No. 885,917. PATENTED APR. 28, 1908.

W. D. FERRIS.

BALE TIE.

APPLICATION FILED MAR. 6, 1907.

Fig. 1.

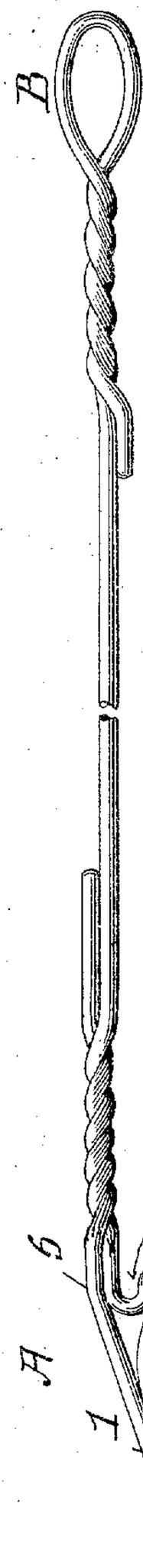
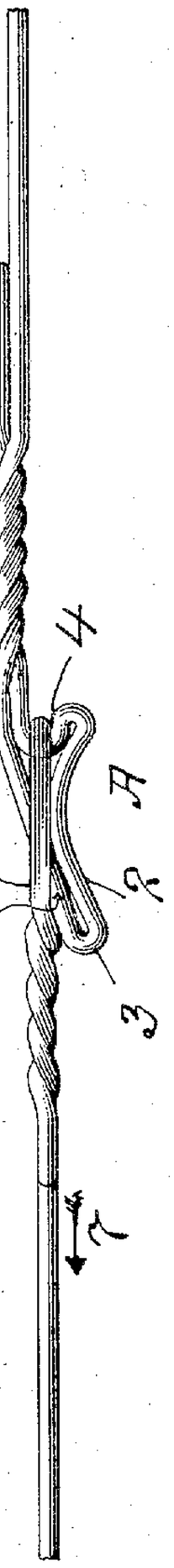


Fig. 2.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM D. FERRIS, OF STERLING, ILLINOIS.

BALE-TIE.

No. 885,917. Specification of Letters Patent. Patented April 28, 1908.

Application filed March 6, 1907. Serial No. 360,914.

To all whom it may concern:

Be it known that I, WILLIAM D. FERRIS, a citizen of the United States, residing at Sterling, in the county of Whiteside and State of Illinois, have invented a certain new and useful Improvement in Bale-Ties, of which the following is a specification.

The invention relates to wire bale ties made of a single wire and is an improvement upon the tie set forth in U. S. Patent No. 191,192, granted to L. Stewart, May 22, 1877.

The object of the invention is to prevent the deformation and possible pulling of the cross head out of the eye when under strain and to render the tie stronger and more efficient.

The invention consists in the construction of the tie as hereinafter set forth and claimed.

In the accompanying drawings—Figure 1 shows the cross head and eye at the opposite ends of the tie, the middle portion of said tie being broken away. Fig. 2 shows the cross head engaged with the eye.

Similar numbers of reference indicate like parts.

Cross heads of the shape shown in the Stewart patent aforesaid are ordinarily made by bending the wire around a forming pin of suitable shape to produce the desired configuration. When the cross heads are thus made it is practically impossible to bring the parts 1, 2, at the bight 3 of the cross head A, closely together. Hence, these parts stand separated at a considerable angle or the curve at the bight is of considerable radius as clearly shown in the drawings of said Stewart patent. I have found that when this opening at the bight 3 is relatively large the hook 4 rapidly straightens out under strain, so that the cross head becomes deformed and no longer properly engages, as shown in Fig. 2, with the twisted eye B formed on the opposite end of the tie. This difficulty can be wholly avoided by bringing the parts 1 and 2 of the cross head which lie beyond the hook 4 closely together, so that the part 2 bears directly upon the part 1, and the opening or angle at bight 3 becomes reduced to a minimum.

The parts 1 and 2 thus unitedly form a strut, which when the tie is engaged as shown in Fig. 2 bears on the twisted part of the tie in proximity to the eye B, and not only prevents said cross head hook coming out of the eye, but furnishes, through the bearing of part 2 on part 1, and of part 1 on the tie, a rigid support for said hook which prevents any tendency of that hook to straighten out when strain is applied thereto in the direction of arrow 7. This result is further secured by bending both parts of the loop in the same plane and at an angle 6 to the parallel juxtaposed parts immediately adjacent to the twist, and by forming the hook 4 at the bend.

As it is obvious that a cross head of this form cannot be produced by bending the wire around a suitably shaped forming pin, I have devised a new mechanism for making this cross head by first forming a bight and a hook, then twisting the parts of the bight together and then laterally compressing the resulting eye and hook into the shape here shown. Said mechanism is fully set forth and claimed in another application for Letters Patent, Serial No. 360,913 filed by me simultaneously herewith.

I claim:

In a wire bale-tie crosshead, a loop formed by twisting together the doubled over end and the standing portion of the tie wire and having both of its parts in the same plane, a bend in said loop located between the extremity thereof and the twist, a hook formed in one of said parts and at said bend, the other of said parts being straight from the bend to the extremity of the loop, and both parts being in substantially close contact from said extremity for a distance toward the hook.

In testimony whereof I have affixed my signature in presence of two witnesses.

WILLIAM D. FERRIS.

Witnesses:

JEANNIE HASTIE,

GERTRUDE T. PORTER.