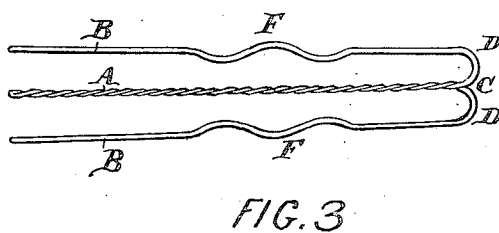
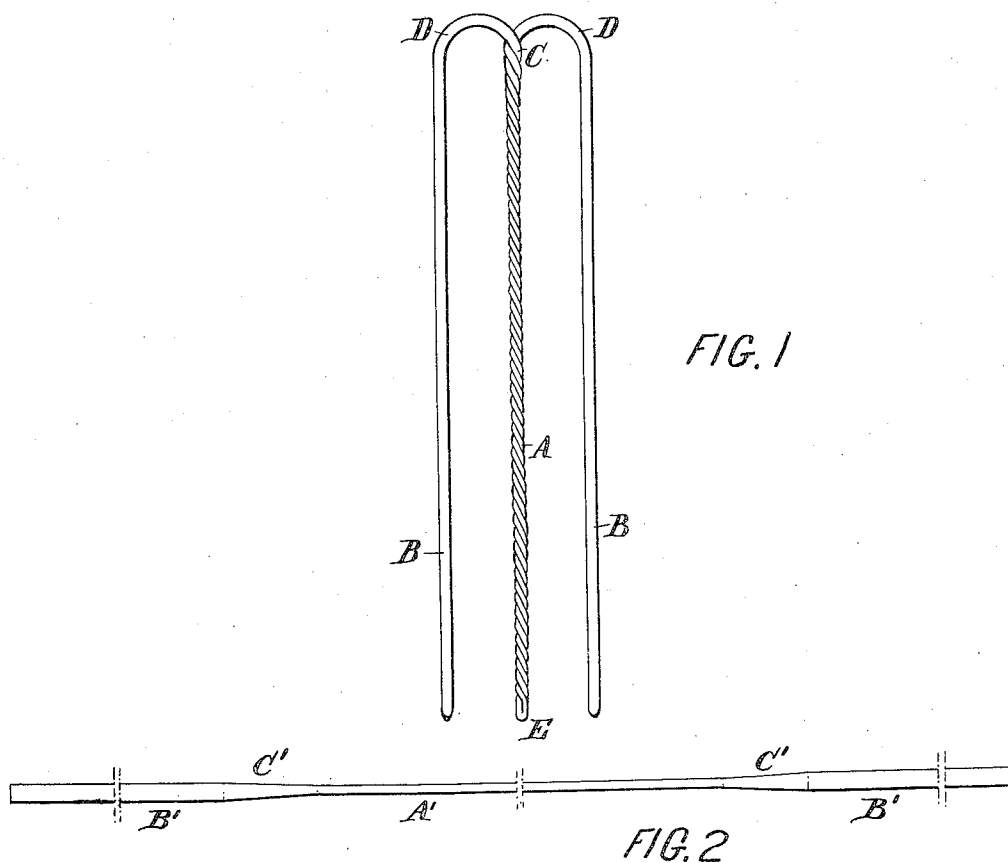


L. C. BELZ.
HAIR PIN.
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975,390.

Patented Nov. 15, 1910.



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LOUIS C. BELZ, OF PHILADELPHIA, PENNSYLVANIA.

HAIR-PIN.

975,390.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, LOUIS C. BELZ, a citizen of the United States, and a resident of Philadelphia, county of Philadelphia, State of Pennsylvania, have invented an Improvement in Hair-Pins, of which the following is a specification.

My invention has reference to hair pins, and consists of certain improvements which are fully set forth in the following specification and shown in the accompanying drawings, which form a part thereof.

The object of my invention is to provide a construction of hair pin having a triad construction which will have capacity for holding the hair more securely than the ordinary two prong hair pin, and which shall also be simple and inexpensive of manufacture.

My invention consists of a hair pin having a plurality of prongs in substantially parallel alinement, formed of a single wire strand made with a plurality of integrally connected portions in its length, the adjacent portions of which having different cross sectional areas, and that portion having the smallest cross sectional area being twisted upon itself to form one of the prongs, and the rest of the wire strand, having the larger cross sectional area, forming the remainder of the plurality of prongs, and in which the twisted wire prong so formed is of substantially the size in cross section of the cross section of the untwisted remainder of the prongs.

In the preferred form of my improved hair pin, I form the pin of a continuous wire having its central portion of reduced cross sectional area and bent upon itself and twisted to form a middle prong and the end portions bent to positions substantially parallel to the central prong to form single strands at each side of the middle twisted prong and with the three prongs preferably in the same plane; the construction being such, that the middle prong is approximately, in mass, equal to each of the side prongs, whereby the hair pin is light in weight, symmetrical in form, and metal and elasticity uniformly distributed.

My invention also comprehends details of construction which, together with the features above specified, will be better understood by reference to the drawings, in which:

Figure 1 is an elevation of a hair pin embodying my invention; Fig. 2 is a plan view

of a wire strand from which the hair pin is made, and Fig. 3 is an elevation of a modified form of my invention.

The hair pin is formed of one piece of wire so bent and twisted that it provides three prongs A, B, B of substantially the same length, said prongs being connected at C by the curved portions D D. The hair pin is made from a continuous wire of variable cross section as more fully described hereinafter and twisted upon itself and otherwise formed as follows: The middle prong A is formed by the wire strand being bent upon itself at the middle and twisted so as to provide two entwining helical strands. This provides a prong of strength and moderate rigidity and which is adapted to coact with the outer flexible prongs B B throughout their length. These outer prongs are of single wire strands and constitute the respective ends of the twisted strands forming the middle prong, they being continuations of said twisted strands and are sustained in definite relation to the middle prong by the curved connecting portions D D. The ends of the outer prongs B B are finished so as not to catch on the hair and this finish may be considered as a blunt point. The ends of the outer prongs B B and the middle prong A are preferably substantially parallel in their normal position before being applied to the hair, so that the hair pin may be readily pushed into the hair without spreading, when so desired. The point E of the middle prong is preferably made without being twisted and by simply bending the wire tightly upon itself, and if desired, drawing or shaping the bent end into a more or less point. In this way, the points all enter the hair with freedom and without disturbing the hair when the hair pin is pushed home.

The wire strand from which my improved hair pin is made is of the construction, illustrated by way of example, in Fig. 2 and consisting of the two end portions B' B' of maximum cross section and the intermediate middle portion A' of minimum cross section, said middle and end portions being connected by the tapering portions C'. The middle portion A' may be reduced to substantially one-half the cross section of the end portions B' so that when it is twisted upon itself to form the middle prong A of the hair pin said prong has substantially the same cross section of metal as the outer

prongs B'. Because of the twist in the middle prong it will be somewhat more rigid than the side prongs and will present the desired frictional surface required to retain the hair pin in the hair. The tapered portions C' when twisted together to form the part C of the hair pin will provide a very strong union and give great rigidity at the branching point since the cross section of the metal at this point will be in excess of that of either of the prongs themselves. In the larger hair pins the relative reduction of the cross section of the wire for the middle prong relatively to cross section of the side prongs will be greater than in the case of the smaller hair pins and I therefore do not restrict myself to any particular degree of reduction in cross section of the wire from which the middle prong is made as compared with the cross section of the outer prongs.

When it is desired to cause the hair pin to clamp the hair, this may be accomplished by the hand in such a manner that the pressure of the thumb may come upon the middle prong from one side and the pressure of the index and middle fingers may come upon the outer prongs from the other side, so as to spread the outer prongs relatively to the middle prong in a direction transversely to the normal plane of the three prongs, and then the hair pin is pushed into the hair, allowing a material quantity of hair to pass over the middle prong and under the outer or side prongs. When the pressure upon the prongs is removed, they spring back into normal position and clamp the hair; and the twisted form of the middle prong offers much friction against the hair pin becoming disengaged.

The outer spring prongs B B may be smooth and straight as shown in Fig. 1 or they may also, if desired, be provided with sinuosities F, as indicated in Fig. 3. These sinuosities or waves may be arranged in any way desired and in the same plane or angle to each other and are adapted to offer additional friction to the hair clamped between the prongs or through which the outer prongs B B pass.

I have shown the several prongs of approximately the same length, but I do not restrict myself in this respect. It is also to be understood that the outer prongs B may be parallel to the middle or twisted prong A as shown in Fig. 1 or substantially parallel thereto as shown in Fig. 3, as preferred.

In the construction of my improved hair pin I do not have any twisted free ends which form obstructions adapted to catch or bind upon the hair. I furthermore pro-

vide a hair pin which has a clamping action throughout the entire length of the prongs and provide great flexibility for the outer prongs and somewhat greater rigidity for the middle prongs.

While I prefer that the hair pin shall have three prongs as shown, I do not restrict myself in this respect, as one of the side prongs B may be omitted and the essential features of my invention would still remain in the two prong structure thus formed.

I have shown my invention in the form I have found most desirable in use while I prefer said construction, the details thereof may be more or less modified within the scope of the appended claims without departing from the spirit of the invention.

Having now described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. A hair pin having a plurality of prongs in substantially parallel alinement, formed of a single wire strand made with a plurality of integrally connected portions in its length, the adjacent portions of which have different cross sectional areas, and that portion having the smallest cross sectional area being twisted upon itself to form one of the prongs, and the rest of the wire strand, having the larger cross sectional area, forming the remainder of the plurality of prongs, and in which the twisted wire prong so formed is of substantially the size in cross section of the cross section of the untwisted remainder of the prongs.

2. A hair pin having a plurality of prongs in substantially parallel alinement and formed of a single wire strand providing in its length a plurality of different cross sectional areas connected by integral tapering portions of variable cross sectional area, that portion of the wire strand of the smallest cross sectional area being twisted upon itself to form one of the prongs, and the rest of the wire strand having the larger cross sectional area forming the remainder of the plurality of prongs branching from the twisted prong, and the twisted portion of the twisted prong immediately adjacent to the branching point being formed of the tapering portions of the wire strand, and in which the twisted wire prong so formed is of substantially the size in cross section of the cross section of the untwisted remainder of the prongs.

In testimony of which invention, I hereunto set my hand.

LOUIS C. BELZ.

Witnesses:

R. M. KELLY,
E. H. BARLOW.