

(No Model.)

H. H. GIFFORD.
WASHING MACHINE.

No. 409,399.

Patented Aug. 20, 1889.

Fig. 1.

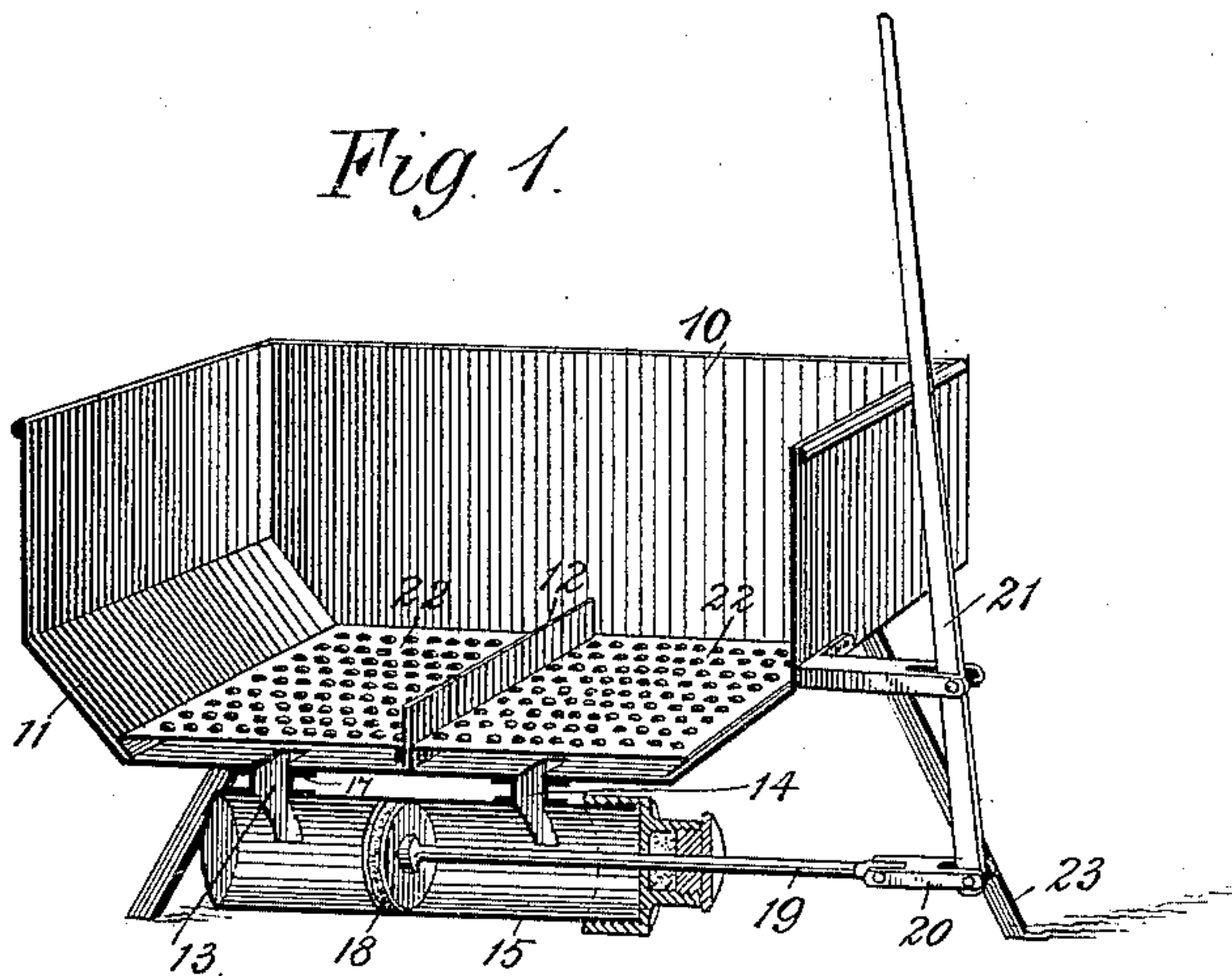


Fig. 2.

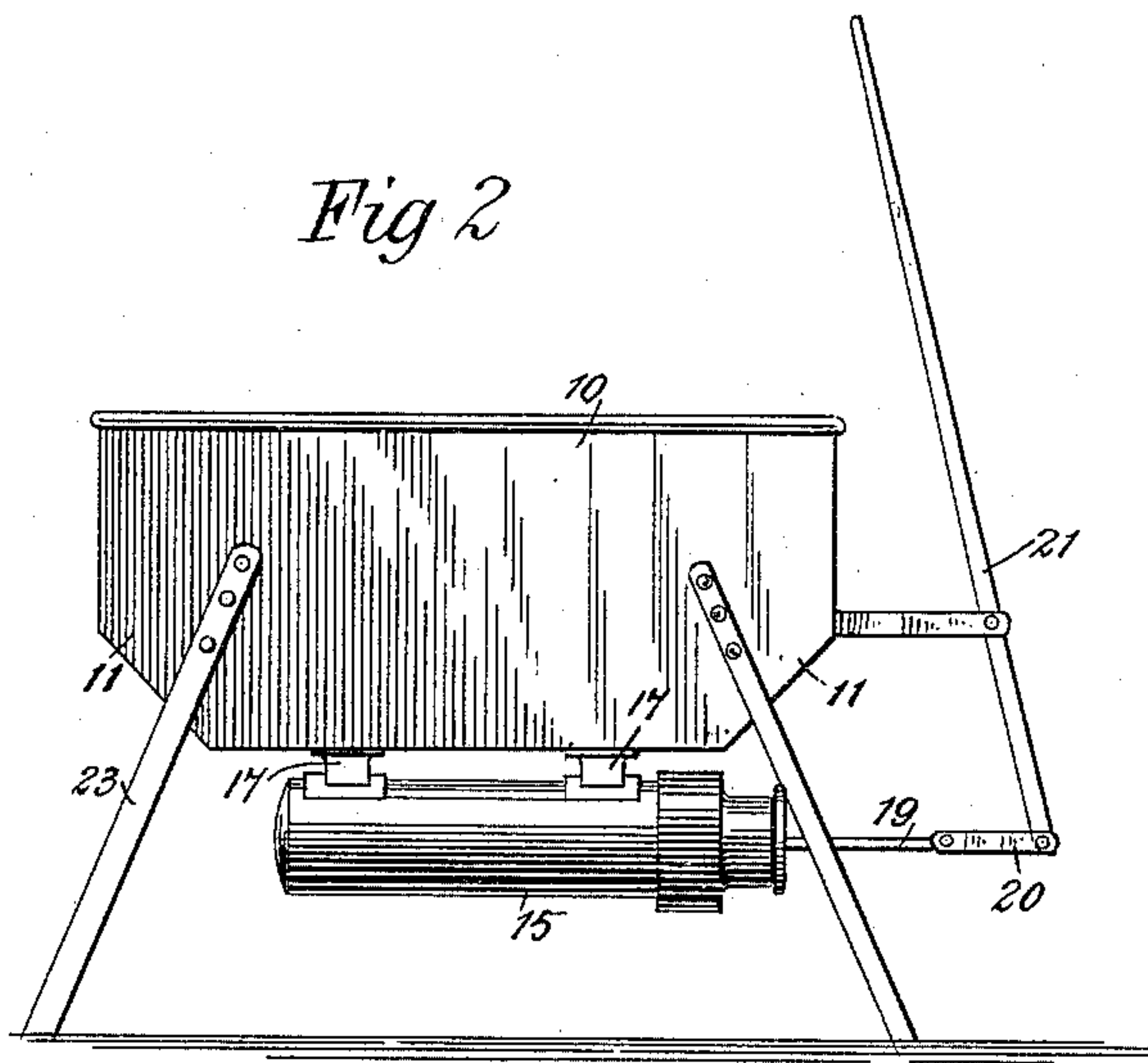
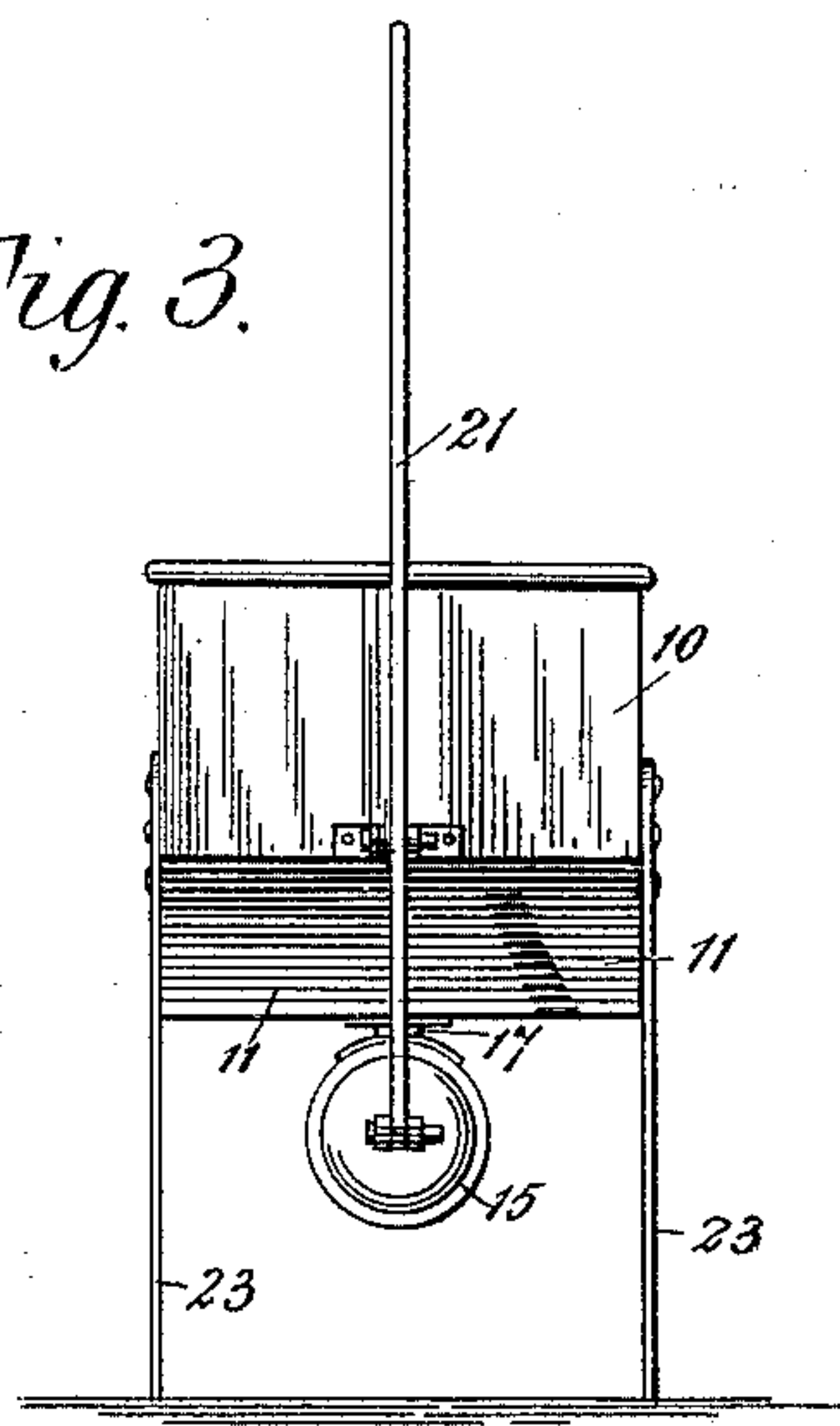


Fig. 3.



WITNESSES:

Paul J. J. J.
C. Sedgwick

INVENTOR:

H. H. Gifford

BY

Munn & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

HIRAM H. GIFFORD, OF ROSCOMMON, MICHIGAN.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 409,399, dated August 20, 1889.

Application filed June 5, 1889. Serial No. 313,111. (No model.)

To all whom it may concern:

Be it known that I, HIRAM H. GIFFORD, of Roscommon, in the county of Roscommon and State of Michigan, have invented a new and Improved Washing-Machine, of which the following is a full, clear, and exact description.

My invention relates to an improvement in washing-machines, and has for its object to provide a machine of simple and durable construction, capable of thoroughly washing the clothes without subjecting them to undue friction, and wherein the action of the washer will not tend to remove any buttons.

A further object of the invention is to provide for the uniform circulation of the water through the clothes, and to so force the water in contact with the latter and draw it therefrom that the water under pressure and suction will effectually clean the articles introduced into the machine, and thereby obviate the necessity of rubbing.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully described, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the washing-machine, one side being broken away and the cylinder beneath the machine being in section. Fig. 2 is a side elevation of the machine, and Fig. 3 is an end view of the same.

The machine is provided with a box-like body 10, which is preferably and usually constructed of metal; but other material may be employed if found desirable. At or near the bottom of the body, at each end, the surface of the said ends is made to incline downward in the direction of the bottom, as illustrated at 11 in the drawings. The body 10 may, if desired, be provided with a cover; but such cover is not absolutely necessary.

The bottom of the body is divided transversely at or near the center into two compartments by a partition 12, which partition is not very high, being preferably made about three inches in height when the body of the machine is about twenty-eight inches long, eighteen inches wide, and sixteen inches deep. These proportions are ordinarily ob-

served. At each side of the partition 12 ports 13 and 14 are respectively formed in the several compartments. Beneath the bottom of the body a cylinder 15 is horizontally supported by being connected with the said bottom by tubular standards or brackets 17, which standards or brackets inclose the several body-ports 13 and 14, and also corresponding or registering apertures in the cylinder 15, whereby a communication is established between the several compartments of the body and the said cylinder, as illustrated in Fig. 1. In the cylinder 15 a piston 18 of any approved construction is held to reciprocate, having an attached piston-rod 19, which extends through one head of the cylinder, and is united at its outer end by a link or knuckle joint 20 with a lever 21, fulcrumed upon one end of the body, which lever is adapted to extend vertically upward and above the body. Thus by laterally reciprocating the lever 21 the piston-head 18 is reciprocated in the cylinder.

Each compartment is provided with a false bottom 22, consisting of a perforated plate of metal having lugs integral with two opposite ends, whereby the false bottom is elevated a slight distance above the bottom proper, as illustrated in Fig. 1.

The body 10 of the machine is supported by suitable legs 23.

In operation, the clothes having been placed in the body and a sufficient quantity of water, soap, and other washing material having been introduced also, when the lever 21 is operated, the piston 18, as aforesaid, is reciprocated thereby in the cylinder, and in the forward and backward throw of the said piston the water contained in the cylinder is alternately forced violently upward through the clothes in one compartment and water drawn downward into the cylinder through the clothes contained in the other compartment.

The object of the partition in the center is to compel the water to pass upward through the clothes and over the top of the partition, and not simply to pass from one port to the other in contact with the bottom.

The advantages of a machine of this description are apparent, and the further operation of the machine will be readily understood.

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

1. In a washing-machine, the combination, with a body having ports in the bottom thereof, and a cylinder suspended beneath the bottom of the body and connected with the said ports, of a piston held to slide in the cylinder, provided with a piston-rod extending through one end of the said cylinder, and a lever connected with the outer end of the said piston-rod, substantially as shown and described.

2. In a washing-machine, the combination, with a body having ports formed in the bottom thereof and provided with a transverse partition separating the ports, of a cylinder held beneath the bottom of the body and connected with the ports of the latter, a piston held to reciprocate in the cylinder, provided with a piston-rod projecting through one end thereof, and a lever fulcrumed upon the body, connected with the said piston-rod,

all combined for operation substantially as shown and described.

3. In a washing-machine, the combination, with a body provided with a partition secured to the bottom, dividing the same into two compartments, a port formed in each of the said compartments, and a cylinder supported beneath the said body connected with the ports of the body, of a piston held to reciprocate in the cylinder, provided with an attached rod extending through one end of the same, a lever fulcrumed to the body and connected with the piston-rod, and a perforated false bottom supported a distance above the main bottom of the body in each of the compartments formed therein, substantially as and for the purpose specified.

HIRAM II. GIFFORD.

Witnesses:

R. P. FORBES,
EDMUND M. MASON.