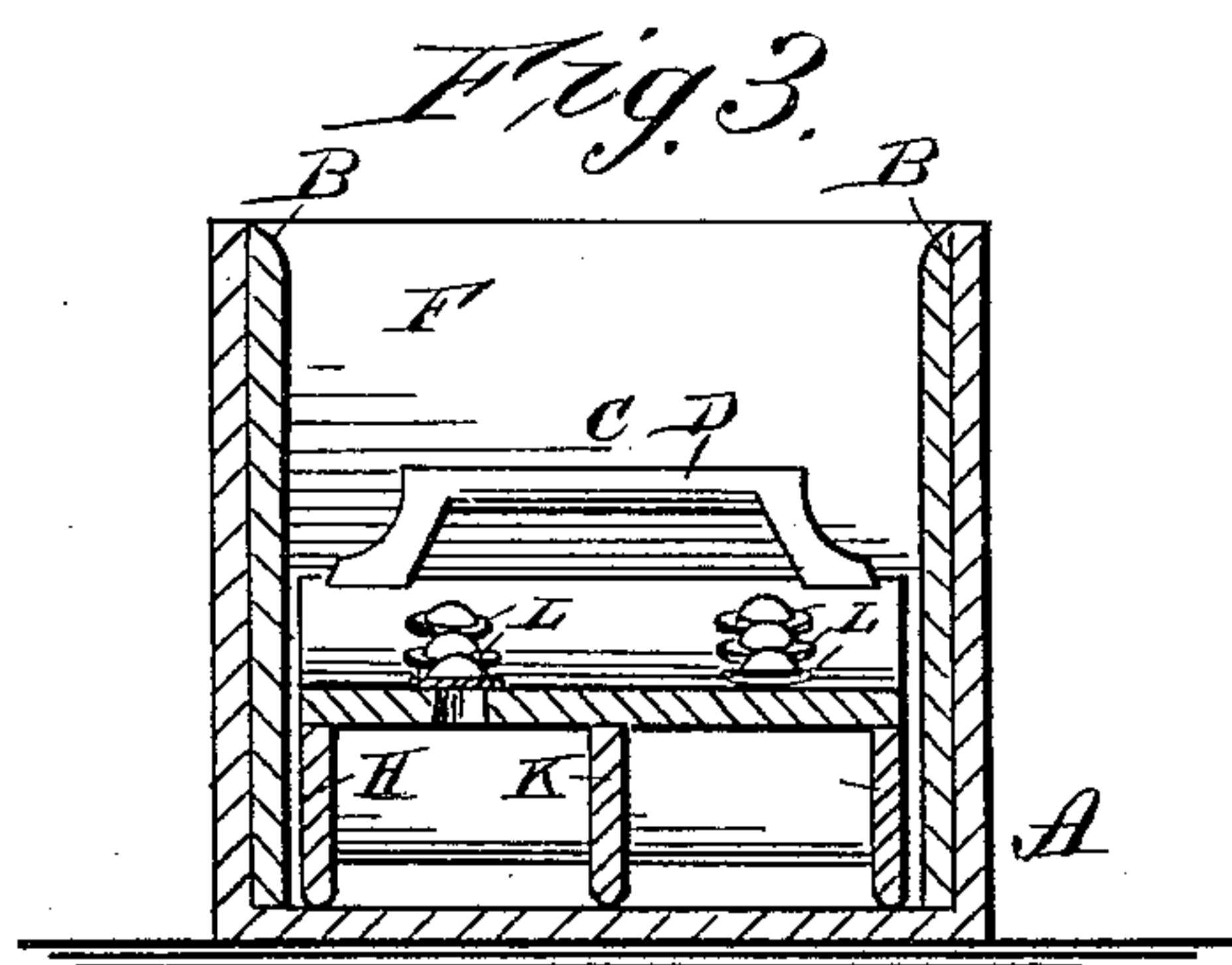
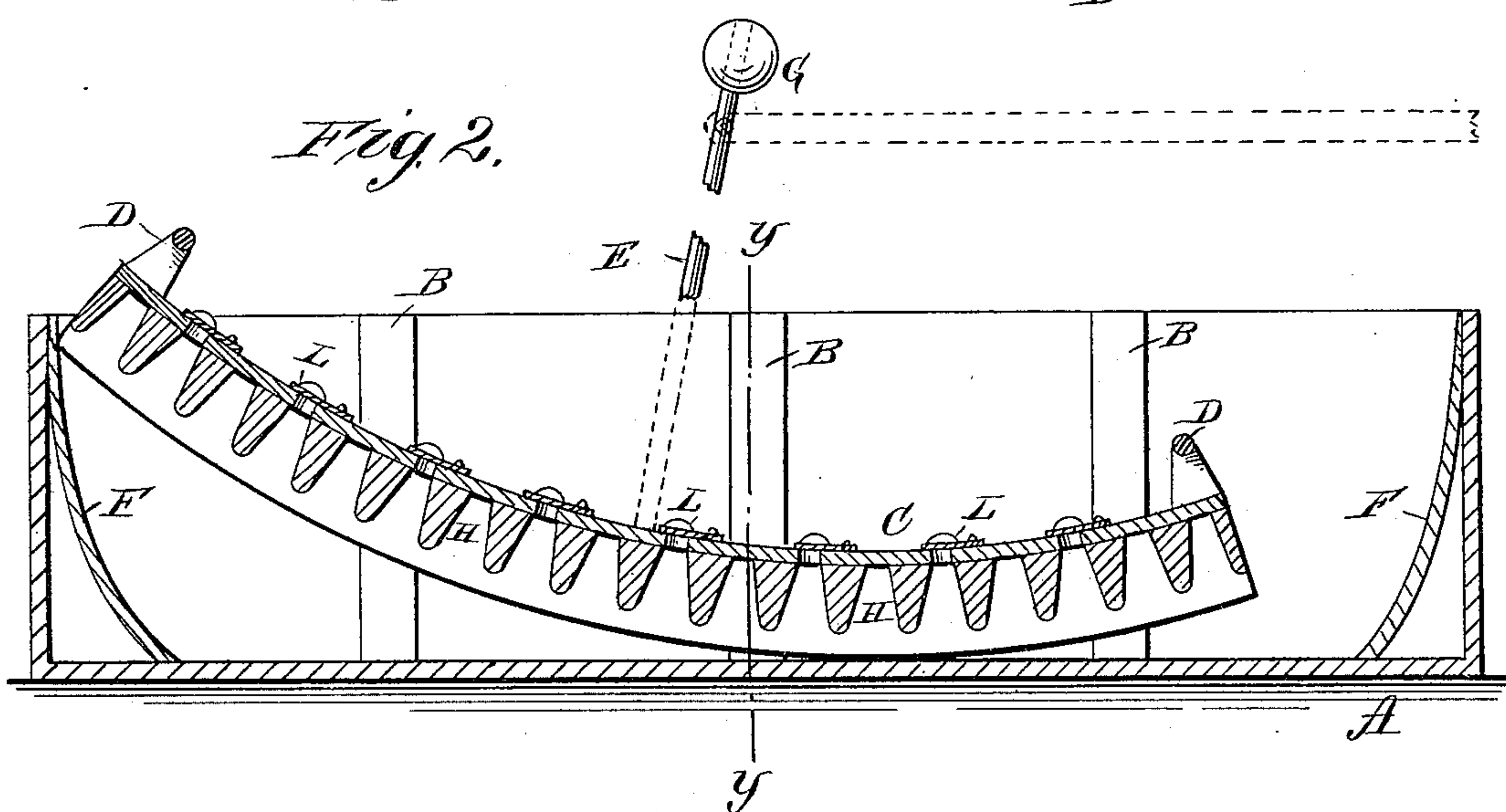
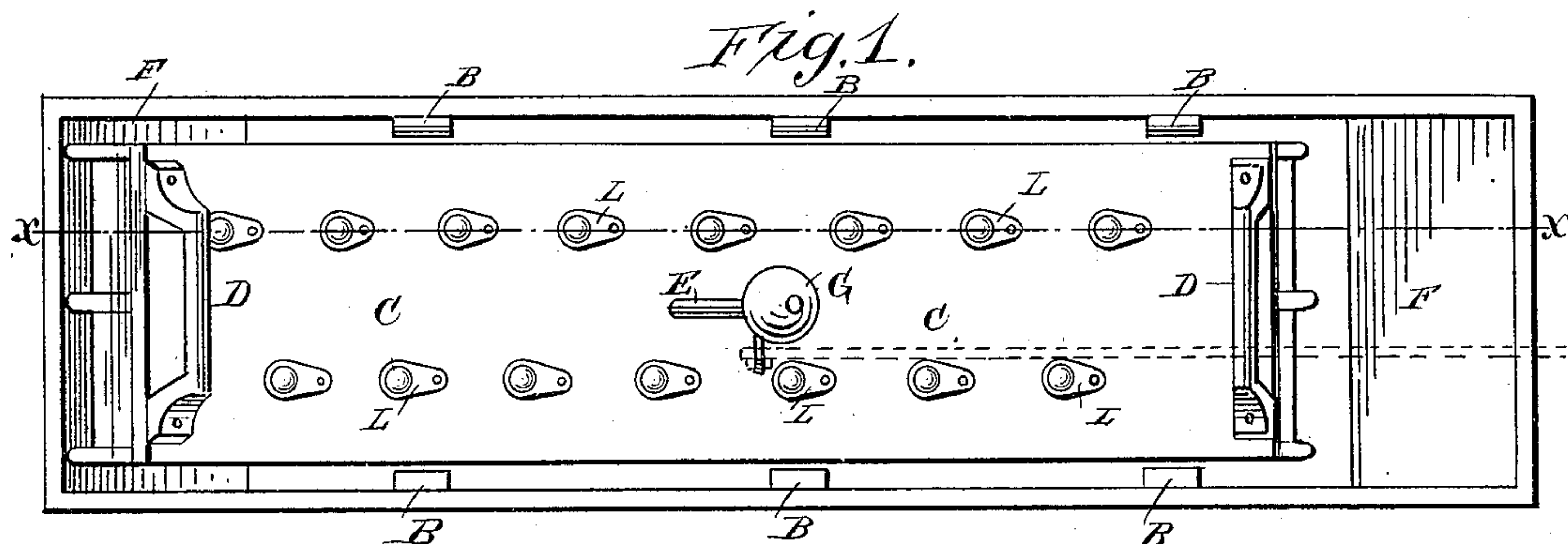


(No Model.)

S. W. WARREN.  
WASHING MACHINE.

No. 371,395.

Patented Oct. 11, 1887.



WITNESSES:

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INVENTOR:

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ATTORNEYS.

# UNITED STATES PATENT OFFICE.

SETH W. WARREN, OF OLEAN, NEW YORK.

## WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 371,395, dated October 11, 1887.

Application filed December 17, 1886. Serial No. 221,846. (No model.)

*To all whom it may concern:*

Be it known that I, SETH WILLISTON WARREN, of Olean, in the county of Cattaraugus and State of New York, have invented a new and Improved Washing - Machine, of which the following is a full, clear, and exact description.

My invention has for its object to provide a washing-machine in which the water will be repeatedly forced through the fabrics under treatment, and the rubber will be given a combined rocking and reciprocating motion in the tank, thereby thoroughly cleansing the articles.

The invention consists in a novel construction, combination, and arrangement of parts, as hereinafter fully described, and particularly pointed out in the claim.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of my improved washing-machine. Fig. 2 is a longitudinal sectional view on the line *x x*, Fig. 1. Fig. 3 is a cross-sectional view on the line *y y*, Fig. 2.

A is the water-tank, the inner vertical sides of which are provided with vertical guides B. Between the guides on either side is fitted closely and works the rubber C, the body of which is curved in the arc of a circle, and is somewhat shorter than the water-tank. In either end of the tank curved or inclined guides F are arranged, so that when the rubber is rocked in the tank, either by means of the end handles, D, or by the fixed central upright, E, through connection with a suitable power, it will be given a short longitudinal reciprocating movement in the tank by its ends coming in contact with the curved or inclined guides F. A weight, G, is fixed on the end of the upright E to counterbalance the body of the rubber, and also to cause the same to operate on the treated fabrics with greater pressure.

The body of the rubber is formed with vertical sides corresponding with the projecting side guides, B, which allow the water to escape

at the side of the rubber when operated, and is further divided by a series of transverse partitions, H, and a central longitudinal partition, K, into a number of cells opening downward. Alternate ones of these cells on either side of the body of the rubber are provided with valves L, of any suitable style, located in the top of the body and opening upward.

With this construction, when the fabrics to be treated are put in the water-tank, the rubber C placed on top of them and operated as described, the fabrics are first thoroughly rubbed between the bottom of the tank and the lower rounded edges of the cell-walls on the rocking and reciprocating rubber, the water being thereby forced into contact with every part of the fabrics, loosening and to a greater or less extent removing the unclean matter. Further, as each end of the rubber-body rises the top valves are automatically closed, and the fabrics cling by suction to that end of the body, so that when said end descends the fabrics are carried downward there- with through the water, the water forced through the pores of the fabric and out through the opened top valves. All the soiled accumulations already loosened by the rubbing action will be thus effectually removed and the fabrics thoroughly cleansed.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The washing - machine consisting of the clothes receptacle or tub provided at its sides with guide-strips and at its ends with curved strips, and the rubber, the body of which is curved in the arc of a circle, and which is provided upon its under side with rows of cells, each alternate one of a row having an upwardly-opening valve, said rubber having at its ends handles and at its middle an upright having its upper end weighted, substantially as shown and described.

SETH W. WARREN.

Witnesses:

CLARENCE L. BURGER,  
EDGAR TATE.