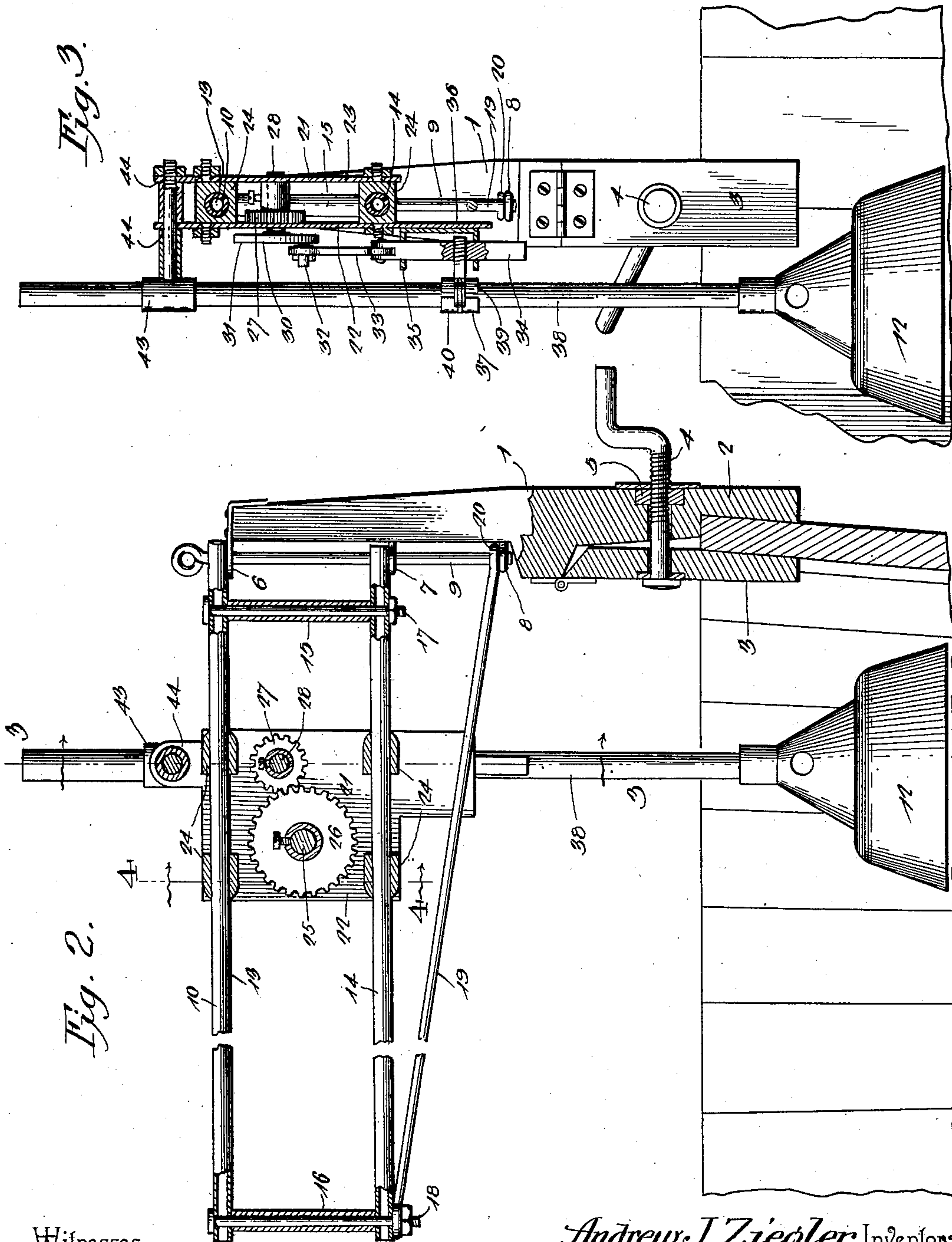
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2 Sheets—Sheet 2.



Witnesses

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UNITED STATES PATENT OFFICE.

ANDREW J. ZIEGLER, JACOB B. ZIEGLER, AND WILLIAM D. ZIEGLER, OF
HAZLETON, PENNSYLVANIA.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 633,178, dated September 19, 1899.

Application filed May 25, 1899. Serial No. 718,204. (No model.)

To all whom it may concern:

Be it known that we, ANDREW J. ZIEGLER, JACOB B. ZIEGLER, and WILLIAM D. ZIEGLER, citizens of the United States, residing at Hazleton, in the county of Luzerne and State of Pennsylvania, 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 device possessing great strength and durability and adapted to be readily mounted on a washtub or analogous receptacle and capable of vertically reciprocating a clothes-pounder and of enabling the same to be readily moved to any point over the bottom of the tub, so that the entire contents of the same may be operated on to the desired extent.

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 perspective view of a washing-machine constructed in accordance with this invention. Fig. 2 is a vertical longitudinal sectional view of the same. Fig. 3 is a transverse sectional view on line 3 3 of Fig. 2. Fig. 4 is a detail sectional view on line 4 4 of Fig. 2.

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

1 designates a standard designed to be mounted on a tub or analogous receptacle and provided at its lower end with a rigid jaw 2, which coöperates with a hinged jaw 3, and the latter is connected with an adjusting-screw 4, extending through the jaws and provided at its outer end with a crank-handle, by means of which it is operated. The adjusting-screw, which is preferably swiveled at its inner end to the hinged jaw 3, engages a nut 5 of the stationary jaw 2 at a point above the engaging portions of the jaws; but any other suitable clamping device may be

employed for mounting the standard upon the tub or other suds-receptacle.

The standard 1 is provided with eyes 6, 7, and 8, receiving a pintle-rod 9, which hinges a swinging frame 10 to the standard, and the said swinging frame, which is disposed horizontally, is adapted to oscillate to carry a pounder 12 to different portions of the tub. The swinging frame, which may be constructed in any suitable manner, is preferably composed of upper and lower tubular guide-bars 13 and 14 and vertical connecting-bars 15 and 16, arranged at a point near the inner ends of the top and bottom bars of the frame and at the outer terminals thereof. The vertical connecting-bars are tubular and have their ends recessed to form seats for the upper and lower bars, and they are secured to the same by vertical rods or bolts 17 and 18, extending through the tubes 15 and 16 and provided at their lower ends with nuts. The frame is further supported by an inclined bracing-rod 19, extending from the outer end of it to the lower eye 8 and provided at that point with an eye 20 to receive the vertical pintle-rod.

A sliding casing 21 is mounted on the horizontally-swinging frame and is adapted to move longitudinally thereof, and it is composed of side plates 22 and 23, secured to horizontal sleeves 24, receiving the upper and lower bars of the horizontal frame and adapted to slide thereon. The sleeves 24, which are located at the corners of the casing, are horizontally aligned and have the plates 22 and 23 detachably secured to them, preferably by means of threaded studs and nuts, so that either of the plates may be removed when it is desired to obtain access to the gearing, hereinafter described, for vertically reciprocating the clothes-pounder. The casing is provided with bearings for a shaft 25, upon which is mounted a gear-wheel 26, which meshes with a pinion 27 of a counter-shaft 28. The shaft 25 is extended beyond one side of the frame and is squared to receive a crank-handle 29, and the counter-shaft 28 is extended from the opposite side of the casing and carries a crank 30. The crank-handle is adapted to be rotated, and as the gear-wheel is of greater diameter than the pinion the

crank 30 will be rapidly rotated. The gear-wheels are preferably secured to the shafts by set-screws or other suitable fastening devices; but, if desired, they may be provided with extended journals or hub portions instead of being mounted on separate shafts.

The crank 30, which actuates the clothes-pounder, consists of a disk 31 and an eccentrically-arranged wrist-pin 32, which is connected by a pitman 33 with a vertically-reciprocating bar 34. The vertically-reciprocating bar 34, which has its upper end bifurcated to receive the lower end of the pitman, is mounted in horizontal arms of a bracket 35, secured to an extension 36 of the adjacent side plate 22, and provided in its arms with rectangular openings conforming to the configuration of the vertically-reciprocating bar, which may, if desired, be any shape in cross-section. The vertically-reciprocating bar carries at a point between the horizontal guide-arms of the bracket 35 a sectional clamp 37, which is adapted to engage a stem or rod 38 of the clothes-pounder 12 and which permits the same to be adjusted vertically to suit the depth of the tub and the contents thereof. The sectional clamp, which is provided with a threaded shank to engage the threaded perforation of the reciprocating bar, is preferably composed of a rigid inner section 39 and a hinged outer section 40. The free end of the hinged section is slotted to receive a projecting loop or staple 41 and is secured in its closed position by a key 42. The upper portion of the rod or stem 38 is supported by a guide 43, consisting of a sleeve having a horizontal arm secured by a nut in suitable eyes 44 of the top of the casing.

The sliding casing, which supports the clothes-pounder and which is adapted to move inward and outward longitudinally of the horizontally-swinging frame, is provided at the side opposite the crank-handle with a vertical handle or grip 45 to enable the sliding casing or support to be readily moved along the frame. The grip or handle is adapted to be grasped with one hand, while the crank-handle is operated with the other hand, and by this arrangement the operator has complete control of the machine and may move the vertically-reciprocating clothes-pounder to any point over the bottom of the tub or receptacle, and the contents thereof may be thoroughly and uniformly operated on.

It will be seen that the washing-machine is simple and comparatively inexpensive in construction, that it possesses great strength and durability, and that it is adapted to be readily applied to any ordinary tub or receptacle and is capable of rapidly reciprocating a pounder at the expenditure of a minimum amount of labor. It will also be seen that the clothes-pounder can be adjusted to suit the depth of the receptacle and that it is capable of being readily arranged over any portion of the bottom of the same, so that the contents of the

receptacle may be thoroughly and uniformly operated on.

Changes in the form, proportion, size, and the minor details of construction within the scope of the appended claims may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What is claimed is—

1. A device of the class described comprising a rigid support, a horizontally-swinging frame hinged at one end to the support and adapted to oscillate over a tub or other receptacle, a casing slidably mounted on the swinging frame and adapted to be moved from one end of the frame to the other end thereof, a vertically-reciprocating clamping device carried by the casing and adapted to engage the stem of a clothes-pounder, and gearing mounted within the casing and connected with and operating the clamping device, substantially as described.

2. A device of the class described comprising a standard or support designed to be mounted on a tub, a horizontally-swinging frame hinged to the support, a casing slidably mounted on the frame and adapted to move longitudinally thereof, gearing mounted in the casing, a vertically-reciprocating clamping device adapted to engage the clothes-pounder, a crank-handle connected with the gearing and arranged at one side of the casing, and a handle or grip located at the opposite side of the casing, substantially as described.

3. A device of the class described comprising a standard or support designed to be mounted on a tub, a horizontally-swinging frame hinged to the standard or support, a casing slidably mounted on the frame, a guide-bracket mounted on the casing at one side thereof, a vertically-reciprocating bar guided in the said bracket, a pitman connected with the vertically-reciprocating bar, gearing mounted in the casing, a crank connected with the pitman and with the gearing, and means for connecting a clothes-pounder with the vertically-reciprocating bar, substantially as described.

4. A device of the class described comprising a standard or support, a horizontally-swinging frame, a sliding casing mounted on the frame, transverse shafts 25 and 27 journaled in suitable bearings of the casing and extended from opposite sides thereof, gears mounted on the shafts and meshing with each other, a crank carried by the shaft 27, a vertically-reciprocating bar connected with and operated by the crank, means for connecting a clothes-pounder with the said bar, and an operating-handle connected with the shaft 25, substantially as described.

5. A device of the class described comprising a support, a horizontally-swinging frame having parallel guide-bars, a pintle-rod hinging the frame to the support, an inclined bracing-rod extending from the outer end of the

frame to the said pintle, a casing provided with sleeves sliding on the frame, and gearing carried by the casing for reciprocating the clothes-pounder, substantially as described.

5 6. A device of the class described comprising a support, a horizontally-swinging frame hinged to the support and having parallel guide-bars, a casing composed of side plates, and sleeves mounted on the guide-bars and
10 having the side plates detachably secured to them, and gearing carried by the casing for reciprocating a clothes-pounder, substantially as described.

15 7. A device of the class described comprising a support, a horizontally-swinging frame hinged to the support, a sliding casing mounted on the frame, a vertically-reciprocating

bar guided on the casing at one side thereof, a clamp carried by the bar, a stem engaged by the clamp and designed to carry a clothes- 20
pounder, a guide mounted on the casing at the upper portion thereof, located above the clamp and receiving the stem, and gearing for reciprocating the bar, substantially as described. 25

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

ANDREW J. ZIEGLER.

JACOB B. ZIEGLER.

WILLIAM D. ZIEGLER.

Witnesses:

C. MILLARD HILL,

W. F. DANZER.