(No Model.)

# E. McCONNELL.

## SAFETY PIN.

No. 590,622. Patented Sept. 28, 1897.

Fig. 1

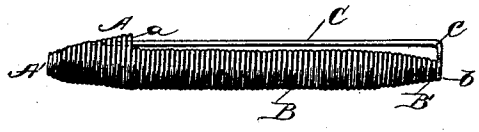



Fig. 2

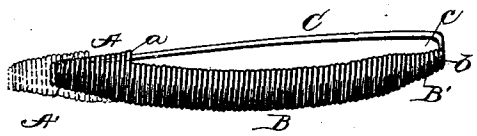
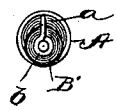



Fig. 3

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# UNITED STATES PATENT OFFICE.

EDWARD McCONNELL, OF RICHMOND, VIRGINIA, ASSIGNOR TO SIMOND KAUFMAN AND MORRIS F. PFAELZER, OF NEW YORK, N. Y.

## SAFETY-PIN.

SPECIFICATION forming part of Letters Patent No. 590,622, dated September 28, 1897.

Application filed January 30, 1897. Serial No. 621,314. (No model.)

*To all whom it may concern:*

Be it known that I, EDWARD MCCONNELL, of Richmond, in the county of Henrico and State of Virginia, have invented certain new and useful Improvements in Safety-Pins; and I hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, which form part of this specification.

This invention is a safety-pin, and is an improvement upon the pin for which I obtained Letters Patent No. 406,367, dated July 2, 1889; and its object is to obviate certain defects or objectionable features of my patented pin and to make a better holding, more easily adjustable, and less cumbersome pin; and to these ends the invention consists in the novel construction of the pin, as shown in the accompanying drawings and hereinafter described.

Referring to the drawings, Figure 1 is a side view of the pin. Fig. 2 is a similar view showing the pin as if fastened in a cloth, and also showing in dotted lines the guard-coil drawn out so as to release the point of pin. Fig. 3 is an enlarged end view of the pin, looking toward the guard-coil.

As described in my aforesaid patent, the pin consists of a single piece of wire which is coiled at one end into a "guard-coil" A of relatively shorter length to a body-coil B of smaller diameter than coil A, but extending from the inner end thereof about the length of the penetrating portion or pin proper, C, of the device. The coils A B abut close together, so that they brace each other, and have a crescent-shaped eye *a* for the reception and protection of the point of pin C when the pin is fastened.

The guard-coil A in the present invention is not made cylindrical, as in my patent aforesaid, but is tapered outwardly, as at A', its outer end being very small, while the outer end of body-coil B is also tapered, as at B', so as to render it very close and compact at the end where the pin C is connected to it. The pin C really springs from the last semi-coil *b* of end B' of the body-coil, and owing to the taper of part B' the final coils are so small that they will not yield or spring apart laterally, and hence the fabric of the garments in which the pin is fastened will not crowd down between the end *c* of the pin C and the last coil *b* of the body-coil. In practical use of my patented pin, because the body-coil was of uniform diameter throughout, I found that in some cases the fabric would work between part *c* of the pin and the end of the body-coil or would be caught therebetween when the body-coil was distended in engaging or disengaging the guard-coil from the point of pin. By the present invention the body-coil will distend throughout the cylindrical part thereof; but the tapered part B', and especially the last few coils, will remain tightly together, so that the fabrics will not be caught nor work in between the part B' and part *c*. Further, because of the taper of the guard-coil it is not liable to distend when pulled outward, so as to engage or disengage the point of pin C; but the main object of this taper is to give the point of pin C a bearing against all the coils of the guard-coil A, which it underlies, as exhibited more clearly in Fig. 2. When these safety-pins are applied, the body-coil bows to accommodate the goods, thus preventing bowing or bending of the pin C, and when the guard-coil was made cylindrical it resulted that the point of pin entering the body-coil bore only against the innermost coil of the guard-coil, and this and the pin were soon worn, so that the pin became rough and unserviceable. The taper of the guard-coil in my improved pin is such that the point of pin, when in use, rests against a series of inner coils of the guard-coil, thus giving more wearing-surface and a better hold and prolonging the usefulness of the pin.

Another important advantage of the tapered coils is that the pin fits more closely to the garment, allows outer garments to lie more closely over the pin, and does not make unsightly points or projections in the appearance of the clothing.

There are other minor advantages of my improved pin over that already patented to me; but sufficient has been said to show the value and utility of my improvements.

Having thus described my invention, what I therefore claim as new, and desire to secure by Letters Patent thereon, is—

1. A safety-pin composed of a single wire substantially as described, having its guard-coil tapered outwardly and a body-coil having its outer end also tapered outwardly, and the pin springing from the smallest end of the body-coil and bent backwardly toward the guard-coil, all substantially as and for the purpose described.

2. As an improved article of manufacture, a safety-pin constructed of a single piece of wire, this wire being formed into a spring guard-coil at one end, said guard-coil being tapered outwardly substantially as described, the wire being also formed into a long spring body-coil of less diameter than the larger end of guard-coil and setting up close against the larger end of the guard-coil whereby a crescent-shaped opening for the engagement of the point of the securing-pin is formed; the outer end of said body-coil being tapered substantially as described, and the securing-pin springing from the smallest end of the body-coil, all substantially as and for the purpose set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

EDWARD McCONNELL.

In presence of—
T. H. ALEXANDER,
JAMES R. MANSFIELD.