HAIRPIN OPENING DEVICE

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The present invention relates to a hairpin opening device. More specifically, this invention relates to a device adapted to be held in the mouth by a person and when thus held to provide means against which may be forced a hairpin of the spring type commonly known as a "bobby pin" and the same opened before application to the hair.

Hereofore, it has been common practice to open the spring-type hairpins by forcing the ends thereof against the user's teeth resulting in premature wear of the tooth enamel and not infrequently, chipping away of the teeth themselves. It has been suggested in the prior art to use a device adapted to be clamped between the user's teeth to open the hairpins; however, the device was of such a design that the pin, had to be precisely located on the device while the pin was being opened. The device has not attained widespread use because of this fact and also because the required movement being an uncommon one on the part of the user, the operation was slow, tedious, and tiresome, adding unnecessary time for setting of the hair.

It is a principal object of this invention to provide a device having none of the aforementioned disadvantages, being of simple design and operation.

Other objects of the invention will appear as the description proceeds.

To the accomplishment of the foregoing and related ends, said invention comprises the features hereinafter fully described and particularly pointed out in the claims, the following description and the annexed drawings setting forth in detail certain illustrative embodiments of the invention, these being indicative, however, of but a few of the various ways in which the principle of the invention may be employed.

In said annexed drawings:
Fig. 1 is a transverse sectional view of the device shown positioned in the mouth of the user illustrated diagrammatically;
Fig. 2 is a perspective view of the device itself;
Fig. 3 is a top plan view of the device;
Fig. 4 is a transverse sectional view of the device taken on the plane substantially indicated by the line 4—4 in Fig. 3;
Fig. 5 is a transverse sectional view of the device taken on the line 5—5 of Fig. 3; and
Fig. 6 is a side elevational view of the device.

Referring now more specifically to the drawing, the device herein illustrated as embodying one form of my invention consists principally of a platform portion; and a marginal flange portion.

The platform portion illustrated in Figs. 3 and 4 has transverse ridges 3 and 4 extending upwardly from one face thereof and adapted, when the device is placed in the mouth of the user as illustrated in Fig. 1, to assist in positioning and anchoring the device as illustrated in Fig. 1. The illustrated serrations 3 and 4, are so spaced that the teeth of the user may be placed in front of either one or the other of such serrations, depending upon the desire of the user, while still leaving the marginal flange 2 projecting for a sufficient distance beyond the lips. It is not only within the contemplation of my invention to provide the device with raised ridges or serrations, but also to provide the platform with a flat surface or even with indentations in the platform surface corresponding to the position occupied by the teeth when the device is in use.

The area of platform 1 should be of sufficient size so as to fill a substantial portion of the lateral extent of the user's mouth. This not only provides a device which may be easily handled but also provides suitable area with which the teeth may engage so as to hold the device securely in position during use. The fact that it extends for a substantial distance back into the mouth of the user is of advantage in that in this way the pivotal force brought to bear on the platform 1 during use may be resisted by the lips and tongue and not transmitted to the teeth as a bending force. While in the broadest aspects of the invention, the marginal flange 2 may be arranged on the side opposite the ridges, and it is likewise preferably inclined to the platform 1 at an angle greater than 90° but not substantially greater than 135°. The marginal flange 2 should terminate in a tapered or chisel-like working edge to facilitate the easy insertion of the edge of such flange into the pin to be opened or separated. The lateral extent of the marginal flange 2 should be such as to provide a working edge co-extensive with at least the major portion of the width of the mouth of the user. The cross-section of the marginal flange 2 should be such that it may extend into the pin for a distance sufficient to prevent the pin easily slipping therethrough and also to force apart the legs of the pin sufficiently so that one of such legs may be readily gripped by the fingers and the opening operation completed by having the other leg of the pin bear against the flange 2 as an abutment. The marginal flange should be curved to substantially conform to the curvature of the line of contact between
the platform and the user’s teeth, thus providing a convenient and naturally shaped device. I have invented an improved hairpin opener of a thermoplastic plastic composition like that used in the manufacture of dentures; however, it is within the contemplation of this invention to fashion the device out of any suitable and low-cost material. I have found that thermoplastic plastic composition is best suited for this purpose as it is generally softer than the teeth, obviating any danger of chipping the tooth enamel and also the plastic composition quickly assumes the temperature prevailing in the user’s mouth, avoiding shock of a cold surface as would be experienced if the device were made of metal.

Other modes of applying the principle of the invention may be employed, change being made as regards the details described, provided the features stated in any of the following claims, or the equivalent of such, be employed.

I therefore particularly point out and distinctly claim as my invention:

1. A device of the character described comprising a platform portion adapted to be gripped in the mouth of a person and having a rigid marginal flange along one side thereof angularly related to the plane of the platform, and curved to substantially conform to the curvature of the line of contact between the platform and the user’s teeth, and terminating in a chisel edge.

2. A device of the character described comprising a platform portion adapted to be gripped in the mouth of a person and having a rigid marginal flange along one side thereof angularly related to the plane of the platform and having a lateral extent parallel to the plane of the platform for a width substantially equal to a major portion of the width of a person’s mouth and terminating in a chisel edge.

3. A device of the character described comprising a platform portion serrated on one surface and adapted to be gripped in the mouth of a person and having a rigid marginal flange along one side thereof angularly related to the plane of the platform, and curved to substantially conform to the curvature of the line of contact between the platform and the user’s teeth, and terminating in a chisel edge.

4. A device of the character described comprising a platform portion serrated on one surface and adapted to be gripped in the mouth of a person and having a rigid marginal flange along one side thereof angularly related to the plane of the platform and having a lateral extent parallel to the plane of the platform, and curved to substantially conform to the curvature of the line of contact between the platform and the user’s teeth, for a width substantially equal to a major portion of the width of a person’s mouth and terminating in a chisel edge.

5. A device of the character described comprising a platform portion serrated on one surface and adapted to be gripped in the mouth of a person and having a marginal flange along one side thereof angularly related to the plane of the platform, and curved to substantially conform to the curvature of the line of contact between the platform and the user’s teeth, and extending therefrom on the side opposite said serrations and having a lateral extent parallel to the plane of the platform for a width substantially equal to a major portion of the width of a person’s mouth and terminating in a chisel edge, said device being made of a rigid thermoplastic material.

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REFERENCES CITED

The following references are of record in the file of this patent:

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<tr>
<th>Number</th>
<th>Name</th>
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<tr>
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<td>Brown</td>
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