O. L. REYNOLDS.

Cutting Slots in Metal Wash Boards.

No. 18,944. Patented Dec. 22, 1857.

Fig. 1

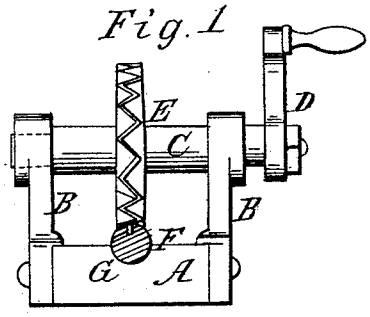
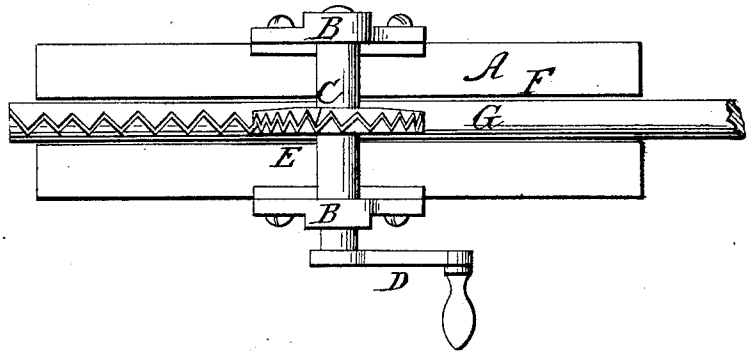


Fig. 2.



N. PETERS. Photo-Lithographer. Washington, D. C.

UNITED STATES PATENT OFFICE.

O. L. REYNOLDS, OF DOVER, NEW HAMPSHIRE, ASSIGNOR TO HIRAM F. SNOW, OF DOVER, NEW HAMPSHIRE.

MACHINE FOR CUTTING ZIGZAG GROOVES IN STILES OF WASHBOARDS.

Specification of Letters Patent No. 18,944, dated December 22, 1857.

To all whom it may concern:

Be it known that I, O. L. REYNOLDS, of Dover, in the county of Strafford and State of New Hampshire, have invented a new and Improved Method of Cutting Zigzag Slots or Creases in the Stiles or Side Pieces of Corrugated-Metal Washboards; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1, is an end view of the apparatus or mechanism employed in carrying out my improvement. Fig. 2, is a plan or top view of ditto.

Similar letters of reference indicate corresponding parts in the two figures.

This invention consists in a new method of cutting or forming the zig-zag grooves in the stiles or side pieces of wash-boards, the body part or rubbing surfaces of which are composed of corrugated sheet metal.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A, represents a metallic bed of a suitable width and length, and B, B, are two uprights, which are secured one at each side of the bed at about its center.

C, is a shaft the ends of which work in the upper parts of the uprights B, B. One end of the shaft C, has a crank D, upon it.

E, is a wheel placed upon the shaft C, at about its center. The periphery of this wheel is cut or filed so as to form a zig-zag cutting edge as plainly shown in both figures.

In the upper surface of the bed A at its center there is made a longitudinal groove F, said groove being directly underneath or in line with the wheel E.

The operation is as follows. The stile or side piece represented by G, is placed in the groove F, and as the wheel E, is turned, the stile or side piece is forced along by the wheel, the cutting edge of which enters the stile or side piece and makes the zigzag slot or crease therein. The wheel E, of course must be sufficiently large in diameter to allow its edge to sink the requisite depth into the stile or side piece.

My improved method of making the zig-zag grooves in washboard stiles is specially intended for use in the manufacture of that description of wash-boards in which the rubbing surface is composed of corrugated sheet metal; the board, when completed, having a rubbing surface on both sides.

For want of some method of making the zig-zag grooves in the stiles, so that they would firmly bind upon the edges of the corrugated sheets, it has heretofore been usual to have a solid wooden back-board to give stability and unity to the frame; two corrugated plates of metal being required, and laid upon each side against the back-board. Now, it is conceded that, when the metal is supported by a backboard in the manner described, the rib pressing upon it, is corroded (by the moisture which accumulates) and reduced in thickness and strength faster than the one that is exposed to wear, and that the washboard when apparently worn out, is in reality corroded out; whereas, in my wash-board since both sides of the metal are not only simultaneously exposed to wear, but to the atmosphere also, no dampness is accumulated and no corrosion takes place.

As it appears that my form of washboard is the most desirable, for the reasons above stated, the next consideration is, how to produce it at the least possible expense. One point is already gained, which is a saving of one-half of the stock of an ordinary double-sided board, one thickness of metal only being used, and the back-board being dispensed with.

In the making of my form of board, by hand, the great difficulty has been to cut the stiles correctly to receive the metal, which requires great accuracy. When the cutting is done, however accurately, with a chisel, the corners of the wood are liable to break out, leaving recesses for the accumulation of filth, which is very objectionable.

All the above difficulties are obviated by my improved method of stile-cutting, for by its use, correctness is mathematically certain; and constant use has demonstrated that no danger of the breaking of the wood need be feared, while fifty stiles may be cut by my method, by one operator, in the time that would be consumed in cutting a single one by any other known means. From the manner in which the metal is secured in the framework, it is impossible for the corrugations in it to change in shape by use.

The zig-zag groove in the sides of the

frame or stiles, being pressed open by my method, to receive the metal without any of the wood being removed, the wood, when wetted, swells and grasps the edges of the metal so as to support it without any back-board, so that both sides of it (the metal) are alike, and either may be used with equal facility; and as the articles applied to one side, in washing, do not touch the same ribs when applied to the opposite side, but bear on the intermediate ones, it is obvious that the metal will wear twice as long as when one side only is used.

I do not claim zig-zag cutting wheels, as my invention, for I am well aware that they are old. But

Having thus described my invention, what I claim as new, and desire to secure by Letters-Patent, is:—

The method herein described of cutting or forming the grooves in the stiles or side pieces of wash-boards in which corrugated metallic rubbing surfaces are employed.

O. L. REYNOLDS.

Witnesses:
J. W. KINGMAN,
J. D. THORNTON.