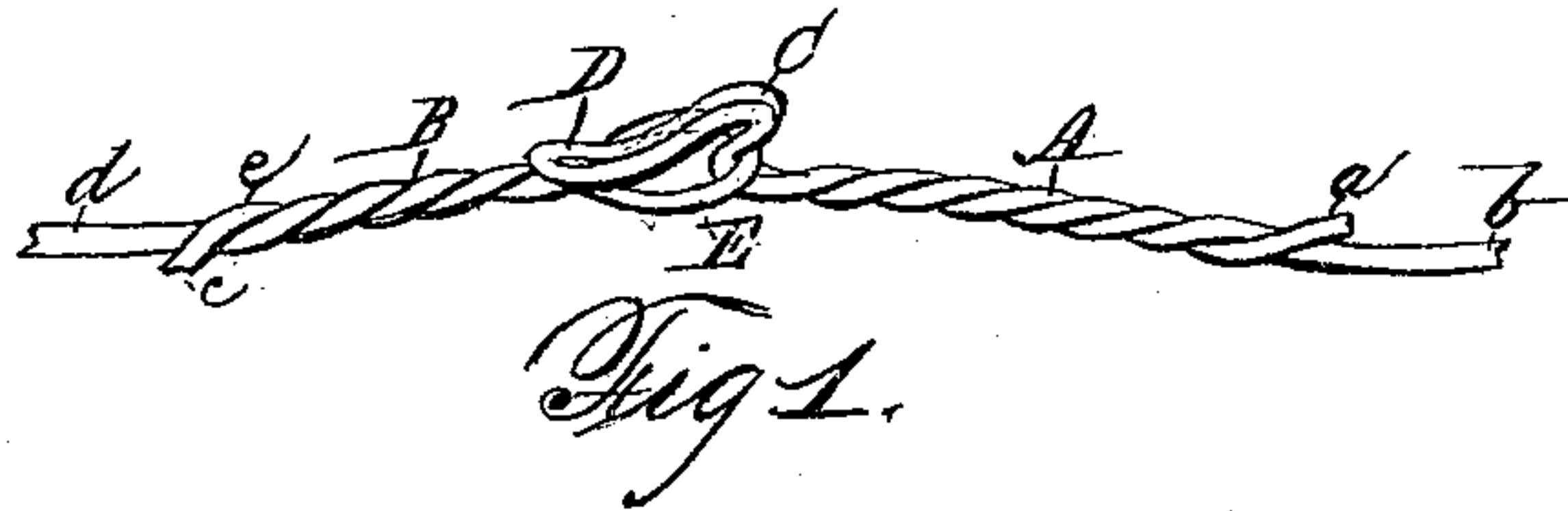


G. S. FRANCE.

BALE-TIE.

No. 185,310.

Patented Dec. 12, 1876.



WITNESSES;

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INVENTOR;

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GUSTUS S. FRANCE, OF COBLESKILL, NEW YORK, ASSIGNOR TO WASHBURN & MOEN MANUFACTURING COMPANY, OF WORCESTER, MASS.

IMPROVEMENT IN BALE-TIES.

Specification forming part of Letters Patent No. 185,310, dated December 12, 1876; application filed April 10, 1876.

To all whom it may concern:

Be it known that I, GUSTUS S. FRANCE, of Cobleskill, in the county of Schoharie and State of New York, 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 perspective view of a section of a bale-tie made according to my present invention. Fig. 2 represents a vertical central section taken through the length of the section of bale-tie shown in Fig. 1. Fig. 3 represents a perspective view of a modification of my said bale-tie, and Fig. 4 also represents a modified form of a bale-tie embracing my said invention.

It will be understood that the parts represented by the drawings only show the two interlocking ends of the bale-tie, since my invention relates to the interlocking parts of the tie.

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 part marked A represents one portion of the bale-tie, formed by twisting together the end *a* with the main wire *b*, leaving at the end a hook, C, having a brace or extension part, D, which rests, when the parts are locked together, as shown in Fig. 1, upon the base of the loop E, formed upon the wire *d* by twisting its end *c* to form the double twist, or twist composed of two parts, *c* and *d*, as shown at B.

In Fig. 3 the hook C is formed by passing the looped end D back over, and thence down through between the strands 1 and 2, as fully indicated in the drawings, so that the tongue or brace D will rest upon the base of the loop E, as shown at *f*, thereby supporting the hook C, substantially as shown in Fig. 1.

In Fig. 4 the hook C is formed by one strand of wire, with a twist, *g*, between hook C and the brace end D.

Those skilled in the art to which my invention belongs will readily understand and ap-

preciate the practical advantages naturally resulting from my said invention, since the entire bale-tie can be made from a single piece of wire, *b d*, with its ends *a c* bent back, and twisted about the main parts of the wire after being bent, the end *a* to form the brace-point or projection D and hook C, and the end *c*, after it has been bent, to form the loop E.

In applying the bale-tie, it is hooked together, after having been passed around the bale, by slipping the end D through loop E until hook C slips up over loop E, as shown in the drawings, and in which position the brace part D bears upon the base of loop E, as shown at *f*, thereby serving as a lock or guard to prevent hook C from becoming detached from loop E before the bale of hay, cotton, or other material is released from the press or the power thereof, while it also serves as a brace to sustain and support hook C after the expanding strain and pressure of the expanding bale has been allowed to exert its full force upon the bale-ties by which it is encircled.

As before explained, the entire bale-tie can be made from a single piece of wire, although, if preferred in any case, the portions of the bale-tie *b d* which extend around the bale may be made up of different sections of wire hooked or fastened together, and even such portion of the bale-tie could be made of hoop-iron, the interlocking parts to which my invention relates remaining the same, as shown and described.

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

1. A bale-tie having on one end a loop, E, and on the other end a hook, C, and brace D, substantially as and for the purposes set forth.
2. The combination, with a bale-tie hook, C, of a downwardly-projecting brace or tongue, D, made continuous with said hook, for the purposes stated.

GUSTUS S. FRANCE.

Witnesses:

THOS. H. DODGE,
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