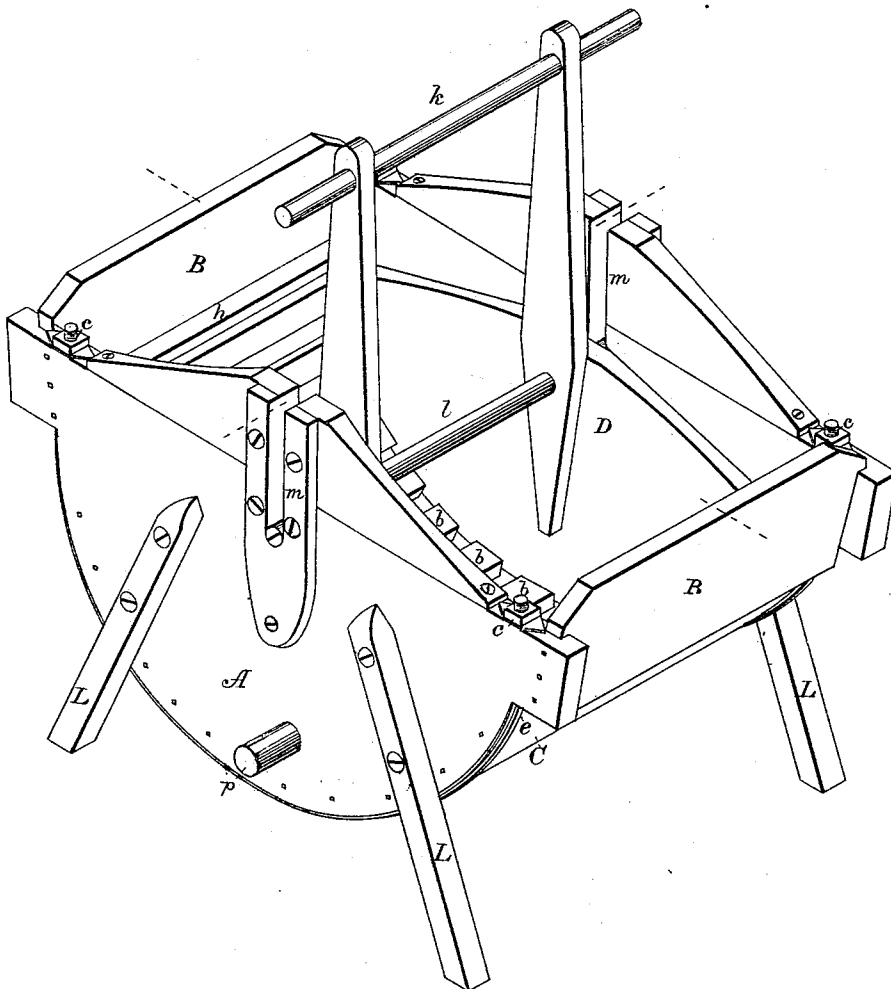


D. & D. F. BORN.  
Washing-Machine.

No. 166,584.

Patented Aug. 10, 1875.

*Fig. 1.*



Witnesses:

*M. Tinsley*  
*F. B. Schott*

Inventor:

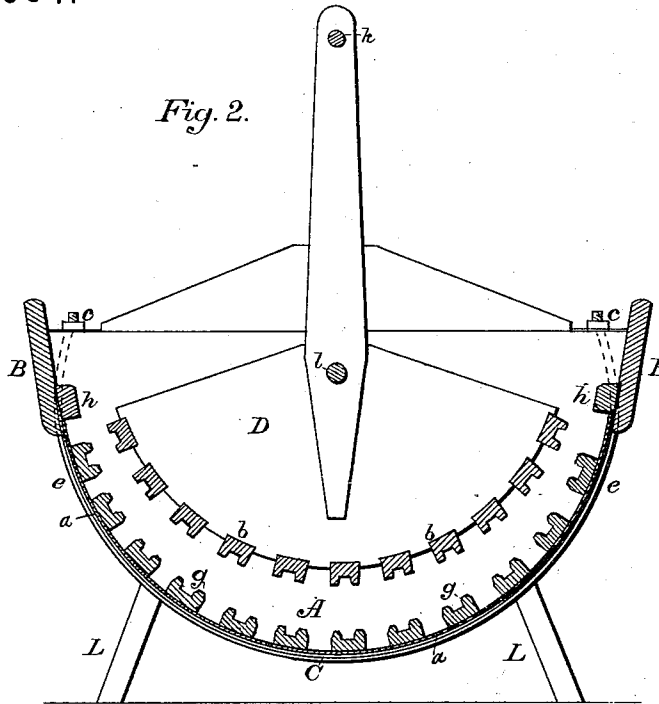
*David Born*  
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*Atty*

**D. & D. F. BORN.**  
**Washing-Machine.**

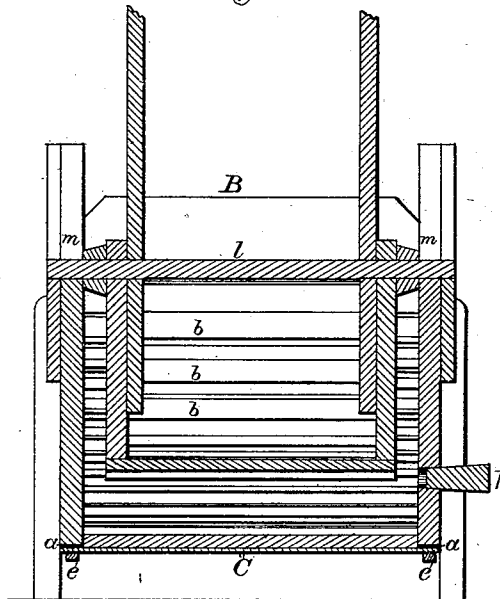
No. 166,584.

Patented Aug. 10, 1875.

*Fig. 2.*



*Fig. 3.*



Witnesses:

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# UNITED STATES PATENT OFFICE.

DAVID BORN AND DAVID F. BORN, OF FULTON, OHIO.

## IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **166,584**, dated August 10, 1875; application filed March 6, 1875.

*To all whom it may concern:*

Be it known that we, DAVID BORN and DAVID FRANKLIN BORN, of the town of Fulton, in the county of Fulton and State of Ohio, have invented certain new and useful Improvements in Washing-Machines; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

Similar letters of reference indicate corresponding parts in the different figures.

Figure 1 represents a perspective view of the machine. Fig. 2 is a vertical cross-section, and Fig. 3 presents a vertical longitudinal section of the device.

This invention relates to that class of washing-machines technically called reciprocating rubbers, from the motion given to the rubber in operating the machine, the object in the present case being to so construct the machine that, notwithstanding the great expansion and contraction of the wooden sides caused by the vicissitudes of temperature and moisture to which it is exposed, the outer metallic case may always be kept tight and in serviceable condition; and the invention consists in the construction and arrangement of the parts, as will be hereinafter fully explained, and then pointed out in the claim.

A represents the wooden sides of the machine, connected to each other by the cross-pieces B at each end, and the grooved bed-pieces g, which form a semi-cylindrical rubbing-bed, upon which the textile or other fabric rests during the operation of washing. An outer metallic case, C, is then applied to the semicircular lower edges of the side pieces, having interposed between them an elastic strip of rubber packing or other analogous material, a, which, when the case C is drawn tightly into its proper position by means of the metallic straps e, forms a joint impervious to water between them, and at the same time, owing to the elasticity of the packing, allowing considerable expansion or contraction of the sides without disturbing the tightness of the joint. This is further facilitated by the screw-nuts c upon the ends of the straps, which allows them to be tightened or loosened at

pleasure. It will also be observed that the case C is not attached to the side pieces at any point, its ends being secured to the two strips h, which are allowed to move freely between the side pieces as the latter expand and contract. The rubber D is constructed of two side pieces of quadrant shape, as shown in the drawings, the lower circular portion provided with the grooved pieces b, placed at such a distance from each other as to allow free passage to the water employed in the process of washing, and being further connected by the round bars or rods k l, the upper one of which also serves as a handle, by which the device is operated. The others, l, extending outward through the slots m in the sides of the machine, form the pivots upon which the rubber oscillates. These slots m allow the rubber to rise and accommodate itself to the thickness of the material upon which it is operating without varying its point of oscillation in a lateral direction; also allow of its removal when desired, it being only necessary to lift the pivots out of the slots in order to disengage the rubber D from the lower part of the machine. A plug or faucet, p, inserted in one of the side pieces, serves to drain the water from the machine when desired, and suitable legs L are provided for its support.

The operation of this machine is similar to that of others of its class, and is so common and well understood as to render a description superfluous.

We are aware of the patent granted to O'Louval November 26, 1872, and claim nothing therein shown; but

What we do claim, and desire to secure by Letters Patent, is—

The combination of the case C, having bars h at each end unattached to the side pieces, cross-pieces B B, binding-straps e, sides A, and packing-strips a, substantially as and for the purpose described.

In testimony that we claim the foregoing we have hereunto set our hands this 18th day of February, 1875.

DAVID BORN.  
DAVID F. BORN.

Witnesses:

R. B. FLICKINGER,  
JOHN FLICKINGER.