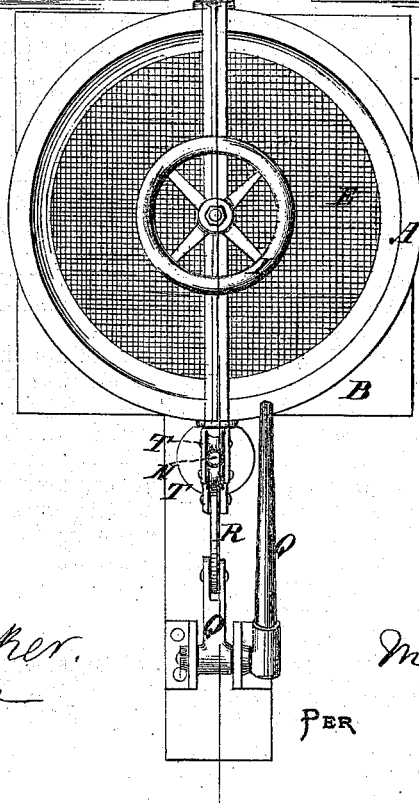
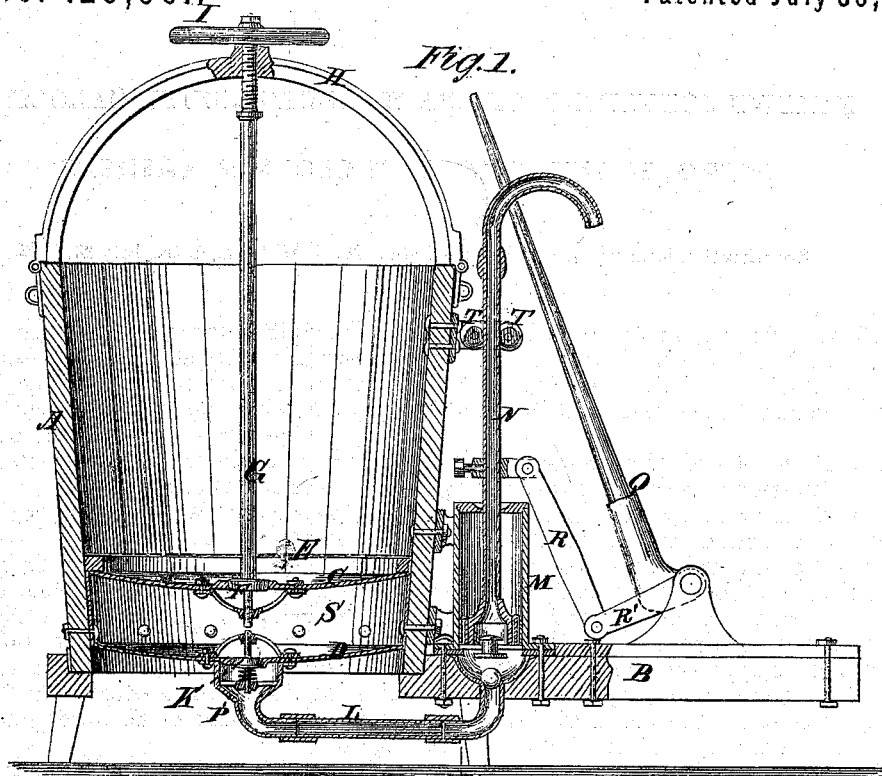


McK. JOHNSTONE.

Improvement in Vacuum Clothes-Washers.

No. 129,961.

Patented July 30, 1872.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

McKEWN JOHNSTONE, OF SPARTANBURG, SOUTH CAROLINA.

## IMPROVEMENT IN VACUUM CLOTHES-WASHERS.

Specification forming part of Letters Patent No. 129,961, dated July 30, 1872.

Specification describing a new and Improved Vacuum Clothes-Washer, invented by McKEWN JOHNSTONE, of Spartanburg, in the county of Spartanburg and State of South Carolina.

My invention consists of a wash-tub with a chamber between an upper and lower bottom, a pump, and valves in the said bottoms, so arranged that a vacuum may be formed under the clothes, which are supported on a wire screen above the top of the vacuum-chamber, and the soap-water in the tub forced through the clothes into the vacuum-chamber by atmospheric pressure, when the valve at the top of the chamber is suddenly opened, and after washing sufficiently the air may be forced through in like manner to dry them. From the vacuum-chamber the water may be pumped back into the tub and the operation repeated as long as the state of the water will allow, after which, by the same pump, the foul water may be discharged from the machine.

Figure 1 is a sectional elevation of my improved machine, and Fig. 2 is a plan view.

Similar letters of reference indicate corresponding parts.

A is a tub of any suitable kind, on a low bench, B, with an upper galvanized-iron or other suitable sheet-metal bottom, C, and a similar lower one, D, also with a screen-wire or other perforated clothes-holder, E, a short distance above the bottom. The bottom C is provided with a valve, F, closing air-tight, and having a rod, G, extending upward through the bridge H, in which it screws up and down, for opening and closing, a hand-wheel, I, being fixed on its top to facilitate the turning. K is a valve in the lower bottom D, opening downward into a tube, L, leading to a pump, M, with a "goose-neck" discharge-pipe, N, which may be turned around on its axis so as either to discharge into the tub or into another receptacle. The said valve is closed upward by the spring P, and is opened by the suction of the pump. The latter is worked by a cranked lever, Q, which is connected to it by a link, R and R'.

The clothes are put in the tub and packed around the valve-stem G as closely as can be to prevent the air from rushing down to the valve F when opened, and the clothes are properly moistened with water charged with saponaceous matters. The air is then pumped out of the chamber S to create a vacuum therein; the valve F is then suddenly raised, and the water is instantly forced through the clothes by the atmospheric pressure above them, and carries with it the foul matters contained in them. The water is then pumped from the chamber into the tub, and the operation repeated, and so on as often as necessary; or until the water becomes too foul, when it is discharged and clean water put in the tub again.

After the clothes are sufficiently washed they may be readily dried by continuing the same operation with air only, and they may be starched by forcing starch-water through them.

The upper part of the tube N works between guide-rollers T, which lessen the friction.

This mode of washing clothes is far less laborious than the common way, and the work is much less objectionable, and it works no injury to the clothes by rubbing and wearing them.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A tub having valved bottoms C D and wire-gauze clothes-holder E, combined with a pump, M, connected thereto by a pipe, L, as and for the purpose set forth.

2. A wash-tub connected with a pump, M, having the swiveled discharge-pipe N, arranged as described, so that the water may be either discharged or returned to tub and on top of the clothes.

McKEWN JOHNSTONE.

Witnesses:

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