S. L. DENNEY.

WASHING-MACHINE.

No. 189,343. Patented April 10, 1877.

Fig. 1.

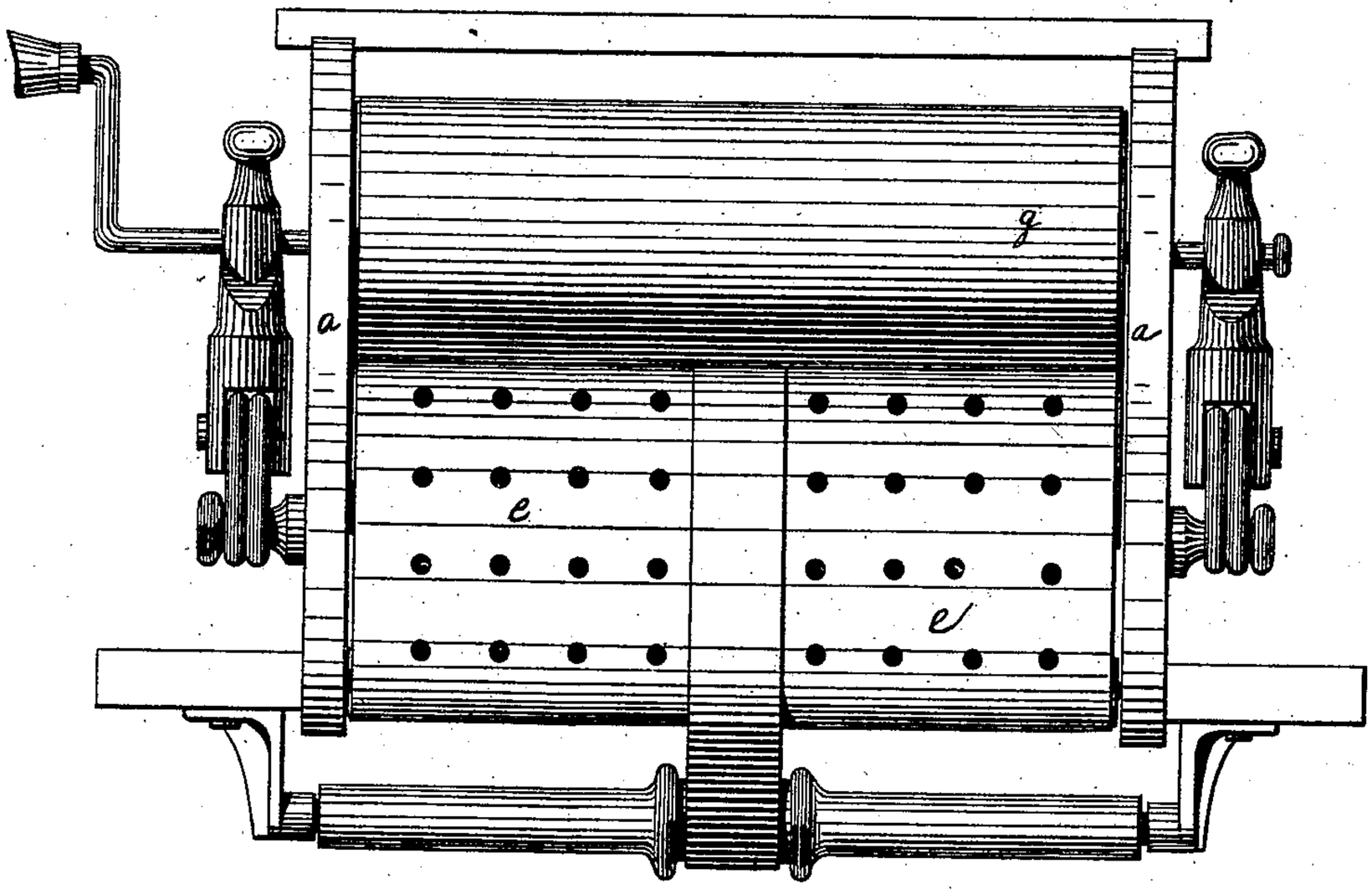
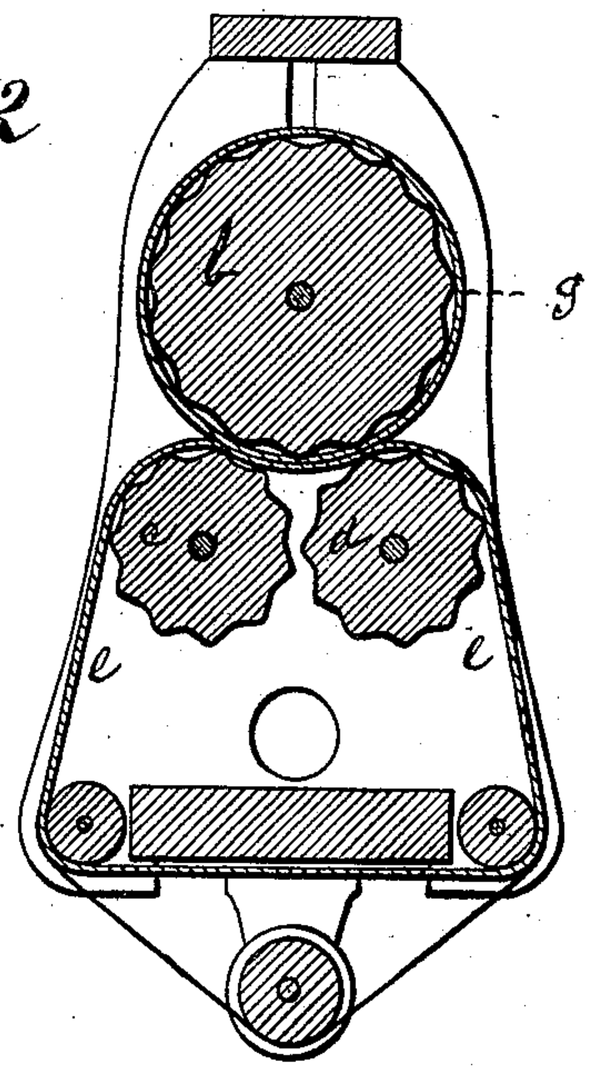


Fig. 2



Attest:

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Inventor:

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UNITED STATES PATENT OFFICE.

SAMUEL L. DENNEY, OF GAP, PENNSYLVANIA.

IMPROVEMENT IN WASHING-MACHINES.

Specification forming part of Letters Patent No. **189,343**, dated April 10, 1877; application filed November 15, 1876.

To all whom it may concern:

Be it known that I, SAMUEL L. DENNEY, of Gap, in the county of Lancaster and State of Pennsylvania, have invented certain new and useful Improvements in Washing-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to an improvement in washing-machines; and it consists in the arrangement and combination of devices that will be more fully described hereinafter, whereby the action of abrasion and compression is materially assisted by the free circulation of the water and air through the perforated endless band.

Figure 1 is a side elevation of my invention. Fig. 2 is a vertical section of the same.

a represents the frame, in which the three rollers *b c d* are journaled. The corrugations are differently spaced on each roll, so that the round of the one will not fit fairly into the hollow of the others, by which arrangement an abrading action is produced. The large roll *b* is covered with a sheet of vulcanized india-rubber, *g*, specially prepared for the purpose, with a ply of cloth as a base to prevent stretching, and the greater thickness of rubber on the outer surface, which comes in contact with the clothing in the process of washing.

The endless band *e* is perforated, and is also of rubber material, with the greater thickness of rubber on its outer surface, thereby creating a soft elastic bearing for the clothes to rest upon while under the pressure and abrading action of the top roller.

The surfaces of the top roller and that of the endless band being soft and elastic, admits of a much greater pressure being applied to the top roller to hold it down upon the clothes, thereby greatly increasing the effectiveness of the machine.

The elasticity of the rubber when applied in a smooth sheet upon a corrugated roller and made to act upon corrugations differently spaced, the same being protected by the elastic band *e*, gives a more prolonged abrading action than can be produced without the presence of the elastic material, while no possible injury is done to the texture of the fabric, or the buttons on the same.

Experience has demonstrated that such articles of wearing apparel as, from their delicate texture, would be injured by the ordinary process of rubbing on a wash-board, may be cleansed with this machine without possible injury, and with no more care in manipulating than is used in cleansing ordinary wearing-apparel.

It will be readily seen that roller *b*, as I have constructed it, is applicable to any of the different styles of roller washing-machines, and its application would much improve their efficiency by removing the tendency which hard wooden surfaces have to destroy the texture of the goods and break the buttons.

I am aware of patent of Dicky, No. 57,485, in which a corrugated roll is covered with a thick sheet of rubber made to conform externally and internally to the irregularities of the roll, and I disclaim such an invention.

Having described my invention, I claim—

1. In a washing-machine, a roller, *b*, having longitudinal corrugations, as shown, and covered with a thin sheet of rubber, which rest upon the ridges between the corrugations, as and for the purpose shown.

2. The combination of the rollers *b c d* with perforated band *e*, when arranged substantially in the manner specified.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

SAMUEL L. DENNEY.

Witnesses:
THOMAS C. CONNOLLY,
A. E. BEECHER.