April 7, 1953 E. RODRIGUEZ 2,633,619

CENTER CATCH CLASP

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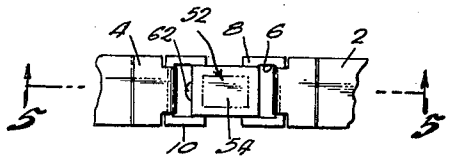


Fig. 1

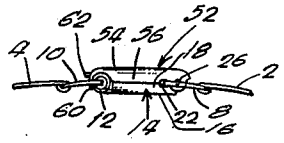


Fig. 2

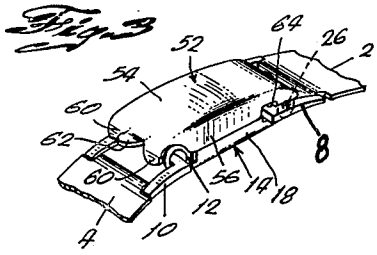


Fig. 3

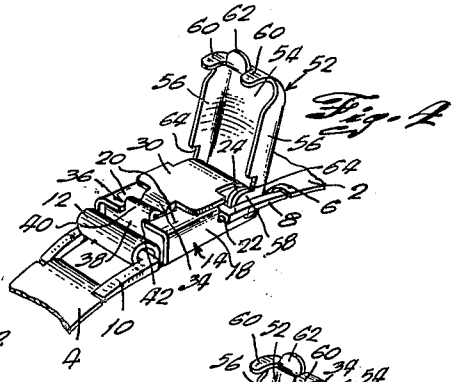


Fig. 4

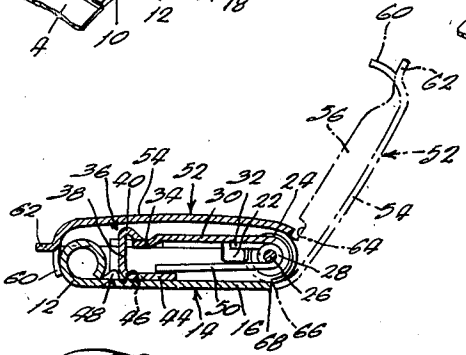


Fig. 5

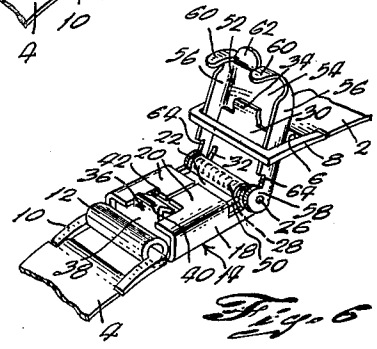


Fig. 6

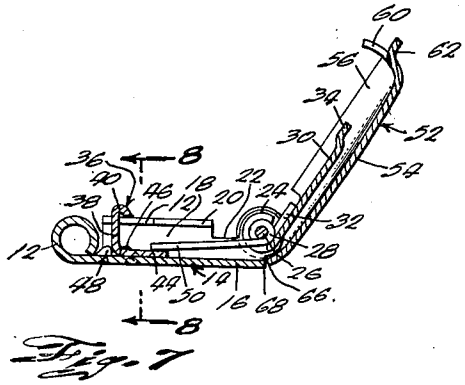


Fig. 7

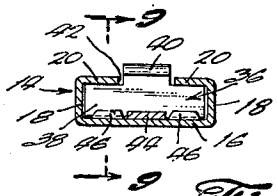


Fig. 8

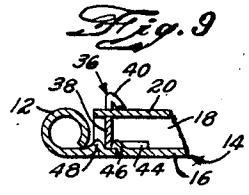


Fig. 9

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CENTER CATCH CLASP

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1 Claim. (Cl. 24—241)

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The present invention relates to a center catch clasp particularly adapted for releasably connecting two ends of a bracelet or the like, and in particular to such a clasp having novel constructional features giving rise to improved appearance, safety and functioning.

Various types of clasps have in the past been proposed for releasably connecting two ends of bracelets or similar articles. It is essential that the clasps be positive in operation, that is to say, that they cannot accidentally open so that the bracelet ends may become disengaged and the bracelet fall from the wrist of the wearer and become damaged or lost. It is also of prime importance that such clasps have a decorative appearance in order that they not detract from the decorative nature of the bracelets with which they are employed. These two requirements which make for positiveness of operation generally impart to the clasp a functional appearance which detracts from its decorativeness, and conversely if the clasp is decorative the construction necessary thereto mitigates against positive, safe functioning.

Such clasps, particularly when they are employed in conjunction with bracelets of small dimensions, as is the case when the bracelet is secured to a lady's watch, are very small and delicate and as a result manipulation of them to connect the two bracelet ends so as to secure the bracelet on the wrist or to separate the two bracelet ends so that the bracelet may be removed from the wrist presents many difficulties, particularly to those persons who do not have great manual dexterity. Even when such manual dexterity is present, manipulation is difficult because it must normally be carried out with only one hand, the hand on which the bracelet is to be secured being useless in the operation.

The structure of the clasp of the present invention permits the ready and simultaneous achievement of all three of the above objectives, to wit, decorative appearance, positive and safe functioning, and ease of manipulation, the clasp members cooperating so as to mutually aid one another in the achievement of all of the objectives. The clasp here disclosed is of a type adapted to receive part of one bracelet end thereon in detachably secured relationship, said one bracelet end being provided with an aperture, and to be fixedly secured to the other bracelet end. The clasp members include two leaves adapted to pass through the aperture in said one bracelet end and to be foldable thereover so as to secure the bracelet in position on the clasp. One of these, here termed the top closure plate, is spring urged to open position but is retainable in closed position by means of a latch on the clasp housing. Such a construction is well known in the art. However, in the conventional

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construction of this type, the latch and leaf are exposed so that the latch may be manipulated. This not only gives rise to a functional and non-decorative appearance but also reduces the safety factor of the clasp since the latch is exposed to accidental manipulation. Accordingly, the clasp of the present invention is provided with a second leaf, here termed the cover, positionable over the first leaf and the latch so as to hide them from view, thus giving rise to a decorative appearance and guarding against accidental or inadvertent manipulation of the latch. This second leaf is itself releasably connectable to the clasp housing so that, even if the first leaf should break or should not be properly latched to the clasp housing, the second leaf will act as a safety device to prevent disengagement of the bracelet ends. By the same token, should the second leaf accidentally become disengaged from the clasp proper, the first leaf will act as a safety device to prevent the bracelet ends from separating.

It is a feature of this invention that the two leaves are pivotally mounted at the same end of the clasp housing, and preferably about the same pivotal axis, so as to be pivotable in the same directions. Hence, whenever the first leaf is unlatched and the second leaf is also swung to open position, the two closure members will be in engagement one with the other and hence can be passed as a unit through the aperture in said one bracelet end, thus materially facilitating connection of the two bracelet ends.

The construction is simple and relatively positive in operation, the various parts thereof may be inexpensively constructed and easily assembled, and the finished clasp may be decorated in any desired manner.

To the accomplishment of the above, and to the accomplishment of such other objects as may hereinafter appear, the present invention relates to the construction of a center catch clasp as defined in the appended claim and as described in this specification, taken together with the accompanying drawings, in which:

Fig. 1 is a top view of a clasp of the present invention attached to a bracelet, the clasp being shown in closed position;

Fig. 2 is a side view thereof;

Fig. 3 is a three-quarter perspective view thereof on an enlarged scale;

Fig. 4 is a view similar to Fig. 3 but showing the cover in open position;

Fig. 5 is a side cross-sectional view taken along the line 5—5 of Fig. 1, the cover being shown in open position in phantom lines;

Fig. 6 is a view similar to Fig. 4 but showing both the cover and the top closure plate in open position and showing said one bracelet end in-

termediate between its secured and disengaged position;

Fig. 7 is a view similar to Fig. 5 but showing both the cover and the top closure plate in open position;

Fig. 8 is an end cross-sectional view taken along the line 8—8 of Fig. 7; and

Fig. 9 is a side cross-sectional view taken along the line 9—9 of Fig. 8.

Although the clasp is here shown being employed for connecting two ends 2 and 4 of a link bracelet or the like, it will be apparent that the clasp may be employed with any type of bracelet or indeed with any pair of elements the ends of which are to be releasably connected. One of the bracelet ends, here shown as the end 2, is provided with an aperture 6 here defined by the open link 8 at the end thereof. It is this bracelet end which is adapted to be detachably connected to the clasp. The other bracelet end 4 is permanently secured to the clasp, the instant drawings showing the end 4 of the bracelet bent about link 10 a portion of which is encompassed within the curled portion 12 preferably integrally formed with the clasp housing 14.

As here disclosed, the housing 14 comprises an integral piece of sheet metal suitably shaped to define a bottom 16, sides 18 and tops or inwardly directed flanges (or top walls) 20, the bottom 16 extending beyond the tops 20 in a direction away from the curled part 12 so as to define a portion 22 adapted to receive a part of the bracelet end 2 and in particular to receive the end of the link 8. To accomplish this, the sides 18 are notched in at 22 so that the end of the link 8, when it is received in the notch 22, will not extend above the tops 20.

The sides 18, beyond the notch 22, are provided with ears 24 in which pivot pin 26 is mounted and helical spring 28 is wrapped around that pin.

The first leaf, in the form of a top closure plate 30, is pivotally mounted on the pin 26 so as to be movable between a closed position illustrated in Figs. 4 and 5, in which it overlies the notch 22 and closes the top thereof, so that the link 8 cannot become disengaged from the clasp, and an open position illustrated in Figs. 6 and 7 in which it exposes the notch 22 so as to permit engagement or disengagement of the link 8. The spring 28 is provided with an extension 32 which bears against the underside of the plate 30, the spring being so tensioned as to urge the plate 30 to its open position.

The extremity of the plate 30 is provided with a nose 34 adapted to be engaged by the latch generally designated 36 which is mounted in the housing 14. The latch comprises a vertical portion 38 extending substantially across the width of the housing 14 and contained therewithin and a hooked nose-engaging portion 40 extending thereabove through an aperture 42 in the tops 20 of the housing 14 so as to be engageable with or disengageable from the nose 34 on the top closure plate 30. The latch is also provided with a centrally disposed horizontally extending tongue 44 which extends between two upward indentations 46 in the bottom 16 of the housing. Other upward indentations 48 are provided in the housing bottom 16 behind the vertical portion 38 of the latch and an extension 50 of the spring 28 engages the top of the horizontal tongue 44 so as to urge it downwardly into engagement with the housing bottom 16. As a result, the latch 36 is pivotally mounted in the housing 14 so as to be movable between a plate-engaging position in which the portion 40 thereof engages the nose 34 of the top closure plate 30 so as to hold that plate in closed position, and a plate-releasing position in which the portion 40 of the latch 36 is movable out of engagement with the nose 34 of the plate 30 so as to release that plate and permit it to move to its open position under the influence of the spring 28. The same spring 28 which urges the top cover plate to its open position also urges the latch 36 to its plate-engaging position. It will be apparent that any other mode of articulately mounting the latch 36 in the housing 14 could also be used, but the illustrated mounting has advantages of simplicity and ease of assembly.

The structure as thus far described constitutes an operable clasp but characterized by the facts that the latch 36 and the top closure plate 30 are exposed to view from above, thus marring the aesthetic appearance of the clasp, the latch 36 is exposed to possible accidental and inadvertent manipulation, thus decreasing the safety of the clasp, and only a single securing action is achieved so that if the latch 36 should become inoperative or if the top closure plate 30 should break, the clasp would be completely unusable.

In order to eliminate all of those defects, the clasp of the present invention is provided with a cover generally designated 52, this cover comprising a portion 54 adapted to overlie the entire top of the clasp and side flanges 56 adapted to encompass the sides of the clasp. The side flanges 56 are provided with ears 58 through which the ends of the pivot pin 26 are received, so that the cover 52 is pivotally mounted on the housing 14 at the same end thereof as the top closure plate 30 and coaxially therewith so as to be pivotable in the same directions. The free extremity of the cover 52 is provided with curved resilient fingers 60 adapted to form a snap engagement with the curled portion 12 of the housing 14 so as to releaseably secure the cover 52 in closed position as illustrated in Figs. 2 and 3. A finger lift 62 may be provided between the fingers 60 so as to facilitate disengagement of the fingers 60 from the curled portion 12 when it is desired to move the cover 52 to its open position, illustrated in Figs. 4, 6 and 7, in which position it exposes the top closure plate 30 and the latch 36. The side flanges 56 of the cover 52 are cut away at 64 so as to clear the part of the link 8 which is secured in the notch 22 of the housing 14. Pivotal motion of the cover 52 in a clockwise direction as viewed in Figs. 5 and 7 to its open position is limited by engagement of the end 66 of the portion 54 with the end 68 of the housing bottom 16.

When it is desired to secure the end 2 of the bracelet to the clasp, the finger lift 62 is moved upwardly so as to disengage the fingers 60 from the curled portion 12 of the housing 14, after which the cover 52 is pivoted so as to expose the latch 36. The hooked nose-engaging portion 40 of the latch is moved to the left as viewed in Figs. 5 and 7 to its plate-releasing position, the extension 32 on the spring 28 then pivoting the top closure plate 30 in a clockwise direction. This motion will continue until the top closure plate 30 moves inside of and engages the cover 52. Thereafter, both the top closure plate and the cover 52 will simultaneously pivot in a clockwise direction, as urged by the spring 28, until the edge 66 of the cover 52 engages the edge 68 on the housing 14. The spring 28 will constantly retain both the top closure plate and the cover 52 in this position no matter what the inclination of the clasp so that these elements cannot

move from their aligned position with respect to the remainder of the clasp.

The end 2 of the bracelet is then moved so that the link 8 will encompass the cover 52, that cover and the top closure plate 30 which is in engagement therewith passing simultaneously and as a unit through the aperture 6 in the link 8 until the end of the link 8 rests in the notch 22 of the housing 14. Thereafter, the cover 52 is moved in a counterclockwise direction against the action of the spring 28 until its fingers 60 snap engage with the curled portion 12 of the housing 14. Since the top closure plate 30 engages the inner surface of the cover 52, said plate 30 is also rotated in a counterclockwise direction. The portion 54 of the cover 52 is somewhat domed so that, in the embodiment here illustrated, the plate 30 is engaged at its sides and hence there is a space between the body of the plate 30 and the bo ly of the cover 52. The spatial relationship is such that when the cover 52 is snap engaged in its closed position, the top closure plate 30 is moved thereby so that its nose 34 is engaged by the latch 36, the latch being constantly urged to its plate-engaging position by the spring 28. Accordingly, a single motion of the cover 52 serves to close both of the safety devices of the catch.

It will be apparent from the above that when the clasp is in closed position the only part exposed to view from above is the cover 52 which is non-functional in appearance and which may be ornamented in any desired manner so as, for example, to conform to the design motif of the bracelet with which it is employed, only a small portion of the housing sides 18 being visible from the sides of the closed clasp. The moving parts are not exposed to view, are not susceptible of accidental manipulation, and are not in a projecting position in which they are liable to catch the clothing of the wearer or scratch her skin. Should the cover 52 become accidentally disengaged from the housing 14, the bracelet ends will not become disconnected because the top closure plate 30 will prevent such disengagement. If, during the engagement procedure, the top closure plate 30 should not be firmly latched, the bracelet ends will nevertheless be kept in connected condition by means of the cover 52. A definite double safety action is thus provided.

Since both the top closure plate 30 and the cover 52 are pivotally mounted at the same end of the housing so as to be pivotable in the same directions, and since the spring urged top closure plate 30 is so positioned as to engage the cover 52, both of these elements are passable through the aperture 6 in the braclet end 2 simultaneously and as a unit, and both of these elements are positively retained in a definite aligned relationship with respect to the remainder of the clasp during the time that they are to be passed through the aperture 6. As a result, manipulation of the clasp when connecting or disconnecting the bracelet ends is materially facilitated. Moreover, but a single manipulative act, to wit, the moving of the cover 52 in a counterclockwise direction until its fingers 60 snap engage with the curled portion 12 of the housing 14, causes both of the fastening elements to be moved to closed position.

It will be apparent that all of the parts are very simple of construction, are readily manufacturable from standard sheet stock, and are easily assemblable so as to produce a clasp of

simplified construction and improved appearance which functions in a positive manner, which presents a double safety feature, and which is easily manipulatable even by one hand.

It will be apparent that many variations may be made in the details of the clasp without departing from the spirit of the invention as defined in the following claim.

I claim:

A center catch clasp for connecting the two ends of a bracelet or the like, one of said bracelet ends having an aperture, said clasp comprising a housing adapted to be secured to the other of said bracelet ends and having a portion adapted to receive part of said one bracelet end thereon, said housing also including a bottom wall, upstanding side walls and inwardly directed top flanges terminating in edges spaced from one another at a point remote from said housing portion, a top closure plate for said housing portion pivotally mounted on said housing at the end thereof adjacent said portion adapted to receive part of said one bracelet end thereon, a spring in said housing active on said plate so as to urge it at all times to an open position exposing said housing portion, spaced upward protuberances on the bottom wall of said housing, and a latch in said housing having a narrow portion passing between said inwardly directed top flanges and a portion below said top flanges resting on said bottom wall, extending substantially up to said top flanges and wider than the space between said top flanges, said latch thereby being restrained from vertical movement by said bottom wall and top flanges, said latch being mounted between and restrained from horizontal movement by said protuberances and being pivotal therebetween, said latch being engageable with said plate to releasably hold it in closed position covering said housing portion, and a cover overlying said plate and pivotally mounted on said housing about the same pivotal axis as said plate and pivotal in the same directions as said plate, said cover being movable between a closed position covering said plate and said latch and an open position exposing said plate and said latch, said cover in said closed position having a releasable engagement with said housing, and interengaging means on said housing and said cover for fixing the open position of said cover, said plate when spring actuated to open position engaging said overlying cover and forcing said cover to its open position, said plate constituting the sole means for urging said cover to open position and said cover together with said interengaging means constituting the sole means for fixing the open position of said plate, both said plate and said cover then being passable as a unit through the aperture in said one bracelet end.

EMIL RODRIGUEZ.

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