

(No Model.)

H. T. HENDERSON.

WASHING MACHINE.

No. 327,680.

Patented Oct. 6, 1885.

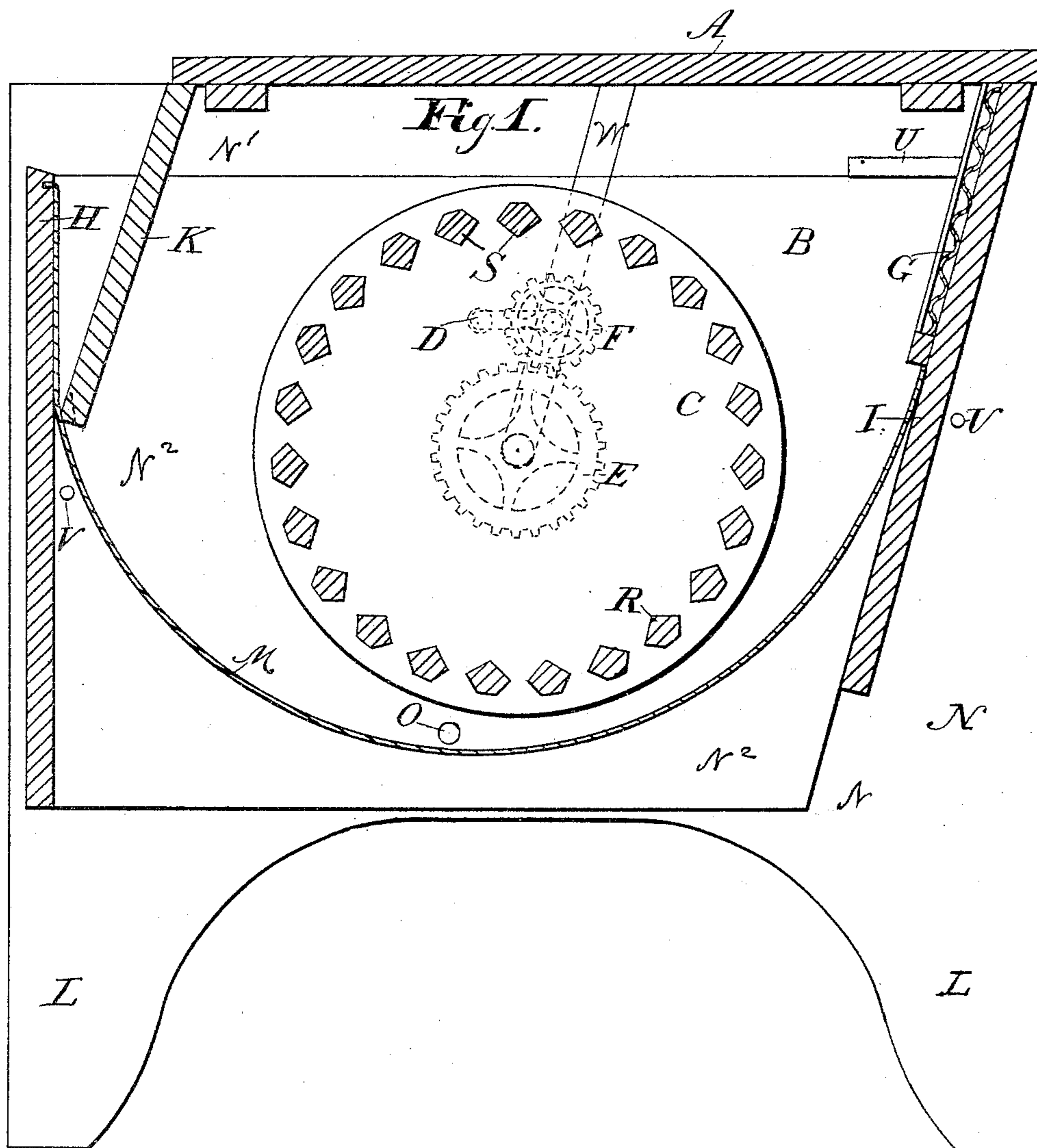
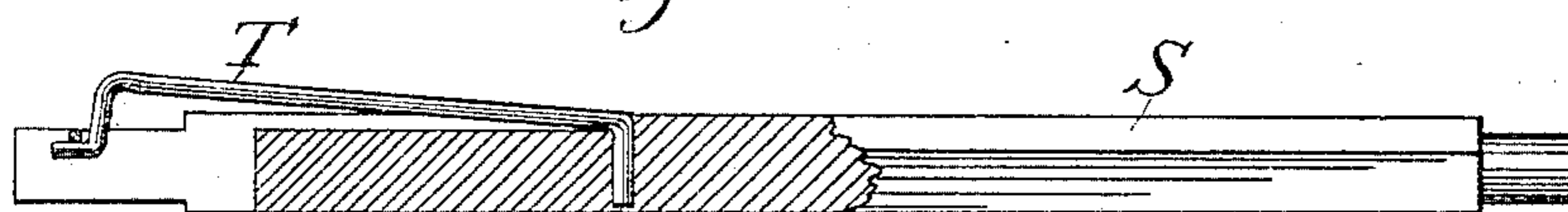


Fig. 2.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

HENRY T. HENDERSON, OF KEOKUK, IOWA.

## WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 327,680, dated October 6, 1885.

Application filed October 29, 1884. Serial No. 146,723. (No model.)

*To all whom it may concern:*

Be it known that I, HENRY T. HENDERSON, a citizen of the United States, residing at Keokuk, in the county of Lee and State of Iowa, have invented certain new and useful Improvements in Washing-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention consists, first, in an improved article of manufacture having provided therein and in connection with a single suds-tank the three needed features of a tumbling-cylinder washer, a wash-board, and a holder for a wringer arranged so that each may remain in place while the others are being used, so as to promote economy in space and in the labor of washing; second, in an improved suds-tank for washing; and, third, in other new and improved features adapted to promote the combined and general purpose. This I make for use substantially as set forth hereinafter, and as shown in the accompanying drawings, in which—

Figure 1 is a sectional elevation of the improved article. Fig. 2 is a detail of a part thereof.

This improved article of manufacture comprises a suds tank or box, B, provided with legs L, a wash-board, G, a holder, H, for a wringer, a tumbling cylinder, C, having a crank-handle and gearing to turn it, a lid, A, and board K to inclose the suds-tank when the cylinder is used, and various details, all arranged for use in conjunction, as shown.

The suds-tank is made with end boards, N, which project down at the corners to form legs L. These are connected by side boards, H I, and guard-board K, and by the trough-like sheet-metal bottom M. The end boards, N, are made each of two parts, N' N<sup>2</sup>, which have the grain crossed, that of the outer parts, N', being upright, and that of the inner, N<sup>2</sup>, of less area, being crosswise.

The bottom M is made of sheet-zinc or other metal, bent trough like. This is attached securely to parts N', and has parts N<sup>2</sup> cut to fit on the two sides to make a water-tight joint. It is bent up at the sides against the side boards, H I, and connected with them at the top. This bottom M and the end boards, N, serve to form a durable water-tight tank to hold hot suds for washing.

The side board, H, is set upright, and is made strong, to hold the wringer securely without requiring it to be removed when the other parts are being used.

The guard-board K is set at an angle, so as to inclose the tank, while leaving room at the top for the wringer. A passage-way is cut or left at the bottom to let the suds run down into the tank from the wringer when in use.

The board I is set inclined, so as to suit the wash-board G, which is attached and held on its inner face in a convenient position for use in cleansing special parts of clothing as it is removed from the tumbling cylinder and before it is passed over to the wringer on the other side, H. A soap-box, U, is set in the corner convenient to the wash-board.

The lid A is made to fit onto the tops of boards K, I, and N, so as to securely inclose the suds-tank when the tumbling cylinder is being used, to retain the heat of the hot suds used in its work, and to prevent throwing water while it is being turned. This leaves the space for the wringer free.

An outlet, O, is used for letting the suds or water out of the tank. This is provided with a faucet or plug.

The tank is held together by bolts V V, which hold the end boards, N, tight against the ends of the sheet-metal bottom M, to keep the tank water-tight.

In some cases ends of sheet metal could be added and joined to the bottom M to make more secure; but for cheaper machines is not used.

The cylinder C is mounted in the tank by journals held in the ends, so as to turn freely. One journal extends through the end part, N, and bears a wheel, E, by which it is turned to tumble the clothing in the cylinder in the hot suds in the tank by a wheel, F, having a crank, D. The cylinder is put in place by passing the journal-shaft which bears wheel E down through a passway cut in the end N, which is then securely closed by a slide part, W. The cylinder is formed with ends of wood or galvanized metal, and has slats R S set at suitable intervals around it to hold and act on the clothing as turned, which connect the end parts.

Two or more slats, S, are made removable to insert or remove clothing. These are set

into holes in the ends of the cylinder, and have bearings on their ends to fit therein, which are arranged so they may be pushed through one way to let the other ends into their holes or therefrom. They have springs T with holding-shoulders to bear against the end of cylinder when in place to prevent endwise motion; but these may be pushed down so as to pass into the holes when required. The slats are made with angles projected inward to catch and carry the clothing around, so as to drop it on those below to promote the washing as the cylinder turns. The outer angles are flattened down.

5 The clothing is put into the cylinder with hot suds in the tank, and the lid closed thereon, when it is tumbled by turning to wash it. It is then taken out piece by piece, and such parts as need it are rubbed clean on the wash-  
10 board, and then passed over to the wringer with a minimum of labor and time and with great convenience. Various modifications may be made.

I claim—

1. A tumbling cylinder, C, having slats 25 around it provided with removable slats having springs with holding-shoulders to provide for removal.

2. A tumbling-cylinder washing-machine constructed with the tumbling cylinder C, 30 adapted to receive clothing to be washed and provided with gearing to turn it by, with the suds-tank having a bent sheet-metal bottom connecting with compound end boards, N, having parts with the grain across each other, 35 and with the wash-board G, wringer-holder H, and inclosing-lid A, combined to form one article of manufacture, substantially as set forth.

In testimony whereof I affix my signature 40 in the presence of two witnesses.

HENRY T. HENDERSON.

Witnesses:

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M. R. KING.