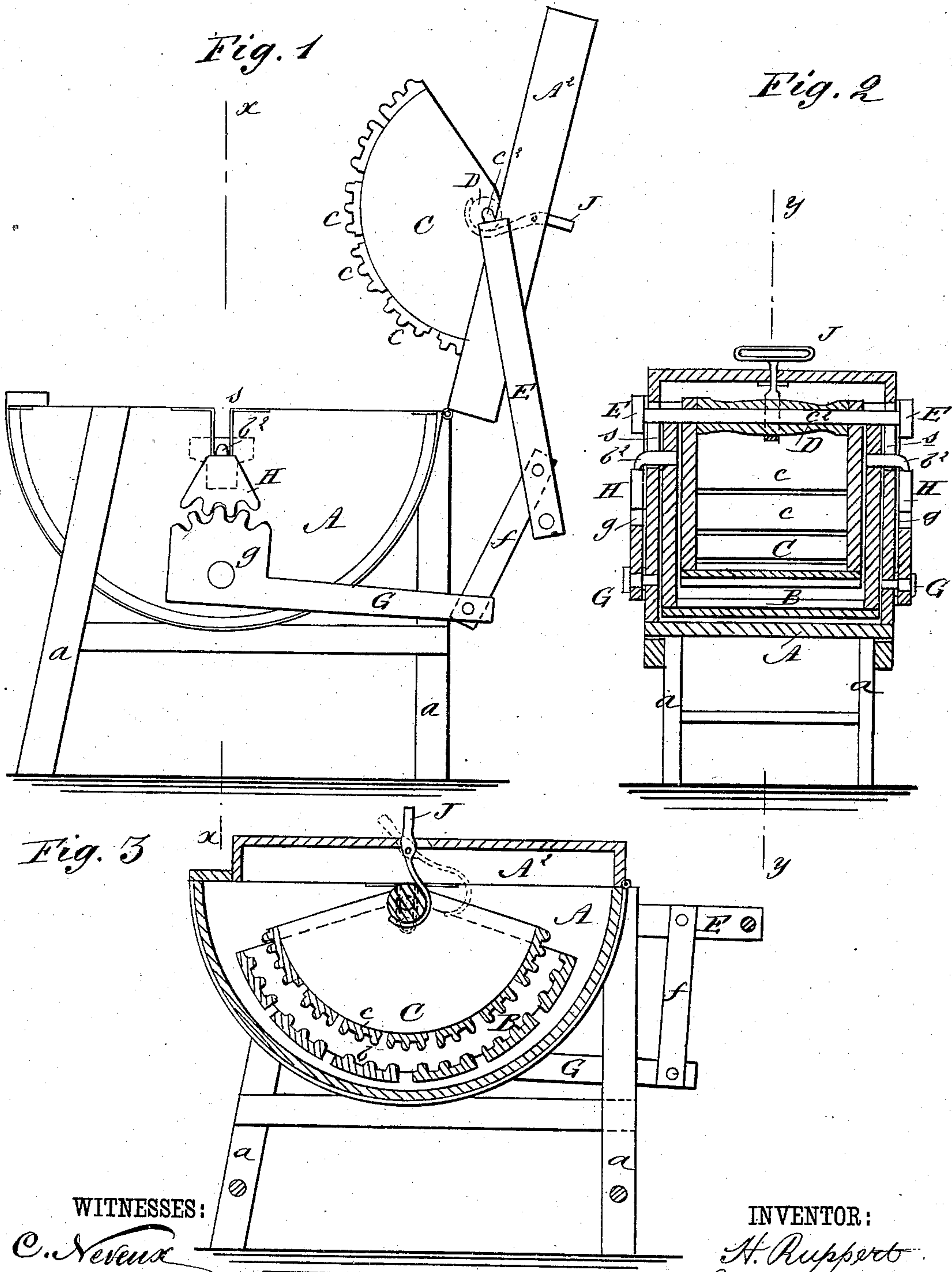


(Model.)

H. RUPPERT & J. MULLERWEISS, Sr.  
Washing Machine.

No. 241,725.

Patented May 17, 1881.



WITNESSES:

C. Neveu  
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# UNITED STATES PATENT OFFICE.

HENRY RUPPERT AND JOHN MÜLLERWEISS, SR., OF SEBEWAING, MICHIGAN.

## WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 241,725, dated May 17, 1881.

Application filed March 9, 1881. (Model.)

*To all whom it may concern:*

Be it known that we, HENRY RUPPERT and JOHN MÜLLERWEISS, Sr., of Sebewaing, in the county of Huron and State of Michigan, have invented a new and useful Improvement in Washing-Machines, of which the following is a full, clear, and exact description.

Our invention consists in a novel construction, arrangement, and combination, with a tub, of two curved oscillating and reciprocating rubbing-surfaces and devices for operating them, as hereinafter more particularly described.

In the accompanying drawings, Figure 1 is a side view of an apparatus embodying our improvements. Fig. 2 is a transverse vertical sectional view taken in the line  $x x$  of Fig. 1, showing the rubbers in position. Fig. 3 is a longitudinal vertical section taken in the line  $y y$ , Fig. 2.

Similar letters of reference indicate corresponding parts.

A represents a semi-cylindrical tub, of the usual construction, supported on a frame,  $a$ , and having notches  $s$  in the upper edges of its two semicircular side pieces.

B is a concave rubber, having its side pieces nearly semicircular and its bottom or rubbing surface composed of ribbed or beaded slats  $b$ , with the ribs or beads inside.

C is a convex rubber, having its side pieces nearly semicircular and its bottom or rubbing surface composed of ribbed or beaded slats  $c$ , with the ribs or beads outside.

The rubber B is provided with gudgeons  $b^2$ , by which it is suspended in the tub A from the notches  $s$ . These gudgeons are rigidly attached to two toothed sectors, H, which gear with toothed segments  $g$  on levers G, pivoted to the side pieces of the tub A exactly below the notches  $s$ .

The rubber C is provided with a shaft,  $c^2$ , the ends of which work in the notches  $s$  above the gudgeons  $b^2$ , by which means the rubber C is suspended inside of the rubber B, with a

space between the rubbing-surfaces sufficient to admit a quantity of clothes. The ends of the shaft outside of the notches are rigidly attached to the front ends of two levers, E, the rear ends of which are connected by rods or bars  $f$  to the rear ends of the levers G, which carry the toothed segments  $g$ .

By the construction and arrangement of parts above described it will be seen that when the levers E and G are oscillated vertically they move parallel with each other, and the rubbers B and C are caused to oscillate on their axes in opposite directions, so as to thoroughly rub the clothes between them and wash them in the water or suds contained in the tub A.

The tub A is provided with a hinged lid,  $A^2$ , which fits closely when in use, so as to prevent splashing, and may be raised in order to insert or remove the clothes. In the center of this lid is pivoted a bar, J, the lower end of which is formed into a hook and the upper end into a handle. The shaft  $c^2$  of the rubber C is surrounded by a wooden sleeve, D.

When the lid  $A^2$  is about to be raised the hook is engaged with the wooden sleeve D and the rubber C is raised to and held in the position shown in Fig. 1, so as to afford access to the clothes.

The rubber B may be removed by simply lifting it up.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

In a washing-machine, the combination, with the tub A, of a concave rubber, B, convex rubber C, toothed sectors H, toothed segments  $g$ , levers G, connecting rods or bars  $f$ , and levers E, arranged and operating substantially as and for the purpose herein described.

HENRY RUPPERT.

JOHN MÜLLERWEISS, SR.

Witnesses:

JNO. MÜLLERWEISS, Jr.,

JOHN J. F. AUCH.