May 28, 1957 E. T. ODER 2,793,413

COMBINATION LOOP AND FASTENING DEVICE

Filed July 20, 1948

Fig. 1

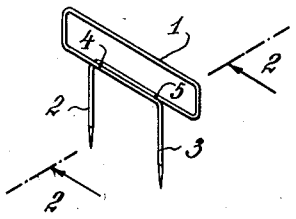


Fig. 2,



Fig. 3

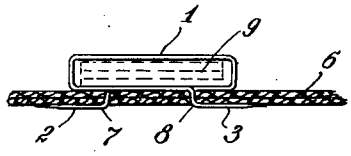


Fig. 4,

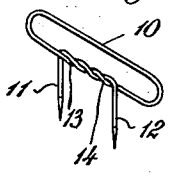


Fig. 5

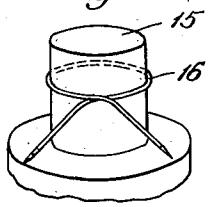


Fig. 6,

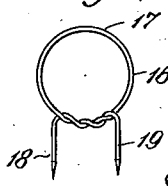


Fig. 7,

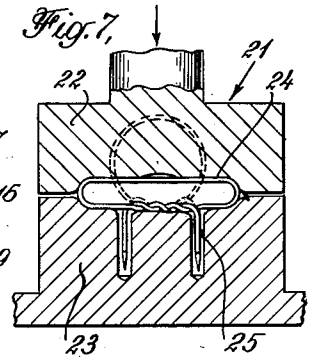


Fig. 8,

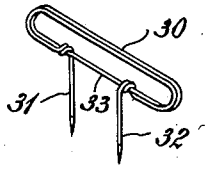


Fig. 11,

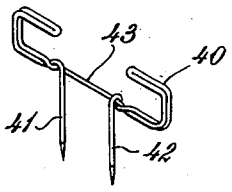


Fig. 12,

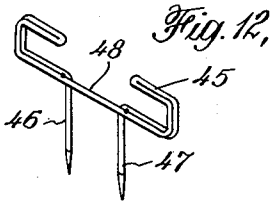


Fig. 9,

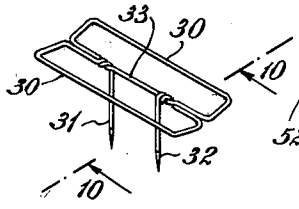


Fig. 13,

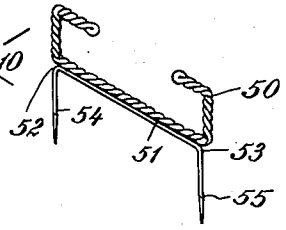


Fig. 14,

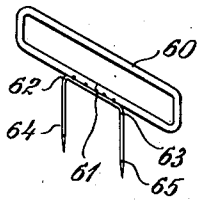
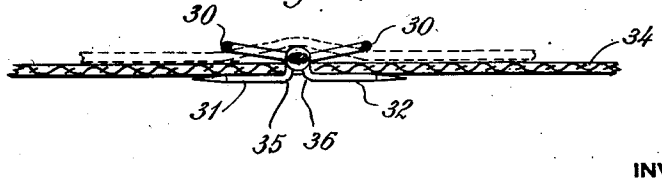


Fig. 10,



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COMBINATION LOOP AND FASTENING DEVICE

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3 Claims. (Cl. 24—13)

This invention relates to a combination self-supporting wire loop and fastening device and to methods of forming and manufacturing the same, prefereably of a single piece of wire. The principal object is to provide a self-supporting loop having a plurality of dependent pin-type penetrating and attaching members at its underside, which is simple and inexpensive to manufacture and which may be readily affixed by hand, or otherwise, to cloth, fabrics and other materials where an external loop may be useful or desired for holding or retaining some other material or object within the loop in a desired location on the first material.

A preferred embodiment of the invention provides a unitary self-supporting flattened loop with integral dependent penetrating and attaching members formed of a single piece or length of wire, wherein the said members are maintained in substantially mutually spaced or separated relation affixed to the underside of the loop itself by fusedly uniting the loop and said members as by welding or soldering, or mechanically, as by twisting that portion of the wire of the penetrating members adjacent the loop around the underside of the loop. In this way, the loop is rendered self-supporting and remains undeformable in application and attachment. The pin-type penetrating and attaching members are also restrained against movement along the loop in mutually spaced and fixed relation ready to be pushed through material, manually or otherwise, and bent on the underside of the material to hold the loop in the desired location.

The combination loop and fastening device of my invention finds ready application in both the garment and millinery industries. For example, as a means of saving the sewing of belt loops on clothing, particularly where a given size lady's garment is intended to be sold for varied length waist lines. With my device the loops may be adjusted and fixed in position on the garment to accommodate either long or short torsos, and, furthermore, the loops may be removed prior to laundering or cleaning the garment and belt, and replaced thereafter.

In the millinery industry the combination loop and fastening device of my invention finds application in providing a ready substitute for sewing trimming, or artificial flowers, and the like, to the hat body.

For holding flowers and corsages on garments the florist and the wearer are now almost wholly dependent on the use of a staright pin or the like. With the combination loop and fastening device of my invention, particularly the open-loop form, it is a simple matter to affix a flower or corsage to a gown or suit without damage to the garment and at the same time effect an ease and security of attachment heretofore unattainable.

The nature of my invention and the methods of forming and manufacturing the combination self-supporting loop and fastening device of wire will appear more fully from the accompanying description and drawings, and it will be particularly pointed out in the appended claims.

The drawings show both preferred forms and other forms of the new article of manufacture in accordance with my invention, together with illustrations of methods and arrangements for manufacturing the same.

In the drawings:

Fig. 1 is a perspective view of a preferred form of the combination closed loop and fastening device wherein the loop portion is fusedly united with itself as by welding or soldering and with the penetrating and attaching members dependent from the undersides of the loop at substantially spaced points;

Fig. 2 is an enlarged cross-sectional view taken along 2—2 of Fig. 1;

Fig. 3 is a view partly in section, showing the combination loop and fastening device applied to a piece of material with the penetrating and attaching members bent so as to hold the loop in the desired location.

Fig. 4 is a perspective view of a form of the combination closed loop and fastening device wherein those portions of the penetrating members adjacent the loop areaffixed to the underside of the loop mechanically by twisting the same around the underside of the loop;

Figs. 5, 6 and 7 illustrate a method and arranements for forming and making the device of Fig. 4;

Fig. 8 is a perspective view of a modified form of the combination closed loop and fastening-device wherein the outer loop portion is formed of a double strand of wire and the portions of the penetrating members adjacent the loop are twisted around the underside of the loop;

Fig. 9 shows the device of Fig. 8 with the two strands of the loop bent outwardly;

Fig. 10 shows the device of Fig. 9 applied to a piece of material and supporting a belt or ribbon;

Fig. 11 is a perspective view of a form of combination open loop and fastening device wherein the penetrating members are twisted around the underside of the loop;

Fig. 12 is a perspective view of a form of combination open loop and fastening device similar to that of Fig. 11, but wherein those portions of the wire of the penetrating members adjacent the underside of the loop are fusedly united as by welding or soldering;

Fig. 13 is a perspective view of a form of a two-piece combination closed loop and fastening device wherein the loop is formed of twisted wires and the penetrating members are formed of a separate wire fusedly united to the loop; and

Fig. 14 is a perspective view of a form of a two-piece combination closed loop and fastening device, similar to Fig. 13, wherein the loop portion is formed of a single strand of wire fusedly united to the penetrating members.

Referring now to Fig. 1, the manner of making the combination closed lop and fastening device from a single piece or length of wire entails the bending of the wire at right angles at four points to form the loop **1**. The penetrating and attaching members **2**, **3** are formed by the bending of the wire at right angles at two points.

Thereupon, that portion of the wire of the penetrating member **2** adjacent the underside of the loop **1** is fusedly united to the wire of the loop at **4** as by welding or soldering, and the wire of the penetrating member **3** is likewise fusedly united to the wire of the loop at **5**. In this way, the loop **1** becomes self-supporting and the penetrating and attaching members **2**, **3** become restrained against movement along the loop in mutually spaced and fixed relation ready to be pushed through material, manually or otherwise, and then bent as shown in Fig. 3.

Fig. 2 shows partly in cross-section, an end view of the loop **1** with the penetrating and attaching members **2**, **3**, ready and in position to be pushed through some material.

Fig. 3 shows the device of Fig. 1, applied to a material

6, with the penetrating and attaching members 2, 3, bent as at 7, 8 to hold the loop 1 in a desired location on the material 6, and to hold or support the second material 9 within the loop 1.

Fig. 4 shows a modified form of a combination closed loop 10, and penetrating and attaching members 11, 12, wherein the penetrating and attaching members are affixed to the underside of the loop 10 by twisting the same around the underside of the loop 10 as at 13, 14. In this way the loop 10 becomes self-supporting and the penetrating and attaching members 11, 12 become restrained against movement along the underside of the loop 10 in mutually spaced and fixed relation.

The manner of forming and making the device of Fig. 4 is shown in Figs. 5–7, inclusive. Referring first to Fig. 5, a cylindrical former 15 provides a means of forming a circular loop from a single piece of wire 16. The wire 16 is then removed from the former 15, and the two ends thereof 18, 19 are twisted around the underside of the loop 17 as shown in Fig. 6, the diameter of the loop 17 being sufficiently large to permit of the same. In this way a closed circular loop 17 having depending penetrating and attaching members 18, 19 is formed. To obtain an elongated loop a two-piece die or press 21, as shown in Fig. 7, may be used to flatten the circular loop 17 of the device of Fig. 6. Thus, upper and lower members 22, 23 having appropriately shaped recesses 24, 25 may be employed. By inserting the circular loop device of Fig. 6 in the lower portion 23 of the die or press 21, and lowering the upper portion 22 to the position shown in Fig. 7, the circular loop device of Fig. 6 is formed into the elongated closed-loop device as shown in Fig. 4.

The closed-loop device of Fig. 8 may be formed and made in a manner similar to the closed-loop device of Fig. 4 except the loop 30 is formed of two strands of wire instead of one and the penetrating and attaching members 31, 32 are separately twisted about the single strand 33 at the underside of the loop 30. In this way the loop 30 becomes self-supporting and the penetrating and attaching members 31, 32 become restrained against movement along the underside of the loop 30 in mutually spaced and fixed relation.

Fig. 9 shows how the two strands of the loop 30 as shown in Fig. 8, may be separated by bending apart to provide a loop for holding a ribbon or belt 33 as shown in Fig. 10 on a material 34 in a desired location, the penetrating and attaching members 31, 32 having been bent as at 35, 36.

A modified open-loop form of the device is shown in Fig. 11. Here, the open loop 40 is formed of two strands of wire and the penetrating and attaching members 41, 42 are separately twisted about a single strand 43 at the underside of the open loop 40. In this way the loop 40 becomes self-supporting and the penetrating and attaching members 41, 42 become restrained against movement along the underside of the loop 40 in mutually spaced and fixed relation.

The device of Fig. 11 may be formed and made from a single piece of wire in a manner similar to that employed in the operations described by reference to Figs. 5 and 7.

A form of open-loop device made from a single piece of wire is shown in Fig. 12. Here the open loop 45 is formed of two strands of wire and the penetrating and attaching members 46, 47 are fusedly united to the single strand 48 at the underside of the loop 45, as by welding or soldering. In this way, the open loop 45 becomes self-supporting and the penetrating and attaching members 46, 47 become restrained against movement along the under side of the loop 45 in mutually spaced and fixed relation.

The device of Fig. 12 may be formed and made by bending in a manner similar to that described in connection with the device of Fig. 1.

The modifications shown in Figs. 13 and 14 are two-piece devices as distinguished from the unitary devices shown in the other drawings. Fig. 13 is formed and made of a twisted wire two-strand open-loop portion 50 and a single wire strand 51 fusedly united to the underside of the open loop 50 as by welding or soldering. The strand of wire 5 is bent at points 52, 53, to form and provide the penetrating and attaching members 54, 55.

The single-strand closed-loop device of Fig. 14 is formed of two pieces of wire, one, the loop 60 and, two, the portion 61 fusedly united to the underside of the loop 60 as by soldering or welding and bent at the points 62, 63, to provide the penetrating and attaching members 64, 65.

I wish it to be understood that my invention is not limited to the mere details, construction or arrangement of the several forms of the combination loop and fastening device disclosed for it is plain that various modifications might be made within the spirit and scope of the invention, and instead of circular cross-section wire other cross-sectional shapes may be employed such as so-called ribbon wire and the like, all without departing from the scope of the appended claims.

I claim:

1. A unitary self-supporting wire loop and fastening device formed of a single length of wire comprising a flattened loop of at least one strand having relatively long and substantially parallel upper and under sides, and relatively short U-shaped ends joining said sides, and two pin-type penetrating and attaching members one at each end of said wire length and formed by bending at two spaced points on the under side of said loop, each point being substantially distant from each of the said U-shaped ends, said members depending from said loop at said spaced points in substantially ninety degree angular relation to the under side thereof, and means uniting a strand of said loop with the upper part of each of said members at each said points, whereby said attaching members are restrained against movement along the under side of the loop and the loop itself is rendered substantially undeformable.

2. A unitary self-supporting wire loop and fastening device formed of a single length of wire comprising a flattened loop of at least one strand having relatively long and substantially parallel upper and under sides, and relatively short U-shaped ends joining said sides, and two pin-type penetrating and attaching members one at each end of said wire length and formed by bending at two spaced points on the under side of said loop, each point being substantially distant from each of the said U-shaped ends, said members depending from said loop at said spaced points in substantially ninety degree angular relation to the under side thereof, and means fusedly uniting a strand of said loop with the upper part of each of said members at each of said points, whereby said attaching members are restrained against movement along the under side of the loop and the loop itself is rendered substantially undeformable.

3. A unitary self-supporting wire loop and fastening device formed of a single length of wire comprising a flattened loop of a plurality of strands having relatively long and substantially parallel upper and under sides, and relatively short U-shaped ends joining said sides, and two pin-type penetrating and attaching members one at each end of said wire length and formed by bending at two spaced points on the under side of said loop, each point being substantially distant from each of the U-shaped ends, said members depending from said loop at said spaced points in substantially ninety degree angular relation to the under side thereof and means uniting the strands of said loop with the upper part of each of said members at each of said points, whereby said attaching members are restrained against movement along the underside of the loop and the loop itself is rendered substantially undeformable.

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