A. SCHROETTER.

CLASP.

APPLICATION FILED JAN. 8, 1921.

1,396,887. **Patented Nov. 15, 1921.**

Fig. 1.

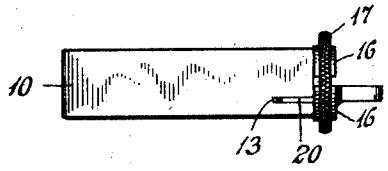


Fig. 2.

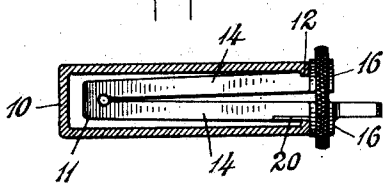


Fig. 3.

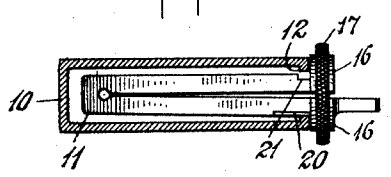


Fig. 4.

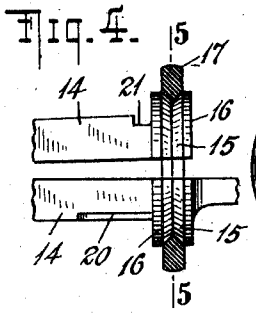


Fig. 5.

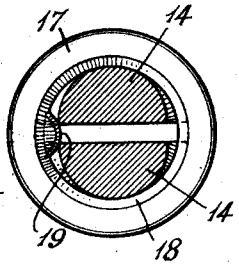


Fig. 6.

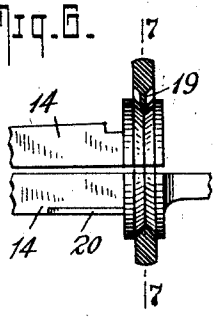


Fig. 7.

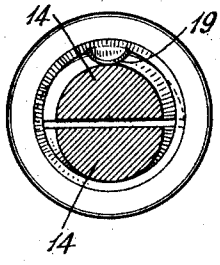


Fig. 8.

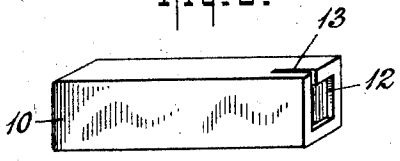
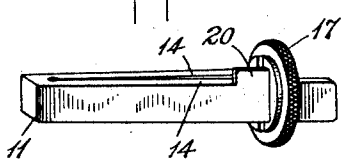


Fig. 9.



WITNESSES

G. V. Rasmussen

John A. Kellenbeck

INVENTOR

ARNOLD SCHROETTER

BY

Briesen & Schurck

ATTORNEYS

UNITED STATES PATENT OFFICE.

ARNOLD SCHROETTER, OF NEW YORK, N. Y.

CLASP.

1,396,887. Specification of Letters Patent. Patented Nov. 15, 1921.

Application filed January 8, 1921. Serial No. 435,806.

To all whom it may concern:

Be it known that I, ARNOLD SCHROETTER, a citizen of the United States, and resident of the borough and county of the Bronx, city and State of New York, have invented certain new and useful Improvements in Clasps, of which the following is a specification.

My invention relates to clasps and more particularly to jewelry clasps of the kind whereby, for instance, the ends of a chain, necklace, bracelet or the like are detachably fastened together. My invention contemplates the provision of a construction of maximum simplicity which is reliable in function and in which the possibility of unintentional and accidental unclasping or unfastening of the clasp elements relatively to each other is positively avoided. Other more specific objects of my invention will appear from the description hereinafter and the features of novelty will be pointed out in the appended claims.

In the accompanying drawings, which show an embodiment of my invention without defining its limits, Figure 1 is an exterior view of the clasp; Figs. 2 and 3 are sectional views showing the parts of the clasp in different positions; Fig. 4 is a fragmentary detail illustrating the one member of the clasp in its operative or locked position; Fig. 5 is a section thereof on the line 5—5 of Fig. 4; Fig. 6 is a view similar to Fig. 4 showing said one member in its inoperative or unlocked position; Fig. 7 is a section thereof on the line 7—7 of Fig. 6; and Figs. 8 and 9 are perspective views respectively of the two major elements of the clasp, it being understood that all of the views are on relatively enlarged scales with respect to the device as it is actually constructed.

As shown in the illustrated example, the clasp comprises two major elements consisting of a female or socket member 10 and a cooperating male or catch member 11. The member 10 is hollow with its one end closed and its other end open and may be of any suitable form and dimensions and of any convenient cross-section, the illustration showing said member 10 of oblong shape and rectangular cross-section which is the preferred form. At its open end the member 10 is provided with an inwardly projecting flange 12 and with an open-ended slot or recess 13 extending lengthwise of one wall of said member 10 for the purpose which will appear more fully farther on in the description.

The catch member 11 as illustrated, comprises two legs 14 joined together at one end and having an inherent elasticity or resiliency tending to spread them apart upon the connected end as a pivot, the legs 14 of said member 11 preferably comprising integral parts of a single element as shown in Figs. 2, 3 and 9. At their free ends, the legs 14 are provided with grooves 15 which, as shown in the illustrated example, may be of semi-circular shape and formed in the peripheries of bearing members 16 carried by said legs, the grooves being preferably of V-shape although this is not essential as grooves of other shape may be substituted without affecting the efficiency of the clasp. The bearing members 16 may comprise integral parts of the legs 14 or consist of separate elements permanently attached to said legs in any convenient and well known way. An operating member illustrated in the form of a ring 17 is rotatably mounted at the free ends of the legs 14 and specifically upon the bearing members 16 and is constructed with an internal bearing annulus 18 corresponding in shape to the form of the grooves 15 and fitting the same as shown in Figs. 4 and 6 whereby said ring 17 and members 15 are maintained in operative relation against disconnection from each other. At a given point on its periphery the annulus 18 is provided with a cam member 19 of suitable shape, for instance as shown, and extending inwardly from said annulus into one or the other of the grooves 15; the said cam member 19 is of a size sufficient to press the legs 14 toward and into close proximity to each other in an inoperative or unlocked position, as will be more fully pointed out hereinafter. The clasp further includes a web or lug 20 carried by one of the legs 14 and arranged to extend into the slot or recess 13 for the purpose of predetermining the connecting relation of the catch member 11 with respect to the socket member 10; the other leg 14 is provided with a notch 21 arranged to receive and accommodate the flange 12 of the socket member 10 when the clasp is closed or locked.

Suitable devices, such as eyelets or the like,

may be provided at the closed end of the member 10 and at the free end of one of the legs 14 of the member 11 for connecting said clasp with the opposite ends of a chain, necklace, bracelet and the like.

In practice assuming that the clasp is open or disconnected and it is desired to close or connect the same, the ring 17 is rotated relatively to the legs 14 to bring the cam member 19 into one or the other of the grooves 16 for instance as shown in Figs. 6 and 7 and to consequently cause said cam member to exert an inward pressure upon that leg 14 or more specifically the bearing member 15 of which the particular groove forms a part. The inward pressure exerted by said cam member presses the one leg 14 toward the other, which is held against any tendency to move away by the ring 17, and brings said two legs into close proximity to each other as shown in Figs. 3, 6 and 7. In this position of the parts, the catch member 11 may be freely inserted into the socket member 10 as illustrated in Fig. 3; in connecting the two clasp members with each other the lug 20 is caused to enter the slot or recess 13 as indicated in Fig. 1, whereby the notch 21 is brought into proper coöperative relation with the flange 12 or, in other words, the connecting relation of the male and female members of the clasp is predetermined. The introduction of the member 11 into the member 10 is continued until the bearing members 16 or their equivalents abut against the open end of the socket member 10, in which position the notch 21 is in registry with the flange 12, it being understood that the parts are constructed and dimensioned to produce this result. By rotating the ring 17 relatively to the legs 14 until the cam member 19 is opposite to the cut between the legs 14 as shown in Fig. 5 or in any position in a plane parallel to the plane in which the resiliency of the legs 14 is effective, the restraining influence or its inward pressure upon the one leg 14 is removed. With the cam member thus located, the inherent elasticity of the legs 14 will cause them to spread apart as shown in Figs. 2, 4 and 5 to the extent permitted by the grooves 15; this brings the notch 21 over the flange 12 and securely locks the catch member 11 against withdrawal from the socket member 10, thus firmly closing or connecting the clasp.

Because of the protection afforded by the ring 17 and its rigidity and due to the fact that only comparatively small surface areas of the legs 14 or more specifically, the bearing members 16, are exposed beyond the open end of the socket member 10, when the clasp is closed, it is substantially impossible to unintentionally or accidentally disconnect the members 10 and 11 from each other. The clasp is therefore absolutely reliable in action and proof against accidental disconnection whereby the danger of loss of the necklace, chain, bracelet or other article of jewelry of which it forms a part is obviated. To disconnect the clasp members it is simply necessary to rotate the ring 17 to the position shown in Figs. 3, 6 and 7 in which the notch 21 is disengaged from the flange 12 and the legs 14 are pressed together in a position which leaves the catch member 11 free to be withdrawn from the socket member 10. The manipulative movements required to connect and disconnect the clasp members are easily carried out in a perfectly natural manner without any special effort or concentration, the whole device, both in construction and operation, being extremely simple and of maximum efficiency for its intended purposes.

The clasp is capable of a wide range of usefulness in the jewelry art and may also be successfully applied in other arts where a reliable and efficient clasp is desired.

Various changes in the specific form shown and described may be made within the scope of the claims without departing from the spirit of my invention.

I claim:

1. A clasp comprising two members arranged to be detachably connected, one of said members being adjustable to operative and inoperative positions for connection with and disconnection from the coöperating member and means for adjusting said adjustable member to its inoperative position and for maintaining it therein, said means protecting said adjustable member, in its operative position, against unintentional adjustment to its inoperative position.

2. A clasp comprising two members arranged to be detachably connected, one of said members having an inherent elasticity tending to adjust it to an operative position and means whereby said elastic member may be adjusted to an inoperative position and adjustable to permit said member to assume its operative position, said means protecting said elastic member against unintentional disconnection from its coöperating member.

3. A clasp comprising a socket member, a resilient catch member arranged to be inserted into said socket member, coöperating means on said members whereby they are detachably connected, and means movably mounted on said catch member for adjusting it to disengage said coöperating means and permit separation of said clasp members, said means protecting said catch member in its operative position, against unintentional actuation to disengage said coöperating means.

4. A clasp comprising a socket member, a resilient catch member arranged to be inserted into said socket member, said catch

member comprising connected legs having an inherent elasticity tending to spread them apart to an operative position, devices on said members coöperating, in the operative position of said catch member, to detachably connect said members and a member rotatably mounted upon said catch member whereby said legs are pressed toward each other to an inoperative position to disengage said devices and permitted to spread apart to engage the same, said rotatable member protecting said legs, when spread apart, against unintentional adjustment toward each other to said inoperative position.

5. A clasp comprising a socket member, a resilient catch member arranged to be inserted into said socket member, said catch member comprising connected legs having an inherent elasticity tending to spread them apart to an operative position, a projection and a notch on said members, coöperating, in the operative position of said catch member, to detachably connect said members, grooved bearing members carried by said legs, a ring rotatably mounted upon said bearing members and a cam member carried by said ring whereby said legs are pressed toward each other to an inoperative position to disengage said notch and projection and permit separation of said clasp members, said ring protecting said legs, when spread apart, against unintentional adjustment toward each other to said inoperative position.

6. A clasp comprising a socket member, a resilient catch member arranged to be inserted into said socket member, coöperating means on said members whereby they are detachably connected, means movably mounted on said catch member for adjusting it, disengage said coöperating means and permit separation of said clasp members, said means protecting said catch member, in its operative position, against unintentional actuation to disengage said coöperating means and coöperating devices on said socket and catch members whereby the connecting relation thereof is predetermined.

7. A clasp comprising a socket member having a recess, a resilient catch member arranged to be inserted into said socket member, coöperating means on said members whereby they are detachably connected, a member mounted on said catch member and rotatable transversely thereto to disengage said coöperating means and permit separation of said clasp members, and a lug on said catch member arranged to enter said recess whereby the connecting relation of said socket and catch members is predetermined.

In testimony whereof I have hereunto set my hand.

ARNOLD SCHROETTER.