Aug. 28, 1956 D. V. BAGNASCO 2,760,247

PIN CLASPS

Filed Nov. 23, 1953

Fig. 1.

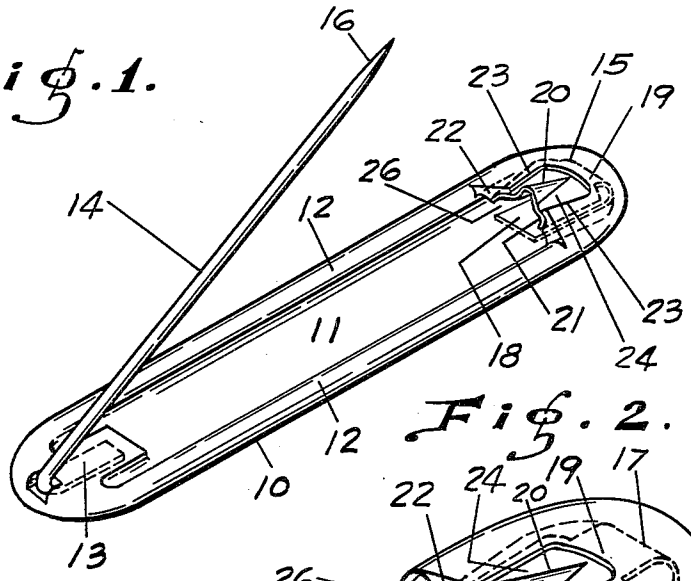


Fig. 2.

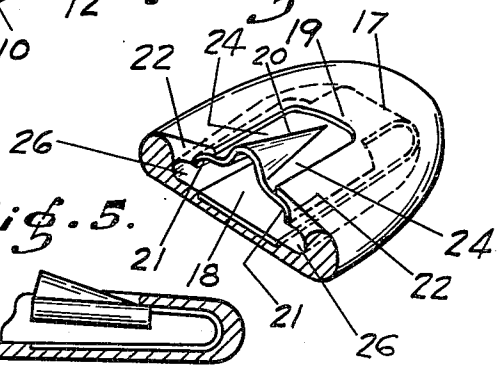


Fig. 3.

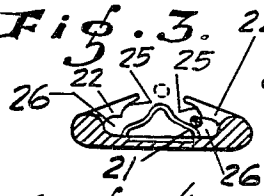


Fig. 5.

Fig. 4.

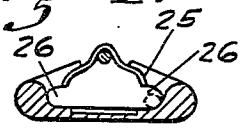


Fig. 6.

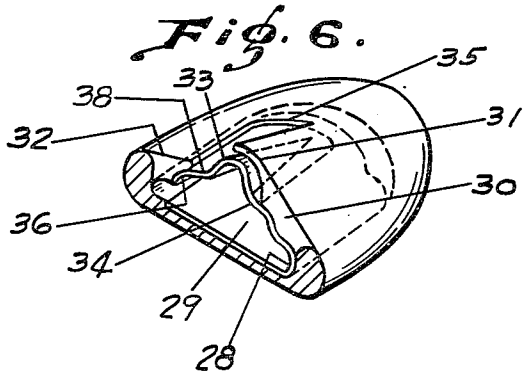


Fig. 7.

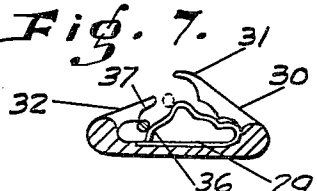
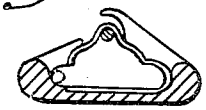


Fig. 8.



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PIN CLASPS

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4 Claims. (Cl. 24—156)

This invention relates to a pin having a safety clasp. It is the object of this invention to provide a pin of the character described which will be easy to close and easy to open by proper manipulation, but which will not be openable by accident.

It is a further object to provide a pin of the character described in which pressure of the pin element itself is utilized to help keep the pin in locked position, but in which the release of the pressure of the pin will not itself release the locking.

In my prior Patent No. 2,546,662 issued March 27, 1951, I have shown a pin designed to be closed by a simple action and which will resist opening by accident. The present invention provides a pin in which the locking is still more secure, requiring actual manual manipulation for release. Such a pin as here described will be preferred where greater security is of importance, as for example when the pin itself is of substantial value and must not be lost, or where the garment must be held against release in spite of movements that might tend to do so.

This invention accordingly comprises an article possessing the features, properties and the relation of elements which will be exemplified in the article hereinafter described and the scope of the application of which will be indicated in the claims.

For a fuller understanding of the nature and objects of the invention, reference should be had to the following detailed description taken in connection with the accompanying drawings, in which:

Fig. 1 is a perspective view of a pin embodying this invention. Fig. 2 is an enlarged perspective of the head section, showing the catch or locking mechanism. Figs. 3 and 4 are details in section through the head and bar showing the relation of the bar to the catch, respectively in the act of closing and in closed position. Fig. 5 is a longitudinal view fragmentary central section showing the form of the clasp element. Fig. 6 is a view similar to Fig. 2, showing a modification of the device. Figs. 7 and 8 are sections similar to Figs. 3 and 4 for showing the modification Fig. 6 in the closed position and in the act of closing.

In the drawings the numeral **10** comprises an elongated dished body portion affording a channel trough **11** within which the pin portion may be concealed, which trough is bounded throughout its periphery by a ridge **12** which is made much heavier at both ends to carry the other portions of the device.

Mounted within this ridge at one end of the body is a shank portion **13** of a pin bar **14**. This shank portion is embedded within a recess in the ridge in such a manner as to permit the pin to be substantially concealed within the trough when in the closed position, but to spring outwardly to the open position shown in Fig. 1.

At the other end of the body the ridge **12** is shaped to form a chamber **15** for the pointed end **16** of the pin, containing a spring catch **17**. This catch is bent back upon itself to provide two arms, one of which is a flat section

18 which is embedded in the material of the body, the other arm **19** comprises a spring member having along its central portion a longitudinally extending bulge **20**, shaped to receive the pointed end **16** when the pin is in closed position. The lateral edges of this spring portion are bent inwardly and downwardly to provide flanges **21**.

The upper wall **22** of this chamber **15** is cutaway at its central portion, providing an opening **23** to receive the bulge **20** and to expose a portion **24** of the flange **21** at the side of the bulge, to receive the point **16** of the pin, during the closing movement.

The upper walls **22** of the chamber **15**, at the sides of the opening **23** engages the flanges **21**, and are shaped to conform to them, as shown at **25**, so that in closed position the flanges fit snugly against the walls **22** at **25**. The chamber **15**, however, is also provided with recesses **26** beyond the edges of the flanges **21** which are of sufficient size to receive the end **16** of the pin, and to permit the flanges to snap past it.

It is the purpose of this invention to provide a pin which will remain locked closed, unless positive action is taken to release it. In this device the lower edges of the flanges **21** are protected by the walls **22** at **25**, of the chamber **15** against having the pin contact their upper surfaces. In the embodiment shown, the flange is held in spring contact with the wall, at **25**, of the chamber, particularly at the lower edge of the flange, and that lower edge is preferably flush with the upper surface of the recess **26**.

To open this pin, we must, therefore, press against the spring arm, as for example with a thumb nail, to depress the flange below the point **16**, while the latter is held in the recess **26**, whereupon, the point may be then slid up on the upper surface of the catch, and be thus released.

The folded back arm **18**, of the catch **17**, having only its flat portion embedded in the material of which the catch is made, provides a greater length of free spring material in the catch, reducing the liability that it may be permanently distorted. The top surface of the walls **22** serves as a guide for the point **16**, in closing the device.

To close the pin, the springiness of the catch is sufficient to permit the spring member to be depressed sufficiently to pass the free end **16**, of the pin bar **14**, between the side flanges **21** and the conforming surface **25** of the wall **22**, as will be seen from Fig. 3, but yet to permit the spring member **19** to spring back into place after the pin is inserted, as shown at Fig. 4. In this position any strain imposed upon the bar in the direction of opening the pin will tend to hold the clasp more tightly against the body of the pin.

Notwithstanding the foregoing facts, the device may be readily opened, when so desired, by bringing the pin over into a recess **26**, beyond the edge of the flange **21**, see Fig. 4, and then depressing the spring portion of the clasp with the thumb nail, whereupon the end **16** of the bar pin **14** is released, see Fig. 3, passing between the side flange **21** and the edge **25** of the upper wall **22**.

In the construction shown in Figs. 6, 7 and 8, the head and clasp section is similar to that previously described except that the spring portion **28** is reversely bent downward at the side of the head providing a flat section **29** which is embedded in the material of the body. The other end of the clasp is formed as previously described for Figs. 1, 2, 3 and 4 with a laterally and downward extending flange **36** fitting against the surface **25** in recess **37**, see Fig. 7.

This modification provides the shelf **30** to extend upward and over the bulge **33** of the clasp **34** thus forming a safety cover **31** to further prevent the clasp from being accidently depressed to release the pin bar **14**. The upper

surface of the hollowed out portion is cut away as at **35** to permit the pin to enter.

With the invention in this form, the pin bar **14** may be pressed against the clasp at **38**, Fig. 6, with just enough pressure to depress the spring, permitting the end of the pin to slide down between the flange **36** and recess **37**, as in Fig. 7. When the pin has slid into the hollowed out portion under the shelf **32**, the clasp springs shut allowing the pin bar to center itself at bulge **33**, see Fig. 8.

It will be observed that with this construction the pin cannot be released accidently unless the spring is forcibly depressed by external means far enough to permit the pin to slide out between the flange **21** and the shelf.

Whereas in Figs. 1, 2, 3 and 4 the pin bar could be entered or released on either side of the bulge **20**, Fig. 2, the modification provides entrance only on one side of the bulge **33**, Fig. 6, allowing the added protection of a cover **31** as part of the shelf **30** on the other side.

Since certain changes may be made in the above construction and different embodiments of the invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description, or shown in the accompanying drawings shall be interpretated as illustrative and not in a limiting sense.

It is also to be understood that the following claims are intended to cover all of the generic and specific features of the invention herein described, and all statements of the scope of the invention which as a matter of language might be said to fall therebetween.

What I claim:

1. A pin of the character described comprising a body portion having a chamber at one end thereof, having an opening through its upper wall, a pin member attached to the body member having a point in position to enter

said chamber through said opening, a catch comprising a spring arm within said chamber having a bulge to receive the point of said pin, and having a flange extending from said bulge down into said chamber and having its lower edge spring-pressed against the underside of the upper wall of the chamber adjacent said opening, said chamber including a recess to receive the point of the pin beyond and normally below the edge of the flange whereby the flange is protected from being caught and opened by engagement by pin.

2. A device according to claim 1 in which the catch is bent back upon itself to form a spring arm carrying the bulge, and a flat arm fastened to the bottom of the chamber.

3. A device according to claim 2 in which the upper wall of the chamber extends up and over the bulge of the catch.

4. A device according to claim 1 in which the catch is bent back upon itself about a line parallel to the pin to form the spring arm and a flat arm, the latter being attached to the body, and the wall of the chamber on the side of said line extending up and over said bulge and said lateral opening being at the other edge of said bulge.

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