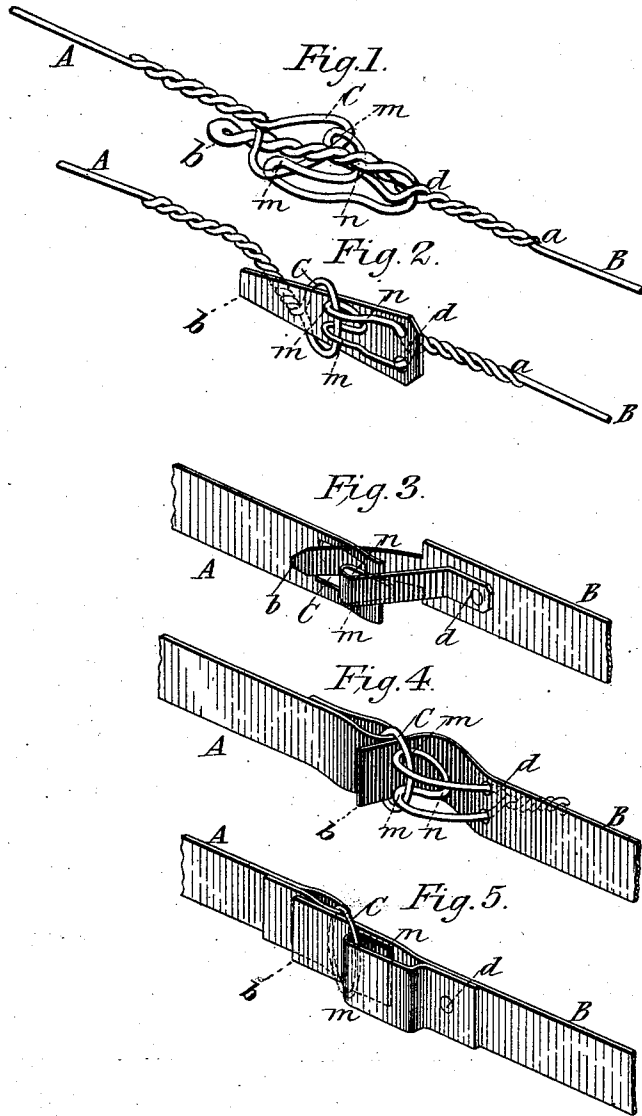


(No Model.)

M. CAMPBELL.  
BALE TIE.

No. 264,512.

Patented Sept. 19, 1882.



Witnesses:

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# UNITED STATES PATENT OFFICE.

MARVIN CAMPBELL, OF SOUTH BEND, INDIANA.

## BALE-TIE.

SPECIFICATION forming part of Letters Patent No. 264,512, dated September 19, 1882.

Application filed August 16, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, MARVIN CAMPBELL, a citizen of the United States, and a resident of South Bend, in the county of St. Joseph 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 and clear description of the same, whereby those skilled in the art to which my invention belongs may be enabled to make and use the same, reference being had to the accompanying drawings, forming a part of this specification.

My invention relates only to the way in which I prepare and lock together the two ends of the bale-tie. Hence I only show short parts from each end, as I deem that sufficient to illustrate my invention.

In making a bale-tie fastening of the nature and kind to which my invention refers, it may be made all from wire or all from sheet metal, or part wire and part sheet metal.

Figures 1, 2, 3, 4, and 5 all show the two ends locked together, the same in all of them, the only difference in the figures being the difference in material used in constructing different parts of the bale-tie, as will appear in my further description.

My invention consists of a hook whose open side or point turns toward or rests upon a tongue, which projects forward from the base of said hook, the object of this combined downwardly-turned hook and tongue being to engage the loop upon the other end of the tie, constituting an easily-manipulated and secure fastening. This device is the same in all of the figures. The construction of each kind, as shown in each figure, I will now proceed to fully describe.

In Fig. 1 the loop C upon the end A is made by turning the end of the wire back upon itself, and twisting to the main body of the wire, leaving the open loop C. To prepare the hook and tongue upon the end B, turn the wire back upon itself from *b* to *a*, leaving the strands of unequal length. Twist together these strands from *b* to *a*, thus forming the tongue *b d*, and leaving an open loop at the point *d*, which, upon being turned downward and back upon itself from the point *m*, constitutes the hook *d m n*. It is obvious that before bending to make the hook this loop may have its two

strands twisted together from the point *d* entire or in part, or not at all, at the option of the maker, and the device remain the same. 55

In Fig. 2 the loop C upon the end A is made the same as in Fig. 1. The tongue *b d* is of sheet metal, attached to the end B by passing the end through one eye and back through the other at the point *d*, then twisting to the main wire from *d* to *a*, leaving the open loop *d m n*, which, as in Fig. 1, may be twisted in part or entire, or not at all, before being bent downward at the point *m* to form the hook. It is clearly plain in this figure that the tongue *b d* may be of sheet metal or metal of any shape, or wood, that it may be attached at the point *d* by one or more eyes or holes, or by simply a notch about which the two strands of wire may be securely twisted. 70

In Fig. 3 the eye C upon the ends A is made by cutting a hole in the end of the sheet-metal or hoop-iron band. The tongue *b d* is made by trimming the end B to a width that will allow it to easily enter the loop C, and the hook is made by riveting a piece of hoop-iron or sheet metal at the point *d* and turning it downward at the point *m*, thus making a downwardly-turned hook. 75

In Fig. 4 the loop C is made by fastening a separate loop or ring to the end of the sheet-iron band. This loop may be of iron or wire, or of cord. The loop may be attached in different ways, the most practical of which is to pass the end of the sheet-metal band through the ring C, then turn it back and rivet to the main band, thus securing the loop C. The hook *d m n* upon the end B is attached to the sheet-metal band at the point *d*. In this figure it is shown made of wire, simply an open loop made by passing the two ends of the wire through the band and securing on the under side of the wire. Before bending this loop at *m* to form the hook it may be twisted together in part or entire, or left open, at the option of the maker, or it may be an ordinary single wire hook, or two single hooks, one from each edge of the band, the device and manner of manipulating still being the same, so long as the open part of the hook or hooks is turned down upon the tongue. 80 85 90 95 100

Fig. 5 is the same as Fig. 4, except that the hook *d m n* is made of one piece of sheet metal riveted to the end B at the point *d*.

I will now explain the mode of locking together the two ends after the tie has been passed about the bale, and as it is the same in each of the figures the one explanation may be applied to each one of the figures. Pass the tongue *b d* through the loop C a little past the point *n*, between the tongue *b d* and the hook. Then either raise the loop C or press the hook *d m n* down slightly, so that in drawing back the loop C it will hook into the said downward-turned hook. In this way the lock is made secure, as the hook cannot open, as by the tension on the bale it has its open side pressed upon and held by the tongue, and the tongue cannot give way, as its outer end rests upon the back part of the loop C, and so the ends can be unlocked only by reversing the process by which they were locked together. I prefer to pass the tongue *b d* through the loop C, as shown in all of the figures; yet this is not absolutely necessary, as the tongue pressing upon the material in the bale would be held to its place, and so prevent the hook from opening by tension upon the bale-tie, or the end *d* of the tongue might have a loop through which

the loop C should pass before being hooked upon the downward-turned hook. Hence I do not want to confine myself to a specific construction throughout. The whole merit of my invention is the downward-turned hook, from the base of which projects the tongue. It matters but little, as to efficiency, whether the tongue is held up against the downward-turned hook by the pressure of the material of the bale by resting upon the back of the loop C or by the loop C passing through a loop in the end of the tongue.

What I claim as new and of my invention, and desire to secure by Letters Patent, is—

A bale-tie, one end having a hook whose open side turns toward or rests upon a tongue projecting forward from or near the base of said hook, the other end having a simple loop, substantially as and for the purpose described and set forth in the foregoing specification.

MARVIN CAMPBELL.

Witnesses:

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