



# UNITED STATES PATENT OFFICE.

CHARLES STEVENSON, OF PHILADELPHIA, PENNSYLVANIA.

## IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **187,194**, dated February 6, 1877; application filed December 29, 1876.

*To all whom it may concern:*

Be it known that I, CHARLES STEVENSON, of Philadelphia, Pennsylvania, have invented a new and useful Improvement in Washing-Machines, of which the following is a specification:

The object of my invention is to construct a cheap, portable, and effective washing-machine; and this object I attain in the manner which I will now proceed to describe, reference being had to the accompanying drawing, in which—

Figure 1 is a vertical sectional view of my improved washing-machine, and Fig. 2 an enlarged view of part of the same.

A is a tub similar to an ordinary wash-tub, but having an elevated rubbing-bed, B, which has a concave corrugated surface, and is supported, in the present instance, by strips *a* at each end.

To the upper edge of the tub is secured a plate, D, having a flange, *c*, to which is bolted a flange, *d*, at the lower end of a frame, E, the latter being made preferably of cast-iron, and having bearings *ee* for a driving-shaft, F, and a slotted projection, *f*, to which is pivoted a vibrating lever, G, carrying at its lower end a spring-rubber, I, the lower face of which is corrugated in the same manner as the face of the rubbing-bed B.

The vibrating movement of the lever G is effected by means of a zigzag rib, *i*, on the periphery of a wheel, J, carried by the shaft F, this rib being embraced by arms *m m* on a

block, M, a pin, *n*, on which projects into an opening in the end of the lever, so that the block is at liberty to turn and permit the arms *m* to accommodate themselves to the movement of the rib *i*. Other methods of vibrating the lever G may, however, be adopted.

The plate D, frame E, and bed B are so constructed that they can be readily adapted to an ordinary wash-tub, and can be readily removed when the tub is required for other purposes than washing clothes.

One of the main advantages of my invention is that the rubbing-bed B is exposed, so that the position of the material on the same can be readily changed, in order to secure a proper action of the rubber I upon all parts.

I claim as my invention—

1. The combination of the tub A with the elevated rubbing-bed B, and with the frame E, having bearings for a shaft, F, and for a vibrating lever, G, to be operated from the shaft, as set forth.

2. The combination of the shaft F and its wheel J, having a zigzag rib, *i*, with the lever G, and its swivel-block M.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES STEVENSON.

Witnesses:

HERMANN MOESSNER,  
HARRY SMITH.