D. HALL.
Bale-Tie.

No. 203,444. Patented May 7, 1878.

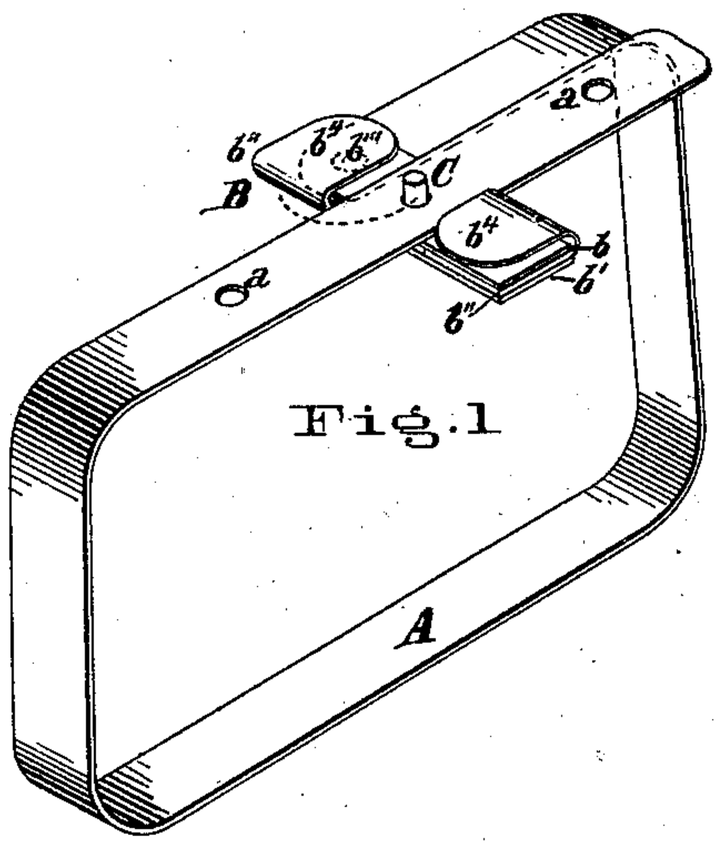


Fig. 1

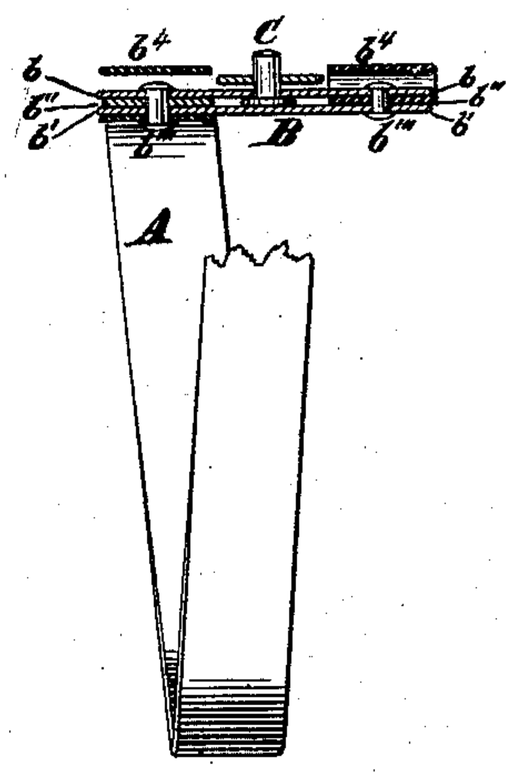


Fig. 2

Fig. 3

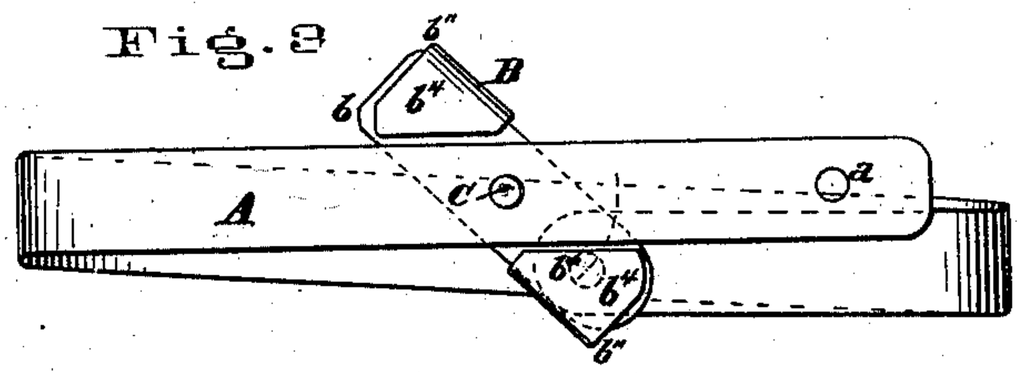
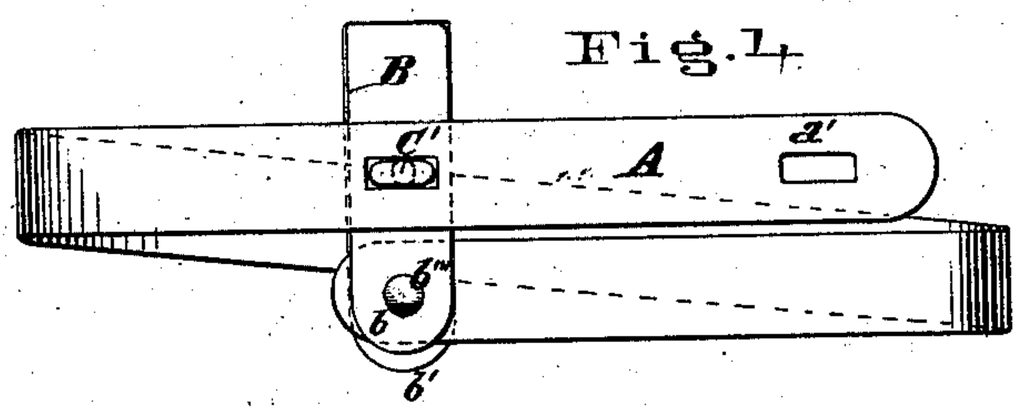


Fig. 4



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UNITED STATES PATENT OFFICE.

DANIEL HALL, OF COVINGTON, KENTUCKY.

IMPROVEMENT IN BALE-TIES.

Specification forming part of Letters Patent No. **203,444**, dated May 7, 1878; application filed February 23, 1878.

To all whom it may concern:

Be it known that I, DANIEL HALL, of Covington, Kenton county, State of Kentucky, have invented an Improvement in Bale-Ties, of which the following is a specification:

My invention consists of a metallic band, one end of which has a series of small holes, by which the band may be adapted to bind different sizes of bales, and the other end a short link, having a swiveling connection with the band, a link carrying a fixed pin, over which the holes at the other end of the band may be placed, and a turned-down ear or ears, under which the loose end of the band engages securely when the link has been brought in to bind by the pressure of the bale on the tie.

In the accompanying drawing, Figure 1 is a perspective view of the preferred construction of my bale-tie. Fig. 2 is a section of the same. Fig. 3 is a plan of a modification in the form of the ears. Fig. 4 is also a modification of my device.

A is the body of the band, and *a* the holes in its free end. B is the short link. It is made up of two main pieces, *b b'*, of the same material as the hoop or band itself, and one or two U-shaped pieces, *b''*, of the same material, secured between the pieces *b b'* by rivets *b'''*, the other end being free to form a turned-down ear, b^4.

Before, however, the pieces *b b'* are put together, a common rivet is inserted between them, a shank projecting through a hole in piece *b*. This rivet is secured in no other way than by its head being held between the pieces *b b'*, and its shank forms a rigid pin, C, over which the free end of the band may be engaged. When the band is about to be attached to the bale the link B is swung to one side, as shown in Fig. 1. The band may be then passed around the bale and engaged with the pin C at the proper hole for the size of the bale. In this position the loose end of the band is enabled to pass over the pin, and it is then passed down between the ears b^4.

When the pressure is removed from the bale and it is allowed to expand itself against the bale-ties, the link B will be forced from the position shown in Fig. 1 into a position in line with the tie itself, and at the same time the free end of the tie will be brought under the ears b^4, so that lateral displacement is impossible.

As an important feature of my invention, it is well to state that besides the hoop itself, there is nothing but scraps of metal used in the manufacture of bale-ties and common rivets.

In Fig. 1 a difference in the size of the tie when first attached to the bale, and when expanded by the pressure interiorly, may in some cases be regarded as too great, so I have contrived in the modification, Fig. 3, in which the ears b^4 have beveled edges, as shown, to admit the free end of the tie to enter between them without necessitating the swiveling of the link into a right-angled position.

In Fig. 3 the pressure on the tie will cause but little expansion in its length by the swiveling of the link.

In Fig. 4, in place of the ears b^4 and the common rivet C, I use a projecting pin, C', having a rectangular head in horizontal section, adapted to fit into and pass through a rectangular hole, *a'*. In this case the free end of the tie will pass over the flattened head, and when the link is turned by the force of pressure into line with the tie, the sides of the loose end of the tie will be engaged under the head of the pin C', and thereby properly secure it.

I claim—

1. A bale-tie having a swiveling link, B, carrying a pin, over which, in a certain position of the link, any one of the holes in the free end of the tie may be engaged, and a turned-down ear or ears, under which the free end of the tie passes when the link is swung into line by the expansion of the tie.

2. The link B, formed of two pieces of metal, *b b'*, between which the head of a rivet, C, is secured, substantially as shown and described.

In testimony of which invention I hereunto set my hand.

DANIEL HALL.

Witnesses:
JOHN E. JONES,
J. E. Q. MADDOX.