(No Model.)

C. B. BRAINARD.

BALE TIE.

No. 485,253. Patented Nov. 1, 1892.

Fig. 1

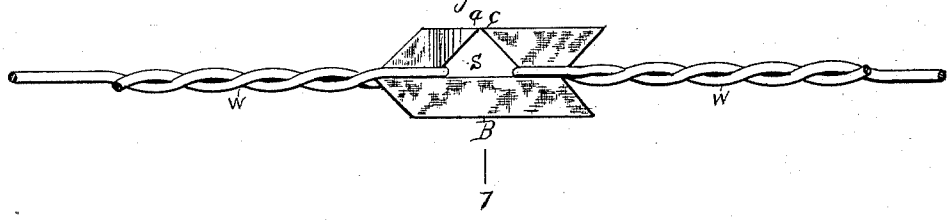


Fig. 2

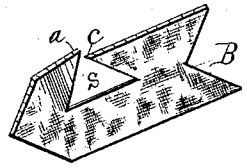


Fig. 3

Fig. 4

Fig. 5.

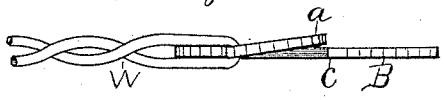


Fig. 6.

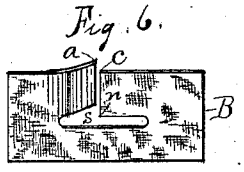


Fig. 7.

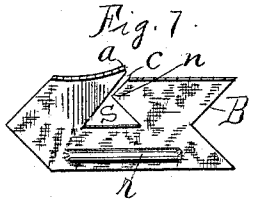
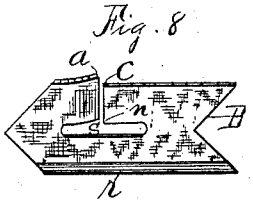


Fig. 8



Witnesses

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UNITED STATES PATENT OFFICE.

CURTIS B. BRAINARD, OF JOLIET, ILLINOIS.

BALE-TIE.

SPECIFICATION forming part of Letters Patent No. 485,253, dated November 1, 1892.

Application filed February 8, 1892. Serial No. 420,648. (No model.)

To all whom it may concern:

Be it known that I, CURTIS B. BRAINARD, a citizen of the United States of America, residing at Joliet, in the county of Will and State of Illinois, have invented certain new and useful Improvements in Bale-Ties, of which the following is a specification, reference being had therein to the accompanying drawings and the letters of reference thereon, forming a part of this specification, in which—

Figure 1 is a perspective view of a flat metal plate formed with hooks for connecting the two looped ends of a wire bale-tie. Fig. 2 is a perspective view of a single-hooked plate. Figs. 3 and 4 are cross-sectional views of one of said hooked plates, taken on a line between its two hooks and showing strengthening ribs or beads for giving strength to the body of the plate. Fig. 5 is a plan view on the top of one of said hooked plates having a section of a wire bale-tie connected thereto; and Figs. 6, 7, and 8 are perspective views of the hooked plate, showing modifications in the form of its hooks.

This invention relates to certain improvements in bale-ties of the kind made of wire, and relates more particularly to the hooked plate or device for holding connected the two looped ends of a wire bale-tie.

Referring to the drawings, *w w* represent the two opposite ends of a wire, forming a bale-tie for use in baling fibrous material, such as hay, straw, and the like.

B is a flat metal plate having its forward end arrow-pointed and its rear end forked or formed as a fish-tail.

S is a triangular-shaped aperture cut or punched out of said plate in such manner as to form the two opposing hooks *a* and *c*, having their points meet or nearly meet each other at or near the center of the plate. The forward hook *a* is turned to one side from hook *c* far enough to admit the bale-wire loop *w* to pass between them, so that said hook may hook into the bale-wire loop, as shown in Figs. 1 and 5, and the hook *a* may then be bent back to its first position, so as to prevent the wire loop from passing off of said hook, because of the space between the points of said hooks *a* and *c* being closed together; or if the point or hook *a* be not turned back, as stated, the sides of the arrow-point of the plate B will conduct the loop of wire *w* rearward in a line with the body of said plate, so as to engage the under side of hook *c*, and thus prevent the wire loop from being disengaged from hook *a* should the bale-wire become loose and slack on the bale. The rear hook *c* and the rear fish-tail end of the plate B form a seat for the opposite looped end of the bale-wire to be permanently attached to the said plate in the manufacture of the bale-tie. If desired, the triangular aperture S may be formed, as shown in Fig. 7, so that the apex will not extend to the top of the plate, and so that a cut-out from the apex of said aperture will cause the rear hook *c* to be formed with the forwardly-projecting point *n*, which may be advantageous when used with different kinds of bale-wire, or the triangular-shaped aperture S may be substituted by the oblong aperture, (shown in Fig. 8,) so as to form vertical blunt ends on the hooks *a* and *c*; but in all these various modifications the hooks *a* and *c* remain and operate in the manner stated.

In use the plate B is attached permanently at its rear end to one end of the bale-wire *w*, as above stated. After the bale-wire is passed around a bale to be tied the pointed end of the plate B is passed through the opposite looped end of the bale-wire and hooked over the hook *a*, where it is held in its proper position, as shown in Fig. 1, by means of the tension on the said wire. It is intended to form the hooked plates B from metal strips passed through a machine that will punch and form them, as shown, and at the same operation form ribs or beads *r* in the body of the plate for giving lateral strength to the plate. If desired, the plate B may be square at each end, as shown in Fig. 6, if for any reason that form is thought to be desirable.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is as follows, to wit:

In a wire bale-tie and in combination with the wire of the tie, the plate B, having the triangular recess S, the base thereof being approximately on a line with the longitudinal center of the plate and having its apex extend out through one side of the plate for access to said recess and to form the hooks *a*

c, adapted to be turned laterally to open and close said recess, the base angles of said recess forming seats for the bale-wire, and the said plate being pointed at its forward end for passing it forward around a bale and its rear end being V-shaped to form, in conjunction with the angles of said recess, a seat for the end of the bale-wire secured on said plate, substantially as and for the purpose set forth.

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