J. C. RIETHMÜLLER.

Bale-Tie.

No. 200,764. Patented Feb. 26, 1878.

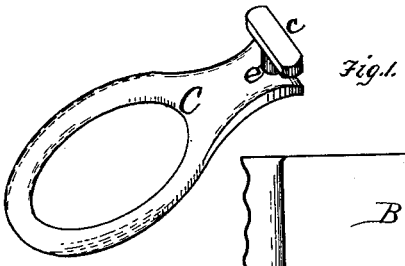


Fig. 1.

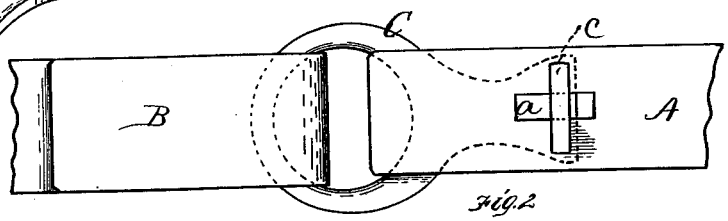


Fig. 2

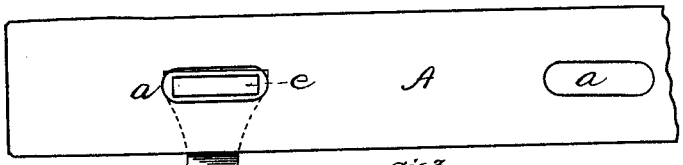
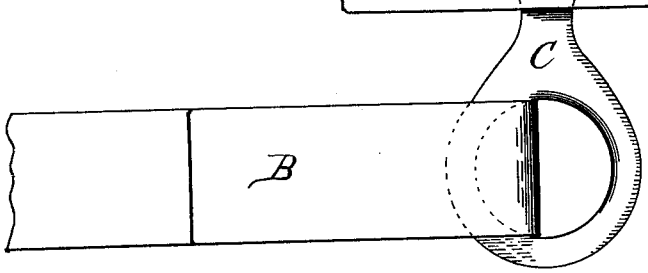


Fig. 3.



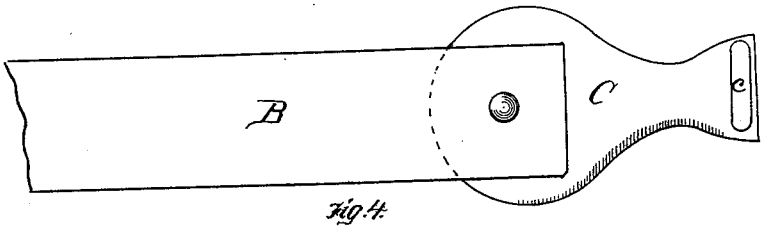


Fig. 4.

WITNESSES.

John C Smith

Wm J. Clark

INVENTOR.

John Christ Riethmüller

by Bakewell & Kerr

Attys

UNITED STATES PATENT OFFICE.

JOHN C. RIETHMÜLLER, OF PITTSBURG, PENNSYLVANIA.

IMPROVEMENT IN BALE-TIES.

Specification forming part of Letters Patent No. **200,764**, dated February 26, 1878; application filed February 9, 1878.

To all whom it may concern:

Be it known that I, JOHN C. RIETHMÜLLER, of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Bale-Ties; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 is a detached view of the locking plate or hook. Fig. 2 is an under-side view of the locking device and ends of a bale-band when in use. Fig. 3 is a view showing the relative position of the devices when about to be fastened. Fig. 4 is a modification.

Like letters refer to like parts wherever they occur.

My invention relates to that class of bale-ties wherein the fastening is made by a hook upon one end of the bale-band and a slot or slots in the opposite end of the band; and consists in a hook or plate adapted to be pivoted on a bale-band, and provided with a locking cleat or button, so formed with or attached to the plate that when the tie is made the long axis of the cleat will cross the long axis of the slot, whereby a secure and effective fastening of the ends of a bale-band can be made; and also in the combination, with a slotted bale-band, of a plate or hook provided with a transverse cleat, the plate so pivoted to the band that the long axis of the cleat can be made to correspond with the long axis of the slot at the time of making the lock, but will change its position when the fastening is completed.

Wherever the hook and slotted band have been heretofore used for the purposes of securing bales, the hook, so far as I am aware, has been more or less rigidly connected to the band, and the long axis of the locking-cleat has been in line with the long axis of the slot, the excess in length of the cleat being depended upon to retain the parts in position. Such fastenings are insecure, for the reason that any sudden compression of the bale followed by sudden expansion may release the heel of the cleat, and allow it to escape from the slot. The danger and trouble arising from the flying of bale-bands having such and similar fastenings are well known, and have caused the invention of various devices to obviate them, as, for instance, slotting both ends of the bale-band, and using therewith a turn-button with a neck and cleat with long and short axis; but this latter device, being free to turn, is also more or less unreliable, as slight changes of position from time to time, induced by the handling of the bale, may, and frequently do, bring the long axis of the cleat in line with the long axis of the slot, permitting the band to fly apart.

My devices, while resembling in some particulars those above referred to, differ materially and essentially from either or all of them, the pivoting of the hook compelling the cleat to travel in the arc of a circle before the corresponding axes of slot and cleat can coincide, while in the first-named devices the axes of cleat and slot always coincide, and in the second the cleat revolves upon its neck as on a center.

I will now proceed to describe my invention more specifically, so that others skilled in the art to which it appertains may apply the same.

In the drawing, A indicates one end of a bale-band, and B the other, the end A being slotted in the usual or any approved manner, as shown at *a*. To the end B of the band is pivoted or swiveled a piece or plate, C, adapted by its connection to turn at an angle to the line of strain or draft. The plate C is provided with a transverse cleat, *c*, or one whose long axis stands at an angle to the line of draft, said cleat *c* being preferably and usually connected to the plate C by a short neck or constricted portion, *e*.

Plate C may be formed with a ring or loop, as shown in Figs. 1, 2, and 3, for connecting it to the band, or may simply have a rivet-hole for riveting it loosely on the end of the band, as shown in Fig. 4.

The devices are employed as follows: The bale-band being properly slotted, and the plate with cleat (forming the hook) being pivoted thereto, as specified, the tie is made by turning the plate at such an angle to the band as will bring the long axis of the cleat in the same direction as the long axis of the slot in the opposite end of the bale-band, as shown in Fig. 3, when the cleat is passed through the

slot and the plate allowed to swing or turn back into line with the band, which will bring the long axis of the cleat across the long axis of the slot, making a perfectly secure and effective lock, that cannot be broken by any accident.

The device C *c* may be punched from a sheet in a single piece and the cleat turned down. It may be cast and malleableized, or may be readily, easily, and cheaply made by many other methods known to the trade.

The advantages of my invention are simplicity, cheapness, and effectiveness, the cost of manufacture, which is a material item in bale-ties, being light, and the easy manner in which a secure tie can be made, commending it to the trade.

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

1. The bale-tie hook composed of the plate or piece adapted to be pivoted to a band, and the transverse cleat, substantially as and for the purpose specified.

2. The combination, with a slotted bale-tie, of the plate pivoted thereto, so that it can be turned at an angle to the line of draft, said plate provided with a transverse cleat or locking-lug, substantially as and for the purpose specified.

In testimony whereof I, the said JOHN C. RIETHMÜLLER, have hereunto set my hand.

JOHN CHRIST RIETHMÜLLER.

Witnesses:

F. W. RITTER, Jr.,

JAMES I. KAY.