

J. W. PORTER.
WASHING MACHINE.

Patented Apr. 17, 1883.

A detailed technical drawing of a watch movement, labeled 'Fig. 1'. The movement is shown in a plan view, enclosed within a circular frame. Key components are labeled with letters: 'A' points to the balance wheel, 'B' to the balance spring, 'C' to the escapement wheel, 'D' to the escape wheel, 'E' to the escape wheel, 'F' to the escape wheel, 'G' to the escape wheel, 'H' to the escape wheel, 'I' to the escape wheel, 'J' to the escape wheel, 'K' to the escape wheel, 'L' to the escape wheel, 'M' to the escape wheel, 'N' to the escape wheel, 'O' to the escape wheel, 'P' to the escape wheel, 'Q' to the escape wheel, 'R' to the escape wheel, 'S' to the escape wheel, 'T' to the escape wheel, 'U' to the escape wheel, 'V' to the escape wheel, 'W' to the escape wheel, 'X' to the escape wheel, 'Y' to the escape wheel, 'Z' to the escape wheel. The drawing shows the intricate gear train and the balance assembly.

A detailed technical drawing of a circular machine, likely a printing press component. It features a circular frame with a grid of small circular holes. A vertical rod assembly is positioned in the center, with a handle on the left. Various parts are labeled with letters: A (outer frame), B (inner frame), C (vertical rod), D (rod tip), E (rod base), F (handle), G (rod base), H (rod tip), I (rod base), J (rod base), K (rod base), L (rod base), M (rod base), N (rod base), O (rod base), P (rod base), Q (rod base), R (rod base), S (rod base), T (rod base), U (rod base), V (rod base), W (rod base), X (rod base), Y (rod base), Z (rod base).

A circular diagram representing a cross-section of a crystal. It contains a regular grid of small circles, each with a central dot and concentric rings, representing atoms. The label 'a' is placed near several of these atoms, and the label 'D' is placed near the top right edge of the circle. A small, hatched rectangular object is shown at the bottom right corner.

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UNITED STATES PATENT OFFICE.

J. WOOD PORTER, OF MORRIS, ILLINOIS.

WASHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 276,072, dated April 17, 1883.

Application filed September 11, 1882. (No model.)

To all whom it may concern:

Be it known that I, J. WOOD PORTER, a citizen of the United States, residing at Morris, in the county of Grundy and State of Illinois, have invented certain new and useful Improvements in Washing-Machines, of which the following is a specification, reference being had to the accompanying drawings, forming part hereof, in which—

Figure 1 is a top plan view. Fig. 2 is the same view, the lid being turned to a vertical position, showing the inside of the tub. Fig. 3 is a bottom view of the rotary rubber; and Fig. 4 is a detail view, showing the manner of attaching and securing the gear-wheel by which the shaft of the rotary rubber is actuated.

My invention relates to that class of washing-machines in which the clothes are cleansed by rotary rubbing between an upper and a lower surface suitably roughened; and it consists in certain improvements in the construction and combination of the parts composing a machine of that class, as will be first fully described hereinafter, and then particularly pointed out in the claims.

Referring to the drawings by letter, A is an ordinary wash-tub covered by a stationary segment, B, and hinged lid C. The bottom of the tub is provided with a number of projections, *b*, which consist of half-oval blocks of wood or metal, attached to the bottom by means of screws passing up through the bottom.

D is the rotary rubber, similarly provided with projections *d*. Secured to the center of and at right angles to the rubber D is a square shaft, E.

On top of the lid C is mounted the mechanism by which the rubber is rotated, which is constructed as follows: On an upright shaft or pin, F, which is secured to the lid by means of a washer or flange, *f*, above the lid, and a similar one, *f'*, below the lid, is an ordinary gear-wheel, G. This gear-wheel is provided with loops *g*, into which a handle, H, is secured, and meshes with a gear, I, which is cast solid with its shaft J, and that shaft is provided with a longitudinal rectangular perforation to receive the square shaft E of the rubber. Each end of the shaft J is cut down and the lower end is stepped in a socket in a plate, L, attached by any suitable means to the lower side of the lid C. The upper end of

this shaft has a bearing in a socket in the lower side of a strap, K, which is secured to the top of the lid C by any suitable means. The plate L and strap K are each perforated with round openings to permit the shaft E to pass through them and be revolved with the gear I.

The operation of my device is as follows: The articles to be cleansed are placed in the tub, water being provided therein, and the lid, and with it the rotary rubber, is brought down on them. The handle or lever H is now moved from side to side, causing the gear-wheel G to alternately rotate in opposite directions. This causes a similar rotation of the gear I, which carries with it the shaft E and rubber D. The clothes are thus rubbed between two surfaces, each of which is provided with half-oval projections, and are quickly and effectually cleansed.

Having thus fully described my invention, what I claim and desire to secure by Letters Patent, is—

1. The combination, with the tub having oval projections on its bottom, of the rotary rubber having similar downward projections, and upward-projecting square shaft, the hinged lid, the socketed perforated plate L, the shaft and pinion I J, perforated as described, the strap K, having socket and perforation, and suitable means for alternately rotating the shaft J, substantially as described.

2. The rotary rubber, its square shaft, the pinion and shaft I J, having square opening to receive the square shaft, the plate L, provided with step for shaft J, and the strap K, secured to the lid and having bearing for the upper end of the shaft J, all constructed as described, and combined with the hinged lid C, as and for the purpose set forth.

3. The combination, substantially as described, of the lid C, plate L, attached to its lower side, strap K, attached to its upper side, the plate and strap being perforated and socketed as described, the rubber having square shaft, the pinion and shaft I J, perforated to receive said square shaft, the gear-wheel G, loops *g*, and handle H, as and for the purpose set forth.

J. WOOD PORTER.

Witnesses:

ISAAC N. BROWN,
A. G. WOODBURY.