

C. C. GRIDLEY.
CLOTHES WASHING DEVICE.
APPLICATION FILED JULY 16, 1910.

999,218.

Patented Aug. 1, 1911.

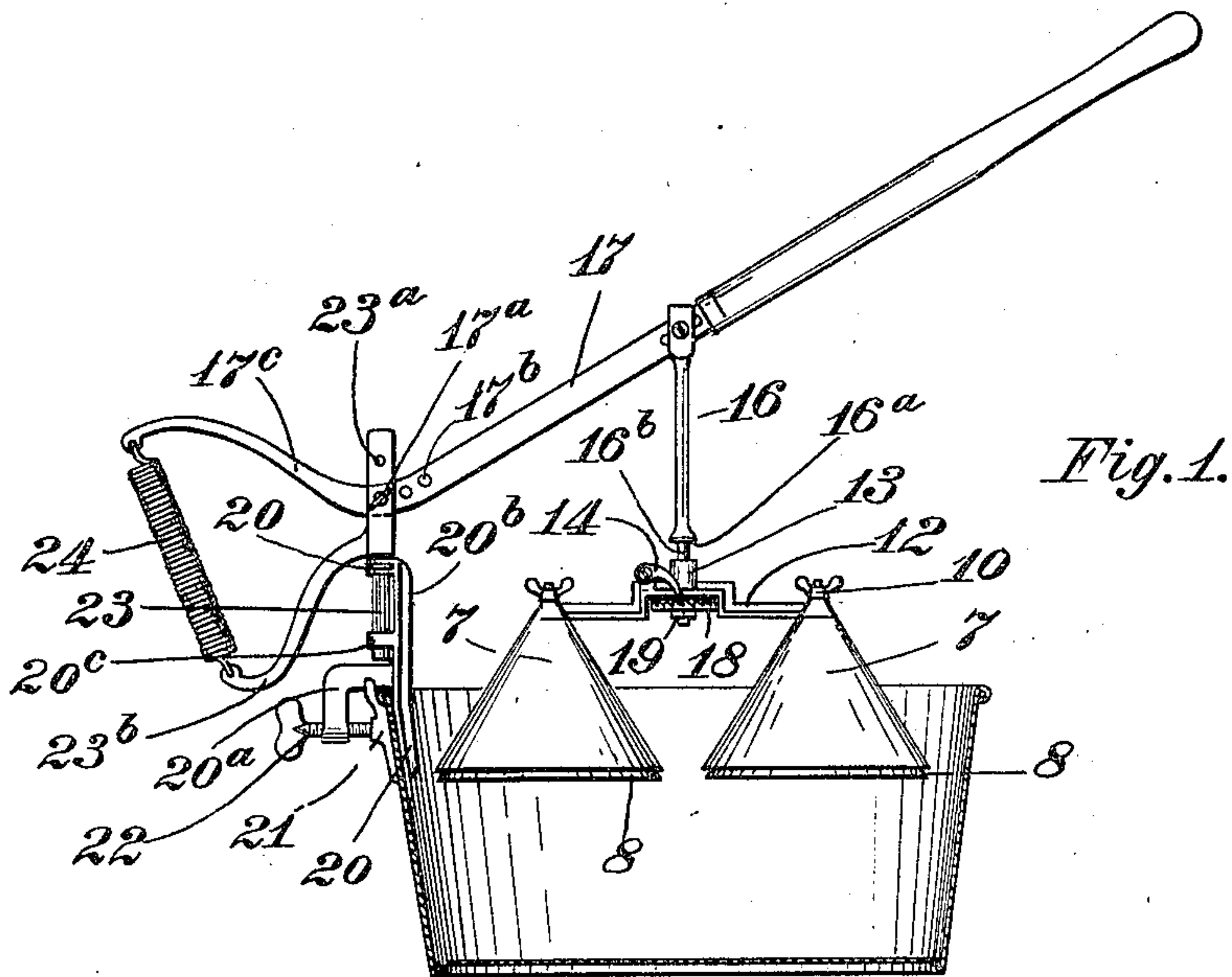


Fig. 1.

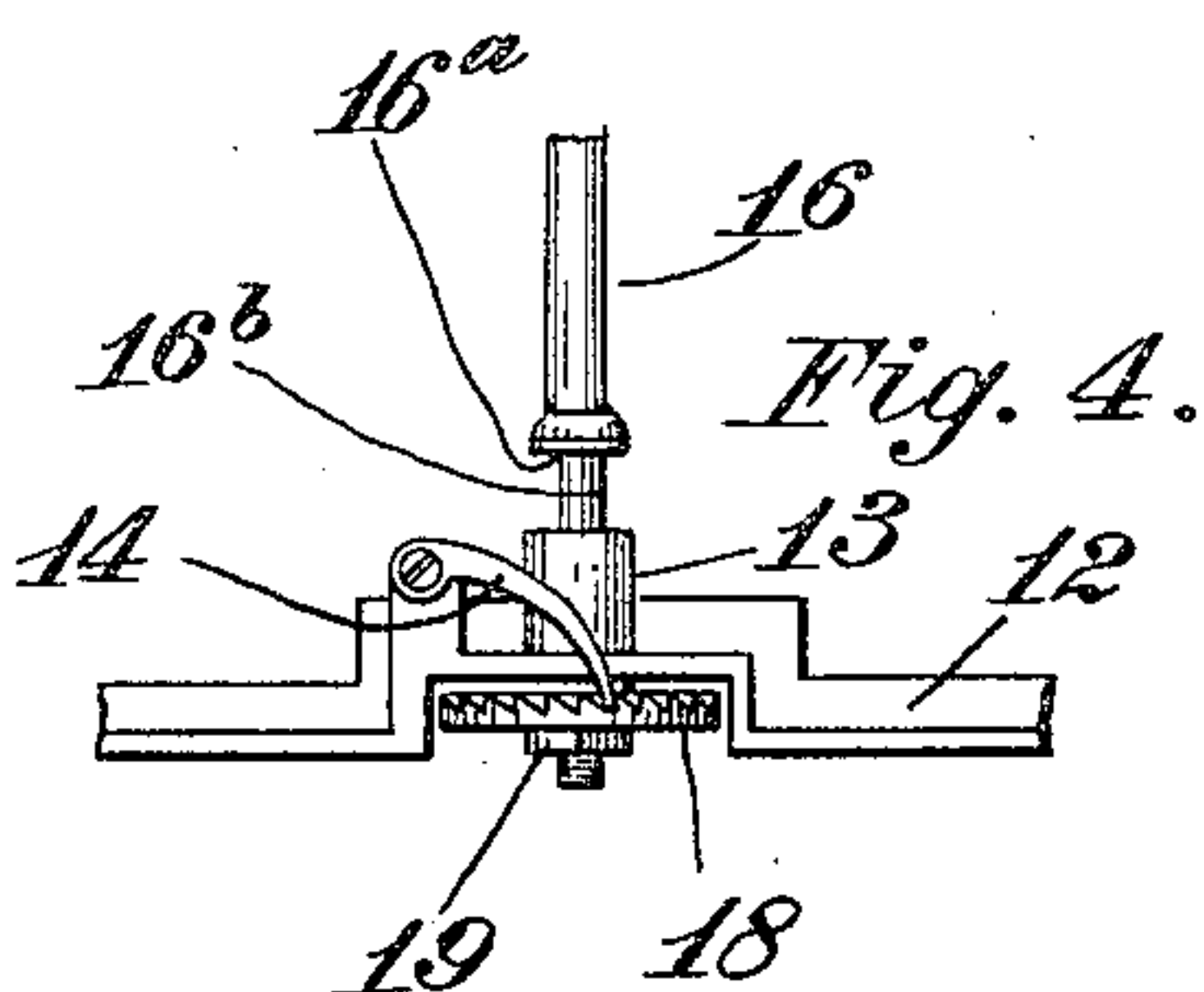


Fig. 4.

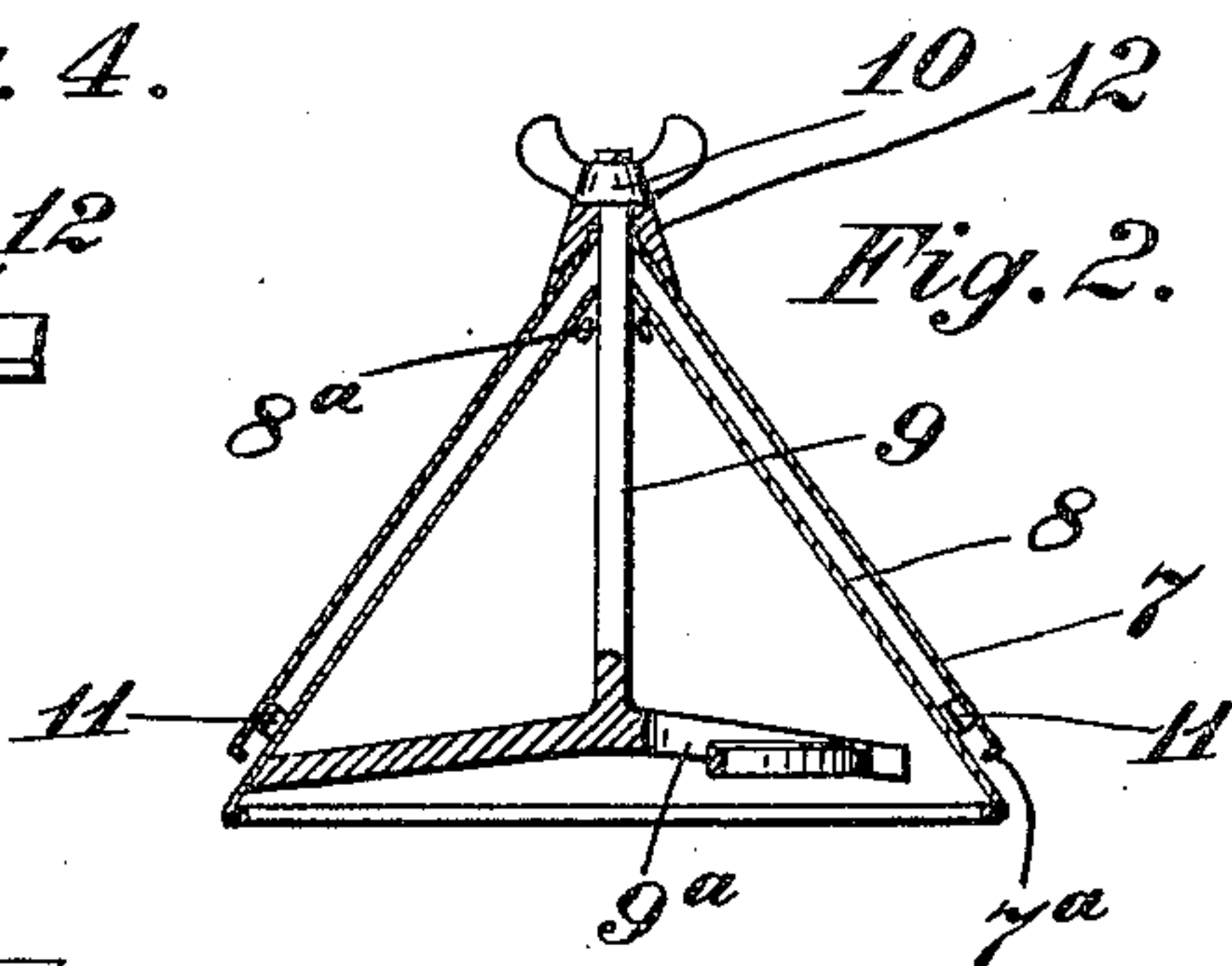


Fig. 2.

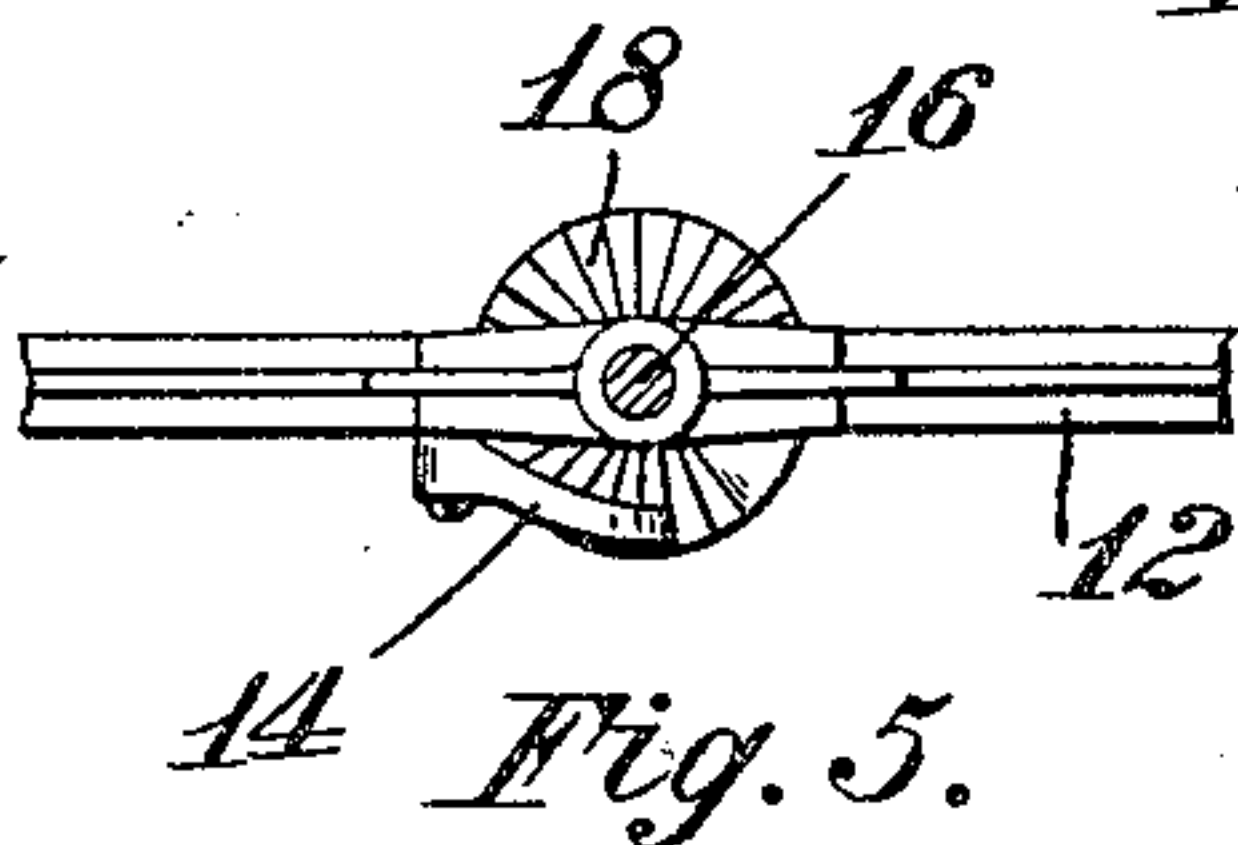


Fig. 5.

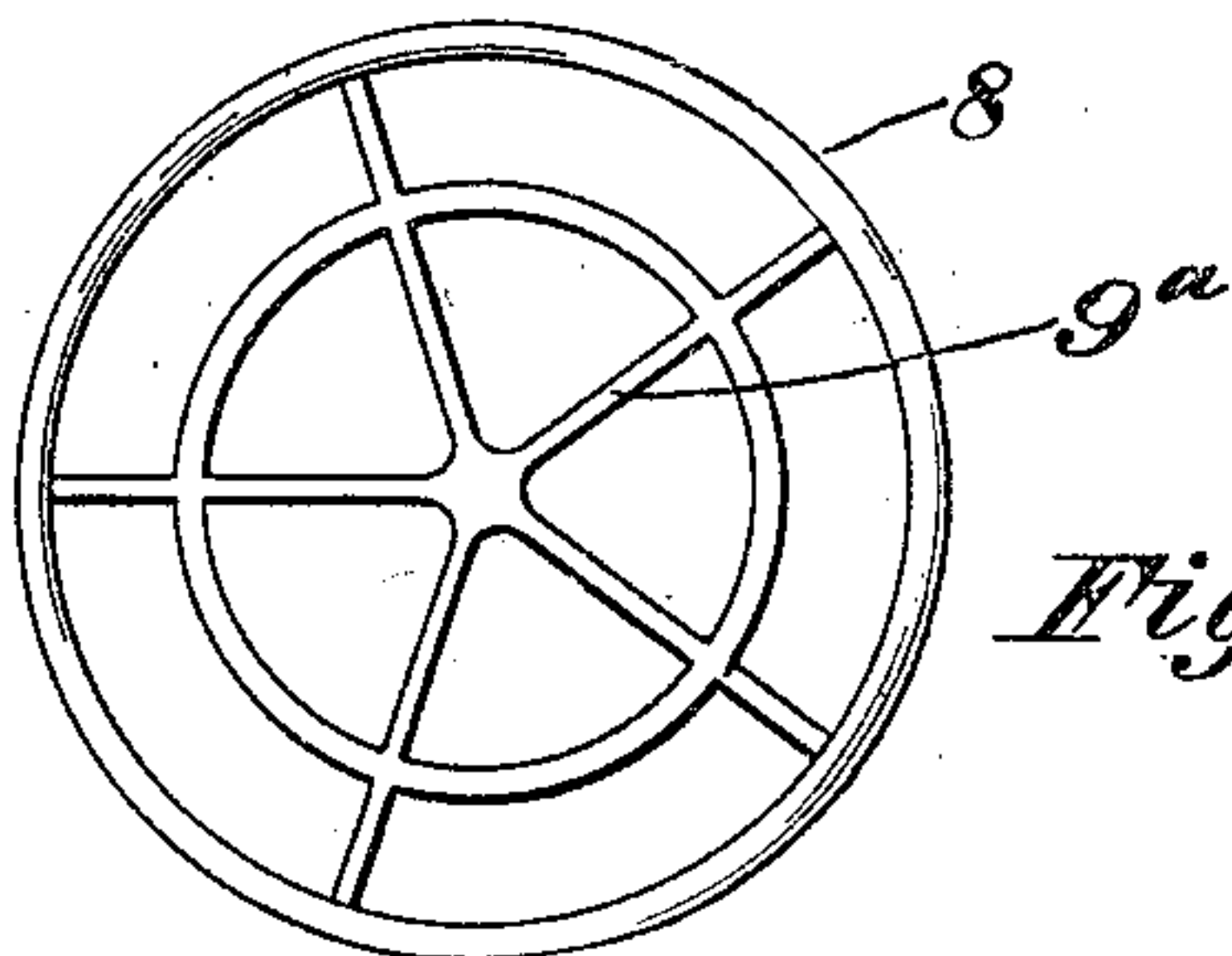


Fig. 3.

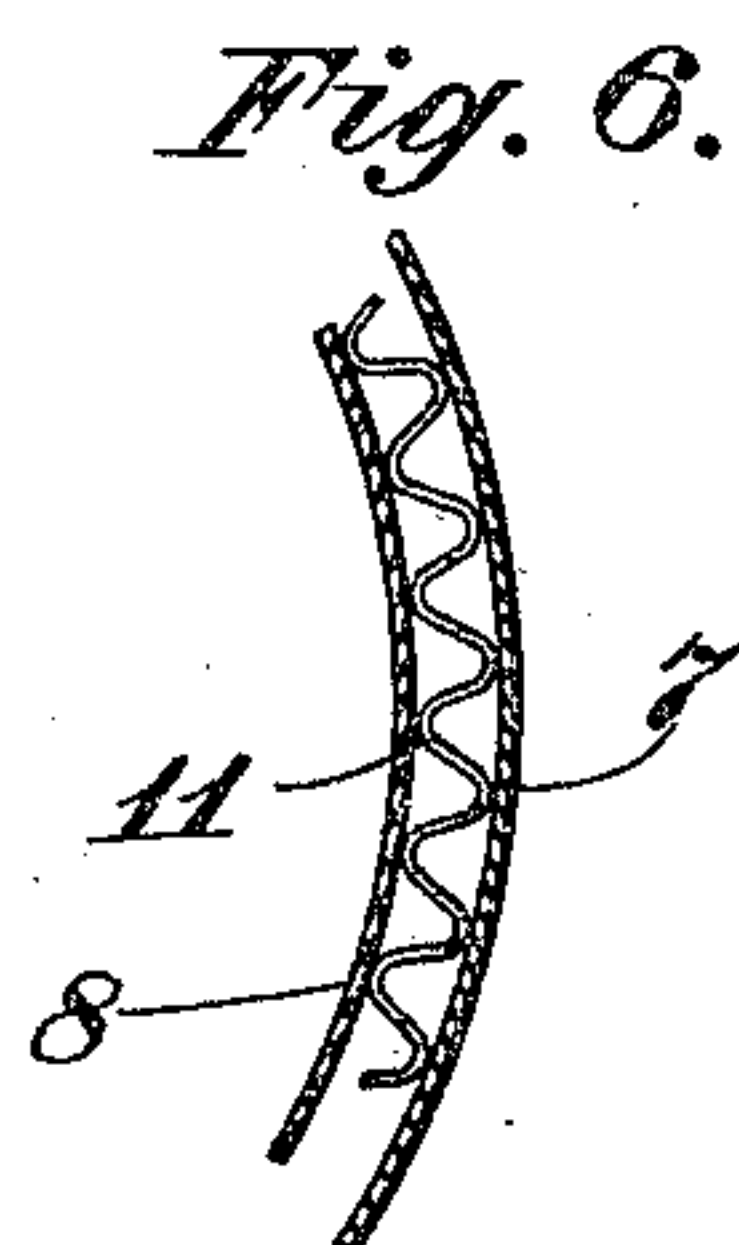


Fig. 6.

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UNITED STATES PATENT OFFICE.

CHARLES C. GRIDLEY, OF COLUMBUS, OHIO.

CLOTHES-WASHING DEVICE.

999,218.

Specification of Letters Patent.

Patented Aug. 1, 1911.

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To all whom it may concern:

Be it known that I, CHARLES C. GRIDLEY, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Clothes-Washing Devices, of which the following is a specification.

The object of this invention is to provide improved means for operating members that are vertically reciprocated and horizontally rotated to press upon the clothes and suds and water in a tub.

The invention is embodied in the construction herein shown and described, the invention not being confined in its embodiment to precisely the forms of the parts shown.

In the accompanying drawings forming part hereof—Figure 1 is a side elevation of the washer showing the same as applied to a tub which latter is in vertical section. Fig. 2 is a vertical sectional view of one of the cones, the scale being larger. Fig. 3 is a plan view of the construction at the lower end of one of the cones. Fig. 4 is a detail in side view of the means for causing the rotation of the cone carrying frame. Fig. 5 is a plan view of the same. Fig. 6 is a sectional view of a fraction of the cones showing the device for holding them properly separated at their lower portions.

The compressor devices each comprise two sheet metal cones 7 and 8, the character 7 designating the outer one and 8 the inner. These two cones are of approximately the same size and form and they are placed one within the other with their apices together as shown and they are secured together by a rod 9 passed through the apices of both. The said rod is threaded at its upper end and it has a thumb nut 10 for securing the cones in position with reference to each other. The rod 9 has at its lower end an open work frame or spider 9^a that fits against the inner side of the inner cone 8 and the outer cone 7 has soldered to its inner side a corrugated strip 11 to hold the cones slightly separated so as to provide an air space between them. The outer cone 7 has its lower edge bent inwardly all around to provide a flange 7^a that does not close but contracts the space between said edge and the outer side of the inner cone. The inner cone 8 has openings 8^a near its apex so that the air can pass from the interior of the

inner cone into the aforesaid space between the two cones. Two of the doubled cones as thus constructed are mounted at their apices on the extremities of an arm 12. At its middle the arm 12 has a journal sleeve 13 near which is pivotally mounted a pawl 14.

The character 16 designates a rod or spindle hingedly but non-rotatively suspended from a lever 17. The lower end of the rod 16 has a shoulder 16^a to operate on the cone-carrying arm 12 and a journal 16^b that extends through the sleeve 13; and fixed on the lower extremity of the journal 16^b below the arm 12 is a face ratchet 18 secured by means of a nut 19 threaded onto the journal. The teeth of the ratchet are adapted to be engaged by the pawl 14. The journal 16^b has sufficient vertical play in the sleeve 13 to permit the end of the pawl to pass over one or more of the teeth of the ratchet, if said ratchet be depressed, so that when the ratchet is elevated the arm 12 is given a partial rotation.

20 designates the inner tub-clamping member and 21 is the outer one. The outer tub-clamping member 21 is provided with a screw 22 passed through an arm 20^a of the inner clamping member so that both can be secured to the tub. The inner tub-clamping member has an arm 20^b extending upward above the edge of the tub and said arm is provided with eyes 20^c to receive swivelly a post 23 provided with sundry holes 23^a. The post 23 has rigid with it a downward curved arm 23^b. The lever 17 is fulcrumed in the post 23 by means of a suitable pin at 17^a passed through one of the holes in the post and one of several holes 17^b in the lever. The arm of the lever 17 beyond its fulcrum is upwardly curved as seen at 17^c and between the extremity of this arm and that of the arm 23^b is secured a strong coil spring 24 tending to hold the long arm of the lever upward with the lower ends of the cones above or near the proposed level of the clothes and water in the tub. The long arm of the lever 17 constitutes or is provided with a suitable handle.

The operation is briefly this: The clothes and water and suds having been placed in the tub and the washer turned to position over them the handle end of the lever is raised and lowered after the manner of a pump handle. The cones on the down stroke, and when depressed upon the clothes and water, cause the air to be forced upward in the in-

ner cone and downward between the two
cones and out of the narrow opening be-
tween the flanged edge of the outer cone
and the lower margin of the inner cone.
5 This escaping air agitates the water and
suds and more or less of it with water and
suds passes through the clothes thus driving
out the dirt. The spider at the lower end of
the inner cone prevents the clothes from
10 pressing far up into the inner cone. When
the washing devices are raised above the
water by lifting the lever (this operation be-
ing aided or entirely effected as may be de-
sired by the spring 24) the air flows back
15 into the interior cone in reverse direction
and aids in causing a separation of the
cones from the clothes. On the up stroke
the water and suds are also agitated by the
suction or incoming air. In the washing
20 operation the lifting of the face ratchet
draws on the pawl and causes the arm carry-
ing the cones to move through a consider-
able arc and thus automatically places the
cones in a fresh position for descent upon
25 the clothes.

It is obvious that the cones can be swung
out of the tub without detaching them from
the tub. The spring 24 does not interfere
with this operation because the post 23 with

which one end of the spring is connected 30
is swiveled in one end of the tube clamping
members. It is also obvious that some parts
of my invention can be used with other parts
of different construction.

What I claim is:

In a clothes washer, the combination with 35
a vertically reciprocable clothes pressing
means, and a handled lever for operating
the same connected therewith, of a tub
clamping member, a post having a later- 40
ally extending arm 23^b, and said post being
swivelly connected with said tub clamping
member, said lever being fulcrumed on said
post and a spring connected at one end with
said arm 23^b beyond the connection of the 45
post with the tub clamping member and at
its other end with said lever at a point be-
yond the fulcrum of said lever and at the
side opposite the handled portion of the 50
lever, the pressing means, the post, the lever
and spring being directly removable from
the tub without removing the tub clamping
member, substantially as described.

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Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."