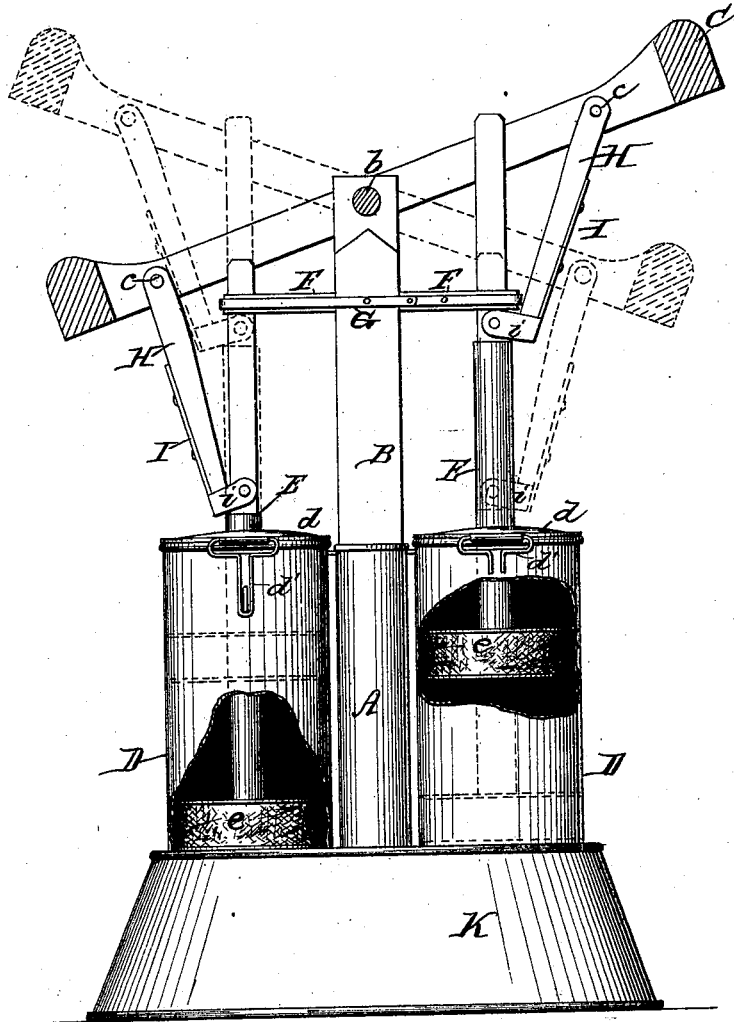


J. W. GLADWELL & J. R. WHITE.
Washing Machine.

No. 202,104.

Patented April 9, 1878.



Attest.

D. H. Graves
A. Scott

Inventor.

J. W. Gladwell
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UNITED STATES PATENT OFFICE.

JOHN W. GLADWELL AND JOSEPH R. WHITE, OF KEYS, NORTH CAROLINA.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **202,104**, dated April 9, 1878; application filed March 13, 1878.

To all whom it may concern:

Be it known that we, JOHN W. GLADWELL and JOSEPH R. WHITE, of Keys, in the county of Buncombe and State of North Carolina, have invented an Improvement in Washing-Machines, of which the following specification, together with the accompanying drawing, forming a part thereof, is a full, clear, and exact description of the construction and operation of our device.

The drawing is a representation of the machine in elevation, partly in section, and with portions broken away to show the interior construction.

This machine belongs to that class of atmospheric washers which employ cylinders with pistons for forcing air and water through the articles to be washed; and the invention consists in the construction and arrangement of the several parts for operating said pistons, of which we employ two, working in cylinders placed on both sides of a central tubular support, A, which receives the shaft B of the operating-lever C, pivoted at *b* to the said shaft. The cylinders D D are furnished with covers *d d* and catches *d' d'*, to hold the covers firmly in place during the operation of washing. Through perforations in these covers are passed the piston-rods E E, having closely-fitting piston-heads *e e* on their ends. The upper ends of these rods are free, and guided in their upward movements by slotted guides F F, secured to the shaft B by means of an encircling band, G. Motion is communicated from the lever C to the piston-rods by means

of arms H H, pivoted to the former at *c c*, and provided with elbow-bars I I, the lower portions of which, *i i*, are forked and embrace the piston-rods, and are pivoted thereto. The lever C is slotted throughout nearly its entire length, which enables the upper ends of the piston-rods to move therein without binding, no matter what the angle of inclination of the lever may be; and by means of the guides F the piston-rods, receiving their motion through the arms H H, will always be in a vertical position.

When one piston-head is raised the other is lowered, and thus a constant circulation of air and water is kept up, and the clothing quickly cleaned. The cylinders are held rigidly in place by being connected at the top by braces to the tubular support or socket A, and at the bottom to a flaring base, K, which serves to retain the clothing while it is being operated upon.

Having thus described the construction and operation of our device, we claim and desire to secure by Letters Patent—

The combination of the cylinders D D, base K, tubular support A, shaft B, lever C, pistons E *e* E *e*, guide F G, and arms H I *i*, all constructed and arranged as described, and for the purpose set forth.

JOHN W. GLADWELL.
JOSEPH R. WHITE.

Witnesses:

JAMES J. WHITE,
ALEXANDER C. COOK.