Sept. 19, 1933. E. F. BAILEY 1,927,732

WIRE FASTENER

Filed Jan. 8, 1932

Fig. 1.

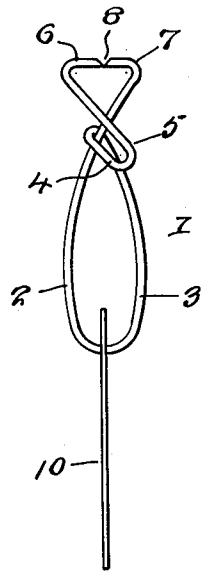


Fig. 2.

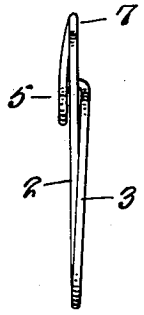


Fig. 3.

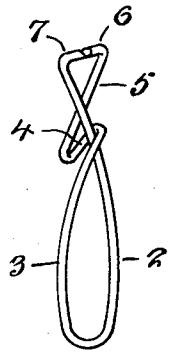


Fig. 4.

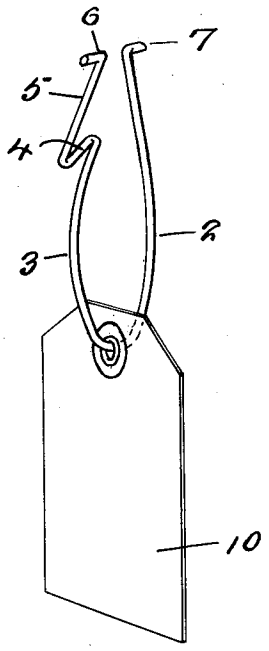


Fig. 8.

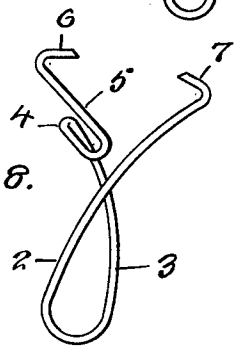


Fig. 5.

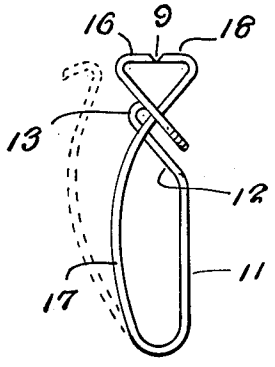


Fig. 6.

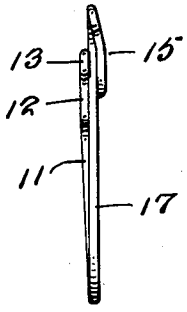
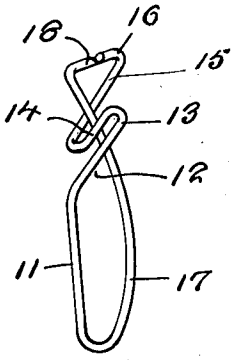


Fig. 7.



E. F. Bailey
INVENTOR

BY Victor J. Evans & Co.
ATTORNEY

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WIRE FASTENER

Eugene F. Bailey, Pittsburgh, Pa., assignor to Raymond A. Knoll, Pittsburgh, Pa.

Application January 8, 1932. Serial No. 585,578

6 Claims. (Cl. 24—261)

This invention relates to fasteners and more particularly to fasteners adapted for use in attaching tags or other identifying media or indicia temporarily on articles or materials.

An object of the invention is the provision of a fastener which will effectively grip and attach itself to the article or material to be identified.

Another object of the invention is the provision of such a fastener which will not damage the article or material.

A further and important object is the provision of a fastener which may spread open to support thereon one or a plurality of tags, which will readily and automatically spring to closed position and which will have its jaws automatically opened when the article to be identified is inserted between the jaws after which the jaws automatically close.

A still further object is the provision of a fastener readily and inexpensively formed from a single piece of wire.

Other objects and advantages will present themselves as the nature of the invention is more fully disclosed, reference being had to the accompanying drawing which forms part of this application.

In the drawing:

Figure 1 is an elevation of a fastener carrying an identifying tag.

Figure 2 is an edge view of the fastener.

Figure 3 is a perspective view thereof.

Figure 4 is an elevation showing the movable jaw of the fastener swung to open position to permit the arrangement of tags on the fastener.

Figure 5 is an elevation of another form of the fastener.

Figure 6 is an edge view thereof.

Figure 7 is a perspective view thereof.

Figure 8 is a perspective view of the construction disclosed by Figures 1 to 4 but showing the jaws fully opened.

My fastener is formed, by a suitable machine, from a single piece of tempered steel wire. This wire 1 is bent intermediate its ends, but not at its mid-point to form a shorter leg 2 and a longer leg 3. In the showing of Figures 1 to 4 of the drawing the legs 2 and 3 are arched or bowed away from each other, but the said legs, adjacent to the jaw end of the fastener cross each other. At the point of crossing of the legs 2 and 3, the longer leg 3 is rounded upon itself and is formed with an angle substantially U-shaped bent portion 4 which is directed toward the bottom of the fastener. The upper arm of this bent portion is indicated for distinction by the numeral 5 and merges into an inwardly directed angle and which is arranged transversely with respect to the central longitudinal plane of the fastener. This end 6 provides one of the jaws of the fastener, and the shorter leg 2 has its upper end similarly bent to provide the second jaw 7 of the fastener. The cooperating jaws 6 and 7 have pointed ends and these points are formed by beveling the extremities of the jaws 6 and 7 in opposite directions, as indicated by the numeral 8. Thus it will be noted that the sharpened ends of the jaws 6 and 7 are arranged upon the lower or inner edges thereof. This is an important feature of the invention, as the outer substantially V-shaped space 9, between the pointed ends of the jaws affords an entrance mouth for the article or material on which the fastener is temporarily attached. Also by arranging the jaws 6 and 7 in the same plane, and not at angles with respect to each other it will be apparent that the jaws may be moved away from each other without inflicting injury to the article or material engaged thereby.

The arms 4 and 5 are arranged to one side of the leg 3, a distance approximately equaling the thickness of the wire strand 1. These arms thus afford a combined guide and keeper for the leg 2 so that the jaw 7 carried by the leg 2 will have its pointed end normally in contact with the pointed end of the jaw 6 and also this combined guide and keeper prevents the lateral movement of the leg 2 with respect to the leg 3. The combined guide and keeper for the leg 2 reinforces and strengthens the leg 3 to an extent that will render the said leg 3 practically rigid, while the arched or bowed leg 2 will, upon pressure, be forced through the guide and keeper to open the jaws of the fastener and to permit of one of a plurality of tags 10 being passed over the leg 2, while a release of such pressure will permit of the leg 2 springing between the keeper and the upper portion of the leg 3 and thus automatically bring the pointed end of the jaw 7 against the pointed end of the jaw 6.

The above description refers particularly to Figures 1 to 4 and Figure 8 of the drawing, but the devices disclosed in the remaining figures are practically of a similar construction. The main difference between the showing of Figs. 5, 6 and 7 and the remaining figures is that the longer leg 11 is straight and is bent adjacent to its outer or jaw end at an upward angle, as indicated by the numeral 12 to provide an arm. This arm his its outer end rounded upon itself, as at

13, the said rounded portion merging into an outer arm 14 spaced from but arranged in the same angle as the arm 12. The outer end of the arm 14 is bent upon itself and formed with an angle extension 15 that merges into an inwardly directed jaw 16 similar to the jaw 6. The second leg 17 of the fastener is bowed or arched outwardly with respect to the straight leg and has its upper portion received in the combined guide and keeper provided by the arms 12 and 14 and the extension 15. The outer end of the bowed or arched arm 17 has an angle extension that provides a jaw 18, and the contacting ends of these jaws are beveled or cut at opposite angles from their outer surfaces to provide inner cooperating points and an outer substantially V-shaped entrance mouth or passage for the fabric or other article with which the jaws temporarily impringingly engage. The material is gripped by the jaws by passing the said material through the entrance mouth provided by the beveled cooperating ends of the jaws, and by slightly moving the jaw 18 laterally away from the jaw 16, the leg 17 will automatically spring to open position as disclosed by the dotted lines in Figure 5 so that one or a plurality of tags may be supported between the legs 11 and 17. When the leg 17 is sprung between the combined guide and keeper provided by the arms 12, 14 and 15 the jaw 18 may be moved by contact with the said arms to bring its pointed end into contacting engagement with the pointed or sharpened end of the jaw 16.

To those skilled in the art to which this invention relates it will be apparent that the jaw construction of my fastener permits the device being readily inserted through and securely attaching itself to an article without damage to such article and that the said jaws will move in a straight line away from each other when the fastener is to be removed from the article; that the guide and keeper hold the movable jaw 7 or 16 in positive alinement and in contact with the stationary jaw, and further the important feature of permitting the movable jaw and the leg on which it is attached being moved or sprung away from the stationary jaw and the stationary leg so that not only the indicia bearing tag of a store or factory may be supported on the fastener but other tags bearing other indicia, such for instance, as a "sold" tag or a "special sale" tag used when the article is sold or when the selling price of the article is reduced, may be also arranged upon the fastener after, and not before, the fastener is wholly constructed. It should also be apparent that the fastener may be cheaply manufactured in quantities by a suitable machine and the individual fasteners thus produced delivered from the machine in determined quantities into a box or like receptacle so that the same may be shipped to the merchant or to the purchaser without handling, which further reduces the cost of production and the number of machines employed.

Having described the invention, I claim:

1. A fastener formed from a single piece of tempered steel wire bent upon itself to provide two legs which extend in the same direction and which cross each other at points adjacent to their ends, one of said legs being bent laterally upon itself to provide an open keeper which normally receives the other leg therein, and the ends of the legs having inwardly directed meeting jaws.

2. A fastener formed from a single piece of tempered steel wire bent upon itself to provide two legs which extend in the same direction and which cross each other at points adjacent to their outer ends, one of said legs being bent to provide an open keeper in which other leg is normally received, and the ends of the legs having inwardly directed jaws, whose confronting and contacting ends are notched to provide inner sharpened points.

3. A fastener formed from a single piece of tempered steel wire bent upon itself to provide two legs which extend in the same direction but which cross each other adjacent to their outer ends, one of said legs being bent laterally upon itself to add to the rigidity of said leg and likewise afford a keeper in which the second leg is normally received and through which keeper the said second leg may be passed when pressure is exerted thereagainst, and both of said legs having their ends bent toward each other to provide jaws whose ends contact and which have their outer portions beveled to provide inner points.

4. A fastener formed from a single piece of tempered steel wire to provide two legs, which cross each other adjacent to their outer ends, one of said legs being longer than the other and the longer leg being bent laterally upon itself to provide a substantially U-shaped keeper into which the second leg is designed to spring when the device is in fastening position and through which keeper the said second leg may pass outwardly therefrom when pressure is exerted upon said leg, both of said legs having their outer ends bent inwardly to provide jaws whose ends are held in contacting engagement by the keeper and the said jaws being beveled in opposite directions from their outer surface to provide inner points which are in contact with each other.

5. A fastener formed from a single piece of tempered steel wire rounded upon itself to provide legs that extend in the same direction and which cross each other adjacent to their outer ends, one of the legs being longer than the other end being bent laterally and angularly upon itself to render the said leg rigid and to afford a keeper for the second and swingable leg which swingable leg is movable through the keeper when pressure is exerted thereagainst, said legs having their ends bent and extended toward each other in the same plane and having their ends cut at opposite angles to provide inner points which are held in contact with each other by the inherent spring of the swingable leg and by the contacting engagement of the swingable leg with the closed end of the keeper.

6. A fastener formed of a strand of spring wire rolled upon itself to provide a pair of legs which cross each other adjacent the outer ends thereof, one of said legs being rounded and formed with a lateral substantially U-shaped portion, to add rigidity thereto and provide a keeper which is open at one of its ends and in which the second leg is normally received, and jaws on the outer ends of the legs and forced into contact with each other by the second leg when the latter is in contact with the closed end of the keeper.

EUGENE F. BAILEY.