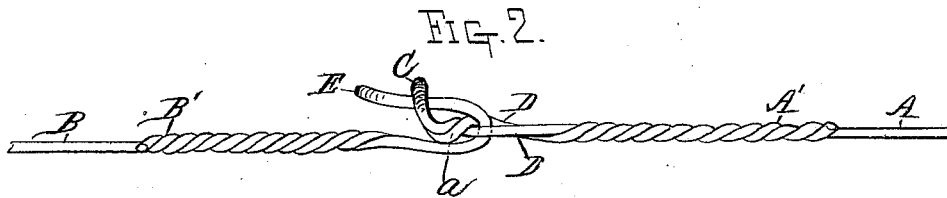
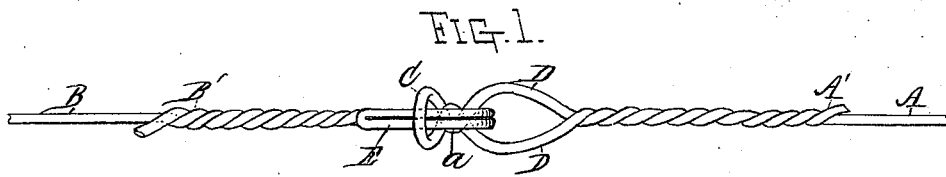


G. S. FRANCE.

BALE-TIE.

No. 184,607.

Patented Nov. 21, 1876.



WITNESSES;

Thomas Dudge
Edwin C. Moore

INVENTOR;

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UNITED STATES PATENT OFFICE.

GUSTUS S. FRANCE, OF WORCESTER, MASSACHUSETTS.

IMPROVEMENT IN BALE-TIES.

Specification forming part of Letters Patent No. **184,607**, dated November 21, 1876; application filed November 6, 1876.

To all whom it may concern:

Be it known that I, GUSTUS S. FRANCE, of the city and county of Worcester, and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Bale-Ties; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and in which—

Figure 1 represents a top or plan view of so much of a wire bale-tie as is necessary to illustrate my present invention, and Fig. 2 represents a side view of the parts shown in Fig. 1.

To enable those skilled in the art to which my invention belongs to make and use the same, I will proceed to describe it more in detail.

In the drawings, the parts marked A and B represent the two ends of a bale-tie, made of wire. The end A is extended and bent back to form loop C. It is then partially braided or twisted, as shown at *a*, after which it is bent to form the loop D, and then twisted or wound around the main wire A, as shown at A', thus forming a secure connection with the main part A. The end of wire B is extended and bent to form hook E, and is then returned upon itself by twisting, as shown at B'.

Loop C is made so as to stand up a little, as shown in Fig. 2, so that when hook E is inserted in loop D and drawn back it will pass through loop C, thereby engaging both loops

C and D, as fully shown in Fig. 2 of the drawings.

Those skilled in the art to which my invention belongs will perceive that both loops engage hook E, and the partial twist or braid between the loops, as shown at *a*, prevents loop D from pulling out or becoming elongated.

In making loops C and D the end A' may be first bent back and then twisted with and upon the part A, after which, the parts forming loop D may be held in a clamp device, while the parts forming loop C are twisted to form a cross or partial braid between the loops.

Having described my improvements in bale-ties, what I claim therein as new and of my invention, and desire to secure by Letters Patent, is—

1. The combination, in a bale-tie, of the loops C D and hook E, substantially as and for the purposes set forth.

2. A bale-tie having two loops at one end, separated by a partial twist, and a hook device at the other end, substantially as and for the purposes set forth.

3. A bale-tie provided with two loops at one end, for engaging the hook device at the other end of the bale-tie.

GUSTUS S. FRANCE.

Witnesses:

THOS. H. DODGE,
EDWIN E. MOORE.