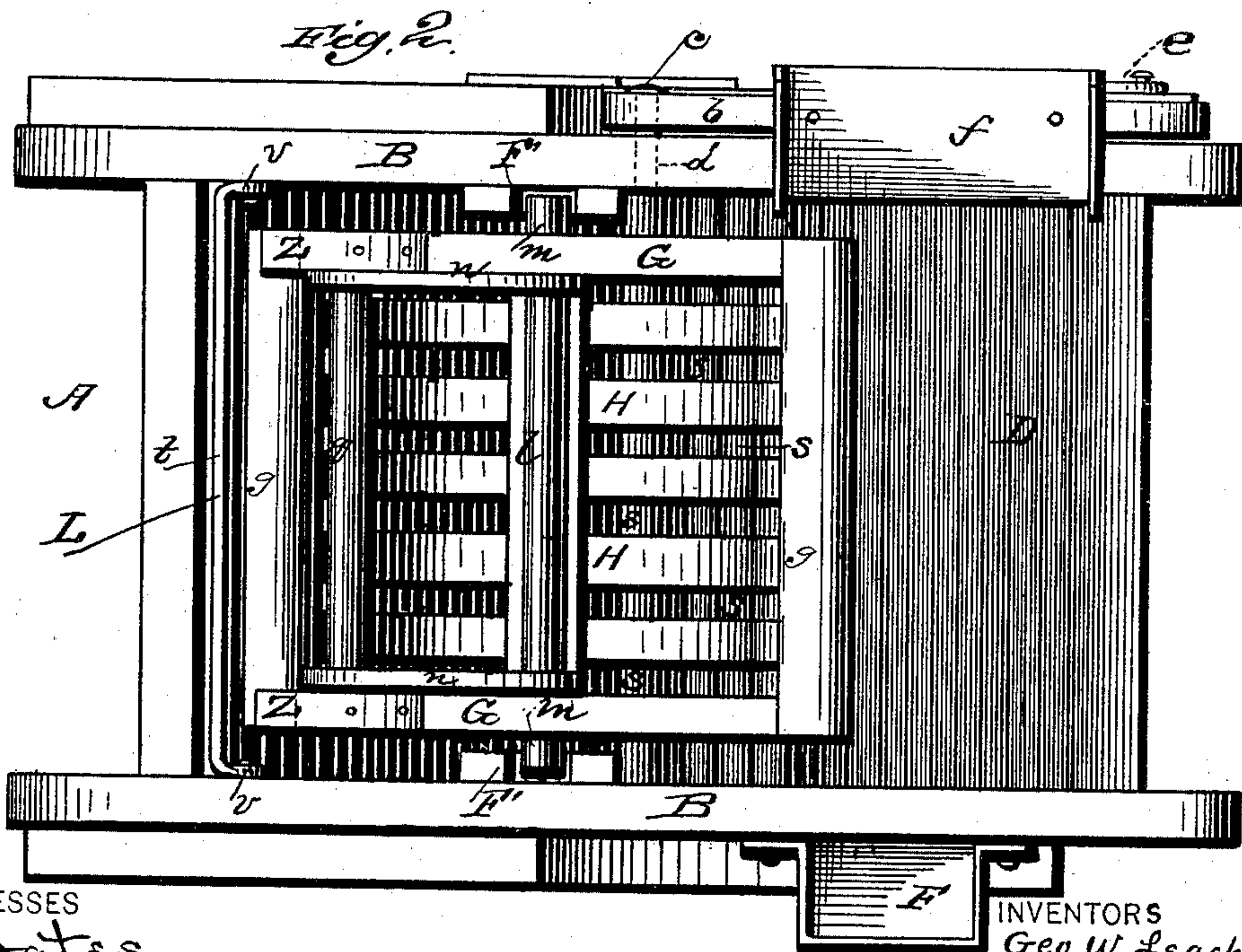


2 Sheets—Sheet 1.

WASHING MACHINE.

Patented Apr. 28, 1885.



WITNESSES

E. H. Bates.

John T. Morrow.

INVENTORS

Geo. W. Leach

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by Anderson & Smith  
their ATTORNEYS

ATTORNEYS

(No Model.)

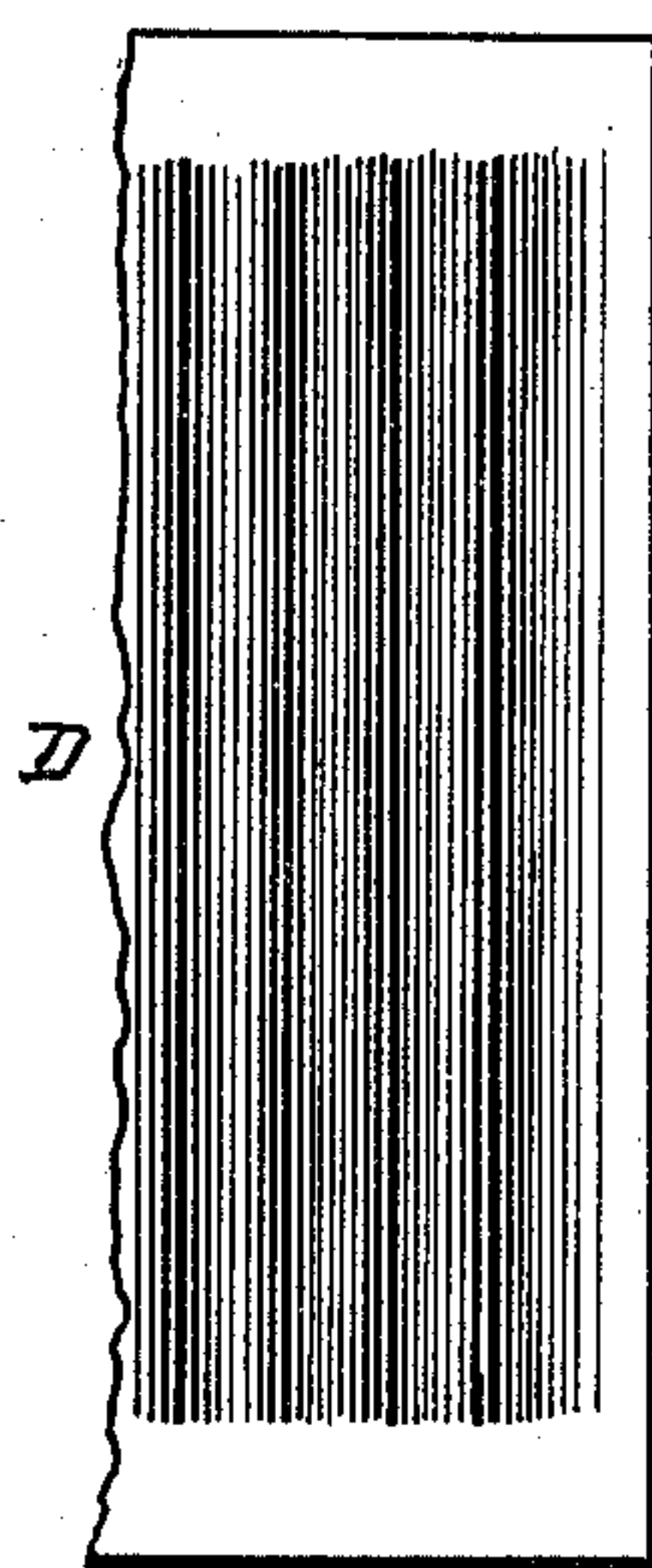
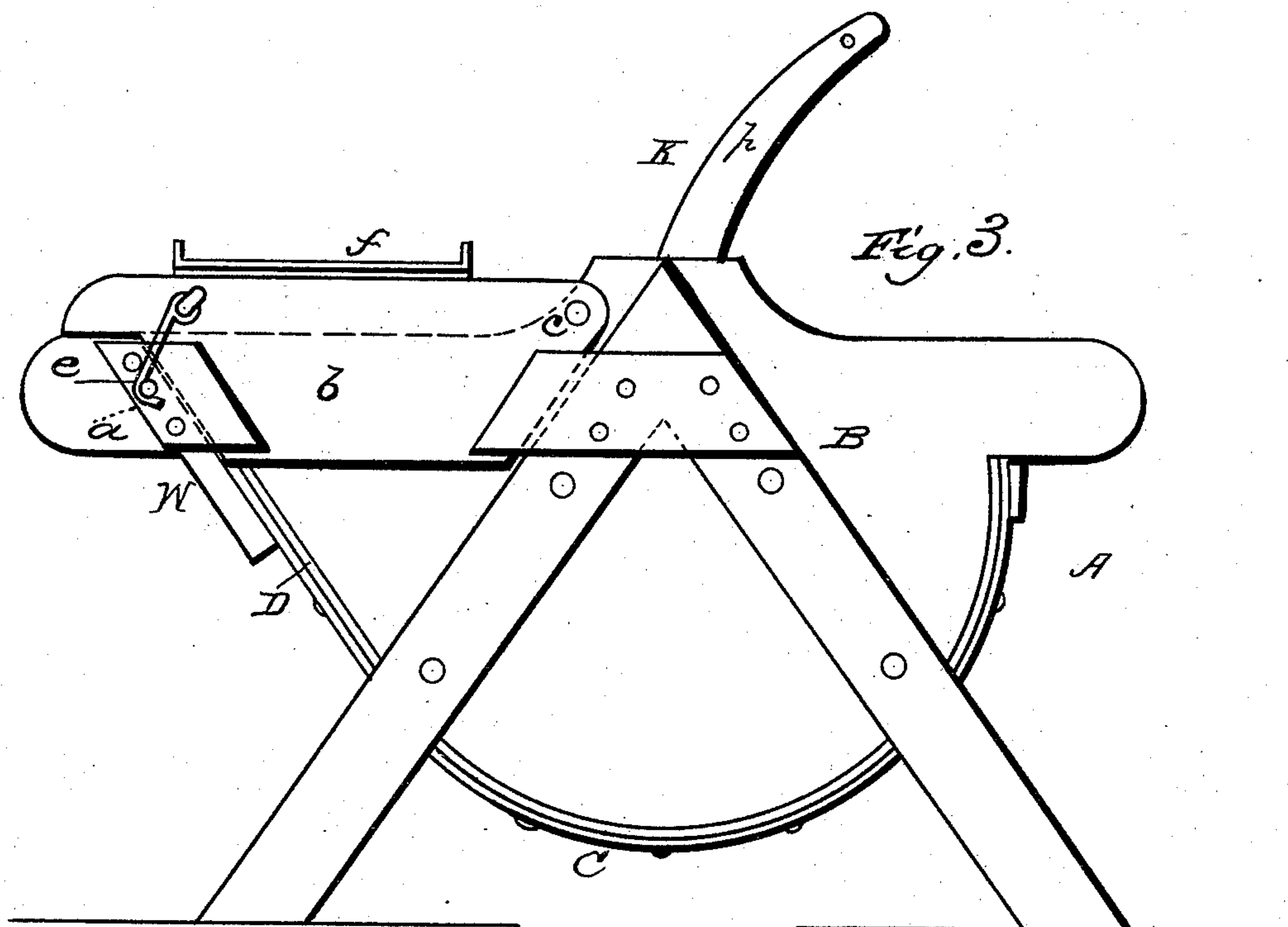
2 Sheets—Sheet 2.

G. W. LEACH & J. H. SMITH.

WASHING MACHINE.

No. 316,795.

Patented Apr. 28, 1885.



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E. H. Boates  
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# UNITED STATES PATENT OFFICE.

GEORGE W. LEACH AND JAMES H. SMITH, OF STEWARTSVILLE, MISSOURI.

## WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 316,795, dated April 28, 1885.

Application filed November 23, 1883. (No model.)

*To all whom it may concern:*

Be it known that we, GEORGE W. LEACH and JAMES H. SMITH, citizens of the United States, residing at Stewartsville, in the county of De Kalb and State of Missouri, have invented certain new and useful Improvements in Washing-Machines; and we do 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 appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 of the drawings is a representation of a transverse sectional view of our machine. Fig. 2 is a plan view of the same. Fig. 3 is a side elevation, and Fig. 4 is a detail view, of the tangential portion of the corrugated bottom.

This invention has relation to washing-machines; and it consists in the construction and novel arrangement of devices, all as hereinafter set forth and particularly pointed out in the appended claim.

In the accompanying drawings, the letter A designates the tub, which is formed with parallel sides B and circularly-curved bottom C, said bottom being at one end made tangential to the curved portion, as indicated at D, and this tangential portion being inclined or sloping. The sides of the tub are made of wood and the bottom of transversely-corrugated zinc, the corrugations being also formed on the tangential portion, which is designed to serve as a wash-board for hand-rubbing, when the lever-rubber E is thrown forward and upward out of the way. On one side of the tub, near the end at which the operator stands, is attached a soap-box, F. The other side of the tub is provided with flanged bearings a, designed to engage the sloping ends of a movable base, b, to which the wringer is secured. The inner end of the base b is provided with a journal-stud, c, which engages a bearing, d, in the side of the tub, near its central portion, in such a manner as to be easily removable therefrom when the base b is turned up out of its bearings a. When the base is placed in its bearings, it is designed to be secured by means of a hook and stud, as indicated at e. To a sloping or beveled portion of the upper edge of the base b is attached a sloping drain-

plate, f, which extends inward sufficiently to guide the water dripping from the wringer into the tub.

The bottom of the tub is usually made of two sheets of zinc, the inner sheet being corrugated, as above stated, and the outer sheet being smooth. In order that the edges of the corrugated zinc may fit the edges of the sides B they are left smooth, and the corrugations are pressed upward above the level thereof, so that when the two sheets are applied their edges will come neatly in contact and may be secured to the edges of the sides B by the same screws or nails.

Vertically arranged in the central portions of the sides B are the vertically-slotted bearings F', which are open at their upper ends, as shown, to receive the journals of the rubber E. These slotted bearings are U-shaped, the upper ends of the branches being beveled to give a flaring form to the openings, so that the journals of the rubber will be properly guided into the slot-bearing when said rubber is brought down into working position.

The rubber E is generally of semi-cylindrical form, and consists of semicircular sides G, cross-bars g and h, intermediate semicircularly-curved bottom bars, H, interspaced between the sides G and the lever-handle K.

The sides G are plain and are finished on their lower or operating edges with wave-like corrugations k. The sides are connected by the end bars, g, and the bottom or central cross-bar, h, and extending across the middle portion of the rubber is the round bar l, the ends of which project through the sides to form the journals m. The uprights n of the handle K are secured centrally and vertically to the inside walls of the sides G and are perforated for the passage of the round bar l. These uprights are extended upward from the rubber in obliquely-curved form, as indicated at p, toward the end of the tub farthest from the operator, in order to give a long sweep to the rubber when the same is operated, and in order to bring the end of the uprights downward out of the way when the rubber is turned up out of the water. The extended ends of the uprights are connected by the handle-bar q, and the lower ends of these uprights are usually dovetailed to the cross-bar h.

The semicircularly-curved bottom bars, H,



are formed on their under or working edges with wave-like corrugations *k*, similar to those of the sides *G*. Their upper edges are concave and are notched at *r* to receive the bottom cross-bar, *h*. These bottom bars are separated from each other by interspaces *s*, through which the water is designed to pass freely, when the rubber is in operation, into and through the interior concavity of the rubber.

10 *L* represents a vibratory journal-bar made in bail form, having arms extending downward from its horizontal portion *t*, said arms being pivoted to the inner walls of the sides at *v*, near the end of the tub, in such a manner  
15 that the bail will rest against said end when not in use.

*z z* indicate hook-form bearings, which are arranged on the upper edges at one end of the sides *G* of the rubber next the bail *L*. These  
20 bearings project sufficiently outward from the rubber to engage the said bail when the same is turned on its bearings to drop beneath the hooks. When this engagement is effected, the operator may, by simply pressing upon the  
25 lever-handles of the rubber in the direction of the bail *L*, raise the rubber from its supporting-bearings out of the water, bringing the support of the same upon the bail and carrying the opposite end of the rubber up  
30 and out of the tub, but not so far out as to allow the drip to run upon the floor, the bail-ear serving to securely hold the rubber to the tub.

When the rubber is thrown down upon the journal-bail into the tub, its journals will fall  
35 into the slot-bearings at the sides of the tub and the bail-journal will fall back into position against the end of the tub.

That portion of the end of the tub which is occupied by the sloping part of the corrugated bottom, forming the hand wash-board, is provided with a wooden backing, *W*, which sustains the corrugated zinc against the rubbing pressure. 40

Heretofore the upper edges of the side walls of wash-boxes have been provided with guide-staples to receive the opposite ends of a stop-bar, which is also provided with guide-blocks to engage the outer sides of the said box, the bar being movable and designed to receive and support the reciprocating rubber when raised  
50 out of the box, and therefore we do not claim such devices, broadly; but

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

As an improvement in washing-machines, 55 the combination of the tub having the bearings *v* on its inner side walls beneath their upper edges, the angular bail *L*, journaled at opposite ends thereon in such position as to permit the free working of the rubber, and  
60 the rubber provided with the hook-bearings *z* on the upper horizontal side edges thereof, to engage the said bail, substantially as specified.

In testimony whereof we affix our signatures 65 in presence of two witnesses.

GEORGE W. LEACH.

JAMES H. SMITH.

Attest to George W. Leach:

CURTIS ELLER,

JAMES JUSTICE.

Attest to James H. Smith:

JACOB SMITH,

MOSES HOLMES.