J. M. POLLARD.

BALE-TIE.

No. 188,669. Patented March 20, 1877.

Fig. 1.

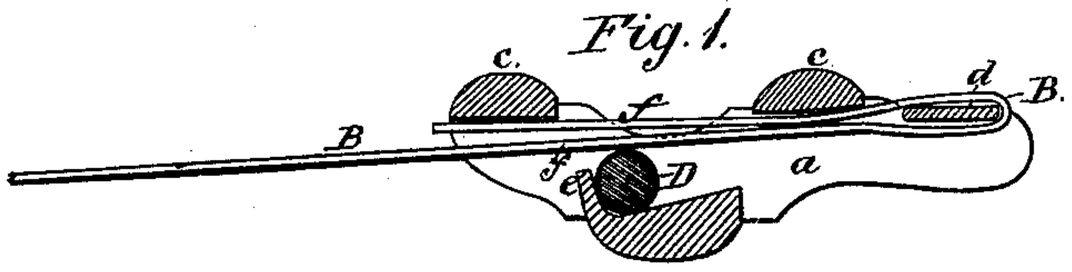


Fig. 2.

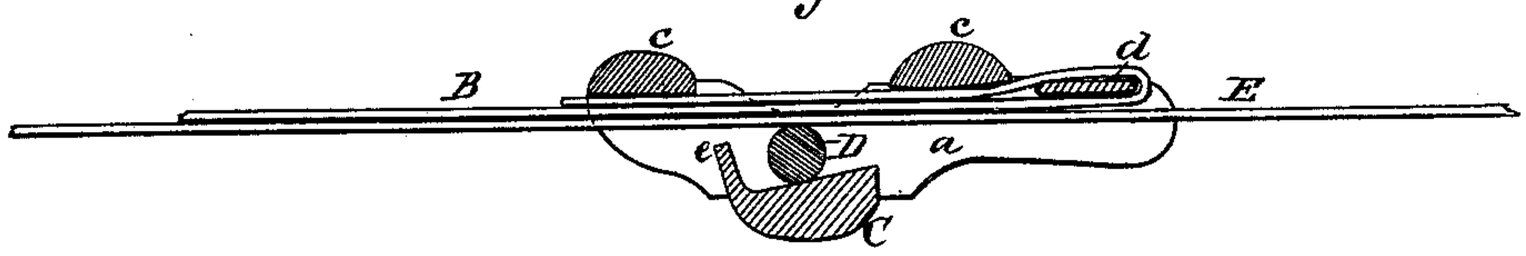


Fig. 3.

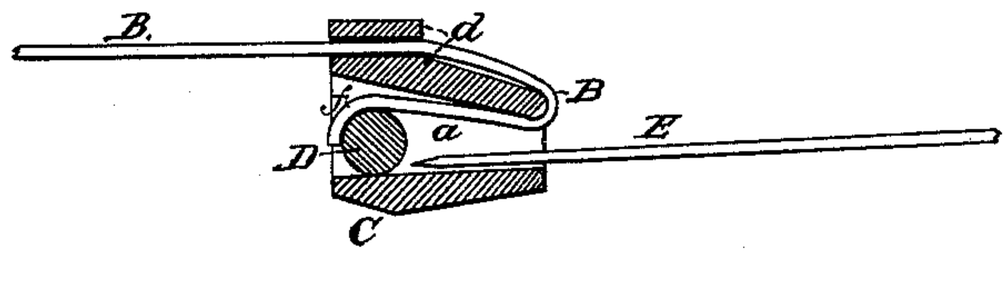


Fig. 4.

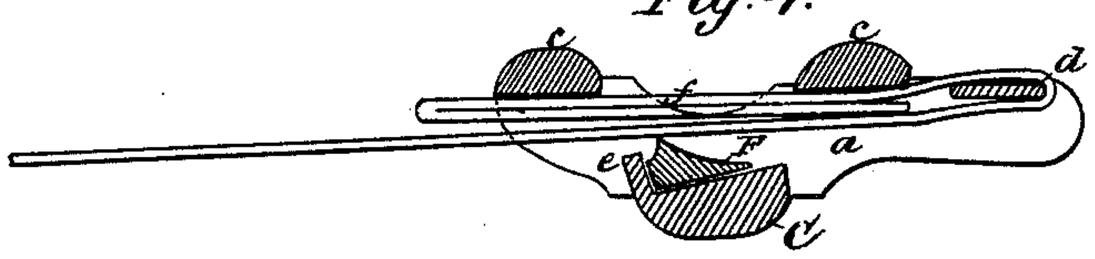


Fig. 5.

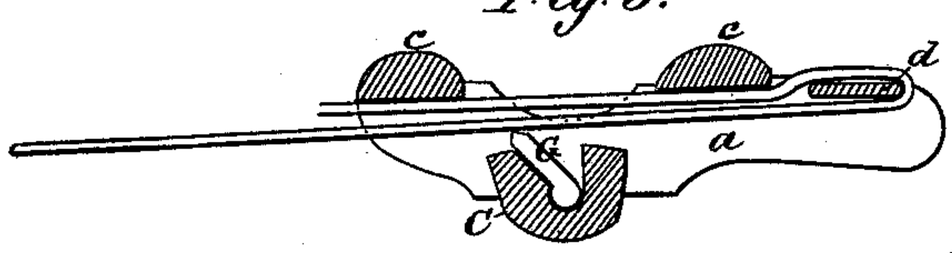
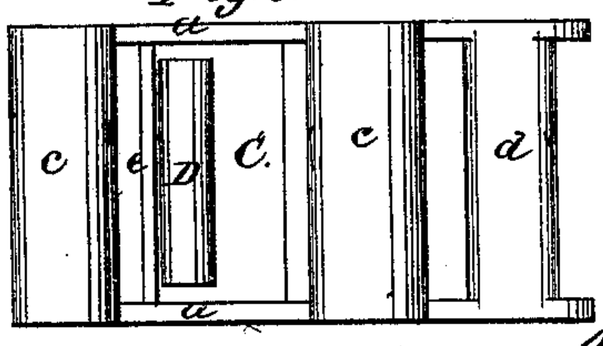


Fig. 6.



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UNITED STATES PATENT OFFICE.

JAMES M. POLLARD, OF NEW ORLEANS, LA., ASSIGNOR OF THREE-FOURTHS OF HIS RIGHT TO WM. L. McNEELY, JOHN D. MILBURN, AND THOS. M. McNEELY.

IMPROVEMENT IN BALE-TIES.

Specification forming part of Letters Patent No. **188,669**, dated March 20, 1877; application filed December 21, 1876.

To all whom it may concern:

Be it known that I, JAMES M. POLLARD, of New Orleans, in the 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.

This invention is an improvement upon the so-called "B-tie" for which Letters Patent were granted to me November 28, 1876.

In that device the fast end of the band is constructed to form a spring, which holds the free slotted end thereof engaged with a fixed lug or projection attached to a central cross-bar of the buckle.

In the present invention the spring end of the band is made to act or impinge on a roller or movable cam, which is the active agent for holding or locking the free end of the band. The spring and roller are so arranged or combined that the former serves to hold the roller in place when the tie is being shipped or handled, and to cause the immediate engagement of the free end of the band with the roller when said end is inserted in or drawn through the buckle.

In the accompanying drawing, forming part of this specification, Figure 1 is a longitudinal section of the buckle of my improved tie, with the roller in position to receive the free end of the band. Fig. 2 is a similar section, showing the free end of the band inserted and locked by the roller. Figs. 3, 4, 5 represent modifications. Fig. 6 is a plan view of the form of buckle shown in Figs. 1 and 2.

The buckle A is formed of the parallel side bars *a a* and connecting cross-bars *c c*, *d*, and C, the latter being inclined on its upper side, and also provided with a lip or flange, *e*, for a purpose which will be presently explained. The end B of the band is inserted between the cross-bars *c c* and bar C, and looped around the end bar *d*, thus forming a spring, *f*, which acts against the bars *c c*, and tends to press the body of the band upon the cross-bar C. A detachable roller or solid cylinder, D, is, however, interposed, being placed on the inclined surface of said bar, and held thereon or confined by the combined action of the spring and flange *e*, thus enabling the tie to be handled and shipped without danger of the roller becoming detached.

When the band is applied to a bale, the free end E is inserted between the roller D and the looped end B of the band, the spring yielding and permitting this to be done easily. When the bale expands the friction of the end E with the roller causes it to pass up the incline of the bar C, on which it rests, to the position shown in Fig. 2, thus acting as a wedge, compressing the spring *f*, and clamping the end E of the band tightly against the looped end B thereof, and thereby effecting the desired lock.

I illustrate in Fig. 3 a modification, in which the buckle is shown contracted in length, and having but two cross-bars, *d* and C. The bar *d* is slotted, and the end B of the band passes through the slot and is looped around the body of the bar, its extremity being turned downward to form a sort of spring-hook, which takes the place of the flange *e*, Figs. 1 and 2, and serves to hold the roller D on the inclined surface.

I illustrate in Fig. 4 the substitution of a detachable sliding wedge, F, for the roller D, and in Fig. 5 the substitution of a detachable pivoted vibrating cam, G, for the same, the operation of which will be readily understood.

When the end B of the band is looped or doubled, as shown in Figs. 1, 3, 5, the roller acts in opposition to three thicknesses of the band; but this number may be increased by one, and a firmer resistance offered to the action of the roller or wedge if the end B is bent or doubled a second time, as shown in Fig. 4.

By constructing the buckle in the manner above described, a core may be dispensed with in casting, and the buckle thus more cheaply produced.

What I claim is—

1. In a bale-tie, in combination with a buckle, a movable device acting as a wedge or cam, and supported upon a cross-bar, as described,

the looped end of the band attached to the buckle and forming a spring, to operate as shown and set forth.

2. In a bale-tie, the combination of the roller D, the cross-bar C of the buckle inclined on the upper side, and the looped end B of the band, forming a spring and exerting an elastic pressure on the roller, as shown and described.

3. In a bale-tie, the combination of the central cross-bar, having the inclined upper side, and the flange *e* formed on the lower edge thereof, the roller D, the end B of the band looped around the bar *d*, and having the spring end *f* and the cross-bars *c c*, arranged with relation to the cross-bar C as shown and described, to operate as specified.

JAMES M. POLLARD.

Witnesses:
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