L. I. BODENHAMER.

BALE-TIE AND HOOP-LACER.

No. 170,932. Patented Dec. 14, 1875.

Fig. 1.

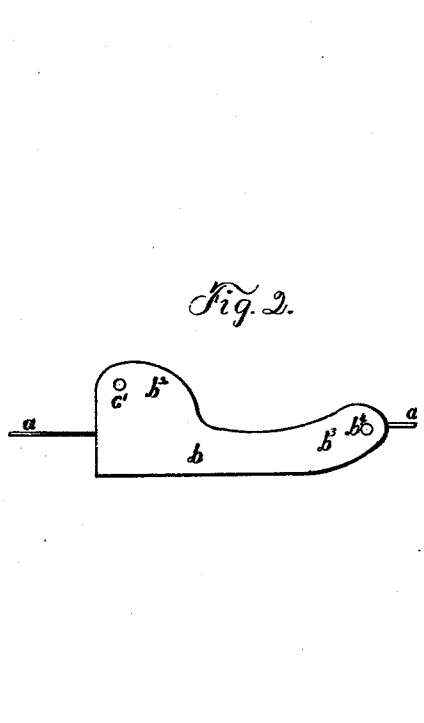


Fig. 2.

Fig. 3.

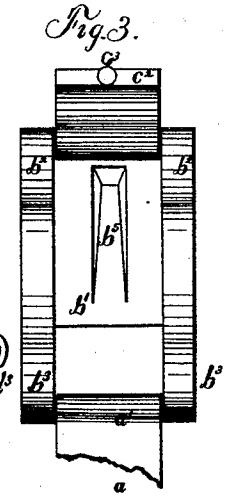


Fig. 4.

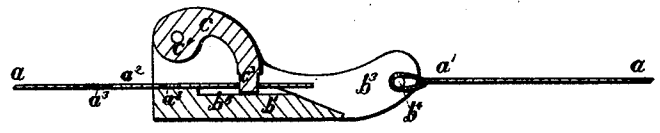
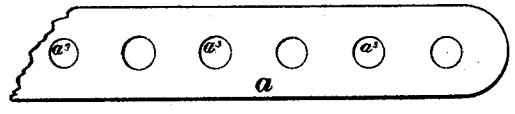


Fig. 5.



Witnesses:

J. B. Holderby

A. B. Canaga

Inventor:

Levi I. Bodenhamer

Per R. S. & A. P. Lacey

attorneys

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

LEVI ISAAC BODENHAMER, OF KERNERSVILLE, NORTH CAROLINA.

IMPROVEMENT IN BALE-TIES AND HOOP-LACERS.

Specification forming part of Letters Patent No. **170,932**, dated December 14, 1875; application filed November 5, 1875.

To all whom it may concern:

Be it known that I, LEVI I. BODENHAMER, of Kernersville, in the county of Forsyth and State of North Carolina, have invented certain new and useful Improvements in Cotton-Bale Ties and Hoop-Lacers; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it pertains to make and use the same, reference being had to the accompanying drawing and to the letters of reference marked thereon, which form a part of this specification.

My invention relates to improvements in devices for tightening and securing the bands on cotton and other bales.

It consists in the construction of the tie or lock-lacer and band, as hereinafter fully explained, and pointed out in the claims.

In the drawings, Figure 1 is the lacer, and Fig. 2 is a side elevation; Fig. 3, a plan, and Fig. 4 a longitudinal vertical section, of the tie or lock, and Fig. 5 shows a portion of the free or loose perforated end of the band.

a is the band. The end a^1 is fixed to the tie or lock, hereinafter described. The loose end a^2, which passes around the bale, is perforated with a series of holes, a^3, placed near together, which afford facilities for drawing the band tight by means of the lacer, and of retaining it in place by the fastener, as hereinafter described. *b* is the tie or lock for securing the ends of the band. It is composed of the base part b^1, having at one end the side vertical lugs or ears b^2, in which is fixed or journaled the axis of the fastener hereinafter described, and at its opposite end the projecting arms b^3, which are slightly curved upward, and on the outer ends of which is the fixed cross-bar or round b^4, to which the end a^1 of the band *a* is secured. It is recessed at b^5 to receive the tongue of the fastener, which projects through the band when the latter is secured around the bale. *c* is a curved fastener for locking the band when tightened on the bale. It is hinged or fixed on an axle, c^1, which is fixed or journaled in the lugs b^2. By preference it is made the full width of the space between the lugs b^2, thereby increasing its strength and durability, and effectiveness in holding and preserving the band. From the center of its edge c^2 projects the tongue c^3, which, in securing the band, drops through one of the holes a^3 into the recess b^5, and fastens the end a^2 of the band to the tie *b*. *d* is the lacer for drawing the band tight around the bale and into the tie or lock. It is formed with the prongs d^1 d^1, arranged so that the band *a* will pass between them. Attached to it, and centrally above the prongs d^1, is the rod d^2, which is provided at its outer end with the hook d^3, which catches in one of the holes a^3 in the act of tightening the band.

To tighten the band the end a^2 is placed in the tie under the fastener *c*. The prongs d^1 of the lacer are placed over the end a^1 of the band and against the ends of the arms b^3 of the tie. The lacer is then inclined over the tie, and the hook d^3 placed in one of the holes a^3, when, by drawing back on the lever end d^4, the band will be drawn into and through the tie, the end a^2 passing under the end a^1. The fastener *c*, being hinged as hereinbefore stated, does not interfere with the free passage through the tie of the band in the act of tightening the latter.

When the force exerted in lacing up is removed, the tongue c^3, dropping into one of the holes a^3, fastens the band so that it cannot be withdrawn from the tie.

The band can readily be removed by drawing it up with the lacer sufficiently to relieve the fastener, so that the latter can be raised to a vertical position, as shown in Fig. 3, when it can be removed.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a bale-tie, a hinged fastener, *c*, provided with the tongue c^1, and supported by the lugs b^2, so that as the free end of the band is drawn through the tie, it will automatically catch in the holes provided in said end, and secure the band to the bale.

2. The lacer *d*, constructed with the prongs d^1 d^1, and provided with the rod d^2, having the hook d^3, for the purpose specified.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

LEVI ISAAC BODENHAMER.

Witnesses:

V. W. PERRY,

NANCY JARRELL.