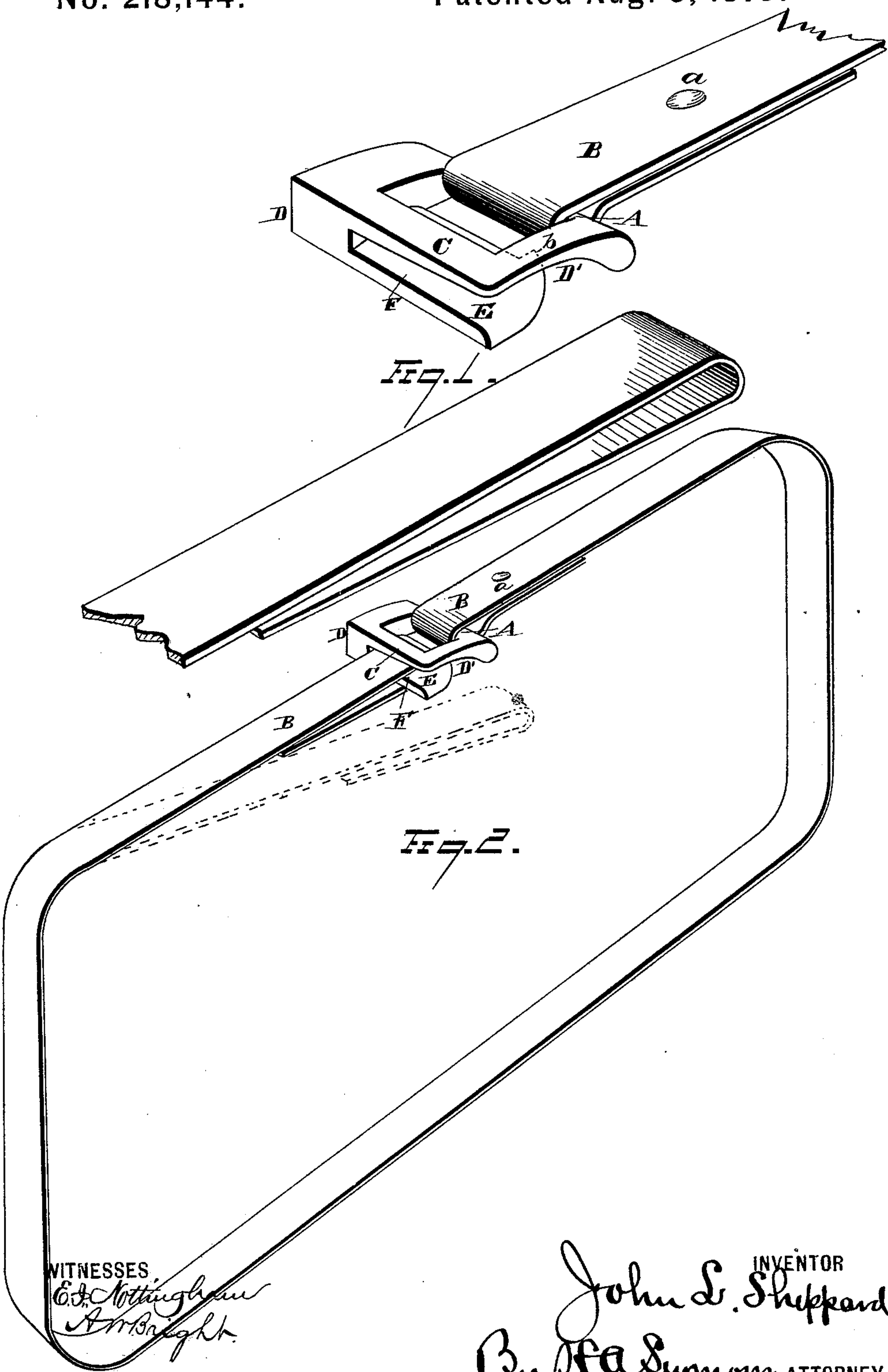


J. L. SHEPPARD.
Bale-Tie.

No. 218,144.

Patented Aug. 5, 1879.



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Fig. 3.

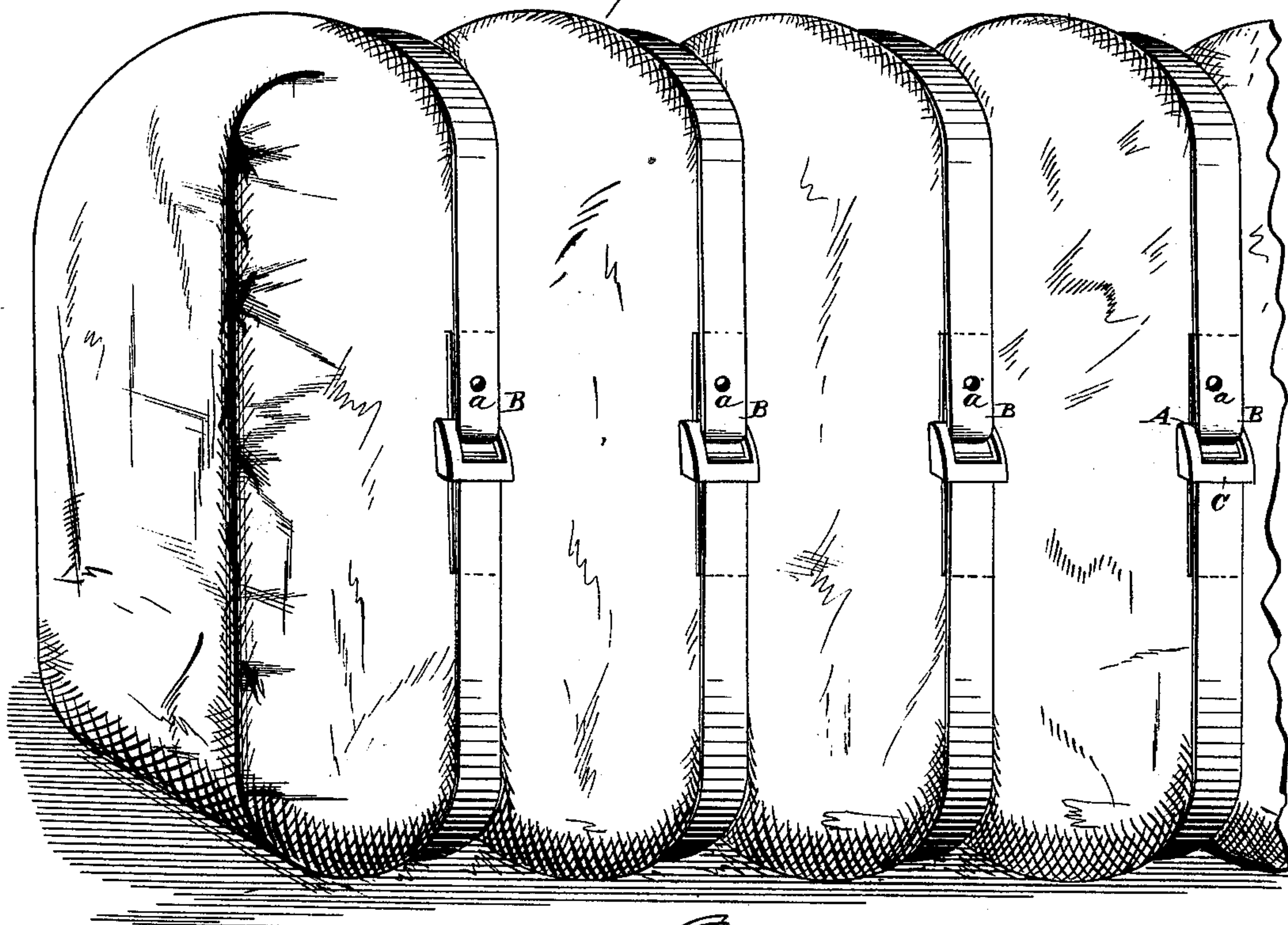
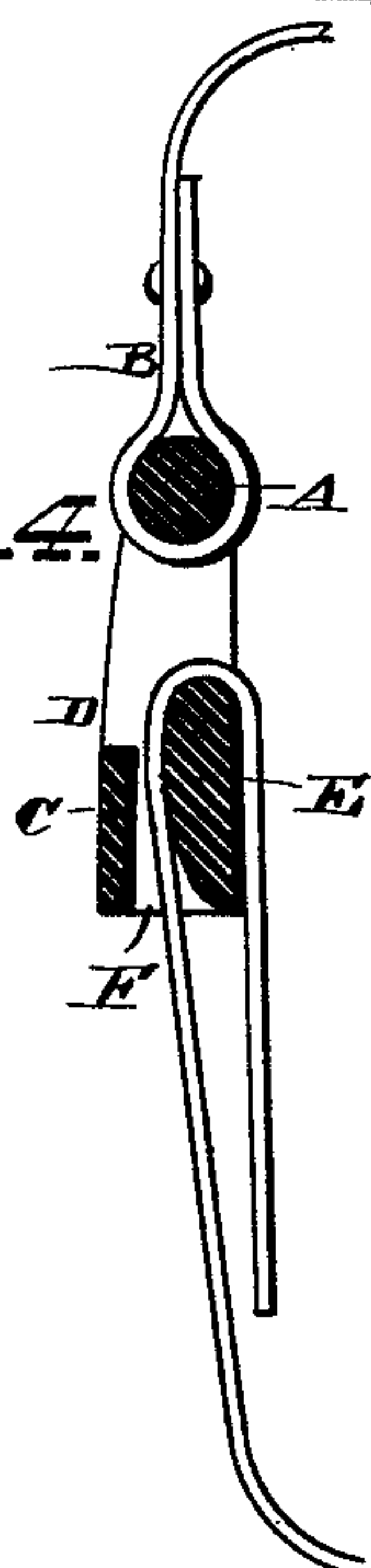


Fig. 4.



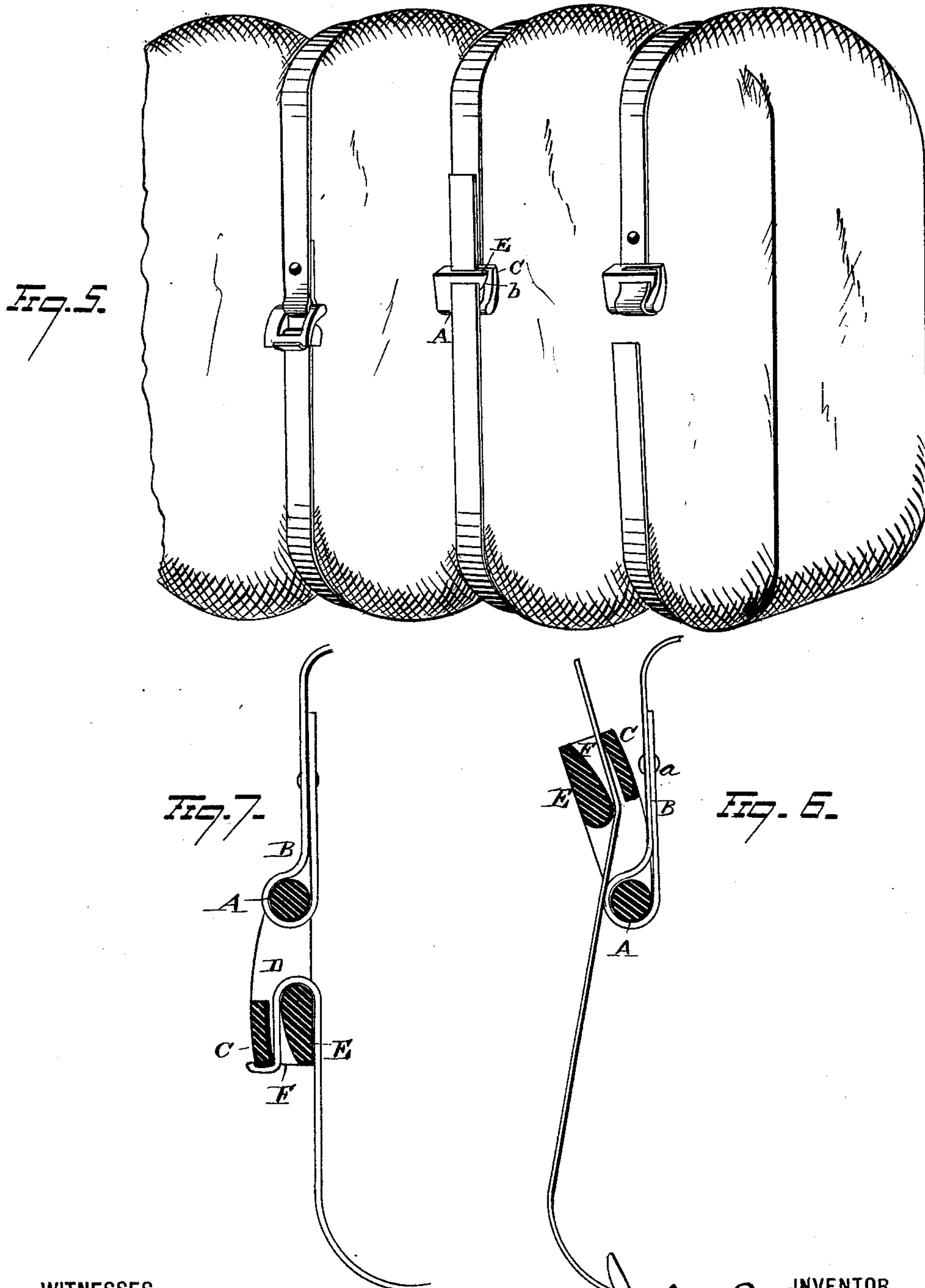
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UNITED STATES PATENT OFFICE.

JOHN L. SHEPPARD, OF CHARLESTON, SOUTH CAROLINA.

IMPROVEMENT IN BALE-TIES.

Specification forming part of Letters Patent No. **218,144**, dated August 5, 1879; application filed May 29, 1879.

To all whom it may concern:

Be it known that I, JOHN L. SHEPPARD, of Charleston, in the county of Charleston and State of South Carolina, have invented certain new and useful Improvements in Bale-Ties; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in bale-ties, the object being to provide a buckle of such construction that it may be used as a planter's tie with both ends of the band in contact with the bale, and also adapted to be used as a compress-tie, wherein the ends of the bands are secured by upsetting the buckle and forming the loop with the free end projecting outward from the bale; and to these ends my invention consists in a bale-tie adapted to be upset and form the tie, the buckle provided with two cross-bars on its free end, said bars being located over each other, forming an open slot for the attachment of the looped end of a band, whereby the tie is adapted for use either by the planters or as a compress-tie.

My invention further consists in certain details of construction, as will hereinafter be explained, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a view, in perspective, of my improved tie with a bale-band attached to one end thereof. Fig. 2 is a similar view with the looped end of the band secured to the buckle, forming the planter's tie. Fig. 3 is a view, in perspective, of a bale with the several bands thereof secured in the manner illustrated in Fig. 2. Fig. 4 is a longitudinal section of a tie formed as shown in Fig. 2. Fig. 5 is a view, in perspective, of a bale, showing different views of my improved buckle when used as a compress-tie. Figs. 6 and 7 represent the compress-tie in longitudinal section.

A designates the end cross-bar of the tie, to which one end of the band B is secured, and preferably retained in place by a rivet, *a*. The opposite or free end of the tie is formed with a broad end wall or plate, C, and sides D D'.

One of the side pieces, D, has formed inte-

grally therewith an arm, E, which latter is located below the wall or plate C, forming an open slot, F, between the adjacent faces of the wall or plate C and the arm E. The outer end of the arm is preferably provided with a projection, *b*, to prevent any lateral displacement of the band after the tie has been formed.

When the buckle is used as a planter's tie a loop is formed on the free end of the band, and the loop is inserted laterally through the open slot, thus securing the looped end of the band to the arm E of the buckle, the projection *b* serving to prevent any lateral displacement of the band. The tie being of compact form and easy of manipulation is specially adapted for planters' use, and possesses all the excellences of any open-slot tie now on the market.

Fig. 3 represents a bale bound by my improved tie in the manner hereinbefore set forth, and ready for the compress. A compress-tie adapted for employment in connection with automatic band-tighteners necessitates a tie or buckle of such construction that it may be automatically locked with the expenditure of the least amount of slack band, and with this end in view I have constructed my improved tie for use either as a planter's tie or a compress-tie, and when used in a compress to be locked by upsetting the buckle, and forming a return-bend in the band with the end projecting outwardly instead of projecting inwardly in contact with the bale, as is the case when used as a planter's tie.

The sides D D' are preferably made of gradually-increasing width from the end cross-bar to the outer or free end of the buckle, so that when the buckle is turned back upon the band end, to which it is secured for receiving the free end of the band, the open slot F is raised sufficiently above the end cross-bar to allow of the ready insertion of the free end of the band, either laterally or endwise, as clearly illustrated in Figs. 5 and 6. After the desired tension has been exerted on the free end of the band, or upon the opposite ends of the band, the buckle is then upset or turned back, which operation may be effected automatically or in any desired manner, thus forming a return-bend in the free end of the band, the end of the band being retained in its place by its fric-

tional contact with the wall or plate C and arm E of the buckle.

The tie is effected with the employment of but little slack band, for the reason that the buckle is made as short as possible, and hence the arc described thereby when the buckle is upset is not sufficient to cause any material waste of power or increased bulk by reason of slack band.

When the buckle has been upset and the band ends secured, as represented in Figs. 5 and 7, the holding ends of the band will be in the line of strain, and hence there will be no tendency to raise one end of the buckle and release the bands while the bales are being handled or while they are *in transitu*.

Owing to the fact that my improved tie is adapted to be used both as a planter's tie and a compress-tie, it is of great importance and value to the trade, as may be instanced for the following reasons: It is desirable to furnish the buckle and band for planters' use, and for convenience in handling and safety in use it is preferable to permanently secure one end of the band to the buckle by riveting or otherwise, that a complete band and buckle may be furnished in bundles and in any desired numbers. Hence the bands may be secured to my improved buckles in the ordinary manner, and furnished to planters for use as a planters' tie.

An acceptable planters' tie must be of such construction that the tie may be effected by a lateral or sidewise movement of a loop on the free end of the band, so that the projecting end of the band may be placed next the bale, and thus not necessitate the cutting off of the extra length of band end. As planters are not usually provided with means to clip off any surplus band, and should they be, and cut off such surplus, the portions of the bands thus removed will prove a waste and loss; but by retaining the bands at full length until they reach the compress, the clipped-off portions of the bands are then used to form new bands to supply the additional bands needed on bales after having been compressed.

As heretofore set forth, my improved buckle provides for these wants, and is adapted to be manipulated in the manner to be desired by the planters, as well as at the compress.

The bales are now shipped to the compresses.

When the bales are provided with the ordinary styles of buckles the latter must be detached from the bands, if band-tighteners are used in connection with the compresses, and buckles especially designed for use in connection with the band-tighteners substituted in

lieu of the ordinary buckles. By the employment of my improved buckle all this extra labor and expense are obviated.

The bales bound with my open-slot turn-over buckles are placed in the compress and the free end only of the band detached from the buckle-arm. The band is then straightened and inserted by a lateral or endwise movement beneath the arm E of the buckle, when the latter is turned back in the position illustrated in Figs. 5 and 6. The extreme end of the band is then grasped by the band-tightener, and the desired tension having been exerted thereon, the buckle is then upset, forming a perfect tie, as shown in Figs. 5 and 7. Hence it will be observed that while my improved buckle has all the essentials of a perfect upset buckle, it is also specially adapted for use as a planters' tie.

I make no claim in this case to a turn-over buckle provided with a cross-bar at one end, and with two cross-bars at its opposite end, which are located over each other, and whose outer edges are of equal distance substantially from the single cross-bar, and from a band-opening which will be in line of the direction of the strain when the buckle is turned back to rest upon the band end, to which it is secured, as such subject-matter is involved in my pending application filed of prior date to this application.

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

1. An upset buckle provided with two cross bars or plates on its free end, said bars or plates being located over each other, forming an open slot in its outer or free end, whereby the tie may be effected by a lateral movement of the free or looped end of the band, or be formed by upsetting the buckle, thus constituting both a planters' and a compress-tie, substantially as set forth.

2. An upset-buckle provided on its free end with two cross bars or plates, located one over the other, one of said bars or plates being disconnected from the buckle at one end, and having a projection formed on its outer end, whereby there is formed an open slot, to enable the buckle to be used either as a planters' or a compress tie, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 24th day of May, 1879.

JOHN L. SHEPPARD.

Witnesses:

R. H. McDOWELL, Jr.,
JULIUS A. BLAKE.