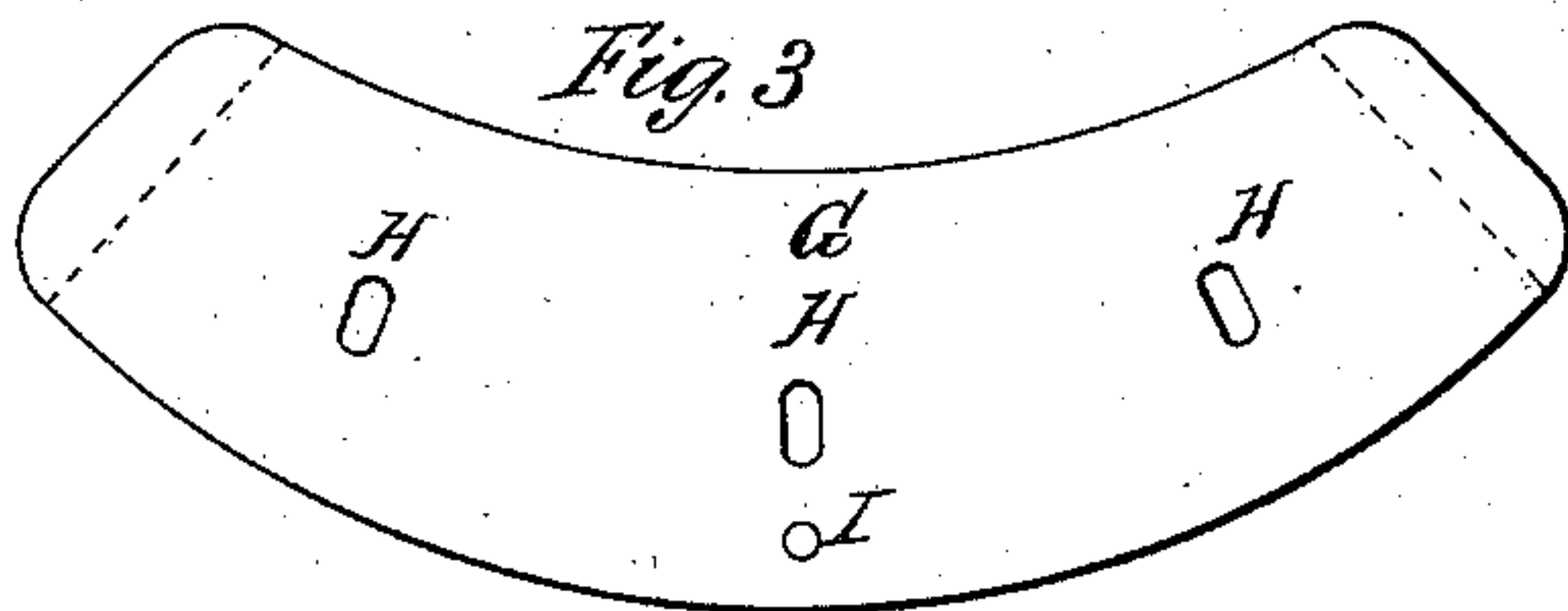
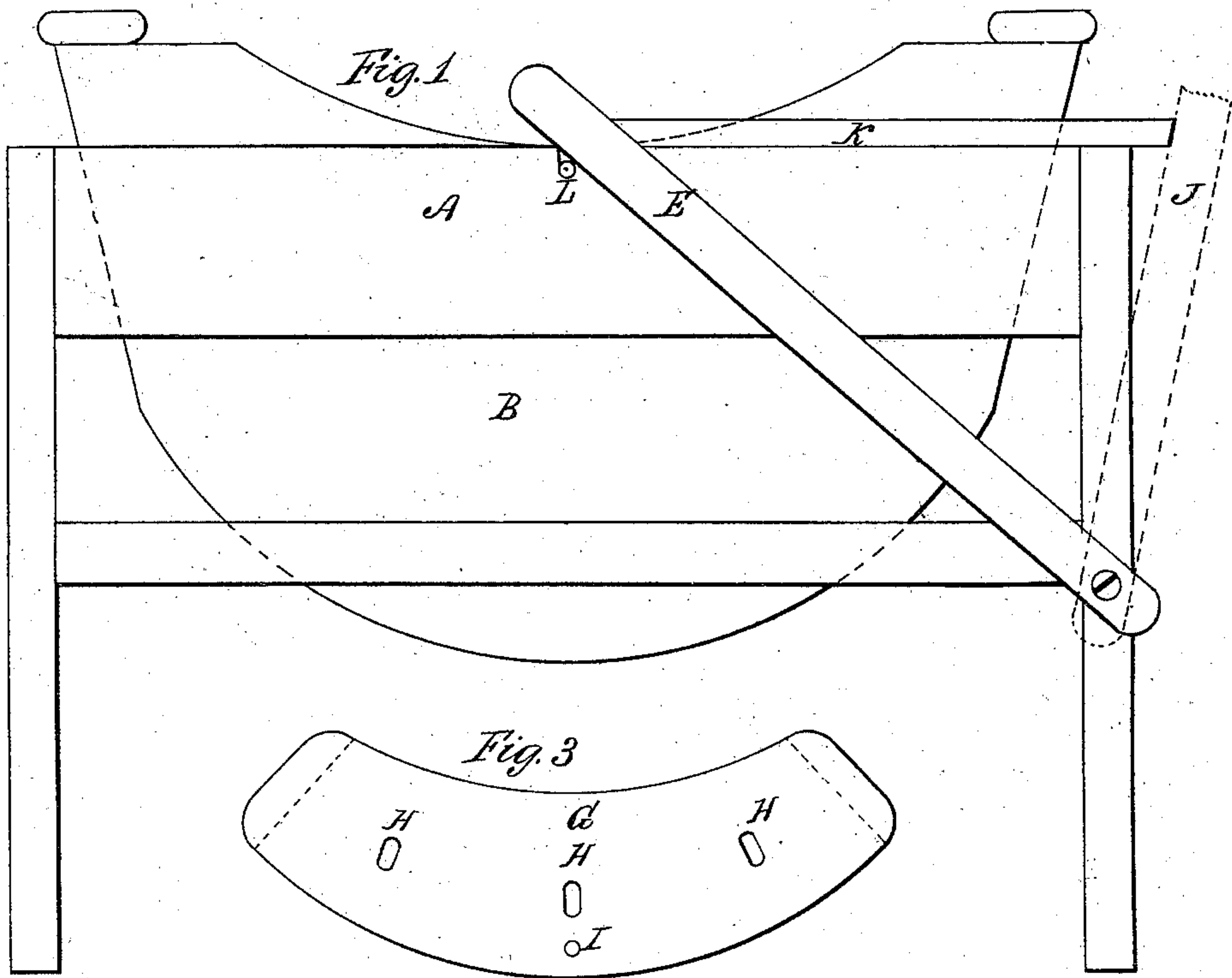
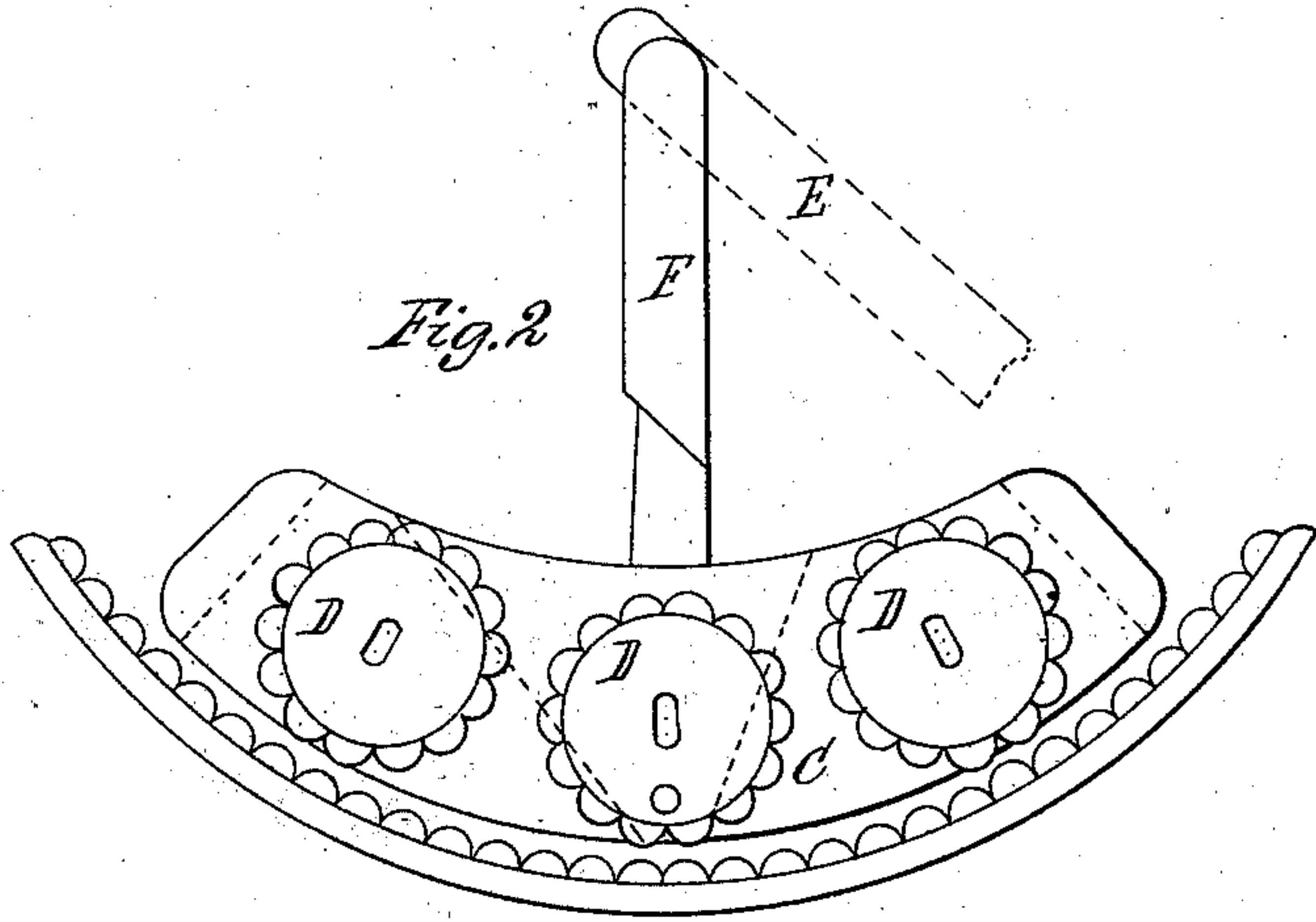


*J. Lee,*

*Washing Machine,*

*Nº 33,352.*

*Patented Sep. 24, 1861.*



*Witnesses;*  
*Wm. M. O'Leary*  
*Ed. A. Stilson*

*Inventor;*  
*Joel Lee*

# UNITED STATES PATENT OFFICE.

JOEL LEE, OF GALESBURG, ILLINOIS.

## IMPROVED WASHING-MACHINE.

Specification forming part of Letters Patent No. 33,352, dated September 24, 1861.

*To all whom it may concern:*

Be it known that I, JOEL LEE, of Galesburg, in the county of Knox, in the State of Illinois, have invented a new and useful Improvement in Washing-Machines; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists, first, in providing oscillating arms, which, being fastened at one end to the roller-frame and pivoted at the other end to the general frame, serve the purpose of steadying the roller-frame longitudinally, thereby securing the efficient operation of the rollers, and being pivoted at or near the line indicated by the point of resistance (or the roller-bearings) the resistance is equal, whether either end of the tub is going up or down. These arms are also serviceable in permitting the roller-frame to accommodate itself to the inequalities in the quantity or general surface of the clothes, and, again, their point of attachment to the general frame forms an advantageous fulcrum for raising the rollers out of the tub; second, in furnishing a roller-frame whose bearing is placed below the bearings for the rollers, which gives to the frame the capacity to rock or climb more easily over inequalities in the surface of the clothes; third, in furnishing slotted bearings for the rollers, thus enabling them to adjust themselves freely to small prominences in the clothes, and, fourth, in furnishing a spring for the purpose of holding the rollers in their place when raised out of the tub.

In order to enable others skilled in the art to manufacture and use my invention, I will proceed to describe its construction and operation in the accompanying drawings, which make a part of this specification.

Figure 1 is a side view; Fig. 2, an internal view; Fig. 3, an internal view of a section of the roller-frame.

A is the general frame; B, the semicircular tub; C, the roller-frame; D D D, the corrugated rollers; E, the oscillating arms; F, the upright arms; G, a section of the roller-frame. H H H are slotted bearings for the roller-journals; I, the bearing for the roller-frame placed below the roller-bearings; J, the oscillating

arm when the roller-frame is raised out of the tub and held by the spring.

K is the spring; L, the journal supporting the tub at its top and center, thus producing a swinging motion when operated.

When my invention is to be used, the operator raises the rollers out of the tub by the cross-bar which connects the upper ends of the upright arms until the oscillating arm passes the end of the spring by which the rollers are held in their place. The clothes are then laid in the bottom of the tub. Then the end of the spring is pressed inward with one hand till it passes the oscillating arm, while the rollers are lowered into the tub with the other. The tub is then swung by taking hold of either end or standing at the side and placing one hand on each end. This operation moves the corrugated bottom of the tub and the clothes under the corrugated rollers, which, being held fast longitudinally and the pressure being upon the clothes, revolve upon their axes, thus avoiding friction from a rubbing process and cleansing the clothes by the agitation of the water and squeezing or pressing it through their fibers. It will be seen that as the water naturally seeks the lowest point in the bottom of the tub, and as that point is constantly changing, it is forced by its own weight through the clothes in addition to the force produced by the pressure and revolutions of the rollers. It is clear, also, when weight is used instead of springs that the pressure on the clothes is uniform whether the quantity is large or small or whether the surface is smooth or unequal. Hence the operation is performed with greater ease. The rolling instead of the rubbing process also contributes to ease of operation, as the clothes are not shoved or displaced with respect to the bottom of the tub.

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

The arrangement of the box A, the roller-frame C, the rollers D D D, the arms F and E, the spring K, and the arm J, the several parts being constructed and operating as and for the purpose herein specified.

JOEL LEE.

Witnesses:

WM. M. WOOLLEY,  
L. A. STILSON.