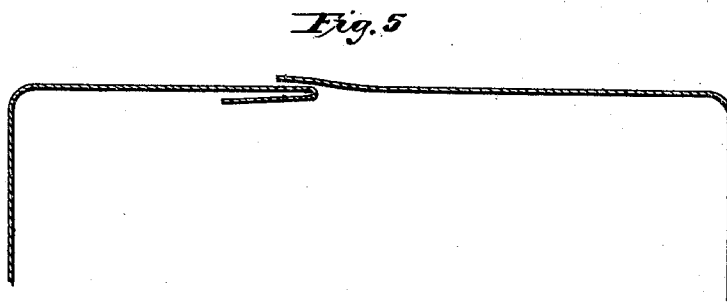
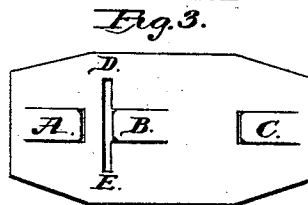
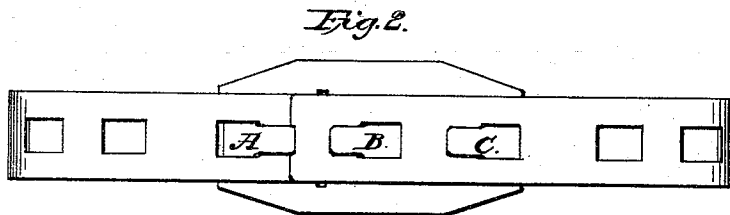
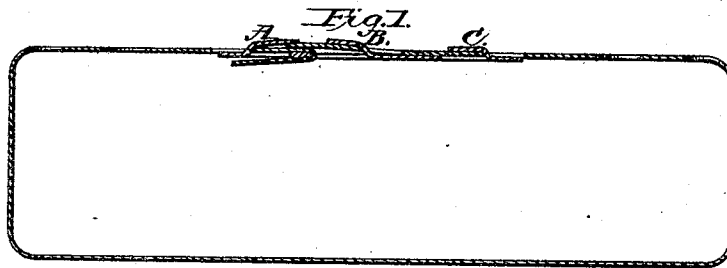


R. De GRAY.
BALE-TIES.

No. 179,841.

Patented July 18, 1876.



Witnesses:

Wm. J. Barry
John H. Shy.

Inventor:

Richard D. Gray.

UNITED STATES PATENT OFFICE.

RICHARD DE GRAY, OF NEW ORLEANS, LOUISIANA.

IMPROVEMENT IN BALE-TIES.

Specification forming part of Letters Patent No. **179,841**, dated July 18, 1876; application filed February 14, 1876.

To all whom it may concern:

Be it known that I, RICHARD DE GRAY, of the city of New Orleans, parish of Orleans, and State of Louisiana, have invented a new and useful Improvement in Bale-Ties; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, forming part of this specification, in which—

Figure 1 represents the tie and band as fastened and tied around the bale. Fig. 2 represents a plane or flat view of the buckle and band as hooked and fastened. Fig. 3 represents a plan of the buckle. Fig. 4 represents a side elevation. Fig. 5 represents the two ends of the band as they are when fastened or tied.

Similar letters of reference in the different figures indicate like parts.

The object of my invention is to furnish a more expeditious and cheap mode of securely fastening bale-ties than has been before known; and I accomplish this object by the use of a buckle or tie with three stationary lips or teeth raised from and above the level of said buckle, two of them about an inch apart, standing and hooking in one and the same direction, one of said two being in the middle of said buckle, while the third tooth or lip, slightly longer than the others, situated in the opposite end of said buckle, hooks in the opposite direction from those first named. The two first named I call the "holding lips or teeth," and the last the "guard lip or tooth." Said buckle also has a slot or opening cut across the same immediately in front of the middle lip or tooth. The band or strap to be used in connection with this buckle is punched with square or longitudinal holes at the same distance apart as said lips or teeth, and slightly larger, so as to admit them freely to pass in said holes.

Operation: The end of the band is pushed through the slot or opening D E, Fig. 3, far

enough to allow the hole in said band to be caught under the guard lip or tooth A, and said band is then drawn backward against the shoulder or base of guard lip or tooth A, to secure said band from slipping, and the end of said band then, through said slot or opening D E, Fig. 3, is bent downward and backward against the lower side of said buckle, as per Figs. 1 and 5. Said buckle and band are now ready for use.

The band being passed around the bale is drawn tight, and the hole in the band then nearest the guard lip or tooth A is pulled under the same and against the shoulder or base thereof, when the two holes in the band next below and behind the said hole, now under the guard lip or tooth A, pass at once over the holding lips or teeth B and C, and the band is thus let slip and becomes caught and hooked under B and C. The band is thereby securely locked, so as to prevent any slipping or loosening by throwing, bouncing, or springing of the bale.

I do not claim a band or hoop constructed with fastening devices upon it, as such construction upon the band makes a weak fastening, while my construction avoids weakening the fastening at those points where the strain comes.

I claim as my invention—

1. The buckle-plate made with the guard tooth or lip A, and slot or opening D E, in combination with the band or hoop, substantially as described.

2. The buckle-plate made with the slot or opening D E, holding teeth or lips B and C, and guard lip or tooth A, in combination with the band or hoop having holes through it, substantially as described.

RICHARD DE GRAY.

Witnesses:

HENRY J. LEROY,
JOHN H. ILSLEY.