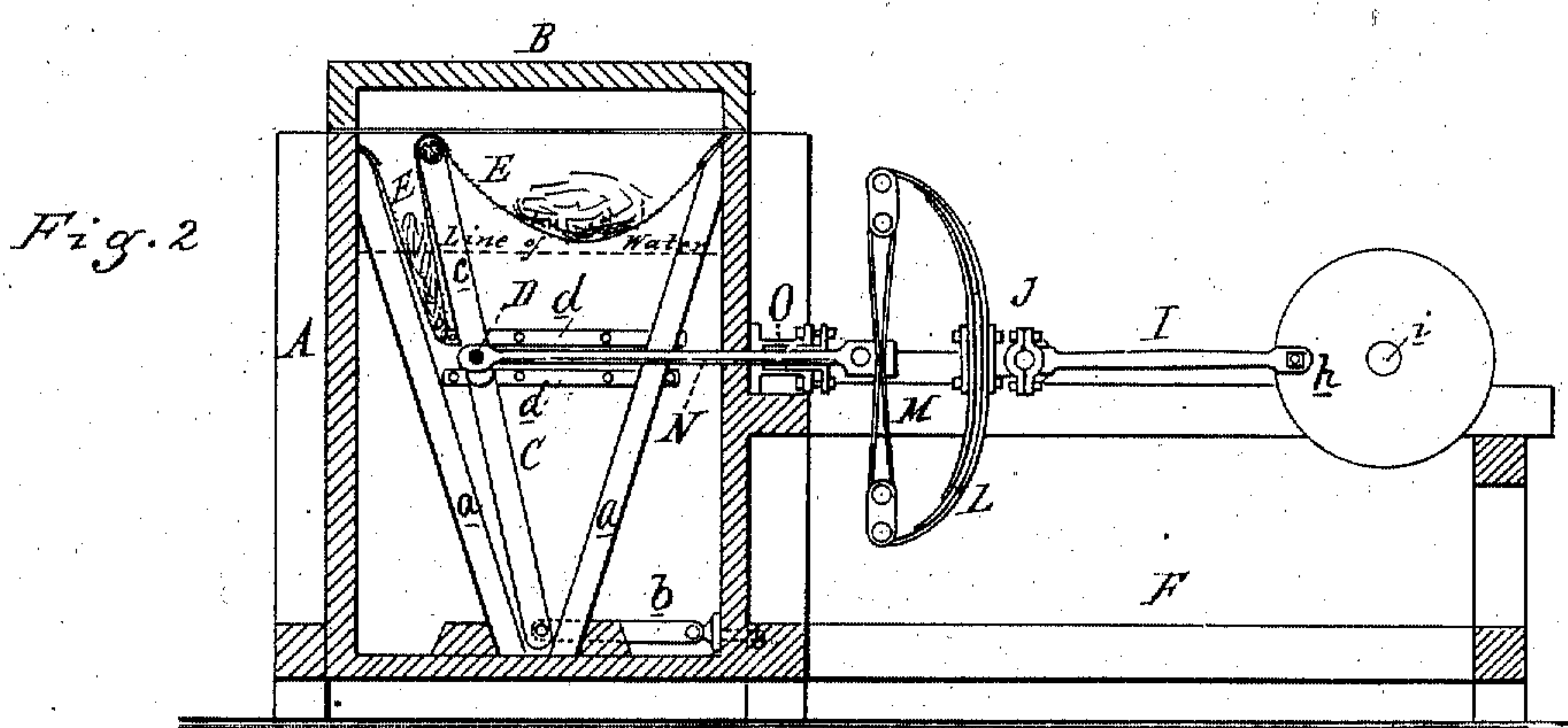
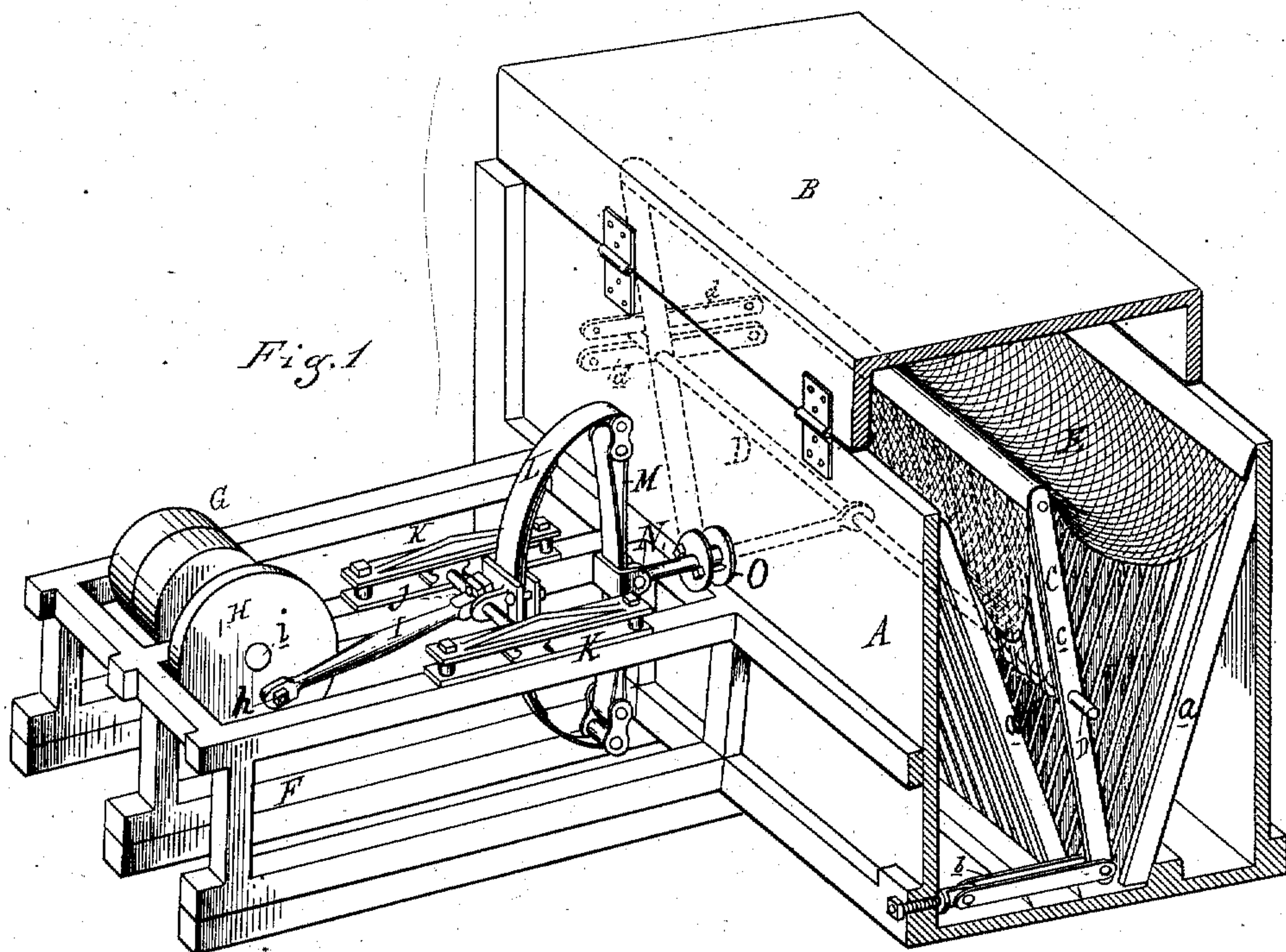


(No Model.)

V. COLLIAN.  
Washing Machine.

No. 231,762.

Patented Aug. 31, 1880.



Attest:  
A. Barthel  
Thos. S. Day

Inventor:  
V. Colliau  
By atty  
Thos. S. Sprague



# UNITED STATES PATENT OFFICE.

VICTOR COLLIAN, OF DETROIT, MICHIGAN.

## WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 231,762, dated August 31, 1880.

Application filed May 27, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, VICTOR COLLIAN, of Detroit, Wayne county, Michigan, have invented an Improvement in Washing-Machines, of which the following is a specification.

The nature of this invention relates to certain new and useful improvements in machines particularly designed for washing clothes; and the invention consists in the construction, arrangement, and combinations of the various parts, all as more fully hereinafter set forth, and pointed out in the claims.

In the drawings, Figure 1 is a sectional perspective. Fig. 2 is a vertical cross-section.

In the accompanying drawings, which form a part of this specification, A represents a proper water-tight box or tank provided with the cover B. Within the main portion of this box, and along the sides thereof, are rigidly secured the slats or bars *a*, forming racks upon the two sides.

C is a beater-frame, pivoted by means of the links *b* or other suitable means to the box A. The upper half of this frame is also provided with bars *c*, rigidly secured at their upper ends to the top bar of the frame C, while a rod, D, passes through their lower ends and projects outside the frame C, resting in and between the guides *d*, secured upon the inner walls of the ends of the box.

A net, E, is secured to the top of the racks *a* and to the top of the beater-frame C, as shown, and is designed to receive and support the material to be washed.

A suitable frame, F, is erected at one side of the tank, and in this frame is properly journaled a shaft, *i*, carrying the pulleys G, and has secured to one end the disk H, which is provided with a wrist-pin, *h*. To this wrist-pin is secured one end of the connecting-rod I, the opposite end of which is secured to the cross-head J, which reciprocates between the guides K upon the top of the frame.

A metallic C-spring, L, is secured to the cross-head, its two ends being connected by means of a rubber band or spring, M. At the longitudinal center of this spring M is properly connected the outer end of the piston-rod N, which passes through a stuffing-box, O, in the side wall of the tank, and has

its inner end secured to the rod D of the beater-frame.

In practice, the tank A is filled about three-quarters full of water, the material to be washed is placed upon the nets and the cover closed, and the machine is put in motion. This imparts an oscillating motion to the beater-frame, alternately submerging the material in one net while it raises that in the other, and beats and squeezes the material under water between the beater-frame and the corresponding side rack. At the same time it throws the material in the opposite net out of the water, loosens it up, and causes it to turn over.

It will be perceived that in the above-described construction the oscillating beater-frame C, operated by the straight piston-rod N, must, to prevent the bending of said piston-rod and to render its movements free and easy of operation, be so connected to the body A that its lower end can rise and fall vertically in the box in the oscillations of the beater-frame, as the rod D reciprocates in a straight line horizontally, and to attain this result the beater-frame C is pivoted to one end of the links *b*, which, at their opposite ends, are pivoted to the body or tub A.

What I claim as my invention is—

1. The combination, with the tank A, of the beater-frame C, provided with rod D, traveling in guides *d*, links *b*, pivoted to the beater-frame and tank, and reciprocating piston-rod N, connected at its inner end with the beater-frame, substantially as described, and for the purpose set forth.

2. The combination, with the tank A and racks *a*, of the beater-frame C, reciprocating piston-rod N, C-spring L, connected at its ends by the spring M, and connecting-rod I, substantially as described, and for the purpose set forth.

3. The combination, with the tank A and racks *a*, of the hinged beater-frame C, oscillating between said racks, and nets E, each of which is attached to the upper end of one of the rack-frames and to the top bar of the beater-frame, substantially as described, and for the purpose set forth.

4. The combination, with the tank A and

inclined racks *a*, of the oscillating beater-  
frame C, having rod D and short bars *c*, links  
*b*, pivoted to the beater-frame and tank, nets  
E, secured to the racks and beater-frame, pis-  
5 ton-rod N, stuffing-box O, C-spring L, pass-  
ing through the cross-head, spring M, cross-  
head J, guides K, and connecting-rod I, sub-

stantially as described, and for the purpose  
set forth.

VR. COLLIAN.

Witnesses:

H. S. SPRAGUE,  
EDWARD A. LANE.

It is hereby certified that in Letters Patent No. 231,762, dated August 31, 1880, for Washing Machines, the surname of the patentee was erroneously written and printed in said Letters Patent "Collian" instead of *Colliau*; that the proper corrections have been made in the records of this Office, and that said correction is hereby made in said Letters Patent.

Signed, countersigned, and sealed this 13th day of November, A. D. 1880.

[SEAL.]

A. BELL,  
*Acting Secretary of the Interior.*

Countersigned:

E. M. MARBLE,  
*Commissioner of Patents.*