

H. ESTES.  
Bale-Ties.

No. 166,085.

Patented July 27, 1875.

FIG. 1.

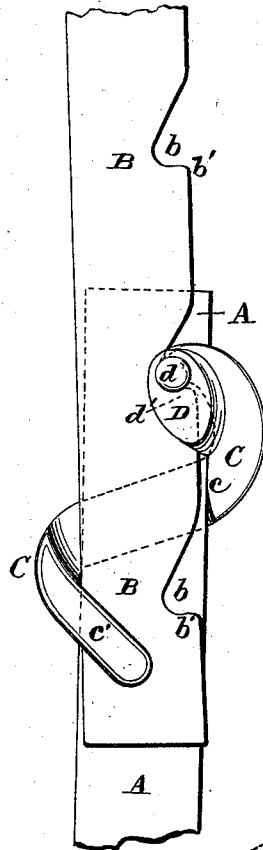
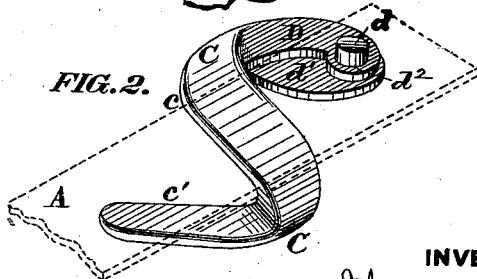


FIG. 2.



ATTEST:

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# UNITED STATES PATENT OFFICE.

HENDERSON ESTES, OF ST. LOUIS, MISSOURI.

## IMPROVEMENT IN BALE-TIES.

Specification forming part of Letters Patent No. **166,085**, dated July 27, 1875; application filed January 23, 1875.

*To all whom it may concern :*

Be it known that I, HENDERSON ESTES, of St. Louis, in the county of St. Louis and State of Missouri, have invented a certain new and useful Improvement in Bale-Ties, of which the following is a specification :

My improvement consists of a serpentine lock-piece of a peculiar form, that is attached to the first end of the band by a single rivet. (The rivet may be a stud cast upon the lock-piece.) The last end of the band has side notches to engage on a suitably-formed part of the lock-piece. The lock-piece has a recess to receive the corner at that side of said notch, upon which the strain comes, so as to prevent the splitting of the loop by the strain.

In the drawings, Figure 1 is a side view of the tie as in use, with the ends of the lock-piece outside. Fig. 2 is a perspective view of the lock-piece, with the first end of the band shown in dotted lines.

A is the first end of the band, to which the lock-piece is attached. B is the last end of the band, with edge notches *b* to engage on the lock-piece. The lock-piece consists of a bar, C, of serpentine form, fitted to coil or lap around the edges of the end A. *c* is a shoulder, which rests firmly against one edge of the band, and *c'* is a finger, which laps around the other edge. The head D of the lock or tie piece has a stud, *d*, which extends through the band end A, and is riveted to it. (In place of the stud *d* a separate rivet may be used, passing through the head and band.) The head D is expanded into a hood, which lies flat upon the side of A; and upon the inner side of this hood is a recess, *d'*, to receive a corner, *b'*, of the end B, and the notch *b* at the same time receives the projection or shoulder *d''*, (in the head D, beside the recess *d'*.) The band is restrained from lateral movement, toward disengagements of these parts, by the finger *c'*,

as shown in Fig. 1. In case there should be any seam or incipient split in the iron communicating with the notch *b*, all injurious results therefrom would be prevented, because the projection *b* would be inclosed in the recess *d'*, and prevented from turning outward. The lock-piece is held in position by the lap of the finger *c'* around one edge of the band by the hold of the shoulder *c* against the other edge, and by the rivet *d*, and thus but a single riveting operation is required for the attaching of the lock-piece; and it is held firmly against transverse and endwise strain, and also from twisting on the band. The finger *c'* of the lock-piece has capacity for movement to or from the flat side of the band, so that in the shipping of the packages of ties the fingers would not be liable to be bent, as they would give way readily to pressure.

The tie may be used with either side outward. When used as shown in Fig. 1 it is very easy of attachment, and satisfactory in all respects. When the tie is used with the other side outward there is no projecting end, either of the band or lock-piece; and, though the attachment is not made so readily as that shown in Fig. 1, yet it might be preferred where the bale is intended for shipment to foreign ports as being better fitted for tight stowing on board ship.

I claim as my invention—

The combination of the band end A with the serpentine tie or lock piece C, provided with finger *c'* and head D, the latter having recess *d'* and projection or shoulder *d''*, and secured by rivet or stud *d*, all substantially as set forth.

HENDERSON ESTES.

Witnesses:

SAML. KNIGHT,  
ROBERT BURNS.