J. M. GOLDSMITH.

Bale-Tie.

No. 162,054. Patented April 13, 1875.

Fig 1

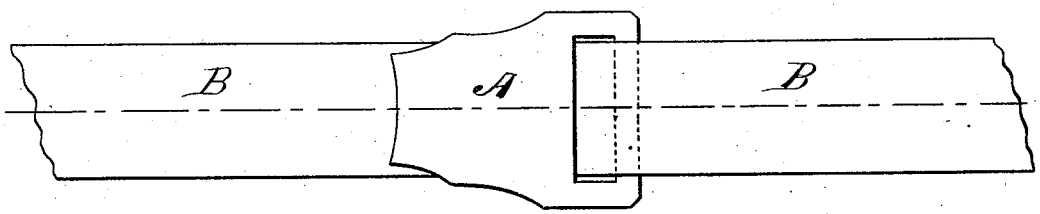


Fig 2

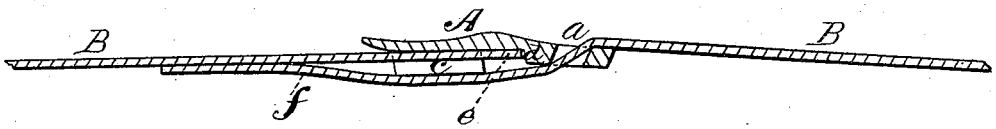


Fig 3

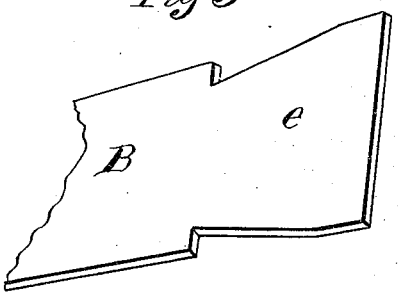
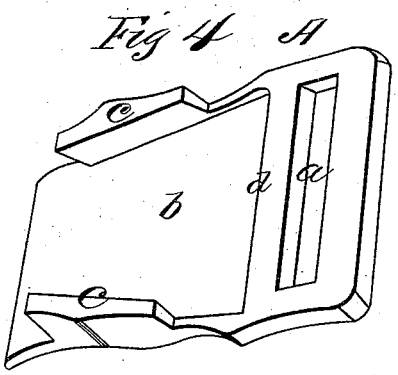


Fig 4



WITNESSES

Mary P. Utley.
Frederick J. Kasi

INVENTOR

J. Mortimer Goldsmith
Chipman Fessenden & Co
ATTORNEYS

THE GRAPHIC CO. PHOTO-LITH. 39 & 41 PARK PLACE, N.Y.

UNITED STATES PATENT OFFICE.

J. MORTIMER GOLDSMITH, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN BALE-TIES.

Specification forming part of Letters Patent No. **162,054**, dated April 13, 1875; application filed March 6, 1875.

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 plan view of my bale-tie. Fig. 2 is a longitudinal sectional view of the same; and Figs. 3 and 4 are perspective detail views.

This invention has relation to improvements in ties which are designed to unite the two ends of a strap-iron binder passing around a compressed mass of cotton, hay, wool, or other similar substances; and the nature of the invention consists in an oblong buckle-plate having a backwardly-inclined slot in its front end and a recess in the shape of a trapezoid upon its rear under side, which recess is wider in front than in rear, and is adapted to receive the correspondingly-shaped end of a strap-iron binder, whereby I am enabled to dispense with the well-known rivets generally used for securing the binder to the plate, and an effective tie will be produced when the other end of the binder is passed from above through the slot in the front end of the plate and under the body of the same, and the compressing power is removed, as will be hereinafter more fully explained.

In the annexed drawings, A designates my improved buckle-plate, formed of any suitable metal, and preferably of oblong form. The front end of this plate has a transverse slot, *a*, of rectangular form, the front and rear walls of which incline backwardly, as shown in Fig. 2, and the under side thereof has a recess, *b*, cut therein, the lateral walls of which are formed by lugs *c* projecting downwardly a suitable distance below the body of the plate, the inner edges of which lugs form, with the bottom of the recess, acute angles, for a purpose hereinafter explained. This recess, as is shown in the figure, is of the form of a trapezoid, and its front wall *d* is vertical to the bottom thereof and to the body of the plate. B designates a strap-iron binder of the usual form and dimensions, one end, *e*, of which is cut into a shape corresponding to that of recess *b* of the plate, and is adapted to be placed therein, as shown in Fig. 2. The other end of this binder is of the same dimensions as its body, and is of a width corresponding to the length of the slot in the front end of the plate.

I use my improved buckle in the following manner, to wit:

The binder is passed around the baled mass in the usual well-known manner. The plain end of the binder, which I shall now designate by the letter *f*, is then passed into slot *a* of plate A until the length of the binder from its point of entry into the plate to its free end is equal, or nearly so, to the compass of the bale. The plate is then vibrated downward, bending the binder oblique to the line of strain, and the trapezoidal-shaped end *e* thereof is inserted into recess *b* between lugs *c*.

If, after a suitable number of these binders have been secured around the bale, as above described, the power used for compressing the bale be removed, its natural expansion will force the end *f* of the binder powerfully up against the under side of the bale, at the same time bending it sharply across the upper front and the lower rear edges of slot *a*, rigidly holding it against slipping.

The other trapezoidal-shaped end of the binder will be held against escape from recess *b*, owing to the fact that the inner end of the said recess and the outer end of the binder are of greater width than their respective outer and inner ends, and that the end *f* of the binder is pressed forcibly up against its other end *e* by the expansion of the bale.

The edges of the trapezoidal end *e* of the binder being beveled to correspond to the inclination of the inner edges of lugs *c*, it will fit snugly between them, and no difficulty will be experienced in placing it in recess *b* of the plate.

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

1. In a bale-tie, the combination, with a strap-iron binder having a trapezoidal end, *e*, of the plate A, having slot *a*, recess *b*, and lateral lugs *c*, substantially as specified.

2. The buckle-plate A, having a rearwardly-inclined slot, *a*, recess *b*, and lugs *c*, adapted for use substantially as and for the purpose specified.

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

J. MORTIMER GOLDSMITH.

Witnesses:

CHAS. ROBINSON, Jr.,
E. H. DARLING.