J. Crookes.

Cotton Bale Tie.

No. 91,091. Patented Jun. 8, 1869.

Fig. 1.

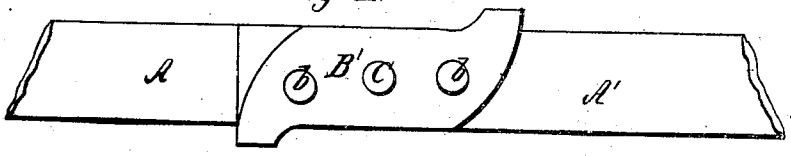


Fig. 2.

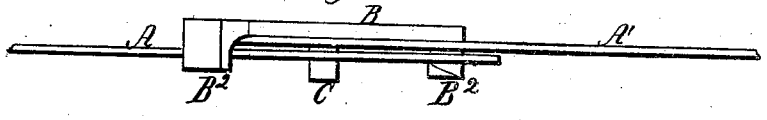


Fig. 4.

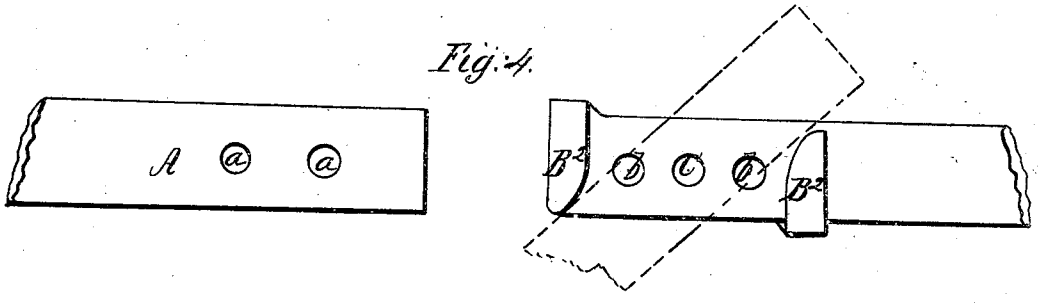
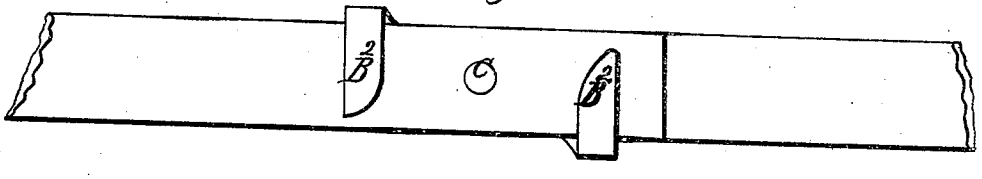


Fig. 3.



Witnesses;

Geo. P. Gaither Jr.

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Inventor;

Joseph Crookes

UNITED STATES PATENT OFFICE.

JOSEPH CROOKES, OF ST. LOUIS, MISSOURI, ASSIGNOR TO HIMSELF AND JOSEPH W. BRANCH, OF SAME PLACE.

IMPROVED COTTON-BALE TIE.

Specification forming part of Letters Patent No. **91,091**, dated June 8, 1869.

To all whom it may concern:

Be it known that I, JOSEPH CROOKES, of St. Louis, in the county of St. Louis and State of Missouri, have made certain new and useful Improvements in Cotton-Bale Tie; and I do hereby declare that the following is a full and clear description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention relates to locking or tying devices, such as are usually used to secure the ends of the metallic bands or hoops which are used to confine bales of cotton, hemp, rags, hay, and similar stuffs.

The nature of said invention is in the use of a joint-rivet for holding the ends of the bands against the tension caused by the bale, and in the application of a locking-piece in connection with said rivet, which shall prevent the bands from lifting off from said rivet, and thus from disengaging from each other, unless removed by the operator, as hereinafter shown.

To enable those herein skilled to make and use my said invention, I will now more fully describe the same, referring to the accompanying Figures 1, 2, and 3, respectively, as top plan, side view, and bottom plan of the bands or hoops locked by this improved tie, and to Fig. 4 as a plan, showing the band ends when disconnected.

A A′ represent the ends of the usual wrought-iron baling band or hoop.

In arranging said band as in the nature of this invention, the rivet hole or holes *a* are made, by punching, drilling, or otherwise, in the end A.

To the end A′, I connect the locking-piece B of the general form indicated in the several figures. Said locking-piece may be riveted to the end A′ by rivets *b*, or the said connection may be made by the joint-rivet C, by which the engagement of the band ends A and A′ is to be secured.

The said rivet C is formed to fit the holes *a* in the other end, A, of the band, and said rivet is fitted firmly into the end A′, and may be riveted over in the locking-piece B.

The locking-piece B has the top plate B^1, which rests along the upper edge of the band A′, and, being secured by the rivets C and *b*, (or either thereof,) strengthens said end of band materially.

At opposite corners of the plate B there are therewith connected the ear-pieces B^2, generally as indicated in Figs. 3 and 4.

The forward edge of each ear-piece B^2 is beveled, so as to increase the distance between the upper surface thereof and the under surface of the band A′.

In order to bring the ends A and A′ to a lock, I place the end A upon the end A′, in the position indicated by red lines in Fig. 4, the rivet C passing through the hole *a*. The band will then be twisted about the axis of the rivet C to achieve said position. Upon releasing the bands the ends A A′ will draw to a parallel position, and the end A will pass under the ears B^2, and be thus held. The position of parts in the lock thus achieved is such that unless the band ends are twisted back to the position of intersection indicated in red and black lines in Fig. 4, said parts cannot be lifted off from the rivet C and be disconnected from each other, and owing to the material which said band usually surrounds and secures it is plain that said ends A A′ cannot achieve the position required for unlocking, and the lock is therefore essentially secure, and said band, joined and secured as aforesaid, will thus form an efficient bale-band. Moreover, owing to the juxtaposition of the ends A and A′, and owing to their direct connection with the rivet C, the strain caused by the compressed material encircled by the band is to shear said rivet, and then a comparatively smaller strain upon the locking-piece B, which may therefore be constructed of less weight and strength than in such locking devices in which the strain more immediately reaches the locking-piece or buckle.

In the more usual construction of my said improved device the backing-plate B^1 will be placed uppermost, and the parts A′ A will be thereunder, while the rivet C will project through said parts A and A′ and be toward the material of the bale, thus being shielded against dislodgment by contusions in hand-

ling and storing the bales, and the ear-pieces B^1 will be similarly protected.

By the beveled surfaces of the ear-pieces B^1 the ends A A′, when locked, are forced to lie closely against each other, while they are readily entered in adjusting the tie.

Having thus fully described my invention, what I claim is—

The locking-piece B, arranged with ear-pieces B^2 and riveted to the end A′, when combined with the joint-rivet C and the end A, substantially as herein set forth.

JOSEPH CROOKES.

Witnesses:

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