

(No Model.)

2 Sheets—Sheet 1.

E. TWEEDALE.

MEANS FOR FASTENING CARD CLOTHING TO THE TOP FLATS OF
CARDING ENGINES.

No. 410,048.

Patented Aug. 27, 1889.

Fig 2.

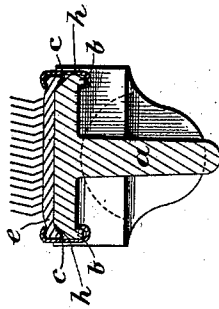


Fig 4.

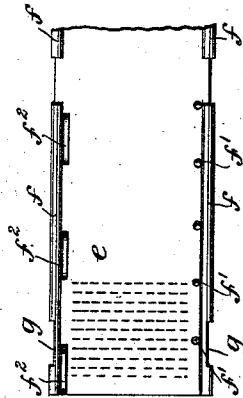


Fig 1.

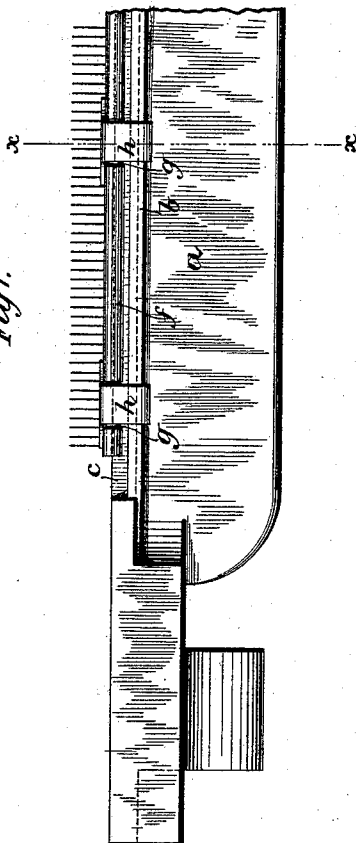
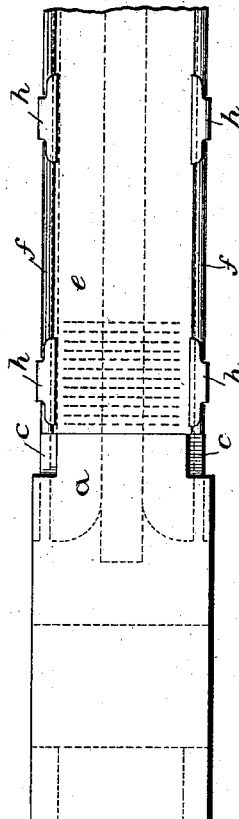


Fig 3.



WITNESSES.

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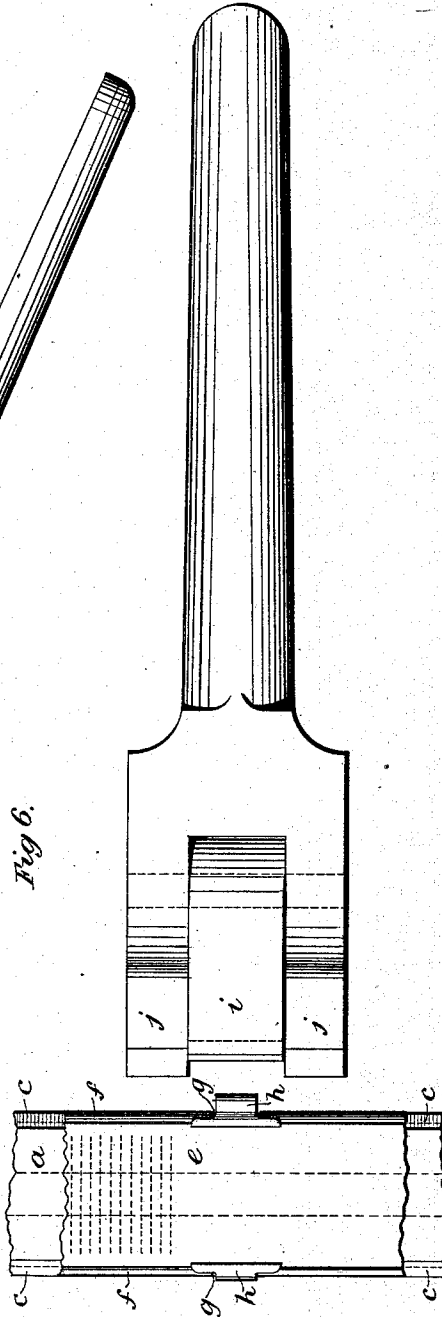
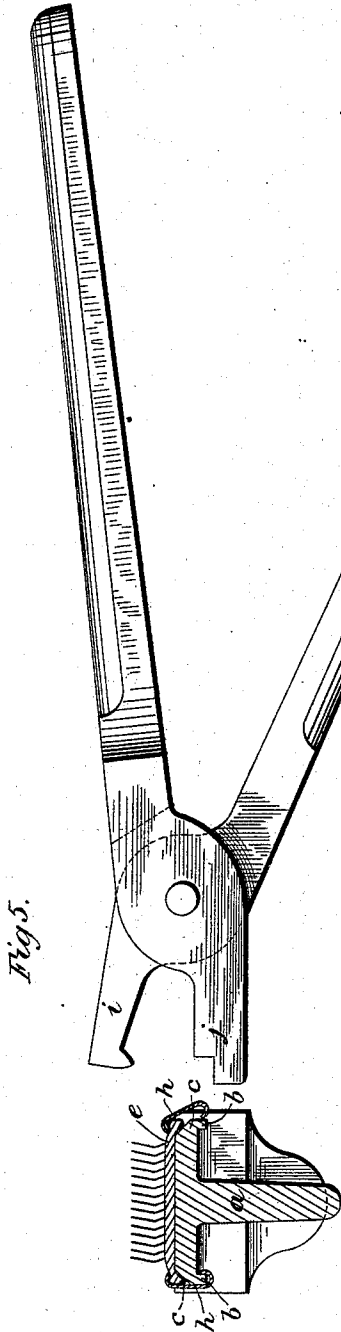
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UNITED STATES PATENT OFFICE.

EDMUND TWEEDALE, OF ACCRINGTON, COUNTY OF LANCASTER, ENGLAND.

MEANS FOR FASTENING CARD-CLOTHING TO THE TOP-FLATS OF CARDING-ENGINES.

SPECIFICATION forming part of Letters Patent No. 410,048, dated August 27, 1889.

Application filed May 6, 1889. Serial No. 309,808. (No model.)

To all whom it may concern:

Be it known that I, EDMUND TWEEDALE, a subject of Her Majesty the Queen of Great Britain, residing at Accrington, in the county of Lancaster, England, have invented a certain new and useful Improvement in Means for Fastening Card-Clothing to the Top-Flats of Carding-Engines, of which the following is a specification.

My invention consists of an improved metallic mounting or covering for inclosing the raw or cut edges of the foundation of the fillet or clothing, combined with a "flat-bar" having beveled or recessed edges, for the purpose hereinafter set forth, and means for fastening or securing the foundation when so incased to the bar of the flat.

According to my invention I employ strips of metal—preferably of mild or soft steel—rolled, stamped, or pressed into C shape, which receive, inclose, and grip the raw edges of the cut woven foundation; while the fastening device I employ consists of double-hooked pieces of metal of T shape, one hook of which engages with a rib formed on the under side of the bar of the flat, while the other hook, formed of the head of the T, secures its hold partly upon the metal edging and partly upon the woven foundation or clothing, a number of such fasteners being placed at intervals along both sides of the bar.

To clearly explain the nature of my invention, reference is made to the accompanying drawings, in which—

Figure 1 is an elevation of a portion of a card-flat with my improvements applied thereto. Fig. 2 is a section of the same on the line *xx*, Fig. 1. Fig. 3 is a plan of Fig. 1. Fig. 4 is a plan view of the card-clothing, only showing the incased edge. Fig. 5 is a similar section of the flat to Fig. 2, but showing one of the fasteners about to be applied, with a tool for that purpose. Fig. 6 is a plan view of the flat and the tool.

The bar *a* of the flat has two ribs *bb* formed upon the under side of its head, as described in an application for Letters Patent filed by me in the United States Patent Office February 18, 1889, under Serial No. 300,344, while its upper surface is beveled off or recessed at the points *cc*, as shown. The object of the beveling off (or recessing) is to provide for the extra thickness of the edges of the foundation by reason of the metal edging, so that the clothing lies flat to the face of the bar, and its metal-incased edges are not too prominent.

The card-clothing *e* has its edges incased and inclosed by the C-shaped metal strips *ff*, which are applied in any convenient manner. These strips may be either continuous and have notches *gg*, Fig. 4, cut therein for the reception of the fasteners *h*, or they may be applied in lengths, as shown at the right-hand end of Fig. 4, suitable spaces being left between them for the same purpose. These notches *gg*, or spaces, enable the fasteners *h* to lie flush with the side of the metal edging *f*.

The fasteners *h* consist of T-shaped metal double hooks, as shown, the upper hook of which bears upon the foundation and upon the metal edging *f*, while the lower hook engages with the rib *b* on the under side of the bar *a* of the flat, the metal edging of the card-clothing being drawn down and seated in the bevels *cc* on the edges of the bar.

In Fig. 5 I have shown the method of applying these fasteners with a tool for the purpose. The latter consists of a pair of tongs having a single upper jaw *i*, with a ridge or tooth on the same, (which may be serrated, if desired,) and a pair of lower jaws *jj* cut away or recessed to form shoulders, as shown. The upper hook of the fastener *h* being placed on the metal edging, as shown in Fig. 5, the jaw *i* of the tongs is placed upon the same, while the lower jaws *jj* take hold of the rib *b* on each side of the lower hooked end of the fastener, which, upon pressure being applied to close the jaws, (and slight leverage,) will draw and stretch the clothing tightly over the face of the bar of the flat and enable the operator to slip the lower hooked end of the fastener around the rib *d* and the operation is completed. The metal edging-strips *ff* may, however, be employed with the ordinary pins or rivets *f'* or staples *f''*, as shown in Fig. 4, or other fasteners, as they serve to prevent the edges of the clothing fraying away; but I prefer to use the T form of fasteners shown and described.

What I claim is—

1. In combination, the card-flat, the card-

clothing, the strip for inclosing the raw edges of said clothing, the said bar being cut away beneath the edges of the clothing, and fasteners for the clothing, substantially as described.

5 2. In combination, the card-flat, the card-clothing, the strip for inclosing the edges thereof, and double hooked fasteners to grip said strips and the card-flat, substantially as described.

10 3. In combination, the card-flat, the card-clothing, the edging-strips therefor, and fasteners for securing the clothing to the flat, said fasteners engaging with the edging-strip, substantially as described.

15 4. In combination, the card-flat, the card-clothing, the edging-strip therefor having notches, and the securing-hooks fitted to said notches, substantially as described.

5. In combination, the card-flat, the card-clothing, and fasteners at the edge of said clothing, the said card-flat being cut away under the edge of the clothing, substantially as described.

6. In combination, the card-flat having ribs 7, the clothing, and the double-hooked fasteners engaging the clothing and the ribs, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

EDMUND TWEEDALE.

Witnesses:

WALTER BRIERLEY,

J. BRIERLEY HOWARD.