July 22, 1958 C. S. KOELLING 2,843,908

JEWELRY CLASP

Filed Oct. 26, 1954 2 Sheets-Sheet 1

FIG. 1

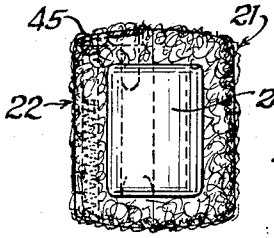


FIG. 2

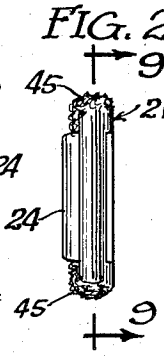


FIG. 3

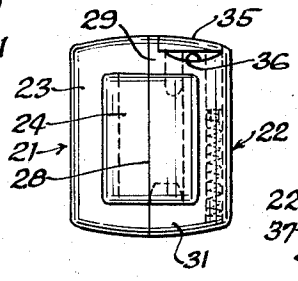


FIG. 4

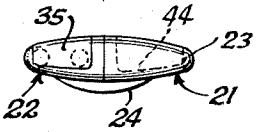


FIG. 5

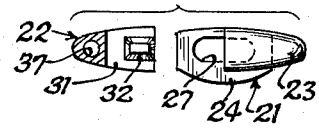


FIG. 6

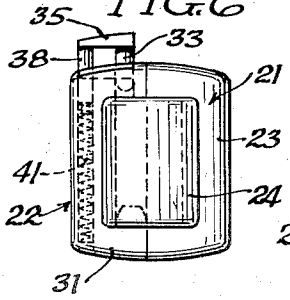


FIG. 7

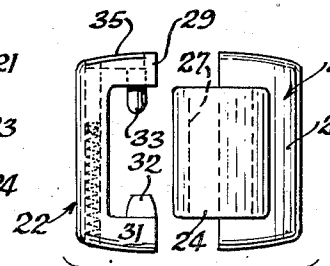
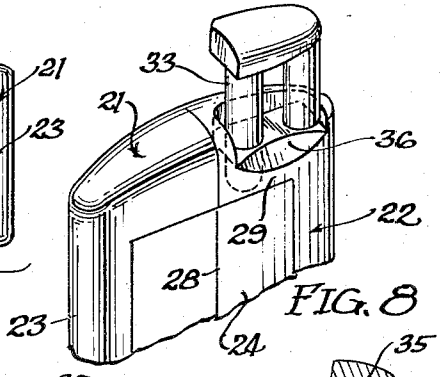


FIG. 8



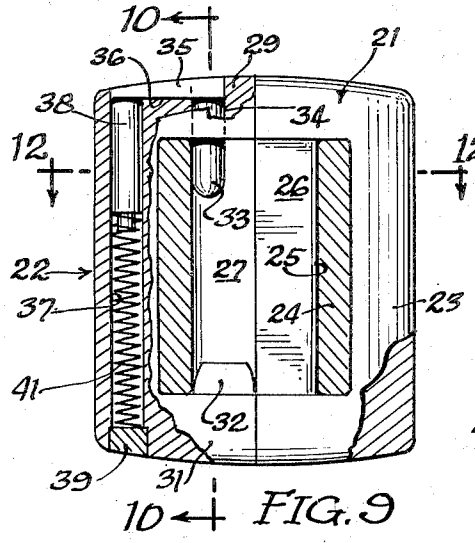


FIG. 9

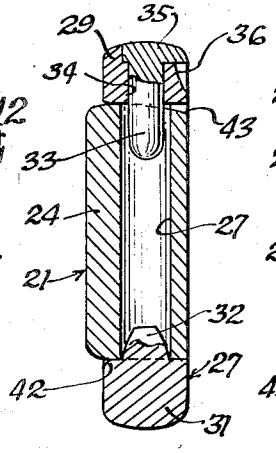


FIG. 10

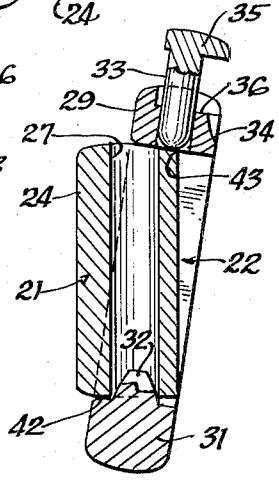


FIG. 11

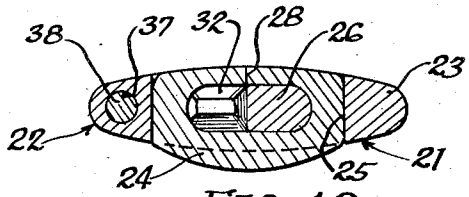


FIG. 12

INVENTOR.
Carolyn S. Koelling
BY
Sheridan, Davis & Cargill
Attys

July 22, 1958 C. S. KOELLING 2,843,908

JEWELRY CLASP

Filed Oct. 26, 1954 2 Sheets-Sheet 2

FIG. 13

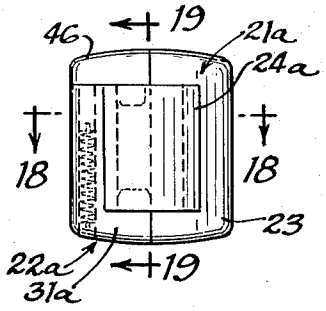


FIG. 14

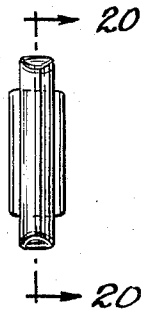


FIG. 18

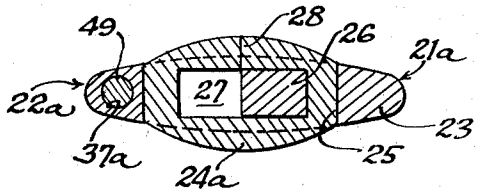


FIG. 15

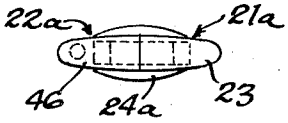


FIG. 19

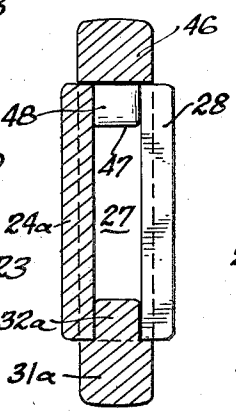


FIG. 20

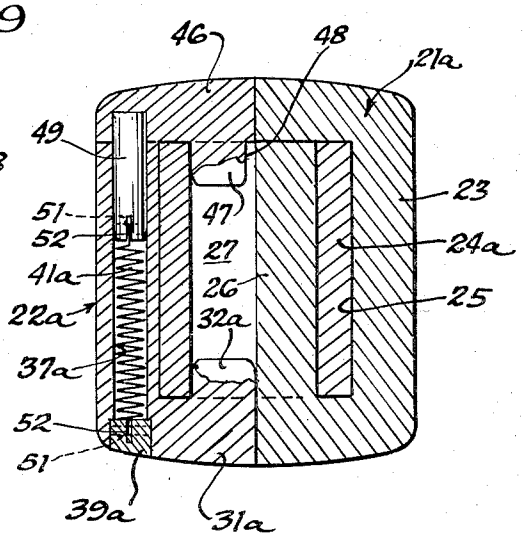


FIG. 16

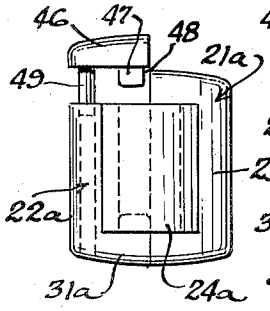
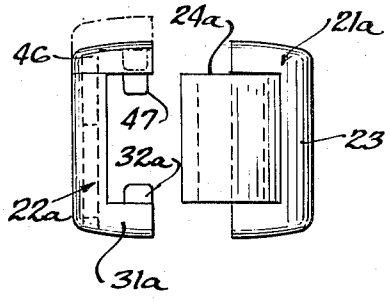


FIG. 17



INVENTOR.
Carolyn S. Koelling
BY
Sheridan, Davis & Cargill
Attys

United States Patent Office 2,843,908 Patented July 22, 1958

2,843,908

JEWELRY CLASP

Carolyn S. Koelling, Crete, Ill.

Application October 26, 1954, Serial No. 464,765

5 Claims. (Cl. 24—230)

This invention relates in general to jewelry clasps, and more particularly to novel means for securing together the end portions of separable bracelets, watch bands, belts, necklaces, and the like.

A principal object of the invention is to provide a decorative and artistic jewelry clasp of strong and durable construction which, nevertheless, is easy and cheap to manufacture.

Another important object of the invention is the provision in such a clasp of novel locking means manually operable against spring action to a release position to permit separation of those parts of the clasp comprising the end portions of the bracelet, or the like, of which the clasp forms a part.

A further important object is the provision of a clasp which inherently lends itself to surface decoration of any desired type and in which that decoration may be given such form as will effectively conceal the lines of separation between its separable parts and the manually operable locking means.

Numerous other objects and advantages of the invention will be apparent as it is better understood from the following description, which, when taken in connection with the accompanying drawings, discloses a preferred embodiment thereof.

In the drawings:

Figure 1 is a front elevation of a jewelry clasp embodying the features of the invention;

Fig. 2 is a side elevation of the clasp of Fig. 1, as seen from the right side thereof;

Fig. 3 is a rear elevational view, as seen from the right side of Fig. 2;

Fig. 4 is a top plan view of the clasp of Figs. 1 through 3, without the surface decoration shown in Figs. 1 and 2;

Fig. 5 is a top plan view showing the two main parts of the clasp separated from each other, with the upper portion of the second or leftmost part removed;

Fig. 6 is a front elevation similar to Fig. 1, without the surface decoration illustrated in the latter, and showing the upper movable portion of the latch or locking mechanism on the second part in raised position as the first step in separating the two main component parts of the clasp;

Fig. 7 is a front elevational view showing the two main parts of the clasp separated from each other;

Fig. 8 is a rear perspective view showing the finger piece of the releasable latch or locking mechanism in raised position as in Fig. 6;

Fig. 9 is an enlarged front elevational view, with parts shown in section to better illustrate the interior construction;

Fig. 10 is a vertical sectional view taken substantially on the line **10—10** of Fig. 9;

Fig. 11 is a vertical section similar to Fig. 10 showing the main parts of the clasp substantially removed from each other;

Fig. 12 is a horizontal section taken substantially on the line **12—12** of Fig. 9;

Fig. 13 is a front elevational view of a modified form of clasp;

Fig. 14 is a side elevational view, as seen from the right side of Fig. 13;

Fig. 15 is a top plan view of the clasp of Fig. 13;

Fig. 16 is a front elevational view similar to Fig. 13 showing the movable latch in raised position;

Fig. 17 is a front elevational view of the clasp of Fig. 13 with the main parts thereof separated from each other;

Fig. 18 is a horizontal sectional view taken substantially on the line **18—18** of Fig. 13;

Fig. 19 is an enlarged vertical section taken substantially on the line **19—19** of Fig. 13; and

Fig. 20 is a transverse vertical section of the same scale as Fig. 19, as seen from the line **20—20** of Fig. 14.

Each of the two modifications herein illustrated comprises a jewelry clasp made up of separable parts forming the end portions of a bracelet, or the like, together with novel locking means manually operable against spring action to a release position to permit separation of those parts, and which is so designed as to lend itself to surface decoration of any desired type that will effectively conceal the lines of separation between the separable parts and the manually operable locking means. In the modification of Figs. 1 through 12, these two main separable parts are designated, respectively, by reference numerals **21** and **22**. The first of these main separable parts **21**, as seen at the right side in Figs. 1 and 4 through 7, preferably is formed as two interengaging links **23** and **24**. The link **23** comprises an outer end portion of the clasp having a vertically disposed aperture **25** extending therethrough (Fig. 9) and defining an inner leg portion **26** which is reduced in thickness from front to rear, as best seen in Fig. 12. The other link **24** preferably comprises an inner or central member having its right-hand portion extending through the aperture **25** and tightly embracing the leg portion **26** and folded back upon itself at its left-hand side in spaced relationship to the leg portion **26** to define, with the latter, a vertical aperture **27**. If desired, the abutting ends of the central link **24** may be brazed, soldered, or otherwise secured together along their vertical line of joinder, as indicated at **28** in Fig. 12. With this arrangement, it will be seen that the rear surfaces are flush with each other or form a substantially continuous surface, while the forward surface of the central link **24** may be curved forwardly from the plane of the forward surface of the outer end portion of link **23** for a purpose to be later described. It will also be seen that the inner or central link **24** is substantially shorter than the outer link **23** to provide a longitudinally reduced portion with opposed recesses in the end thereof, comprising the upper and lower ends of the vertical aperture **27**. This first part **21** is constructed as described and illustrated of the two links **23** and **24** in order to facilitate, and reduce the cost of, its manufacture. However, it will be readily understood that the two portions **23** and **24** of this first part **21** may be formed as an integral member, if desired.

As best seen in Figs. 7 and 9, the second of the two separable parts **22** is substantially C-shaped in vertical section to provide inwardly extending upper and lower leg portions **29** and **31** spaced from each other substantially the height of the central link **24** or longitudinally reduced portion of the first part **21**, and having their outer surfaces forming substantial continuations of the contiguous outer surfaces of the end portion **23** of the first part **21**. The lower leg portion **31** of the second part **22** is provided with a fixed stud **32** formed integrally therewith and preferably tapered upwardly, for a reason to be later described, as best seen in Fig. 12, which stud

is adapted to engage within and substantially fill the lower end of the aperture **27** when the two separable parts **21** and **22** are in their interengaged or assembled positions of Figs. 9 and 10. When in such position, the spaced leg portions **29** and **31** close the opposed recesses comprising the ends of the vertical aperture **27**, and the fixed stud **32**, together with latch means now to be described, engage within the opposed recesses or aperture **27** to provide means for releasably securing the separable parts **21** and **22** together. This latch means comprises a movable stud **33** slidably extending through a vertical aperture **34** provided in the upper leg portion **29** of the second part **22** (Figs. 9–11). The movable stud **33** is secured to or formed integrally with a substantially horizontally disposed finger piece **35** at its upper end, which finger piece is normally housed within a suitably formed recess or cavity **36** in the upper surface of the leg portion **29**. The main portion of the second part **22** is provided with a vertical bore **37** (Fig. 9), the upper end of which slidably receives a shaft **38** secured at its upper end to, or formed integrally with, and depending from, the outer end of the finger piece **35**. The lower end of the bore **37** preferably is counterbored to receive a suitable plug **39** and to limit upward movement of the same therein. Connected at its opposite ends to the plug **39** and the lower end of the shaft **38**, as by soldering or any other suitable method, is a coil spring **41** which thus is housed within the vertical bore **37** and functions normally to maintain the movable stud **33** in its locking position of Fig. 9.

From the above description, it will be appreciated that the two separable parts **21** and **22** of this jewelry clasp normally are maintained in rigid engagement with each other by the fixed or lower stud **32** and the upper or movable stud **33** engaging against the walls of the opposed recesses defined by the vertical aperture **27**, the embracing of the left-hand portion of the center link **24** by the second part **22**, and the abutting engagement between the vertical end surfaces of the upper and lower leg portions **29** and **31** with the adjacent vertical surfaces of the first part **21** comprising the left ends of the outer link **23**. In order to separate the two main parts **21** and **22** from each other, it is necessary only first to lift the finger piece **35** against the action of the spring **41** to its release or raised position of Figs. 6 and 8, and secondly to pivotally move the upper portion of the movable or second part **22** relative to the stationary or first part **21** rearwardly through its position of Fig. 11 and until the upper leg portion **29** clears the upper surface of the central link **24**, which will permit downward movement of the part **22** relative to the part **21** to completely disengage the fixed stud **32** from the lower end of the aperture **27**. In order to permit such pivotal movement of the parts relative to each other, while insuring normal tight interengagement thereof, the fixed stud **32** has been tapered in the manner previously referred to, the upper surface of the forward portion of the lower leg **31** has been chamfered or rounded off, as indicated at **42** in Figs. 10 and 11, and the upper rear surface of the free end of the central link **24** has similarly been rounded off at **43**. Suitable clearance for such pivotal movements of the leg portions **29** and **31** of the second part **22** relative to the central link **24** of the first part **21** is thus provided. Assembly or reengagement of the parts from their fully disengaged position of Figs. 5 and 7 is acomplished by lifting the finger piece **35** of the latch to raise the lower end of the movable stud **33** above the lower surface of the upper leg portion **29**, twisting the parts **21** and **22** relative to each other while maintaining their horizontal axes parallel, inserting the lower lug **32** into the lower end of the recess **27**, and then moving the upper portion **29** of the part **22** forwardly relative to the part **21** through its position of Fig. 11 to that of Fig. 10. Release of the finger piece **35**, of course, permits spring **41** to return the latch to its locking position wherein the movable stud **33** is disposed in the upper portion of the recess or aperture **27**, as best seen in Fig. 9.

With the two parts **21** and **22** thus assembled, the clasp presents a balanced appearance as seen from all directions, with the exception of the rear view (Fig. 3), but it will be appreciated that the rear surface of the clasp is normally not in view. To enhance this symmetrical appearance, the upper surface of the outer link **23** of the first part **21** may have a line engraved thereon corresponding in size and shape to the plan outline of the aperture **36** receiving the finger piece **35** in the upper leg portion **29** of the second part **22**, as shown in broken lines at **44** in Fig. 4. As previously noted herein, the present clasp inherently lends itself to surface decoration of any desired type. One arrangement of surface decoration may take the form illustrated in Figs. 1 and 2, wherein the front, top, and bottom surfaces of the parts **21** and **22**, except for the central link **24**, are those portions of the clasp receiving the decoration **45**, which may take the form of encrusted rhinestones, or other jewels, engraved designs, or any other suitable type of surface adornment. As best seen in Fig. 1, such arrangement presents a fancy border for the central link **24**, and also performs an additional and important function in effectively concealing all lines of separation between the parts **21** and **22** except those appearing on the rear portion of the clasp which normally is not in view. The manually operable or releasable locking means thus cannot be actuated except by the wearer of the clasp or with her or his knowledge.

Referring now to the modification illustrated in Figs. 13 through 20, the clasp therein illustrated is made up of two separable main parts **21***a* and **22***a* which are similar in substantially all respects to the parts **21** and **22** heretofore described, except in the arrangement of the releasable locking means or latch, which in this modification enables the part **22***a* to be removed from the part **21***a* without requiring any twisting or relative tilting thereof. As is perhaps best seen from Figs. 18 and 20, the first or stationary part **21***a* is identical to the previously described first part **21** of Figs. 1 through 12, except that the central or inner link member **24***a* is shaped symmetrically on each side of its vertical center line so that both its rear and its front surface bulge out from the plane of the rear and front surfaces of the outer or end link **23**. The same longitudinally reduced portion is provided as in the part **21** of the other modification by the inner or free end of the central link **24***a* with the aperture **27** extending vertically therethrough.

The second or removable part **22***a* has a lower leg portion **31***a* substantially identical to the previously described leg portion **31** which is similarly provided with an upstanding fixed stud **32***a* adapted to slidingly engage within the lower end of the recess **27**. The part **22***a* also is provided with a vertical bore **37***a* extending upwardly therethrough and counterbored at its lower end to receive a plug **39***a* similar to the plug **39** of the first modification. At its upper end, the second part **22***a* is provided with a movable leg portion **46** shaped similarly to the lower stationary leg portion **31***a* and having a depending lug **47**. As best seen in Figs. 19 and 20, this lug **47** is adapted to slidingly fit into the upper end of the aperture **27**, and its inner vertical surface preferably is cut back, as indicated at **48**, for a purpose to be later described. The leg portion **46** which comprises the movable portion of the locking or latching means is slidably and rotatably mounted on the part **22***a* by means of a shaft **49** secured in any suitable manner at its upper end thereto and extending downwardly into the upper end of the bore **37***a*. A coil spring **41***a* is secured at its opposite ends to the plug **39***a* and the lower end of the shaft **49**. As best seen in Fig. 20, such attachment of the spring **41***a* to these parts may be accomplished by providing transverse apertures in the latter receiving pins **51** and forming a slot **52** in the opposed ends of the plug **39***a* and the

shaft **49** through which the ends of the spring **41***a* may pass for engagement over the pins **51**.

With the parts **21***a* and **22***a* in their normal assembled or interengaging positions, separation thereof may be accomplished merely by first lifting the movable upper leg portion **46** against the action of the spring **41***a* to its position of Fig. 16. Rotation of the leg portion **46** through an angle of 90° then will clear it from the center link **24***a* to permit downward movement of the part **22***a* relative to the part **21***a* to remove the lower stud **32***a* from the aperture **27** to separate the parts. The inner end of the upper stud **47** is cut away at **48**, as previously described, to insure clearance between the parts and their relative movement as the upper leg portion **46** is rotated on its shaft **49** relative to the outer link **23** of the first part **21***a*. Reassembly of the parts **21***a* and **22***a* from their separated position of Fig. 17 may readily be accomplished by first lifting the upper leg portion **46** to its broken line position of that figure, rotating the same through 90° on its shaft **49**, moving the part **22***a* into alignment and engagement with the free end portion of the central link **24***a*, sliding the part **22***a* upwardly to engage the lower stud **32***a* into the lower end of the vertical aperture **27**, rotatively returning the upper leg portion **46** to its position of Fig. 16, and releasing the same to permit the spring **41***a* to return it downwardly into locking position, as best seen in Fig. 20, with the depending upper lug **47** engaged in the upper end of the aperture **27**.

It is thought that the invention and its attendant advantages will be understood from the foregoing description, and it will be apparent that various changes may be made in the form, construction and arrangement of the parts without departing from the spirit and scope of the invention or sacrificing all of its material advantages, the form hereinbefore described and illustrated in the drawings being merely a preferred embodiment.

I claim:

1. A jewelry clasp, comprising separable parts forming the end portions of a bracelet, or the like, engageable with each other to form a clasp having a unitary appearance with each side and edge surface of one part forming a continuation of the corresponding surface of the other part, a first said part having a longitudinally reduced portion with recesses in each of the ends thereof, a second said part having spaced leg portions engageable with said first part to close said recesses, and means for securing said separable parts together, comprising a fixed stud on said second part engageable in a said recess, manually operable locking means comprising a movable stud slidably mounted on said second part for movement into and out of the other said recess, means for limiting such movement of said movable stud to translational movement and spring means housed interiorly of said second part and interconnected between the latter and said movable stud to retain said movable stud in the other recess to prevent separation of said parts.

2. A jewelry clasp according to claim 1, wherein said fixed stud is tapered to provide clearance with the walls of its associated said recess to permit relative pivotal movements between said first and second parts against the action of said spring means, after manual withdrawal of said movable stud from its associated said recess, to effect separation of said parts from each other.

3. A jewelry clasp according to claim 2, wherein said manually operable locking means comprises a finger piece interconnecting said movable stud and said spring means, said second part having a cavity to receive and house said finger piece flush with the adjoining outer surfaces of said separable parts when the same are secured together.

4. In a jewelry clasp according to claim 3, surface decorating means on each of said separable parts interrelated to visually conceal the lines of separation between said parts and said manually operable locking means.

5. A jewelry clasp, comprising separable parts forming the end portions of a bracelet, or the like, engageable with each other to form a clasp having a unitary appearance with each side and edge surface of one part forming a continuation of the corresponding surface of the other part, a first said part having a longitudinally reduced portion with recesses in each of the ends thereof, a second said part having integral spaced leg portions engageable with the ends of said reduced portion to close said recesses when said parts are secured together, means for limiting such movement of said movable stud to translational movement and means for securing said separable parts together, comprising a fixed stud on a first said leg portion engageable in a said recess, manually operable locking means comprising a movable stud slidably mounted in a second said leg portion for movement into and out of the other said recess, and spring means housed interiorly of said second part and interconnected between the latter and said movable stud to retain said movable stud in the other recess to prevent separation of said parts.

References Cited in the file of this patent

UNITED STATES PATENTS

154,058	Lochner	Aug. 11, 1874
1,467,465	Wiedmann	Sept. 11, 1923
1,750,786	Roy	Mar. 18, 1930
2,552,728	Liner	May 15, 1951
2,639,480	Magid	May 26, 1953

FOREIGN PATENTS

583,065	France	Jan. 6, 1925
785,981	France	Aug. 23, 1935
943,056	France	Feb. 25, 1949