(Model.)

E. C. PFANSCHMIDT.

WASH BOARD.

No. 417,880. Patented Dec. 24, 1889.

Fig. 1.

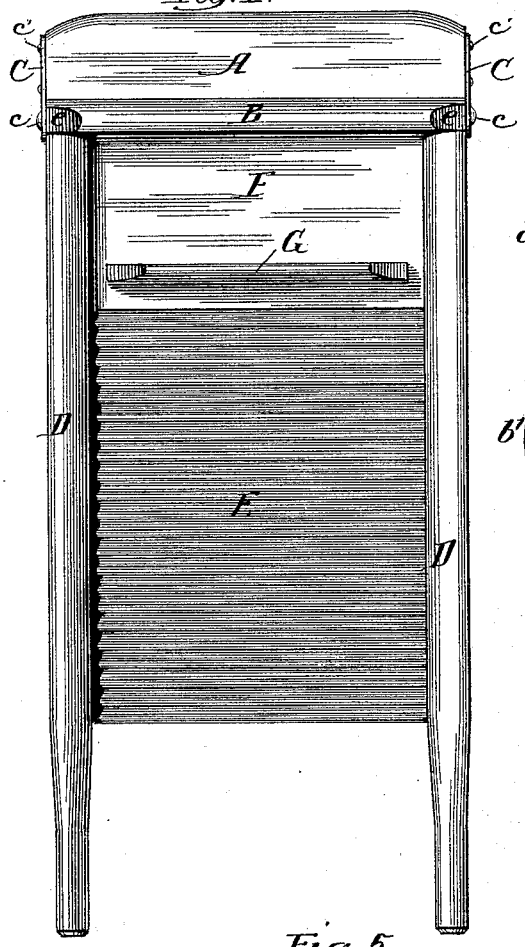


Fig. 2.

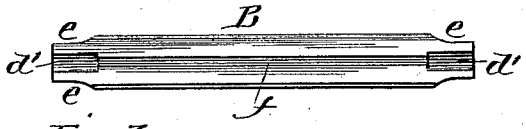


Fig. 3.

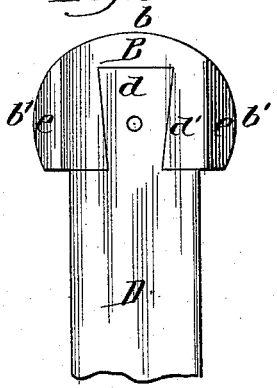


Fig. 4.

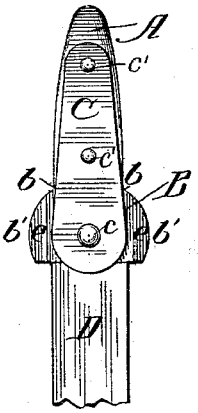


Fig. 7.

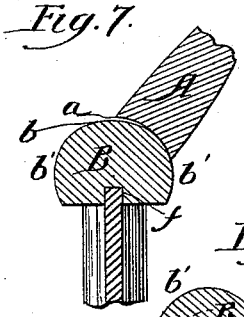


Fig. 5.

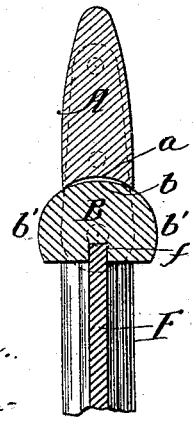
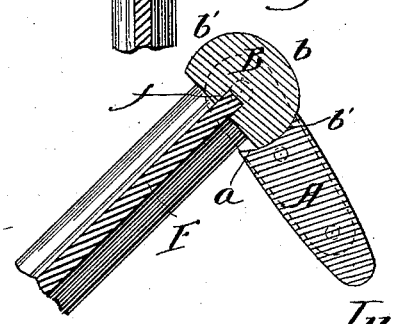


Fig. 6.



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WASH-BOARD.

SPECIFICATION forming part of Letters Patent No. 417,880, dated December 24, 1889.

Application filed September 13, 1888. Serial No. 285,425. (Model.)

To all whom it may concern:

Be it known that I, EDWARD C. PFANSCHMIDT, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Wash-Boards; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawings, forming a part hereof, in which—

Figure 1 is a front elevation. Fig. 2 is a bottom view of the top rail. Fig. 3 is a detail, being an end view, showing the connection for the top and side rails. Fig. 4 is a detail, being an end view of the parts shown. Fig. 5 is a section of the parts shown in Fig. 4 with the protector straight. Fig. 6 is a section of the parts shown in Fig. 4 with the protector turned. Fig. 7 is a section of the parts shown in Fig. 4 with the protector partially turned. Fig. 3 is of full size for an ordinary wash-board; and Figs. 4, 5, 6, and 7 are enlarged as compared with Figs. 1 and 2.

This invention relates principally to wash-boards provided at the upper end with a swinging reversible protector; but a part thereof is adapted for use with wash-boards having no protector.

The objects of the invention are to insure the holding of the protector in any position desired, to prevent leakage at the upper end of the wash-board in use, and to improve generally the construction of wash-boards at the top or upper end; and its nature consists in providing a reversible protector having its inner edge formed concave and a top rail having its exterior formed convex on two curves to produce a face to coact with the concave face of the protector and furnish a means for holding the protector at different angles, and at the same time form a tight joint between the protector and top rail by which any leakage (in use) at that point is prevented; in securing the brand-board to the top rail by entering its edge in a slot in the top rail to prevent leakage (in use) at that point; in securing the side rails or legs to the top rail in a simple and efficient manner, and improving generally the construction of wash-boards at the upper end thereof.

In the drawings, A represents the protector, formed of a piece of wood or other suitable material, with its side faces rounded, as shown, or otherwise formed, and provided on its inner edge with a concave face *a*.

B is the top rail, of wood or other suitable material, having its top and side faces of a convex shape, the convexity being on two different curves, the curvature of the top face *b* being on a larger circle and struck from a different center than that of the side faces *b'*, which are struck or formed from a common center, and the exterior face thus formed is of an oval shape in cross-section, with the top face the less curved. The curvature of the side faces *b'* is the same or approximately the same as the curve of the concave face *a*, while the curvature of the face *b* is on a larger circle than the curve of the face *a* of the protector A, so that the width of the face *a* is slightly less than the width of the face *b'*.

C are straps, of sheet metal or other suitable material, one for each end of the protector A, and secured to the end by nails *c'* or other suitable means. Each strap extends below the lower edge of the protector A and is attached to the end of the top rail B by a pin or pivot c. The relation of the pivots *c* to the lower edge of the protector when in contact with the face *b* of the top rail B is one that locates the pivots at each end at the center of the circle of the face *b*, making the circle described by the lower edge of the protector within the circle of the side faces *b'*, and this manner of pivoting the protector for its lower edge to describe a circle within the circle of the sides *b'* produces an eccentric effect by which the concave face *a* will be made to hug either side face *b'* snugly and closely in traveling on such side face, producing a binding between the faces *a* and *b'*, by which the protector will be held in an inclined position in relation to the side rails of the wash-board at any point after the edge or lip of the face *a*

on either side passes onto the face *b*, from the face *b*, making a close tight joint between the protector and top rail, in the use of the board.

D are the side rails or legs of the wash-board, one for each side, as usual, and each having at its upper end a dovetail tenon *d*, fitting a dovetail mortise *d'* in the end of the top rail, as shown in Fig. 3, locking the top rail to the side rail against end movement, and so that a single rail is all that is required to hold the two parts together against side movement.

E is the zinc or other washing surface, crimped or corrugated, as usual, and secured in place between the side rails D in any usual and well-known manner.

F is the brand or filling board between the top rail B and zinc E and side rails D, and in order to prevent leakage between the top rail B and board F the bottom face of the top rail B is provided with a longitudinal groove *f*, into which the top edge of the board F enters and fits closely, forming a tight joint, and as the top rail B is held against drawing away by the dovetail tenon *d* and groove or mortise *d'* the joint formed by projecting the top edge of the board F into the groove *f* will not be opened by ordinary usage.

G is the soap-rest, one for each side of the board, and secured to the board F by nails or otherwise.

As shown, the lower ends of the legs D are round, or nearly so, in cross-section, and each corner of the top rail B is cut out to form a depression *e* to receive the legs, so that by laying the wash-boards end for end a close packing can be had, saving space in storage and shipping.

The protector A is pivoted to the ends of the rail B by the end straps C, and in attaching the protector in position it is placed centrally on top of the top rail and pressed down by hand and held firmly with the side edges or lips of the concave at its lower edge in contact with the outer edges of the face *b* of the top rail, and when in this position a pin or pivot *c* is inserted in the pivot-hole of such strap C and driven in or otherwise secured to the end of the top rail, and, as the distance from the edges or lips of the concave of the face *a* to the pivot-hole in the straps C is the same as the radius of the circle for the side faces *b'*, it follows that when the pivot-point for the strap C is dropped below the center of the circle of the side faces *b'* the circle described by the lower edge of the protector is inside of the circle of the sides *b'*, producing an eccentric action when the protector A is turned or swung to either side *b'*, by which the concave face *a* will be drawn tightly against the face *b'*, as shown in Figs. 6 and 7, holding the protector by the friction between the two faces, and at the same time producing a tight fit between the protector A and top rail B, preventing leakage at that point in use. The filling-board F is entered at the top into the groove *f*, and the side rails or legs driven into the dovetail grooves *d'*, uniting the top rail, side rails, and filling-board closely together, the ends of the filling-board entering grooves in the inner face of each side rail, as usual, and when the filling-board F is in place there can be no leakage at the juncture of the top rail and the filling-board by reason of the projection of the top of the filling-board F into the groove *f* of the top rail B, and, as a tight joint is had between the top rail B and protector A by the arrangement described, it will be seen that the upper end of the wash-board is rendered non-leaking, so that in use the operator is fully protected against being wet from any leakage.

The manner of pivoting the protector A to the top rail B does away with the necessity of stops to hold the protector in position, as the protector furnishes its own stop in connection with the acting faces *a* and *b'* of the protector and top rail, and this stop is effectual and reliable by reason of the friction produced by the draw as the protector is swung from the face *b* around the face *b'*, which acts to force the face *a* closer against the face *b'* as the protector is turned, and at the same time the bind between the faces *a* and *b'* is not one that will prevent the protector from being turned for its edge to strike the face of the side rail and be supported thereby, if so desired, as shown in Fig. 6.

The feature of rendering the board non-leaking at the top by projecting the top of the filling-board F into the groove *f* of the top rail will be found beneficial without the protector A, and the benefits and advantages pertaining to the pivoting of the protector, as described, can be obtained with other fastening means for the top and side rails than the dovetail tenon and groove. The pivot-holes in the straps C can be made at a point equal to the distance from the side edges or lips of the concave *a* to the center of the circle for the sides *b* when the protector is pressed on the face *b*, and when so made the pivots *c* will be at the center of the circle of the sides *b'*, producing the same eccentric effect, by which a close binding is had between the faces *a* and *b'*.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a wash-board, a reversible protector having its inner edge formed concave, in combination with a top rail having a top face and side faces on different circles, a convex face on two curves, and a pivotal connection for the protector to the top rail at a point to cause the bearing-face of the protector in turning to describe a smaller circle than the circle of the sides of the top rail, producing an eccen-

tric action between the protector and the top rail, substantially as and for the purposes specified.

2. The combination, with a reversible protector A, having a concave face *a* on its inner edge, of a top rail B, having the convex face *b b'* formed on two different circles, straps C, and pivots *c*, connecting the protector to the top rail to draw the lower edge of the protector against the face of the sides *b'* of the top rail in turning, substantially as and for the purposes specified.

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Witnesses:
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