

(No Model.)

W. BURTIS.

BALE TIE.

No. 301,958.

Patented July 15, 1884.

Fig. 1.

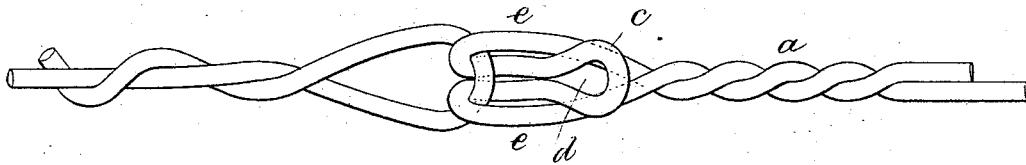


Fig. 2.



Fig. 3.

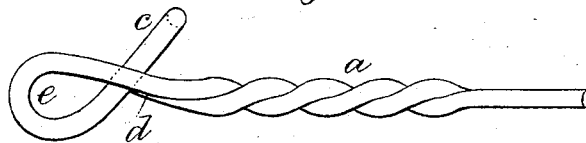
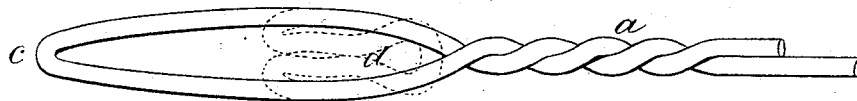


Fig. 4.



Witnesses

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att'y

# UNITED STATES PATENT OFFICE.

WILLIAM BURTIS, OF NEW EGYPT, NEW JERSEY, ASSIGNOR TO THE WASH-  
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## BALE-TIE.

SPECIFICATION forming part of Letters Patent No. 301,958, dated July 15, 1884.

Application filed September 14, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM BURTIS, of New Egypt, in the county of Ocean and State of New Jersey, have invented an Improvement in Bale-Ties, of which the following is a specification.

Bale-ties have been made of a wire turned back upon itself and twisted together in such a manner that a double thickness of wire is presented to the other end of the bale-tie, which is threaded through an eye or eyes formed at such twisted end, the object being to prevent the single end of the bale-tie being abraded or cut off by the strain to which it is subjected, as experience shows that when the two ends of a wire bale-band are looped together with single loops there is a greater tendency to cut and break than when one of the loops is made of double wire.

Bale-ties have been made with a compound loop at one end forming a hook, and at the other end a loop that is to be passed over the hook. In this instance the bale-tie is of a fixed length. In my improvement one end of the tie is plain and the other end is made with a double or compound loop, through which the plain end of the wire is thrust and drawn up to whatever extent is necessary, and then it is bent back upon itself and twisted together, thus adapting my tie to various sizes of bales.

In the drawings, Figure 1 represents the bale-tie ready for the strain to come upon it as the press is slackened and the bale expands. Fig. 2 is an end view, and Fig. 3 a side view, of the double-wire end; and Fig. 4 is a diagram representing the manner in which the twisted end and hook are made.

The wire composing the bale-tie is of suitable size, according to the strain to which it is to be subjected. One end of the wire *a* is

bent back upon itself, say, for three inches, and twisted together, leaving an untwisted portion of about an inch between the looped or folded end *c* and the crotch *d*, where the twist *e* commences. The end *c* is now bent around, the crotch *d* opened, and the end *c* thrust through and the wire at the sides of the crotch closed in tightly at the outsides of the wire below the end *c*. The end *c* being a slightly-open loop and projecting through the crotch *d*, there are two loops, *e e*, now projecting at the end of the bale-tie, and when the plain end of the wire bale-tie is inserted through these two loops it is to be drawn up and bent back upon itself and twisted together, as in Fig. 1. As soon as the pressure is lessened and the bale expands the strain upon the tie causes the loops to draw tightly together and press firmly at the sides of the wire hook below the point *c*; hence the hook cannot draw out of the crotch, and the loops at the sides of the hook ends will each take its proportion of strain, because the folded wire lies straight while the parts are being twisted, and there is the same length of wire in each loop between the hook end *c* and the crotch.

I claim as my invention—

The wire bale-tie having one plain end, and the wire at the other end folded back upon itself and twisted together, the hook end *c* of the wire being passed between the two parts of the wire at the crotch, and forming two equal loops, *e e*, for the other end of the wire, substantially as set forth.

Signed by me this 4th day of September, A. D. 1883.

WILLIAM BURTIS.

Witnesses:

R. H. COWPERTHWAIT,  
ED: M. CLIFT.