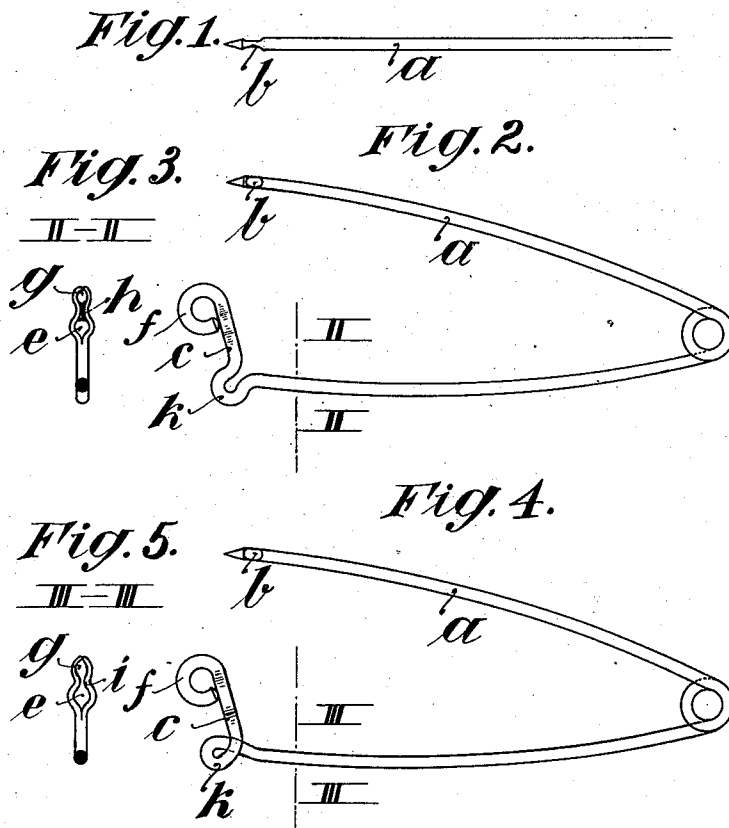


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SAFETY PIN.

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1,028,784.

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Witnesses
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FRITZ RAUPACH, OF PULSNITZ, GERMANY.

SAFETY-PIN.

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To all whom it may concern:

Be it known that I, FRITZ RAUPACH, a subject of the German Emperor, residing at Pulsnitz, Saxony, Germany, have invented
5 certain new and useful Improvements in Safety-Pins; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it ap-
10 pertains to make and use the same.

The subject of the present invention is a safety pin, which possesses the advantage over those already in use that it can be closed and opened by means of a single
15 pressure of the hand, while at the same time, through its peculiar construction, it forms a particular firm fastening. In order to engage the pin firmly in the closing portion, it is sufficient to press the parts of the
20 pin together; and by simply running the thumb along the pin in the proper manner it can be opened.

The novelty of the safety pin consists essentially in the provision of a groove in the
25 closing portion made by splitting the wire of which the pin is formed.

A further improvement over previous arrangements is that the point of the pin is better protected than hitherto, and that the
30 insertion of the pin into the article to be fastened is facilitated. This technical effect is produced by forming a beveled groove for guiding the pin point, which groove has at the bottom a contracted slot leading to
35 a larger opening at the end for the reception of the pin point.

In the accompanying drawing forming a part of this application several methods of making a safety pin according to the pres-
40 ent invention are shown by way of example.

Figure 1 shows a top plan of a fragmental portion of the pin provided with recesses. Fig. 2 shows a method of making a safety pin, in side elevation. Fig. 3 shows
45 a section on line 2, 2, Fig. 2; Fig. 4 shows a modified form of the pin, in side elevation; Fig. 5 shows a section on line 3, 3, Fig. 4.

The same letters of reference are employed to denote the same parts in all the
50 views.

According to the invention the point *a* of the pin is provided with one or two side recesses *b*. The springy closing portion *c* has an opening *g* which is intended, when the
55 parts of the pin are pressed together, to guide the point *b* into the opening *e*, which

opening has a contracted portion *h* leading into it formed at the bottom of the opening *g*. The closing of the safety pin now proceeds until the point of the pin reaches the opening *e*, where it is held firmly, on account of the closing portion *c* springing inwardly. The guiding of the pin to the closing part is thus effected automatically. The springy closing portion is preferably bent over backward at *f* and covers the point of the pin resting in the closing portion, so that the user cannot receive injury therefrom.

The opening of the pin is effected like the closing, by pressing together the pin and the portion formed for its reception, but with the difference that during the operation, the springy closing portion *c* is pressed outwardly. The pin then springs automatically out of the closing portion. The opening of the pin can easily be effected with one hand by drawing the thumb along the pin, and pressing outwardly the springy closing portion *c* while the back of the pin is held against the forefinger.

In the constructional form of the pin according to Figs. 4 and 5, the contracted connecting portion *h* is omitted, and a contracted slit *i* is provided between the guide opening *g* and the eye *e*.

The springs on the front closing portion can be formed by suitably bending the material of which the pin is made in any suitable loop *k* as shown in Figs. 2 and 4. The side recesses *b* on the pin point *a* are preferably formed somewhat slanting, in order to prevent the material, into which the pin is inserted, being torn.

In the case of the constructional form according to Fig. 2, the slot opening from the eye *e* is formed very small and narrowed, and its object is to receive the pin point when the pin is pressed down, thus preventing injury to the point.

It will be observed that in all of the forms the groove *d*, *h* and *i* terminating in the locking aperture is of a width less than the maximum width of the beveled pin point, so that when the pin portion is brought toward the body portion the extreme tip of the pin point rides within the groove in a protected position and out of contact with the closing portion, while passing through said groove, the beveled edges of the pin point engaging walls of the groove and forcing the closing portion out-

wardly until the pin point passes through the groove and is disposed opposite the aperture, whereupon the resiliency of the closing portion will cause it to spring back to its normal position and lock the end of the pin portion within said aperture and with the pin point within the protecting ring.

What I claim is:—

A safety pin comprising a single piece of wire bent upon itself to form a resilient pin portion and body portion, the free end of said body portion being bent upwardly to form a resilient closing means and terminating in an outwardly bent ring, said closing portion being split to form a top

aperture and a lower aperture with a restricted slot or groove therebetween, whereby when said pin portion is being closed the pin point will pass through said groove or slot in a protected position, springing said closing portion outwardly and passing through said lower aperture into said ring, when closed, substantially as described.

In testimony whereof, I affix my signature, in presence of two witnesses.

FRITZ RAUPACH.

Witnesses:

ULYSSES J. BYWATER,
PAUL ARRAS.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
