

G. N. BEARD.

Bale-Ties.

No. 156,754.

Patented Nov. 10, 1874.

FIG. 1.

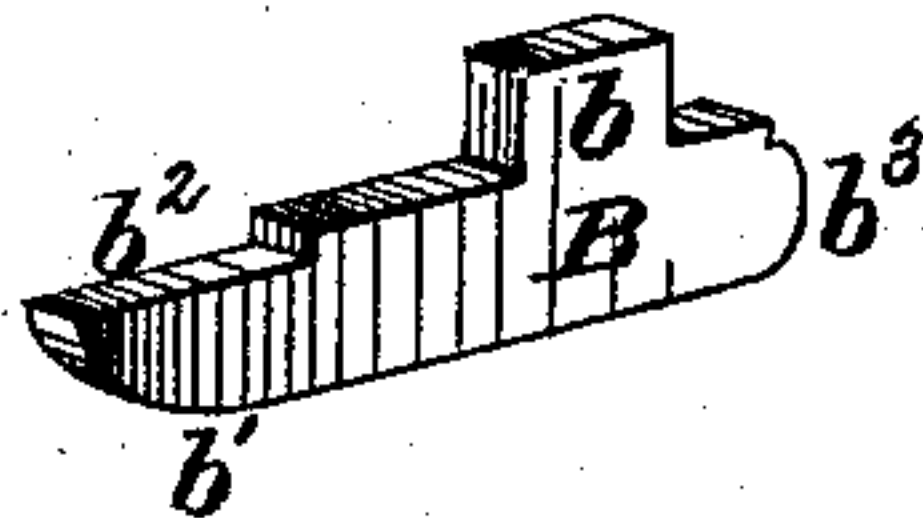


FIG. 2.

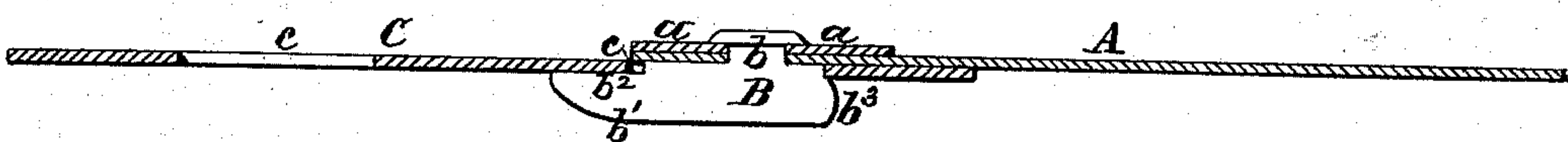


FIG. 3.

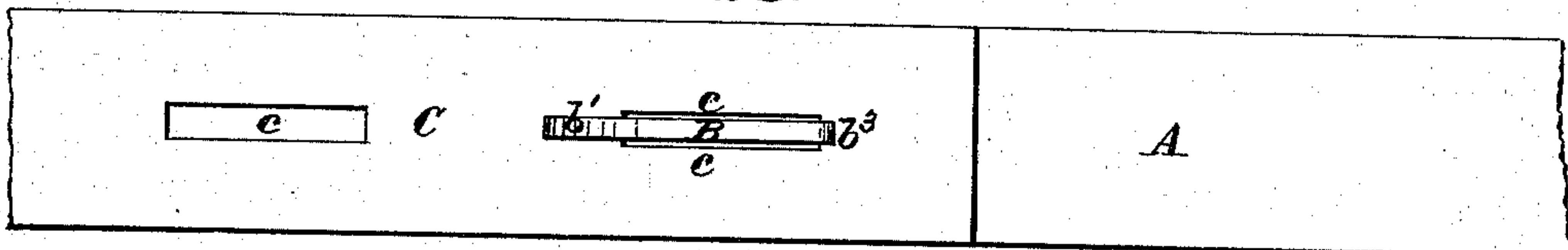
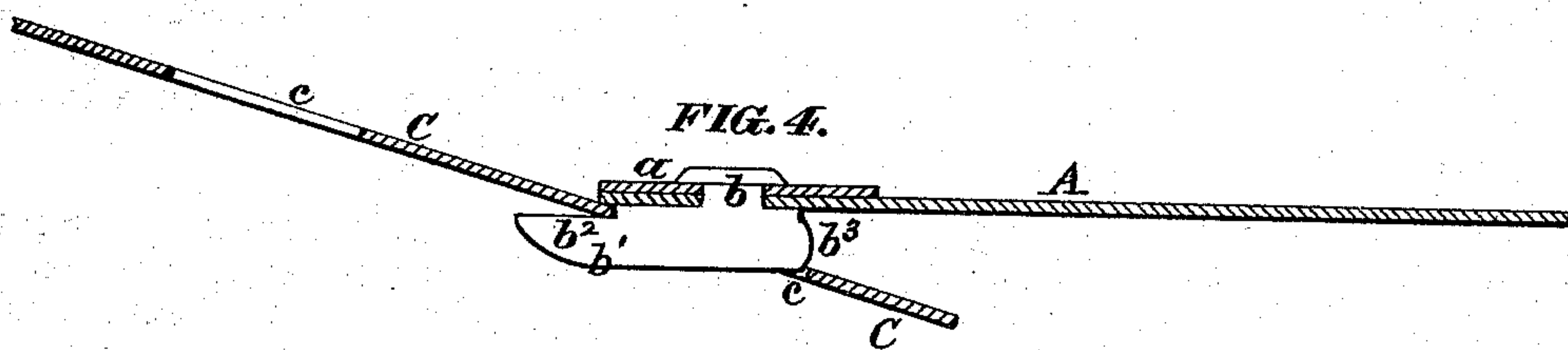


FIG. 4.



ATTEST:

Robert Burns.
Henry Tanner.

INVENTOR:

George N. Beard
By Knight Bros.
Atty

UNITED STATES PATENT OFFICE.

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

IMPROVEMENT IN BALE-TIES.

Specification forming part of Letters Patent No. **156,754**, dated November 10, 1874; application filed September 8, 1874.

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 Bale-Ties, of which the following is a specification:

This is an improvement on the "improvement in iron ties for cotton-bales" patented to me the 16th day of July, 1861; and my improvement consists in making the cleat or button with only one horn, the bearing-edge of which is straight and parallel with the surface of the band. The heel of this cleat has a bulging projection, so as to make it easy of insertion into the slots, and to tend to hold the cleat to its engagement in the slot when the band is stretched.

In the drawings, Figure 1 is a perspective view of my button or cleat before attachment to the band or hoop. Fig. 2 is a longitudinal section through the center of the tie, showing the button in side view. Fig. 3 is an under view of the tie. Fig. 4 is a longitudinal section, showing the tie in act of engagement.

A is the end of the hoop or band, to which the button B is attached by riveting the shank *b* of the button passing through the end A of the hoop and through a re-enforce plate, *a*.

The button in my patent of July 16, 1861, had two horns, the outer one being longer than the inner one. In this, the rear horn, owing to its length, caused unnecessary difficulty in buttoning the tie.

To give an extended surface bearing of the under side of the button upon the slotted end, I make the bearing-edge *b*² of the horn *b*¹ parallel with the band ends, and so far dispense with the rear horn of the button as to leave merely a rounded excrescence, *b*³, on the heel, which, by having no outer angularity, allows the end of the slot *c* to slip easily over it. The described form of heel also gives a small recess or notch between the excrescence and the end A, which tends to hold the slotted end in contact with the button end.

Where the bearing-surface of the horn *b*¹ is small, it is liable to weaken the part of the band in contact with it by making a bend in the same, and where the strain comes principally on the corners of the slot *c*, as it does where the slope is outward, it is apt to cause the corners of the slot to tear under extreme strain; but with my extended bearing lying flat upon the hoop, the strain is evenly extended over a surface sufficiently large to prevent injury to the hoop.

I claim as my invention—

The button or cleat B, having a straight bearing, *b*², parallel with the ends of the band, and a bulging projection, *b*³, on the heel, substantially as and for the purpose set forth.

GEORGE N. BEARD.

Witnesses:

SAML. KNIGHT,
ROBERT BURNS.