

(No Model.)

C. MILLS.  
DEVICE FOR PREPARING CARD CLOTHING.

No. 581,748.

Patented May 4, 1897.

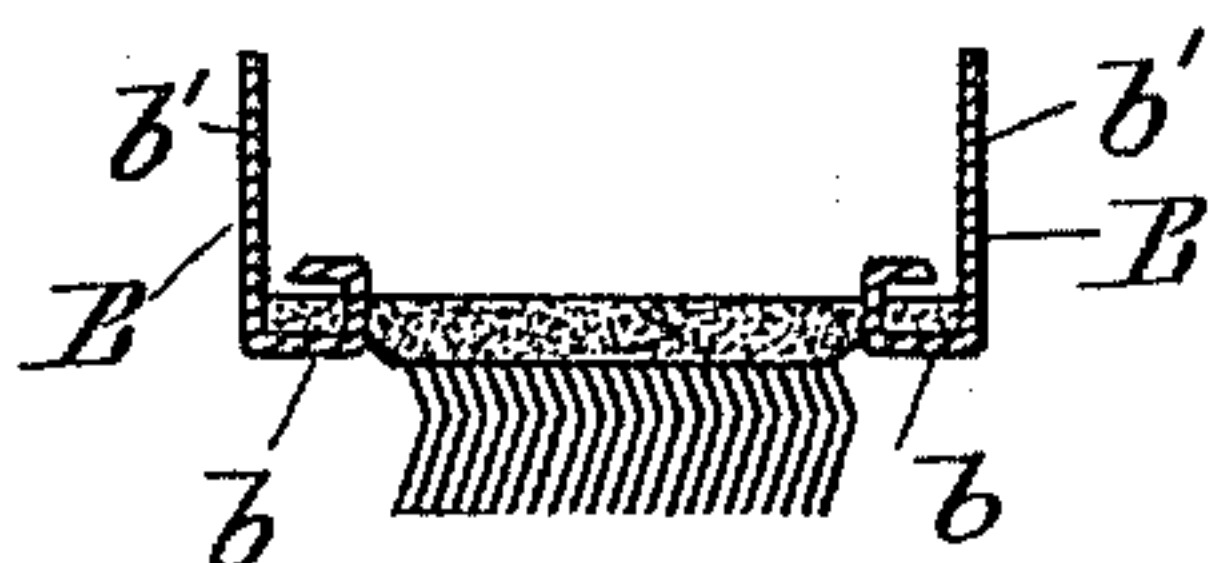


Fig. 1.

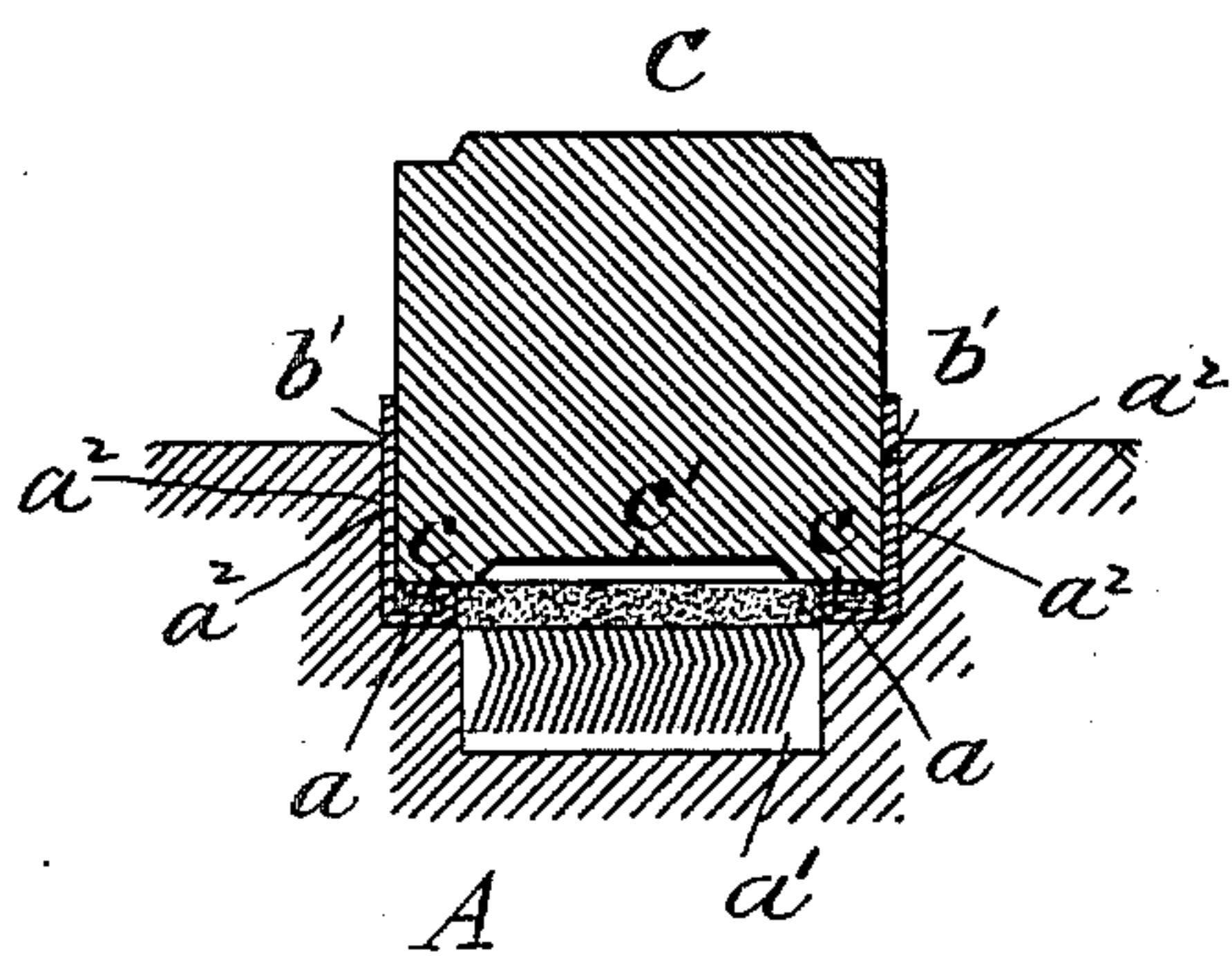


Fig. 3.

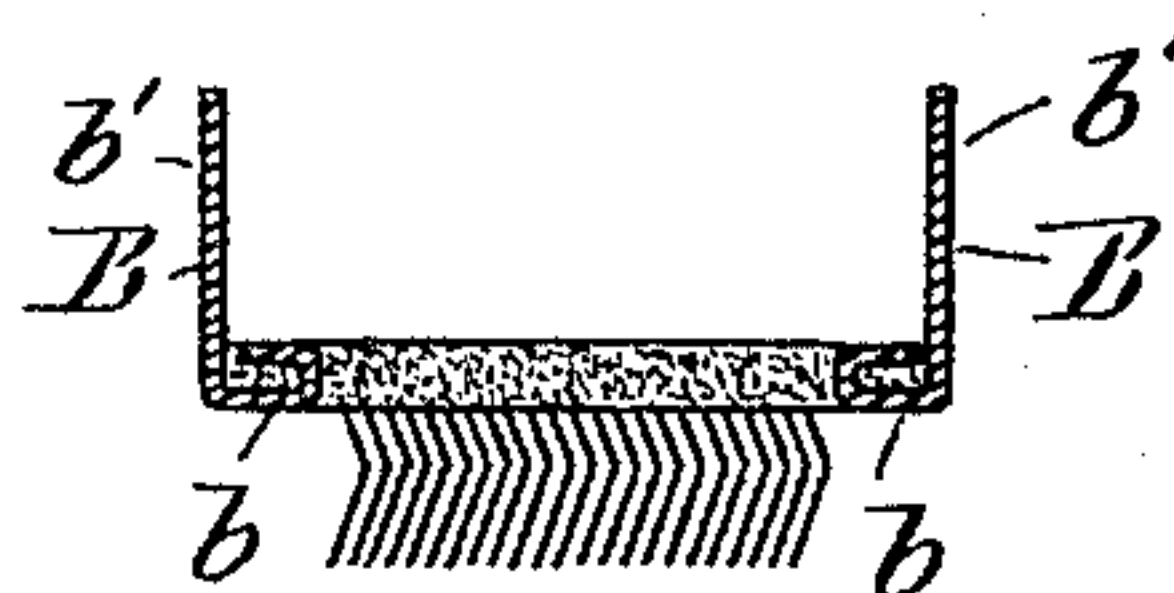


Fig. 4.

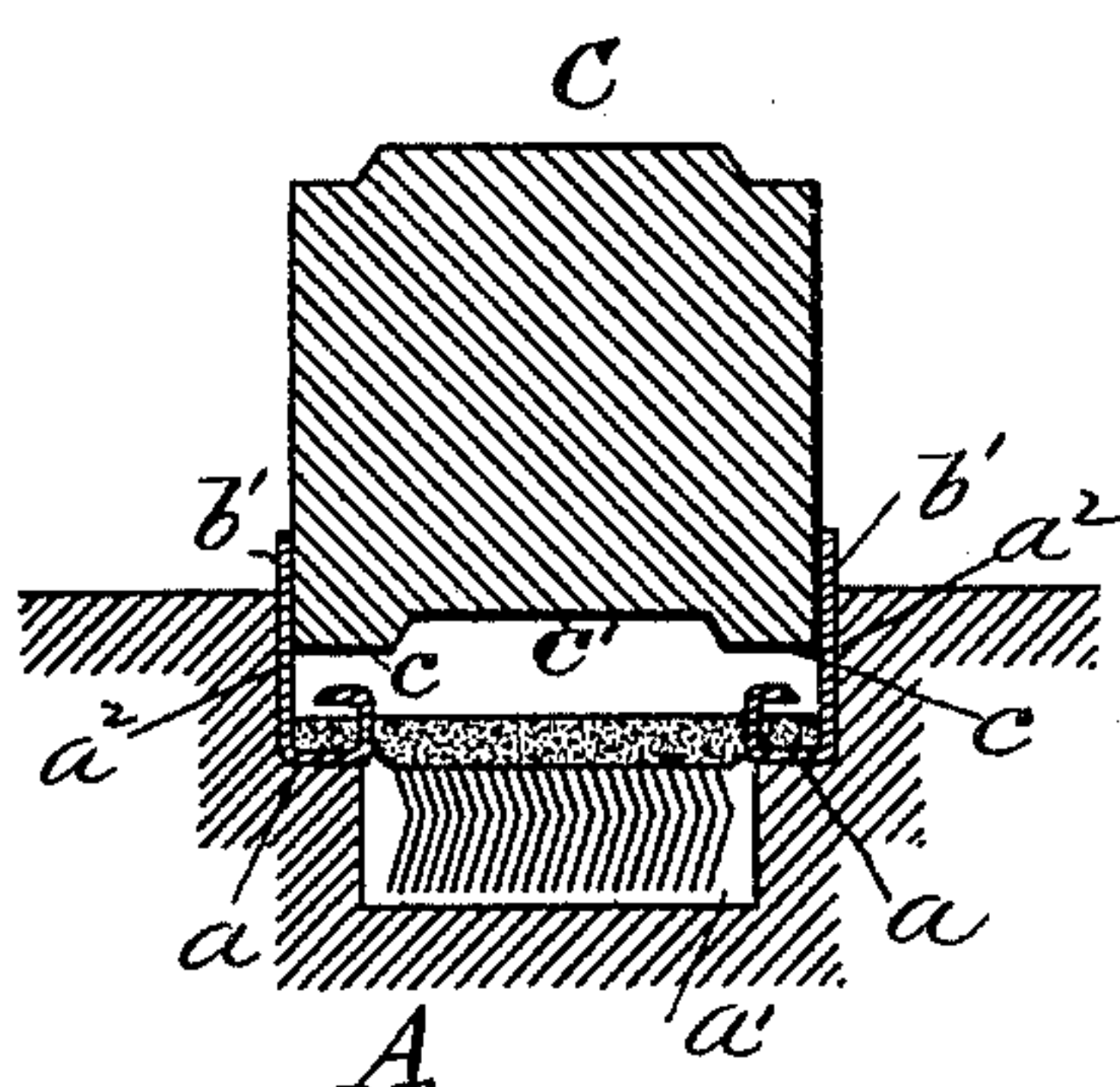


Fig. 2.

WITNESSES  
*J. M. Mc Namara*  
*W. Thompson*

INVENTOR  
*Charles Mills*



# UNITED STATES PATENT OFFICE.

CHARLES MILLS, OF NEWTON, MASSACHUSETTS, ASSIGNOR TO THE PETTEE MACHINE WORKS, OF SAME PLACE.

## DEVICE FOR PREPARING CARD-CLOTHING.

SPECIFICATION forming part of Letters Patent No. 581,748, dated May 4, 1897.

Application filed February 24, 1896. Serial No. 580,344. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES MILLS, a subject of Victoria, Queen of Great Britain, residing in Newton, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Devices for Fastening Card-Clothing to the Flats of Revolving-Flat Carding-Engines, of which the following is a specification.

10 The subject-matter of this invention was originally described in the joint application of Robert W. Hunton and myself, filed August 1, 1894, Serial No. 519,149, and it comprises means for embedding the partially-  
15 turned-over prongs of fastening-clips employed for attaching card-clothing to flats in the inner surface of said clothing near its edges and without injury to the wire clothing or intermediate wired section of the  
20 clothing. It comprises a holder for holding the clips and the clothing, the structure and operation of which are hereinafter described, and a plunger or pressure head having surfaces or sections along each edge adapted to  
25 be brought simultaneously into contact with the partially-turned-over points of the prongs and to exert pressure thereon, whereby they are embedded into the substance of the clothing, the said pressing-surfaces being separated by a recess which prevents pressure being applied to the section of the clothing between the edges.

In the drawings, Figure 1 represents the card-clothing and the clips attached to its  
35 edges as they are formed and left after the clip-applying devices have finished their work. Fig. 2 represents the clothing and attached clips as placed in a holder preparatory to the action of the point-embedding  
40 plunger or pressure head. Fig. 3 represents the relation of the clothing, clips, prongs, and pressure-head at the end of the embedding operation; and Fig. 4 is a view of the clothing and attached clips removed from the holder.

45 A represents the holder. It has the beds  $a$ , which are separated from each other by the recess  $a'$  and the side walls  $a^2$ , extending upwardly from the outer edges of the beds. The beds are of a width to receive the sections  $b$  of the clips B, and the sections  $b'$  of the clips bear against the walls  $a^2$ . While

the wired section of the clothing enters the recess  $a'$ , the ends of the prongs have been turned over upon the under surface of the clothing, but not having been embedded in  
55 it, and they are disposed over the beds  $a$ .

The plunger or pressure head C has the flat point-embedding sections  $c$  and the depressed section  $c'$  between them, and these embedding-sections  $c$  are also located so as  
60 to be immediately above the turned-over prongs, and upon the insertion of the pressure-head between the sections  $b$  of the clips and its movement upon the prongs they are embedded in the clothing, so that their sur-  
65 faces are flush therewith and without bringing material pressure to bear upon the wired section thereof. It is desirable that the points or ends of the prongs should be thus embedded into the substance of the cloth-  
70 ing in order that its under surface may be made as flat or level as possible before the clothing is secured to the flat, as it is desirable that there should be no bunches or irregularities upon its under surface to in  
75 any way throw out of shape or displace the wired clothing. I thus obtain a clothing which is prepared for subsequent application to a flat by having rigidly secured to its edges, in advance of its application to the  
80 flat, attaching-clips which are not only in the subsequent attaching operation employed for securing the clothing to the flat, but also for stretching the clothing in the act of securing it.

The walls of the holder are separated from  
85 each other by a space which holds the clips at a distance apart somewhat less than the width of the flat to which the clothing is to be secured, or, in other words, the clips are attached to the clothing in its unstretched  
90 condition.

Having thus fully described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a device for attaching clips to card-  
95 clothing, the combination of a holder having the beds  $a$  for holding the clips as specified and attached wire clothing, the intermediate recess  $a'$  for receiving the wired section of the clothing, and the side walls  $a^2$  separated from each other by a space equal to the  
100 width of the clothing and attached clips, with



a plunger or pressure head having the prong-embedded sections *c* adapted to be brought against the partially - turned ends of the prongs projecting from the inner surface of the clothing and to press them downward into the substance of the clothing, as and for the purposes specified.

2. The combination in a device for attaching clips to card-clothing, of the beds *a* for receiving and holding the clothing upon its face side and the attached clips secured to the clothing as specified, with the pressure-head *C* having the point-flattening sections *c* and adapted to be closed upon the points of said clips and flatten the same into the rear surface of the clothing between the clips, as and for the purposes described.

3. The combination, in a device for attaching clips to card-clothing, of a bed *a* adapted to receive the face side of the clips, a clip-sustaining wall *a*<sup>2</sup> rising from the in-

ner edge of the bed, and a pressure-head *C* having a point - embedding section *c* and adapted to act upon the rear surface of the clothing, whereby the points of the clips extending above the inner surface of the clothing may be flattened into the inner surface thereof.

4. The combination in a device for attaching clips to card-clothing, of a holder for holding the wired card-clothing with the clips partially attached thereto by its front edges only, the same comprising the beds *a* to receive the face of the clothing, with the pressure-head having the point-embedding surfaces *c* and the recess *c'* between them to act upon the rear surface of the clothing, as and for the purposes described.

CHARLES MILLS.

In presence of—

A. J. M. MCNAMARA,  
S. A. THOMPSON.