S. O. Ryder,

Cotton Bale Tie.

No. 63,563. Fig. 1. Patented Apr. 2, 1867.

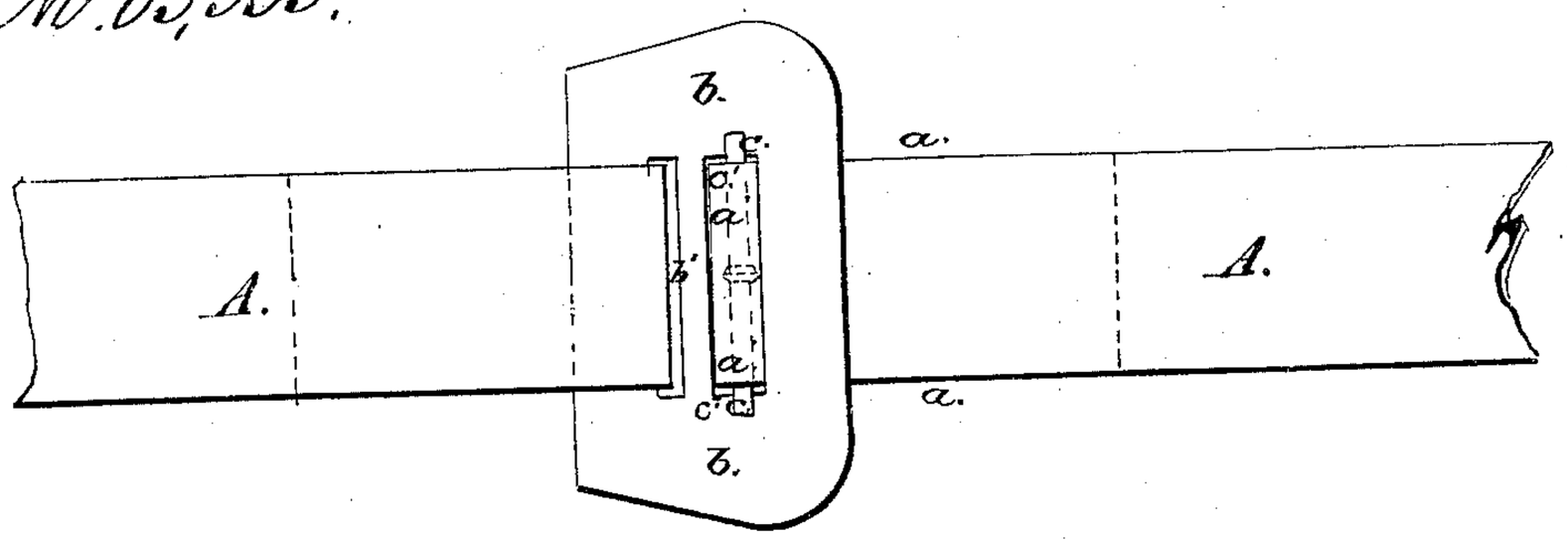


Fig. 2.

Fig. 3.

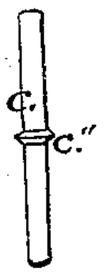
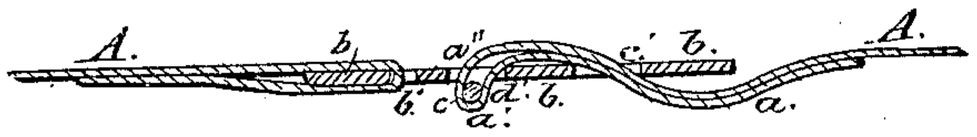


Fig. 4.



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STEPHEN O. RYDER, OF NEW YORK, N. Y.

Letters Patent No. 63,563, *dated April* 2, 1867.

IMPROVEMENT IN TIES FOR BALES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, STEPHEN O. RYDER, of the city, county, and State of New York, have invented a new and useful Improvement in Ties for Bales; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a portion of this specification, in which—

Figure 1 is a plan view of a bale tie constructed according to my invention.

Figure 2 is a longitudinal central section of the same.

Figure 3 is a detached view of a portion of the same.

Figure 4 is a longitudinal section showing a modification of my invention.

Similar letters of reference indicate corresponding parts in all the figures.

This invention is designed principally for binding cotton bales, and relates to that variety of metallic ties in which the two ends of the tie or band are secured together by means of a transverse key or pin.

The invention consists in a key or pin constructed with an annular tooth or rib, and combined with the looped and slotted ends of the tie in such manner that the said ends may be very easily and conveniently locked together, at the same time that all liability of the accidental displacement of the said key or pin is effectually prevented.

To enable others to understand the nature and construction of my invention, I will proceed to describe it with reference to the drawings.

The tie or band is marked A in the drawings, and is intended to be made of hoop or band iron of any suitable or desired size, and has one of its ends folded or turned over, as shown at *a*, in such manner that a loop, *a'*, is formed at the aforesaid end of the tie. The opposite end of the tie is furnished with a plate, *b*, of a greater width than the main length thereof. This plate may, if desired, be formed in one piece with the aforesaid main length of the tie, but it is preferred to have it attached thereto, either by rivets or by looping the ends of the tie through a transverse slot, *c*, formed near the innermost end of the said plate *b*, as represented in the several figures, this plate *b*, either formed in one piece with or attached to the tie or band, constituting what I term the slotted end of the said tie or band; this said plate *b* being provided, near its outermost end, with a transverse slot, *c'*, of a size sufficient to allow the looped end *a* of the tie to be passed up through the same, as shown in fig. 2, and as will be presently more fully set forth. The key or pin employed in locking the two ends of the tie together when the same is in use is indicated at *c*, and shown separately in fig. 3. The length of this key *c* is considerably greater than that of the slot *c'*. This key may be of cylindrical shape, and has formed upon it, at or near its middle, an annular tooth or rib, *c''*, the circumference of which is brought to a moderately sharp edge, in order that it may bite into the inner surface of the loop *a*, in order to prevent the key from being removed from the said loop from slight or accidental causes when the two ends of the tie are locked together.

The tie or band is passed around the cotton or other bale in the ordinary or in any suitable manner, and the loop *a'* of the looped end *a* is thrust up through the transverse slot *c'*, formed at the outermost part of the plate *b*, as hereinbefore set forth. The key or pin *c* is then passed through the loop *a*, above the said plate, with its ends resting thereon at the ends of the slot *c'*, in such manner as to prevent the loop *a'* from being drawn back through the aforesaid slot, thus firmly locking the two ends of the tie together, the expansion or outward pressure of the bale, when released from the action of the press, exerting sufficient force upon the tie to draw it tight and to cause the edge of the annular tooth or rib *c''* to bite into the inner surface of the loop *a'* in such a way as to prevent any longitudinal movement or displacement of the key from slight or accidental causes, thus rendering the locking together of the two ends of the tie very efficient and secure. If desired, instead of having only a single slot, *c'*, in the outer end of the plate *b*, as herein fully set forth, a supplementary slot, *a''*, may be formed immediately behind the slot *c'*, as shown in fig. 4, the looped end of the tie being first thrust upward through the slot *c'*, and then through the supplementary slot *a''*, the key *c* being then passed through the loop *a'*, upon the inner instead of upon the outer surface of the tie A.

What I claim as new, and desire to secure by Letters Patent, is—

The key or pin *c*, constructed with an annular tooth or rib, *c''*, in combination with the loop *a'* and slot *c'*, arranged at the opposite ends of the tie or band, substantially as herein set forth for the purpose specified.

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Witnesses:

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