

J. P. MOLLIERE.

## Machine for Hammering Leather.

No. 14,140.

Patented Jan. 22, 1856.

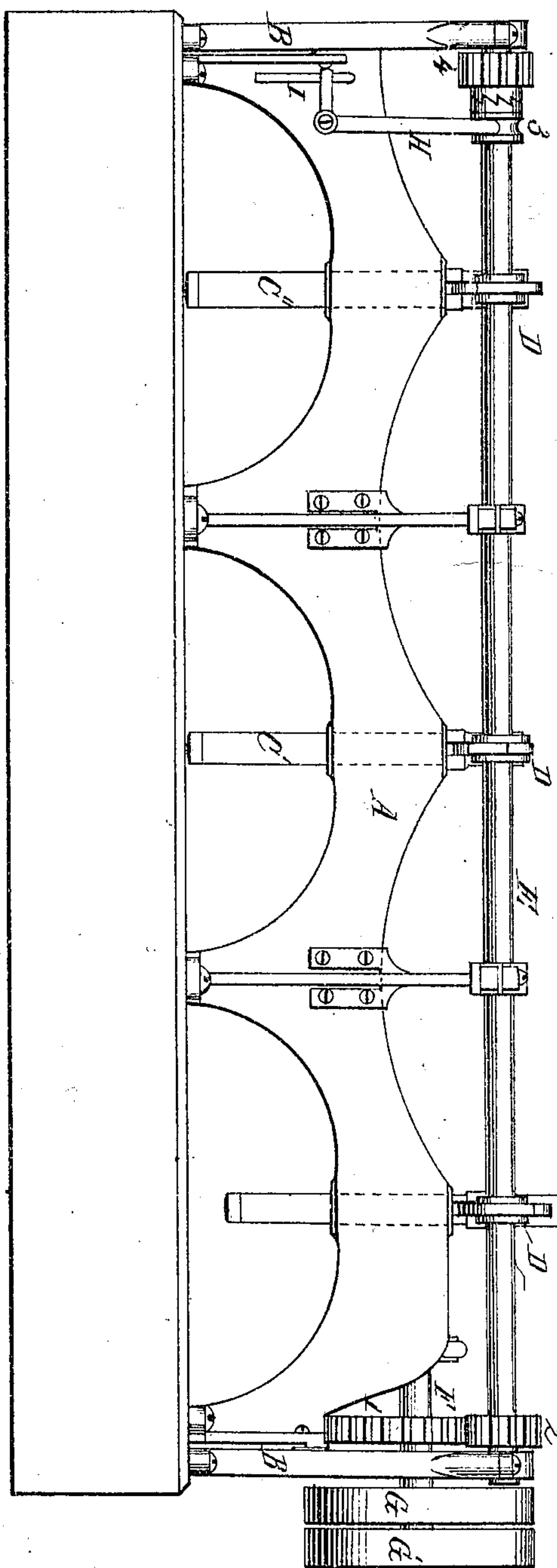


Fig. 1

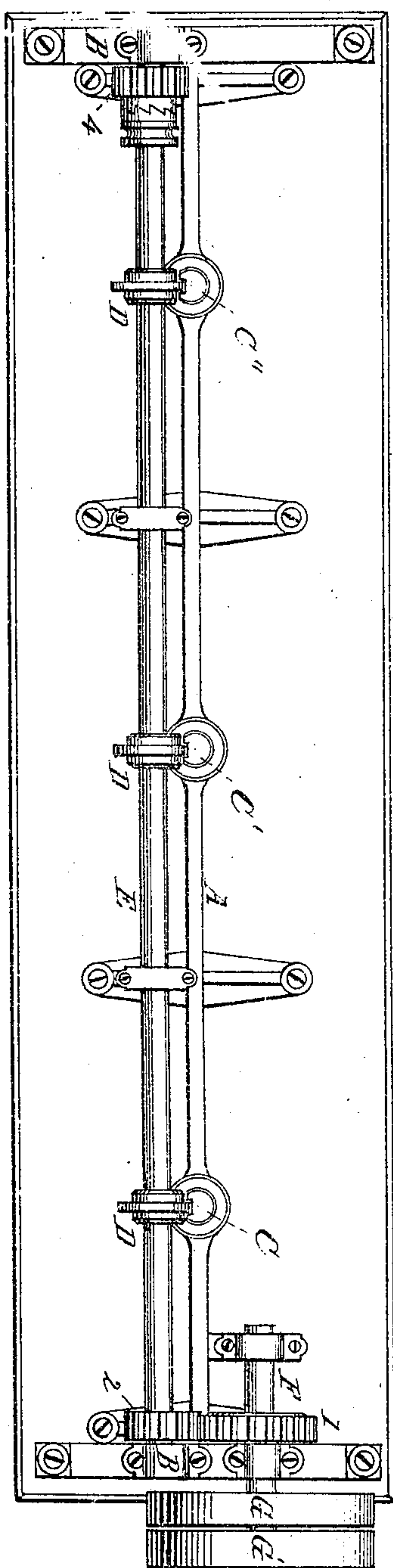


Fig. 2



# UNITED STATES PATENT OFFICE.

JEAN PIERRE MOLLIÈRE, OF LYON, FRANCE.

## MACHINE FOR HAMMERING LEATHER FOR THE SOLES AND HEELS OF BOOTS AND SHOES.

Specification of Letters Patent No. 14,140, dated January 22, 1856.

*To all whom it may concern:*

Be it known that I, JEAN PIERRE MOLLIÈRE, of Lyon, in France, have invented a new and useful Machine for Hammering  
5 Leather Intended for Manufacture into Boots and Shoes, the object being to close the pores of the leather without any displacement of them so as to render it water-proof; and I do hereby declare that the following is a full, clear, and exact description  
10 of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

15 Figure 1 is a longitudinal section and Fig. 2 a top view of the machine and in which the letters referring to the separate parts thereof are explained in the following description.

20 To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

This machine may or may not be connected with a second one for cutting out, pricking and stamping heels and soles, but if it is  
25 so constructed, then it transmits its motion to the latter, and is made fast to a separate foundation stone or to one common to the two machines, and it is upon this stone,  
30 which is hard and polished, that the leather is hammered.

It consists of a frame of cast iron A, forming three arches, which are secured to the foundation stone by bolts passing into  
35 the same. This frame is attached on one side to the pedestal or upright B, and on the other to the frame of the cutting out, &c., machine, or to a pedestal which may be independent or not of the latter. In the  
40 center of each one of the arches, is a round hole or socket, in which the hammer slides up and down. The machine has three hammers C C' C'', which are of different sizes; they are of cast iron and hollow, so as to  
45 allow their weight to be increased or diminished, by putting into or taking out of the hollow part, heavy bodies, such as lead, &c. To the lower extremity of the hammer, is  
50 keyed a steel hammer head, for striking the leather; to avoid accidental encounters between the hammer and the stone, which might spoil both, when by inattention or forgetfulness, there would be no leather upon the stone, the hammer is held back on  
55 the upper side of the socket by a shoulder,

which stops it there. Above this shoulder, the hammer is mortised through its center, and in this mortise plays the cam, by which it is raised. This arrangement has the double advantage of lifting the hammer, by  
60 its center, and keeping the cam always in the mortise, thereby preventing the hammer from rotating and consequently diminishing its friction.

The cams D are placed upon the shaft E, in such a manner, as to lift the hammer to the desired height, to disengage it instantly at that point, so as to let it fall again upon the leather, and to lift it again immediately, just before it can give a second blow by the  
70 rebound. These cams are double, that is to say, each one lifts up its hammer twice, during a revolution of the shaft, and as they are so arranged as to act, the one after the other, the shaft raises only one hammer at a  
75 time with great rapidity. The velocity of this shaft being about seventy-five revolutions a minute, each hammer strikes one hundred and fifty blows, in the same space of time. The interval between the blows is  
80 sufficient to let the workman, who holds the leather strips for hammering, slip them, so as to be hammered at every point; to serve this machine requires three workmen. When it is required to stop a hammer, you  
85 slip under it a piece of wood, which holds it up, and then the cam, playing in the mortise, without encountering anything, leaves the hammer at rest.

The shaft E is driven by the shaft F, 90 which takes its motion from the main power by the pulleys G G', and transmits it by a wheel 1 to a pinion 2. Upon the shaft E, at its other extremity, is a pinion 4, which only acts with this shaft, when it is held  
95 fast by the gear muff 3, keyed upon the shaft, and moved by the handle H, which keeps it in gear by the spring catch I. It is by this pinion 4, that the motion of the hammering machine is given to the cutting out machine, if they are united; but if the former  
100 be made and constructed independently of the latter, which can be done, in that case, the connecting gearing, I have described, can be dispensed with. The steel hammer  
105 heads should be made slightly rounded on their faces, to prevent the edges from cutting the leather.

What I claim as my invention and desire to secure by Letters Patent of even date with 110

the French patent for the same invention is—

5 The hammering of sole leather upon a hard surface, after it is cut into heel and sole strips, for the purpose of closing its pores, without any displacement thereof, in order to render it water proof, by means of steel hammer heads, of slightly rounded face, attached to the hollow rods C C' C'', which  
10 may be weighted at pleasure, and shall be so

governed by a cam movement, that no two strike at the same moment, while they are kept by their shoulder pieces from crushing the leather, after it is hammered, the whole constructed and operated substantially as 15 herein described.

J. P. MOLLIÈRE.

Witnesses:

W. G. SNETHEN,  
L. A. MAISCELL.