

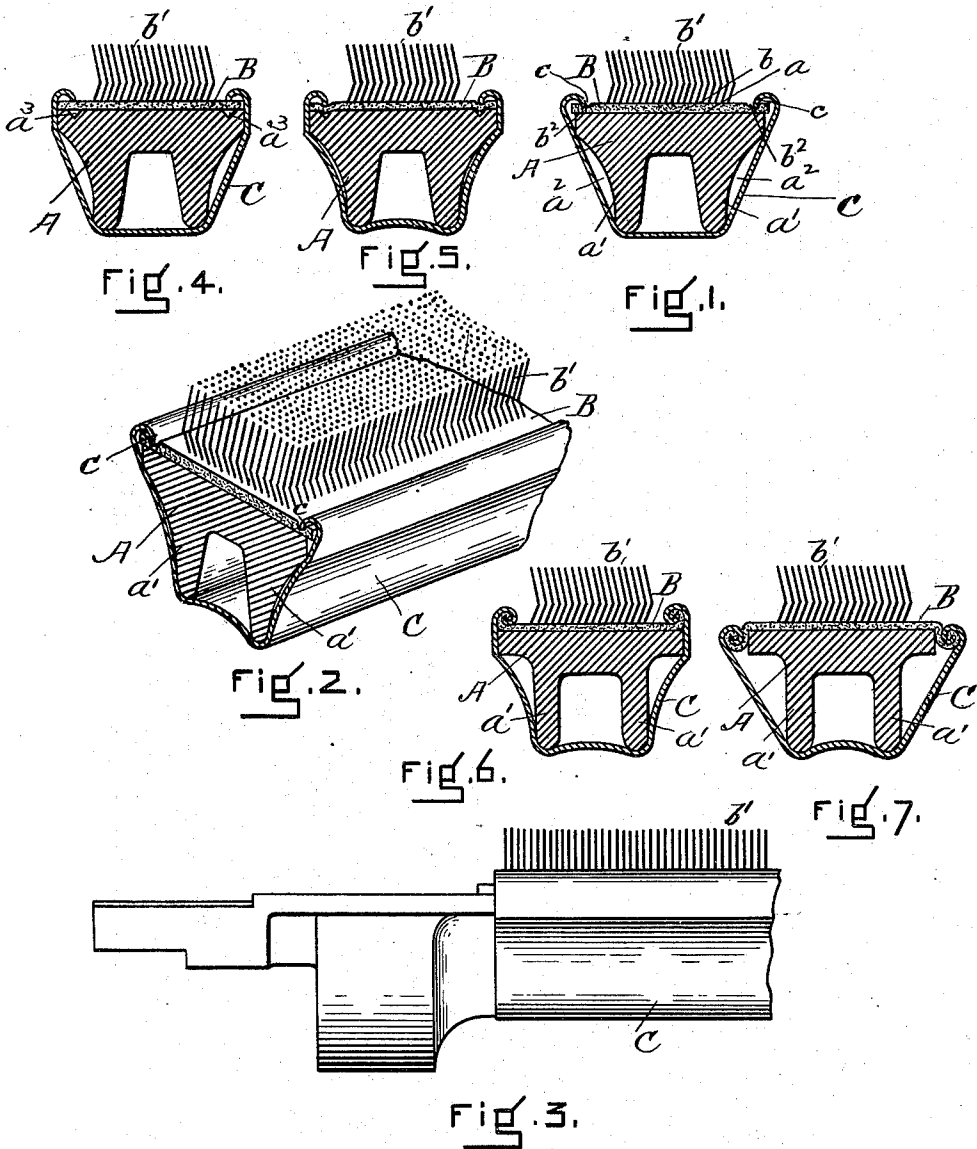
(No Model.)

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MEANS FOR APPLYING WIRE CLOTHING TO FLATS.

No. 565,554.

Patented Aug. 11, 1896.



WITNESSES

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

MEANS FOR APPLYING WIRE CLOTHING TO FLATS.

SPECIFICATION forming part of Letters Patent No. 565,554, dated August 11, 1896.

Application filed July 21, 1894. Serial No. 518,219. (No model.)

To all whom it may concern:

Be it known that I, CHARLES MILLS, a subject of the Queen of Great Britain, residing at Newton, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Means for Applying Wire-Clothing to Flats, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, in explaining its nature.

The clothing of flats for carding-engines comprises bent wires rising from a flexible base. This flexible base is generally attached to the face of the flat by means which strain it thereon, in order that it may lie firmly against the said face.

Various ways have been invented for so securing the clothing, and my present invention embodies a new means for accomplishing the desired purpose.

My invention involves a slight modification in the shape of the flat by which it is provided with two stiffening ribs instead of one and of the same depth throughout, and these ribs are provided with concave surfaces upon their sides for the purpose of giving lightness to the ribs, but more especially for the purpose of permitting my clothing-fastening device to be so set that in the act of fastening its edges shall strain the clothing to the face of the flat.

In the drawings, Figure 1 is a view in cross-section of a flat-clothing and the fastening-strip before it is set. Fig. 2 is a view in perspective of the same parts after the fastening-strip has been set and after the clothing has been strained to the surface of the flat. Fig. 3 is a view in elevation comprising one end of a clothed flat. Figs. 4, 5, 6, and 7 show in section modifications to which reference is hereinafter made.

A represents the flat. It has the flat surface a , which receives the wire-clothing B. It also has the ribs a' , which stiffen it and are of uniform depth throughout the length of the flat. The ribs have in their outer sides the hollows or cavities a^2 .

The clothing B has the usual fibrous base b and the wires b' extending from it, the edges b^2 of the clothing on each side being free from wires and affording means by which the cloth-

ing is stretched upon the flat face and fastened thereto. In this instance the clothing is secured to the flat by a strip of sheet metal C, which is bent to envelop the flat on all sides excepting the surface a , and has its ends c curved to engage the edges b^2 of the clothing, and the edges preferably are serrated to better engage the clothing, and after the engagement has been effected a straining action upon the clothing is produced by causing the strip to conform to the hollows or concave surfaces a^2 of the flat, whereby it is strained and a draft applied, to the edges b^2 of the clothing, whereby it is drawn taut to the surface of the flat and at the same time rigidly fastened, the strip also providing a metal binding to the edges of the clothing.

In Figs. 4 and 5 the surface a of the flat is represented as having grooves or depressions a^3 , one near each end, into which the edges of the clothing and the turned-in edges of the strip are forced by the fitting of the strip to the flat. Fig. 4 represents the position of the parts before the strip has been strained, and Fig. 5 after it has been strained, showing the edges of the clothing as depressed or drawn into the recesses a^3 .

In Fig. 6 the edges of the strip are represented as engaging the edges of the clothing by being rolled with them. To thus roll the edge of the clothing with the edges of the strip, the edges of the clothing are laid alongside of the inner surfaces of the edges of the strip, which may be partially rolled or sufficiently to permit the edges of the clothing to be seized by the turned-in edges of the strip, and the edges of the strip and of the clothing are then rolled together to any desired degree to secure proper tension upon the clothing, and after such tension is obtained, where desired, the rolled edges may be brought against the surface of the flat with any desired stress by causing the portion of the strip surrounding the flat to be curved or formed inward from a straight line, as represented in Fig. 6.

In Fig. 7 the edges of the clothing are represented as engaging the edges of the strip by rolling, as in Fig. 6, but instead of upon the surface of the flat upon its edges, the clothing being drawn over the corners of the flat.

The straining action upon the clothing is obtained by changing the shape of the strip from a straight to a curved form, as represented in Figs. 2, 5, and 6.

5 The employment of a strip of the character described and in the manner specified gives increased rigidity to the flat, in that it braces it, and it also provides a surface which sheds dust, which is of consequence. This dust-
10 shedding property is obtained because of the smoothness of the strip, it being very different in character from the surface of the cast-iron of which the flat is made, and the strip not only serves to cover this rougher and
15 coarser surface of the flat, but it also covers the recesses and irregularities therein, leaving no ledges or recesses in which dust can lodge or be held.

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

1. The combination of the flat A, having the plane surface *a*, the card-clothing B and the clip C in one piece, arranged to envelop
25 the sides and back of the flat, to engage by its edges the edges of the clothing and secure the clothing to the flat, and to exert a stretching strain upon the clothing by having sections thereof changed in form from a flat or
30 straight to a curved shape, substantially as described.

2. The combination of a flat having a plane surface *a*, one or more concave or recessed sections and a clip C in one piece arranged to envelop the flat upon its sides and back
35 and to engage the edges of the clothing and adapted to be bent into one or more of the concave or recessed sections to thereby separate the edges and strain the clothing, substantially as and for the purposes described. 40

3. The combination of the flat A, having the recesses *a*³ in its face, the card-clothing B, the edges of which extend over said recesses, and the metal strip C in one piece, arranged to envelop the sides and back of the
45 flat and the edges of which extend over the edges of the clothing in line with said recesses *a*³, said strip being adapted to force the edges of the clothing into said recesses, and thereby exert a straining action upon it, as and
50 for the purposes described.

4. The combination of a flat, its wire-clothing and a clothing straining and attaching flat-covering clip in one piece, adapted to envelop the sides and back of the clip and to
55 engage the edges of the clothing and by a change in its shape to strain and secure the clothing to the flat, substantially as described.

CHARLES MILLS.

In presence of—

J. M. DOLAN,

F. F. RAYMOND, 2d.