

C. J. MERRILL.

Improvement in Machines for Pressing Roofing-Tiles, &c.

No. 130,856.

Patented Aug. 27, 1872.

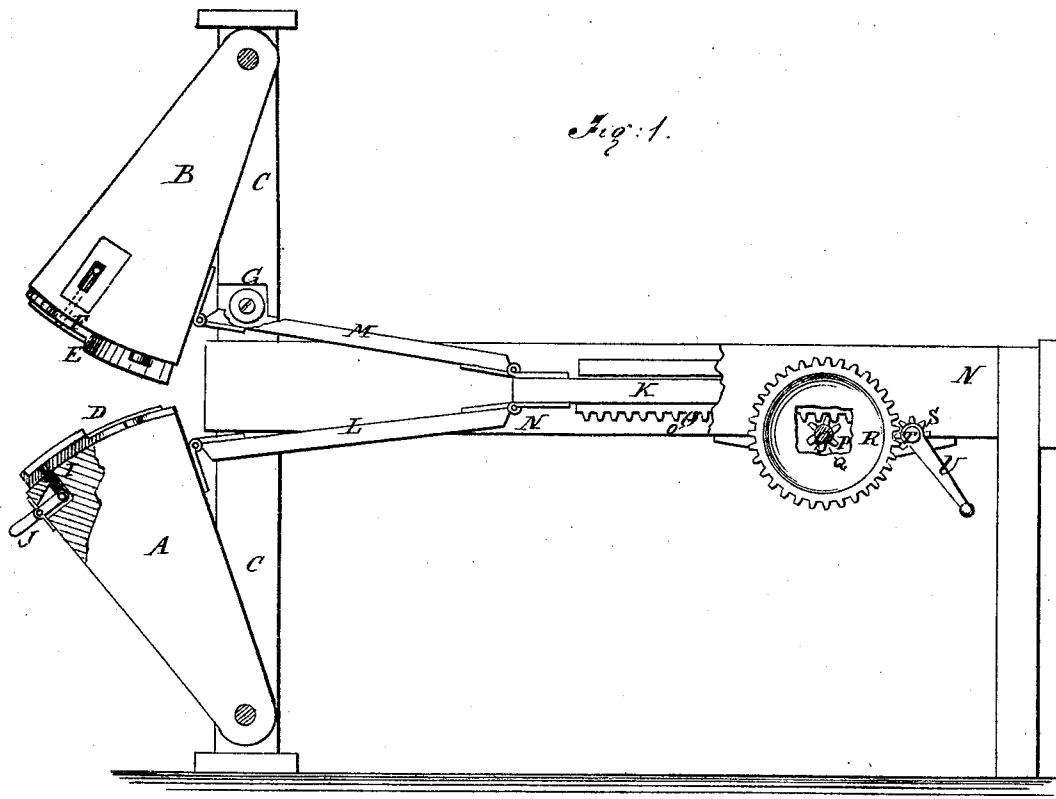


Fig. 2.

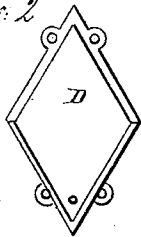


Fig. 3.

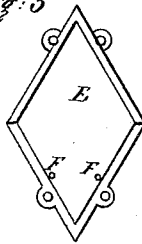
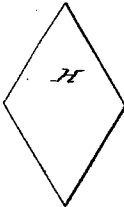


Fig. 4.



Witnesses:

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# UNITED STATES PATENT OFFICE.

CALVIN J. MERRILL, OF UPPER ALTON, ILLINOIS, ASSIGNOR TO HIMSELF,  
FRANK F. MERRILL, AND CHARLES C. MERRILL, OF SAME PLACE.

## IMPROVEMENT IN MACHINES FOR PRESSING ROOFING-TILES, &c.

Specification forming part of Letters Patent No. 130,856, dated August 27, 1872.

Specification describing a new and useful Improvement in Machine for Pressing Roofing-Tiles, &c., of potter's clay, invented by CALVIN J. MERRILL, of Upper Alton, in the county of Madison and State of Illinois.

In the accompanying drawing, Figure 1 is a side view of my improved machine, parts being broken away to show the construction. Fig. 2 represents the lower die. Fig. 3 represents the upper die. Fig. 4 represents the metallic plate.

Similar letters of reference indicate corresponding parts.

My invention has for its object to furnish an improved machine for pressing roofing-tiles, window caps and sills, and other articles of potter's clay, and which shall be simple in construction, convenient in use, and effective in operation; and it consists in the construction and combination of the various parts of the machine, as hereinafter more fully described.

A B represent segments of wheels or cylinders, six feet, more or less, in diameter, and which are pivoted to a suitable framework, C. To the faces of the segments or cylinders A B are attached one or more sets of dies, D E, which are so constructed as to give the desired form to the article to be made. The dies D E are curved to correspond with the curvature of the faces of the segments, wheels, or cylinders A B, so that they may begin to press the clay at one corner or edge, and may pack and press the clay into all parts of the dies, forcing the surplus clay out at the other corner or edge. In forming roofing-tile the nail-holes are formed in the clay while under great pressure by the pins F inserted in the segments or cylinder B, and which pass out through holes in the die E to rest against the other die. The pins F are held in by springs connected with them, and are forced out by having arms formed upon them, which project through slots in the end of said cylinder or segment, and which, at the proper time, come in contact with wheels G pivoted to the frame C. In using the dies a small metallic plate, H, of the same form as the lower die, is placed in said lower die, upon which the clay is pressed, so that the pressed article may be removed from the die by raising the said plate. The plate H is raised out

of the lower die D by the rod I, which is pivoted to and forced out by a small hand-lever, J, and which is held in by a spring connected with it. When the dies D E are attached to segments said segments may be oscillated to press the articles by the slide K, which is connected with the segments A B by pivoted connection-rods L M, and which slides in ways in a horizontal frame, N. The slide K has a rack, O, attached to its lower side, into the teeth of which mesh the teeth of a small gear-wheel, P, attached to the shaft Q, which revolves in bearings attached to the frame N, and to the outer end of which is attached a large gear-wheel, R. Into the teeth of the large gear-wheel R mesh the teeth of a small gear-wheel, S, attached to a shaft, T, which revolves in bearings attached to the frame N, and to the end of which is attached the crank U for operating the machine. In forming window-caps, sills, and other large articles, the lower die may be made straight and detached, and geared to pass between the lower cylinder and the upper die for convenience in removing the articles without injuring them. The faces of the dies and of the metallic plate may be left with the fine sand prints not finished out, or may be etched or otherwise made so as to confine small portions of air between said surfaces and the clay, which air, when the pressure is removed, will expand and raise or loosen the clay from said surfaces.

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

1. In a tile-forming machine, the combination of the pivoted reciprocating segments A B, provided with dies, and of suitable mechanism for operating the same, as described.

2. The combination of the plate H and lever J and its rod with a die for forming the tile, as specified.

3. The combination of the reciprocating slide K and connecting-rods L M, the segments A B, and curved dies D E, as herein described, and for the purpose specified.

CALVIN J. MERRILL.

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