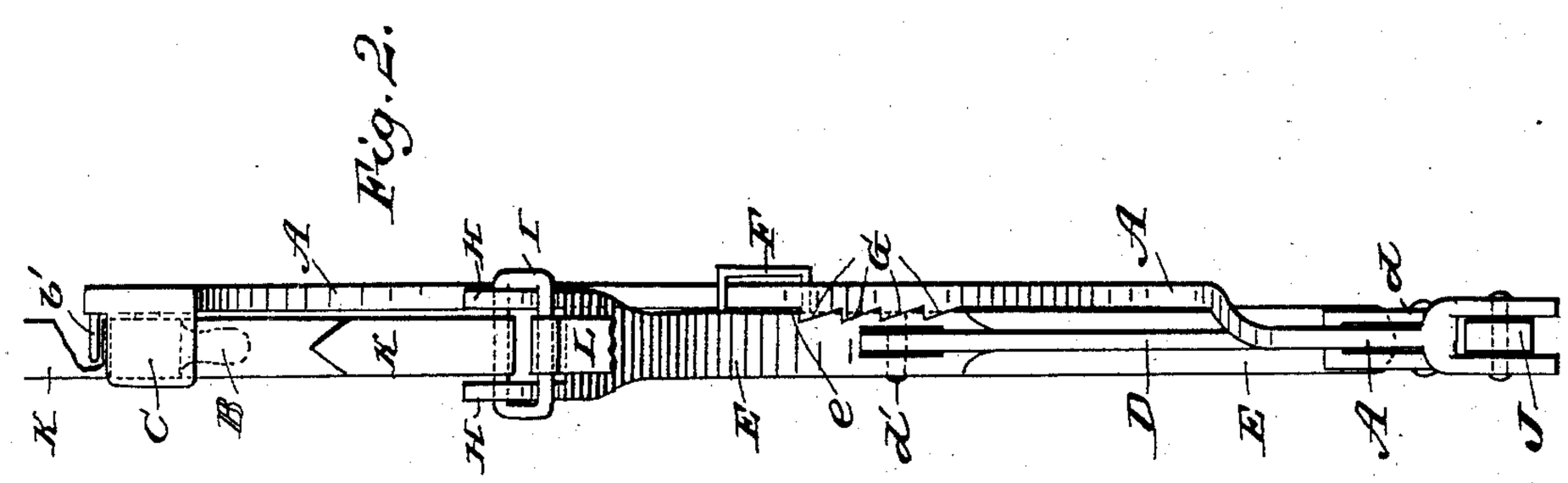
(No Model.)

F. S. WILLIAMS.

IMPLEMENT FOR BUCKLING BALE TIES.

No. 363,569. Patented May 24, 1887.



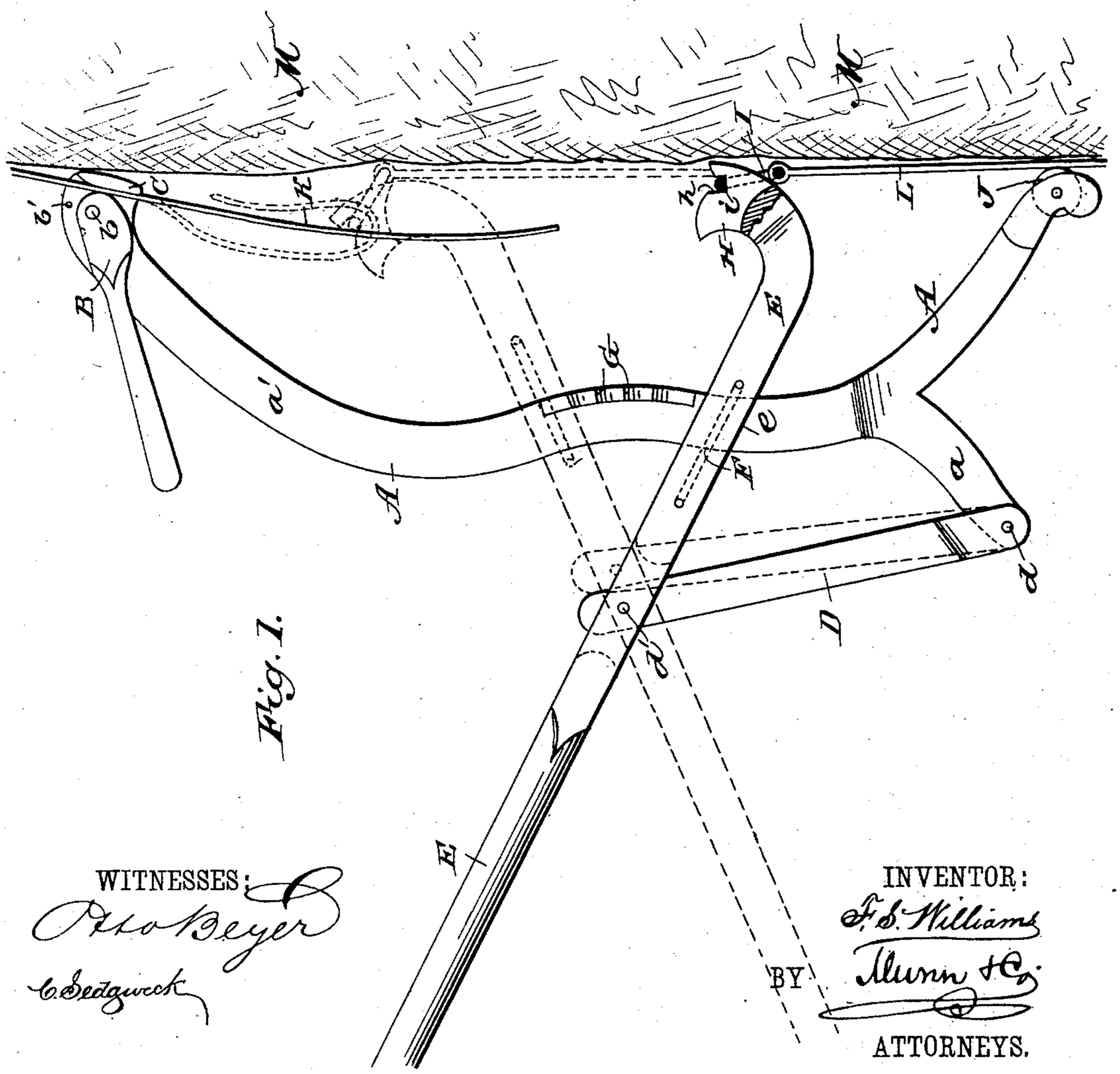


Fig. 1.

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FREDERIC S. WILLIAMS, OF DE ROCHE, ARKANSAS.

IMPLEMENT FOR BUCKLING BALE-TIES.

SPECIFICATION forming part of Letters Patent No. 363,569, dated May 24, 1887.

Application filed March 18, 1887. Serial No. 231,412. (No model.)

To all whom it may concern:

Be it known that I, FREDERIC STAYTON WILLIAMS, of De Roche, in the county of Hot Spring and State of Arkansas, have invented a new and Improved Implement for Buckling Bale-Ties, of which the following is a full, clear, and exact description.

My invention relates to an implement adapted for buckling ties onto pressed bales of cotton, hay, or general merchandise, and has for its object to provide a simple, inexpensive, and efficient device of this character.

The invention consists in certain novel features of construction and combinations of parts of the tie-buckling implement, all as hereinafter fully described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a side view of my improved implement as applied to use to buckle a tie onto a pressed bale, and Fig. 2 is a front edge view of the implement partly broken away and with parts of the bale-tie held thereto, the parts being shown in the positions they assume when the tie is buckled on the bale.

The stock or main bar A of the implement is provided at its upper end with a cam-lever, B, which is pivoted at *b* to the bar, so that its eccentric or cam face is adapted to clamp one end of a bale-tie to a lug, C, formed on the bar, a suitable pin, *b'*, being fixed in the bar to prevent the cam-lever being swung over upward too far, thereby always assuring an opening between the cam and the lug when the lever is thrown upward, to facilitate placing the end of the tie between the cam and the lug with one hand in operating the tool, as hereinafter explained.

To the main bar A, or preferably to a lug, *a*, projecting rearward from the back edge of the bar, is pivoted at *d* the forked end of a link, D, the other end of which preferably enters a slot in a lever, E, and is pivoted at *d'* to the lever, which ranges along one side of the bar A, and to which it is held loosely by a long staple or eye, F, crossing the bar and fixed at opposite ends to the lever, the lower edge of which at *e* is adapted to lock onto any one of a series of ratchet-teeth, G, formed on or fixed to the face of the bar. The link D constitutes a movable fulcrum to the lever E, while both link and lever have substantial support on or from the main bar A.

The forward end of the lever E is bent upward and made in forked form or with two parallel lugs, H H, spaced apart sufficiently to admit a bale-tie flatwise between them, and provided at their upper edges or extremities with notches *h*, to receive a cross-bar, *i*, of the tie-buckle I. The lower end of the main bar A is forked, and in this fork is pivoted an anti-friction roller, J, adapted to move upon the face of the lower end part of the bale-tie. The lever E is shown broken away in the drawings; but it may have any desired length, assuring sufficient leverage to allow easy and effective action of the implement.

The operation is as follows: The two opposite ends K L of a tie on a pressed bale, M, (shown only in part), are connected to the implement in the following manner: The main bar A will be firmly grasped by the left hand at its curved upper portion, *a'*, and the end K of the tie will be placed between the cam-lever B and the bar-lug C by the right hand, and the cam-lever will then be operated by the right hand to clamp this end of the tie, as in the drawings; and while the outer end of the lever E is rested on and lifted by the left knee of the operator the buckle I on the other end, L, of the tie will be slipped by its cross-bar *i* into the notches *h* of the fork-jaws H on the lever, this being also done by the right hand, all being then ready for tightening the tie, and the parts having the positions shown in full lines in Fig. 1 of the drawings. The outer end of the lever E will now be pressed down by both hands, meanwhile being swung over a little at its back end to allow its forward part to move easily clear of the ratchet-teeth G, and when the lever assumes the position indicated in dotted lines, or when the tie is sufficiently tightened, the back end of the lever E will be moved toward the right hand to cause it to engage one of the ratchet-teeth G, as in Fig. 2, to hold the tightened tie, and the extremity of the part K of the tie will then be slipped between the jaws H H of the lever and beneath

the cross-bar *i* of the buckle I and bent upward, as indicated in dotted lines in Fig. 1; and when the lever E is disengaged from the rack G by a sidewise or twisting motion of the lever, and the cam-lever B is thrown upward, the implement will be released from the tie ready for operation in a like manner on the next tie to be tightened. The roller J moves easily on the end L of the tie as the implement is operated to tighten the tie, as above described.

The main bar A, with the link D and lever E, may be used with a device other than the cam-lever B and lug C for holding one end of the tie; but the cam and lug-clamp is simple and effective, and is at present preferred in practice.

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

1. In an implement for buckling bale-ties, the combination, with a bar having a device at one end for clamping one end of the tie, of a lever fulcrumed to the bar and formed with a forked forward end adapted to retain the cross-bar of a buckle held to the other end of the tie and allow the first-named end of the tightened tie to be passed around the buckle cross-bar, substantially as herein described.

2. In an implement for buckling bale-ties, the combination, with a main bar having a device at one end for clamping one end of the tie, of a lever fulcrumed to the bar and provided with a forked forward end adapted to retain the cross-bar of a buckle held to the other end of the tie and allow the first-named end of the tightened tie to be passed around the buckle's cross-bar, and said main bar having an anti-friction roller at its other end adapted to move on the tie as the implement is operated, substantially as herein described.

3. In an implement for buckling bale-ties, the combination, with a bar having a device at one end for clamping one end of the tie and provided with ratchet-teeth, of a lever fulcrumed to the bar and adapted to engage the ratchet and formed with a forked forward end adapted to retain the cross-bar of a buckle held to the other end of the tie and allow the first-named end of the tie to be passed around the buckle's cross-bar while the lever is held by the ratchet, substantially as herein described.

4. The combination, in an implement for buckling bale-ties, of a bar, A, having a lug, C, a cam-lever, B, pivoted to the bar, a link, D, also pivoted to bar A, and a lever, E, pivoted to the link D and provided at its forward end with lugs H H, notched at *h*, substantially as shown and described.

5. The combination, in an implement for buckling bale-ties, of a bar, A, having a lug, C, and ratchet-teeth G, a cam-lever, B, pivoted to the bar, a link, D also pivoted to the bar A, a lever, E, pivoted to the link D and provided with lugs H H, notched at *h*, and a retainer, F, for the lever, substantially as shown and described.

6. An implement for buckling bale-ties, made substantially as herein shown and described, and consisting of a main bar, A, having a lug, C, a rack, G, and a roller, J, a cam-lever, B, pivoted to bar A, a link, D, also pivoted to said bar, a lever, E, pivoted to the link D and having lugs H H, notched at *h*, and a retainer, F, for the lever, all arranged for operation as and for the purposes herein set forth.

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Witnesses:
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