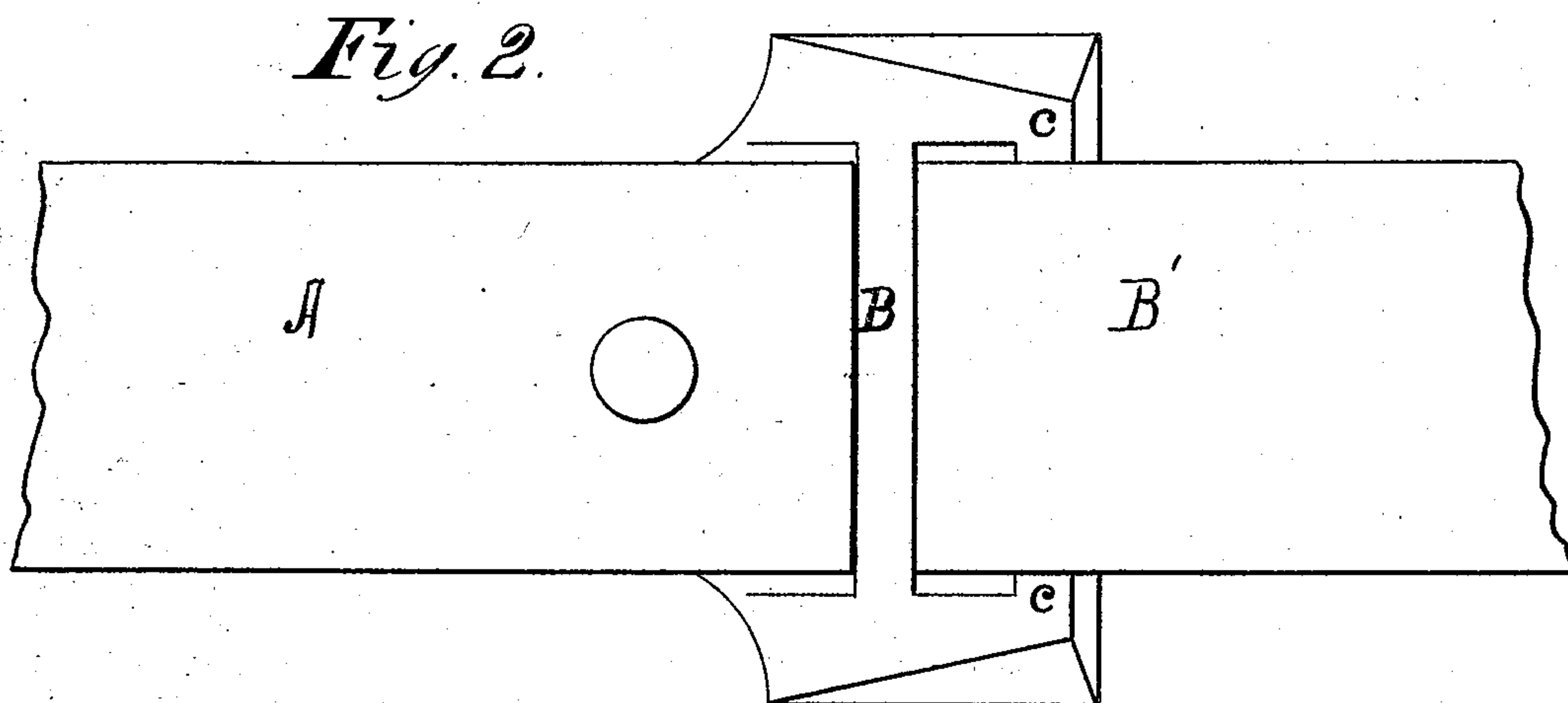
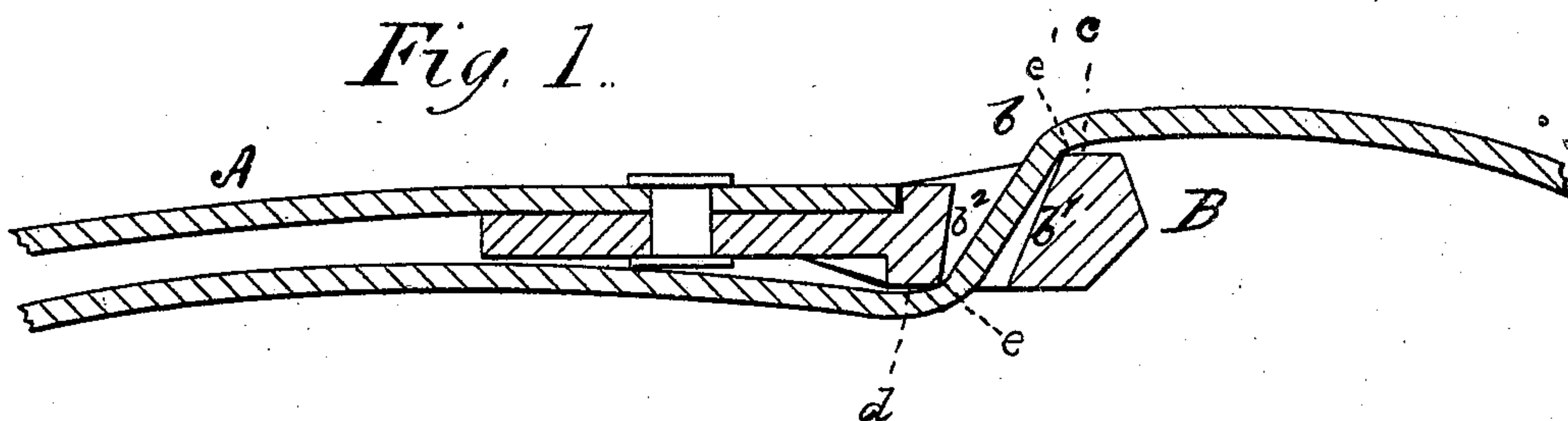


J. M. GOLDSMITH.
Cotton-Bale Ties.

No. 152,480.

Patented June 30, 1874.



WITNESSES

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UNITED STATES PATENT OFFICE.

J. MORTIMER GOLDSMITH, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN COTTON-BALE TIES.

Specification forming part of Letters Patent No. **152,480**, dated June 30, 1874; application filed June 13, 1874.

To all whom it may concern:

Be it known that I, J. MORTIMER GOLDSMITH, of Boston, in the county of Suffolk and State of Massachusetts, have invented a new and valuable Improvement in Bale-Ties; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a sectional view of my bale-tie, and Fig. 2 is a plan view.

This invention has relation to bale-ties, wherein are employed slotted plates, one of the ends of which are permanently riveted to one of the ends of a binder, the other ends being slotted to receive the binders and allow them to be adjusted to the size of any bale. It consists in a slotted plate which is wedge-shaped in longitudinal section, to one end of which an end of a binder is rigidly and permanently attached, the slot being constructed in its other end, and inclined from the perpendicular to the line of strain, and provided at its outer upper edge and its lower inner edge with a ridge, whereby the free end of a binder, when it is introduced into said slot and the pressure upon the mass removed, will be bent at obtuse angles to the line of strain, and will be rigidly secured in said slot under any degree of tension, as will be hereinafter more fully explained.

In the annexed drawings, A designates a metallic binder, one end of which is rigidly attached to a metal buckle, B, by means of a rivet or rivets. In the other end of the said buckle is a slot, *b*, having its bearing-surfaces *b*¹ *b*² inclining, the one toward the other, and which is inclined from the perpendicular to the line of strain. Upon the upper surface of said buckle, and at the outer edge of the slot *b*, a ridge or raised portion, *c*, is constructed, having its upper flat surface at an obtuse angle to the outer bearing-surface, *b*¹ of the slot. Upon the lower flat surface of the buckle and the inner edge of said slot, a ridge or elevation, *d*, is formed, of which the lower flat surface is likewise at an obtuse angle to the inner bearing-surface *b*² of the slot *b*. If the

bent end of the binder B, which I shall cause to be designated by the letter B', be now inserted into the slot *b* to complete the tie, and it be drawn through the said slot until the binder closely conforms to the contour of a baled mass; if, now, the pressure upon the baled mass be removed, its expansion will cause the said binder to be bent at obtuse angles to the line of strain at that portion thereof which is within the slot—that is to say, it will be bent in the direction of the slot, and then over the flat surfaces of the ridges *c* and *d* in such a manner as to form obtuse angles to the line of strain. The expansion of the baled mass, consequent upon the removal of the compressing power forces the surfaces of the binder B strongly against the angular lips *e e'* of the slot *b* at the same time that it bends the said binder, as shown in Fig. 1, and the pressure of the binder against the said angular lips and the resistance opposed by the bent portion *i* of the binder to being drawn through the slot *b*, will cause the binder to be securely held by said slot, and thus afford an effective and easily-applied tie for the purpose of baling cotton, hay, moss, or other analogous substances.

The use of a bent portion, *i*, as shown in Fig. 1, at an obtuse angle, presents obvious advantages over those which may be bent at right angles, or at acute angles to the line of strain, as I am enabled to use an inferior article of iron for binders, there being no possibility of casual breaking while the bale is being transported to a market.

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

In a bale-tie, the slotted plate B, having an inclined slot, *b*, and constructed with ridges *c* and *d* on the front upper lip and rear lower lip of the said slot, in combination with a binder, B, rigidly attached to the said plate, so that the line of strain shall be in a direction with the length of the plate.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

J. MORTIMER GOLDSMITH.

Witnesses:

L. W. CHAMBERLIN,
JULES M. HILZHEIM.