

Holmes & Slack,

Bale Tie.

No. 113,518.

Patented Apr. 11, 1871.

Fig. 1.

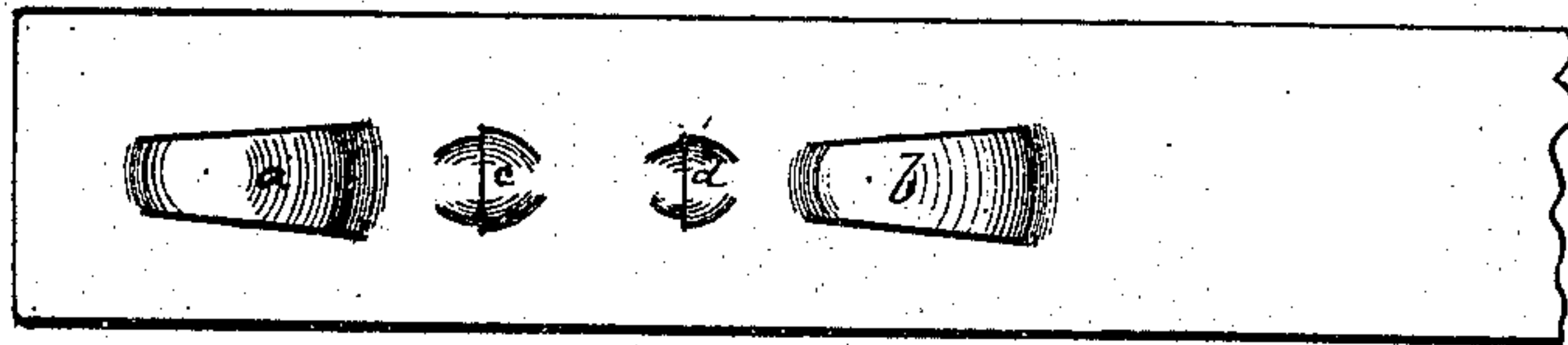


Fig. 2.

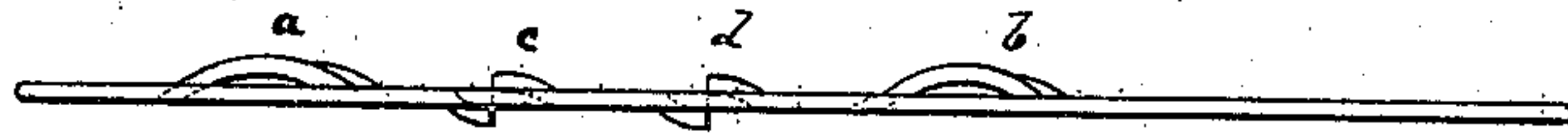


Fig. 3.

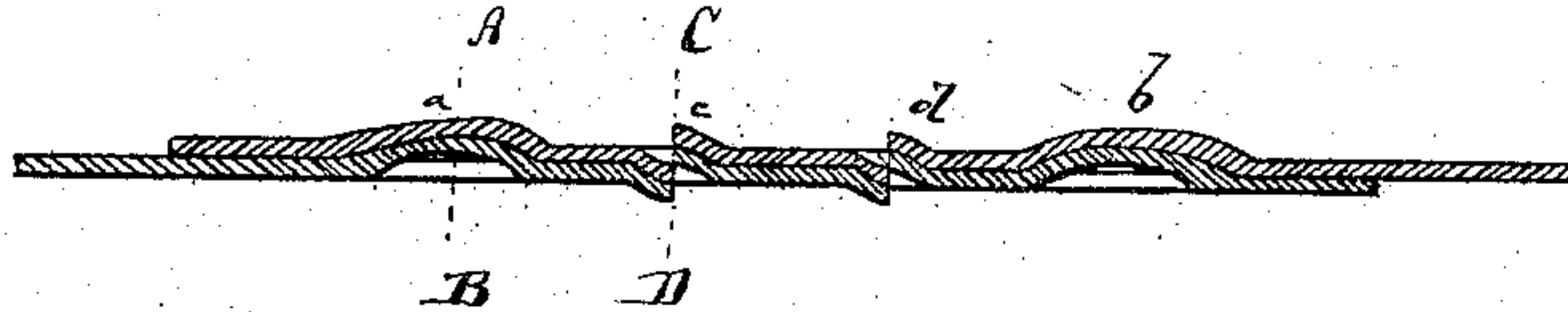


Fig. 4.



Fig. 5.



WITNESSES.  
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# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN BALE-TIES.

Specification forming part of Letters Patent No. **113,518**, dated April 11, 1871.

*To all to whom it may concern:*

Be it known that we, JOHN HOLMES and JAMES CORBETT HOLTZAPHELL SLACK, both of Manchester, in the county of Lancaster, in that part of the United Kingdom of Great Britain and Ireland known as England, have invented certain new and useful Improvements in the Fastenings of the Metallic Hoops or Bands employed in Baling Cotton and other substances; and we hereby declare the following to be a full, clear, and exact description thereof, reference being had to the annexed drawing, forming part of this specification.

In securing bales of cotton or other substances that require to be highly pressed in hydraulic or other presses it is customary to fasten the ends of the metallic hoops or bands surrounding the bale together by means of rivets or studs.

Now, our invention consists of fastening the ends of the hoops or bands together by means of indents or slots and projections fitting together and forming the requisite fastening.

In performing our invention, we use punches and dies, between which the two ends of each hoop, when on the bale, are compressed by a lever, or otherwise. Two or more indentations may be made in the ends of the hoop. As soon as the pressure on the bale is released, the bale, in expanding, tightens together the two ends of the hoops, and the edges of the indentations securely hold the ends of the hoops together.

### *Description of the Drawing.*

Figure 1 represents a plan, and Fig. 2 a side view, of one end of a hoop or band in which the slots and indentations have been punched. Fig. 3 is a longitudinal section. Fig. 4 is a transverse section through the line A B of the ends of a hoop or band fastened together, and Fig. 5 is a similar section through the line C D.

On referring to the drawing, it will be seen that we prefer to make four slots and indentations in each end of the hoop or band, the two outer ones (marked *a* and *b*) being double, and running lengthwise of the hoop or band, and the intermediate ones, *c* and *d*, are placed crosswise.

The punches for making the outer slots and indentations are made to cut two diagonal slots through the hoop or band, and to form curved projections tapering from and into the body of the hoop or band.

The punches for making the intermediate slots and indentations, *c* and *d*, are made to cut transverse slots across the hoop or band, and to form curved projections.

The slots and indentations produced by the punches cause the metal displaced to fit into each other, and thus prevent the ends of the hoops or bands springing apart and the lateral displacement of the ends of the hoops or bands.

We wish to remark that the pressure required for making the slots and indentations in the hoops may be obtained by differential screws, or by a hydraulic ram or other equivalents.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

The combination, on the ends of a cotton-bale tie, of the projections *a b* with the intermediate projections, *c d*, respectively and independently operating as and for the purpose described.

In testimony whereof we have hereunto set our hands before two subscribing witnesses.

JOHN HOLMES.

JAMES C. H. SLACK.

Witnesses:

H. B. BARLOW,

H. B. BARLOW, Jr.