

No. 766,045.

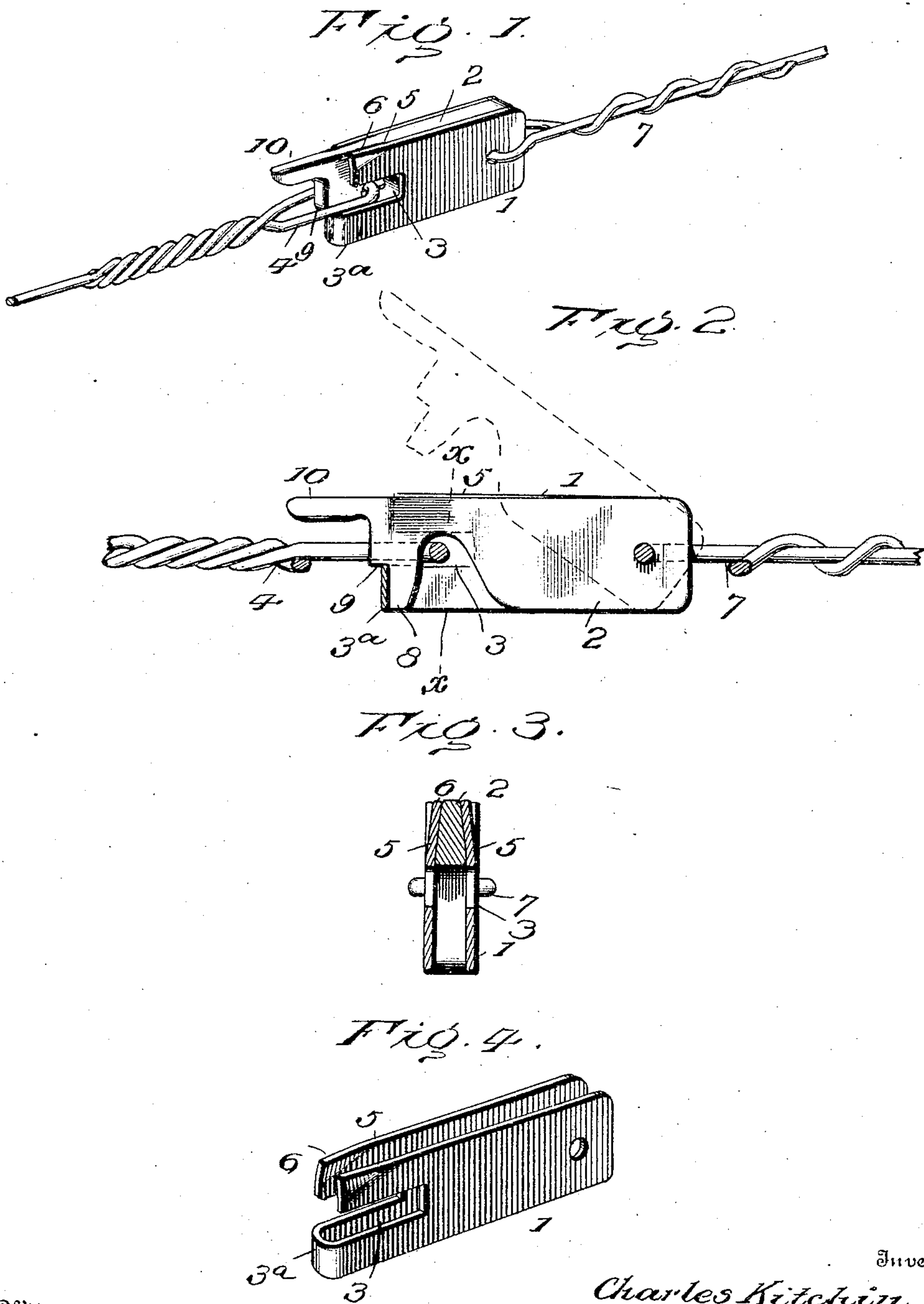
PATENTED JULY 26, 1904.

C. KITCHIN.

BALE TIE.

APPLICATION FILED JAN. 25, 1902. RENEWED FEB. 4, 1904.

NO MODEL.



Witnesses

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BALE-TIE.

SPECIFICATION forming part of Letters Patent No. 766,045, dated July 26, 1904.

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To all whom it may concern:

Be it known that I, CHARLES KITCHIN, a citizen of the United States, residing at Elwood, in the county of Madison and State of Indiana, have invented certain new and useful Improvements in Bale-Ties; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention has relation to ties or binders for bales and packages requiring to be held under great pressure.

The purpose of the invention is the provision of novel means for securing the ends of the tie or binder to enable its repeated use without destruction, as is the case with ties having joints as generally formed.

A further purpose of the invention is the provision of a fastener of simple, cheap, and effective construction and which can be easily and quickly operated either to fasten the tie or to loosen the same when it is required to remove the binder from the bale or package. Security of the fastener is a further consideration in the make-up of the invention.

For a full description of the invention and the merits thereof and also to acquire a knowledge of the details of construction of the means for effecting the result reference is to be had to the following description and drawings hereto attached.

While the essential and characteristic features of the invention are susceptible of modification, still the preferred embodiment of the invention is illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the ends of a tie or binder connected by a fastener embodying the essential features of the invention. Fig. 2 is a longitudinal section, the full lines showing the latch closed and the dotted lines the position of the latch when open. Fig. 3 is a cross-section on the line X-X of Fig. 2. Fig. 4 is a perspective view of the frame.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The fastener comprises a frame 1 and latch 2, pivotally connected at one end. The frame 1 is constructed of a metal blank or strip folded upon itself to form side members, between which the latch 2 is located and operates. A slot 3 extends inward a short distance from the folded end of the frame and is adapted to receive the loop 4 at one end of the tie or binder. One of the parts separated by the slot 3 has its folded end cut away, so as to form, in effect, cheek-pieces 5, which have their upper corners inwardly bent, as shown at 6, for a purpose presently to be explained. The cheek-pieces 5 are outwardly convergent and upwardly inclined for cooperation with the hooked ends of the latch to hold the latter when closed against casual loosening or opening.

The latch 2 is located in the space formed between the side members of the frame and is pivotally connected therewith by the end portion 7 of the tie or binder passing through corresponding openings in the end portions of the latch and side members of the frame. This manner of pivotally connecting the latch to the frame also serves to attach the fastener to one end of the tie, thereby resulting in a simple and economical manner of connecting the parts. The free end of the latch has a hook 8, which is adapted to enter the folded end 3^a of the frame. A shoulder 9 is formed in advance of the hook 8 to limit the movement of the latch when pressed into the frame, said shoulder constituting a stop and engaging with the inner edge of the folds bordering upon the slot 3. A finger-piece 10 projects outward from the latch and provides a convenient means for manipulation thereof. This finger-piece is spaced from the end 4 of the tie or binder, and a finger of the hand or an instrument is adapted to be engaged thereunder when it is required to open the latch to effect a release of the tie preliminary to its removal from the bale or package. The hooked portion of the latch has its side upwardly sloped, as shown most clearly in Fig. 3, and when the latch is closed the cheek-pieces 5 and bent ends 6 grip the sides of the latch and prevent its accidental opening and necessitates the application of some force to en-

able the opening of the latch to effect a release of the tie. When closing the latch, the cheek-pieces 5 are gradually pressed apart, and as the latch closes said cheek-pieces spring inward and close against the inclined sides of the latch and retain the latter closed, as will be readily comprehended. The closing of the latch is arrested by the shoulder 9 engaging with the inner edge of the folded part 3^a.
 10 The tie or binder is applied in the usual manner, and its ends are fastened by thrusting the loop 4 into the slot 3 and closing the latch, so as to cause the hook 8 to pass through the loop 4 and enter the folded end 3^a of the frame. A simple outward movement of the hooked end of the latch effects a release of the tie without resulting in any mutilation thereof. Hence the binder can be repeatedly used.

Having thus described the invention, what is claimed as new is—

1. In a bale-tie, a fastener permanently attached to one end of the tie and adapted to make detachable connection with the other end of the tie, the same consisting of a frame having a longitudinal slot extended inward from its free end and having cheek-pieces at one side of the slot, and a pivoted latch having a hook to project across the slot of the frame and held against accidental opening by the cheek-pieces gripping opposite sides thereof, substantially as set forth.

2. In a bale-tie, a fastener comprising a frame having a longitudinal slot at its free end and cheek-pieces at one side of said slot upwardly converged, and a latch having a hook at its free end and having its side upwardly sloped and adapted to be gripped between the said cheek-pieces, substantially as set forth.

3. In a bale-tie, a fastener comprising a frame having a slot extended inward from its free end and having cheek-pieces at one side of the slot outwardly and upwardly converged, and a latch pivoted to the frame and having a hook at its outer end to project across the slot and having opposite sides of the hooked ends upwardly sloped to be gripped between the said cheek-pieces to prevent loosening of the latch when closed, substantially as set forth.

4. In a bale-tie, a fastener comprising a frame and a latch pivotally connected by an end portion of the tie passing through corresponding openings formed therein, the frame having a longitudinal slot and the latch having a hook to extend across the said slot and engage with a loop at the opposite end of the tie, substantially as specified.

5. In combination, a frame formed of a strip folded upon itself and having a slot extended inward from the folded end and having the fold of one of the parts bordering upon the slot cut away to form cheek-pieces whose upper corners are inwardly bent, and a latch pivoted between the side members of the frame by means of an end portion of the tie, said latch having a hook, a stop-shoulder, and a finger-piece at its free end, the sides of the hooked portion being outwardly sloped to be gripped between the aforementioned cheek-pieces, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES KITCHIN. [L. s.]

Witnesses:

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