

(No Model.)

W. SENIOR, I. WOOD, E. HUGHES & W. HEMINGWAY.
MEANS FOR FASTENING CARD CLOTHING TO FLATS OF CARDING ENGINES.

No. 524,566.

Patented Aug. 14, 1894.

FIG:1.

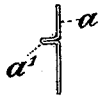


FIG:2.



FIG:3.

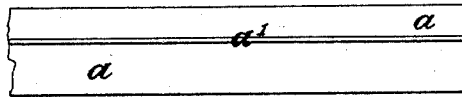


FIG:4.



FIG:5.

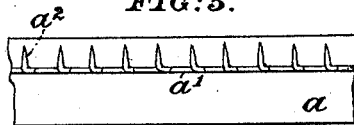


FIG:6.



FIG:7.

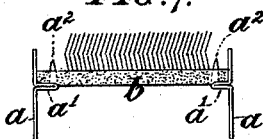


FIG:8.

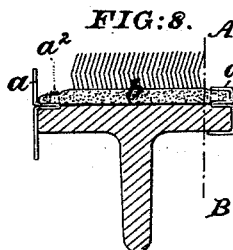


FIG:10.

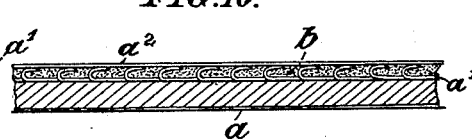


FIG:9.

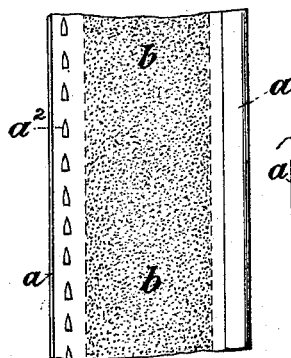
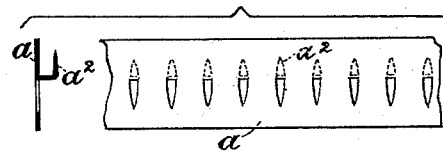


FIG:11.



Witnesses.

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UNITED STATES PATENT OFFICE.

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

SPECIFICATION forming part of Letters Patent No. 524,566, dated August 14, 1894.

Application filed December 4, 1893. Serial No. 492,706. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM SENIOR and IRA WOOD, both of Pendleton, EDWARD HUGHES, of Manchester, and WASHINGTON HEMINGWAY, of Irlams-oth-Height, all in the county of Lancaster, England, subjects of the Queen of Great Britain and Ireland, have invented Improved Means for Fastening Card-Clothing to the Flats of Carding-Engines, of

10 which the following is a specification.

This invention relates to means for fastening card clothing to the flats of carding engines. Hitherto it has been usual to secure the said card clothing by rivets which required considerable skill to avoid unevenness; or the said clothing has been stitched to the flat or secured thereon by edging plates or strips of metal fastened on or beneath the said flat and bent down over the edges of the foundation or back of the card clothing thus holding down the latter upon the flat. These strips of metal are serrated at their edges so as to hold the foundation of the clothing and these are pressed down with a slightly outward motion so as to stretch the same. The objection to this last named method is that the foundation being a thick material of two or more ply and somewhat stiff, the serrated metal plates above described act mostly on the upper surface thereof and have a tendency to raise the center of the clothing which is most undesirable. The object of our present invention is to remedy this defect, and the same will be readily understood from the following description on reference to the accompanying sheet of drawings.

Figures 1, 2, 3, 4, 5 and 6 illustrate our improved fastener in various stages of manufacture as hereinafter described, and Figs. 7, 8, 9 and 10 illustrate the way in which the clothing is fastened to the flat thereby, Fig. 10 being a section at the line A—B on Fig. 8. Fig. 11 shows (in edge and face view) a modified form of our improved fastener.

45 According to our invention we employ metal strips a but we form a flange a' thereon (by bending see Fig. 1 or otherwise see Fig. 2) at right angles thereto, and all along the said strips (see Fig. 3) at or about one third of its width measured from the upper edge. This

flange a' is made with a number of vertical teeth a^2 or spikes (see edge view Fig. 4, face view Fig. 5 and plan view Fig. 6) of sufficient length to pass through the foundation of the card clothing b which is pressed down thereon (see Fig. 7). The projecting ends of the teeth or spikes a^2 are then bent down or clinched upon the upper surface of the said clothing b , which is thus quite firmly secured to the plate or strip, as seen on Figs. 8, 9 and 10. The upper edge of the latter is then bent down over the edge of the foundation b and covers the clothing and the clinched ends of the teeth or spikes, see Figs. 8, 9 and 10; it also serves to make a smooth metal edging at the side of the flat when applied thereto, as seen at the right hand side of Figs. 8 and 9, thereby preventing the accumulation of fluff thereon. This covering of the clinched ends of the teeth or spikes by the upper edge of the metal strip, although preferable, is not absolutely necessary.

Instead of the flange hereinbefore described the spikes may be formed by punching sharp angular cuts in the metal and bending them first outward and then upward at right angles; as seen at Fig. 11; or the teeth or spikes may be otherwise formed or fixed on the strip so long as they are so placed as to pass through the foundation of the card clothing from below. The clothing having been thus edged along both sides is then stretched by suitable means sufficiently to allow the flat to be placed between the metal strips, the edges of which are forced down by suitable pressure over the under side thereof see Figs. 8 and 10 and thus not only will the clothing be secured to the flat but it will also be held stretched thereon, and that without any tendency to rise at the center but rather the reverse because it is stretched upon a series of teeth passing through the fabric.

It will be evident that the upper edge of the strip a can be bent over to form a covering for the spikes or teeth after the clothing has been fastened on the flat but we prefer the method above described.

We claim as our invention—

1. The combination of the flat and clothing of carding engines, with metal strips provided

with a number of teeth or spikes passed up through the edges of the clothing from beneath, the lower edges of the strips being bent around and under the edges of the flats, substantially as described.

2. The combination of the flat and clothing of carding engines, with metal strips provided with a number of teeth or spikes passed through the edges of the clothing from beneath, the upper edges of the said strips being bent over the upper edges of the clothing, and the lower edges of the strips being bent around and under the edges of the flats, substantially as described.

3. The combination of the flat and clothing of carding engines, with a metal securing strip provided with a flange having teeth or spikes

passed through the edges of the clothing from beneath and having the upper edge of the said strip bent over the upper edge of the clothing, and the lower edge of the strip bent around and under the edge of the flat, substantially as described.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

WILLIAM SENIOR.
IRA WOOD.
EDWARD HUGHES.
WASHINGTON HEMINGWAY.

Witnesses:

GEORGE DAVIES,
JNO. HUGHES.