

R. GROVE Wash-Board.

No. 216,181.

Patented June 3, 1879.

Fig. 1.

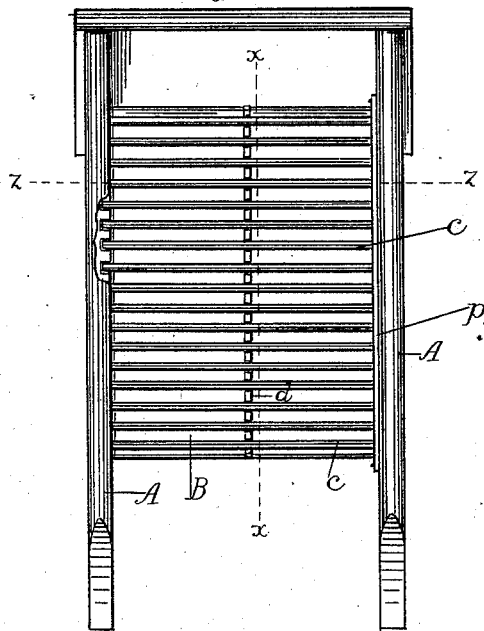


Fig. 5.

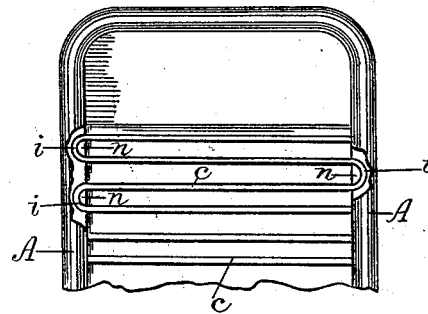


Fig. 7.

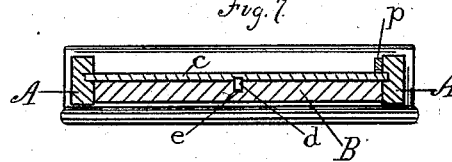


Fig. 3.

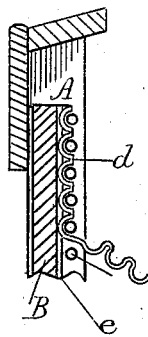


Fig. 2.

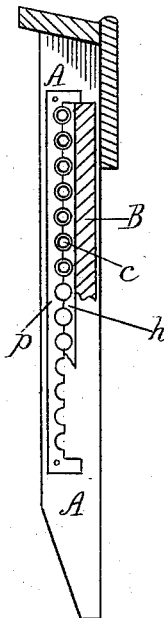


Fig. 4.

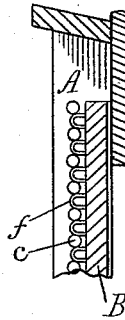


Fig. 6.

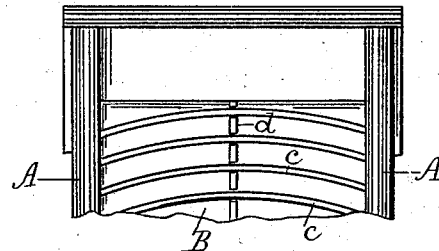
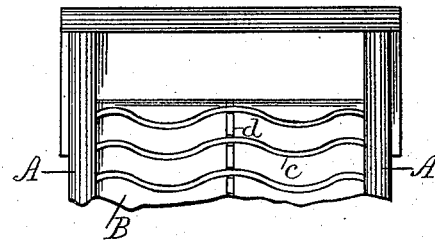


Fig. 8.



Witnesses:

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UNITED STATES PATENT OFFICE.

RICHARD GROVE, OF NORTH LIMA, OHIO.

IMPROVEMENT IN WASH-BOARDS.

Specification forming part of Letters Patent No. **216,181**, dated June 3, 1879; application filed April 23, 1879.

To all whom it may concern:

Be it known that I, RICHARD GROVE, of North Lima, in the county of Mahoning and State of Ohio, have invented a new and useful Improvement in Wash-Boards, of which the following is a specification.

The object of my invention is to provide an improved wash-board the rubbing-surface of which shall consist of wire placed crosswise of the board, and which, by galvanizing or other preparation, shall not be liable to rust.

Figure 1 is a front elevation of the wash-board. Fig. 2 is a longitudinal section of same on line *x x*. Fig. 3 is also a section, showing a modification in manner of staying the wires in center. Fig. 4 is another modification of same. Fig. 5 is a view of a board in which the wire is in one piece. Fig. 6 is a view of a board having the wires curved. Fig. 7 is a cross-section. Fig. 8 is a view of a board in which the wires curve downward between the center stay and side strips.

The subject-matter claimed hereinafter will now be specifically designated.

A represents the side strips; B, the back; *c*, the wires, which constitute the rubbing-surface. These wires, when each one is a separate piece, as shown in Figs. 1 and 6, have their ends inserted in holes formed in the side strips, and are stayed in the center by upward-projecting wire-shoulders *d*, which consist of a wire bent to form the shoulders or stays, (see Fig. 3,) and embedded in a groove, *e*, cut down the center of the wooden back.

Instead of a continuous wire down the center, the cross-wires may be stayed by wire staples *f*, one of which is driven into the back between each cross-wire, as shown in Fig. 4. Another modification consists of a notched strip, *h*, (see Fig. 2,) which may be of either wood or metal, and embedded in the groove *e*.

The cross-wires may consist of separate

pieces, or may be one continuous wire, as shown in Fig. 5, being bent at *i*, which bent part is embedded in suitable notches, *n*, formed in the side strips.

Fig. 6 is an illustration of a board in which the wires describe a curve from side to side, the curves being either upward or downward. Instead of the curve the wires may be bent at the center and form a slight angle, being stayed at the center, as described.

Fig. 8 illustrates a further modification as to the form in which the wires *c* may be bent.

A metal plate, *p*, provided on one edge with notches of proper size for the cross-wires, may be secured, by screws or otherwise, to the inner face of the side strips, and when thus employed will obviate the necessity of boring the side strips to insert the ends of the wires. This plate is applicable only where the cross-wires are each separate and a center stay is employed, as before described.

It is obvious that a board having cross-wires for a rubbing-surface, and which are centrally stayed, as herein shown, is adapted for use by hand, or may be used in connection with other mechanism in a machine.

Having described my invention, I claim and desire to secure by United States Letters Patent—

1. The improved wash-board, having as a rubbing-surface the cross-wires *c*, centrally stayed, substantially as set forth.

2. A wash-board the rubbing-surface of which consists of wires placed crosswise of the board, stayed in the center, and the ends stayed by the metal plate *p*, secured to the side strips, substantially as set forth.

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Witnesses:

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