R. WILLARD.

SAFETY CATCH.

APPLICATION FILED OCT. 25, 1909.

964,075. Patented July 12, 1910.

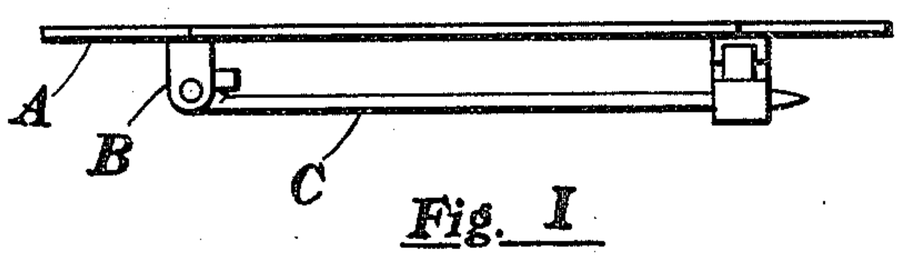

Fig. 1

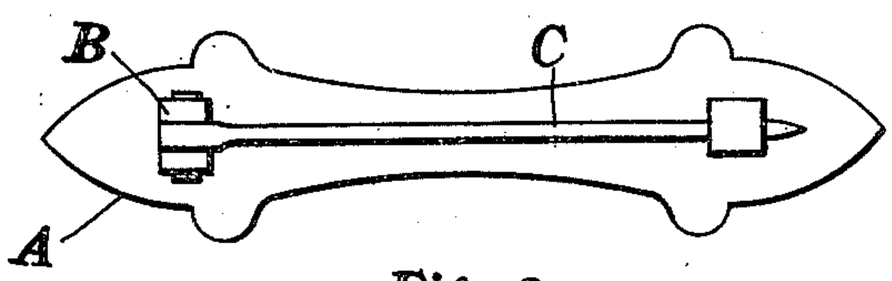

Fig. 2

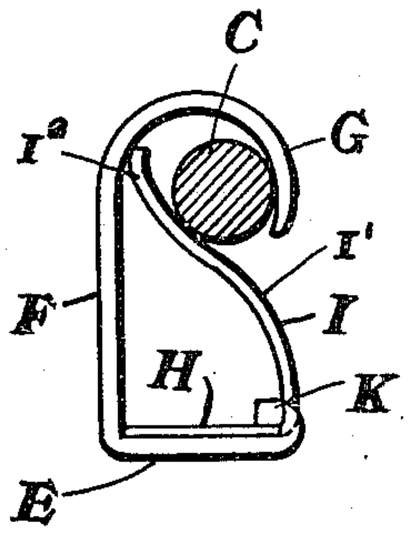

Fig. 3

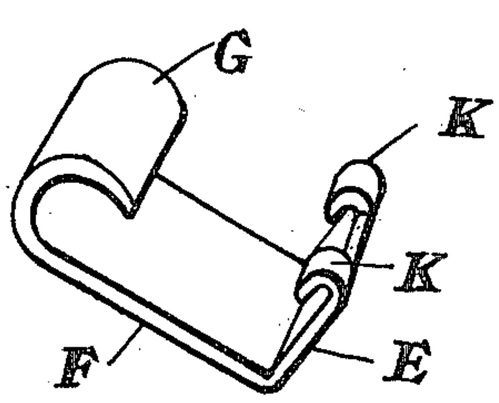

Fig. 4

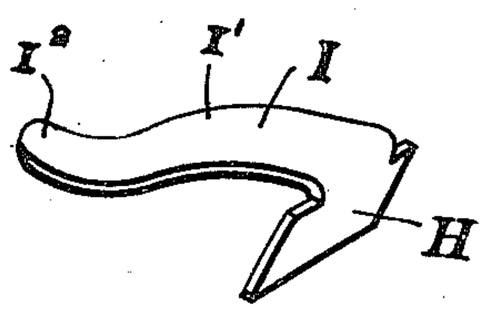

Fig. 5

WITNESSES:

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SAFETY-CATCH.

964,075. Specification of Letters Patent. **Patented July 12, 1910.**

Application filed October 25, 1909. Serial No. 524,336.

To all whom it may concern:

Be it known that I, RATHBUN WILLARD, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Safety-Catches, of which the following is a specification.

My invention relates to safety catches for use on pins, brooches, badges and like articles, and has for its essential objects the ends commonly sought in this class of structures, but more particularly is it sought to secure a firm retention of the pin shaft in its seat; to prevent the accidental dislodgment of the same; to provide a simple and inexpensive structure and one which may be readily applied to and used upon any style of base.

A further object is to connect the spring element to the catch without the use of solder in order to avoid drawing the temper of the spring.

To the above ends my invention consists in the novel construction and combination of parts hereinafter described, and illustrated in the accompanying drawings wherein—

Figures 1 and 2 are side and plan elevations respectively of a brooch provided with my catch, Fig. 3 an end elevation of the catch member engaging a pin shaft shown in transverse section, and Figs. 4 and 5 perspective detail views of the catch body and spring respectively.

In the drawings wherein like reference letters indicate like parts throughout the views A is the body, B the joint, and C the pin tongue of an ordinary brooch in conjunction with which my catch is in this instance employed.

The catch comprises a horizontal base E, a vertical body F and an inturned downwardly directed beak G all bent from a single piece of metal. Mounted in the catch member is a plate H which rests upon the base E with its rear edge abutting against the body F, and provided midway its forward edge with an integral resilient arm I having an upwardly and rearwardly curved or inclined lower portion I′, terminating in an upwardly and forwardly curved end portion I^2 terminating adjacent to or in contact with the front face of the back of the hook. In other words, the lower portion of the arm I is slightly convex, and its upper portion somewhat concave, the convex portion of the arm being nearest the extremity of the beak. The plate H is maintained firmly upon the base E by inturned lugs K extending from the ends of the forward edge of the base, and folded backwardly and down upon the plate H. By this means of fastening the use of solder to connect the parts is avoided.

The operation of the catch is as follows. The pin shaft C is inserted by rearwardly pressing the latter against the arm I which yields sufficiently to permit the shaft to pass under and behind the inturned end of the beak G against whose extremity the shaft is pressed. Because of the limited space between the beak extremity and the convex portion I of the spring arm I, the shaft C can be disengaged from its seat only by manually pressing the shaft downwardly against the portion I with sufficient power to force the arm rearwardly and permit egress of the shaft from beneath the beak G.

What I claim is,—

1. In a safety catch, the combination with a base, a body extended at right angles to said base, and a beak extending over said base, of a plate resting upon the base, lugs upon the base folded down upon the plate, and a resilient arm upon the plate extending within the beak and normally interspaced from the free end of the beak.

2. In a safety catch, the combination with a base, a body extended at right angles to said base, and a beak extending over said base, of a plate resting upon the base and provided with a rearwardly inclined arm midway its forward edge with its free end extended toward the body portion within the beak, and lugs upon the forward edge of the base folded upon the plate upon each side of the arm.

In testimony whereof I have affixed my signature in presence of two witnesses.

RATHBUN WILLARD.

Witnesses:

HORATIO E. BELLOWS,

GEORGE H. MCLAUGHLIN.