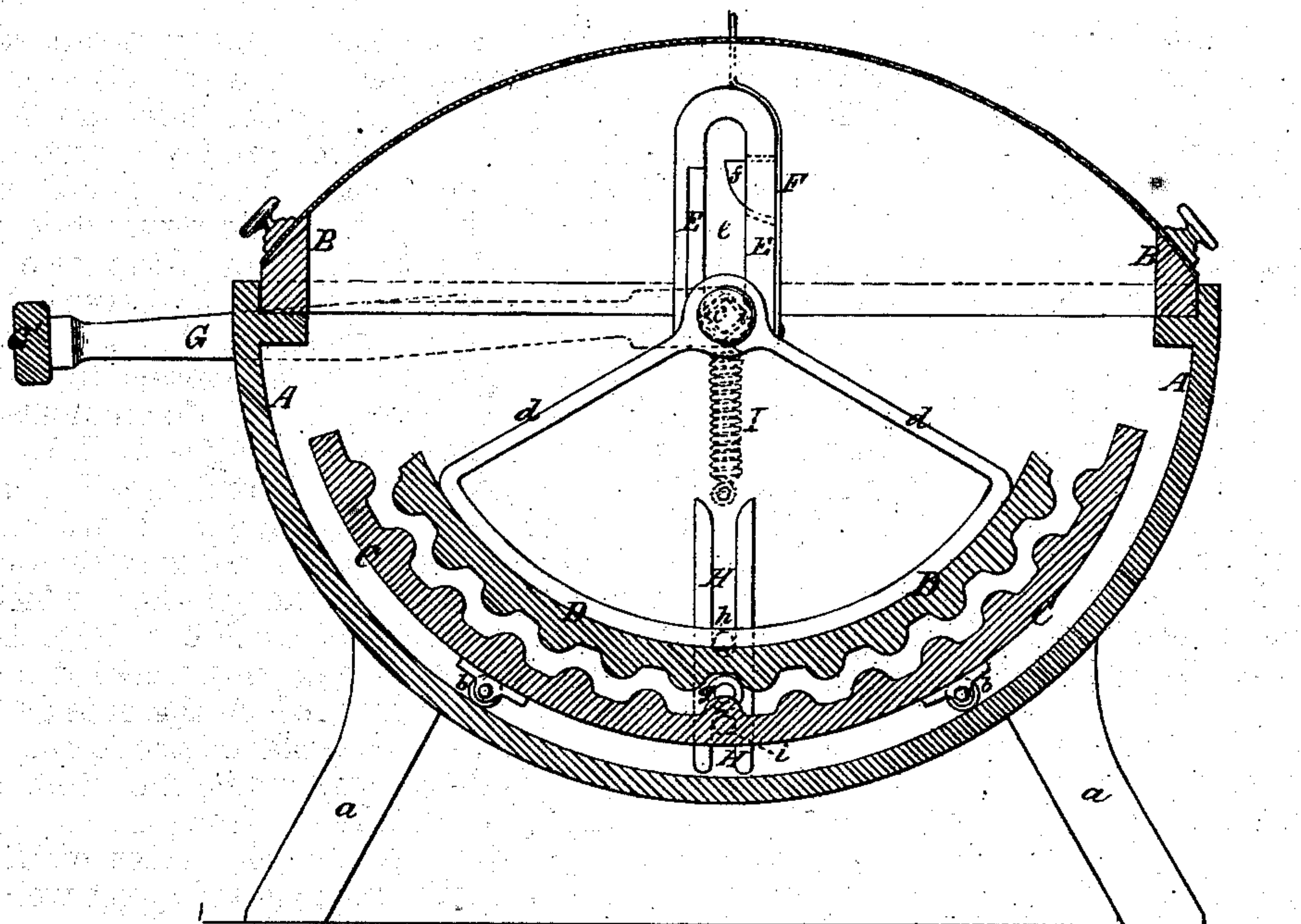


**M. COMMERCE.**  
**Washing-Machines.**

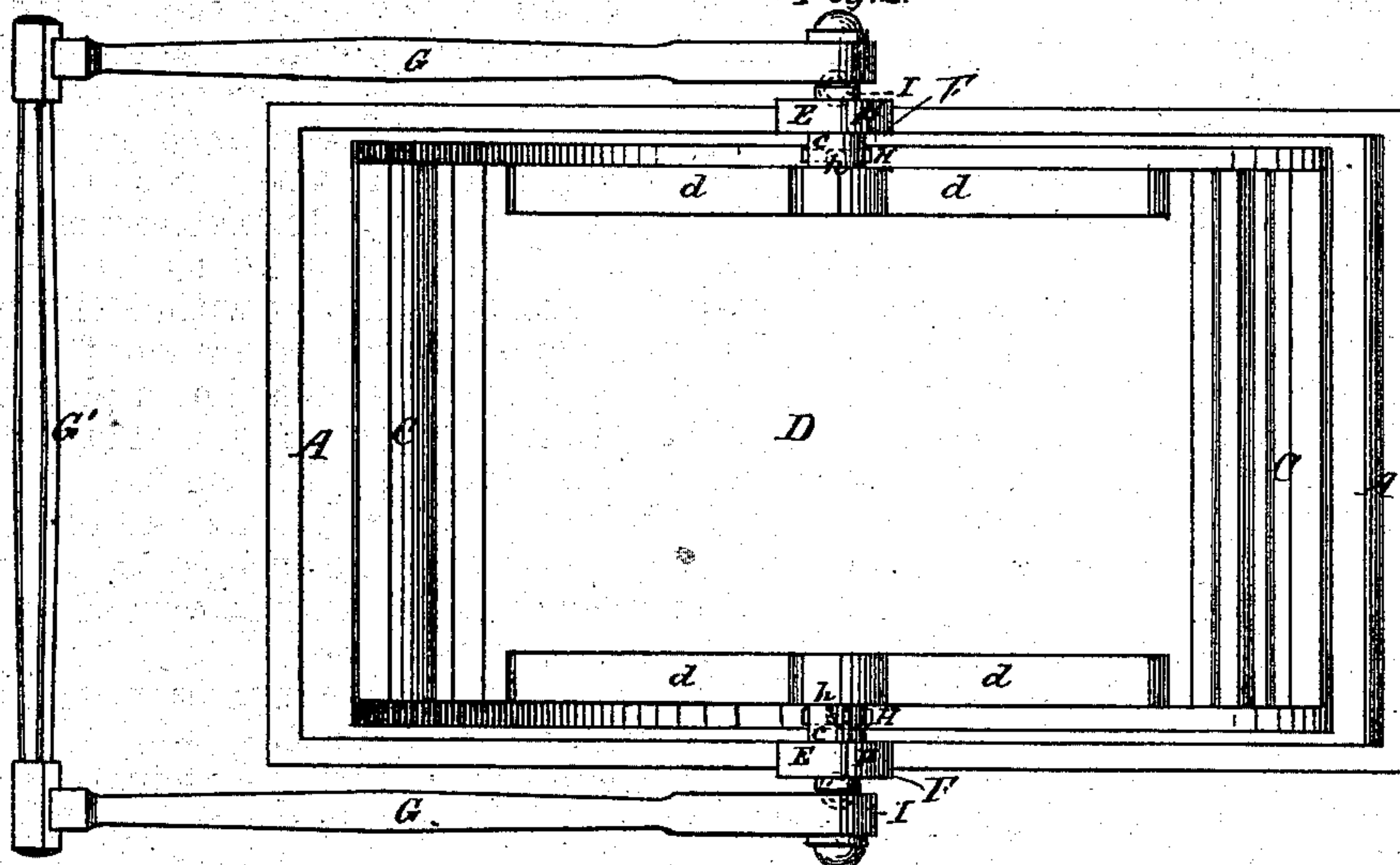
No. 158,783.

Patented Jan. 19, 1875.

*Fig. 1.*



*Fig. 2.*



Witnesses;  
*St. Brice*  
*N. Werther*

*Inventor.*

*Mathias*  
*Commerce*



# UNITED STATES PATENT OFFICE.

MATHIAS COMMERCE, OF JERSEY CITY, NEW JERSEY.

## IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **158,783**, dated January 19, 1875; application filed August 26, 1874.

*To all whom it may concern:*

Be it known that I, MATHIAS COMMERCE, of Jersey City, in the county of Hudson and State of New Jersey, have invented certain Improvements in Washing-Machines, of which the following is a specification:

This invention relates to the combination of two oscillating wash-boards, in such a manner that the said wash-boards shall be capable of moving simultaneously, but in opposite directions to each other; the object of my invention being to effect the turning of the clothes between said wash-boards, and thereby accomplish the washing of clothes with less labor and in less time than heretofore.

Figure 1 is a longitudinal vertical section of a machine embodying my invention. Fig. 2 is a plan of the same with the cover removed.

A is the tub, which should be made water-tight, and constructed longitudinally of a semicircular form, and provided with a cover, B, and proper legs *a*. C is the lower wash-board, which is placed on rollers *b* in the bottom of the tub A. Said wash-board is made in the form of a segment, to correspond with the longitudinal surface of the bottom of the tub, and is allowed to move freely on the latter. The upper surface of this wash-board is corrugated similar to common wash-boards. D is the upper wash-board, of a shape to correspond with the lower one, and is hung on pivots *c* from upright standards E by means of arms *d*. The under surface of the wash-board D is corrugated like the lower wash-board, C. The wash-board D is allowed to swing freely on its pivots *c*, so that its corrugated surface may come close to the upper surface of the lower wash-board, C, the pivots *c* being allowed a free up-and-down motion. The standards E are made fast to the outer sides of the tub A, and are provided with upright slots *e*, in which the pivots *c* are allowed to turn. F are spring-catches, which are arranged to the sides of the standards E so that the noses *f* of the former can reach through slots in the sides of the standards E to about the middle of the slots *e*. The ends of the pivots *c*, which are made to extend a certain distance beyond the standards E, are formed to receive arms or levers G, which are rigidly secured to the pivots *c*, and at their other ends connected by means of a rigid

bar, G'. H are slotted levers arranged close to the inner sides of the tub A, to turn on pivots *g*, which form the fulcrums for said levers. Pins *h*, which are fast to the sides of the upper wash-board, D, are engaged with the levers H above their fulcrums, while pins *i*, which are fast to the sides of the lower wash-board, C, are engaged with the levers H below their fulcrums. Thus, when the wash-board D receives an oscillating motion by means of the arms or levers G, it communicates said motion to the lower wash-board, C, by means of the slotted levers H and pins *h i*, in such a manner that while one wash-board moves in one direction, the other moves in the opposite direction, causing the clothes which are placed between said wash-boards to be continually turned during the process of rubbing. I are springs arranged on the outside of the tub A, so that one end of the spring is attached to the pivot *c*, while the other end is secured to the side of the tub A. These springs, arranged on both sides of the tub, serve to exert the required pressure on the upper wash-board, D. To enable the easy insertion or withdrawal of the clothes into or from the tub A, the upper wash-board, D, is lifted up within the upright standards E after the cover is removed, till the pivots *c* are held in place by the spring-catches F, when the wash-board can be turned out of the tub A. The cover B is put in its place whenever the operation of washing is going on, so as to keep the steam partially within the tub A. The water and dirt can be drawn off from the bottom of the tub by means of a plug or faucet, as usual. The springs I should be detached from the sides of the tub whenever the upper wash-board is lifted out of the tub, so as not to stretch the springs too much.

This machine can easily be worked by hand, or by any known motor.

What I claim as my invention, and desire to secure by Letters Patent, is—

The combination, with the oscillating wash-boards C D, of the pivots *c*, slotted levers H, pins *h i*, and springs I, substantially as and for the purpose herein set forth.

MATHIAS COMMERCE.

Witnesses:

R. GREVEL,  
N. WERTHER.