

W. J. GOODNOUGH, E. S. WORDEN & C. O. LUCE.

Clothes-Washing Machines.

No. 157,812.

Patented Dec. 15, 1874.

FIG. 2.

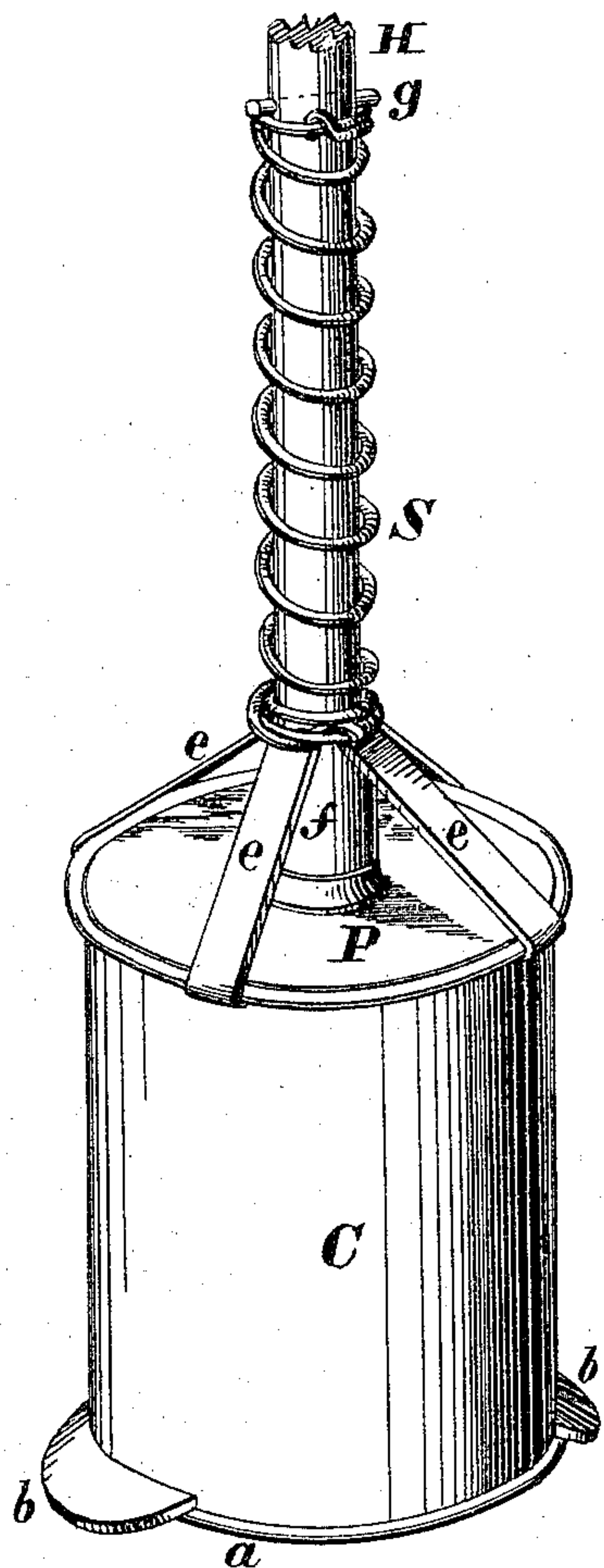


FIG. 3.

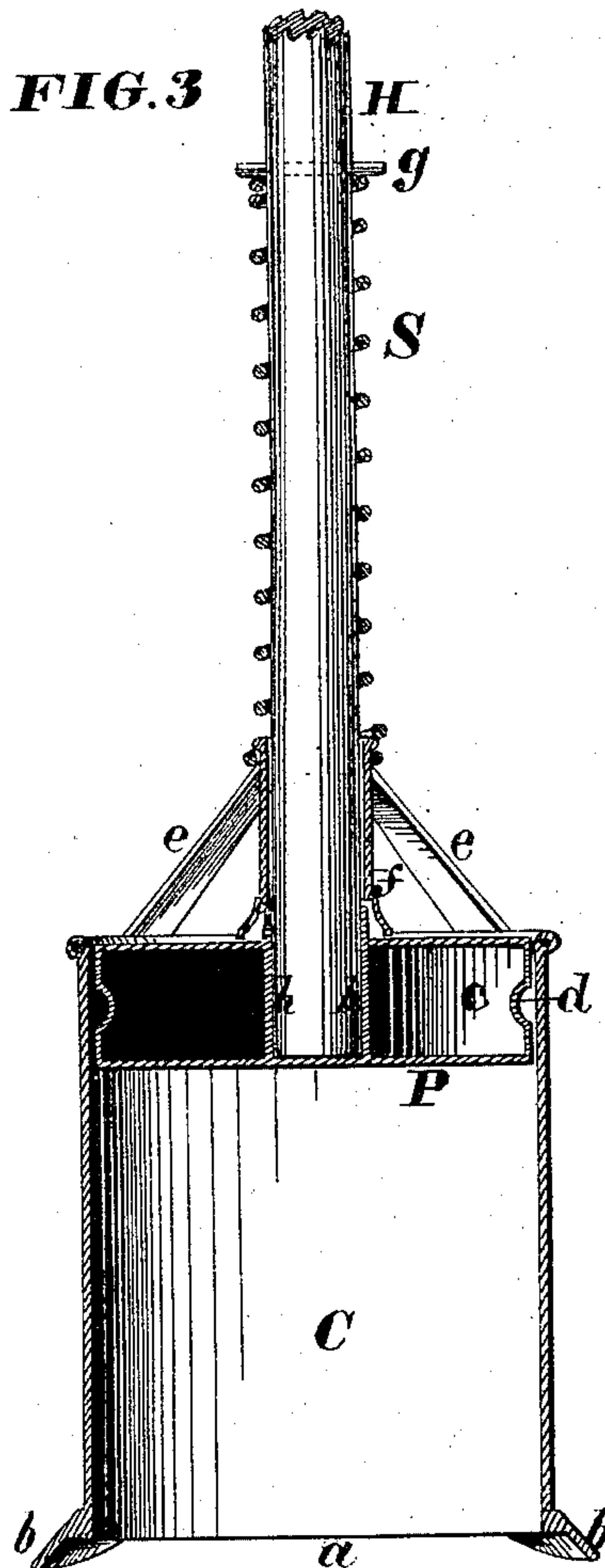
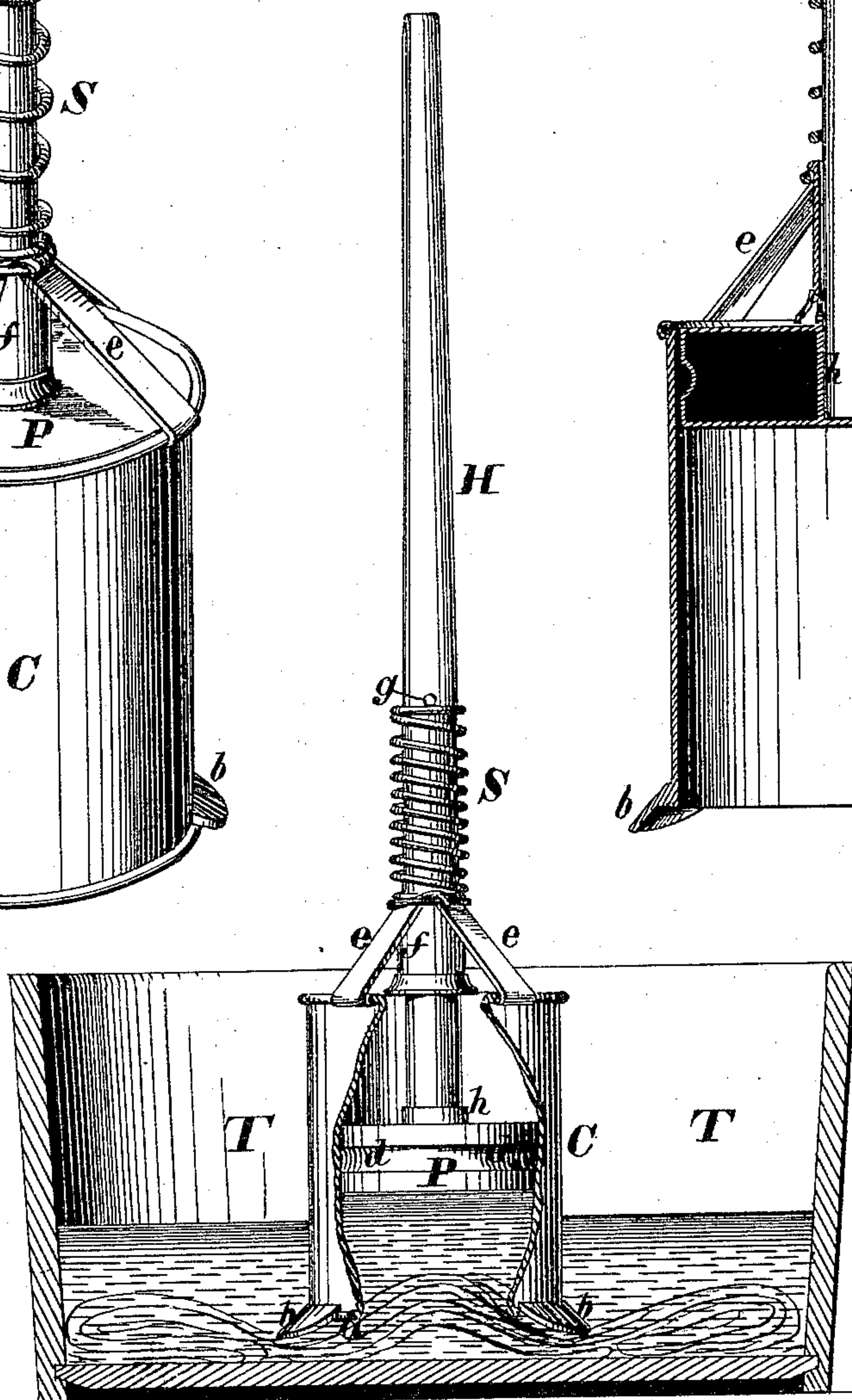


FIG. 1.



WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIS J. GOODNOUGH, EZEKIEL S. WORDEN, AND CURTIS O. LUCE, OF
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IMPROVEMENT IN CLOTHES-WASHING MACHINES.

Specification forming part of Letters Patent No. **157,812**, dated December 15, 1874; application filed
March 11, 1874.

To all whom it may concern:

Be it known that we, WILLIS JUDSON GOODNOUGH, EZEKIEL SIMMONS WORDEN, and CURTIS ORANGE LUCE, all of the town of Brandon and county of Rutland, in the State of Vermont, have jointly invented an Improved Clothes-Washer, of which the following is a specification:

This invention relates to a simple form of washing-machine or clothes-washer for use in an ordinary open wash-tub.

The operation is performed by a reciprocating hand-plunger working in a cylinder, so as to force and draw the water or suds through the clothes to flow out the dirt. The clothes are thus cleansed in superior manner without any rubbing or pounding action.

The invention consists in a peculiar braced guide support and stop for the plunger, in combination with a spring for holding the cylinder down, and assisting to elevate the plunger.

Figure 1 is an elevation of this improved clothes-washer, illustrating its operation, a wash-tub being shown in section, and a portion of the cylinder broken away to expose the interior. Fig. 2 is a perspective view of the washer on a larger scale. Fig. 3 is a vertical longitudinal section on the same scale as Fig. 2.

This washer is composed of a sheet-metal cylinder, C, with open ends, finished with strengthening-wires, or their equivalent, a hollow sheet-metal piston, P, a straight wooden handle, H, applied to the piston for reciprocating the same, and a coiled-wire spring, S, applied to the plunger-handle, to hold the cylinder down during the operation, and to assist in elevating the plunger. The cylinder is constructed with an uneven, scalloped, or serpentine lower edge, *a*, which may be formed by rounded projections *b*, as represented. The air-chamber, *c*, within the hollow piston P, renders it light and buoyant; and a circumferential groove, *d*,

in its periphery contains water to form a frictionless packing between the piston and cylinder.

To guide and support the plunger within the open top of the cylinder, and to arrest the same in elevated position, and to provide for applying the spring to the cylinder, the latter is provided with upwardly-inclined converging arms *e*, (three or more,) and a sleeve, *f*, is supported between these by its upper end, the lower end of the same forming the stop. A transverse pin, *g*, forms an abutment on the handle for the spring. A central thimble, *h*, in the piston, receives the lower end of the handle.

The washer is used in an ordinary wash-tub, T, as illustrated in Fig. 1. The clothes are placed in the tub with water and soap. The washer is then set on the clothes, and the handle reciprocated, which forces and draws the water or suds through the clothes, flowing out the dirt. The washer is moved from place to place, and the operation is continued until the clothes are clean. This is quite rapidly accomplished, and the clothes are not submitted to any rubbing or pounding action, or injured in any respect by the process.

The washer may be made of different sizes, and the represented proportions of the parts may be varied.

Having described this our invention, we claim—

The combination, with the open-ended cylinder C, having the central support, guide, and stop-sleeve *f*, and its converging braces *e*, of the reciprocating plunger P H, the spring S, and the pin *g*, substantially as and for the purpose herein shown and described.

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Witnesses:

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