H. ESTES.

Cotton Bale-Ties.

No. 147,381. Patented Feb. 10, 1874.

Fig. 1.

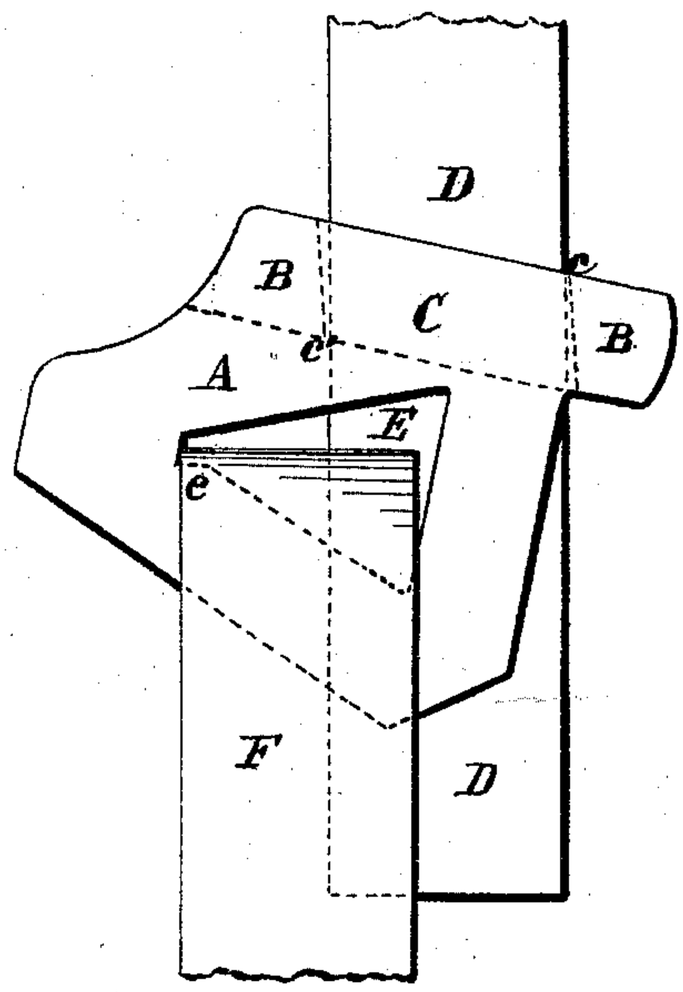


Fig. 3.

Fig. 2.

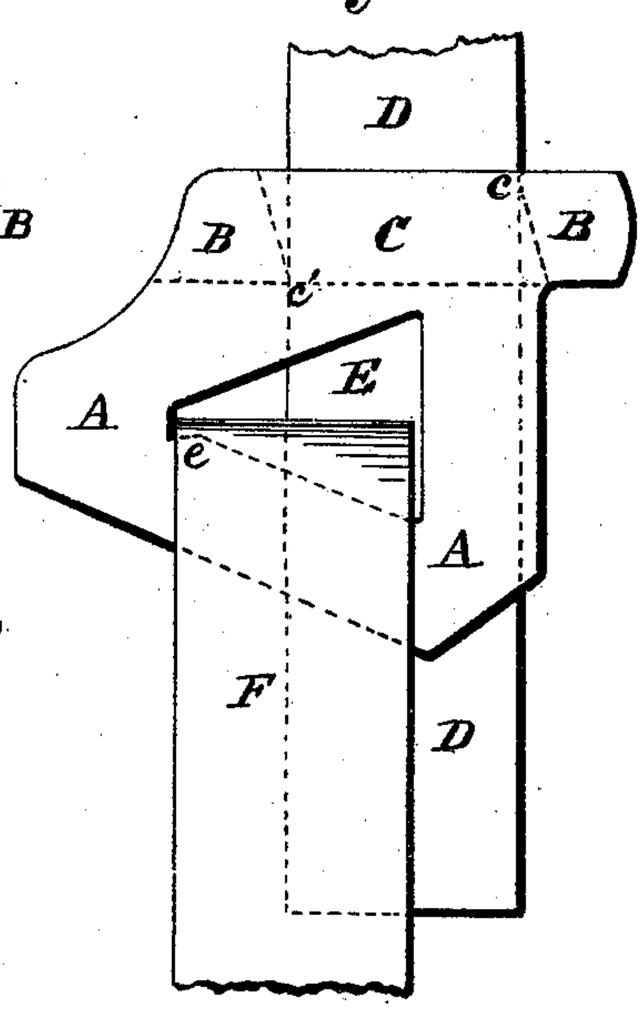


Fig. 5.

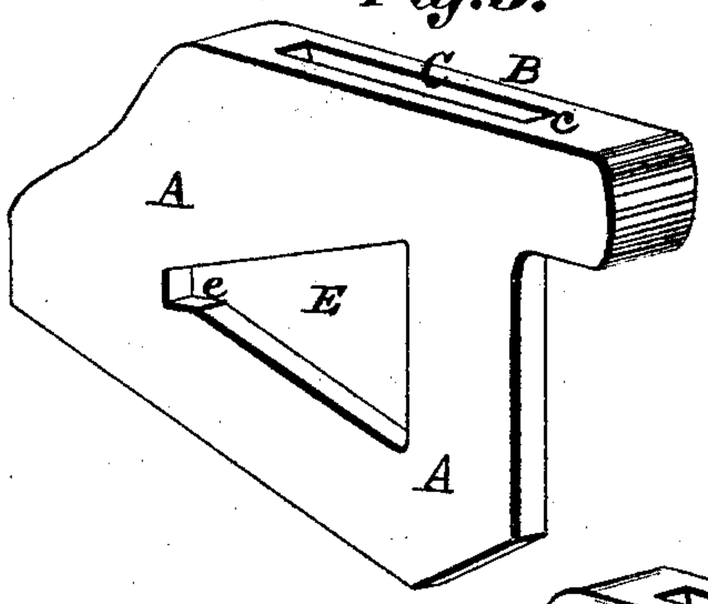


Fig. 4.

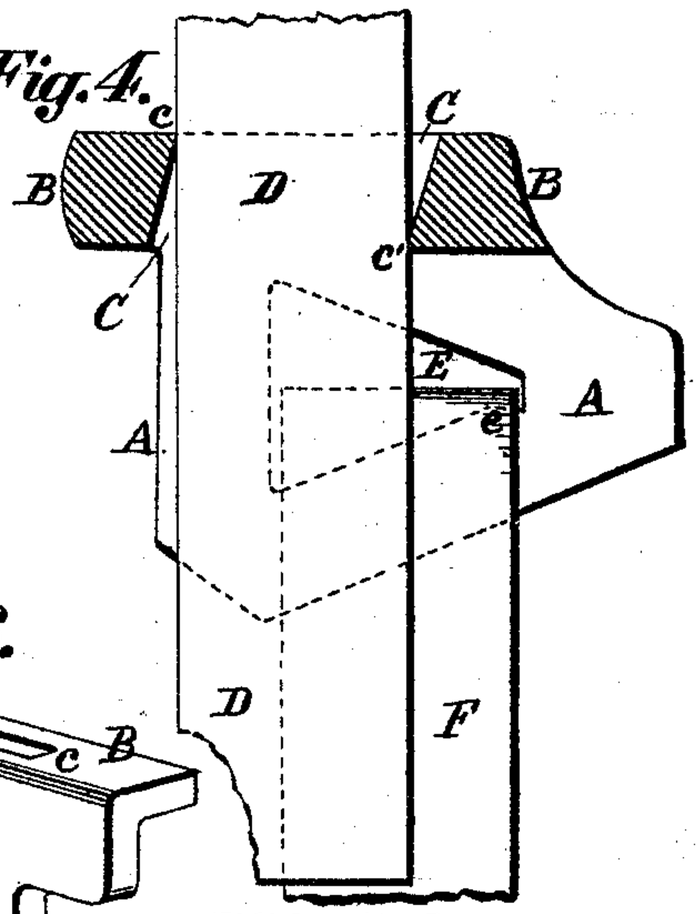
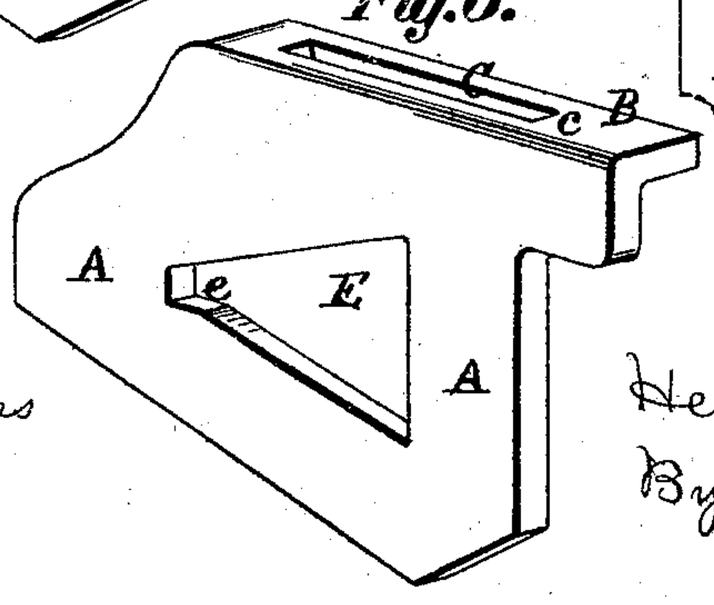


Fig. 6.



ATTEST:

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H. T. Tanner

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UNITED STATES PATENT OFFICE.

HENDERSON ESTES, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN COTTON-BALE TIES.

Specification forming part of Letters Patent No. **147,381**, dated February 10, 1874; application filed December 1, 1873.

CASE B.

To all whom it may concern:

Be it known that I, HENDERSON ESTES, of St. Louis, St. Louis county, Missouri, have invented an Improved Bale-Tie, of which the following is a specification:

In this device there is a three-cornered opening, in which the looped end of the band engages, and a longitudinal slot, through which the other end passes freely. The direction of said slot is inclined laterally, so that the draft of the cotton on the band will force two of the corners of the slot against the edges of the band, in which said corners become embedded and hold the band firmly.

Figure 1 is a front view of the tie, tilted sidewise for the introduction of the straight end of the band. Fig. 2 is a front view of the tie drawn straight and locked in position. Fig. 3 is a side view. Fig. 4 is a section through the vertical opening looking from the back. Fig. 5 is a perspective view of the tie-piece. Fig. 6 is a perspective view of a modification.

A is the tie-piece, formed with a projecting part, B, at its upper end, in which is formed an oblique slot, C, having acute corners *c c'*. This slot C is inclined from the vertical, as shown in Figs. 2 and 4 of the drawing, so that when the tie is tilted to the left, as in Fig. 1, it becomes vertical, and the band end D may, with ease, be passed through it; but as the tie is again drawn straight, as in Figs. 2 and 4, the acute corners *c c'* will bite against and embed themselves in the edges of the band to form a "lock." E is a three-cornered aperture, (formed in the tie A,) in which the end F of the band is looped, the slot being made of the form shown, so as to allow the tilting of the tie, as above set forth.

That edge of the aperture E on which the loop F engages, may be made with a step or flat part, *e*, on which one edge of the band-loop rests when the tie is tilted to the left, and which prevents the loop from slipping down the inclined side and jamming against the vertical side of aperture E. In the absence of this step the friction of the edge of the loop against the vertical side of the aperture might interfere with the locking action.

The tie A is preferably curved outwardly, as shown in Fig. 3, so that the looped end F of the band will not interfere or offer any obstruction to the introduction of the straight end D through the slot C.

The tie is intended to be cast and afterward rendered malleable by the usual process.

In Fig. 6 is shown a modified form made of wrought-iron, the metal being bent over to form the projecting part B, in which is the oblique slot C.

It is obvious that the form of the aperture E may vary, its essential feature being that it allows the described change in the position of the tie-piece, shown, respectively, in Figs. 1 and 2, involving some freedom of movement of the right side of the loop in the aperture E, as shown.

In forming a lock on the baling-band the tie-piece A is tilted sidewise, as in Fig. 1, so as to allow the ready introduction of the straight end D of the band into the oblique slot C, said end being drawn as far as desired through said slot, and on the expansion of the bale the looped end F of the band, acting in the slot E of the tie, will pull the tie straight, as in Figs. 2 and 4, and embed the acute corners *c c'* in the edges of the band to form a lock.

I claim as my invention—

1. The bale-tie, having an oblique slot, C, and adapted to clutch the band edgewise, in manner substantially as explained.

2. The tie-piece A, formed with projecting part B, slot C *c c'*, and aperture E, substantially as set forth.

HENDERSON ESTES.

Witnesses:

SAML. KNIGHT,

ROBERT BURNS.