

[54] JEWELRY CLASP

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1972, abandoned.

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[58] Field of Search 24/230 SL, 230 SC, 230 F;
24/230 B, 230 CF

[56] References Cited

UNITED STATES PATENTS

2,081,606 5/1937 Sorkind 24/230 SC

FOREIGN PATENTS OR APPLICATIONS

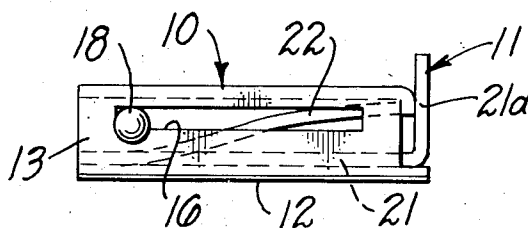
134,432 10/1929 Great Britain 24/230 CF

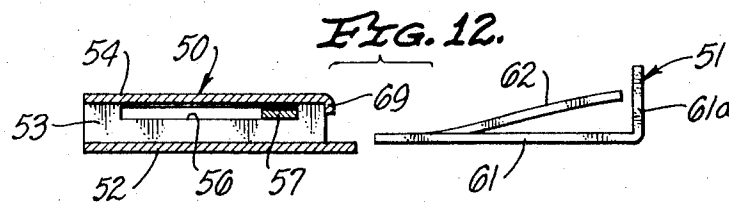
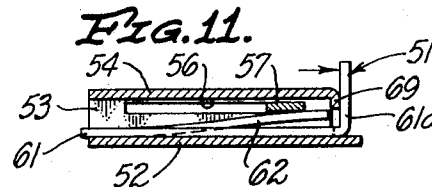
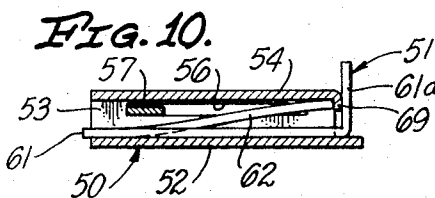
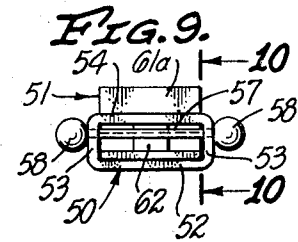
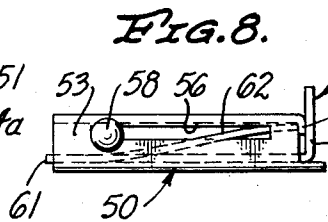
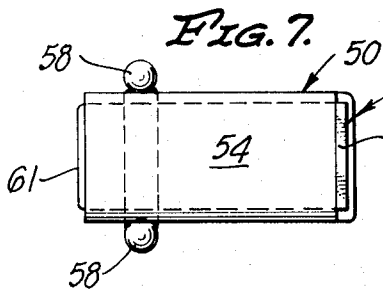
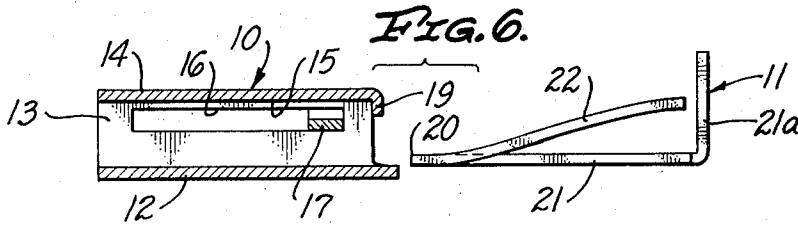
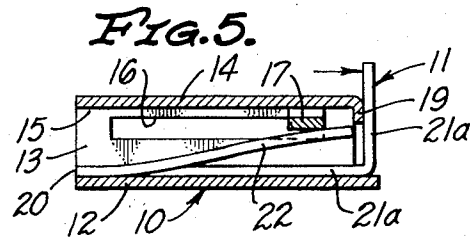
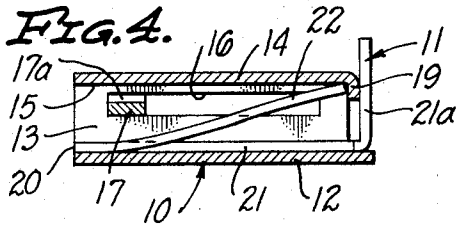
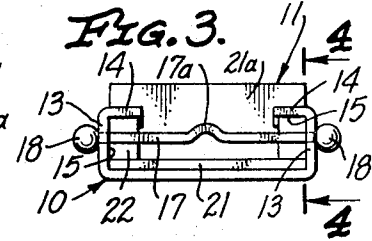
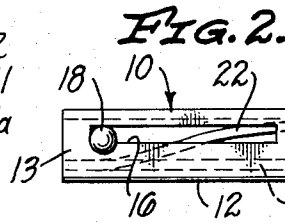
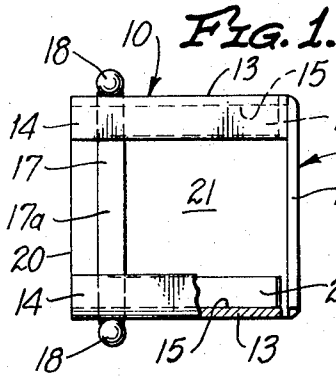
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[57] ABSTRACT

A clasp for jewelry or the like comprising a receptor and a spring clip. The spring clip has at least one integral spring finer which is directly angularly upward and is adapted to form a locking engagement with an integral vertically downwardly directed stop member on the receptor. A release member extends transversely across the receptor and is mounted for sliding longitudinal movement within a pair of aligned horizontal slots formed in opposite sides of the receptor. The release member is movable to depress the spring finger and release it from its locking engagement with the stop member of the receptor.

7 Claims, 12 Drawing Figures





JEWELRY CLASP

REFERENCE TO RELATED APPLICATION

This is a continuation-in-part of my application Ser. No. 296,069 filed Oct. 10, 1972, now abandoned.

BACKGROUND OF THE INVENTION

1. Field of the Invention

The invention relates to a clasp which is particularly adapted for use with articles of jewelry such as bracelets, necklaces, watch bands and the like.

2. Description of the Prior Art

Numerous jewelry clasps of various types are now in use, but almost all of them have the common fault that they will accidentally become open or released. This occurs particularly when pressure is inadvertently exerted upon the clasp through accidental engagement with a portion of the body, an article of clothing or a foreign object of any kind. If the clasp is inadvertently released, a valuable article of jewelry may become lost or damaged.

For this reason auxiliary fastening devices are often employed such as safety chains and the like. This is inconvenient to the wearer, since it means that two separate fastening devices must be operated each time the article is worn or removed. The auxiliary devices themselves are also likely to become entangled with articles of clothing and the like.

SUMMARY OF THE INVENTION

The primary object of the present invention is to provide a jewelry clasp which is safe and sure in use and which will not become inadvertently opened or released, regardless of any accidental engagement which may occur between the clasp and the body of the wearer, an article of clothing or any other object whatsoever.

Another object of the invention is to provide such a clasp which is extremely simple in its structure, so that it can be manufactured and sold at a reasonable price for widespread use.

If formed of precious metal, the clasp is economical because it requires only a minimum amount of material.

A further object is to provide a clasp of the type described which is simple, sure and foolproof to lock and to release, so that it can be operated easily and without mistakes by the wearer.

Another object of the invention is to provide such a clasp which is universal in the sense that it is adapted to be used with almost any article of jewelry which is worn on the body. It can also be used with any other article which can utilize or benefit from such a releasable fastening device.

The invention also comprises such other objects, advantages and capabilities as will later more fully appear and which are inherently possessed by the invention.

While there is shown in the accompanying drawings a preferred embodiment of the invention, it should be understood that the same is susceptible of modification and change without departing from the spirit of the invention.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a top plan view of a first preferred embodiment of a jewelry clasp constructed in accordance with the invention, with the clasp in fully closed position;

FIG. 2 is a side elevational view of the same;

FIG. 3 is an end elevational view of the same;

FIG. 4 is a longitudinal sectional view of the same, taken on line 4—4 of FIG. 3;

FIG. 5 is a view similar to FIG. 4, with the release member and spring fingers in released position;

FIG. 6 is an exploded longitudinal sectional view showing the parts of the clasp separated from each other;

FIG. 7 is a top plan view of a second preferred embodiment, with the clasp in fully closed position;

FIG. 8 is a side elevational view of the same;

FIG. 9 is an end elevational view of the same;

FIG. 10 is a longitudinal sectional view of the same, taken on line 10—10 of FIG. 9;

FIG. 11 is a view similar to FIG. 10, with the release member and spring finger in released position;

FIG. 12 is an exploded longitudinal sectional view showing the parts of the clip separated from each other.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring to FIGS. 1—6 of the drawings, a first preferred embodiment which has been selected to illustrate the invention comprises a receptor 10, which is adapted to be attached to the end of a bracelet, necklace or other member which is to be removably fastened together. A spring clip 11 is adapted to be attached to the other end. The spring clip 11 is adapted to be removably inserted into and removed from the receptor 10 as hereinafter described.

The receptor 10 is provided with a flat base 12, along the sides of which are a pair of integral vertically directed side walls 13, the upper ends of which are bent inwardly at a right angle to form a pair of top walls 14. The top walls 14 preferably extend only partially across the top of the receptor 10, as shown in the drawings. The entire receptor 10, including the base 12, and side walls 13 and top walls 14 may conveniently be formed from a single piece of material.

The top walls 14, side walls 13 and the outer side portions of the base 12 cooperate to define a pair of elongated channels 15 which extend along the opposite sides of the receptor 10.

Each of the side walls 13 is provided with an elongated slot 16, the lower edge of which is disposed substantially along the midportion of each side wall 13. The slots 16 are preferably of equal dimensions and in alignment with each other.

An elongated flat release member 17 having a central hump 17a is mounted for sliding longitudinal movement along the slots 16. The release member 17 extends transversely completely across the receptor 10, with its opposite ends extending through the slots 16. Each end of the release member 17 is provided with a small knob 18 or other suitable protuberance or enlargement which acts to prevent the release member 17 from slipping through the slots 16. The knobs 18 also provide finger engaging means for manual sliding movement of the release member 17 longitudinally with respect to the receptor 10.

The spring clip 11 has a flat base 21, at one end of which is an integral vertically upwardly directed wall 21a. The side edges of the base 21 are struck or deflected upwardly from the base 21 to form a pair of spring fingers 22. The spring fingers 22 normally ex-

tend upwardly at an acute angle with respect to the base 21. The spring clip 11 is preferably formed of somewhat resilient material and may be conveniently formed by bending a single piece of metal. The spring fingers 22 are preferably substantially equal in width and length to the channels 15 of the receptor 10.

The receptor 10 and spring clip 11 are adapted to be attached by any suitable means known to those skilled in the art to the opposite ends of an article for which they are to provide detachable fastening means.

The spring clip 11 is detachably connected to the receptor 10 by inserting the end 20 remote from the wall 21a into the free end of the receptor 10. The outer ends of the top walls 14 of the receptor 10 are bent downwardly at substantially a right angle to provide a pair of integral stop members 19. As the spring clip 11 is inserted into the receptor 10, the lower edges of the stop members 19 engage the upper surfaces of the spring fingers 22 and cause them to be progressively depressed.

As the spring clip 11 is inserted into the receptor 10, the outer end 20 of the spring clip 11 extends beneath the release member 17 and frictionally engages it to move the release member 17 toward the rear or inner ends of the slots 16. The release member 17 accordingly does not prevent or interfere with the movement of the spring clip 11 into the receptor 10.

When the spring clip 11 has been moved into the receptor 10 to the point where the free ends of the spring fingers 22 are moved inwardly beyond the stop members 19, the spring fingers 22 are no longer engaged by the lower edges of the stop members 19 and they are accordingly free to move upwardly by their own resilience until they engage the lower surfaces of the top walls 14.

The device is then in locked position and the spring clip 11 cannot be removed from the receptor 10 because the ends of the spring fingers 22 are disposed directly behind and abut against the inner surfaces of the stop members 19 to prevent such removal or withdrawal of the spring clip 11.

In order to separate the spring clip 11 from the receptor 10, it is necessary first for the wearer or user to grasp the knobs 18 of the release member 17 with the fingers and move both ends of the release member 17 forwardly or outwardly simultaneously. As the release member 17 is moved, its lower surface slidably engages the upper surface of the spring fingers 22 and progressively depresses the free ends of the spring fingers 22. By the time the release member 17 reaches the forward or outer ends of the slots 16, it has depressed the free ends of the spring fingers 22 a sufficient distance so that the spring fingers 22 can be moved beneath the lower edges of the stop members 19. The spring clip 11 may then be slidably removed from the receptor 10 by moving those members or the parts to which they are attached away from each other.

It should particularly be noted that accidental opening of the device is prevented by the fact that movement of only one of the knobs 18 will not effect release of the spring clip 11 from the receptor 10. Thus, even if either knob 18 is caught on an article of clothing or moved forward by contact with another object, the spring clip 11 will still not be released from the receptor 10. Release can be achieved only by the simultaneous movement of both knobs 18 followed by a sepa-

rating pressure exerted against the spring clip 11 and/or receptor 10.

FIGS. 7-12 of the drawings show a second preferred embodiment of the invention in which the receptor 50 has a base 52, side walls 53 and a top wall 54 which extends completely across the top of the receptor 50. The side walls 53 have slots 56 across which extends a release member 57 with knobs 58 similar to the release member described above, except that it has no central hump.

The spring clip 51 has a flat base 61, at one end of which is a vertical wall 61a. The midportion of the flat base 61 is struck upwardly to form a single central spring finger 62.

The outer end of the top wall 54 of the receptor 50 is bent downwardly at a right angle to form an integral stop member 69. The stop member 69 may extend across the entire edge of the top wall 54 or only across a portion thereof.

This embodiment operates in substantially the same manner as the first embodiment described above, the only difference being that it has a single central spring finger instead of a pair of spaced spring fingers.

The purpose of the hump 17a in the center of the release member 17 of the first embodiment of the invention is to prevent the inner end of the spring clip 11 from accidentally passing above the release member 17 instead of beneath it. Such a hump is not required in the second embodiment because the closed top wall 54 of the receptor 50 serves the same purpose.

I claim:

1. A clasp comprising a receptor adapted to be connected to one end of an article to be fastened, said receptor having a base a pair of substantially vertical side walls, a pair of aligned elongated horizontally directed slots formed in said side walls substantially parallel throughout to said base, said receptor having a downwardly directed stop member adjacent to its free end, a spring clip adapted to be connected to the other end of said article, said spring clip having a free end longitudinally insertable into the free end of said receptor, said spring clip having at least one integral spring finger extending angularly upwardly therefrom, said spring finger having one end thereof adapted to be depressed by and pass beneath said stop member upon the insertion of said spring clip into said receptor, said end adapted thereafter to be automatically moved upwardly by the resilience of said spring finger into locking engagement behind said stop member, and a release member extending transversely across said receptor and having its opposite ends slidably extending through said horizontal slots, each end of said release member having a protuberance thereon disposed on the outside of said receptor to facilitate manual engagement and simultaneous sliding movement of both ends of said release member with respect to said receptor, said release member being adapted upon movement thereof toward said stop member to engage and move said end of said spring finger downwardly beneath said stop member to permit the withdrawal of said spring clip from said receptor.

2. The structure described in claim 1, said receptor being formed from a single piece of material bent to form said side walls.

3. The structure described in claim 2, said spring finger being struck upwardly from the midportion of the base of said spring clip, said receptor having an integral

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top wall, said stop member comprising an integral portion bent downwardly from the midportion of said top wall.

4. The structure described in claim 1, said spring clip having a pair of spaced spring fingers comprising the upwardly struck opposite side edges of the base of said spring clip.

5. The structure described in claim 4, said receptor being formed from a single piece of material bent upwardly to form said side walls and bent inwardly to form a pair of top walls extending inwardly from the upper edges of said side walls to form a pair of channels overlying said spring fingers, and a pair of stop mem-

bers bent downwardly from the ends of said top walls.

6. The structure described in claim 5, said release member having an upwardly directed hump adjacent the midportion thereof to prevent said spring clip from passing above instead of beneath said release member.

7. The structure described in claim 4, said release member having an upwardly directed hump adjacent the midportion thereof to prevent said spring clip from passing above instead of beneath said release member.

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