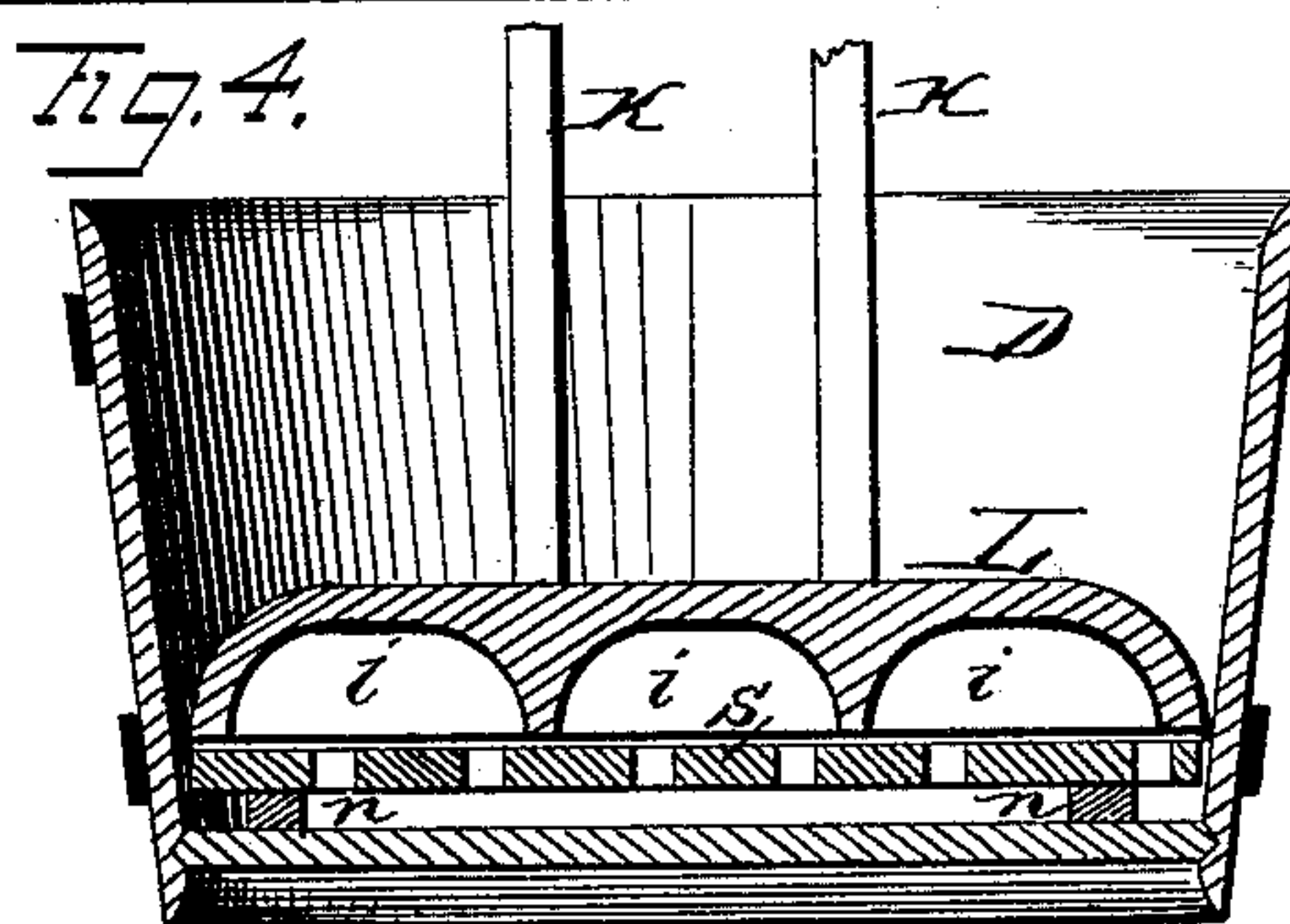
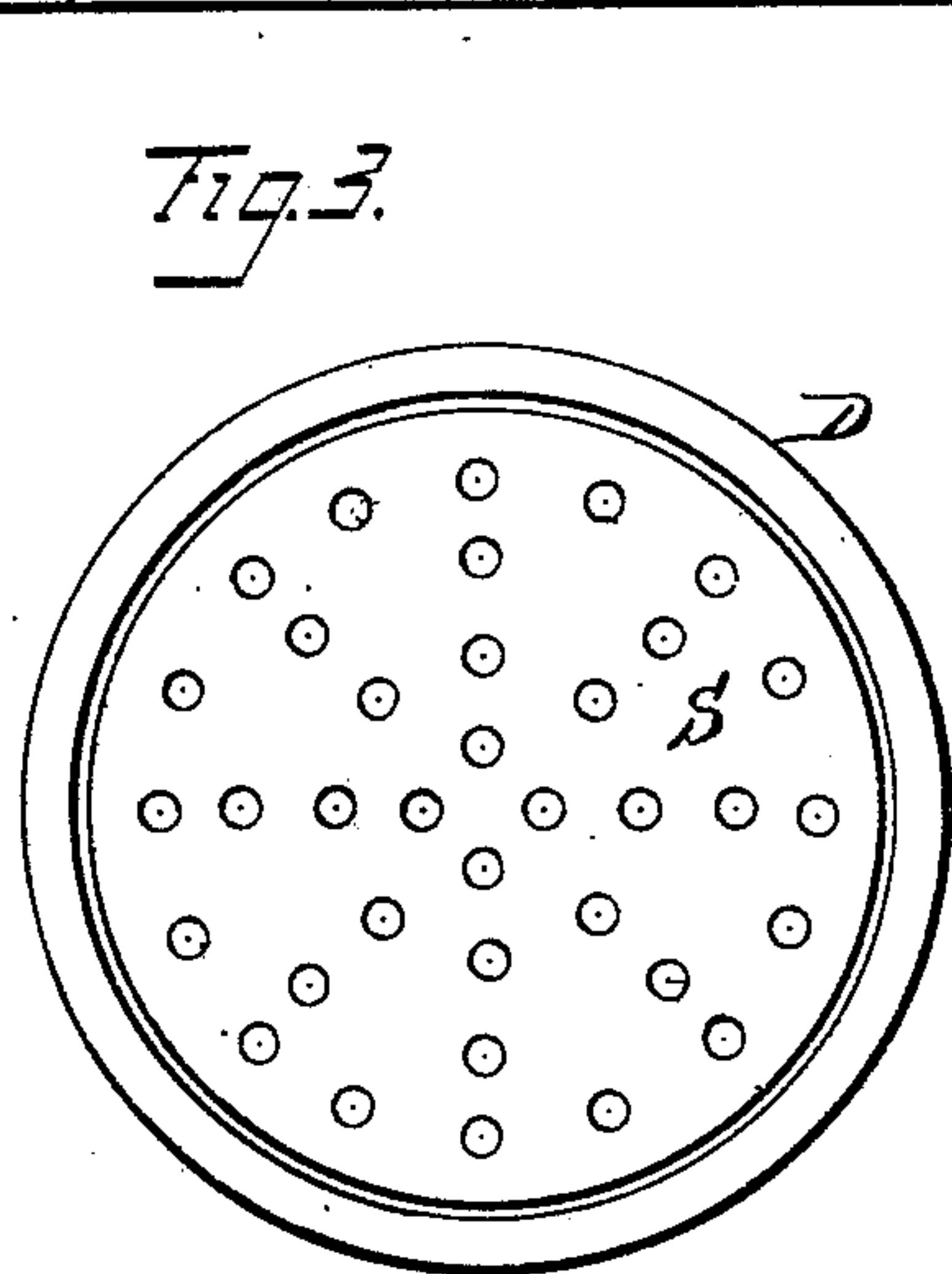
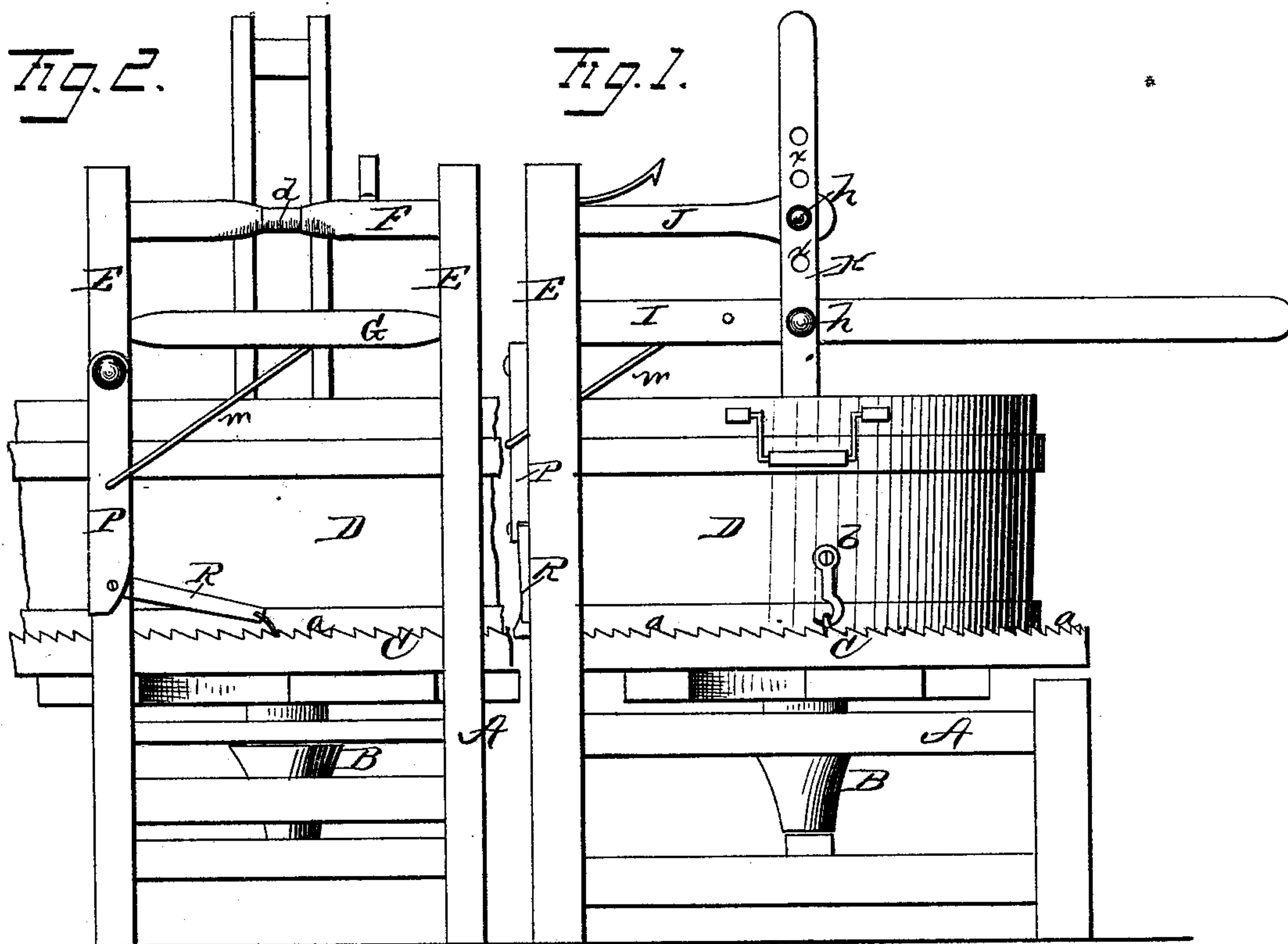


(No Model.)

W. H. LONG.
Washing Machine.

No. 229,433.

Patented June 29, 1880.



Witnesses:
H. B. McArthur,
John C. Rogers.

Inventor.
Wm. H. Long
per J. H. Alexander
Attorney.

UNITED STATES PATENT OFFICE.

WILLIAM H. LONG, OF COVINGTON, OHIO, ASSIGNOR TO HIMSELF, JOHN H. LONG, AND GEORGE CLARK, OF SAME PLACE.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 229,433, dated June 29, 1880.

Application filed March 27, 1880. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. LONG, of Covington, in the county of Miami and State of Ohio, have invented certain new and useful Improvements in Washing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form part of this specification.

My invention relates to that class of washing-machines in which the tub rotates and a plunger is worked up and down in the tub; and it consists in certain peculiarities of construction, as will be hereinafter more fully set forth, and pointed out in the claim.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a side elevation of a washing-machine embodying my invention. Fig. 2 is a rear view of the same. Fig. 3 is a plan view of the tub. Fig. 4 is a central vertical section through the tub and plunger.

A represents a bench of any suitable dimensions, or a frame-work of any convenient construction, provided with a central vertical shaft, B, on the upper end of which is secured a disk, C, having around its periphery a rim, *a*, projecting upward and toothed along its upper edge, as shown. Upon this disk is placed the tub D, which may be fastened thereto by hooks *b* or other suitable or convenient means.

At the rear end of the bench or frame A are two upright standards, E E, extending upward for a suitable distance, and connected at or near their upper ends by a cross-bar, F, to make the frame-work firm and strong.

Below the cross-bar F, in the standards E, is a rocking bar, G, to which are attached the arms I I, having their forward ends connected by a suitable handle.

The center of the cross-bar F is turned down to a round journal, over which is placed a strap-hinge, *d*, forming the connection with one or two arms, J.

L represents the plunger, formed with one or

more recesses or air-chambers, *i*, in its under side. This plunger is provided with two upwardly-projecting bars, K K, which are perforated with series of holes *x*, and connected by pins *h h* to the arms I and J, as shown in Fig. 1.

By means of the holes *x* in the bars K the plunger L can be adjusted up or down, as required, according to the quantity of clothes in the tub.

One of the arms, I, is, by a rod, *m*, connected with a lever, P, pivoted at its upper end to the rear side of one of the standards E, and to the lower end of this lever is pivoted the pawl R, which operates in the toothed rim *a* of the disk C, to rotate the same with the tub every time the plunger is raised.

On the bottom of the tub is a false perforated bottom, S, provided on its under side with cleats *n*, which keep it raised from the regular bottom of the tub. This false perforated bottom allows the water to be pressed down through the clothes and through this false bottom, thus giving free circulation to the water and facilitating the removal of the dirt.

The pawl R, as shown and described, is arranged in the rear, out of the way of the person operating the machine, and always in place.

I am aware that a washing-tub made to rotate by the action of the handle and acting in conjunction with a plunger or pounder is not new, and therefore lay no claim, broadly, to such a device.

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

The combination, in a washing-machine, of the revolving disk C, tub D, and toothed rim *a*, with arm I, rod *m*, lever P, and pawl R, said arm, lever, and pawl being arranged to rotate the tub at the rear side by the action of the arm I, as herein shown and described.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

WM. H. LONG.

Witnesses:

D. J. MARTIN,
JOHN INGLE.