



# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN MACHINES FOR MAKING WASH-BOARD PLATES.

Specification forming part of Letters Patent No. **183,790**, dated October 31, 1876; application filed May 31, 1876.

### *To all whom it may concern:*

Be it known that I, GEORGE W. BARRETT, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Wash-Board Plates and Machinery; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improved machine for making wash-board plates, whereby the same may be properly crimped and otherwise shaped, as will hereinafter more fully and at large appear.

In the drawings, Figure 1 is a view, in side elevation, of a machine embodying my invention. Fig. 2 is an end view of the machine. Fig. 3 is a view of the product of the machine, both in plan and side elevation. Fig. 4 represents a modification of the shape of the crimping-surfaces.

My invention consists in the parts and combinations, as will hereinafter be more fully specified and claimed, wherein A is the main bed or frame of the machine, to which are attached its various parts. This frame may be of any suitable material or design. Upon the bed A rests the crimping-bed B, which has a reciprocating motion, and is provided with a suitable guiding device to insure its movement in the proper direction. The crimping-bed is formed of alternate ridges and depressions, and is provided with a rack, C, which engages with the cog-wheel D. Said cog-wheel is fixed to the shaft E, which it operates. Upon said shaft is fixed the crimping-sector F, whose corrugations or crimps or ridges and depressions are the counterpart of and are made to engage with the crimps or ridges and depressions upon the reciprocating bed B.

Instead of the cog-wheel D a segment-gear may be substituted, and in place of the sector F a cylinder may be employed, and produce the same result. G G are the flanging-bars, placed at the ends of the crimping-bed B for the purpose of turning the flanges on

the wash-board plates, beyond the crimped portion thereof. H H are the main crimps. I I are what I term the "compensating-crimps," placed close to or near the edges, on the surface of the crimping bed and sector, beyond the ends of the crimps H, whereby the material of the wash-board plate, close to or near its edges, shall be formed, on its surface, on both sides at the ends of the crimps H, into comparatively small crimps or corrugations, so that said parts or edges of the completed wash-board plate, thus formed, can be readily introduced into a straight and narrow slot made in the standards or sides of the wash-board.

The crimping-bed and its attached crimping-surface, instead of being made upon a flat or plane surface, may be formed either convex or concave, as shown in Fig. 4 of the drawings. If made concave, the degree of concavity should be sufficiently less than the convexity of the upper crimping-plate to prevent any binding of the material to be crimped.

My machine may be operated in either of two ways—first, by power applied to the shaft E, imparting to the shaft a proper reciprocating or revolving motion; or the power may be applied, in any suitable manner to the crimping-bed B, whereby said bed is given a reciprocating motion.

The main feature of my invention consists in the combination of the main crimps H and the smaller or compensating crimps I, the latter of which are formed on the surface of the crimping bed and sector, on both sides of the main crimps, as hereinbefore already described. The corrugated surface of the main crimps H and that of the smaller or compensating crimps are, of course, equal to each other. As the elevation of these smaller or compensating crimps is very little, it is apparent that a wash-board plate thus formed can be introduced into a narrow slot in the standards or sides of a wash-board, whereas, if the main crimps or corrugations extended to the edges, the slots in the standards would have to be made inconveniently wide.

The object and purpose of constructing the edges of the sheet with the compensating-crimps are that these fine marginal crimps may

extend the margins of the sheet in the same direction that the larger or main crimps extend the body of the sheet, it being apparent that under such a construction the sheet is less liable to rupture or tear than if there were an unequal extension of its different parts.

The function of the flanging-bars G is to give a turn to the upper and lower ends of the wash-board plate, so that said ends may be turned in and properly secured upon the wash-board frame, and thereby firmly held in position.

I do not limit myself in any respect to the precise construction as herein shown, inasmuch as the same may be indefinitely varied without any substantial departure from the spirit of my invention, as that comprises any combination of parts whatever whereby two crimping-surfaces are brought in opposition to each other that will operate to produce a product having the main and compensating crimps L M of the plate in such relation with each other, as hereinbefore described.

The main crimps or corrugations H are beveled at their ends, so as to form the inclined parts or surfaces K of triangular shape or otherwise, and which extend from the summit to the base of said crimps H, where said ends K join the smaller or compensating crimps I.

It will be observed that by my machine, as hereinbefore described, having the main crimps H, compensating-crimps I, and the inclined ends K, a wash-board plate is formed, of the described shape and configuration, at one operation of the machine, whereas by the ordinary method the ends N N of the wash-board plate are formed by a separate operation, which consists in placing an ordinary crimped plate upon a suitable die or form, and then by blows or pressure with any suitable instrument or device conforming the before-named part of the plate to the shape of the die.

As far as I am aware the several described processes have not before been performed by one machine at one operation.

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

1. As an article of manufacture, a wash-board plate, provided with the main crimps L and compensating-crimps M, substantially as and for the purpose described.

2. In a crimping-machine, the combination of the corrugations or crimps H and I, substantially as and for the purpose described.

3. In a crimping-machine, the combination of the bed B, crimps H and I, and sector or cylinder F, provided with counter-crimps, substantially as and for the purpose described.

4. The combination of the crimps H and I and flanging-bars G, substantially as and for the purpose described.

5. The combination, with the crimps H and I and flanging-bars G, of the sector or cylinder F, provided with the counter-crimps and flanging-bars, substantially as and for the purpose described.

6. The combination of the crimping-bed B, crimps H and I, flanging-bars G, gear-wheel or segment D, and rack C, substantially as and for the purpose described.

7. A crimping-machine provided with the crimps H and I, the former having the inclined or beveled ends K, substantially as described.

8. In a crimping-machine, the bed B, provided with the crimps H and I, the said crimps H having inclined or beveled ends K, in combination with the counterpart crimps on the sector or cylinder F, substantially as and for the purpose described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE W. BARRETT.

Witnesses:

L. L. LEGGETT,  
FRANCIS TOUMEY.