W. A. BUTLER.
Safety-Pin.

No. 199,511. Patented Jan. 22, 1878.

Fig. 1.

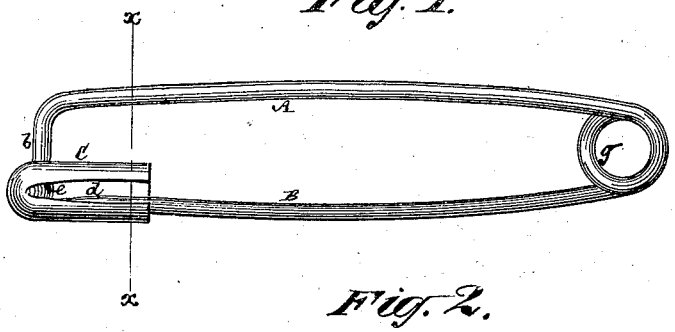

Fig. 3.

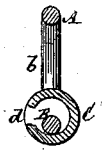

Fig. 2.

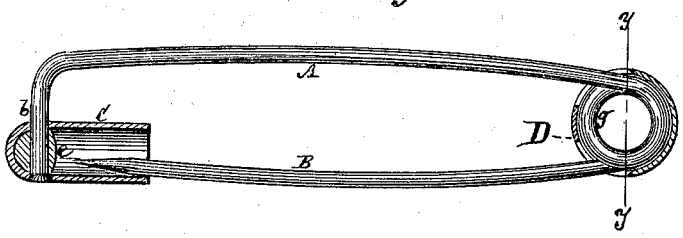

Fig. 4.

Fig. 6.

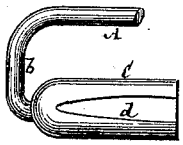

Fig. 7.

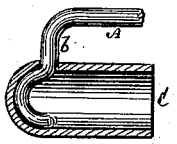

Fig. 5.

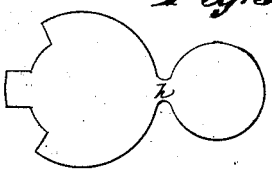

Fig. 8.

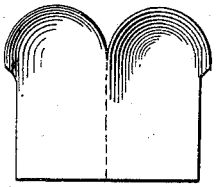

Fig. 9.

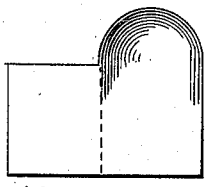

Fig. 10.

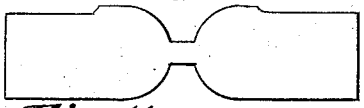

Fig. 11.

Fig. 12.

Witnesses
John Becker
Fred. Haynes

Inventor
William A. Butler
by his Attorneys
Brown & Allen

UNITED STATES PATENT OFFICE.

WILLIAM A. BUTLER, OF NEW YORK, N. Y., ASSIGNOR TO THOMAS L. BUTLER, OF SAME PLACE.

IMPROVEMENT IN SAFETY-PINS.

Specification forming part of Letters Patent No. **199,511**, dated January 22, 1878; application filed December 24, 1877.

To all whom it may concern:

Be it known that I, WILLIAM A. BUTLER, of the city, county, and State of New York, have invented a new and useful Improvement in Safety-Pins, of which the following is a description, reference being had to the accompanying drawing, forming part of this specification.

This invention relates to shield or safety pins, or "diaper-pins," as they are commonly termed, in which a bent wire, formed preferably with a coil at the bend to give it increased elasticity, is attached at its one or unsharpened end with a shield, and made to engage with and disengage from the latter at its other or sharpened end.

The invention consists in a safety-pin of such description, made with or without a coil, of novel construction, whereby the unsharpened limb of the wire, which is attached to the shield, is bent or set off from the latter laterally, which not only gives a better finish to the pins, and indicates, especially when removing the pin in the dark, the engaging and disengaging end of the wire, but, while providing for an immovable attachment of the shield to the unsharpened limb of the wire, admits of the sharpened limb thereof being adjusted or worked around the shield from opposite sides or in reverse directions, to engage or disengage itself with or from the shield without risk of its catching or entanglement with the other limb of the wire.

The invention also consists in a combination of a guard-case with the coil made in the wire to give the limbs of the pin increased elasticity, whereby said coil, which is inclosed by the guard-case, is protected by the latter, and prevented from catching in the cloth or article to which the pin is applied.

Figure 1 represents a longitudinal or side view of a safety-pin constructed in accordance with that part of my invention which relates to the formation of the limb carrying the shield; Fig. 2, a longitudinal section of said pin, showing also a guard-case applied to the coil in the wire; Fig. 3, a transverse section on the line *x x*, and Fig. 4 a transverse section on the line *y y*. Fig. 5 is a view of a blank in illustration of one mode of constructing the guard-case. Fig. 6 represents a longitudinal view, in part, of the unsharpened limb of the wire, with the shield attached thereto according to a modified construction of the pin; and Fig. 7, a sectional longitudinal view, in part, of another modification. Figs. 8, 9, 10, 11, and 12 are diagrams in illustration of various constructions of the shield of the pin.

Referring, in the first instance, to Figs. 1, 2, and 3 of the drawing, A represents the unsharpened limb of the wire or pin, and B the pointed or sharpened limb thereof, said wire either being coiled or not to give it elasticity where it is bent over to form said limbs, but preferably formed with a coil, *g*, at such part. C is the shield of the pin, to which the unsharpened limb A of the wire is attached by a crook or offset, *b*, that thus projects or sets out said shield away from said limb on that side of the latter on which the pointed limb B is arranged, thus not only giving a better finish to the pin, and serving to indicate, especially when removing the pin in the dark, which is the engaging and disengaging end of the wire, but, while providing for a fixed attachment of the shield to the unsharpened limb A, admitting of the sharpened limb B of the wire being adjusted or worked around the shield from opposite sides or in reverse directions to engage or disengage itself with or from the shield. This reversal of the sharpened limb of the pin relatively to the shield will be found very convenient both in engaging and disengaging said sharpened limb *b* with and from the shield C, without any liability, by reason of the offset *b*, of the sharpened limb becoming entangled with or catching the unsharpened limb A.

The shield C, as shown in Figs. 1 and 3, may be formed by stamping and drawing it from sheet metal into a cup, and afterward making a slot, *d*, in its one side for the sharpened limb B of the wire to engage and disengage itself with and from the shield. The construction of the shield, however, admits of various modifications—thus: It may be made from either one of the several shaped blanks shown in Figs. 8, 9, and 10, by suitably bending said blanks to form a slotted cup; or, instead of a slotted cup, it may be made with one of its side edges overlapping the other,

leaving a space between said edges for the entry and removal of the sharpened limb of the pin, and may either be of circular or oval form in its transverse section, as shown in Figs. 11 and 12.

The unsharpened limb A of the wire may be attached to the shield C, to hold it from turning or working loose, by projecting the offset *b* thereof through the side or sides of the shield above its bottom, and uniting the same by solder *e* within said shield, as shown in Fig. 2; or the offset *b* may be projected through the base of the shield, as represented in Fig. 6, and be secured therein in any suitable manner; or, again, said offset may be projected through the one side of the shield, and the portion thereof entering the shield afterward be bent by a punch, as shown in Fig. 7 of the drawing.

When the wire of the pin is formed with a coil, *g*, to give the limbs increased elasticity, a guard-case, D, as shown in Figs. 2 and 4, may be combined with said coil to inclose or protect it in a free manner at its sides, and so prevent the coil from catching in the cloth or article to which the pin is applied, or from becoming entangled with any exposed edge or portion of the cloth. This guard-case may be constructed from a blank shaped as in Fig. 5, by bending said blank at its neck *h*, to receive the coil at its sides within it, and afterward bending over the overlapping edges of the blank or projections thereon, to loosely close the guard-case on the coil. Said guard-case, however, may be variously constructed, and be made either with or without a hole in the center—thus: It might be made of independent side pieces or caps, united either by a solid or hollow rivet through the center of the coil; or it might be otherwise constructed to protect or inclose the coil without restricting the working of the latter when closing and opening the pin.

I claim—

1. A safety-pin having the unsharpened limb of the wire rigidly attached to the guard or shield, and bent or extended laterally from the side of the said guard or shield, whereby the latter is supported off from the limb which carries it, substantially as described.

2. The guard-case D, in combination with the coil *g* of the wire of the pin, essentially as described.

WM. A. BUTLER.

Witnesses:
VERNON H. HARRIS,
FRED. HAYNES.