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L. J. CARTIER

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BROOCH CLASP

Filed April 24, 1930

Fig: 1

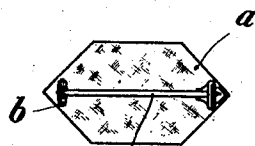


Fig: 2



Fig: 3

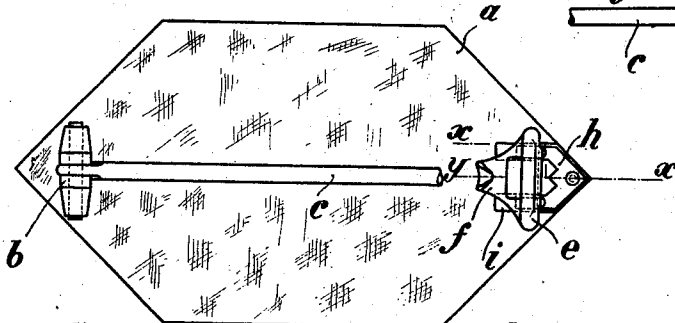


Fig: 4

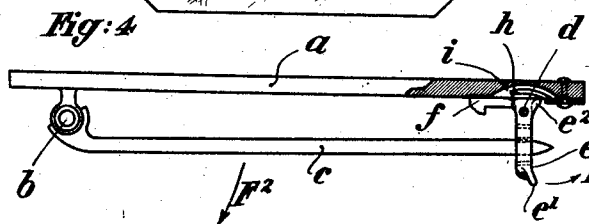


Fig: 6

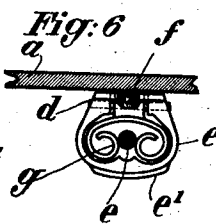
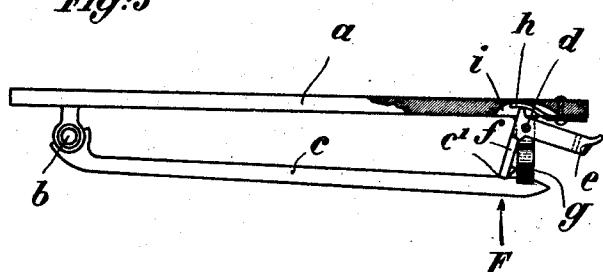


Fig: 5



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UNITED STATES PATENT OFFICE

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BROOCH CLASP

Application filed April 24, 1930, Serial No. 446,959, and in France March 7, 1930.

My invention relates to a self closing clasp for brooch pins, comprising a movable safety ring which comes to fit around the end of the pin when a pressure is applied on said pin for closing the brooch, and which can be disengaged by hand when the brooch is to be opened, thus releasing the end of the pin.

According to a preferred embodiment, the safety ring is pivotally mounted and comprises a cam or arm so disposed as to be in an oblique position relatively to the pin when the safety ring is in the open position, and the pin in contact with said cam or arm.

In that way, when the pin is pressed down, said cam or arm determines the rotation of the ring so as to bring it into the closed position, and when the safety ring is rotated so as to open the clasp, the cam or arm drives the pin out of the clasp. In the closed position, the pin is kept in place by a lyre shaped spring between the branches of which it is pushed, or by any other fixation device fitting in the ring.

A small stop spring keeps the safety ring in the closed or in the open position.

A preferred embodiment of my invention is illustrated in the accompanying drawings, in which:—

Figures 1 and 2 are respectively a front and a side view of a brooch fitted with the clasp according to the invention.

Figure 3 is a view on a larger scale corresponding to Figure 1.

Figures 4 and 5 are side views corresponding to Figure 3, partially in section on the line $x-x$ of Figure 3, showing the pivoting ring in different positions.

Figure 6 is an end view of Figure 4, partially in section.

Figure 7 is a sectional view on the line $y-x$ of Figure 3.

Pin c is hinged in b on the plate of brooch a , which may be of any kind. Said pin is provided with a spring, which always tends to rotate said pin in the opening direction, as shown by arrow F^2 . Opposite the other end of the pin, is mounted a ring e pivoting around an axis d fixed on the brooch plate. Said ring is integral with a cam or arm f dis-

posed at such an angle with respect to the ring that when the clasp is opened, in the position shown in Figure 5, cam f is obliquely disposed with respect to pin c . In other words the point of contact c_1 of the pin with the cam is located between hinge b and axis d , so that when the pin is pressed down in the direction of arrow F , the cam is rotated and consequently, ring e is also rotated and comes to fit around the end of the pin as shown in Figure 4. At the same time the pin is pushed between the branches of a lyre-shaped spring g fitting in the ring and welded to the brooch plate.

The clasp being closed as shown in Figure 4, there is but to push with the nail on the end e_1 of ring e in the direction of arrow F^1 , to bring back the ring in the opening position of Figure 5. The rotation of cam f drives pin c out of the branches of spring g .

A plate spring h acting on the tail e_2 of ring e and fitted in a housing i of the brooch plate keeps the ring in the position of Figure 5 or of Figure 4.

While I have disclosed what I deem to be the preferred form of my device, I do not wish to be limited thereto as there might be changes made in the construction, disposition and form of the parts without departing from the spirit of my invention as comprehended within the scope of the appended claims.

What I claim is:—

1. A self closing clasp for brooches comprising a pin hinged to the brooch plate, an axis on the brooch plate located opposite the end of the pin, a safety ring adapted to pivot on said axis, a projection on said safety ring adapted to transmit the closing motion of the pin to the safety ring and to move said safety ring round the end of the pin, and a lyre shaped spring fitted in the safety ring for keeping the pin in position therein.

2. A self closing clasp for brooches comprising a pin hinged to the brooch plate, an axis on the brooch plate located opposite the end of the pin, a safety ring adapted to pivot on said axis, a projection on said safety ring adapted to transmit the closing motion of the pin to the safety ring and to move said safety ring round the end of the pin, a lyre-shaped

spring fitted in the safety ring for keeping the pin in position, and a plate spring for keeping the safety ring in the open position or in the closed position.

5 In testimony whereof I have signed this specification.

LOUIS JOSEPH CARTIER.

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