J. J. BRELL.

SELF CLOSING SAFETY PIN.

APPLICATION FILED MAR. 11, 1915.

1,166,885. Patented Jan. 4, 1916.

Fig. 1.

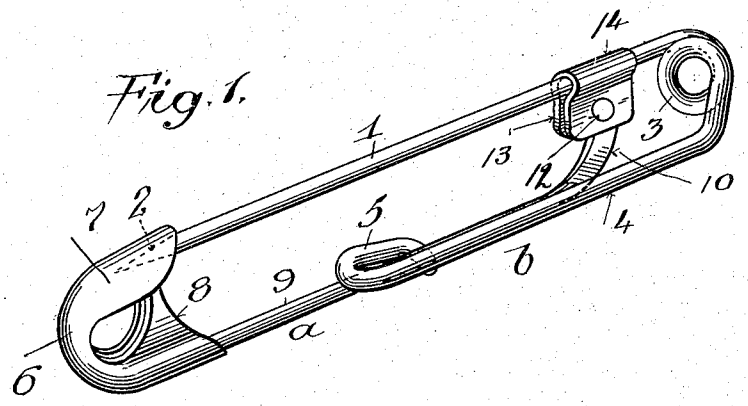
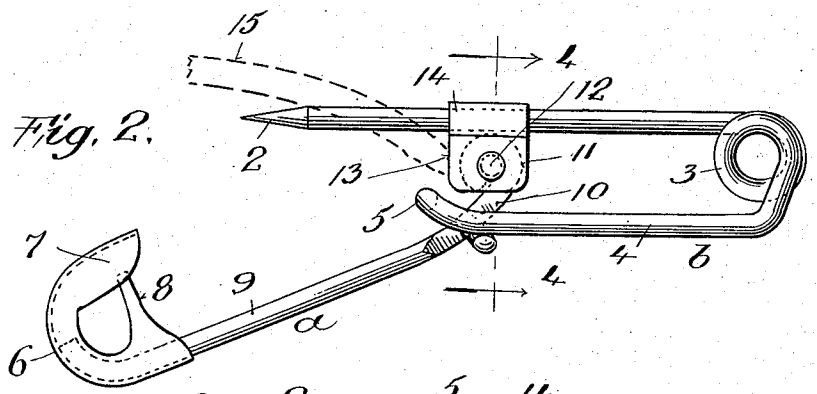


Fig. 2.



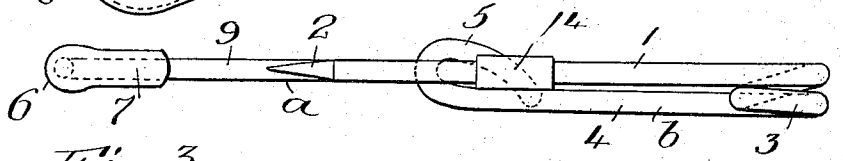
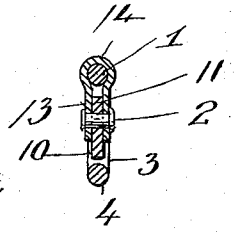


Fig. 3.

Fig. 4.



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SELF-CLOSING SAFETY-PIN.

1,166,885. Specification of Letters Patent. Patented Jan. 4, 1916.

Application filed March 11, 1915. Serial No. 13,589.

To all whom it may concern:

Be it known that I, JULIUS J. BRELL, a citizen of the United States of America, and resident of the city, county, and State of New York, (whose post-office address is 530 West One Hundred and Fifty-ninth street, in said city,) have invented a new and useful Self-Closing Safety-Pin, of which the following is a specification.

The object of my invention is to improve the construction of safety pins and devices of that class.

The further and principal object of my invention is to provide a safety pin or device of that class which will at once be self-closing and self-opening. To that end, I have constructed the safety pin in two sections, the inserting point being on one section and the receiving guard on another section, both sections being pivoted or movably secured together, so that the resistance by the fabric into which the pin is inserted to the entrance of the pin will cause the sections to come together and bring about an entry of the inserting point of one section into the guard of the other section, thereby locking the sections together; and conversely, upon applying force to one of the sections in the opposite direction and against the resistance of the fabric into which the pin has been inserted, the sections will be distended and the securing point and guard separated, so that the pin can be readily removed. Both of these operations, both insertion and removal of the pin, can be performed in situations ordinarily inaccessible, and by the use of one hand, if necessary.

My invention is capable of being variously embodied, and it resides in the construction and combination of parts hereinafter described and falling within the scope of the claims hereunto appended.

In the drawings forming part of this specification, Figure 1 is a perspective view of a safety pin constructed in accordance with my invention, very much enlarged, and in the closed condition; Fig. 2 is a side elevation of the same, the pin being shown in the open condition; Fig. 3 is a plan view of Fig. 1; and Fig. 4 is a sectional elevation on the line 4—4 of Fig. 2, looking in the direction of the arrows.

As previously stated, my invention may be variously embodied, but as the structure shown and described herein has been found to give satisfactory results, I prefer that form, without in any manner limiting myself thereto.

In the embodiment shown herein, the pin is made up of two sections *a* and *b*, pivoted to and movably controlled in relation to each other. The section *a* is what I call the guard section and *b* the pin section. The pin section comprises a rod 1, having a sharpened point 2 for insertion into the fabric, or the article to which the pin is to be applied, a conventional loop or turn 3 (which loop may be omitted, if desired) and a return bar 4 running substantially parallel with the pin-bar 1, and which has formed at its outer end a guide loop 5, slightly upturned. The guard section *a* has a conventional form of guard 6 consisting of the shield 7, and the stop or detent 8, to which is secured a rod 9 which I will, for convenience's case, call the push rod. This rod is provided with a flattened and curved portion 10, which passes through the loop 5, the flattening being had for the purpose of economizing lateral space and preventing turning between the parts, and a loop 11 encircling a pin 12, which pin is secured to the pendent ears 13 of a guide 14, surrounding the pin-bar 1 and adapted to move back and forth thereon. The flattening of the end 10 of the bar 9 also tends to prevent the turning of the rod 9 and preserves the alinement of the pointed end 2 of the bar 1 with the shield 7 of the guard 6. The bar 9 moves stiffly through the loop 5, the sides of the loop bearing against the bar and tending to hold the parts in locked position when the pin is closed.

The operation of the pin is substantially as follows: The pointed end of the bar is inserted into the fabric. The fabric is diagrammatically indicated in Fig. 2 in dotted lines at 15. The guide 14 strikes the fabric and its resistance and the simultaneous movement of the section *b* into the fabric causes the guide to move in a direction opposite to the motion of the pin and cause the curved part 10 of the rod 9 to slide on the loop 5 and elevate the shield 7 of the guard 6 into alinement with the pointed end 2 of the rod 1, the continuation of the movement effecting the complete and automatic closure of the pin as shown in Fig. 1. While in this position, the two points of contact of the section with each other, that is, the section *a* with the guide and the sections *a*

and *b* through the loop, prevent any inadvertent movement of the parts and maintain the pin in a securely locked condition. The detent or stop 8 may be omitted, as the guide 14 and its other associated parts tend to prevent the inadvertent removal of the pin point from the shield, although it may be retained, if desired. The operation of the parts is such that the insertion point of the rod 1 and the shield are automatically alined, so that all the operator has to do is to take hold of the pin at the loop end of section *b*, and by inserting it and continuing the operation, bring about complete penetration of the pin into the fabric and an automatic alinement of the inserting point with the locking shield 7. The removal of the pin from the article to which it has been thus attached may be accomplished by reversing the afore-mentioned operation. By taking hold of the loop end of the section *b*, and merely pulling on it against the resistance of the fabric, which will bear against the guard portion of the section *a*, the section *b* will be pulled out, the guide then moving toward the pin point of the rod 1, and gravity and the contact of the curved portion 10 of the rod 9 on the loop 5 will tend to force the guard section away from the fabric, freeing the insertion point 2 from the shield 7, and bring about the complete separation of the parts of the pin, as shown in Fig. 2, enabling it to be freely withdrawn from the fabric into which it was previously inserted.

It is manifest that my invention may be variously embodied without departing from its spirit; and I deem my invention to be as broad as the scope of the claims appended hereto.

I claim:

1. In an article of the class described, the combination with two sections, one carrying an inserting pin and a guide, the other carrying a guard and being pivotally secured to the guide and slidably connected to the other section.

2. In an article of the class described, a guard section and an inserting pin section, a slidable guide on the pin section pivotally connected to the guard section and another guide on the pin section through which a portion of the guard section slides.

3. In an article of the class described, the combination with a member having a guard and shield and a curved arm, a guide pivoted to said curved arm, and another section comprising an inserting pin on which said guide is movable and a loop on said pin section through which the guard section is adapted to be moved.

4. In an article of the class described, the combination of two sections, one comprising an inserting rod and a substantially parallel loop rod, a loop formed on the end of the latter, the other section comprising a rod with a guard and shield on one end adapted to be alined with the inserting rod, said guard and shield carrying rod passing through the loop of the first section, and movably engaging a guide movable on the inserting rod of the first mentioned section.

5. In an article of the class described, the combination of two sections, one comprising an inserting rod and a substantially parallel extending rod having a loop at its end, the other section comprising a rod, said rod passing through the loop of the first section and having a guard and shield on its outer or free end and a flattened curved section on its other end, a movable guide on the inserting rod of the first-mentioned section and means for pivoting the curved end of the rod to said guide.

6. In an article of the class described, the combination with a section having a guard and shield and a curved arm, having a guide pivoted to said arm, another section comprising an inserting pin on which said guide is movable and a loop formed on said pin section through which said guard section is adapted to be moved, the sides of said loop bearing with friction against the portion of the guard section passing through the loop.

7. In an article of the class described, the combination of two sections, one comprising an inserting rod and a substantially parallel extending rod having a loop at its end, the other section comprising a rod, said rod passing through the loop of the first section and frictionally movable therein and having a guard and shield at its outer or free end and having a flattened curved section on its other end, a movable guide on the inserting rod of the first-mentioned section, the curved end of the guard section being pivoted to said guide between the inserting rod and the rod having the loop at its end.

Signed at the city, county and State of New York, this 6th day of March, 1915.

JULIUS J. BRELL.

Witnesses:
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