

W. S. DAVIS.

BALE-TIE.

No. 173,597.

Patented Feb. 15, 1876.

Fig. 1.

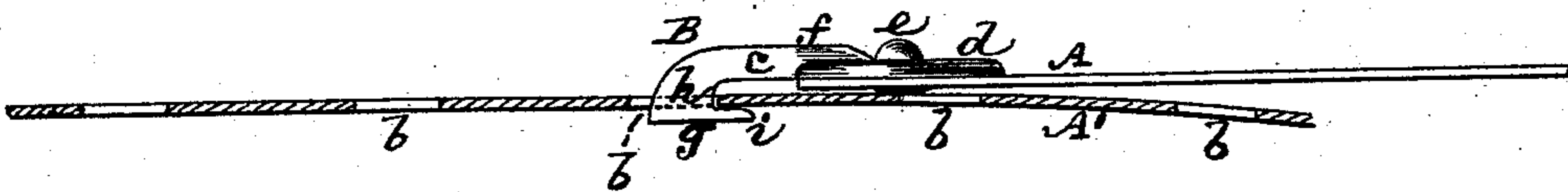


Fig. 3.

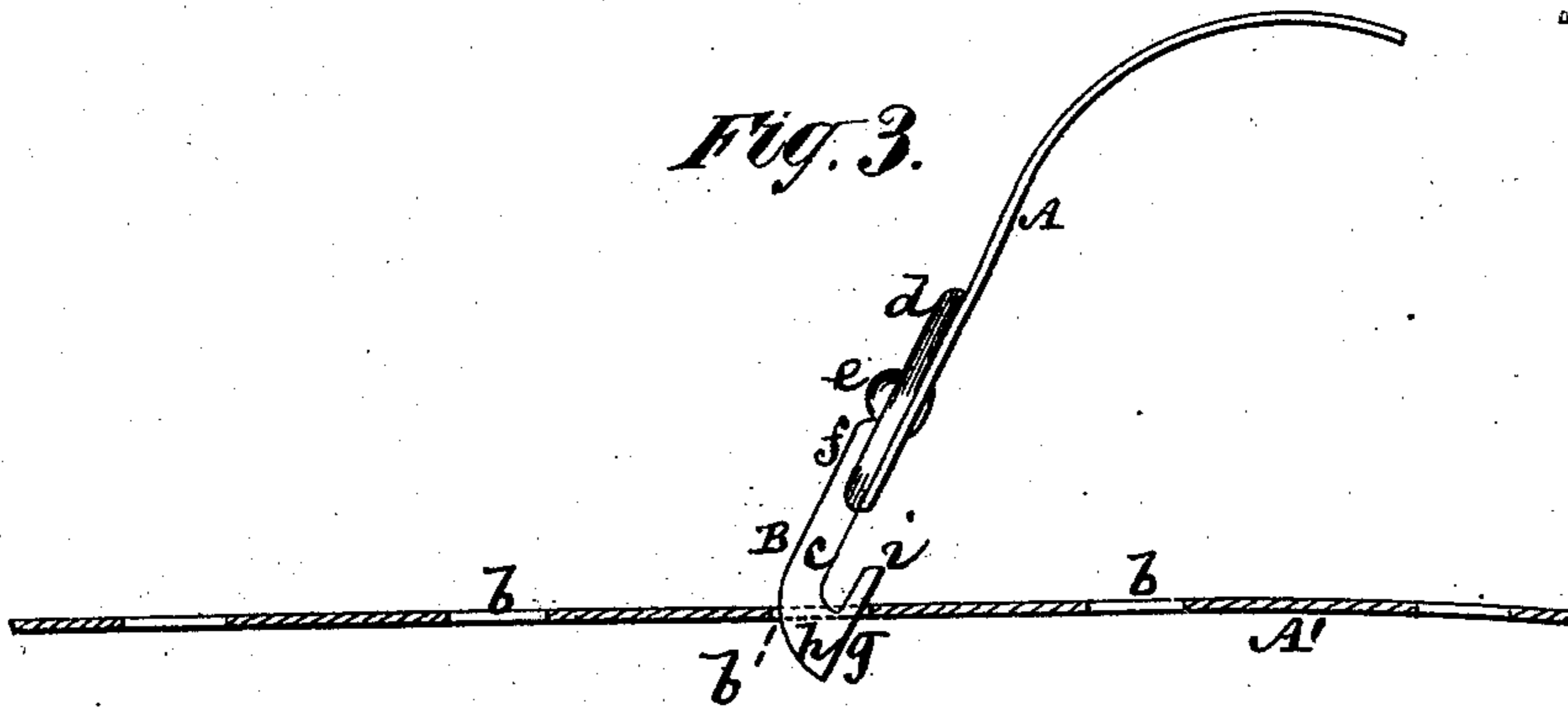
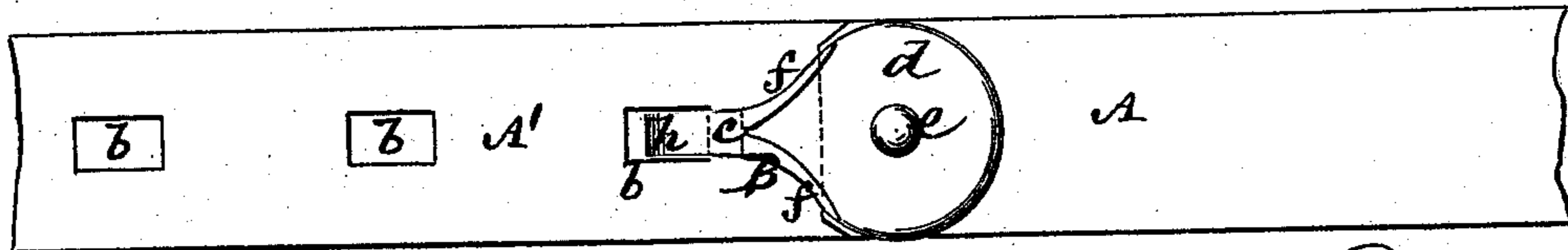


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

WATERS S. DAVIS, OF GALVESTON, TEXAS.

IMPROVEMENT IN BALE-TIES.

Specification forming part of Letters Patent No. **173,597**, dated February 15, 1876; application filed December 27, 1875.

To all whom it may concern:

Be it known that I, WATERS S. DAVIS, of the city and county of Galveston, in the State of Texas, have invented a new and useful Improvement in Bale-Ties; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, which forms part of this specification.

This invention relates to ties for packages or bales of cotton, hemp, rags, or other substances, in which a divided metallic band or hoop encircling the package or bale is used, and the ends whereof are joined by a fastening at the one end of said band, arranged to interlock with any one of a series of mortises in the other end of the band for the purpose of binding or holding the bale together.

The object of this invention is to produce a bale-tie which combines simplicity with efficiency both as regards its use in fastening or unfastening, in accommodating itself to different-sized bales or different compressions and elasticities of the material in the bale, and to different shocks or pressures liable to accidentally detach or open the fastening. To these and other ends I employ a simple single hook-and-mortise fastening; but said single hook, which is carried by one end of the band, being constructed so that not only is the face of the forward or engaging portion of the hook longer than the mortise through which it fits, but the bent end or root of the nose of the hook is so thickened and proportioned in relation with the nose thereof that the hook cannot be removed from the mortise in which it fits by merely sliding it longitudinally in relation with the mortised end of the band, but so that it requires to be canted in order to detach it.

Figure 1 is a longitudinal edge view, in partial section, of the tie portion of a bale-band constructed in accordance with my invention, and showing the hook end of the band as in lock with the mortised end thereof. Fig. 2 is a longitudinal face view of like parts under similar conditions; and Fig. 3, a longitudinal edge view, in partial section, of the same, illustrating the entry or detachment of the hook end of the band in relation with the mortised end thereof.

A is the one end of a metallic bale-band, having attached to it a hook, B, and A' is the other end of said band, having arranged in or along it a series of mortises, *b*, with either of which the hook B is designed to engage, according to the thickness of the bale or package the band is used to bind or hold together.

The mortises *b* may be arranged at any desired distance apart, and, preferably, be either of a square or oblong form.

The hook B may be of malleable cast-iron or other metal. It is represented as having its shank *c* spread or flattened out at its back end to form an enlarged head or disk, *d*, whereby it stiffens or strengthens the end of the band to which it may be attached by a rivet, *e*. Stiffening ribs, *f*, may be formed on the back of the shank, connecting the forward portion of the hook with the disk *d* for the purpose of giving increased strength. The forward or engaging portion of the hook B is of but little less width than either mortise, *b*, through which it fits, and the face *g* of such portion of the hook made flat, and of a length which is greater than that of the mortise, or, in other words, than the dimension of the mortise in direction of the length of the band, and the bent end or root *h* of the nose *i* of the hook is so thickened and proportioned in relation with said nose or length of the latter that the hook cannot be removed from the mortise in which it fits by merely sliding the one end of the band over the other, but so that it requires to be canted in order to detach it.

The hook thus constructed forms a simple but strong and very secure locking device; and to enter it with the greater facility, through the mortise with which it is required to engage, the bent end or root *h* of the nose of the hook is first projected through the mortise by canting the hook, as shown in Fig. 3 of the drawing, and which may be done by bending the end of the band to which the hook is attached, or the hook may be canted relatively to the mortise by bending the mortised end of the band instead, or both ends of the band may be suitably bent to effect the engagement of the hook. A similar springing or bending of either end of the band affords like facility for detaching the hook.

I am aware that a bale-tie has been used provided with a shank at one end, having a button thereon provided with a projection at one end and a hook at the other, and adapted to set into and engage a slot on the other end of the tie, but said button necessitates the employment of a slot of such length as to allow the shank to work longitudinally therein when the parts are hooked together, which is objectionable, and which is entirely obviated by my invention.

I claim—

The hook B, beveled or rounded at the front end of its root *h*, and provided with a nose, *i*, at the rear of said root, in combination with the spread and flattened shank C, and otherwise constructed and proportioned, in relation to the mortise *b*, substantially as described.

WATERS S. DAVIS.

Witnesses:

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