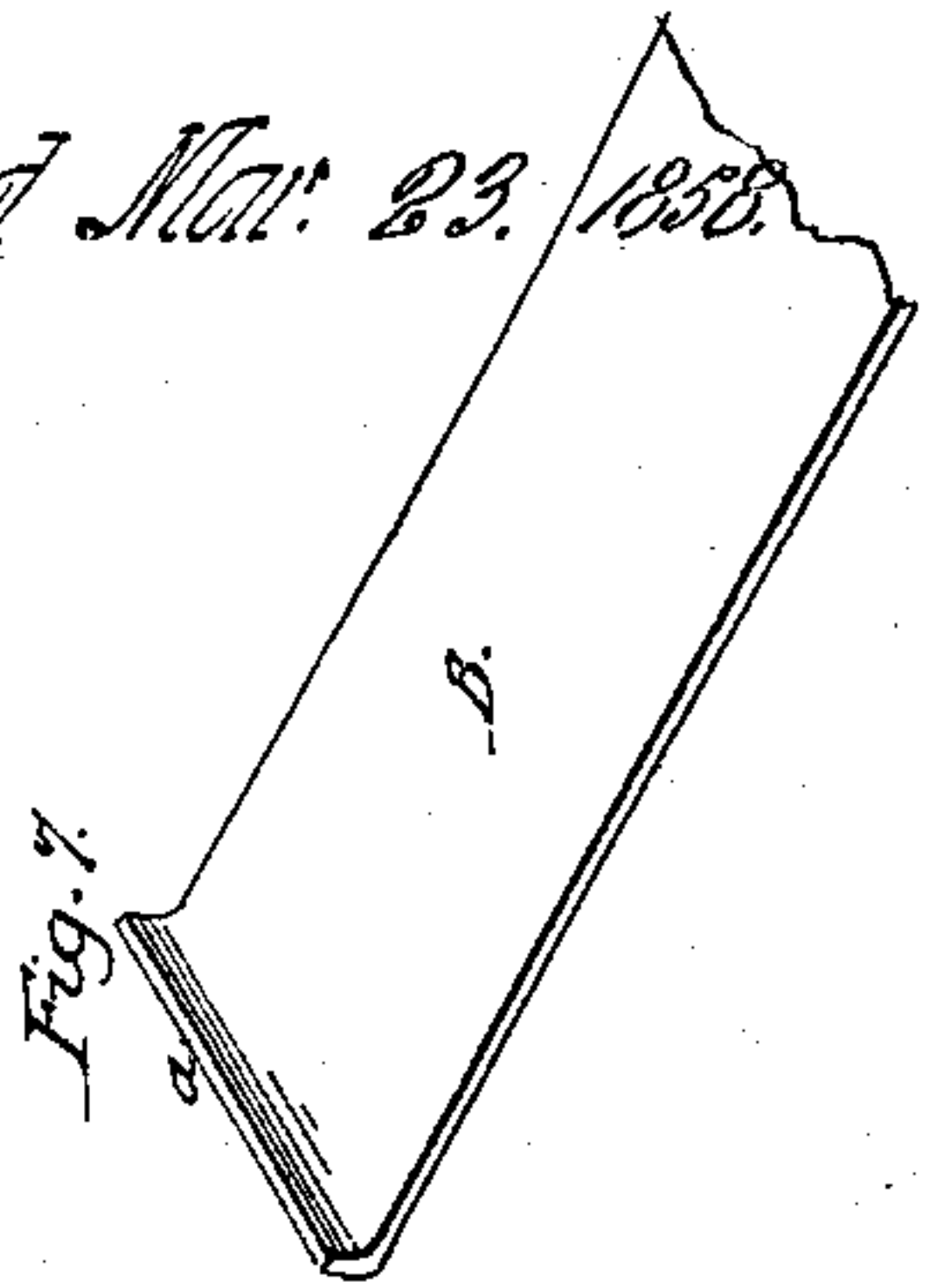
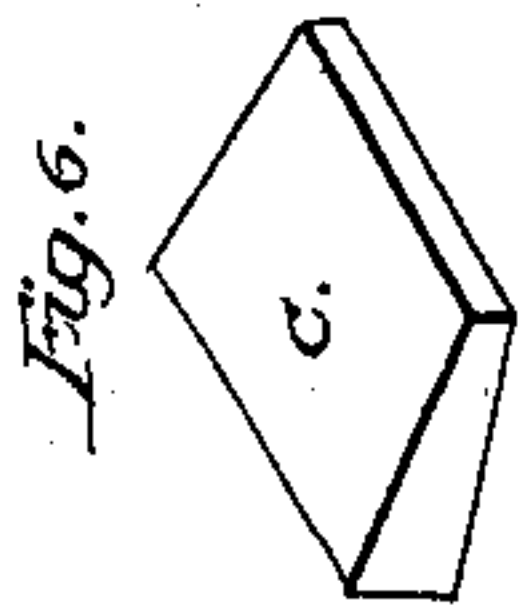
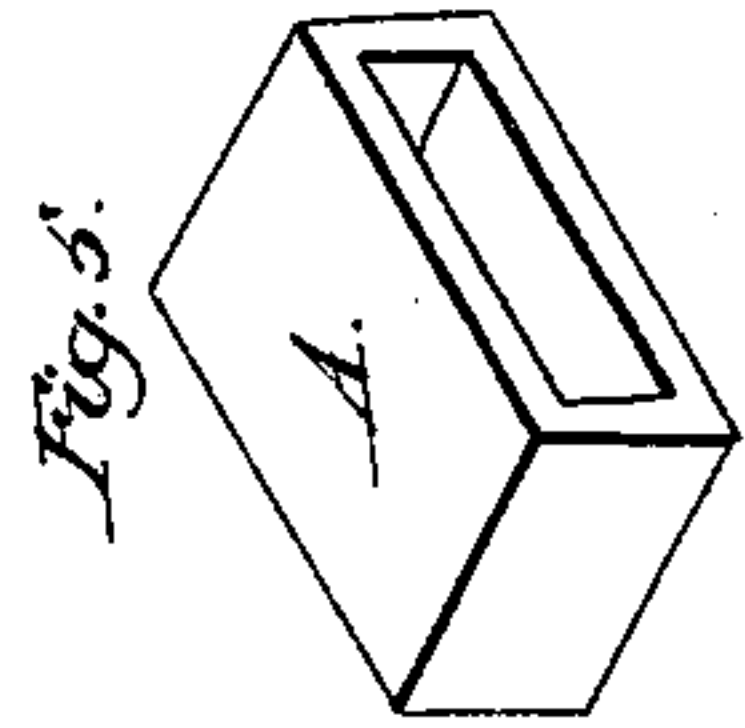
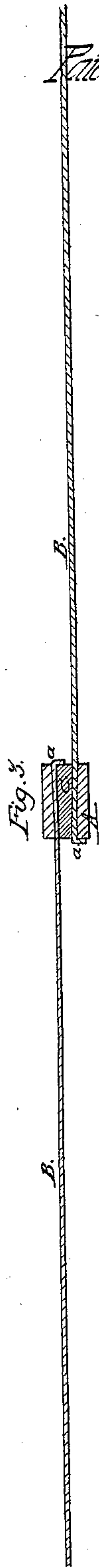
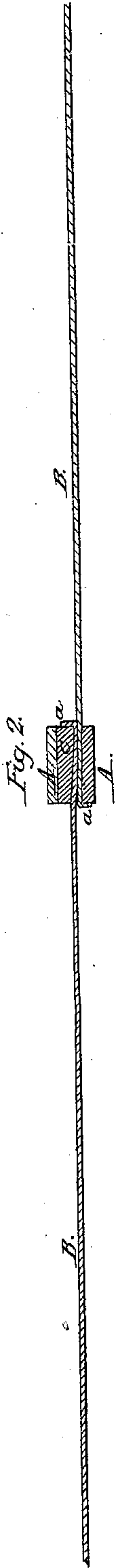
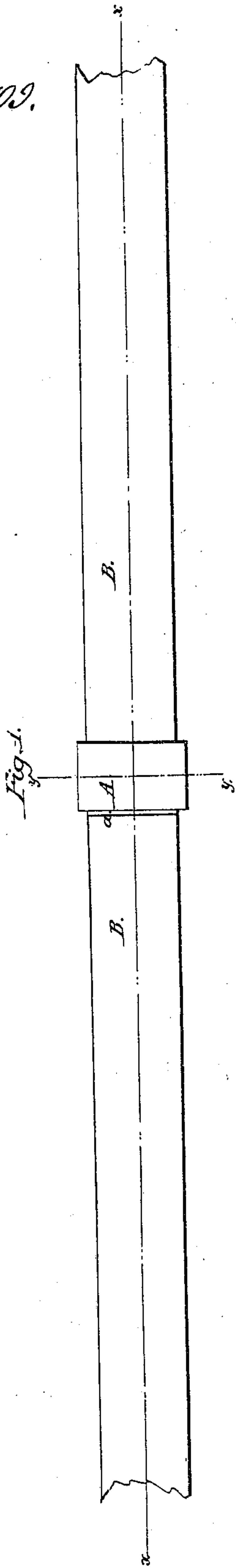


J. G. Olmstead,
Cotton Bale Tie.

No. 19,709.



Patented Mar. 23. 1858.

UNITED STATES PATENT OFFICE.

DAVID G. OLMSTEAD, OF VICKSBURG, MISSISSIPPI.

IMPROVEMENT IN COTTON-BALE TIES.

Specification forming part of Letters Patent No. **19,709**, dated March 23, 1858.

To all whom it may concern:

Be it known that I, D. G. OLMSTEAD, of Vicksburg, in the county of Warren and State of Mississippi, have invented a new and improved tie to be used in baling cotton, hay, and other materials; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification—

Figure 1 being a plan of the tie; Fig. 2, a longitudinal section thereof in the plane indicated by the line *x x*, Fig. 1; Fig. 3, a similar section thereof in the same plane; Fig. 4, a transverse section thereof in the plane indicated by the line *y y*, Fig. 1; Figs. 5, 6, and 7, views in perspective of detached parts.

Like letters designate corresponding parts in all the figures.

A clasp, A, substantially of the form seen in Fig. 5, is provided, being made of cast metal of sufficient size and thickness to resist the pressure which is made within it. The space inclosed by the opposite sides of the said clasp is of wedge shape, being wider at one end than at the other, for purposes hereinafter described.

The band B, which encircles the bale or package and retains it in its compressed shape, may be made of hoop-iron, or thin metal which will bend easily and yet retain sufficient strength to resist the strain caused by the elasticity of the bale. One end of the band being bent at right angles to its length, as seen at *a*, is then inserted through the open space of the clasp A till the bent extremity *a* of the said band

rests against the face of the said clasp. The band is then carried around the bale or package and brought to the original starting-point, when it is passed through the clasp side by side with the opposite extremity, as seen in Fig. 1. When the band is thus drawn to its utmost tension, a wedge, C, which fits closely in the remaining space in the clasp, is inserted between the band and the opposite side of the said clasp, (which, as before mentioned, inclines to meet it,) and thus prevents the band from being drawn back. The band is then bent over the head of the wedge and cut off.

Instead of placing the wedge on one side of the ends of the band, as just explained, it may be inserted between them, as represented in Fig. 2.

In making a tie in this manner the whole strength of the band is preserved, as no portion of it is cut away; and it can break only when the strain overcomes the strength of the material of which it is made.

What I claim as my invention, and desire to secure by Letters Patent, is—

The clasp A and wedge C, arranged and operating in combination with the band B, with its bent extremities *a a*, substantially in the manner and for the purpose herein specified.

The above specification of my improved cotton-bale tie signed by me this 15th day of August, 1857.

DAVID G. OLMSTEAD.

Witnesses:

R. F. OSGOOD,
J. Q. ADAMS.