

(No Model.)

J. W. GARLAND & E. BECKER.

BALE TIE.

No. 294,609.

Patented Mar. 4, 1884.

FIG 1

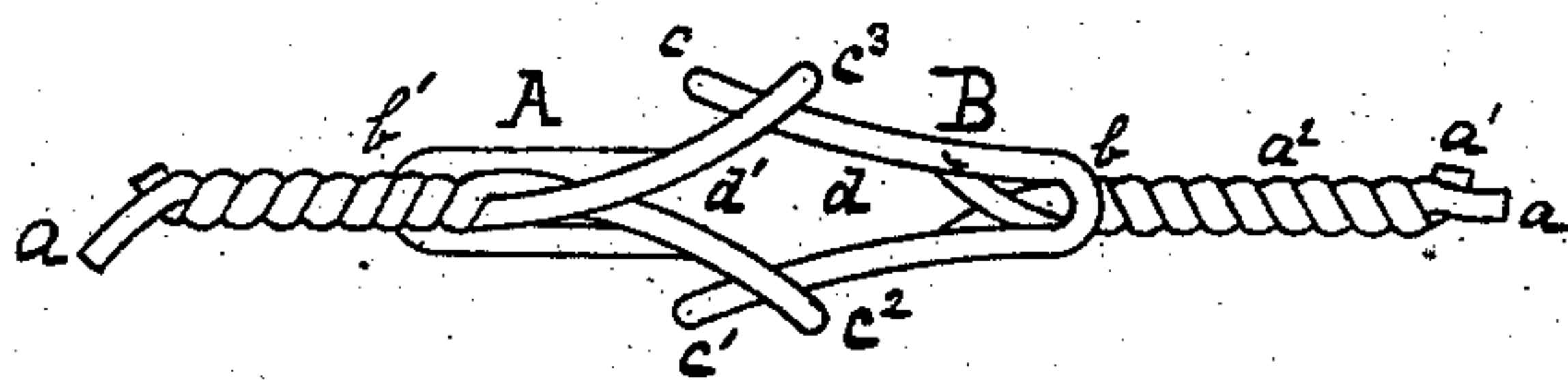


FIG 2

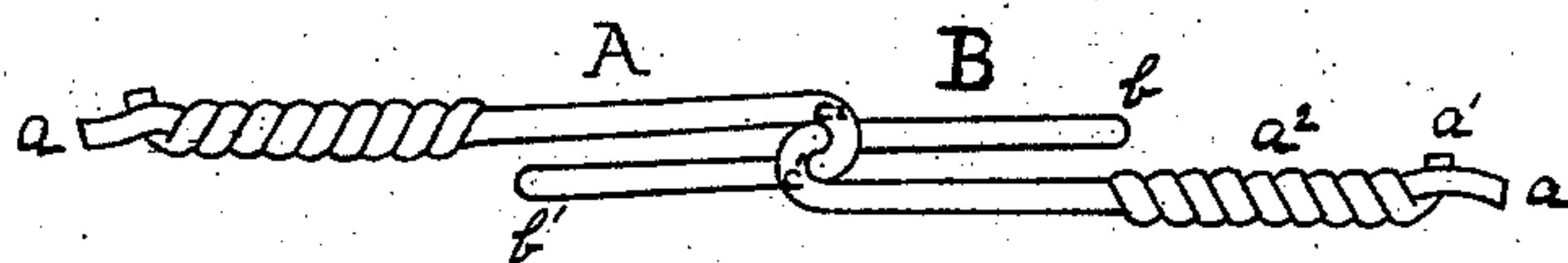
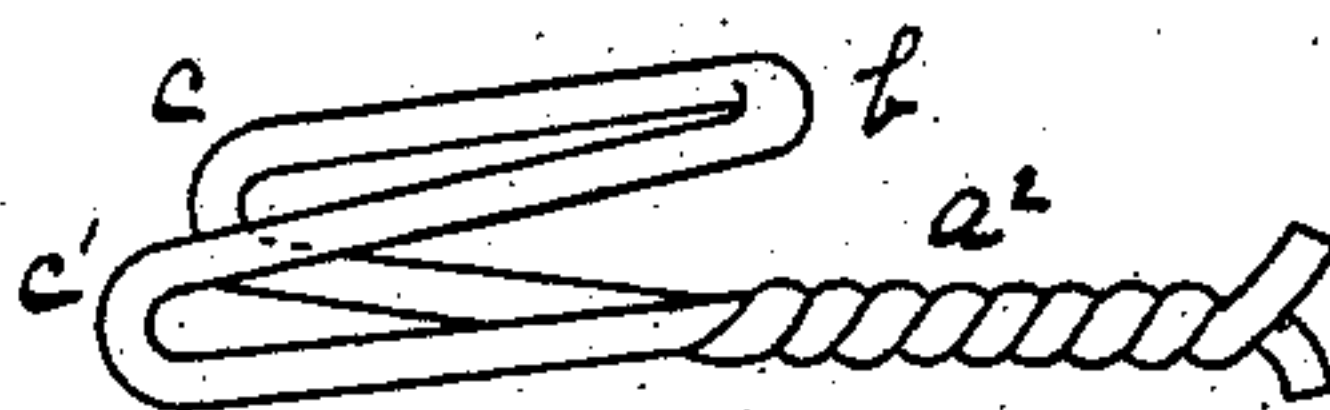


FIG 3



Witnesses
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UNITED STATES PATENT OFFICE.

JOHN W. GARLAND, OF ALLEGHENY CITY, AND EMIL BECKER, OF PITTSBURG, ASSIGNORS TO THE OLIVER & ROBERTS WIRE COMPANY, (LIMITED,) OF PITTSBURG, PENNSYLVANIA.

BALE-TIE.

SPECIFICATION forming part of Letters Patent No. 294,609, dated March 4, 1884.

Application filed January 11, 1884. (No model.)

To all whom it may concern:

Be it known that we, JOHN W. GARLAND and EMIL BECKER, of Allegheny city and Pittsburg, respectively, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Bale-Ties; and we do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a plan view of our improved bale-tie, showing it in position when locked upon the bale. Fig. 2 is a side elevation of Fig. 1. Fig. 3 is a perspective view of one of the similar parts of our bale-tie buckle.

Like letters of reference indicate like parts wherever they occur.

In the drawings, *a* represents a wire bale-band. The extremity *a'* of the wire *a* is bent back and twisted around the wire *a*, so as to form a twisted or braided shank, *a''*, and a narrow loop at extremity of the shank, preferably about two inches in length. This loop is then bent back upon itself in form of a hook, until its extremity *b* is the tongue of the hook, and lies parallel or nearly parallel with the twisted shank *a''*. The bent ends *c c'*, which form the middle of the hook and the base of the tongue *b*, are then separated or spread apart so as to make an opening, *d*, large enough to permit the insertion within it of the tongue of a similar hook, which is made on or attached to the other end of band *a*, and the construction of our improved bale-tie is essentially completed.

The operation of our device is as follows: When the band *a* is in position around the bale, the tongue *b* of one of the similar hooks is placed immediately under and in the same line with the tongue *b* of the other, or is inserted sidewise or diagonally. The tongue *b* of the hook B is then drawn inward through the opening *d'* of the other hook, A, and the tongue *b'* through the opening *d* of the hook B until the inner surfaces of the bent ends *c c'* and *c' c''* of the two hooks, respectively, engage and interlock with each other, as shown in Figs. 1 and 2. The connection of the two parts of the bale-tie buckle is then complete, and a union is made, which is at once strong and secure.

The advantages of our invention are its

strength, cheapness of manufacture, and ease of adjustment. Both parts of the buckle are similar in shape and mode of construction, so that they may be made by use of the same apparatus, and are therefore interchangeable in their application. Its strength consists in the doubled-and-twisted arrangement of the parts, the strain while in use being distributed over four strands of wire, and as it tends to draw the extremities *c c' c'' c'''* of the ties nearer to each other and make the direction of strain rectilinear, the strength and security of the tie is increased, rather than diminished.

We have described our invention particularly with reference to a peculiar method of construction; but we do not desire to limit ourselves thereto.

The parts of the hook, and especially the tongue *b*, may be twisted, or partially twisted or pinched, so as to secure greater symmetry and strength, and the separation of the parts *c c'* of the bent middle portion of the hook may be effected before the hook is formed by spreading the middle parts of the loop first above described, and then reflexing its extremity *b* to constitute the hook and tongue *b*.

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

1. In a wire bale-tie, a loop bent back upon itself, so as to form a hook and tongue, the extremities of the bent middle portion of the loop being spread so as to be capable of receiving and interlocking with another similar tongue and reflexed loop, substantially as and for the purposes described.

2. In a wire bale-tie, a loop bent back upon itself, so as to form a hook and tongue, said tongue being partially twisted, and the bent middle portions of the loop spread so as to receive and interlock with another similar tongue and reflexed loop, substantially as and for the purposes described.

3. A bale-tie buckle consisting of two reflexed loops and tongues, *b b'*, substantially as and for the purposes described.

In testimony whereof we have hereunto set our hands this 1st day of January, A. D. 1884.

JOHN W. GARLAND.
EMIL BECKER.

Witnesses:

THOMAS W. BAKEWELL,
JNO. K. SMITH.