(No Model.)

N. WHITLEY, F. W. THOMSON & H. HOYLE.

APPLIANCE FOR SECURING CARD CLOTHING TO FLATS OF CARDING ENGINES.

No. 371,398. Patented Oct. 11, 1887.

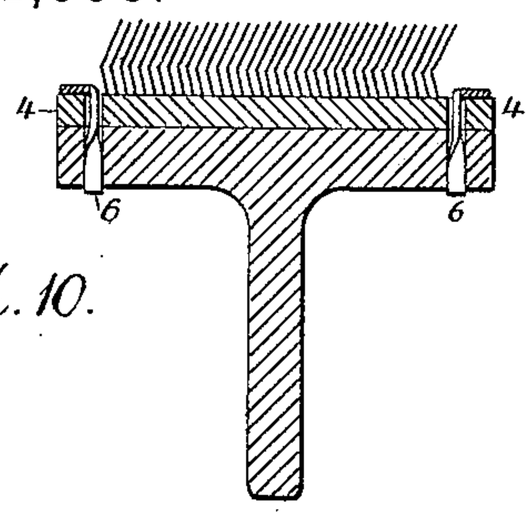


FIG. 10.

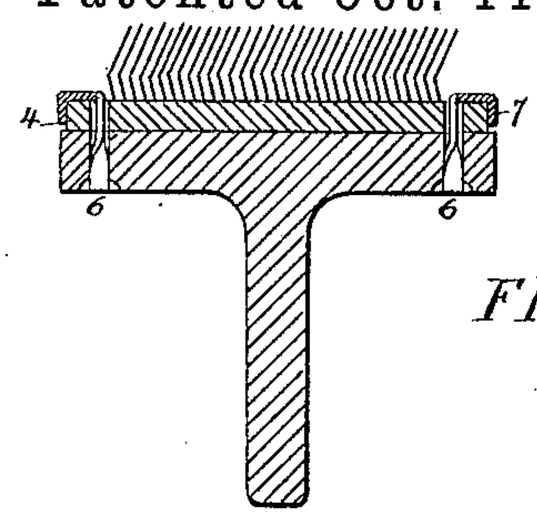


FIG. 11.

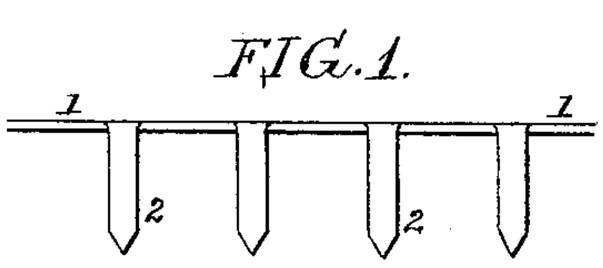


FIG. 1.

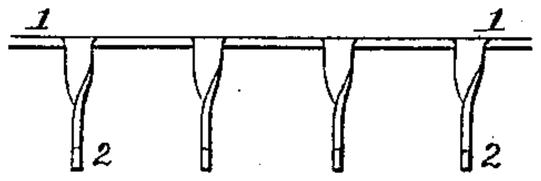


FIG. 2.

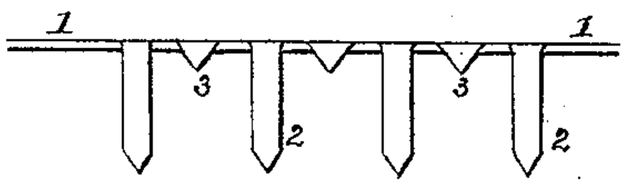


FIG. 3.

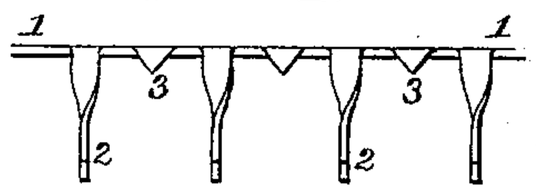


FIG. 4.

FIG. 5.

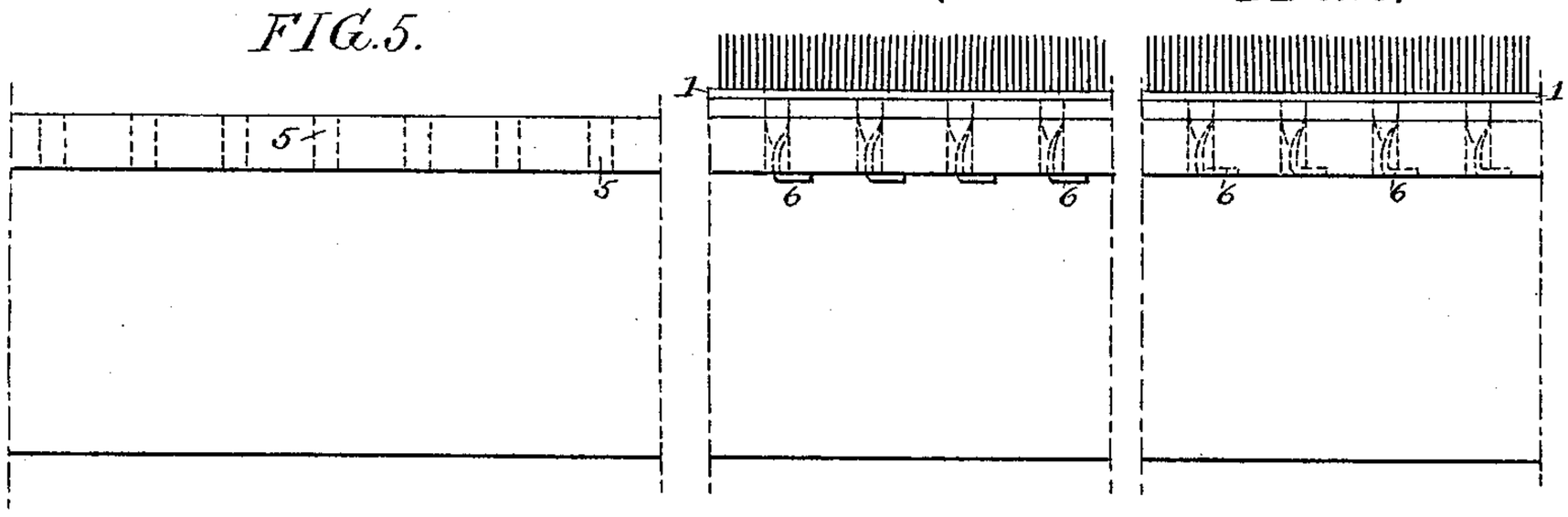


FIG. 6.

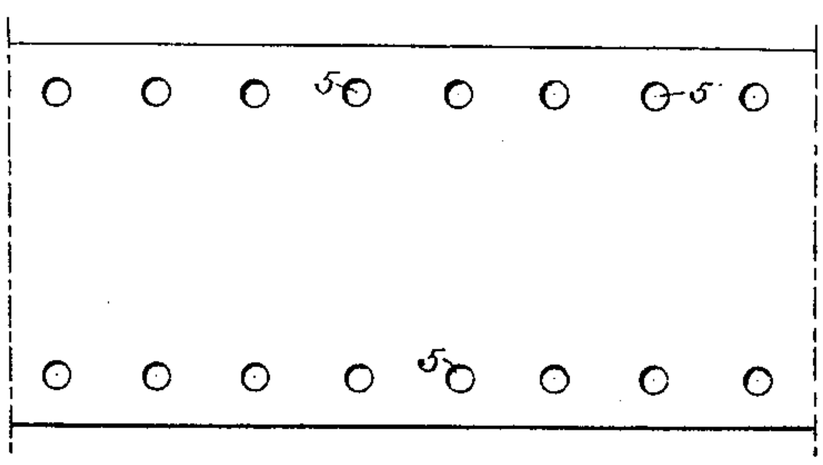


FIG. 9.

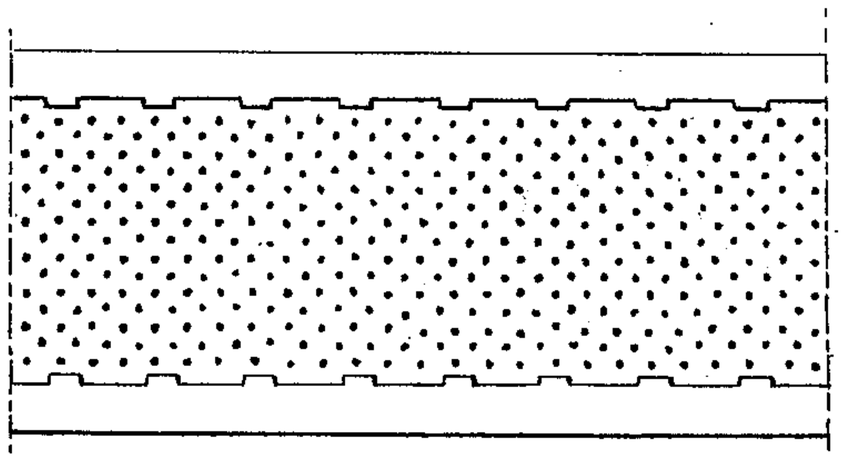


FIG. 13.

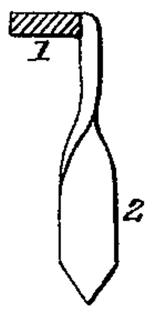
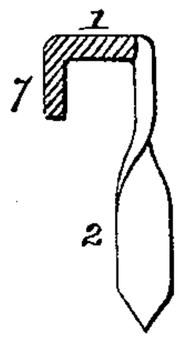


FIG. 12.



Witnesses
David S. Williams.
John J. Lewis

Inventors:
Nathan Whitley,
Frederick W. Thomson &
Henry Hoyle
by their Attorneys
Howson and Howson

UNITED STATES PATENT OFFICE.

NATHAN WHITLEY, FREDERICK WHITLEY THOMSON, AND HENRY HOYLE,
OF HALIFAX, COUNTY OF YORK, ENGLAND.

APPLIANCE FOR SECURING CARD-CLOTHING TO FLATS OF CARDING-ENGINES.

SPECIFICATION forming part of Letters Patent No. 371,398, dated October 11, 1887.

Application filed February 23, 1887. Serial No. 228,537. (No model.) Patented in England March 27, 1885, No. 3,901.

To all whom it may concern:

Be it known that we, NATHAN WHITLEY, FREDERICK WHITLEY THOMSON, and HENRY HOYLE, all residing at Halifax, in the county of York, England, and subjects of the Queen of Great Britain, have invented an Improved Appliance for Securing Card-Clothing to Flats of Carding-Engines, (for which we have obtained British Patent No. 3,901, dated March 27, 1885,) of which the following is a specification.

The object of our invention is to so secure card-clothing to the flats of carding-engines that the clothing will be firmly held and that the outer edges will not be torn or worn by the action of the cleaning-brush or other appliances, and so that the edging-tapes commonly used, will be dispensed with.

In the accompanying drawings, Figure 1 is a view of part of one of our securing-strips in process of manufacture. Fig. 2 is a view of the same as ready to be applied to the flat and card-clothing. Figs. 3 and 4 are corresponding views of constructions in which the strips have nibs intervening between the securing-tongues. Fig. 5 is an elevation, and Fig. 6 is a plan view, of part of a carding-engine flat before the card-clothing has been secured thereto. Figs. 7 and 8 are side views of parts of carding-engine flats after the clothing has been secured thereto. Fig. 9 is a plan view of the same. Figs. 10 and 11 are transverse sections of carding-engine flats provided with our improvements, and Figs. 12 and 13 are sectional views, drawn to an enlarged scale, of different forms of our improved securing-strip.

In carrying out our invention, we provide a longitudinal strip of metal, 1, of any desired width with protruding or pendent tongues 2 at suitable intervals of its length, these tongues being bent at right angles to the strip 1, as illustrated in Fig. 1. In some cases we provide the strip with smaller projecting nibs, 3, between the tongues 2, to further assist in holding down the card-clothing, as illustrated in Fig. 3. The flat tongues 2 then have their lower portions twisted on themselves at a right angle, as illustrated in Figs. 2, 4, 12, and 13.

The iron flats, as illustrated Figs. 5 and 6, are provided with holes 5, corresponding in relative positions to the relative positions of the tongues on the securing-strips.

The card clothing 4, Figs. 7 to 11, having been placed on the iron flats and punctured over the holes 5, the projecting tongues 2 are passed through the edges of the card-clothing 4, and through the holes 5 in the flat, and then the ends of the tongues are bent up or otherwise clinched on the under side of the bar, as at 6, Figs. 7, 8, 10, and 11.

Owing to the twisting of the tongue in the manner described it is brought into the most favorable position for resisting strain, since the clinched end then lies in the direction of the length of the flat.

The constructions shown in Figs. 8 and 11 differ from that shown in Figs. 7 and 10, in that the clinched ends of the tongues in the former cases lie in recesses formed in the under side of the bar of the iron flat, instead of on the plane of the under side of the bar.

In some cases, if desired, the longitudinal strip 1 may be so formed that when applied to the card-clothing its outer edge may be turned down, as at 7, Figs. 11 and 12.

When the card-clothing is secured in the manner and by the means above described to the bars of the flats, said clothing is held down upon the flat throughout its length, and its outer edges are protected from being turned up by the action of the cleaning-brush or other cleaning appliances.

We claim as our invention—

The herein-described retaining appliance for securing card-clothing to flats of carding-engines, said appliance consisting of a longitudinal strip of metal having at intervals pendent tongues twisted upon themselves, substantially as set forth.

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

NATHAN WHITLEY.
FREDERICK WHITLEY THOMSON.
HENRY HOYLE.

Witnesses:
JAMES CLARKSON,
Solicitor, Halifax.
ERNEST TURNER,
Solicitor's Clerk, Halifax.