Feb. 8, 1949. J. CEDAR 2,461,309

BRACELET CLASP

Filed Oct. 3, 1945

Fig. 1.

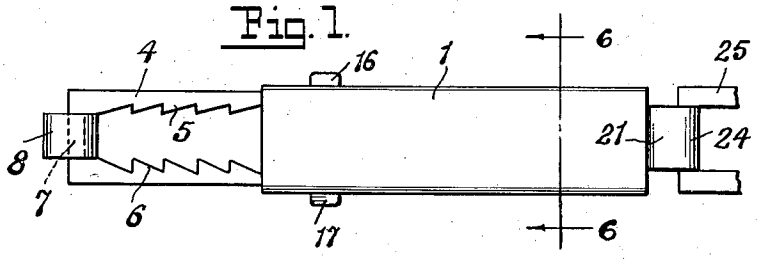


Fig. 2.

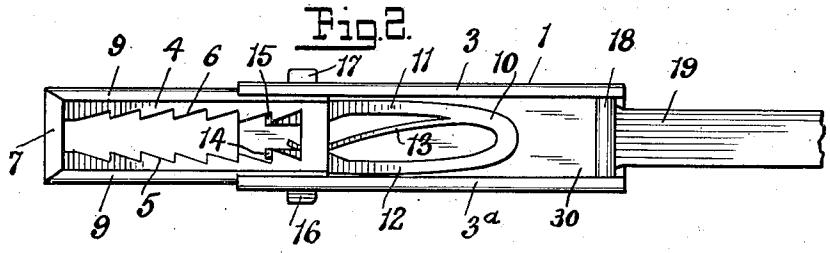


Fig. 4.

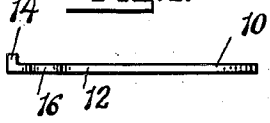


Fig. 3.

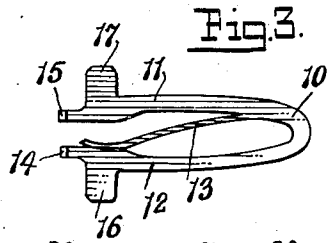


Fig. 5.

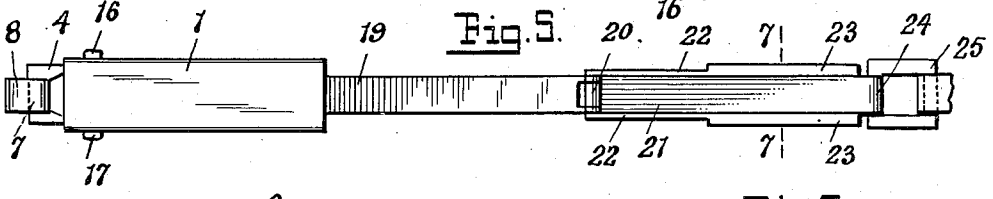


Fig. 6.

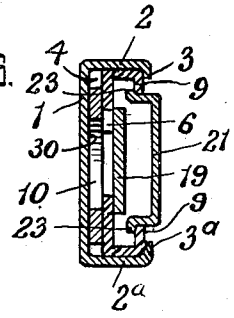
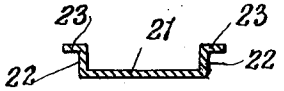


Fig. 7.



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BRACELET CLASP

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2 Claims. (Cl. 24—71)

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This invention relates to clasps intended for use in connection with wrist bands for wrist watches or for bracelets or for other articles of jewelry.

The particular type of clasp to which the present invention relates is that in which a ratchet-bearing slidable link is contained within a box-like outer casing, and a pair of pivotally connected swinging link members, permitting expansion of the bracelet when placing the same on or removing it from the wrist, are swung either into or outside of the casing. In devices of this character, shown in a number of prior patents, means is provided by which the swinging link members are held against swinging movement out of the casing until the slidable link member is moved to its extended position out of the casing. In such prior patents, the slidable link member is held against inadvertent sliding movement by means of a ratchet arrangement controlled by a detent that is freed from the teeth of the ratchet by inward pressure on a finger piece projecting out of the casing.

It has been found that the use of a single detent engaging a single set of ratchet teeth very often causes the clasp to be inadvertently opened, since a slight pressure on the disengaging element for the detent at once frees the detent from th ratchet teeth and permits sliding movement of the slidable link. Very often the wearer of a wrist watch will, when leaning against a surface, or otherwise applying pressure on the wrist band, impose sufficient pressure on the release member so that the clasp will at once open.

One of the objects of the present invention is to correct this serious deficiency found in many wrist band clasps now marketed, and by the provision of means in which releasing pressure is required on two members rather than one, with said pressure being required in opposite directions in order to free the slidable link member so that it may be slid to an extended position out of the casing thus enabling the pivoted link members to be also swung outwardly after the slidable link has been fully extended.

Another object of the invention is to provide means by which the maintenance of the slidable link member in its nested or retracted position within the casing will cause it to engage with one of the pivoted links to thereby hold said links in their overlying and nested position within the casing so long as the slidable link is in a retracted position. While prior structures have sought to attain the last-mentioned object, they have sought it by elements which required apertures

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in the outer casing, thus detracting from its appearance and the smoothness of the casing and continuity of its design. With the present invention, the engagement of the parts takes place solely within the casing so that the exterior appearance of the clasp as a whole is clean-out.

These and other objects are attained by the invention, a more particular description of which will appear hereinafter and be set forth in the claims appended hereto.

In the accompanying drawing, Fig. 1 is a front elevation view of a clasp made in accordance with the invention, the clasp being shown with the slidable link in partly extended position to disclose the two sets of ratchet teeth; Fig. 2 is a rear elevation view of the inner face of the clasp, with the pivoted links swung out of the casing to more clearly disclose the slidable link and the spring; Fig. 3 is a face view of the "wishbone" spring; Fig. 4 is an edge view of the spring; Fig. 5 is a front elevational view of the clasp showing the pivoted links swung out of the casing; Fig. 6 is an enlarged sectional view on the line 6—6 of Fig. 1, looking in the direction of the arrows, the view being taken while the slidable link member and pivotal links are fully disposed within the casing, and Fig. 7 is an enlarged sectional view on the line 7—7 of Fig. 5.

In the drawing, 1 indicates the body portion or main element of the clasp, the same being in the form of a substantially rectangular, slightly curved, shallow channel-shaped casing, having the longitudinal side walls 2 and 2*a* which are inbent to form the inturned flanges 3 and 3*a*. Slidably mounted within the casing 1 and confined therein behind the flanges 3 and 3*a*, is a slidable link member 4, in the form of an open frame provided along both of its inside longitudinal edges with the two sets of ratchet teeth indicated respectively at 5 and 6. At one end, the link member 4 has a cross bar 7 by which it is attached to a loop 8 which is in turn attached in the conventional way to a bracelet, or else forms a part of the same. It will be observed that the slidable link 4 is provided along its outside longitudinal edges with inturned flanges 9 disposed behind the flanges 3 and 3*a* on the casing 1.

Located within the casing and positioned between the inside face 30 of the same and the back of the slidable link 4, is a spring 10 of "wishbone" form. That is to say, it is of substantially U-shape provided with the two free end legs 11 and 12. A spring finger 13, disposed between the legs 11 and 12 and constituting an integral extension of one of the legs, tends to normally thrust the

legs apart to a limited extent. The leg 12 of the spring 10 is formed with a laterally extending lug 16, while a similar lug 17 is formed on the leg 11. These lugs 16 and 17 project through apertures in the side walls 2 and 2a of the casing as clearly seen in Figs. 1, 2 and 5 and constitute finger pieces which are available to the fingers of the wearer to be pressed toward one another when it is desired to open the clasp, as will be presently described.

At the end of the leg 11 of the spring is an outturned portion 15 constituting a detent which engages with the ratchet teeth 6 as clearly seen in Fig. 2. Similarly, the leg 12 is formed with the detent 14 engaging with the teeth 5. Since each set of ratchet teeth is engaged by a detent, it will be apparent that in order to permit extension of the slidable link 4 out of the casing 1, both the detents 14 and 15 have to be released from engagement with the teeth. Thus, in order to slide the link 4 out of the casing 1, the fingers must simultaneously be pressed inwardly on the lugs 16 and 17. In view of the fact that both of the detents must be freed from the ratchet teeth to effect outward sliding movement of the link 4, it is obvious that accidental opening of the clasp is very unlikely since it is highly improbable that both detents would be simultaneously disengaged from the teeth by accidental pressure.

Pivotally attached at 18 between the walls 2 and 2a of the casing near one end of the same, is a link 19, having its opposite end pivotally secured at 20 to an outer, channel-shaped link member 21. The link member 21 has longitudinal side walls 22 provided for a portion of their length with the out-turned flanges 23. The end of the link 21 is connected at 24 to the bracelet 25 in any conventional way. The hinged connection of the two links 19 and 21, and the pivotal connection of the link 19 to the casing 1, as indicated at 18, is such that the two links 19 and 21 may be either disposed in overlying relationship within the casing 1 and over the slidable link 4 or may be extended outside of the casing 1 as shown in Fig. 5. This general disposition of hinged links of this kind is known in this art. In the present structure however, it will be noted that when the links 19 and 21 are disposed in overlying relation within the casing 1, and the slidable link 4 is in its retracted position within the casing 1, the flanges 23 on the pivoted link 21 will be taken over by the inturned flanges 9 of the slidable link 4 so that as long as the slidable link 4 is in a retracted position, the swinging or pivoted links 19 and 21 cannot be swung out of the casing 1.

To effect an expansion of the bracelet, when either removing it from or placing it on the wrist, and it is desired to swing the links 19 and 21 outside of the casing to thereby secure the desired expansion, the lugs 16 and 17 are both pressed inwardly, thus simultaneously freeing the detents 14 and 15 from the ratchet teeth 5 and 6, and the slidable link 4 is then slid out of the casing 1 to the end of its sliding movement. At this time, or when the slidable link 4 is substantially in the position shown in Figs. 1 and 2, the flanges 9 on the link 4 will have cleared the inturned flanges 23 on the pivoted link 21 and the two connected links 19 and 21 may then be swung outward to the position shown in Fig. 5.

From the foregoing, it will be apparent that a clasp has been provided in which simplicity of construction has been combined with safety. The arrangement of the detents is such that accidentally imposed pressure against either one of them, and which very often is likely to occur when using the bracelet, will not cause opening of the clasp. This coupled with the means by which outward movement of the swinging links cannot be effected until an extended movement of the slidable link has taken place, provides a clasp of safety and security.

What I claim is:

1. In a clasp of the character described, a casing connected near one of its ends to one of a pair of pivotally joined links, said casing having flanges extending along its longitudinal edges, said links being adapted to be either located within the casing or swung to an extended position out of the casing, a slidable link member in the form of an open frame movable into or out of the casing, said slidable link member being provided along its longitudinal edges with inwardly turned flanges, one of the pivotally joined links being provided with flanges for a portion of its length for engagement behind those on the slidable link member to thereby hold the pivotal link from swinging movement out of the casing while the slidable link member is in a retracted position within the casing, the slidable link member having two spaced edges each provided with ratchet teeth, a U-shaped spring member within the casing and located between the slidable link member and the back of the casing, said spring member being provided with detents engaging the ratchet teeth, and means on the spring member projecting through the casing and disposed externally of the casing for manually causing a simultaneous disengagement of the detents from the ratchet teeth.

2. In a clasp of the character described, a casing member connected near one of its ends to one of a pair of pivotally joined links, the casing member having flanges extending along its longitudinal edges, the pivotally connected links being adapted to be either located within the casing or swung to an extended position out of the casing, a slidable link member in the form of an open frame movable into or partly out of the casing, said link member having two sets of ratchet teeth, a spring member in the casing confined between the slidable link member and the back of the casing and provided with a pair of detents engaging the ratchet teeth whereby both of said detents must be disengaged from the teeth before said slidable link member can be moved in a direction outward of the casing, means on the spring for manual engagement to thereby free both detents simultaneously from the teeth, one of the pivoted links having flanges on its longitudinal edges, said last-mentioned flanges extending for a portion only of the length of the pivoted link and adapted to engage behind the flanges on the slidable link member when the slidable link member is disposed within the casing, to thereby prevent outward swing of the pivoted link while the slidable link member is in a retracted position within the casing.

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