Nov. 18, 1924.

1,516,028

O. H. SLEEPER

LOCKING DEVICE

Filed Dec. 27, 1919

FIG. I

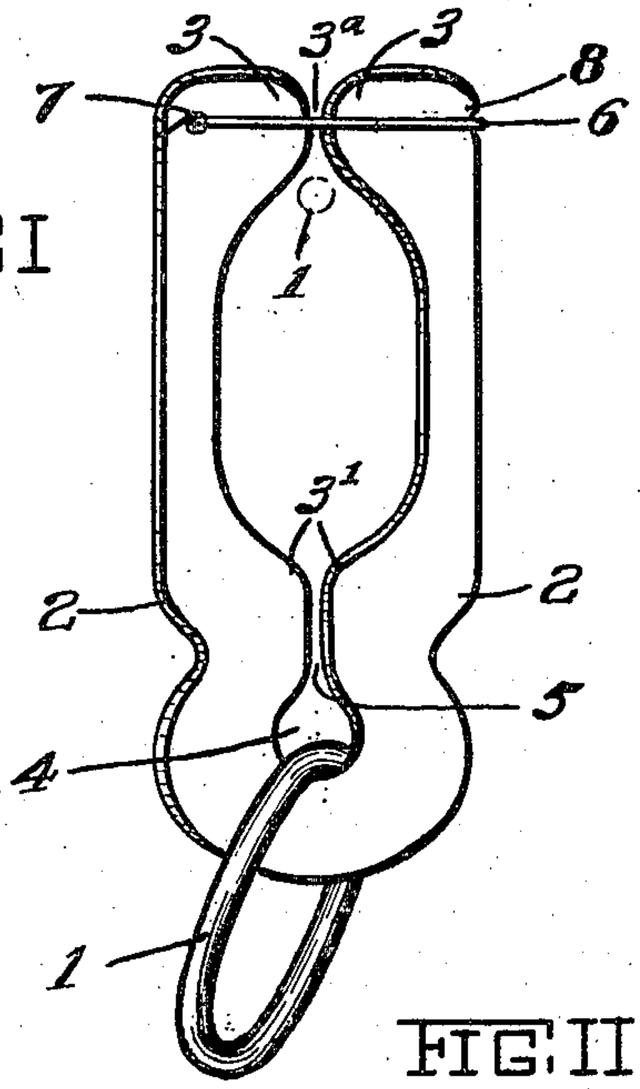


FIG. II

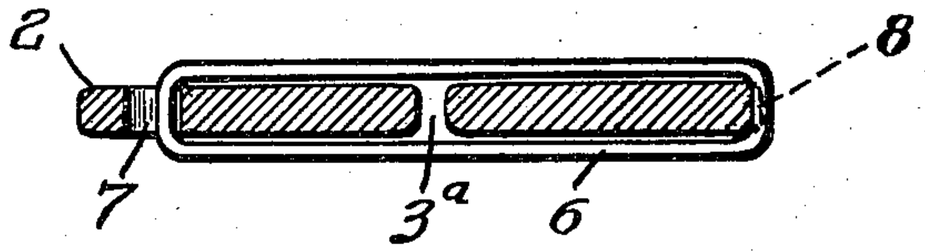


FIG. III

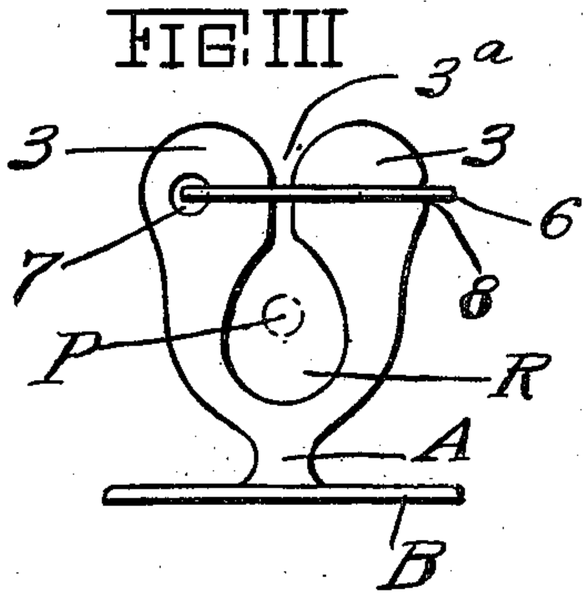
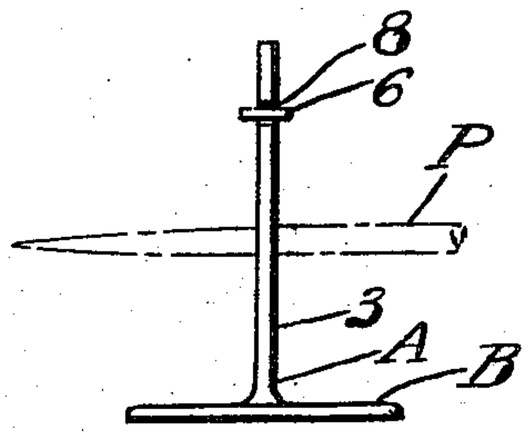


FIG. IV



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UNITED STATES PATENT OFFICE.

OTIS H. SLEEPER, OF EXETER, NEW HAMPSHIRE.

LOCKING DEVICE.

Application filed December 27, 1919. Serial No. 347,803.

To all whom it may concern:

Be it known that I, OTIS H. SLEEPER, a citizen of the United States, residing at Exeter, county of Rockingham, State of New Hampshire, have invented certain new and useful Improvements in Locking Devices, of which the following is a specification.

This invention relates to locking devices, and particularly to a locking device or catch for articles of jewelry or the like.

The object of my present invention is to provide a simple, neat and attractive lock which may be produced in commercial quantities at the minimum cost, and which will effectively prevent accidental disengagement of the ring, pin, or other article to be locked, while capable of ready manipulation to permit intentional disengagement thereof.

To the end therefore of producing a locking device embodying the foregoing characteristics, I have devised my present invention. In it, I attain security of lock and readiness of manipulation in a construction which is at once neat and attractive and which may be produced by simple machine operations at the minimum cost.

The construction and operation of my locking device, together with a selected embodiment which I have found satisfactory in use and well adapted to the requirements of manufacture, is described and illustrated in the accompanying specification and drawings and particularly pointed out in the appended claims. Throughout the specification and drawings like reference characters are correspondingly applied, and in the drawings:

Fig. I is an elevation of a catch in accordance with my invention.

Fig. II is a transverse section thereof.

Fig. III is an end view of a modification, and

Fig. IV is an edge view thereof.

Referring to Figs. I and II, I have indicated at 1 a ring or like article to be locked, and at 2 a catch, which in its simplest form may be conveniently stamped from flat sheet stock. The catch is of bowed form closed at one end and open at its opposite end, and providing a pair of connected spring arms 3 between which the ring 1 is adapted to be entered and locked. Adjacent its closed end, the bowed catch is constricted as indicated at 3^1 to provide a swiveling recess 4 in which the ring 1 normally lies when locked within the catch. The recess 4 communicates at 5 with the open end of the catch, the free ends of the arms 3 opposing each other and being slightly spaced apart to provide a passage 3^a through which the ring 1 may be entered into and withdrawn from the recess 4.

In the form shown in Figs. III and IV, which is particularly designed as a pin lock for a brooch, bar pin, or the like, the retaining recess for the pin P is indicated at R and the catch has an attaching web or foot portion A at its closed end adapted to be soldered or otherwise mounted upon a brooch, bar or the like B.

In both forms, the opposed spring arms 3 are adapted to be locked together by a retainer 6 which may conveniently be in the form of a loop swiveled at 7 to one of the arms and engaging under a shoulder 8 formed by grooving the opposite arm and when so engaged overlying the passage 3^a separating said arms.

In use, the ring, pin or other article to be locked is entered with the locking recess through the passage 3^a between the arms 3, the arms yielding away from each other, if necessary to permit such entrance. The arms are then positively locked together by engaging the retainer 6 under the locking shoulder 8 which puts the arms under tension. Any withdrawing movement of the article to be locked is met by the arms 3 (see dotted line showing Fig. I), which simply tend to spread laterally apart, and thus to tighten the engagement of the retainer 6 under the locking shoulder 8.

To unfasten the catch, the arms 3 are pressed towards each other to allow the retainer 6 to clear the shoulder 8 whereupon the arms automatically tend to separate to allow the article to be locked to be withdrawn through the passage 3^a normally separating the opposing ends of the arms. Under ordinary conditions of use, with the form shown in Figs. I and II, the ring 1 will not usually slip past the shoulders 3^1 into the open face between said shoulders and the opposing terminals of the arms 3, but where this happens, further withdrawal of the ring is positively prevented by said opposing terminals.

Various other modifications in the form

and construction of my device may obviously be resorted to if within the limits of the appended claims.

What I therefore claim and desire to secure by Letters Patent is:

1. A catch comprising a pair of spring arms spaced apart from each other and terminating at one end in an eye within which the article to be locked is normally lodged and beyond said eye having opposite portions adapted to directly receive the pressure of the article to be locked when said article is freed from the eye and moved towards said portions, there being a spa e between the open end of said eye and said opposite portions of the arms within which the article to be locked enters when freed from the eye, and means for normally drawing said pressure receiving portions of the arms towards each other to meet the spreading apart pressure of the article to be locked.

2. A catch comprising a member closed at one end to provide an eye for the reception of an element to be locked and beyond said eye extending as a pair of duplicate symmetrical arms continuously spaced from each, said arms adjacent said eye and adjacent their free ends disposed towards each other to provide spaced alined relatively narrow channels communicating with each other and with said eye, the space between said pairs of channels constituting a recess within which the element to be locked enters when freed from the eye and the opposed portions of the areas adjacent said outer channel adapted to directly meet the spreading apart pressure of the element to be locked upon a withdrawing movement of said element from said recess, and means releasably engaging said arms to draw the outer ends thereof towards each other in position to meet the spreading pressure.

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

OTIS H. SLEEPER.

Witnesses:
ALMON L. SLEEPER,
PERLEY B. SLEEPER.