

(No Model.)

R. W. HUNTON.
MEANS FOR FASTENING CARD CLOTHING TO FLATS OF REVOLVING FLAT
CARDING ENGINES.

No. 564,691.

Patented July 28, 1896.

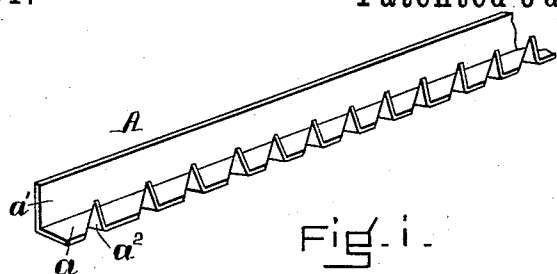


Fig. 1.

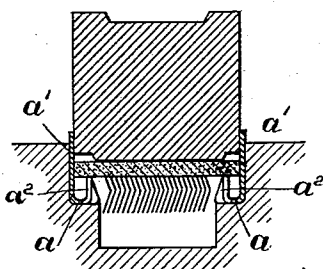


Fig. 2.

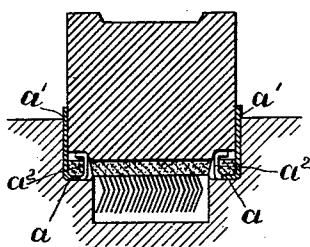


Fig. 3.

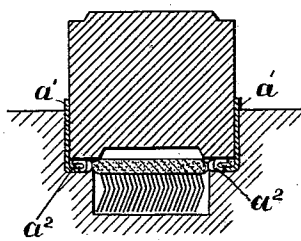


Fig. 4.

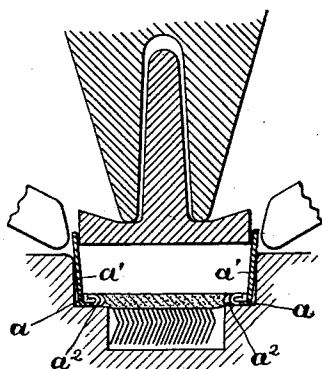


Fig. 5.

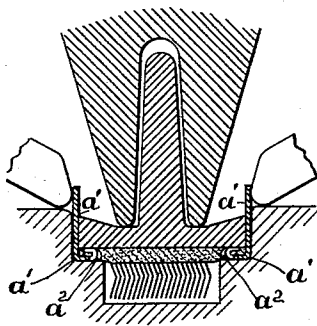


Fig. 6.

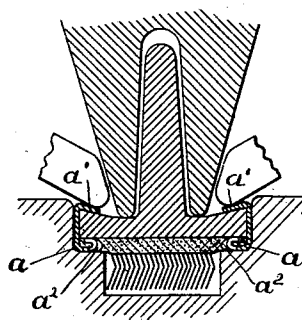


Fig. 7.

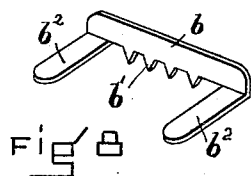


Fig. 8.

WITNESSES

Chas. F. Brown
Am. L. Thompson

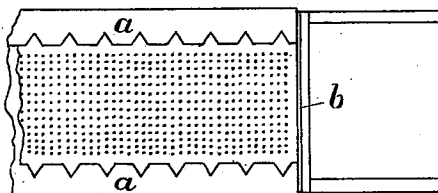


Fig. 9.

INVENTOR
Robt W Hunton

UNITED STATES PATENT OFFICE.

ROBERT W. HUNTON, OF NEWTON, MASSACHUSETTS, ASSIGNOR TO THE
PETTEE MACHINE WORKS, OF SAME PLACE.

MEANS FOR FASTENING CARD-CLOTHING TO FLATS OF REVOLVING-FLAT CARDING-ENGINES.

SPECIFICATION forming part of Letters Patent No. 564,691, dated July 28, 1896.

Application filed November 28, 1894. Serial No. 530,247. (No model.)

To all whom it may concern:

Be it known that I, ROBERT W. HUNTON, a citizen of the United States, residing at Newton Upper Falls, in the county of Middlesex, State of Massachusetts, have invented a new and useful Improvement upon Means for Fastening Card-Clothing to Flats of Revolving-Flat Carding-Engines, 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 invention is an improvement upon that described in the application of Chas. Mills and myself for Letters Patent of the United States, filed August 1, 1894, Serial No. 519,147, and it especially relates to the form of the fastening-clip employed. In the application referred to the clothing is described as secured to the flats by means of long clips of a right-angular shape in section, one portion of each of which has prongs or spurs formed by extensions from the edge, which are bent upward at the edge and which engage the edges of the clothing and hold it, and the other portion of which extends about the edge of the flat to lap upon the opposite surface thereof, it being understood that there are two principal clips which extend lengthwise the clothing and flat practically its entire length, and two end pieces which are of a somewhat different type.

My present invention relates especially to the form of the clips and particularly to the manner of providing them with prongs or spurs which are formed from the clip itself, so to speak, rather than by extensions from its edge. This result is reached by punching or otherwise forming in the edge of the plate forming the clip prongs or spurs, the greatest diameter of which is at an angle to the edge of the plate and within the edge of the plate rather than parallel to it, as shown and described in said application. The substance of such prongs is thus obtained from or within the edge of the clip, and this makes a very considerable saving in the cost of the clip as well as adds strength to the teeth. Thus metal considerably narrower in width can be utilized in making the clip than where the prongs extend directly from the edge, the

saving in the width of the metal being very nearly if not quite the length of the prong, while the teeth, being arranged at an angle in respect to the edge of the clip, are stronger and take better hold of the edge of the cloth and consequently act to unite it more securely, firmly, and rigidly to the clips and through them to the flat.

In the drawings, Figure 1 is a view in perspective of a side clip having the features of my invention. Figs. 2, 3, 4, 5, 6, and 7 illustrate by section the various stages of the application of the clips to the clothing and to the flat and which do not differ essentially from corresponding steps described in the application above referred to. Fig. 8 is a view in perspective of an end clip; and Fig. 9 is a view in plan of the end of a flat, showing the clothing as attached to it.

Referring to the drawings, A represents the side clip. It is formed from a flat-metal plate, preferably thin iron or steel, and to the angular shape shown in Fig. 1, the plate or section *a* lapping upon a surface of the clothing near an edge and the plate *a'* extending by the edge and the edge of the flat to lap upon its inner surface.

The prongs *a*² are formed by cutting or punching or severing sections upon lines extending diagonally inward from the edge of part *a* of the clip and then bending or folding or turning these cut sections upward or so that they extend from the inner face of the part *a* and are parallel with each other and with their greatest diameter upon an oblique or right angle with the edge of the said section and within it. The length of the prong or point and its sharpness will depend upon the degree of the angle of the cut in relation to the edge. This provides the clip with points or spurs, which are very strongly placed and which are formed from the material of the part *a* and which can readily and easily be made.

It is not necessary to describe minutely the method of attaching the clothing to the prongs and the clips to the flat, as that is fully set out in the specification of the application to which I have referred, and it will be sufficient to say that Fig. 2 shows a holder for the clips and a pressure-block for forcing the clothing

upon the prongs; that Fig. 3 represents the relation of the parts at the end of this first movement.

Fig. 4 shows in section a presser for forcing the prongs into the substance of the flat clothing, and Figs. 5, 6, and 7 show the application of the clothing with its attached clips to the flat.

In Fig. 8 I have represented in perspective a type of end clip which I prefer to use and which comprises a flat bar *b*, having downwardly-extending prongs *b'* and laterally-extending arms *b''*. The bar extends across the end of the card-clothing at the ends of the longitudinal clips. The prongs *b'* extend into the substance of the clothing and the clips *A*.

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

1. As an improved article of manufacture, a clip for attaching the edges of card-clothing to flats, the same comprising a long metal plate, having the section *a*, which is adapted to lap or extend upon the surface of the card-clothing near its edge, and has formed from its substance by diagonal slits extending inward from its edge, the short prongs *a'*, which are within the outer edge of said section, and bear at an angle thereto, the said clip also having the section *a'* bent at a right angle to the section *a*, as and for the purposes described.

2. In a clip for fastening the edge of card-clothing to flats, the narrow section *a* for extending or lapping upon the outer surface of the clothing, adjacent to its edge and having formed therein within the inner edge of said section *a* short prongs *a'* to engage the edge of the clothing only, and the points of which

are adapted to be upset upon the inner surface of the clothing, the said prongs being at an angle to the inner edge of the said section, and the said section having means for fastening it to the flat, which are adapted to extend about the edges of the clothing and the flat, and lap upon the upper surface thereof, as and for the purposes described.

3. The combination of the flat, the clothing having the unwired edges and the clips uniting the clothing to the flat by means of prongs formed within the outer edge of the section *a* of each clip, bent at an angle to said edge, and making engagement with the edges of the clothing, as and for the purposes specified, and the said clips having sections *a'* which extend about the outer edges of the clothing, and of the flats, and lap upon the under surface of the flats.

4. The combination of a clip having teeth bent at an angle to the edge which laps upon the clothing, and the outer edges of which teeth are inclined from their points outwardly, with the edge of the card-clothing with which said inclines are engaged, and by which a slight straining action upon the clothing in the act of inserting the prongs is produced.

5. A clip having a lapping edge or section *a* provided with prongs *a'* for engaging the edge of the clothing, set at an angle to said edge and separated from each other by straight or uncut sections of said edge, as and for the purposes described.

ROBT. W. HUNTON.

In presence of—

WILLIAM L. THOMPSON,
F. F. RAYMOND, 2d.