(No Model.)

F. B. GRISWOLD.

ADJUSTABLE BALE TIE.

No. 345,841. Patented July 20, 1886.

Fig. 1

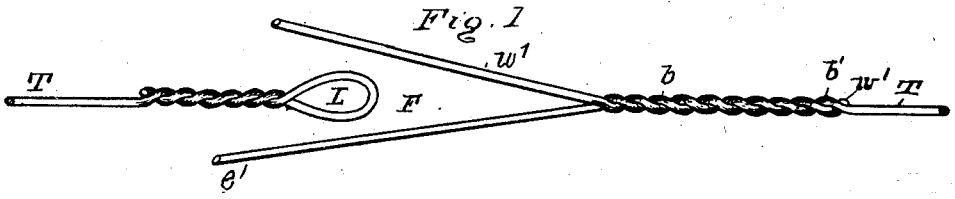


Fig. 2

Fig. 3

Fig. 4

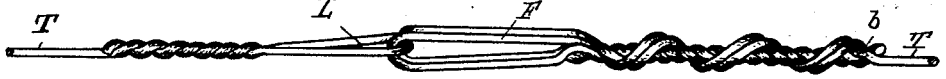


Fig. 5

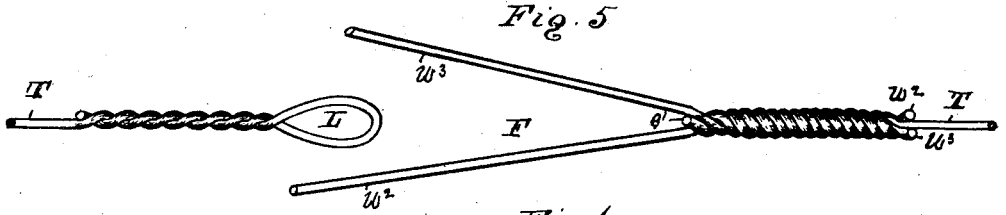
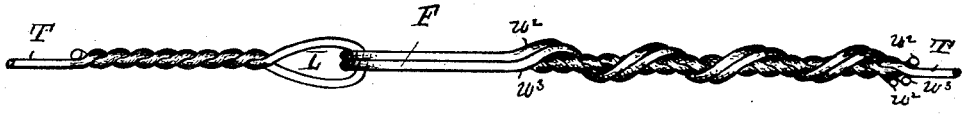


Fig. 6



WITNESSES:

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FRANK B. GRISWOLD, OF TROY, NEW YORK.

ADJUSTABLE BALE-TIE.

SPECIFICATION forming part of Letters Patent No. 345,841, dated July 20, 1886.

Application filed August 18, 1885. Serial No. 174,697. (No model.)

To all whom it may concern:

Be it known that I, FRANK B. GRISWOLD, of the city of Troy, county of Rensselaer, State of New York, have invented a new and useful Improvement in Bale-Ties, of which the following is a specification.

My invention relates to certain improvements upon that class of bale-ties that are made to connect at their ends by an adjustable length of girth; and my invention consists (as will be more fully detailed hereinafter in connection with its illustrations) in the combination, with a loop made upon one end of the tie-wire, of a forked end made upon the other extremity, with the forked end adapted to be passed through the loop and then drawn back to secure the proper girth-tension, with the ends protruding beyond the loop wound around that part of the forked end which is back of where passed through the loop. To produce this forked end upon that extremity of the tie-wire which is opposite to that on which the loop is made, an additional piece of wire is intwisted with the tie-wire at a short distance back from the end, so as to firmly connect the two, and to leave the outer ends where beyond the intwist free, or, if desired, on the extreme end of the tie-wire that is opposite to that on which the loop is made. Two short pieces of wire are intwisted with the end of the tie-wire thereat, so as to firmly connect the three wires with the ends of the two added pieces of wire where projecting beyond their intwist free, and so that they can be utilized in the same manner as before described, where the forked end was produced by intwisting a single piece within the body of the tie-wire a short distance from its end.

Accompanying this specification to form a part of it there is a sheet of drawings containing six figures illustrating my invention, with the same designation of parts by letter reference used in all of them.

Of these illustrations, Figure 1 shows the fork formed upon one end of the tie-wire by means of a piece of wire intwisted with the body of the latter a short distance from that one of its ends which is opposite to that on which the loop is formed. Fig. 2 shows a top view of the connected tie, the forked end being illustrated as having been passed through the loop upon the other end drawn through the loop with the ends of the fork wound around the intwist which united the two wires to form the fork. Fig. 3 illustrates the parts made in the same manner as shown at Fig. 1, but with the forked ends oppositely twisted around the intwist which connected them to produce the fork. Fig. 4 illustrates a side elevation of the tie as it is connected at Fig. 2. Fig. 5 illustrates a modification by which the forked end is produced by intwisting with the end of the tie-wire that is opposite to the one on which a loop is formed two short pieces of wire. Fig. 6 illustrates the tie ends shown at Fig. 5 as connected, the forked ends having been passed through the loop at one end, then drawn back to have the requisite girth-tension, with the ends of the fork wound around the intwist.

The several parts of the bale-tie thus illustrated are designated by letter reference, and the function of the parts is described as follows:

The letter T indicates the body of the tie-wire, L a loop that is formed on one end of it, and F a fork on the other extremity of it. This forked end is shown as produced by intwisting with the tie-body at *b*, and at a short distance from the end *e'*, which is opposite to that on which the loop is placed, a short piece of wire, *w'*, and from where thus intwisted said short piece of wire and the adjacent end of the tie-wire are continued outwardly to form the fork F, as shown at Figs. 1 and 2. This fork is also shown as produced by intwisting with the end *e'* of the tie-wire which is opposite to that on which the loop is formed the two short pieces of wire w^2 w^3, as indicated at Figs. 5 and 6, at Fig. 5 the forked end being shown as made for attachment, and at Fig. 6 shown as connected in the same manner as indicated at Figs. 2 and 4.

By the use of either modification the forked end and the loop connect in the same manner by being passed through the loop L, and drawn therein until the requisite girth-tension is produced, when the ends of the fork are drawn down and wound around the intwist, or that part of the formed ends which are back of where passed through the loop L. By thus

using short pieces of wire to form the adjustable parts of the bale-tie, additional strength is given to the parts thereat, and scraps can be worked into use that would otherwise be wasted. Not only these advantages are had by the use of my invention, but lighter wire can be used for the added pieces, which will be easier to connect.

I disclaim herein a wire bale-tie having an eye in one of its ends made by doubling the wire at its eye end back on itself and then twisting the doubled-back portion back on itself and the body wire thereat to produce an eye, as such a method of forming the eye could not be employed to produce the forked and securing end F, as distinguished from the eye end of the bale-tie, the forked end of my improved tie permitting the use of intwisted scrap pieces to utilize them, which could not be done in the older form of bale-tie disclaimed.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

The wire bale-tie fastening herein described, consisting of a projecting end of the main wire, a separate piece of wire twisted in the main wire back of the loop with a projecting portion of the length of the projecting end of the main wire, and the free end portions of the main wire and the attached piece bent over in loop form and secured around the twisted portion of said parts.

Signed at Troy, New York, this 12th day of May, 1885, and in the presence of the two witnesses whose names were by them hereto written.

FRANK B. GRISWOLD.

Witnesses:
GEO. M. PAYFER,
GEO. A. DARBY.