# S. W. Woodward,

## Washing Machine,

No. 28,529. Patented May 29, 1860

Fig. 2.

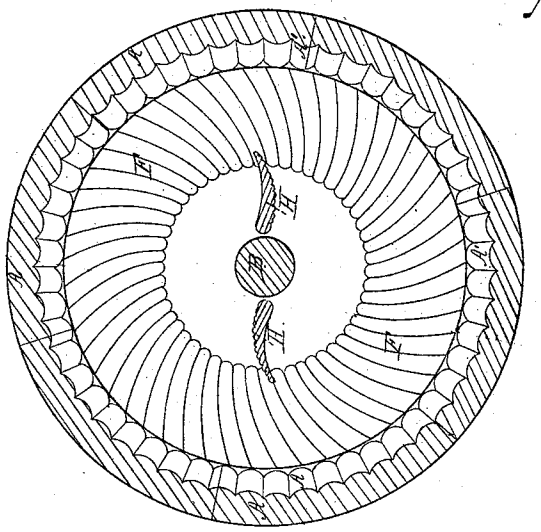
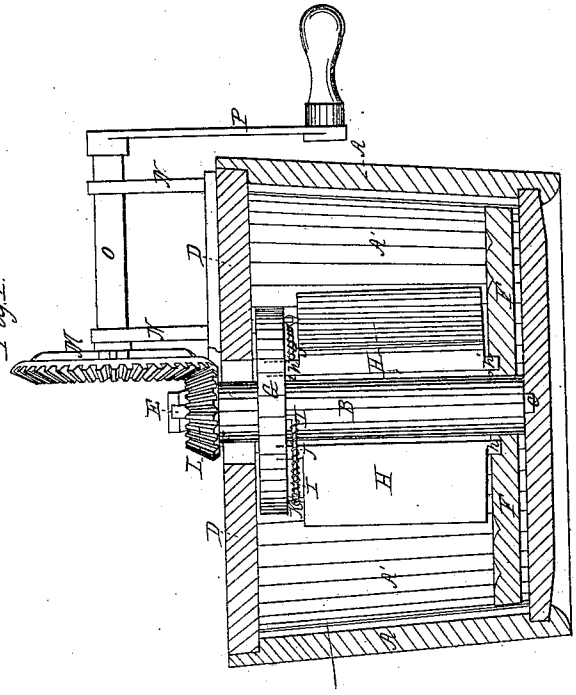


Fig. 1.



Witnesses:
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# UNITED STATES PATENT OFFICE.

STEPHEN W. WOODWARD, OF BUFFALO, NEW YORK.

## WASHING-MACHINE.

Specification of Letters Patent No. 28,529, dated May 29, 1860.

*To all whom it may concern:*

Be it known that I, STEPHEN W. WOODWARD, of the city of Buffalo, county of Erie, and State of New York, have invented a certain new and Improved Washing Machine; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and the letters of reference marked thereon, in which—

Figure I is a vertical section of my improved washing machine; Fig. II is a transverse section of the same.

Letters of like name and kind refer to like parts in each of the figures.

A, represents a cylindrical tub forming the body of the machine into which the clothes are to be put to be washed. It is fluted or corrugated upon the inside as represented at (A′).

(B) represents a vertical shaft which has a step or bearing in the bottom of the tub as shown at (*c*) and a journal bearing in the gear frame as shown at (E).

F, represents a corrugated or fluted circular plate or disk, which is made fast to the shaft (B) near the lower end thereof. Its diameter is a trifle less than the diameter of the tub upon the inside, so that it will revolve freely within the tub ¼ or ½ inch above the bottom of the tub.

(G), represents a circular plate connected to the shaft (B) near its upper end and just under the cross piece (D) for the purpose of connecting the spring rubbers thereto; H, spring flaps or rubbers which are connected to the fluted disk (F) by the journal pin ($h'$) and to the plate G by the journal pin ($h^2$); I, coil springs which are placed on a circular wire, J, which wire is connected to the plate (G). An eye (K) projects from the edge of the flap—the wire passing through this eye. The coil spring is on the wire behind the eye so that the rubbers will press upon the clothes in the tub only to the extent of the power of the spring.

L, is a bevel pinion on upper end of shaft (B); M, bevel wheel; N, frame resting upon the cross piece (D) and supporting the shaft (O) and bevel wheel; P, crank.

As a modification of the flat revolving disk (F) I propose to make it conical so that when a quantity of clothes are put in the tub it will have the effect to press them against the fluted sides of the tub. When a conical disk is used the spring rubbers may be dispensed with.

Operation: A suitable quantity of clothes, with soap and water are put in to the tub— the clothes lying upon the disk. By means of the crank and gearing the disk is made to revolve rapidly causing the clothes to rub against the fluted sides of the tub. The disk will move more rapidly than the clothes and hence its fluted surface will rub against the clothes. The fluted sides of the tub will have a tendency to prevent the clothes from moving around with the disk while the disk will have a tendency to carry the clothes along with it and hence the clothes will be continually rolling over or changing position on the rubbing surfaces. The clothes will also be pressed or squeezed between the spring rubbers (H) and the sides of the tub. The great velocity with which the disk is made to revolve will throw the clothes with a strong centrifugal force against the sides of the tub and the centrifugal force imparted to the water will force the water into and through the clothes in a manner most thoroughly and effectually to wash and cleanse the clothes from dirt without the least injury to the clothes.

The following is what I claim as new and of my invention herein and desire to secure by Letters Patent:

1. The combination of the stationary tub A, rotary shaft B and rotary disk F placed beneath and supporting the clothes; the whole being constructed arranged and operated in the manner and for the purpose set forth.

2. The spring rubbers (H) in combination with the revolving disk (F) substantially as set forth.

STEPHEN W. WOODWARD.

Signed in presence of—
E. B. FORBUSH,
W. H. FORBUSH.