

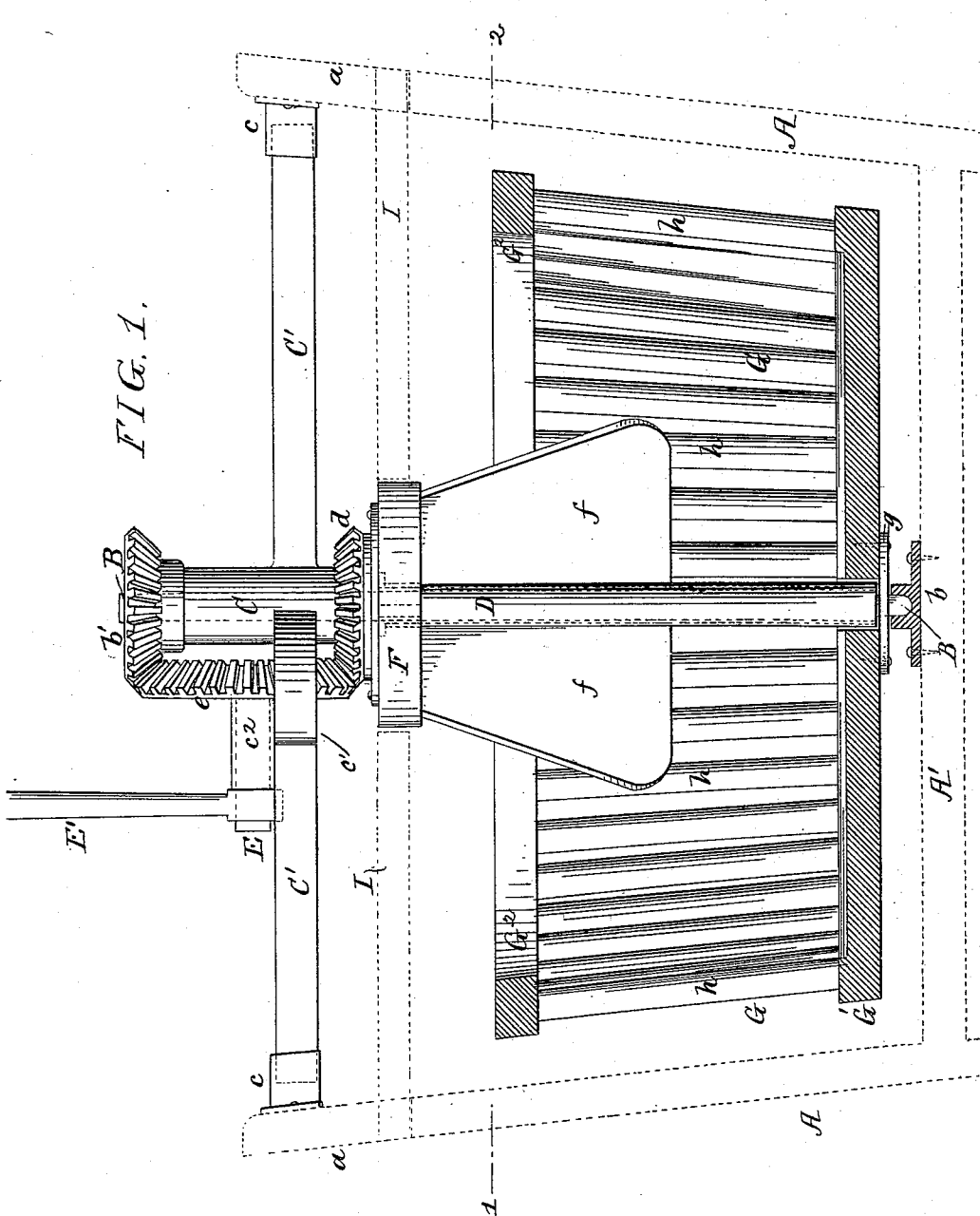
(No Model.)

2 Sheets—Sheet 1.

H. C. SCHULTZ.  
WASHING MACHINE.

No. 464,334.

Patented Dec. 1, 1891.



Witnesses:

R. Schleicher.

A. V. Gruppe.

Inventor:

Harry C. Schultz

by his Attorneys

Howson & Howson

(No Model.)

2 Sheets—Sheet 2.

H. C. SCHULTZ.  
WASHING MACHINE.

No. 464,334.

Patented Dec. 1, 1891.

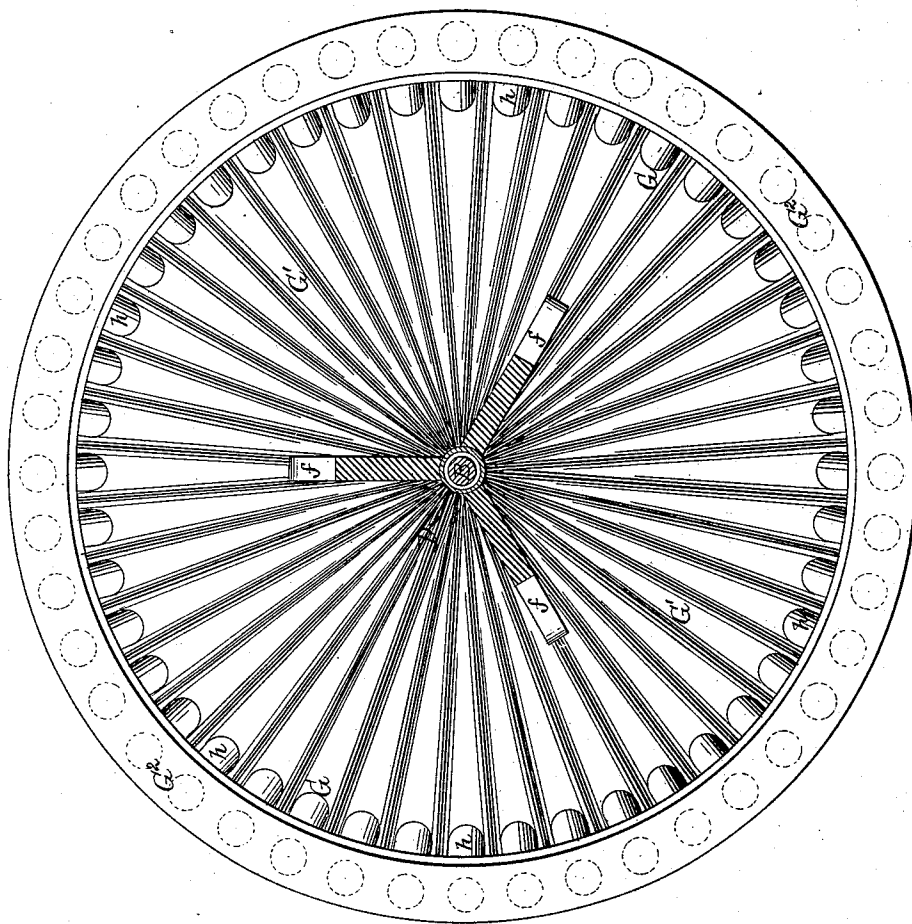


FIG. 2.

Witnesses:

R. Schleicher.

A. V. Gruppe.

Inventor:

Harry C. Schultz

by his Attorneys

Houison & Houison

# UNITED STATES PATENT OFFICE.

HARRY C. SCHULTZ, OF PHILADELPHIA, PENNSYLVANIA.

## WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 464,334, dated December 1, 1891.

Application filed March 18, 1890. Serial No. 344,288. (No model.)

*To all whom it may concern:*

Be it known that I, HARRY C. SCHULTZ, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Washing Attachments for Tubs, of which the following is a specification.

The object of my invention is to provide an ordinary tub with detachable washing apparatus which can be inserted and secured in position and which can be readily removed after the washing is completed.

In the accompanying drawings, Figure 1 is a vertical sectional view of my improved washing attachment for tubs. Fig. 2 is a sectional plan on the line 1 2, Fig. 1.

A is the tub, (shown by dotted lines,) having the usual handles *a a*. Secured to the bottom A' of the tub is a step *b* for the vertical shaft B, which is mounted in a bearing C, having two arms C' resting in pockets *c c*, secured in any suitable manner to the handles of the tub. One of these arms is yoked at *c'* to allow for the free movement of a bevel gear-wheel *e*, which is mounted on a shaft E. The shaft passes through a projection *c<sup>2</sup>* on one of the arms C', and is provided with a handle E', by which it is vibrated. The bevel gear-wheel *e* meshes with the bevel gear-wheel *b'*, secured to the shaft B, and also meshes with a bevel gear-wheel *d*, secured to a sleeve D, which incases the shaft. To this sleeve is secured a head F, having depending blades *f* of the form shown. These blades extend about half the length of the sleeve and are tapered in form.

Secured to the shaft B by a plate *g* is a crib G, circular in form and somewhat smaller than the tub. This crib has a solid bottom G', having radiating grooves cut therein, as shown in the plan view, Fig. 2, in order to provide a roughened surface for the clothes. Projecting from the base G' of the crib is a series of spindles *h*, so mounted as to form spaces for the passage of the water freely through the crib. The upper ends of these spindles

are supported by a ring D<sup>2</sup>, as clearly shown, and as above remarked the blades *f* do not extend to the bottom of the crib, but only about half the distance, leaving a space between the bottom of the blades and the bottom of the crib. The sleeve D, however, extends to and into the bottom of the crib, and as it rotates with the blades the clothes will not become tangled and torn, as would be the case if the shaft D were exposed at this point.

A cover I (shown by dotted lines) rests on the edge of the tub A and fits around the head F, preventing the water in the tub from splashing. As it will be noticed on the vibration of the handle E' by the operator, the crib will be oscillated in one direction and the blades *f* in the opposite direction, thus thoroughly rubbing and cleansing the clothes placed in the crib. I have shown in the present instance three blades *f*; but it will be understood that a more or less number of blades can be used without departing from my invention.

I claim as my invention—

The combination, in a washing attachment for tubs, of a bearing C, having arms C' C', adapted to be secured to the tub, a vertical shaft B, adapted to the bearing and to a step in the bottom of the tub, a crib carried by the shaft, a grooved rubbing-bottom on said crib, a sleeve D, loose on said shaft and extending from the bearing to and into the bottom of the crib, and tapered agitating-blades *f f*, carried by said sleeve and extending midway into the tub, said blades having their lower edges on a line paralld or substantially parallel with the bottom of the crib, with means for rotating the shaft and sleeve in opposite directions, substantially as specified.

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

HARRY C. SCHULTZ.

Witnesses:

EUGENE ELTERICH,  
HENRY HOWSON.