Feb. 16, 1954 J. KUMMLI 2,668,996

SAFETY PIN

Filed Nov. 4, 1950

Fig.1

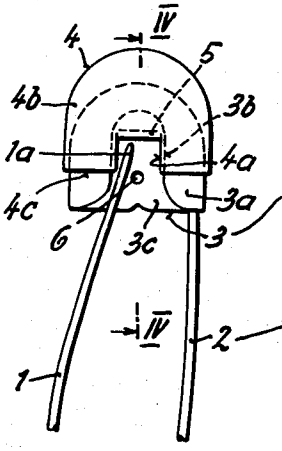



Fig.2

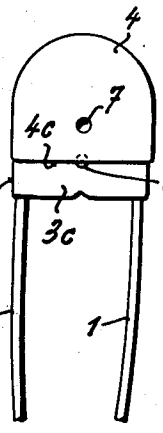



Fig.3

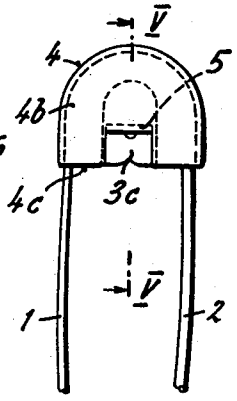



Fig.4

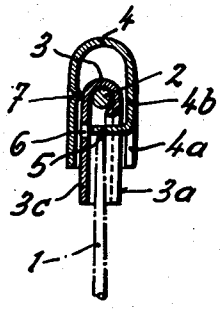
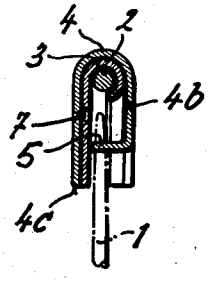



Fig.5

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2,668,996

## SAFETY PIN

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Claims priority, application Switzerland November 7, 1949

2 Claims. (Cl. 24—158)

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The invention relates to safety-pins of the kind comprising a spring wire bent into U-shape and a flat protective hood fixed to one end of said wire, which hood has a slot in at least one of its side walls to allow the other sharpened wire end to enter the hood.

Safety-pins of this kind are liable to open prematurely as a result of an unintentional pressure exerted on the free leg of the wire lodged with its end in the hood and this may especially occur if the safety-pin is used for fastening dresses or the like. Various constructions have been proposed for obviating this disadvantage but most of these were too complicated for cheap manufacture or were liable to fail in the long run.

The main object of the invention is therefore to provide a safety-pin having locking means for locking the free wire end in the hood, which is of simple and sturdy construction, easy to handle and durable in use.

To attain this object the safety-pin according to the invention comprises a second hood for locking the pin, which locking hood is slidably mounted on the protective hood of the pin fixed to the bent wire and is provided with an inwardly projecting lug or flange portion passing through the slot of the protective hood, which lug portion serves to limit the outward sliding movement of the locking hood during an unlocking operation, the locking hood in its locking position at least partially covering the slot in the protective hood, thus preventing the free wire end from passing therethrough, and in its unlocking position leaving the slot opening substantially free.

According to a preferred embodiment of the invention the flange portion of the locking hood projecting through the slot into the protective hood may form a stop for the free wire end when lodged in this latter hood, thereby preventing this wire end from being pressed backwards.

Other objects and features of the present invention will appear more fully from the following description and claims in conjunction with the accompanying drawings, which illustrate by way of example an embodiment of the invention.

Fig. 1 shows a front elevation of a part of a safety-pin according to the invention with the locking hood in open position.

Fig. 2 shows a rear elevation of the safety-pin of Figure 1.

Fig. 3 shows a front elevation of the safety-pin with the locking hood in closed position.

Fig. 4 shows a section along the line IV—IV of Fig. 1 seen in the direction of the arrows.

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Fig. 5 shows a section along the line V—V of Fig. 3 in the direction of the arrows.

In the embodiment shown 1 and 2 represent the two legs of the U-shaped spring wire of the safety-pin, the leg 1 being sharply pointed, and the leg 2 being fixed to a flat protective hood 3. One of the side walls 3*a* of the protective hood 3 has been provided in the known manner with a slot 3*b* allowing the end 1*a* of the leg 1 to enter the hood 3.

A second locking hood 4 enveloping the protective hood 3 is slidably mounted on the latter for movement in the longitudinal direction of the wire legs 1 and 2. The side wall 4*b* of the locking hood 4 is provided with a flange portion 5 cut out of this side wall at the lower edge 4*c* thereof and bent inward to a position substantially perpendicular thereto. The flange portion 5 projects through the slot 3*b* into the protective hood 3 and extends substantially up to the opposite side 3*c* of the hood 3.

In the open or unlocking position of the locking hood, as shown in Figures 1 and 4, the flange portion 5 is situated outside of the track of wire end 1*a*, so that this end may be moved towards and through the slot 3*b* and through the slot 4*a* in the locking hood formed by the cutting out and bending of the flange 5. In the outermost position of the locking hood further outward movement thereof is prevented by the flange portion 5 abutting against the bottom edge of the slot 3*b* or by the outer edge of the flange portion running up against the side wall 3*c* in case the hood 3 has slanting sides.

As may be seen from the drawing, the side wall 3*c* of the protective hood 3 has been provided with a hole 6 adapted to cooperate with a projection or boss 7 in the side wall of the locking hood. When the hood 4 is pressed down into the closed position, the projection 7 falls into the hole 6 (Figure 5) whereby an involuntary sliding movement of the locking hood is prevented. In the closed position of the locking hood, the flange portion 5 is situated in the track of the wire end 1*a*, thus forming a stop preventing the wire end lodged in the hood 3 from being moved backward towards the slot 3*c*. Furthermore this slot is partly covered by the hood 4.

The described construction of the protective hood with locking hood possesses no resilient or hinged parts which are liable to get lame or out of order, so that a sturdy device of great durability is obtained. All parts of the protective as well as of the locking hood can be cheaply manufactured with simple and conventional tools.

While the invention has been illustrated and described with reference to a specific embodiment thereof, it will be understood that other embodiments may be resorted to without departing from the invention.

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

1. A safety-pin comprising a spring wire bent into U-shape, a protective hood secured to one end of said wire, said hood having flattened side walls and having a slot in at least one of said side walls for permitting the free end of the wire to enter the hood, and a second hood for locking the free end of the wire, said second hood enveloping said first hood and being slidably mounted thereon for movement in the longitudinal direction of the legs of the U-shaped wire into an inner pin-securing position and into an outer pin-freezing position, said second hood having one of its sides partially sheared out and inwardly bent to define a tongue portion passing through the slot in the first hood, said tongue portion extending substantially across the open area internally of said first hood to prevent the movement of said free wire into and from said slot, and said tongue portion in the pin-securing position of the second hood thereby providing a rigid positive abutment to intercept positively the free wire end when flexed under load, but said tongue portion in the pin-releasing position of the hood permitting the wire end to pass to the slot and preventing further outward sliding movement of the second hood.

2. A safety-pin comprising a spring wire bent into U-shape, a protective hood secured to one end of said wire, said hood having flattened side walls and having a slot in at least one of said side walls for permitting the free end of the wire to enter the hood, and a second hood for locking the free end of the wire, said second hood enveloping said first hood and being slidably mounted thereon for movement in the longitudinal direction of the legs of the U-shaped wire into an inner pin-securing position and into an outer pin-freeing position, said second hood having approximately a third of the width of one of its sides inwardly bent to define a tongue portion passing through the slot in the first hood, said tongue portion extending substantially across the open area internally of said first hood to prevent the movement of said free wire into and from said slot, and said tongue portion in the pin-securing position of the second hood thereby providing a rigid positive abutment to intercept positively the free wire end when flexed under load, but said tongue portion in the pin-releasing position of the hood permitting the wire end to pass to the slot and preventing further outward sliding movement of the second hood.



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