

R. FELL, Sr.  
Cotton-Bale Tie.

No. 220,067.

Patented Sept. 30, 1879.

FIG.1.

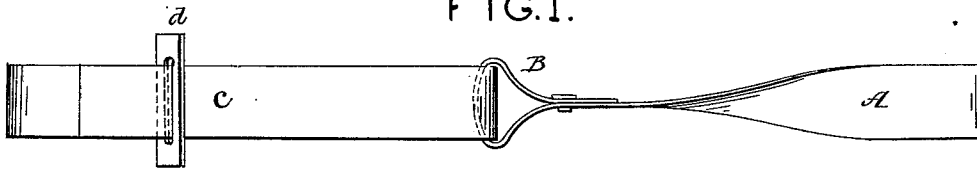


FIG.2.

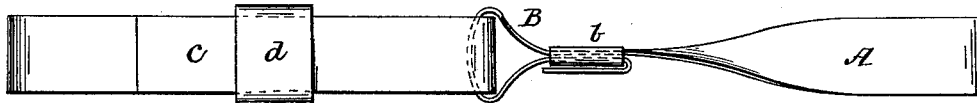


FIG.3.

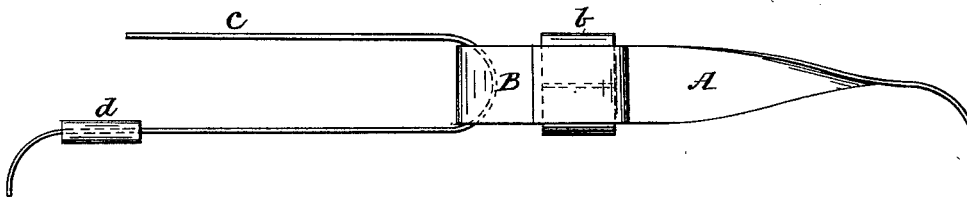
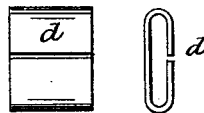


FIG.4.



Witnesses:

Samuel R. Turner  
Wm. H. Bates.

Inventor:

Richard Fell, Jr.  
C. S. Whitman, Atty.

# UNITED STATES PATENT OFFICE.

RICHARD FELL, SR., OF HELENA, ALABAMA, ASSIGNOR TO RICHARD FELL, JR., OF SAME PLACE.

## IMPROVEMENT IN COTTON-BALE TIES.

Specification forming part of Letters Patent No. **220,067**, dated September 30, 1879; application filed June 30, 1879.

### *To all whom it may concern:*

Be it known that I, RICHARD FELL, Sr., of Helena, county of Shelby, and State of Alabama, have invented an Improvement in Cotton-Bale Ties, of which the following description, taken in connection with the accompanying plate of drawings, hereinafter referred to, forms a full and exact specification, wherein are set forth the nature and principles of the invention, by which the same may be distinguished from others of a similar class, together with such parts thereof as are claimed as new and are desired to be secured by Letters Patent of the United States.

My invention relates to that class of ties which are used for fastening together the ends of metallic bands made use of in baling cotton; and the nature thereof consists in certain improvements on the cotton-bale tie for which Letters Patent were granted to me on the 24th day of February, 1874.

In order that my improvement may be clearly understood and distinguished from appliances and devices heretofore made use of, I will briefly review the state of the art to which it relates.

Metallic ties having one end formed into a loop for the interlocking of the other have been used for securing objects of merchandise in a compressed form from time immemorial. It has also been common from time immemorial to render such loop or loops secure by riveting the end of the band to the body thereof. It has also been common from time immemorial in coopering and baling to hook or loop the ends of metallic bands together without the interposition of a link.

In the Letters Patent which were granted to Richard Fell, Jr., February 24, 1874, a bale-tie was described having a twisted band provided with a loop, through which the end of the band was passed from the inner side outward, which band, after having been drawn to a sufficient degree of tightness, was bent back upon itself and secured in position by a flat buckle or keeper having an oblong central aperture, through which were passed the parts of the band to be secured, as shown in Figure 1.

By this construction, abrupt turns or sharp corners in the band, whereby the fiber of the

iron is injured, were avoided, and the band being passed through the loop formed in the other end from the inner or side next to the cotton, the operative was enabled to draw the band directly toward him before any bend in the band was formed.

It was found, however, in practice that the rivet for securing the loop was insecure, and that the flat keeper having an oblong central aperture was liable to tear or injure other bales with which it was brought in contact.

It is the object of my present invention to obviate these difficulties.

In the accompanying plate of drawings, in which corresponding parts are designated by similar letters, Fig. 2 represents a tie as it appears when secured. Fig. 3 illustrates the position of the parts when the fastening is incomplete. Fig. 4 shows the keeper through which the end of the band to be secured is passed.

The tie is made in the following manner: The sleeve *b* is first put on the band and the loop *B* formed. The said sleeve is then slipped upon the end at the loop and the end bent up over the sleeve. The band is then twisted at right angles, so as to bring the edge of the loop in a line with the face of the band. The other end, *c*, of the loop or band is run through the said loop from the inner side outward, and after having been drawn to a sufficient degree of tightness, bent back upon itself and secured in position by a sliding sleeve or keeper, *d*, the form of which is clearly shown in Fig. 4.

It will be observed that when the band is put around the bale the end *c* does not require any twist at all, either before or after entering the loop *B*, but can be drawn through said loop by slight exercise of force, and be secured in a position parallel, or nearly parallel, to the band by the sliding sleeve or keeper *d*, to the place shown in the drawings, without the use of instruments or tools of any kind.

It is also to be observed that it is not necessary to rely upon the expansive force of the cotton to secure the parts in position, as this end is accomplished solely by the sleeve *d*.

The entire fastening is made up with the band as it comes from the mill, and the manu-

facturer is thus enabled to use up all the scrap-ends of the bands.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

The loop formed by the band bent back upon itself, secured by the sleeve, and twisted at right angles, the sleeve *b*, the end *c*, and sliding keeper *d*, all combined as and for the purpose described.

In testimony that I claim the foregoing I have hereunto set my hand this 14th day of June, 1879.

RICHD. FELL, SR.

Witnesses:

R. W. COBB,  
W. A. HAYS.