No. 702,917. Patented June 24, 1902.

G. BODEN.

SAFETY PIN.

(Application filed July 20, 1900.)

(No Model.)

FIG. 1.

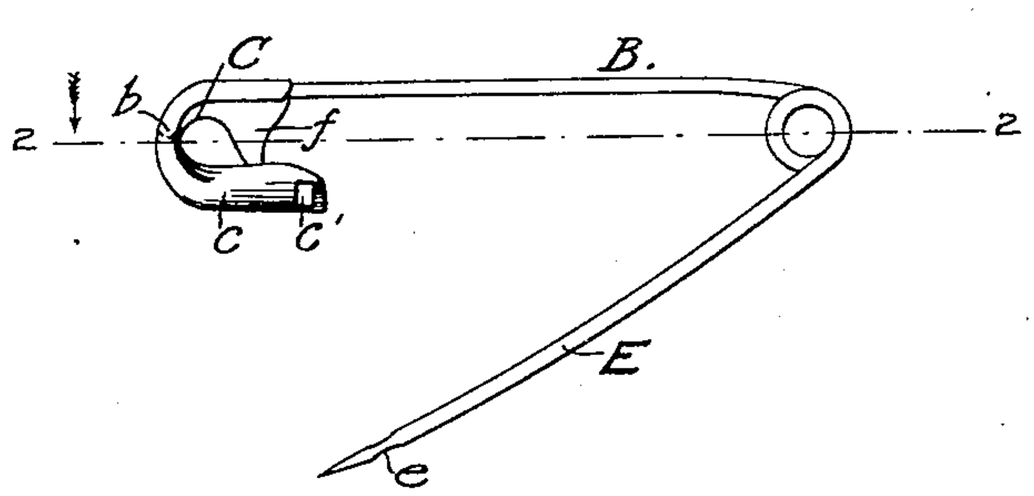


FIG. 2.

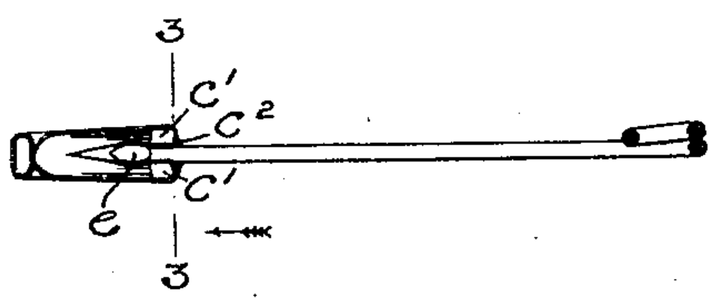
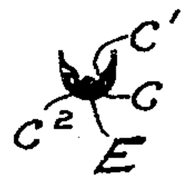


FIG. 3.



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UNITED STATES PATENT OFFICE.

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SAFETY-PIN.

SPECIFICATION forming part of Letters Patent No. 702,917, dated June 24, 1902.

Application filed July 20, 1900. Serial No. 24,257. (No model.)

To all whom it may concern:

Be it known that I, GEORGE BODEN, of Watertown, county of Litchfield, and State of Connecticut, have invented certain new and useful Improvements in Safety-Pins; and I do hereby declare the following specification, taken in connection with the accompanying drawings, forming a part of the same, to be a full, clear, and exact description thereof.

The invention relates to that class of safety-pins in which the shield or catch for engaging the pin-point when the pin is closed is in the form of a metal cap secured to the end of the wire forming the back of the pin; and it consists in providing the shield with indentations, the inner ends of which form shoulders for engaging bosses formed on the pin-point and opposing the tendency of the pin-point to draw longitudinally out of the shield when subjected to a bending strain.

The catches of safety-pins have heretofore been provided with shoulders for engaging projections or bosses on the pin-point; but the shoulders on such pins have not been formed in the manner in which the shoulders are formed in the pin embodying the present invention and have been open to objections, which are overcome by the present invention. Thus in a construction in which the shoulders were formed by bending the edges of the shield at right angles to the sides the shoulders in different pins would vary in position in relation to the bosses on the pin-point owing to the fact that the shields vary in length, even when drawn up by the same dies. Moreover, in such a construction the shoulders would offer a weak resistance to the strain on the pin-point. By the present invention the shoulders may be made to accurately register with the bosses on the pin-points, even if the shields do vary in length, and said shoulders will offer a strong resistance to the strain on the pin and will resist any strain to which the pin will be subjected in actual use without giving way and releasing the pin-point. Moreover, the shoulders are so located with relation to the end of the shield that the outward strain on the pin does not tend to rock the pin-point to disengage the bosses from the shoulders.

In describing the invention more in detail reference will be made to the accompanying drawings, in which—

Figure 1 is a side elevation of a pin embodying the invention. Fig. 2 is a sectional view on line 2 2, Fig. 1; and Fig. 3 is a sectional view on line 3 3, Fig. 2.

The body of the pin shown is formed of wire bent or coiled at A to form the pointed leg E and the leg or back B, to which the shield C is secured. The back B is provided with a bend at *b*, which fits against the end of the shield C and determines the position of the shield with relation to the pin-point. The pointed leg E is provided near its end with bosses *e*, preferably formed by flattening and spreading the wire at this point. The shield is provided with a trough-like side *c*, into which the pointed leg is guided by a finger *f* and which forms the catch for retaining the pointed leg when the pin is closed. The catch *c* is somewhat broader than the diameter of the wire of which the body of the pin is formed, and the sides of this part of the shield are provided with indentations *c'* adjacent to the end of the shield. These indentations form a throat c^2, which is about the size of the pin-wire, and the inner ends of the indentations form shoulders for engaging the bosses *e* and preventing any longitudinal outward movement of the pin-point. In making the pins the indentations are made after the shield has been drawn up and are all located at the same distance from the curved end of the shield, which engages the end of the back B, and they therefore will accurately register with the bosses *e*. Thus any initial bending of the leg E under outward strain is resisted, which would not be the case if the bosses were normally away from the shoulders. It is practically impossible for any strain on the pointed leg E to force the indentations outward sufficient to release the pin-point, and the shoulders be-

ing adjacent the end of the shield against which the leg E fulcrums in bending outward there is little or no tendency to rock the bosses downward away from the shoulders. Thus a pin is provided which may be cheaply and conveniently manufactured and in which the pointed leg is held against any force tending to bend it outward aud draw the point out of the shield by bosses on the pin-point, which accurately register with and engage strong and rigid shoulders formed in the shield and so located that they coöperate with the bosses in the most efficient manner.

What I claim as my invention, and desire to secure by Letters Patent, is—

A safety-pin comprising a wire bent to form the legs of the pin, a metal shield secured to one leg of the pin and having indentations adjacent to its end, and bosses on the pointed leg of the pin arranged to engage the inner ends of said indentations when the pin is closed.

GEORGE BODEN.

Witnesses:
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