

June 19, 1923.

O. T. FENTON
SAFETY CATCH
Filed Nov. 11, 1922

1,459,526

Fig. 1.



Fig. 2.

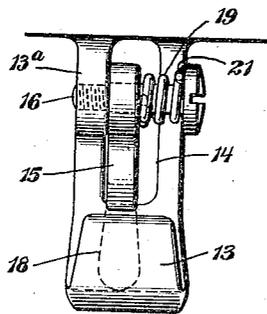


Fig. 3.

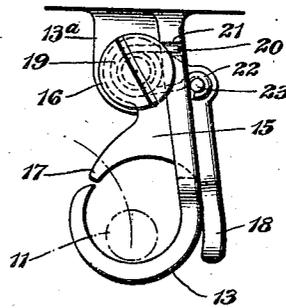


Fig. 4.

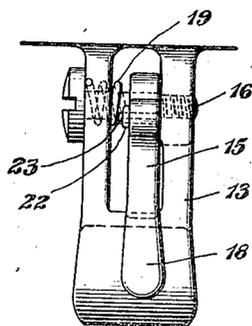
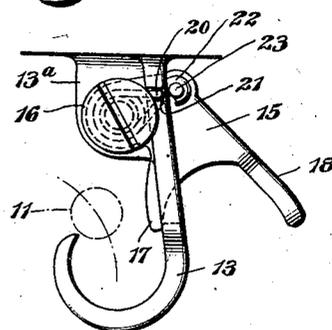


Fig. 5.



INVENTOR.
Oscar T. Fenton,
BY
W. P. Hutchinson,
ATTORNEY.

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UNITED STATES PATENT OFFICE.

OSCAR T. FENTON, OF HIGHTSTOWN, NEW JERSEY.

SAFETY CATCH.

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To all whom it may concern:

Be it known that I, OSCAR T. FENTON, a citizen of the United States, and a resident of Hightstown, Mercer County, New Jersey, have invented a new and useful Improvement in Safety Catches, of which the following is a full, clear, and exact description.

My invention relates to improvements in safety catches, and more particularly to safety catches which are of an ornamental kind such as manufactured by jewelers, or are used as a part of some ornament, although the invention can be applied to any safety pin. The object of my invention is to produce a simple attachment which can be applied to safety pins of the usual or any preferred type, and which will normally close the pin in locked position so that it cannot accidentally become unlocked, and which has means, as for instance a spring, to hold the pin locked, and furthermore has a catch which can be engaged by the finger and by means of which the pin may be unlocked. My invention is intended to produce a structure of this kind which will not add materially to the cost of the article to which it is applied, but which will prevent the unlocking of the safety pin as aforesaid, and which is of such a nature that it is not likely to be broken or get out of order, and can be easily, mechanically, and economically applied to safety pins. All of which will be better understood from the description which follows.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar reference characters indicate corresponding parts in all the views.

Figure 1 is a side elevation of the pin embodying my invention.

Figure 2 is a front elevation on a much enlarged scale of the hook and the lock attachment.

Figure 3 is a side elevation of the structure shown in Figure 2.

Figure 4 is a rear elevation or back view of the structure shown in Figure 2, and

Figure 5 is a view similar to Figure 3 but with the locking latch or member in open position.

In the drawings Figures 2 to 5, the structure is shown on a much enlarged scale so that it can be more readily understood. The body 10 can represent an ordinary

safety pin body, or a brooch, or in fact any object which is provided with a safety pin attachment, and I have shown the customary pin 11 pivoted in an ear 12, but the manner in which the pin 11 is pivoted to the body 10 forms no part of the invention. The pin is used in the ordinary way, that is, the member 11 is swung into and out of engagement with the hook 13 which is rigidly attached to the member 10 near the end opposite the ear 12. The hook has its back bifurcated to provide an opening 14 in which swings a latch 15, the under side of which is preferably curved as shown, and the upper part of the latch is pivoted on a member 16, which can conveniently be a screw, and which is secured in the fin or web 13^a forming a part of the hook, or it might form a part of the body 10. The main thing is to provide means for supporting the latch 15 in a position to swing in the opening 14.

The latch 15 has a forwardly extending tongue 17 which is adapted to close the entrance to the hook 13, and this tongue should be long enough so that when the latch is opened, the tongue will strike the back of the hook just below the opening 14, so that the latch cannot be swung back too far, and the latch cannot be swung too far forward because of the catch or extension 18 which lies against the back of the hook and projects outward or downward opposite the bend of the hook, leaving a place which can be easily engaged by the finger or thumb so as to open the latch 15 against the tension of its spring 19, more particularly referred to below.

Thus it will be seen that the latch 15 has a swinging movement limited in one direction by the tongue 17, and in the other direction by the extension or catch 18.

In safety pin locks as frequently made which close only by gravity, or have springs disposed so that they are readily broken, the locking member frequently gets displaced and the pin becomes unclamped, but I provide a very secure and simple means of holding the latch 15 in closed position. This is preferably a strong though small spiral spring 19 which is coiled around the member 16, and one end of which is secured to an adjacent abutment, as for instance, the back of the hook, while the other end engages the latch 15, and with a tension to hold the latch normally and firmly closed. As a convenient means of carrying the above arrange-

ment into effect, I provide a notch 21 in the back of the hook 13 which notch receives one end 20 of the spiral spring 19, while the opposite end of the spring is formed into a hook 22 which engages a pin or boss 23 on the latch 15, as shown clearly in Figures 3 and 5. Thus it will be seen that the device is very simple and inexpensive, can be conveniently assembled, and will positively hold the latch 15 in position to lock the pin.

The pin is operated, so far as closing it is concerned, like any ordinary safety pin, that is to say, the member 11 is pushed against the tongue 17 and into the hook 13, the tongue and latch 15 swinging back under the pressure of the pin and permitting it to enter the hook 13. As it passes the tongue 17, however, the tension of the spring 19 closes the latch 15, pressing the extension 18 closely against the back of the hook 13, and in jewelry construction the latch and its operating parts are so small that they are unnoticeable. When the pin is to be released, the latch 15 is opened by means of the extension or catch 18, and the pin member 11 can be moved out of the hook 13 as usual.

From the foregoing description it will be seen that I have provided a very simple locking attachment which is positive in operation, in which the latch member has a limited movement so that it cannot get out of place, which is certain to lock the pin member of the hook in closed position, and which can be easily opened when desired.

It will also be seen that by using the screw in the web 13^a, the device can be very easily applied, as the end 20 of the spring will slip naturally into the notch 21.

I claim:

1. A safety pin catch comprising in combination a body with a safety pin on its back, the hook member of the safety pin being a rigid one-piece hook with a slot through the back thereof, a latch pivoted near the back to swing in the slot of the hook, said latch being arranged to close the hook and having its forward part extended so that on its backward swing it will engage the hook back at the end of the slot, and its back part projected beyond the slot end to form a finger catch, and a spring coiled around the pivot of the latch and operatively connected to the latch to normally close the hook.

2. A safety pin catch having the hook member of the pin provided with an opening in the back and with a forwardly extending web, a pivot screw on the web, a latch mounted on the screw and arranged to normally close the hook, the said latch having its front and rear portions long enough to strike the back of the hook below said opening, and a coil spring on the screw arranged to impart its tension to the latch.

3. A safety pin catch having the hook member of the pin provided with an opening in the back and a fin or web extending forwardly from near said opening, a pivot screw on said web, a latch supported on the screw and swinging through the opening, the front end of the latch being adapted to close the hook and the rear end of the latch extending downward behind the hook, and a coil spring on the pivot screw, one end of the spring being secured to the latch and the other to the hook back.

OSCAR T. FENTON.