

July 24, 1923.

J. D. COUGHLIN

1,462,484

HAIR CURLER

Filed Dec. 31. 1921

Fig. 1

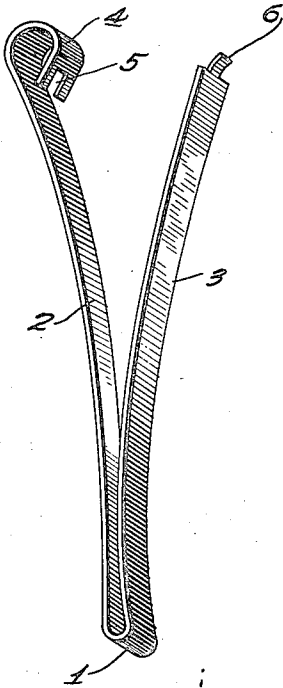


Fig. 2

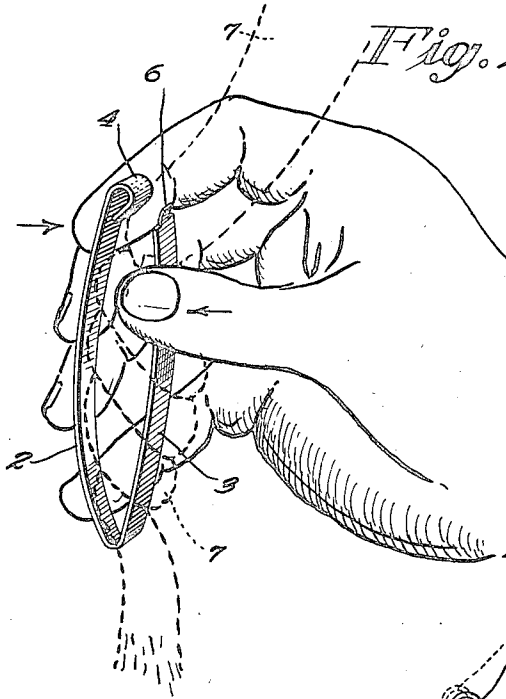
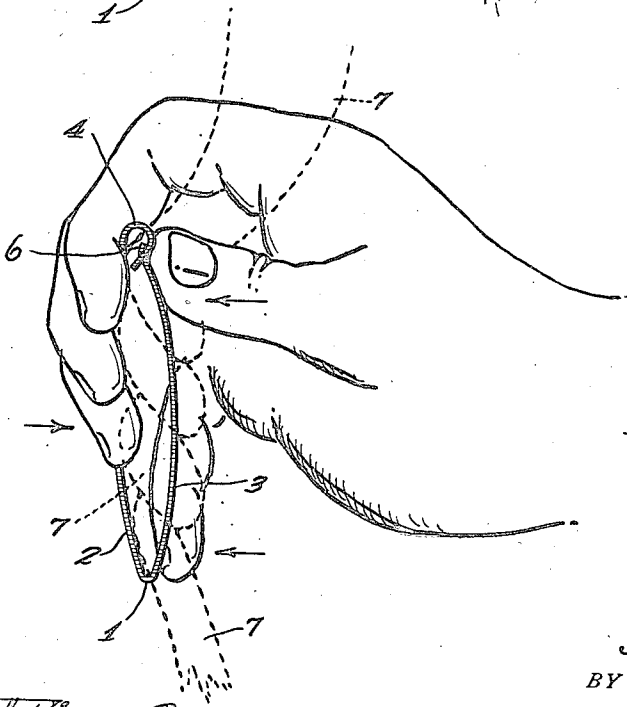


Fig. 3

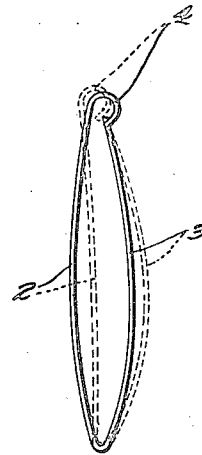


Fig. 4

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Patented July 24, 1923.

1,462,484

UNITED STATES PATENT OFFICE.

JOSEPH D. COUGHLIN, OF NEW YORK, N. Y., ASSIGNOR, BY MESNE ASSIGNMENTS, OF ONE-HALF TO DUNCAN A. McCONNELL.

HAIR CURLER.

Application filed December 31, 1921. Serial No. 526,114.

To all whom it may concern:

Be it known that I, JOSEPH D. COUGHLIN, a citizen of the United States, residing at New York city, in the county of New York and State of New York, have invented a certain new and useful Hair Curler, of which the following is a specification.

This invention is an implement for curling, crimping and waving hair and is preferably formed of spring steel bent intermediate its ends into a substantially V-shaped configuration whereby two resilient arms are formed which are adapted to be flexed toward each other and detachably secured together at their free ends for the purpose of crimping, waving or curling hair previously wound on one or both of said arms.

Implements of this character have been long in use and in practically every instance they are so constructed that the free ends of the arms are secured together thru relative, lateral movement between said arms. In other words, one arm is usually provided at its end with a keeper into engagement with which the free end of the other arm is adapted to be brought by imparting relative, lateral movement between said arms after the manner of manipulating a safety pin of the conventional type. In some of the prior devices the attaching of the free ends of the arms as well as the disengagement of said arms, necessitates relative, lateral movement between said arms throughout their entire lengths, while in other prior devices, one of the arms is provided with a hinged latch which is pivoted in a lateral direction to permit of the engagement or disengagement of the free ends of said arms.

I have found, through close observation, that the imparting of relative, lateral movement between the arms, while hair is wrapped about them, produces a shearing action on the hair which is very apt to cut or damage the same. Aside from these disadvantages, moreover, the safety pin type of catch, so common in the prior constructions, is difficult to manipulate either in attaching or detaching the free ends of the arms while the device is in inaccessible position on the hair.

With the foregoing constructions in mind, the object of the present invention is to provide a curler or crimper which may be locked in position on the hair or unlocked while in such position, in a simple, expeditious and

easy manner through the employment of an interlocking catch which may be sprung into locked condition and released through a flexing of the implement, without imparting a safety pin movement, as heretofore. The advantage of the present construction is that it will not damage the hair in any way, and can be more readily attached and detached than any of the prior constructions.

In its preferred practical form, although not the exclusive one in which the invention is capable of embodiment, the implement comprises a strip of spring steel bent substantially midway of its length to form two resilient arms, one of which is preferably slightly longer than the other. The free end of the longer arm is curled inwardly and is provided at its extreme end with a notch, while the extreme end of the shorter arm is provided with a projecting finger. Hair is adapted to be wound about one or both of said arms which, in normal condition, are inwardly convex. After the hair has been wrapped about the arms, the free end of the shorter arm is adapted to be brought into engagement with the curled end of the longer arm, and by forcing the free ends of said arms firmly together, the finger of the shorter arm may be forced through the notch of the curled end of the longer arm and into a position wherein the finger will underlie said curled end to lock the parts in collapsed condition. When the free ends of the arms are brought into interlocking relation, the arms will be bowed outwardly by the hair between them so that when it is desired to release the shorter arm, it is only necessary to flex the longer arm so that it will be substantially straight, which operation will automatically release the shorter arm and permit the removal of the implement from the hair.

Features of the invention, other than those adverted to, will be apparent from the hereinafter detailed description and claims, when read in conjunction with the accompanying drawings.

The accompanying drawings illustrate one practical embodiment of the invention, but the construction therein shown is to be understood as illustrative, only, and not as defining the limits of the invention.

Figure 1 is a perspective view illustrating the present invention as it normally appears.

Figure 2 is also a perspective view showing

ing the implement placed on the hair and the manner in which the shorter arm may be locked with respect to the longer arm.

Figure 3 is a side elevation of the implement in place on the hair, and shows the manner in which the hand is positioned when it is desired to release the arms to permit of the removal of the implement from the hair, and

10 Figure 4 is a side elevation of the device showing how the same is flexed to permit the release of the cooperating portion of the one arm and the cooperating finger of the other arm.

15 The implement of the present invention may be made of any suitable material but is preferably constructed from spring steel. It may be covered or closed in a suitable envelope if desired, but, in practice, such covering is not necessary. The strip of spring steel from which the crimper is to be constructed, is bent intermediate its ends as at 1 into two arms 2 and 3, the former of which is preferably slightly longer than the latter 25 and has its free end curled inwardly as at 4 and its extreme end notched out as at 5. The shorter arm 3 is provided at its free end with a projecting finger 6.

The normal condition of the implement is 30 as shown in Figure 1, wherein it will be seen that the resilient properties of the spring steel from which it is formed cause the arms 2 and 3 to bow inwardly.

In employing the implement as a crimper 35 or curler, strands of hair 7 are wrapped about one or both of the arms 2 and 3. In practice, it is usually preferred to wrap the hair only around the arm 3 and after this has been done, the free ends of the arms 2 and 3 are flexed together after the manner 40 shown in Figure 2 so that the finger 6 will be brought against the curled end 4 of the arm 2. It will be noted from Figures 1 and 2 that the finger 6 is bent slightly outward 45 so that when the parts are flexed together as shown in Figure 2, said finger will bear against the inclined surface of the curled end 4 which will present an inclined surface to said finger. Accordingly, when the free 50 ends of the arms are forced together, the finger will ride down the inclined surface of the curled end 4 and spring through the notch 5, to come behind the curled end, as clearly shown in Figure 3.

55 When the implement is mounted on the hair in the manner described, the flexing of the free ends of the arms together can only be accomplished by bowing said arms outwardly, since the hair wrapped about one or 60 both of said arms will cause the intermediate portions of the arms to be flexed apart, when the free ends thereof are brought together so that when the device is in position on the hair it will appear as shown in Figure 3, 65 wherein it will be seen that the arms are

70 bowed outwardly and that the finger 6 is hooked through the notch 5. In practice, the notch 5 and cooperating finger 6, may be omitted if desired, but I recommend their use since, through their employment, the arms are positively locked against relative lateral movement.

When it is desired to remove the implement from the hair, the operator's hand is preferably brought into the position shown 75 in Figure 3, so that the thumb may bear upon the curled end 4, one of the fingers bear against the arm 3 adjacent the bend 1 and another finger bear against the arm 2 intermediate its ends. If force is now employed 80 through the fingers of the hand as shown by the arrows in Figure 3, it will be apparent that the whole device may be flexed from the full line position of Figure 4 into the dotted line position of said figure during which 85 operation the outward bow in the arm 2 will be straightened out while the bow in the arm 3 will be increased. As a result of this operation the curled end 4 of the arm 3 will be moved further away from the bend 1 while 90 the finger 6 will be drawn closer thereof, whereby the finger 6 and notch 5 are drawn away from one another and the finger permitted to spring free from said notch.

It will be apparent from the foregoing 95 detailed description of the invention that the free ends of the arms 2 and 3 may be readily sprung together to partake of an interlocked relation so constituted that the finger 6 will actually hook back of the curl 4 and will not 100 become inadvertently released. In fact it cannot be released until the implement is flexed in the manner described. The unlocking of the arms is accomplished in an unusually simple and expeditious manner and 105 requires merely squeezing of the device by the hand of the operator in contradistinction to the unhandy safety pin movements heretofore employed.

It will be understood that the specific invention described may be modified in formal respects, such as by the substitution of equivalents, and that parts of the complete mechanism described may be used alone, or 110 in other environments, without departing from the spirit or substance of the broad invention, the scope of which is commensurate with the appended claims. 115

Having thus fully described the invention, what I claim as new and desire to secure by 120 Letters Patent, is:

1. A hair curler embodying a resilient strip bent intermediate its ends to form two resilient arms, one of which is longer than the other, which arms are normally adapted 125 to partake of diverging relation, the free end portion of the shorter arm being bent outwardly with respect to the remainder of said arm to provide an inclined locking portion and the free end portion of the longer arm 130

being returned upon itself to form a substantially straight inclined retaining portion terminating at the end of the returned portion, the shorter arm being of such length that, when said arms are bowed apart by hair positioned between them and the free ends of the arms forced toward one another, the inclined locking portion at the free end of the shorter arm will engage with the inclined retaining portion of the longer arm and may, by the application of pressure, be forced to slide down the inclined portion of the longer arm and snap beneath the free end thereof so as to become locked behind said free end which forms a shoulder or abutment and engages the inclined locking portion of the shorter arm at a point slightly removed from the extremity of the shorter arm, whereby inadvertent release of the shorter arm is precluded.

2. A hair curler embodying a resilient strip bent upon itself to form two resilient arms of unequal length, the free end of the longer of which is provided with a substantially straight inclined retaining portion

having a notched free end and the free end of the shorter arm being provided with a projecting finger, which is bent outwardly and into inclined relation with respect to the remainder of said arm whereby, when the free ends of the arms are forced together, the inclined finger of the shorter arm will engage with the inclined retaining portion of the longer arm and may, by the application of pressure, be caused to slide down said inclined retaining portion and spring through the notch to be automatically locked behind the base of the notch with the finger and notch interfitting to preclude relative lateral shifting between the arms, the base of the notch serving as a shoulder against which the inclined finger abuts and which engages the finger at a point slightly removed from its extremity, so that inadvertent release of the shorter arm is precluded.

In testimony whereof I have signed the foregoing specification.

JOSEPH D. COUGHLIN.