

J. E. SULLIVAN.
BROOCH.

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1,003,216.

Patented Sept. 12, 1911.

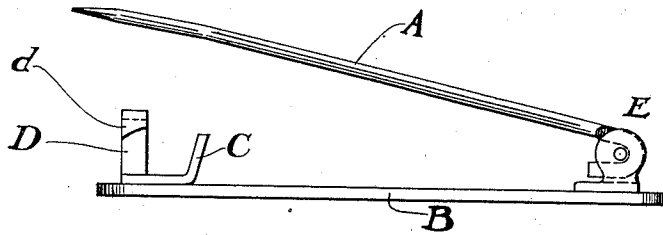


FIG. 1.

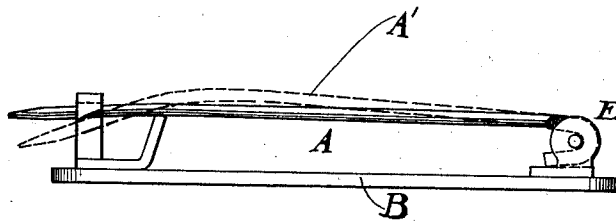


FIG. 2.

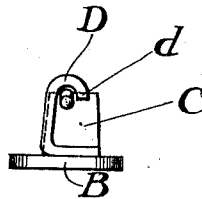


FIG. 3.

WITNESSES.

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UNITED STATES PATENT OFFICE.

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BROOCH.

1,003,216.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JAMES E. SULLIVAN, a citizen of the United States, residing at Pawtucket, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Brooches, of which the following is a specification.

My invention relates to improvements in brooches and the object of my invention is to provide a brooch in which the pin after being placed in the catch is securely locked therein so that it cannot be detached by accidental means. I accomplish this object by the device shown in the accompanying drawings, in which—

Figure 1 represents an elevation of the brooch with the pin disengaged from the catch; Fig. 2, a similar elevation with the pin engaged in the catch and showing the method of detachment, and Fig. 3, a vertical end view of the brooch showing the catch, the pin and the locking device.

In Fig. 1, A represents the pin; B the body of the brooch. Arranged to project from the rear face of the body B of the brooch is a catch consisting of a rearwardly-extending arm D bent at its outer terminus to provide an overhang, as at *d* is disposed transversely with respect to the rear face of the body B of the brooch and has its free terminus beveled. The arm D is shown as having its inner terminus formed integral with one side of a base plate D', which is fixedly secured to the rear face of the body B. The base plate D' terminates at its inner end in a locking device which consists of a rearwardly projecting rigid member C which inclines away from the arm D. The member C is disposed transversely with respect to the rear face of the body B, is arranged in proximity to the arm D.

The pin A and body B are of any desired form and material as in ordinary brooches. The catch and the locking device may be constructed from a single piece of metal as shown suitably fastened to the back of the brooch. The length and the width of the member C are such that the pin A strikes the free terminus thereof as a rigid fulcrum before it can be made to engage the catch. The overhang *d* of the catch D is extended so as to project inwardly and nearer the back of the brooch than the free terminus of the member C. As a result of this arrangement, the engagement of the pin A in the catch is possible only by bending the point

of the pin A downward by the exertion of considerable force, the free terminus of the member C serving as a rigid fulcrum until the point or that portion of the pin adjacent to the point, will come inwardly of the overhang *d* and permit the pin to enter the catch, the shape of the pin at the moment of entrance being approximately as shown by the dotted lines A' in Fig. 2. The relative positions of the free terminus of the member C and the overhang portion of the catch *d* are capable of any desired degree of adjustment, depending upon the stiffness of the pin A.

When once engaged by the catch the pin cannot become detached therefrom except by the exercise of considerable force upon the point of the pin, reversing the process employed in inserting the pin into the catch, and an accidental disengagement is practically impossible. It will thus be seen that the operation of my invention is based on the springiness or flexibility of the pin and the rigidity of the member C.

It will be noticed that the edge of the overhang portion *d* farthest from the pin joint projects inwardly or nearer the back of the brooch than the other edge of said overhang *d*; that is, the extremity of the overhang *d* is cut upon a bevel, as shown best in Fig. 1. The purpose of this is that the bevel may approximately conform to the outline of the pin when the pin is bent for engagement as shown in dotted lines in Fig. 2, thus serving to more securely retain the pin in the catch.

The distance of the member C from the catch may be varied to suit pins of different size or rigidity.

Although the drawing shows the member C to be integral with the catch, this is not essential and the two may be formed of separate pieces of metal.

Having now described my invention, what I claim and desire to secure by Letters Patent is:—

1. A brooch comprising a body-portion, a pin, means for pivotally connecting one end of the pin to one side of the body-portion at the rear thereof, a relatively short base plate fixedly secured to the rear face of the body-portion at the side opposite to that to which the pin is pivotally connected, a rearwardly-extending arm integral with said base plate at the outer portion thereof and bent at its outer terminus to provide a guard, a rearwardly-projecting rigid member formed in—

tegral with the inner portion of said base plate and permanently spaced throughout from the guard and providing a permanent stationary fulcrum and a lock for the free
5 end of the pin when the latter is shifted to extend under the guard and when the pin is bent intermediate its ends toward the brooch while the free end of the pin is positioned under the guard thereby preventing
10 separation of the pin from the guard.

2. A brooch comprising a body-portion, a pin, means for pivotally connecting one end of the pin to one side of the body-portion at the rear thereof, a rearwardly-extending arm connected with the rear of the
15 body-portion of the brooch at that side opposite to that to which said means is arranged, a rearwardly-projecting rigid member con-

nected with the rear of the base and permanently spaced throughout from the guard in
20 proximity to and inwardly of said guard and providing a permanent stationary fulcrum and lock for the free end of the pin when the latter is shifted to extend under the guard and when the pin is bent inter-
25 mediate its ends toward the brooch while the free end of the pin is positioned under the guard thereby preventing the separation of the pin from the guard.

In testimony whereof I affix my signature 30
in presence of two witnesses.

JAMES E. SULLIVAN.

Witnesses:

ROSCOE M. DEXTER,
EDITH M. BROMLEY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."