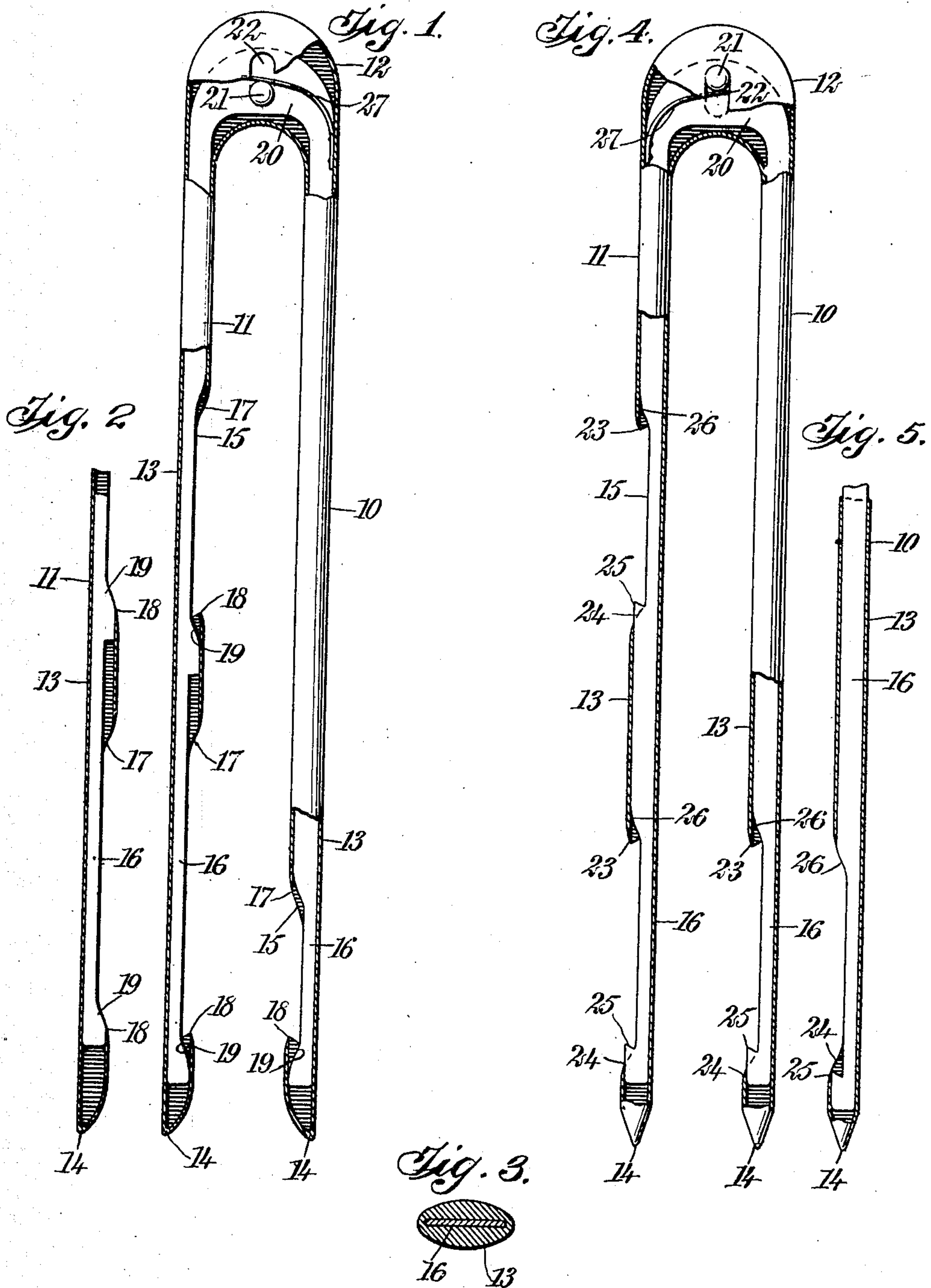


No. 871,646.

PATENTED NOV. 19, 1907.

G. H. SPRAY.
HAIR PIN.

APPLICATION FILED MAR. 8, 1907.



WITNESSES

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GEORGE H. SPRAY, OF NEW YORK, N. Y., ASSIGNOR OF ONE-HALF TO JOHN ANDERSON, OF BROOKLYN, NEW YORK.

HAIR-PIN.

No. 871,646.

Specification of Letters Patent.

Patented Nov. 19, 1907.

Application filed March 8, 1907. Serial No. 361,207.

To all whom it may concern:

Be it known that I, GEORGE H. SPRAY, a subject of the King of Great Britain, and a resident of the city of New York, borough of Manhattan, county and State of New York, have invented a new and Improved Hair-Pin, of which the following is a full, clear, and exact description.

This invention relates to certain improvements in safety devices for retaining hair pins, hat pins, combs, scarf pins, jewelry fasteners, and the like, in place, and the object of the invention is to provide a pin composed of two members, one slidably mounted within the other, and the members so constructed that when in one position in respect to each other, barbs or sharp projections are presented to prevent the withdrawal of the pin, while when the members are in the opposite position in relation to each other the barbs are concealed or shielded.

The invention consists in certain features of construction and combination of parts, all of which will be fully set forth hereinafter and particularly pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures, and in which

Figure 1 is a side elevation of one form of my improved pin, a portion thereof being broken away to show the inner member; Fig. 2 is a detail similar to a portion of Fig. 1 and showing the inner member in its opposite position; Fig. 3 is a transverse section through one prong or tine of the pin; Fig. 4 is a side elevation of a second form employing my invention, a portion thereof being broken away; and Fig. 5 is a detail similar to a portion of Fig. 4, but showing the inner member in its opposite position.

In my improved pin I may provide any number of tines or prongs desired, and may construct any number of said prongs or tines according to my invention.

In the drawings I have illustrated two separate forms which my invention may take, and in both cases devices are illustrated having two prongs or tines both of which are constructed to constitute safety devices. In each of the forms illustrated I provide two members, one of which forms an outer sheath or casing, while the other is located within the first mentioned mem-

ber and longitudinally movable in respect thereto.

In the forms illustrated, the pin is provided with two tines 10, 11, held rigidly in respect to each other by a connecting portion 12. Each of the two tines or prongs is formed of an outer sheath or casing 13 terminating in a sharp point 14 and having a plurality of elongated openings 15 cut in the side thereof. The sheath or casing 13 is flattened or elliptical in cross section, and within the interior chamber is located a second member 16 preferably in the form of a flat, narrow strip closely fitting but longitudinally movable within the outer member. The inner member 16 is cut away at the portions adjacent the openings in the outer member, and the portions of the inner member and the outer member adjacent the ends of the opening are so formed as to present a sharp barb or projection when the members are in one of their two limiting positions.

In the form illustrated in Figs. 1 and 2, the openings 15 in the outer member are provided with inclined edges 17 at the ends nearest the connecting portion 12, and are provided with sharp barbs or projections 18 at the end of each opening nearest to the points 14 of the tines. The inner members 16 are provided with cams or inclined portions 19 adjacent the barbs or projections 18, and these inclined portions are so formed and constructed that when the inner member is moved in one direction they are concealed within the outer member, while when the inner member is moved in the opposite direction they are moved to a position adjacent the barbs or projections and serve to shield or protect the latter. In Fig. 1 I have illustrated the inner member as moved to one limiting position and in which the barbs or projections are unprotected and in their operative position; while in Fig. 2 I have illustrated the inner member as moved to its opposite limiting position and the barbs or projections 18 merged into the inclined portions 19 of the inner member and thus prevented from engaging with the hair or other body in connection with which the pin is employed. The two inner members 16, 16, are preferably secured together by a connecting portion 20 lying within the connecting portion 12, and this portion 20 is preferably provided with a stud or pin 21 extending outwardly through a slot 22,

whereby the inner and the outer members may be moved in respect to each other and the limit of movement defined by the length of the slot.

5 As will be noted, the form illustrated in Figs. 1 and 2 is so constructed that the outer member presents the barb or projection and the inner member presents the inclined surface serving to act as a shield to guard said
10 barb or projection. It is evident that the inner member may likewise be provided with barbs or projections, and in Figs. 4 and 5 I have illustrated a device so constructed. In this form the portion of the outer casing adjacent the base or connecting portion 12 is provided with a point or projection 23 extending toward the point 14 of the prongs or tines. The opposite end of each opening is provided with an inclined or cam surface
20 24. At one end of each cutaway portion in the inner member I provide barbs or projections 25 adjacent each of the inclined edges 24, and at the opposite ends of each cutaway portion I provide inclined edges 26 adjacent the projections 23 of the outer casing. With the inner and the outer members in the position in respect to each other illustrated in Fig. 4, the inclined portions 26 are withdrawn within the inner casing and the barbs
30 or projections 25 extend beyond the inclined portions 24 of the outer member, so that the barbs 23 and the barbs 25 are unprotected and in their operative position. By moving the inner member to the position indicated in Fig. 5, the barbs 23 are protected by the inclined portions 26 and the barbs 25 are withdrawn within the casing and protected by the inclined portions 24, so that the pin may be readily inserted or
40 withdrawn. In this form I also provide the connecting portion 20 having its stud or pin 21 extending through a slot 22 in the outer member, whereby the two members may be readily moved in respect to each other.

45 As will be noted, the barbs or projections 18, 23 and 25 are integral with and constitute a portion of one or the other of the members and are immovable in respect to said member. These barbs or projections never extend beyond the general outline of the prongs or tines and only a very slight movement of one member in respect to the other is required to bring them to their operative position.

55 In order to securely hold the members in the desired position in relation to each other and prevent accidental movement, I may provide any suitable mechanism, as, for instance, a spring 27. One end of this spring
60 is preferably secured to the inner surface of the outer member and the opposite end of the spring engages with some portion of the inner member, as, for instance, the stud 21. The action of the spring serves to force the inner
65 member into such a position that the barbs

or projections are exposed and the pin is prevented from becoming dislodged from the hair. In the form shown in Fig. 1, the spring serves to force the stud 21 to one end of the slot, while in the form shown in Fig. 4, the
70 spring serves to force the stud to the opposite end of the slot.

It is known to be old and common to provide an inner member having a prong or projection movable in respect to that member
75 and adapted to move outwardly through an opening in the outer member to prevent the withdrawal of the pin, but in each case the prong extends beyond the general outline of the outer member, and in each case the inner
80 prong is movable in respect to the member which supports the same. In the applicant's construction it is impossible for the hair to be caught between the prong and the casing as the prong is withdrawn to its protecting or
85 inoperative position, as is clearly the case where the inner member is formed of a wire and the barb or projection is formed by an upwardly and outwardly turned end of the wire.
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Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. A device of the class described, comprising two members, one of which constitutes an outer hollow sheath having a sharp point and an elongated opening in the side thereof, and the other of said members having a cutaway portion corresponding to the opening in the sheath or outer member and being located within said outer member and longitudinally movable but laterally immovable in respect thereto, said members being so formed adjacent the ends of the opening and cutaway portions as to present a barb or projection when the members are in one position, and to protect or conceal said barb or projection when the members are moved longitudinally in respect to each other.

2. A device of the class described, comprising two members, one of said members forming a sheath or casing and the other of said members closely fitting within said first mentioned member and longitudinally movable but laterally immovable in respect thereto, one of said members being provided with a barb or projection integral with and rigid in respect thereto, and the other of said members having an inclined portion located adjacent said barb or projection, whereby
120 the barb or projection is exposed when the members are in one position in respect to each other and protected by said inclined portion when the members are in the opposite position in respect to each other.
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3. A device of the class described, comprising two members, one of which is provided with a barb or projection rigid in respect thereto, and the other of said members having an inclined portion located adjacent
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said barb or projection, said members being held against lateral movement but being longitudinally movable in respect to each other to protect the barb or projection by the inclined surface or to bring the barb or projection to an operative position.

In testimony whereof I have signed my

name to this specification in the presence of two subscribing witnesses.

GEORGE H. SPRAY.

Witnesses:

JOHN ANDERSEN,

CLAIR W. FAIRBANK.