

G. N. BEARD.  
Cotton-Bale Ties.

No. 143,319.

Patented September 30, 1873.

Fig.2.

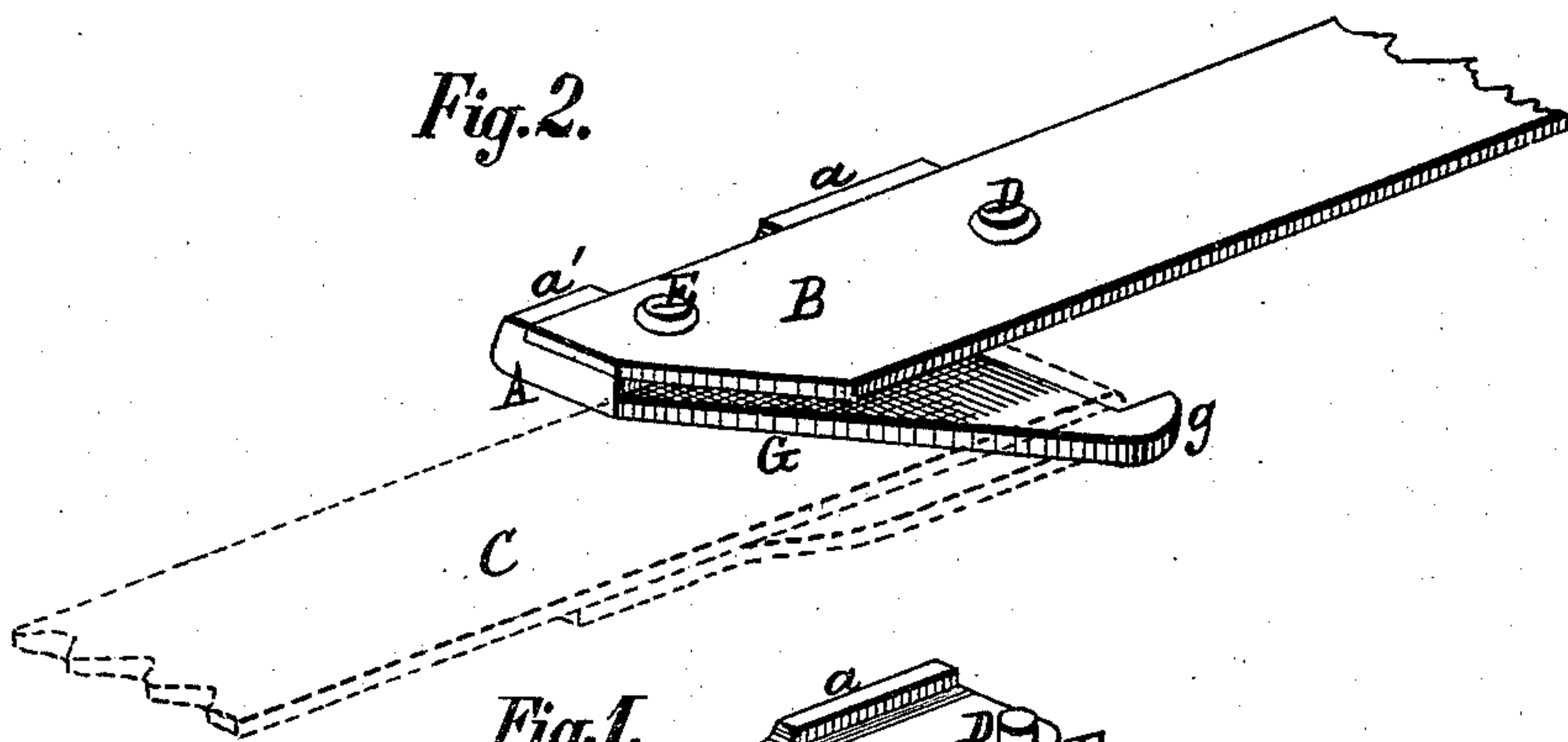


Fig.1.

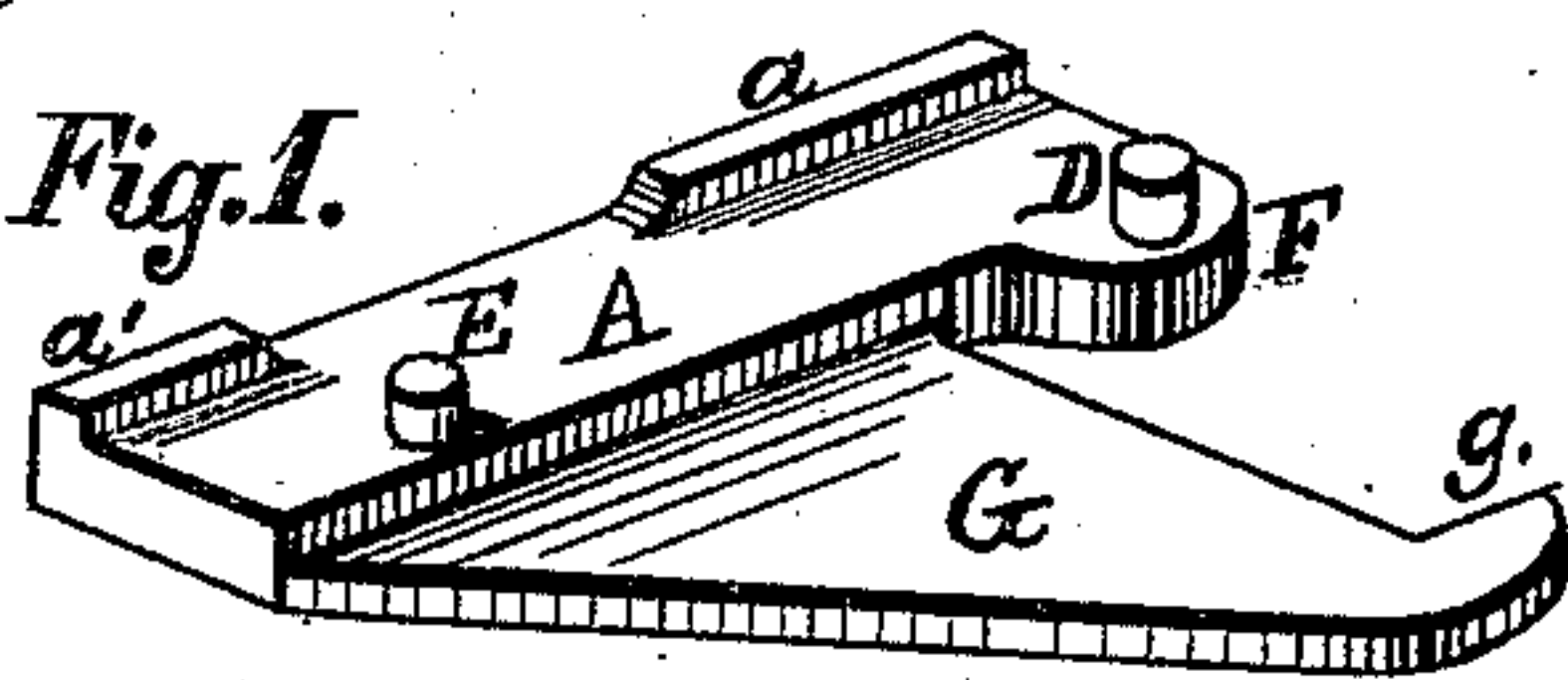


Fig.3.

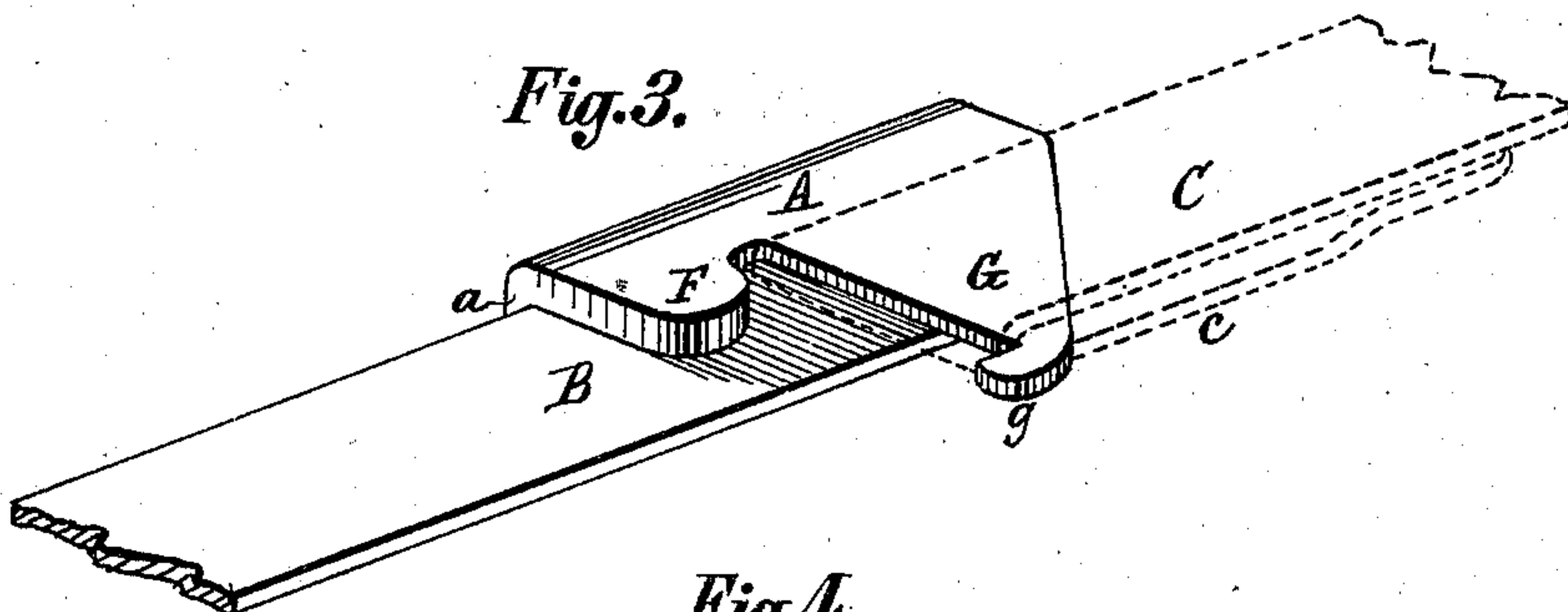
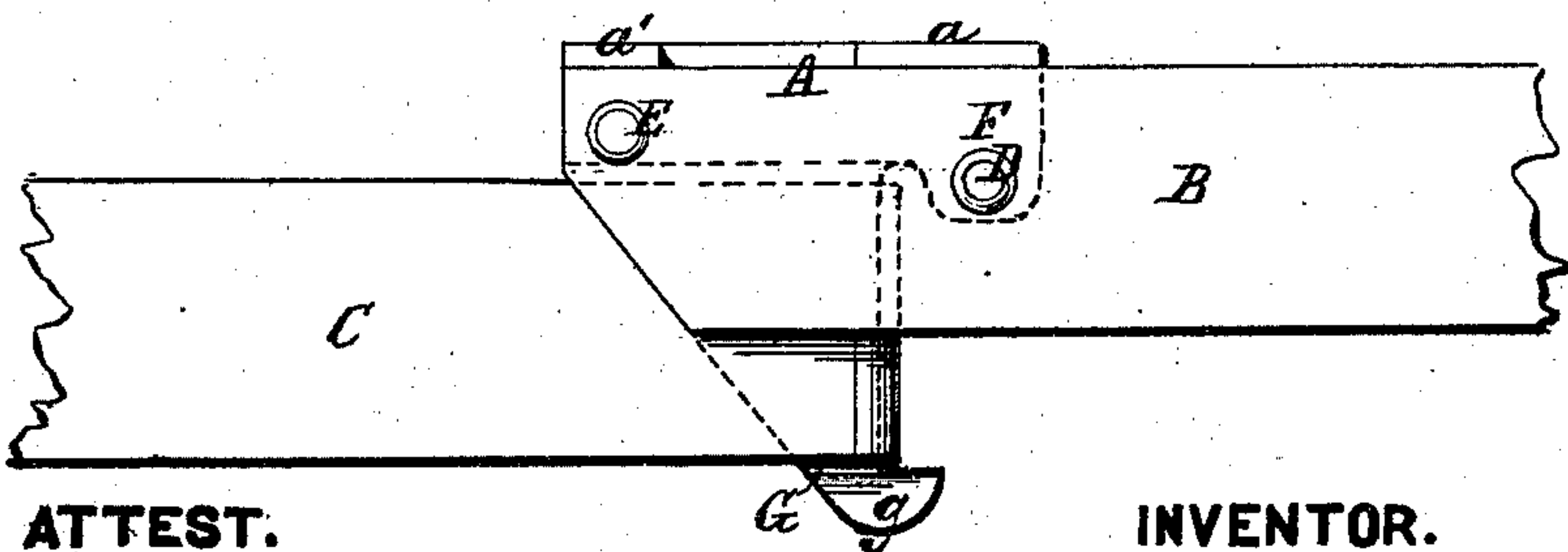


Fig.4.



ATTEST.

Robert Burns.  
Walter Allen

INVENTOR.

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By Knight Bros.  
Atty.

# UNITED STATES PATENT OFFICE.

GEORGE N. BEARD, OF ST. LOUIS, MISSOURI.

## IMPROVEMENT IN COTTON-BALE TIES.

Specification forming part of Letters Patent No. **143,319**, dated September 30, 1873; application filed September 13, 1873.

*To all whom it may concern:*

Be it known that I, GEORGE N. BEARD, of St. Louis, St. Louis county, Missouri, have invented an Improvement in Cotton-Bale Ties, of which the following is a specification:

This invention relates, first, to the construction of a tie-plate, which is secured to one end of the hoop or band. The back of the plate has sufficient thickness to withstand the strain on the bands. It has a flange at the rear edge resting against one edge of the band. The plate is secured to one end of the band by two rivets or rivet-studs, one of which extends from a rounded projection, which acts to prevent the loop at the other end of the band from being disengaged from the horn on which it is held. This horn or tongue is of thinner metal than the back of the plate, as shown, so as to leave a space between the horn and the end of the band to receive one side of the loop at the other end. The horn has at the end a spur to prevent the loop slipping off sidewise. The second part of my invention consists in the combination of the said plate with the band or hoop, the plate being riveted to one end of the band in such a manner that one side of the loop is received between the horn and the end of the band, so that the free end of the loop may be prevented from springing away from the other side of the band, thus not depending on the cotton to hold it in place.

Figure 1 is a perspective view of the tie-plate. Fig. 2 is a perspective view of the tie engaged. Fig. 3 is a perspective view of the tie engaged, with the other side out to that shown in Fig. 2. Fig. 4 is a top view of the tie as shown in Fig. 2.

A is the back of the tie-plate, which has a flange, *a*, to rest against the edge of the end B of the band. D E are rivets or rivet-studs, which may be cast with the plate, as I propose in general to form the plate by casting it of iron which is subsequently rendered malleable. In cases where the plates are stamped out of sheet metal, the rivets D E would, of

course, be separate, and passed through holes in the plate. F is a projection on the fore side of the plate, the projection giving bearing to the rivet-stud D. This projection not only acts as a support to this rivet or stud, but also acts as a lock to prevent the loop C of the band from moving in a retrograde direction, by which it might be disengaged from the claw *g* at the end of the horn or tongue G, by which the loop is held. The horn G is of a triangular flat form, and is of thinner metal than the back A, so that, when the end B of the band is riveted flat upon the side of the back, there is a space between them which receives one side of the loop C, as shown in Figs. 2 and 3, in the latter one of which the end *c* of the loop is held in the space and prevented from flying away from the other side of the loop by the end B of the band, so that the expansion of the cotton is not depended on to hold the end *c* in position.

My tie may be used with either side up, as shown in Figs. 2 and 3.

The flange *a* may extend the whole length of the plate, or may have the central part removed, as shown, or the end *a'* may be removed altogether, as no strain comes on that end of the flange.

I claim as my invention—

1. The tie-plate consisting of a thick back, A, provided with a side flange, *a*, lock-projection F, and a horn, G, so much thinner than the back A as to allow a thickness of the band between the horn and the end B of the band when attached to the latter, substantially as set forth.

2. The combination of band-end B and plate or tie-piece consisting of a back, A, projection F, horn G *g*, and rivets or studs D E, all substantially as and for the purpose set forth.

GEORGE N. BEARD.

Witnesses:

SAML. KNIGHT,  
ROBERT BURNS.