United States Patent [19]

Druskin

[11] 3,739,433

[45] June 19, 1973

[54] **SNAP CLASP FOR BRACELETS**

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[22] Filed: **Dec. 16, 1971**

[21] Appl. No.: **208,759**

[52] **U.S. Cl.** ..... **24/230 CF,** 24/230 SL

[51] **Int. Cl.** **F16g 7/04**

[58] **Field of Search** ..... 24/230 CF, 230 SL, 24/230 F, 230 SC, 230 NP, 230 G, 213 B, 241 S

[56] **References Cited**

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Primary Examiner—James T. McCall
Assistant Examiner—Darrell Marquette
Attorney—Michael Ebert

[57] **ABSTRACT**

A snap clasp for a bracelet or other article of jewelry, the clasp being constituted by a compressible male element insertable in a female element. The male element is formed by a strip of resilient metal folded to define a tongue having upper and lower sections, the rear end of the upper section being bent upwardly to form a limit wall which overlies the rear end of the lower section. One end of the bracelet is attached to the back of the limit wall. The female element is formed of sheet metal cut and bent to define a base wall, a pair of parallel side walls and a front wall extending between the upper front corners of the side walls, the space between the base and front walls serving as an inlet for the tongue. The upper section of the male element includes a raised dimple which falls behind the front wall of the female element when the tongue is fully inserted and prevents withdrawal of the male element unless the tongue is first squeezed to reduce the angle between the upper and lower sections.

8 Claims, 10 Drawing Figures

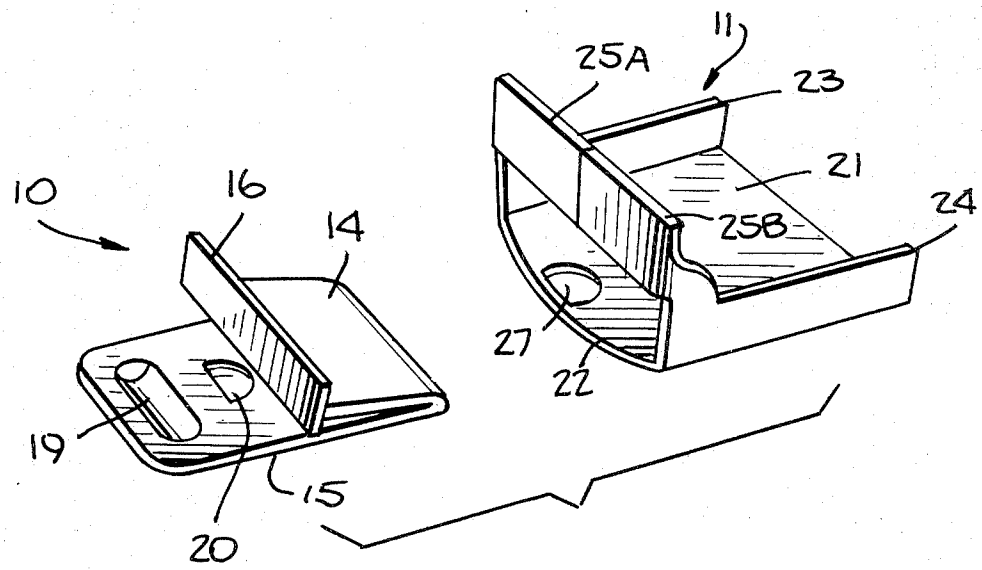


Fig. 1.

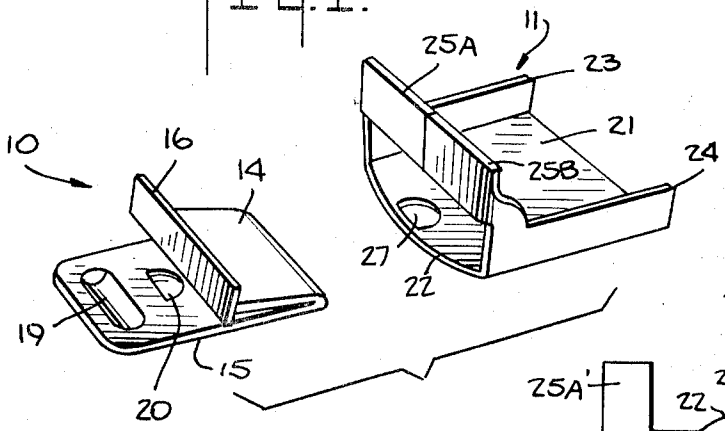
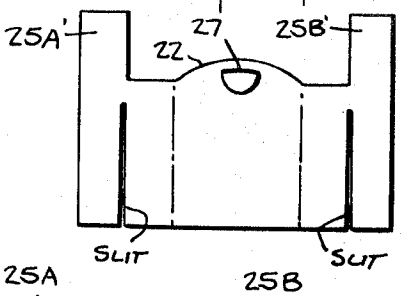


Fig. 10.



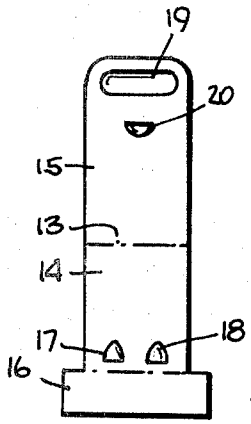


Fig. 3.

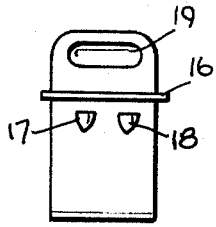


Fig. 4.

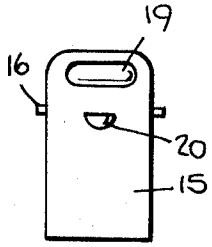


Fig. 5.

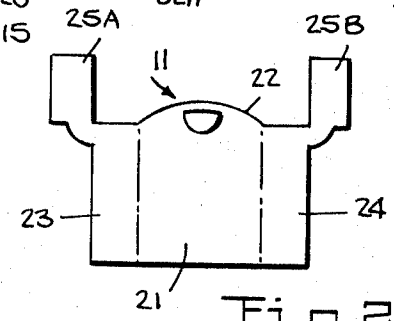


Fig. 2.

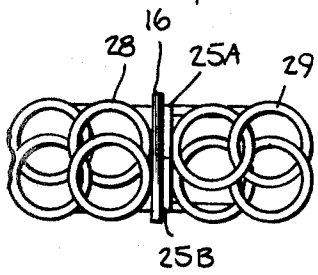


Fig. 6.

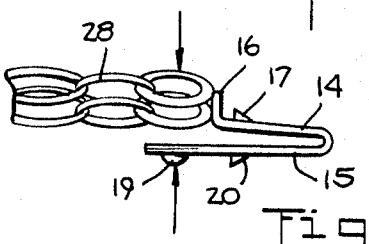


Fig. 8.

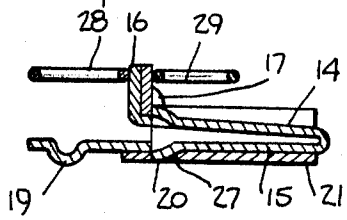
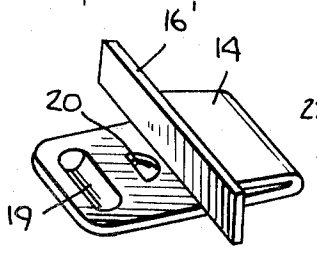
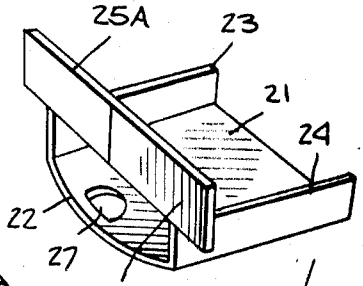


Fig. 7.

Fig. 9.





SNAP CLASP FOR BRACELETS

BACKGROUND OF THE INVENTION

This invention relates generally to snap clasps for bracelets and other articles of jewelry, and more particularly to a snap clasp adapted to be connected to bracelets having a broad range of widths and thicknesses.

Bracelets, necklaces and other related forms of jewelry are essentially constituted by a band of link chain or flexible material which defines a closed loop when the ends of the band are joined together about the wrist or the neck or ankle of the wearer. To this end, the conventional practice is to attach the ends of the band to the separable elements of a snap clasp having a male element or catch which is receivable within a keeper or female element.

In a snap clasp of the type disclosed in my prior U.S. Pat. No. 3,269,145 and also in the Geldwerth U.S. Pat. Nos. 3,308,517 and 2,952,058, the male element includes a depressible spring section having an actuating tab or pin extending upwardly therefrom, the male element entering a slot in the female element and locking therein. In order to release the clasp, the pin must be depressed.

There are several practical drawbacks to a snap clasp having an actuating pin of the above-described type. Since the pin, to be accessible and actuatable, must project somewhat beyond the surface of the bracelet, because it sticks out it tends to catch on clothing, particularly knitted fabrics. Also, the pin acts to impose a limit on the thickness of the bracelet band that can be attached to the clasp, for in order for the pin to project beyond the bracelet, the thickness of the bracelet must be significantly less than the height of the pin. This rules out the use of the clasp with many attractive bracelets which are relatively thick. Moreover, because the tip of the pin is welded onto the male element, it may, with repeated use, be broken off, thereby rendering the clasp inoperative.

SUMMARY OF THE INVENTION

In view of the foregoing, it is the main object of this invention to provide a snap clasp which obviates the need for an actuating pin and which affords a high degree of security.

More particularly, it is an object of this invention to provide a clasp which in no way interferes with the ornamental aspects of the bracelet or necklace to which it is attached, the clasp being in a form which can accommodate bracelets or necklaces of different width and thickness, so that the same basic clasp structure can be used with a great variety of bracelets and necklaces.

Also, an object of the invention is to provide a snap clasp making use of the least amount of metal consistent with an effective mechanical coupling. Since clasps are often made of precious metal, this factor is an important practical advantage. In a clasp in accordance with the invention, the male and female elements are each formed from a die-cut blank which may be quickly bent or folded into the desired formation, the waste of metal being minimized.

Briefly stated, these objects are attained in a snap clasp provided with a female element attachable to one end of a bracelet or necklace, and a male element attachable to the other end thereof.

The female element is fabricated from a single sheet of metal which is die-cut and bent to create a keeper structure having a base wall, a pair of parallel side walls and a raised front or baffle wall extending between the upper front corners of the side walls, the space between the raised baffle wall and the base wall defining an inlet to receive the male element. One end of the bracelet is welded or otherwise attached to the back surface of the front wall.

The male element is fabricated from a strip of the same metal which is folded to form a compressible tongue constituted by angled upper and lower sections insertable in the inlet of the female element. The rear end of the upper section is bent upwardly to form a limit wall that abuts the baffle wall of the female element when the male element is fully inserted therein. The other end of the bracelet is welded to the back of the limit wall and extends therefrom to overlie the rear end of the lower section of the tongue whereby the tongue may be squeezed by applying finger pressure to the extending end portion of the bracelet and the rear end of the lower section.

The upper section of the tongue is provided with a pair of dimples adjacent the limit wall, the dimples lying against the back of the baffle wall of the female element when the male element is fully inserted therein to prevent withdrawal of the male element unless the tongue is compressed to effect disengagement of the dimples. To provide dual security, the lower section of the tongue has a dimple formed thereon which falls into a detent hole in the base wall of the female element when the male element is fully inserted, and which is retracted from the hole only when the tongue is compressed.

Thus both sections of the male-element tongue are latched onto the female element when these elements are intercoupled, thereby providing a high measure of security. Decoupling of the element is effected by a simple squeezing action, without the need for an actuating pin and without the disadvantages occasioned thereby.

OUTLINE OF THE DRAWING

For a better understanding of the invention as well as other objects and further features thereof, reference is made to the following detailed description to be read in conjunction with the accompanying drawing, wherein:

FIG. 1 is a perspective view of the male and female elements of a preferred embodiment of a snap clasp in accordance with the invention;

FIG. 2 shows in plan view the blank for making the female element;

FIG. 3 shows, in plan view, the blank for making the male element;

FIG. 4 is a top plan view of the male element;

FIG. 5 is a bottom plan view of the male element;

FIG. 6 is a plan view showing a bracelet whose opposite ends are attached to the male and female elements of the clasp shown in FIG. 1;

FIG. 7 illustrates the manner in which the elements are interlocked;

FIG. 8 is a side view of the end of the bracelet which is connected to the male element;

FIG. 9 is a perspective view of a modified form of clasp composed of male and female elements, and

FIG. 10 shows the blank for the female element of the modified clasp.

DESCRIPTION OF THE INVENTION

Referring now to FIG. 1, there is shown a snap clasp in accordance with the invention, comprising a catch or male element, generally designated by numeral 10, which is insertable in a keeper or female element, generally designated by numeral 11.

The male element 10, which is formed of a single blank of resilient sheet metal such as gold or silver (see FIG. 3), is die cut and folded along fold line 13 to form a compressible tongue having an upper section 14 and a somewhat longer lower section 15 extending at an angle to the upper section. The rear end of the upper section is bent upwardly to define a limit wall 16.

Formed on upper section 14 adjacent the front of limit wall 16, are a pair of spaced dimples 17 and 18 which bulge above the top surface of this section. The rear end of the lower section 15 which extends beyond limit wall 16, is provided with a transverse boss 19 near the rear edge of this section, and a single dimple 20 which is more inwardly disposed. Boss 19 and dimple 20 protrude from the bottom surface of the lower section. When the upper and lower sections are pressed together, the angle therebetween is reduced, the angle normally being about 20°.

Female element 11 is formed, as shown in FIG. 2, of a single blank of the same metal as that of the male element. The blank is die cut and bent to form a base wall 21 whose outwardly curved front end provides a slight ledge 22 to facilitate entry of the male element. Also provided are a pair of parallel side walls 23 and 24. Extending between the upper front corners of side walls 23 and 24 are wings 25A and 25B which touch each other to define a raised front or baffle wall whose dimensions match those of limit wall 16 of the male element. The space between the baffle wall 25A–25B and base wall 21, forms an inlet 26 to receive the male element. At the center of ledge 22 is a small detent hole 27.

As shown in FIG. 6, one end 28 of a link chain bracelet or other article of jewelry, is welded to the back of limit wall 16 of the male element, while the other end 29 of the bracelet is welded to the back of baffle wall 25A–25B of the female element. These two walls abut each other when the male element is fully inserted in the female element. When this takes place, dimples 17 and 18 on the upper section, as indicated in FIG. 7, lie against the back of baffle wall 25A–25B, while dimple 20 on the lower section is socketed within hole 27. In this way, both sections of the male element are latched to the female element and the bracelet forms a complete loop.

In order to pull apart the clasp to open the bracelet, it is necessary to retract the dimples. This is done by compressing the upper and lower sections of the male element between the fingers. This is easily done, as shown in FIG. 8, by applying one finger to the end portion 28 of the bracelet attached to wall 16 which overlies the rear end of lower section 15, and applying another finger to this rear end. The upper and lower sections of the male element are brought closer together, thereby disengaging the dimples from the female element. The male element may then be withdrawn from the female element without difficulty.

Boss 19 serves as a braille marker to sense the position of the rear end of the lower section of the male element. Thus, to open the clasp without looking, one simply feels the male element to find the proper squeeze position which is established by the boss.

Since the clasp has no projecting pin, the thickness of the bracelet is immaterial, for it does not interfere with the operation of the clasp. In effect, the end portion of the bracelet attached to the male element acts as the actuating member therefor. Both the male and female elements are concealed by the ends of the bracelet, except for the thin edges of the limit and baffle walls so that the clasp in no way obscures or modifies the ornamental appearance of the bracelet.

Since bracelets come in a range of widths, the male and female elements, as shown in FIG. 9 may be made with a relatively wide limit wall 16′ and a baffle 25A′ and 25B′, respectively, to accommodate the broadest bracelet in the range. These walls may be snipped or cut to reduce their width in order to accommodate narrower bracelets. In practice, as a further security measure, one may attach a removable latching chain to join the male element to the female element.

While there have been shown and described preferred embodiments of a snap clasp for bracelets, it will be appreciated that many changes and modifications may be made therein without, however, departing from the essential spirit of the invention. For example, instead of having a limit wall on the male element which is bent upwardly from the upper section thereof, this limit may be formed by a lateral extension on the end of the upper section, which extension strikes the baffle wall of the female element when the male element is fully inserted. To make this modification, the wall 16 of the blank shown in FIG. 3 is maintained in the same plane as section 14, rather than being bent upwardly therefrom. In that event, the bracelet shown must be soldered to the junction between section 14 and wall 16.

Also, while in the clasp shown in FIG. 1, dimple 20 in the lower section of the tongue cooperates with a hole in the base of the female element, in practice this relationship may be reversed. Moreover, other locking means may be used in place of dimples, such as slots or holes in the tongue, arranged to cooperate with tabs in the female element, or vice versa.

I claim:

1. A snap clasp for a bracelet or other article of jewelry, said clasp comprising:

a. a female element formed of metallic sheet material cut and bent to form a base wall, a pair of parallel side walls, and a baffle wall extending between the upper front corners of the side walls, the space between the base wall and the baffle wall defining an inlet for receiving a male element, one end of said bracelet being secured to the back of the baffle wall;

b. a male element constituted by a compressible tongue formed by a metallic strip folded to define angled upper and lower sections, the rear end of the upper section having a limiting wall which when the tongue is fully inserted in the inlet of the female element, strikes the baffle wall of the female element, the other end of the bracelet being secured to the rear end of the upper section whereby finger pressure may be applied to the other end of the bracelet relative to the rear end of the lower

section to release the male element from the female element, and

c. means releasably interlocking said elements when the tongue is fully inserted to prevent withdrawal of the male element unless the male element is first compressed.

2. A snap clasp for a bracelet or other article of jewelry, said clasp comprising:

a. a female element formed of metallic sheet material cut and bent to form a base wall, a pair of parallel side walls, and a baffle wall extending between the upper front corners of the side walls, the space between the base wall and the baffle wall defining an inlet for receiving a male element, one end of said bracelet being secured to the back of the baffle wall; and

b. a male element constituted by a compressible tongue formed by a metallic strip folded to define angled upper and lower sections, the rear end of the upper section being bent upwardly to form a limit wall which when the tongue is fully inserted in the inlet of the female element, abuts the baffle wall of the female element, the other end of the bracelet being secured to the rear of the limit wall whereby finger pressure may be applied thereto relative to the rear end of the lower section to release the male element from the female element, said male element having at least one dimple on the upper section which, when the tongue is fully inserted, is positioned behind the baffle wall of the female element to prevent withdrawal of the male element unless the male element is first compressed.

3. A clasp as set forth in claim **2**, wherein said upper section is provided with a pair of dimples.

4. A clasp as set forth in claim **2**, wherein said lower section is provided with a dimple positioned to fall into a hole in the base wall of the female section, when the male section is fully inserted.

5. A clasp as set forth in claim **2**, wherein said elements are both made of the same precious metal.

6. A clasp as set forth in claim **2**, wherein the rear end of the lower section is provided with a boss which may be sensed by a finger to determine its position.

7. A clasp as set forth in claim **2**, wherein said baffle wall is defined by a pair of touching wings cut from said sheet material.

8. A clasp as set forth in claim **2**, wherein said baffle wall and said limit wall are broader than the base wall and the upper sections, respectively, to accommodate broad bracelets.

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