

(No Model.)

G. B. BOOMER.  
COTTON BALE TIE.

No. 365,572.

Patented June 28, 1887.

Fig. 1.

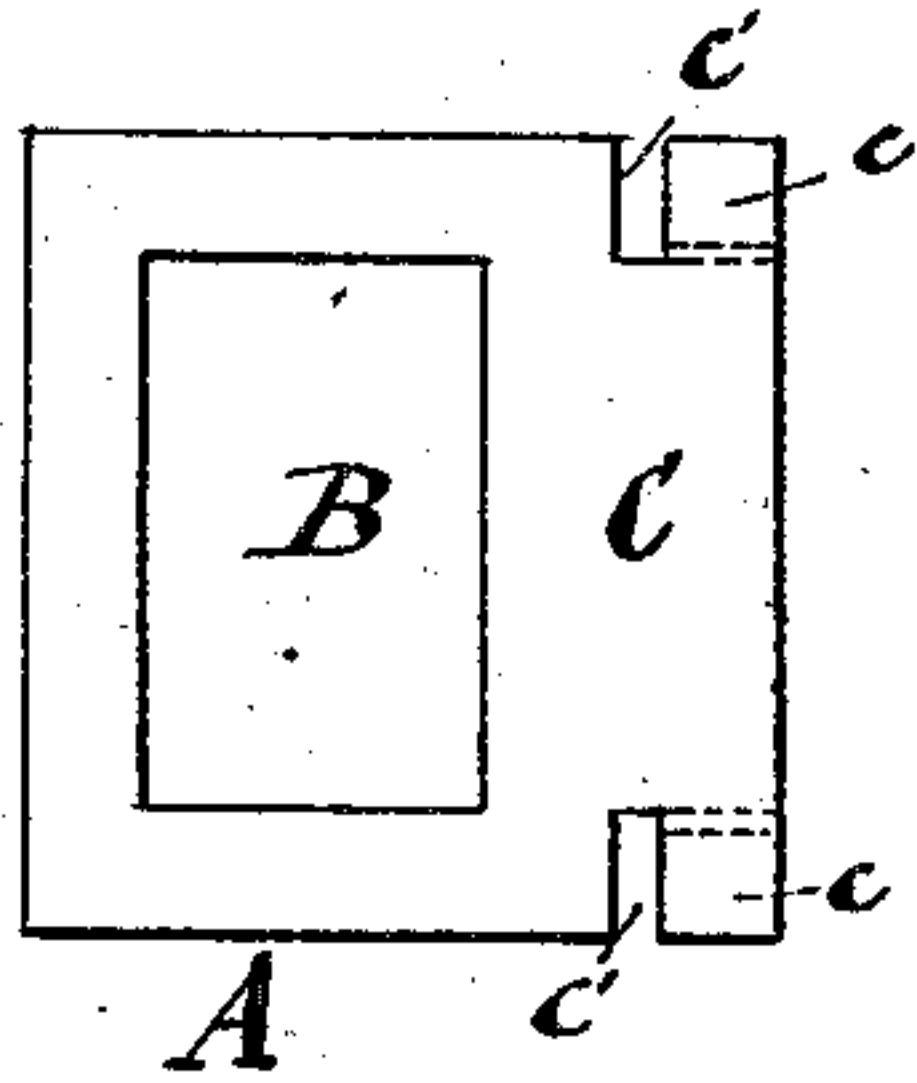


Fig. 2.

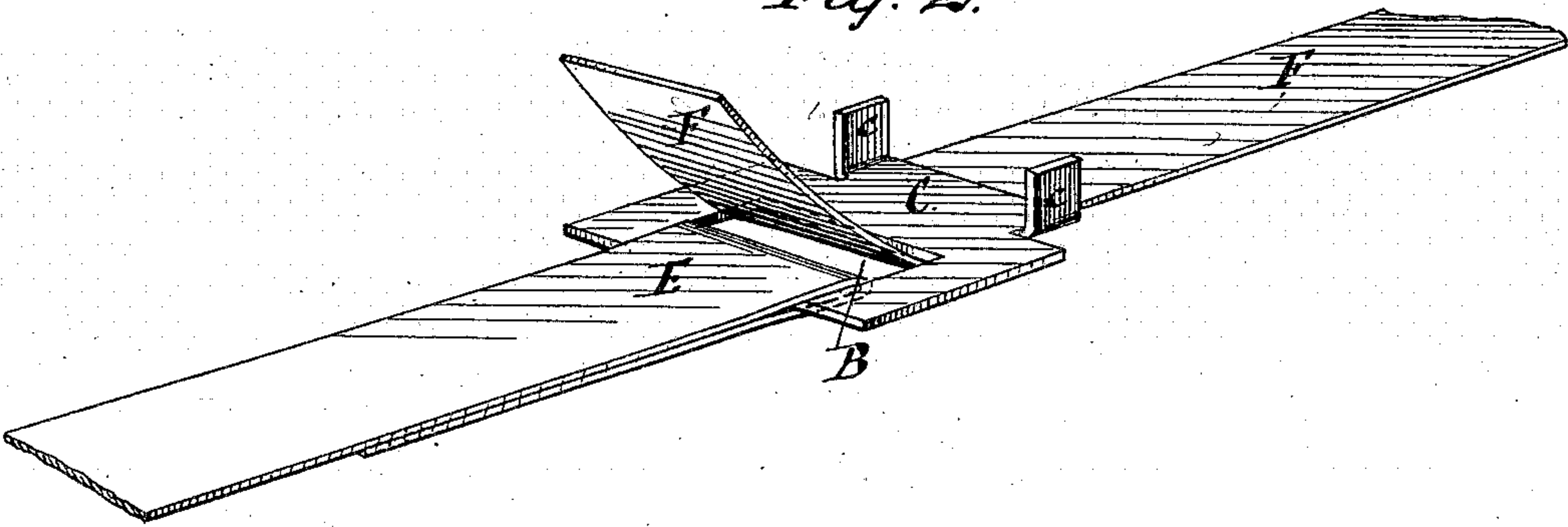


Fig. 3.

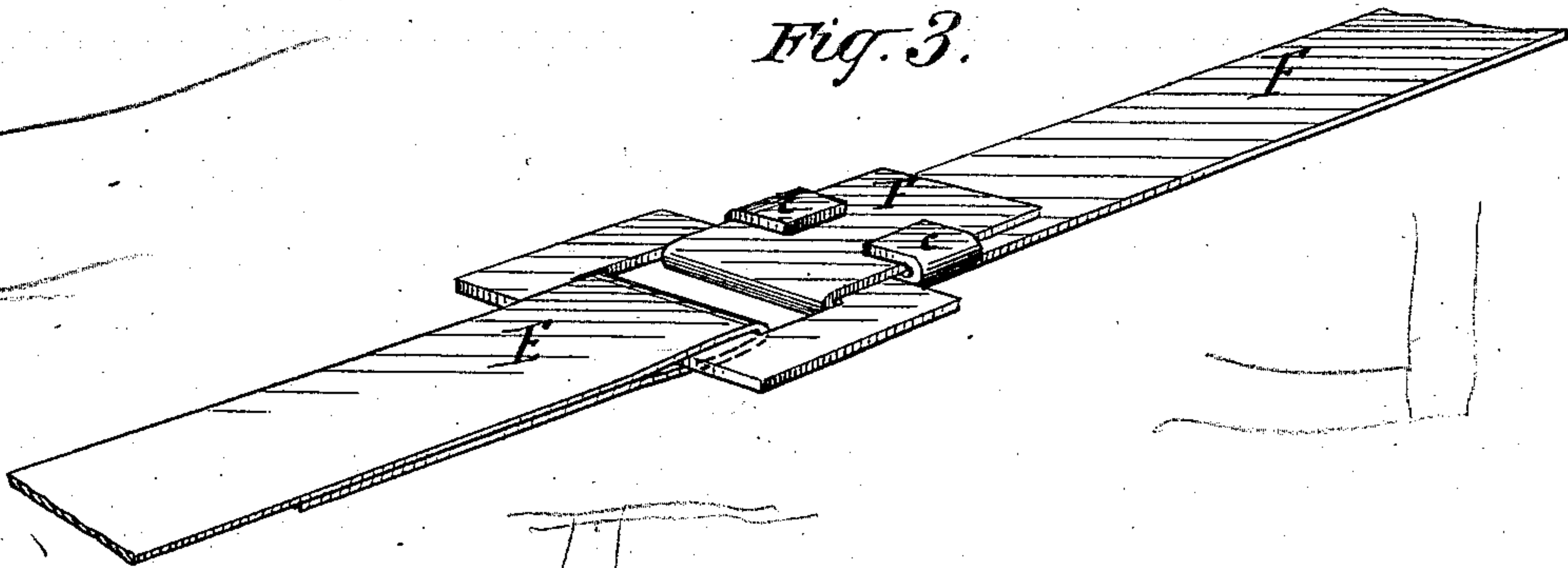
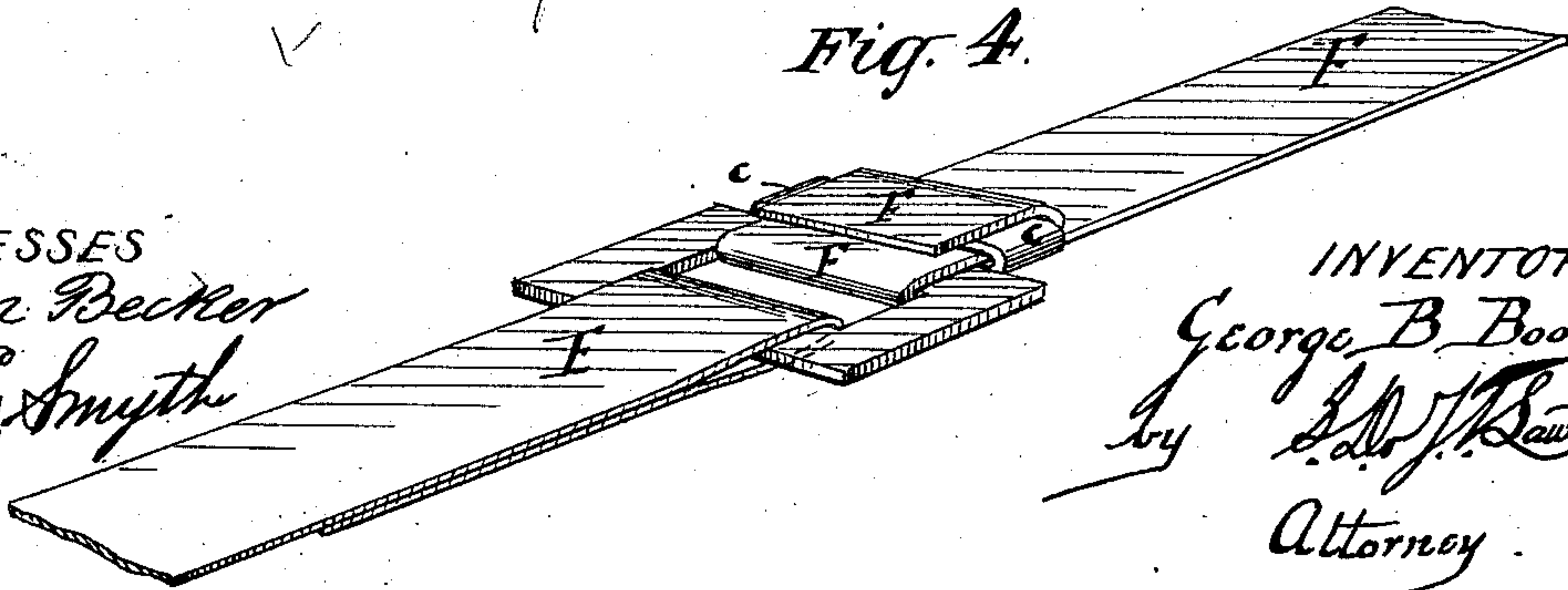


Fig. 4.



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# UNITED STATES PATENT OFFICE.

GEORGE B. BOOMER, OF MOUNT PLEASANT, NEW YORK.

## COTTON-BALE TIE.

SPECIFICATION forming part of Letters Patent No. 365,572, dated June 28, 1887.

Application filed April 18, 1887. Serial No. 235,137. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE B. BOOMER, of the town of Mount Pleasant, county of Westchester, State of New York, have invented certain new and useful Improvements in Cotton-Bale Ties, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

My invention is an improvement in bale-ties, and refers particularly to the buckle by which the band or hoop is secured, and is designed to produce a buckle of such construction that the band can be tightened or drawn through the buckle after it is connected with the latter, and can then be readily fastened and securely held by the buckle itself, and without the necessity of twisting the band in the buckle, and is designed particularly for use where the bale is compressed for shipment.

In the drawings, in which like letters indicate like parts, Figure 1 is a view of the buckle as stamped from the metal. Fig. 2 shows one end of the band secured in the buckle and the other end put through the buckle, ready to be drawn tight around the bale. Fig. 3 shows the free end of the band turned over the buckle and held by the tongues on the buckle. Fig. 4 shows the complete fastening of the band.

The buckle A, the form of which will be best understood by reference to Fig. 1 of the drawings, consists of a single flat piece of suitable metal, as wrought-iron, steel, or the like, constructed with a square or elongated opening or hole, B, of a width equal to or a little greater than the width of the band, so that the latter will be tightly held in the buckle and any side movement prevented. One side of the buckle, as C, is made broader than the other, and has on each side projections or tongues *cc*, adapted to be bent up and over the central portion or side, C, as shown in Fig. 2. The metal at an inner edge of these tongues, or between them and the buckle, is cut away, as shown at *c' c'*, Fig. 1, so as not to interfere with the bending of the tongues. The entire buckle thus constructed can be readily stamped from the metal at a single operation, and, the ends or tongues *cc* being bent upward at right angles to the buckle, as shown in Fig. 2, is ready for use without other preparation or manipulation.

In using my improved tie, one end of the

band is put through the opening B of the buckle and is bent back upon itself over the side of the opening opposite the broad side C and under the band, as shown at E in Figs. 2, 3, and 4, so as to lie between the band and the bale, and thus be firmly held and prevented from slipping by the expansive force of the bale, as is usual in cotton-bale ties. The other or free end of the band F, after extending around the bale, is also put through the opening B, against the broad side C of the buckle, as shown in Fig. 2. This end of the band is then drawn or pulled through the buckle until the band is as tight as is desired, when the end of the band is turned back upon itself over the side of the buckle and between the turned-up tongues *cc*. These tongues are then immediately turned down transversely across the band, as will be seen from Fig. 3. The end of the band is thus securely locked by the buckle and prevented from slipping, and moreover the end of the band is held firmly down on the band itself, so it cannot be raised by being caught on any object as the bale is handled. To still further secure the band the end of the latter is bent back upon itself a second time over the tongues *cc*, as is shown in Fig. 4. As thus secured it is impossible for the band to slip in the buckle, and the tighter the band is drawn around the bale the greater the friction of the engaging parts and the firmer the band is held.

In my improved bale-tie, as will thus be seen, the band is locked and held by the buckle alone, and can be secured when drawn the tightest without the necessity of allowing any slack band in locking the tie; and, furthermore, when the end of the band is turned down over the tongues *cc*, as shown in Fig. 4, the strain in pulling comes on the edges of the tongues and in a direction to which they offer their greatest strength of resistance. Moreover, the band is locked as it is bent or turned over the side of the buckle without the necessity of being twisted in the opening of the buckle or of the latter being turned in any way around the band; hence the band is secured with great rapidity and without any danger of breaking or injuring the band.

In most of the cotton-bale ties heretofore used the free end of the band is held in the buckle by being bent under the band, so as to be between it and the bale, and thus held by



the expansive force of the bale. In such ties the band is bent over or looped before it is fastened, and is placed in the buckle through an opening or slot in the side of the latter.

5 The exact length of the band must therefore be determined before the band is placed in the buckle or is fastened, and, consequently, after the band is placed around the bale and in the buckle it cannot be drawn any tighter. By

10 my improvement I am enabled to draw the band after it is on the bale as tight as may be desired and to hold and lock the band by the buckle when tightened.

My improved buckle is particularly adapted

15 for use where bales are compressed—that is, pressed a second time—for shipment and when it is necessary to draw the bands very tight and to secure them at once when tightened without allowing the bands to slip back, and

20 is especially designed for use when the bands are tightened or drawn around the bale by a tightener. In the cases where a tightener is used it is fastened to the band below the buckle, and when the band has been drawn as tight as

25 desired the free end is bent over the buckle and fastened by the tongues *c c*, as described

above, thus holding the band where drawn and preventing it slipping back when the tightener is removed, and locking the band at once, without twisting it in the buckle or turning 30 the buckle in any manner or forcing the end of the band under the buckle or band, all of which would be difficult to do when the band is drawn very tight.

What I claim is—

1. A bale-tie buckle formed of a single piece 35 of metal, having a hole, B, inclosed on all sides, and the tongues *c c*, adapted to turn down transversely across the end of the band, substantially as described, and for the purposes set forth.

2. A bale-tie buckle formed of a single piece 40 of metal, having a hole, B, inclosed on all sides, and the broad portion C, provided with the side tongues, *c c*, adapted to turn down over the sides of the portion C, substantially as and for 45 the purposes set forth.

In testimony of which I hereto sign my name this 14th day of April, 1887.

GEORGE B. BOOMER.

Witnesses:

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D. R. LEAVENS.