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PATENTED FEB. 18, 1908.

E. YOUNG & J. J. SCHLICHTER.  
BALE TIE FASTENER.

APPLICATION FILED APR. 27, 1906.

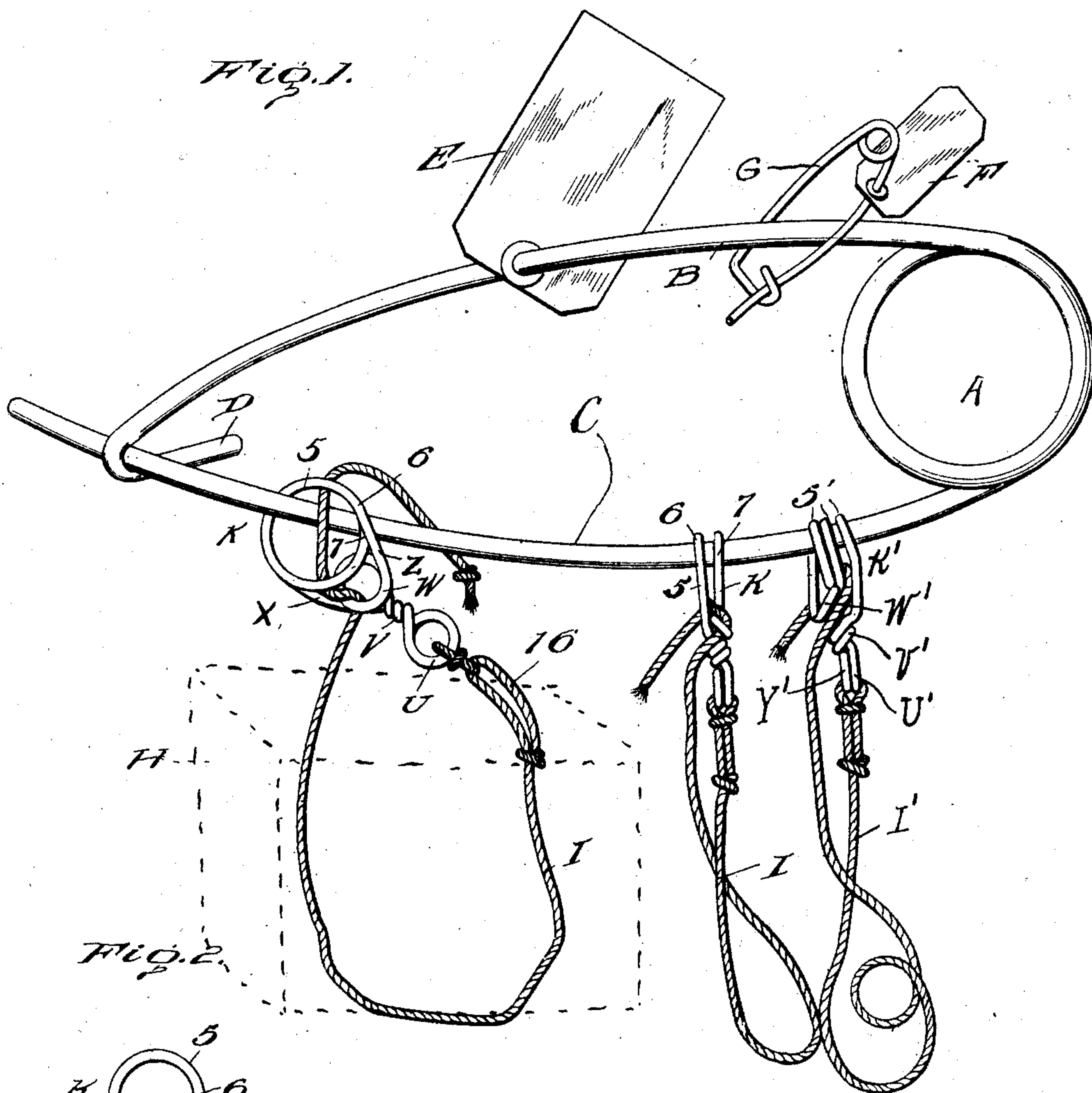
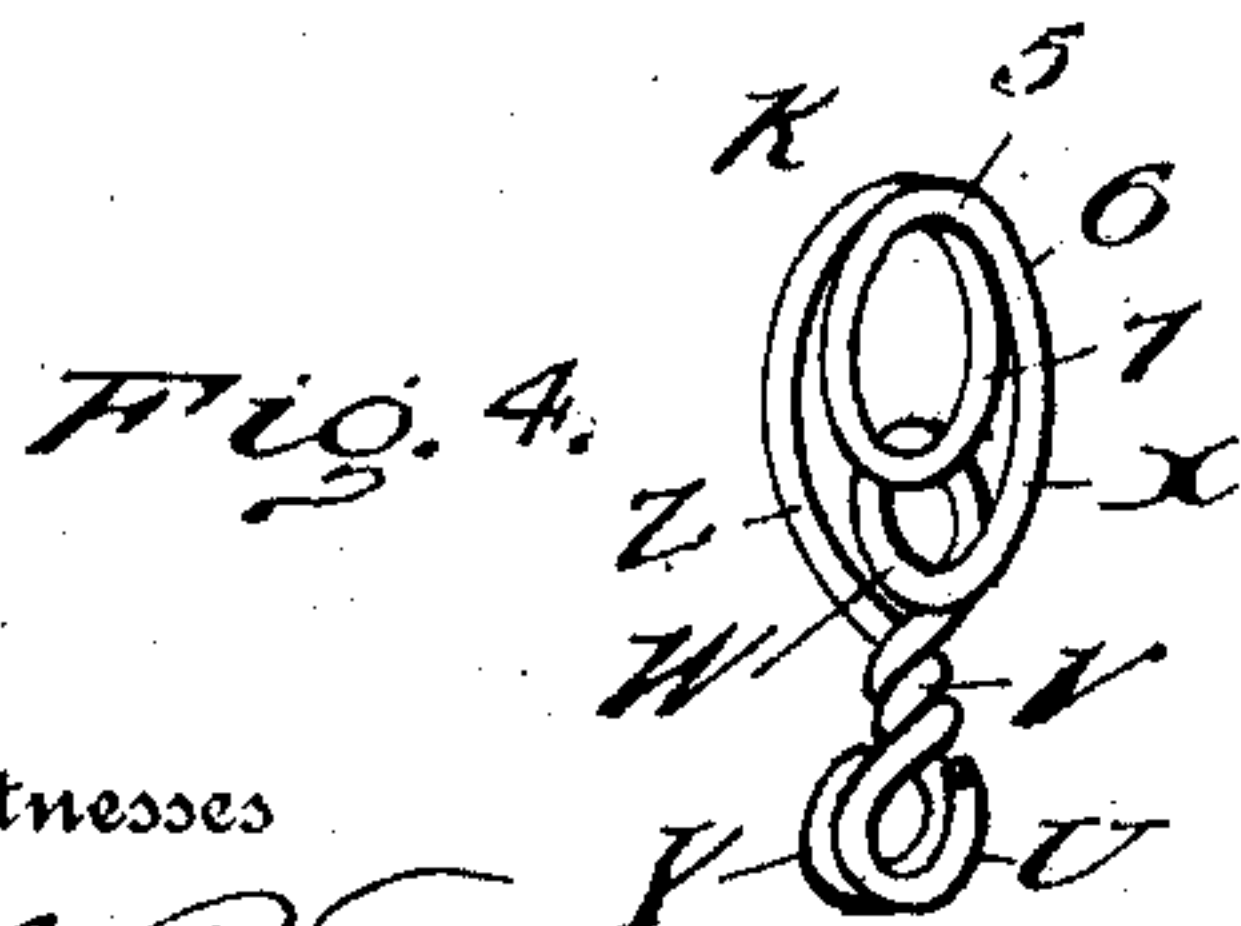
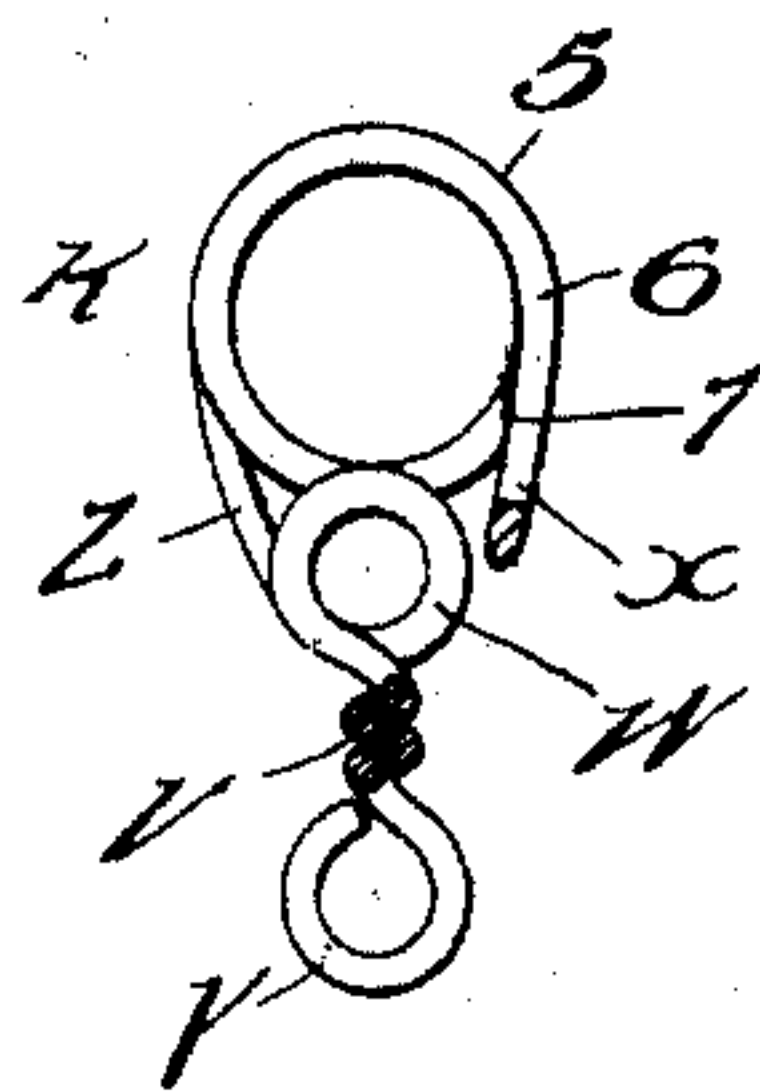
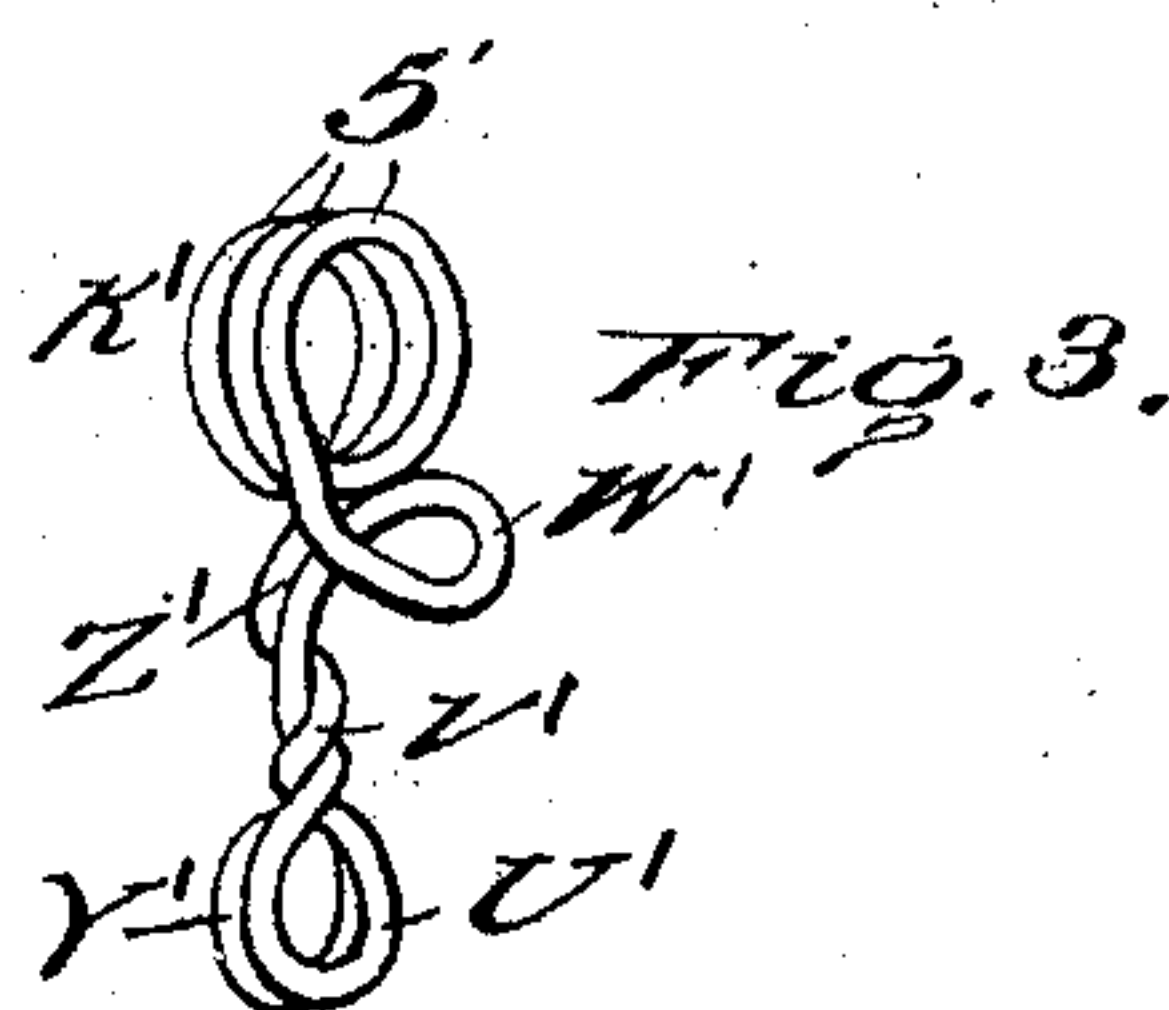


FIG. 2.



Witnesses

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# UNITED STATES PATENT OFFICE.

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## BALE-TIE FASTENER.

No. 879,232.

Specification of Letters Patent.

Patented Feb. 18, 1908.

Application filed April 27, 1905. Serial No. 257,610.

*To all whom it may concern:*

Be it known that we, EDWARD YOUNG and JOHN J. SCHLICHTER, citizens of the United States, residing at Portsmouth, in the county of Scioto, State of Ohio, have invented certain new and useful Improvements in Bale-Tie Fasteners; and we do hereby declare the following to be a full, clear, and exact description of the invention such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to bale tie fasteners, and has for its object to provide a simple fastener of this class which is formed entirely of wire and which will firmly and securely grip the tie in connection with which the fastener is used.

In the accompanying drawings, Figure 1 is a perspective view of several ties embodied in my invention and connected with a bundle connecting device, Fig. 2 is a sectional view of one form of fastener, Fig. 3 is a perspective view of a modified form of fastener, and, Fig. 4 is a detail perspective view of the form of fastener illustrated in Fig. 2.

In the drawings there is shown a bundle connecting device A which consists of spring arms B and C formed by bending a length of resilient wire approximately at its middle. These two arms have a normal tendency to separate and in order that they may be engaged with each other at their free ends, the free end of the arm B is hooked as at D and it is with this hook that the free end of the arm C is engageable for the purpose stated.

An identification tag E is shown as engaged upon the arm B. The other tags F are carried by a bar G which is substantially of the same construction as the member A and is engaged therewith, as is clearly shown in Fig. 1 of the drawings. A package is indicated at H, and passed around the package is a tie I which is attached to the fastener indicated in general by the character K, this fastener being engaged on the arm C of the member A. This fastener is formed of a suitable piece of wire which is bent approximately at its middle to form a helix including two convolutions 6 and 7 and beyond the

helix the portions of the wire are turned to extend in the same general direction as shown at  $x$  and  $z$  and the portion  $z$  is bent to form a convolution  $w$  which lies in close relation to the convolution 7. Beyond the convolution  $w$  the portions  $x$  and  $z$  of the wire are twisted together, as shown at  $v$ , and beyond the twisted portions the end portions are turned oppositely to form registering eyes  $y$  and  $u$ .

In use, one end of the tie I is connected with the eyes  $y$  and  $u$  and after being passed around the package H the tie is passed through the convolution  $w$  in such a way that the portion of the tie which lies between this convolution and its free end may be engaged between the convolutions 6 and 7, as clearly shown in Fig. 1, the tie being also wedged between the convolutions  $w$  and 7.

In Fig. 3 of the drawings, there is shown a slightly modified form of the tie which is substantially the same as the form just described except for the fact that three convolutions 5' are provided which correspond to the convolutions 5 of the preceding form and the convolutions  $w'$  which correspond to the convolution  $w$  of the first described form is slightly offset, as clearly shown. In this figure parts corresponding to parts in Figs. 1, 2, and 4, are indicated by the same reference characters primed.

What is claimed is:

The combination with a tie, of a fastener formed of a single piece of wire bent upon itself adjacent its middle to form the helix having the two convolutions 6 and 7 and having one of its arms beyond the helix bent upon itself to form the loop W which lies adjacent the helix, the said arms beyond the loop being twisted in opposite directions and in position to lie against each other to mutually form an eye, substantially as described.

In testimony whereof, we affix our signatures, in presence of two witnesses.

EDWARD YOUNG.

JOHN J. SCHLICHTER.

Witnesses:

JOSEPH T. KOUNTZ,  
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