W. M. Morris

Cotton Bale Tie.

No. 88,727. Patented Apr. 6, 1869.

Fig. 1.

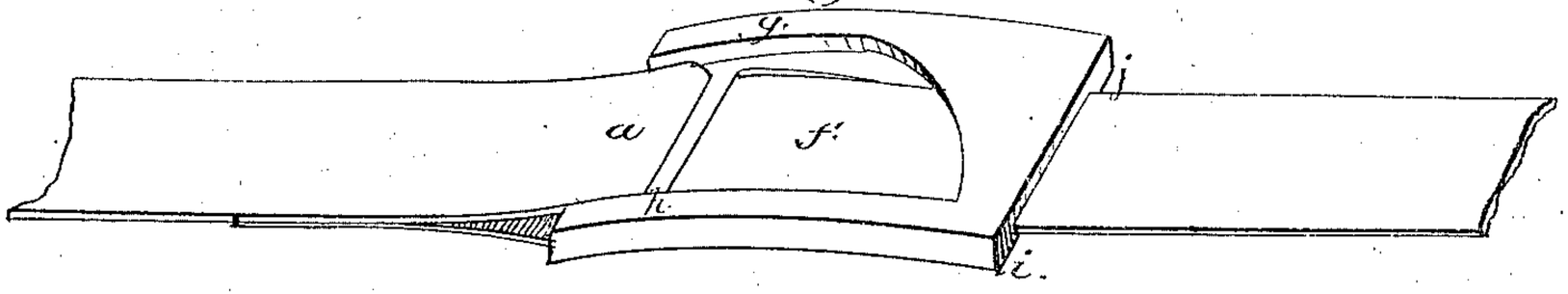

Fig. 2.

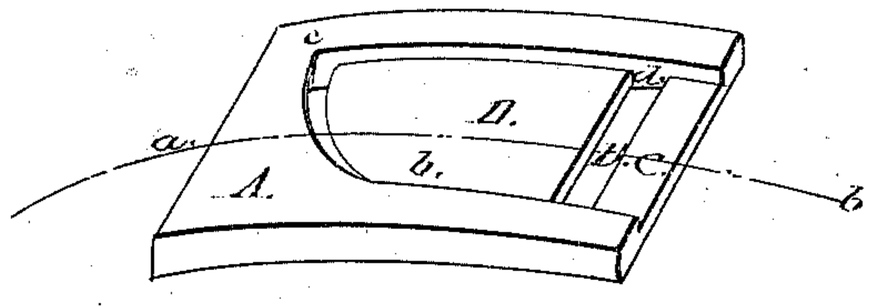

Fig. 3.

Witnesses:
W. Frazier Kelly
H. N. Jenkins

Inventor:
Wm. M. Morris

UNITED STATES PATENT OFFICE.

WILLIAM M. MORRIS, OF WASHINGTON COUNTY, MISSISSIPPI.

IMPROVED COTTON-BALE TIE.

Specification forming part of Letters Patent No. **88,727,** dated April 6, 1869.

To all whom it may concern:

Be it known that I, WILLIAM M. MORRIS, of the county of Washington and State of Mississippi, have invented a certain new, useful, and Improved Device for Fastening the Ends of Iron Hoops or Bands around Bales of Cotton; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view of my said device as when connecting the two ends of a band; Fig. 2, a similar view of it as when separate from a band, and Fig. 3 a sectional edge view on line *a b* of Fig. 1.

Before proceeding to describe my invention, it is well to advert briefly to the fact that, in the actual use of iron hoop-bands in baling cotton, it is very difficult, if not wholly impossible, to take up the slack where the buckle is of such a character as to require the last end of the band that is fastened to be passed first through the slot to which it belongs, and afterward doubled into hook form, to secure it in its place. This difficulty obtains with respect to every buckle in which there is an unbroken continuity of metal outside the openings or slots in which the ends are inserted, and afterward folded down, to establish the fastening, whatever may be their peculiarities or points of merit in other respects.

To overcome this difficulty, which frequently causes the bands on the bale to be of unequal length and destroys all symmetry of proportions in the bale, several buckles have been patented, which, being provided with narrow openings or slits on the side or sides, or at the end of the same, allow of the insertion of the end of the band last fastened, after its proper length has been ascertained and said end has been bent into hook form, by slipping the same edgewise through the said slit; but in every instance the buckle has been so weakened by the opening from its outside edge to the slot that, in practice, it could not bear the strain resulting from the expansive energy of the compressed cotton, and therefore was worthless.

My invention provides for the taking up of the slack of the band without breaking the continuity of the metal on the sides or ends of the buckle, and hence preserves in the latter sufficient strength to bear the tension to which it is subjected by the expansive force of the compressed cotton within the bale, while yet at the same time presenting a means of fastening the last end of the band by slipping it in the buckle edgewise, after the exact length of the band has been ascertained and this end has been bent into the form of an oblate hook, as shown at Fig. 1, and also for preventing the said end from slipping out after the bale has been withdrawn from the compressing-machine under any circumstances whatsoever.

But my invention will be better understood by referring to the drawings, whereon its peculiarities of construction are clearly shown.

A is a plate of metal, which, in length, breadth, and thickness, in practice, is about as shown on the drawing, and which is slightly curved in the direction of its length. At one end of this plate a transverse slot, B, is provided or cut to receive the end *a* of the band, which is the end that is first attached to the device. The attachment of this end *a* is made by passing it through the slot and then bending or folding it, as shown at Fig. 1; and it may be done at the factory or at any convenient time afterward before putting the band around the bale. From one end of this slot B an incision, *b*, is made through the plate in a curved line to the point *c*, which, it will be observed, occupies the same relation to the proximate external corner of the plate that the point *d* does to its proximate corner, so that there is the same external breadth of metal at both ends of the device outside the openings.

The slot B and the incision *b* produce a triangular lug, D, which is enveloped by an unbroken continuity of metal everywhere, and directly connected with the plate on one of its sides from the point *c* to the inner edge of the slot B. The lug D is thrown out of the plane of the plate, as shown clearly at Fig. 3, and hence becomes the means of attaching the last end, *f*, of the band to the buckle, as shown at Fig. 1, the operation being, after the exact length of the band is ascertained, by drawing up all the slack as soon as it is put around the bale, simply to form a hook by a downward flexure of the end, and then slipping this hook over the lug D at the point 1.

The raised edges *g h* may or may not be provided on the convex side of the buckle. As a general thing, I should not deem them necessary; but at the opposite end of the buckle and on the concave side thereof, which is the side that is placed next to the bale, in the practical application of my invention to use, there must always be projections *i j* to guard against the slipping of the end *f* of the band out of its place after the bale is withdrawn from the compressing-machine.

My buckle may be of cast, malleable, or wrought iron; but I should prefer to have it made of wrought-iron in all cases.

The extent of the connection of the lug D with the plate, from the point *c* to the slot B, secures a strength which I have found, by repeated experiments, is more than sufficient to resist any tension to which it will be subjected on a cotton-bale, however great the compression of the same may be, while the unbroken enveloping edge or rim of the metal, outside the openings, guards against the giving way of the buckle at any other point.

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

The buckle A, when provided with the slot B, the triangular lug D, and the projections *i* and *j*, and otherwise constructed substantially as herein described.

WM. M. MORRIS.

Witnesses:
RUFUS R. RHODES,
H. N. JENKINS.