

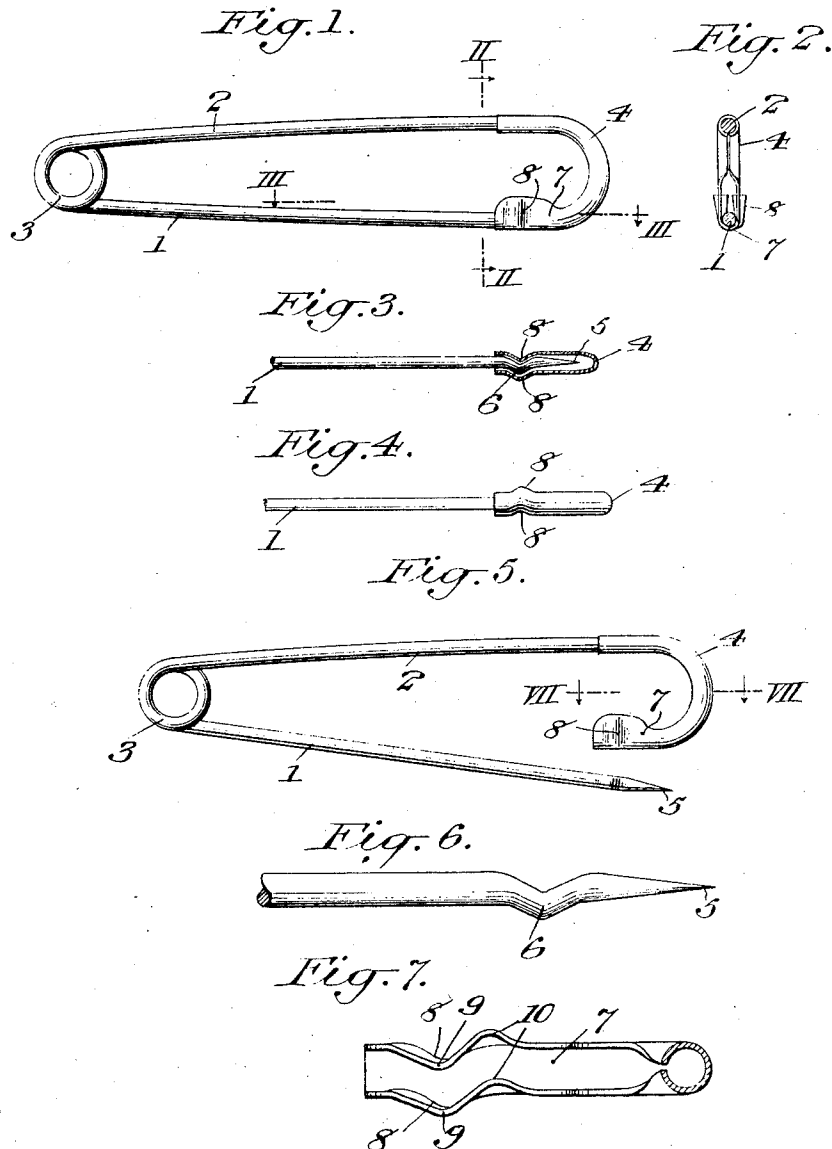
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LOCKING SAFETY PIN

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LOCKING SAFETY PIN.

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This invention relates to an improved locking safety pin and has for an object to provide such an article which may be readily closed and opened.

5 Another object consists in providing such an article which is secured in closed position against accidental opening or pulling apart.

Another object consists in providing such an article in which the pin point tapers continuously in cross section, while securing nevertheless the objects first mentioned.

A further object is to provide such an article which can readily be attached to fabrics without any greater injury thereto than is caused by the ordinary type of safety pin.

A still further object is to provide such an article in which the above named objects are attained with a minimum of structural complexity.

20 Another object consists in providing certain improvements in the form, construction and arrangement of the several parts, whereby the above named and other objects may effectively be attained.

25 It is known that various arrangements have been resorted to in an effort to devise a safety pin which will not accidentally open. Some of these have been directed chiefly to preventing an accidental unpinning of the normal sort, i. e., unpinning by compression of the pin proper toward the body portion; and some have been directed toward securing the point of the pin proper against pulling out longitudinally from its shield or guard—an occurrence annoyingly familiar to users of safety pins. In the former class are found various more or less complicated snap-catch constructions which are difficult to construct and require care and attention to operate. In the latter class it has been customary to provide notches or the like near the point of the pin which may be engaged by suitable projections in the shield or guard; these notches, of course, interrupting the regular taper of the pin point and making it very likely to catch and injure the fabric through which it is passed.

Distinguished from all the locking safety pins heretofore known is the pin of this invention in which the pin point is secured in place absolutely against longitudinal displacement and firmly against accidental unpinning, while yet having a regularly taper-

ing cross-section which will not injure fabrics, and while yet capable of being readily unpinned when desired.

A practical embodiment of my invention is represented in the accompanying drawings, in which

Fig. 1 represents a side elevation of the pin in closed position.

Fig. 2 represents a vertical section on the line II—II of Fig. 1, looking in the direction of the arrows.

Fig. 3 represents a detail view, partly in section and partly in plan, on the line III—III of Fig. 1, looking in the direction of the arrows.

Fig. 4 represents a bottom plan view of the portion shown in section in Fig. 3.

Fig. 5 represents a side elevation of the pin in open position.

Fig. 6 represents an enlarged detail view of the pin point as seen from above.

Fig. 7 represents an enlarged detail view, partly in section and partly in plan, on the line VII—VII of Fig. 5, looking in the direction of the arrows.

In said drawings the pin as a whole is shown as including a pin portion 1, a body portion 2, a spring portion 3, and a guard 4. According to customary practice the pin portion 1, body portion 2 and spring portion 3 are integrally formed from a single piece of material. The guard 4 is secured to the end of the body portion 2 in any usual and convenient manner. The parts so far mentioned correspond generally with those which go to make up the ordinary form of safety pin.

The novel construction by means of which locking is secured will now be described. As shown particularly in Figs. 3 and 6, the pin portion 1 is provided near its point 5 with a horizontal crimp 6 in the shape of a rather flat V. This crimp 6 is formed simply by the bending of the pin portion 1 into the shape shown and no removal of metal is necessary; on the contrary the cross-section of the pin portion 1 tapers regularly near its point 5, notwithstanding the displacement from a straight line of the crimped portion 6. The guard 4 includes a channel portion 7. The lower part of the channel is bent at 8, 8 so as to conform substantially to the shape of the crimp 6 in the pin por-

tion 1, as clearly appears in Figs. 3, 4 and 7, and in the upper part of the channel this bend is exaggerated at 9 and 10 so that it does not conform to the shape of the pin portion 1. This effect might also be described as the result of giving an extra twist in two directions, at 9 and 10, to the channel already bent as at 8, 8. The nonconformity at the top is such that the pin may nevertheless be forced into place by manual pressure, causing the sides of the channel 7 to spring slightly apart. As the pin passes return to their normal position and the pin is thus secured within the channel against accidental unpinning of the normal sort by the natural resiliency of the sides. When desired it may be unpinned similarly by the application of manual pressure in the reverse direction. The bend 8, 8 of the channel 7 serves, as shown in Fig. 3, to lock the pin against longitudinal displacement, since there is insufficient resiliency in the lower part of channel 7 to permit of its sides springing apart enough to allow pulling out of the crimped pin portion. Thus it will be seen that I have provided a locking safety pin having extremely simple construction, easy and positive action, and permanent effectiveness of operation. In ordinary use there is nothing to get out of order and if the sides of the channel 7 should ever be bent out of their most effective position a readjustment can readily be made and the pin thus returned immediately to its full usefulness.

It is apparent that various changes may be resorted to in the form, construction, composition and arrangement of the several parts without departing from the spirit and scope of my invention, hence I do not intend to be limited to the details herein shown and

described, except as they may be included in the claims.

What I claim is:

1. An article of the character described comprising, a pin portion and a guard, said pin portion being crimped adjacent its point, and said guard including a channel portion, part of which channel portion is bent at angles more acute than those of the crimped pin portion so as not to substantially conform thereto.

2. An article of the character described comprising, a pin portion and a guard, said pin portion being crimped adjacent its point, and said guard including a channel portion, the lower part of said channel being bent so as to conform substantially to said crimped pin portion and the upper part of said channel being bent similarly but at more acute angles so that it will not substantially conform to the crimped pin portion.

3. An article of the character described comprising, a pin portion and a guard, said pin portion being crimped adjacent its point, and said guard including a channel portion, the lower part of said channel being bent in substantial conformity to the crimped pin portion for securing said portion against longitudinal displacement, and the upper part of said channel being bent similarly but to a greater extent so that it will not substantially conform to the crimped pin portion and must be sprung forcibly to permit passage of said portion, whereby the latter is secured against accidental unpinning of the normal sort.

In testimony, that I claim the foregoing as my invention, I have signed my name this 17th day of March, 1927.

PEDRO RIOSECO.