May 3, 1960 F. S. WAGGENER 2,935,071

CLIP FOR HOLDING CONTOURED HAIR

Filed Nov. 12, 1957

Fig. 1.

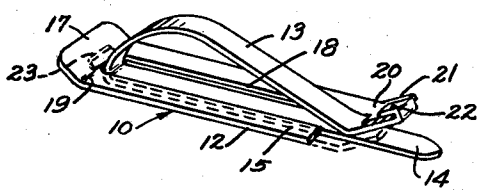


Fig. 3.

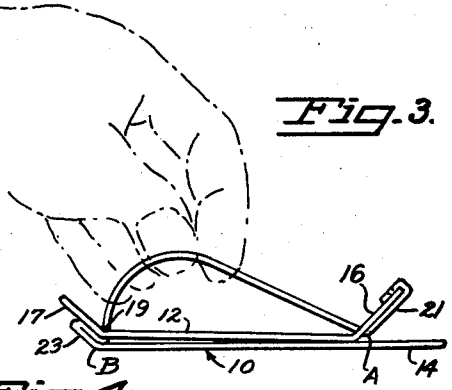


Fig. 2.

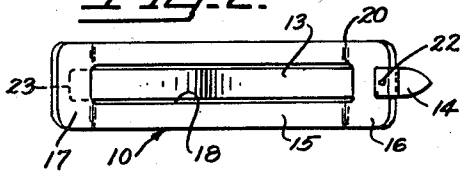


Fig. 4.

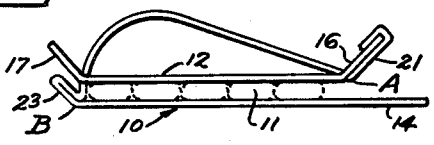


Fig. 5.

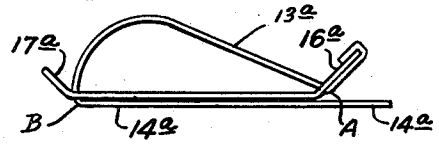
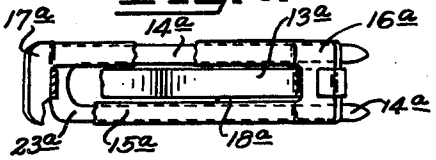


Fig. 6.



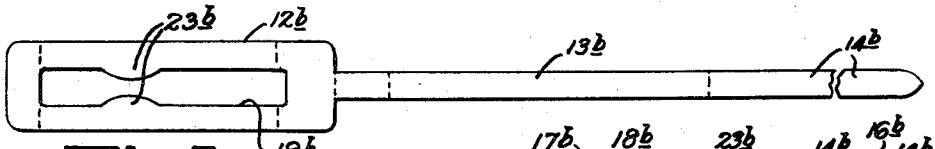


Fig. 7.

Fig. 8.

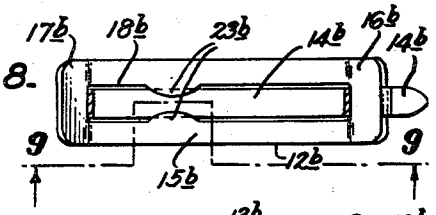
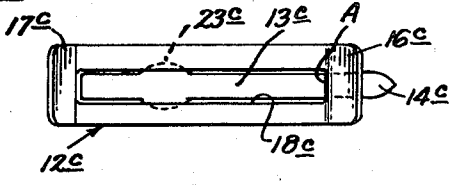


Fig. 10.



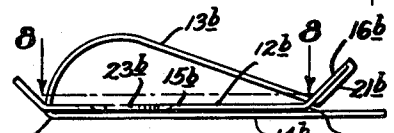
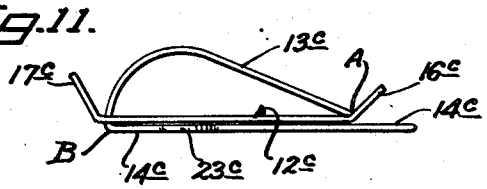


Fig. 9.

Fig. 11.



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CLIP FOR HOLDING CONTOURED HAIR

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Application November 12, 1957, Serial No. 695,891

5 Claims. (Cl. 132—46)

This invention relates to clips for holding a lock of hair that is contoured or wound on the human head in a predetermined form and more particularly relates to such clips which are unitary in construction and provide a resilient finger grip overlying a clamping means.

The clip is particularly adapted for gripping a lock of hair where it is desired that the hair be held between flat surfaces and substantially even pressure applied resiliently over the entire gripped area of the hair. Further advantages are that the clip is operated above the contoured hair rather than at a side thereof, and that the clip exposes a maximum area of the contoured hair to atmosphere for quick drying.

This invention is an improvement in certain respects on my Patent No. 2,660,184 dated November 24, 1953.

Broadly the invention comprises a unitary open frame of flat narrow strip material such as metal, plastic or the like, comprising an elongated planar flat clamping plate preferably having its opposite ends upturned, the clamping plate being longitudinally slotted intermediate said upturned ends, and an elongated upstanding spring-tensioned finger grip centrally overlying the slot of the clamp plate, one end of the finger grip being integral with or securely connected to a forward end of the clamping plate and looping over the slot therein and having its opposite end portion passing through the slot whereupon it is retroverted angularly in the opposite direction to provide one or more tines or prongs parallelly underlying the plane of the clamp plate, a terminal end extending beyond the end of the clamp plate for insertion under a contoured lock of hair which is engaged at its opposite face by the clamp plate.

Numerous advantages are provided by the clip, among which may be mentioned that the resilient mounting of the clamp and prong automatically opens the clip at its opposite ends to receive the contoured hair when its prong is manipulated to slide under one face or side of a lock of hair; its resiliency at both of its ends in its respective parallel clamp and prong members makes it self-gripping on the hair and self-adjusting to varying thicknesses of locks of hair; its members engaging the hair may be very narrow strip material and expose larger areas of the contoured hair for readily drying the hair; it presents narrow surfaces of material which eliminates absorption of heat which may be uncomfortable or may burn the scalp if the head and hair are placed under a mechanical heat drier; it provides for an even-gripping pressure on the lock of hair over the entire hair surface due to the relative parallelism and width of the planar clamp and prong which grip the hair as distinguished from pivoted prong clamps of the "alligator jaw" type which not only become tangled in the hair at the pivot, but also grip tightly adjacent the pivot and loosely at the free end of the prong, thus tending to slide away from the coil of hair, and also making the dried contoured hair tightly curled close to the pivot or jaw and more loosely curled at the free end of the prong, and further causing the hair to show a deformation mark of

the clamp on the hair adjacent to the pivot. A further advantage is that the clip of this invention is gripped and manipulated from above the engaged lock of hair and requires no space at the end of the clip for finger manipulation of levers such as is necessary with the pivoted prong clips. Consequently the shaped hair units on the head may be formed more closely together, and, if desired, in smaller units. The upturned opposite ends facilitate the sliding of the clip upon and removal from the curled hair.

It is the object of the invention to provide a hair clip having the foregoing advantages, which is simple in structure and operation and economical in manufacture, as well as to overcome difficulties in other types of known hair clips. With such objects in view, exemplifications of preferred embodiments of the invention are described herein and illustrated in the accompanying drawing in which:

Fig. 1 is a perspective view of one form of the invention;

Fig. 2 is a plan view of Fig. 1;

Fig. 3 is a side view of Fig. 1 in elevation;

Fig. 4 is a side elevational view of an operational position of Fig. 3;

Fig. 5 is a side elevational view of a modified form of the invention;

Fig. 6 is a plan view of Fig. 5;

Fig. 7 is a plan view of a blank for another modified form of the invention;

Fig. 8 is a plan view of the modified form shown in Fig. 7, sectioned on line 8—8 of Fig. 9;

Fig. 9 is a side elevation of the modified form shown in Fig. 8, partly broken away on line 9—9 of Fig. 8;

Fig. 10 is a plan view of another modified form of the invention;

Fig. 11 is a side elevation of Fig. 10.

Referring to the drawing in which like reference characters indicate corresponding parts in the several views of the respective exemplified forms of the invention, and referring firstly to Figs. 1 to 4, the clip of the invention is generally indicated **10**, and **11** indicates in broken lines a flat spirally wound coil of hair contoured or wound to a predetermined form, the illustrated example herein being known in the trade as a coil which, in the process of forming, lies flatly on the scalp and is gripped in that position by the clip.

The structure of the clip **10**, as illustrated in Figs. 1 to 4, comprises a continuous strip of material, such as metal, plastic or the like, though not necessarily an integral strip, having a clamp plate **12**, a finger grip strip **13**, and a tine or prong strip **14** so connected as to provide a continuous strip clip, the finger grip and prong being resilient.

Plate **12** has an elongated flat planar portion **15** having its opposite ends inclined angularly upwardly from the planar portion providing an upwardly and forwardly inclined prow **16** and upwardly and rearwardly inclined stern **17**, the inclined prow portion preferably having the greater relative length, the inclined prow being for guiding the clamp plate upwardly and over a body of wound hair to be received in the clamp and the rearward inclined stern serving to prevent the clamp from becoming entangled in adjacent hair at the rear when removing the clamp from the hair. The clamp plate has an elongated slot **18** longitudinally centrally of its planar portion and extending between the upwardly inclined end portions from a rearward angle **19** through a forward angle **20** and preferably partially recessed into the inclined prong portion **16** at said forward angle **20** for a very short distance of substantially the thickness of the strip material, the opposite ends of the slot being closed at said angles substantially in the plane of the planar plate. The finger

grip member, the prong, the slot **18**, and the side strips of the clamp plate are preferably of substantial lateral width so as to provide relatively wide surfaces for sliding upon the hair.

The finger grip portion **13** is arcuate in substantially semi-elliptical form to provide an effective elongated arcuate strip of a length to extend between the ends of the slot **18**, and its arc portion overlies and is spaced from the plane of said slot. In the plan the finger grip is substantially aligned with the slot, being a trifle narrower than the slot **18** so as to pass with loosely slidable clearance therethrough. In Figs. 1 to 6 a forward end portion of the finger grip strip extends loosely through the forward end of the slot **18** in the prow **16** and being flanged or bent upon itself upwardly at an angle A to closely overlie the opposite or front face of the prow portion and extend to the upper edge thereof as at **21**, whereat its end is retroverted into a tight clamping relation with the upper free edge portion of the prow. If desired, it may be more tightly secured by a nonperforating punch mark or indentation **22** or by suitable rivet. It is to be noted that the forward end portion of finger grip strip **13** passes through that portion of slot **18** which is recessed into the prow **16** whereby the angled portion **20** of the finger grip strip is maintained above the plane of the lower face of clamp plate **12** to avoid entangling with the hair which slides into the clamp.

At its opposite end the finger grip strip **13** passes loosely and preferably with a close slidable clearance through the opposite or rear end of slot **18** of the clamp plate **15**. At the opposite face of the clamp plate and closely beyond the adjacent rear end of said slot the strip is tightly deformed upon itself into an integral rearwardly extended latch **23** which locks said end of the finger grip strip against movement upwardly through the slot **18**, the strip being thence returned upon itself at an angle indicated B from which the strip is extended directionally oppositely in an integral prong **14** parallelly underlying the slot **18** and extending to a free terminal end beyond the opposite end of the planar portion and slot **18** and the forward closed prow end of the clamp plate. Thus the prong **14** is prevented from movement upwardly through the slot, and is held below the clamping plate for its entire length, and providing, in combination with the overlying upturned prow, an angled open space which is adjacent to the angle indicated "A" whereby a lock of hair is directed and guided into the clamping area between the prong and planar portion of the clamp plate.

In the modified form of structure shown in Figs. 5 and 6, a two-tine prong member is provided. The clip may be generally similar to the structure heretofore described except as hereinafter noted. The resilient strip forming the finger grip **13***a* is secured to the upturned forward end of prow portion **16***a* of the clamp plate and extends through the forward end of slot **18***a* at angle A to provide the resilient arcuate finger grip. At its opposite end the finger grip portion of the strip extends through the rear end of slot **18***a* and is bent directionally oppositely upon itself at angle B closely below the plane portion **15***a* of the clamp plate, the prong portion **14***a* being divided into a pair of parallelly spaced prongs or tines which closely underlie and substantially parallel the underside of the side strips of the planar clamp plate **15***a*, and extending forwardly similarly as in Figs. 1 to 4 and thus being prevented from moving upwardly through the slot by the additional width of the yoke or crotch **23***a* of the prong member. The opposite ends of the clamp plate **15***a* are inclined upwardly, as at **16***a* and **17***a*, as previously described. The latch **23** of Figs. 1 to 4 is omitted.

In Figs. 7 to 9 a modification of structure is disclosed in which the clamp plate **12***b* and the strip forming the finger grip **13***b* and prong **14***b* are comprised of a single integral strip in which the spring tension or resilience of the integral strip may be uniform throughout the length of the entire device including the clamp plate. In this modification the clamp plate portion **12***b* may have the finger grip **13***b* and prong **14***b* integrally extending from its forward end, in the blank as shown in Fig. 7, in which event the strip may be folded downwardly a proper distance as at **21***b* along the forward face of upturned prow **16***b* substantially to the plane of the plate portion **15***b*, thence angularly bent upon itself at angle A and arcuately upwardly through the forward end of slot **18***b*, providing the arcuate finger grip **13***b*, the opposite end of which passes with close slidable clearance through the rearward end of the slot **18***b*, whereupon the strip is bent directionally oppositely or forwardly upon itself at angle B to provide prong **14***b* closely underlying and parallel with the slot **18***b* and extending beyond the forward end of the clamp plate. Adjacently spaced from the rearward end of the slot **18***b* there is provided in the clamp plate a pair of inwardly formed ears or tabs **23***b* which are relatively opposed at each of the longitudinal edges of the slot for preventing upward movement of the prong through the slot at the rearward end, the upward movement at the opposite forward end of the slot **18***b* being prevented because the prong extends beyond the forward end of said slot. The opposite end portions of the clamp plate are inclined upwardly as previously described, and indicated **16***b*, **17***b*.

The modification as shown in Figs. 10 and 11 is particularly adapted for integrally moulding from polyethylene or other suitable type of plastic material which is characterized by suitable rigidity for the clamp plate **12***c* and its upturned opposite ends **16***c*, **17***c*, and suitable resilience in the arcuate finger grip **13***c* and prong **14***c*. In this modification the forward end of the finger grip **13***c* is integrally and resiliently connected to the clamp plate **12***c* at the corresponding forward end of the slot **18***c* providing the angle A from which the finger grip flexes to its opposite end which extends with close slidable clearance through the rearward end of slot **18***c*, whereupon it is returned oppositely upon itself at angle B and extends as prong **14***c* parallelly closely below the clamp plate, as in the other exemplifications of the device. Any of the previously described means for maintaining the prong below the clamp plate may be employed in this modification, but as illustrated such means comprises an outwardly extended tab or ear **23***c* on each edge of prong **14***c* adjacent to its rear end.

With particular references to the devices of Figs. 1 to 6 it is to be noted that the provision of a separate, but connected strip forming the respective finger grips and prongs, adapts the structure to employment of a non-resilient clamp plate and resilient or spring material for the finger grip and prong.

In each of the exemplifications of the invention the strip forming the finger grip and the prong are of resilient spring material. The clamp plate, whether or not made of spring or resilient material, has a resilient action imparted to it by its attachment at one of its ends to the resilient strip. When the lock of hair is slid between the clamp plate and the prong, as shown in Fig. 4, there is a resilient yielding action in the free end of the clamp plate as well as the adjacent portion of the prong at angle B. In localizing points of resilience it may be noted that the resilience of the prong is not due solely to the inherent resilience of its material but is also due to the return angle B which connects the underlying prong with the finger grip member, whereas the overlying clamp plate member is also resilient responsive to the mounting of one end thereof at the forward end of the resilient finger grip portion.

The leverages of the length of the prong and of the clamp member from said respective opposite ends of the clip provide ample resilience so that when a lock of hair is inserted between the prong and clamp plate, as in Fig. 4, the mere manual pressure of inserting the free end of the prong at one face of the lock of hair by means of the finger grip member, causes an opening of the clamp

at the forward end due to the long leverage of the prong from the resilient angle B. As the lock of hair is slid into the clip between the prong and the clamp plate, the second factor of resiliency of the clamp member at angle A is effective to permit the opposite or rear end of the clamp plate to raise since the resiliency at the angles A and B are substantially equally effective for this purpose. Hence, when the lock of hair is between the clamp plate and the prong, the same degree of resiliency being effective at both ends of the clip provides over the entire gripped area of the hair an equalized pressure between parallel gripping members. The gripping of the hair in such manner by narrow strips above and below the coil of hair provides for exposure to atmosphere of the maximum surface of the coiled hair to facilitate drying. The finger grip manipulation of the clip from above the clamping plate facilitates sliding of the clip into and out of engagement with the lock of hair from a free position above the hair, and the upturned opposite ends of the clamp plate serve to press down or flatten adjacent loose hair so that there is no pulling of hair against the scalp when either inserting or withdrawing the clip.

Having thus described the invention, what is claimed as new and patentable is:

1. A clip for holding contoured hair comprising an elongated clamp plate which includes a planar portion having an elongated longitudinal slot centrally thereof, said slot being closed at its opposite ends, the said clamp plate having a forward prow end portion extending angularly upwardly and forwardly beyond the forward end of said planar portion and slot, a continuous strip of resilient sheet material of a width which may pass slidably through said slot and having one of its ends resiliently and securely connected to the clamp plate at said forward end portion, said strip extending from said connection toward the opposite end of the slot in relatively spaced overlying aligned relation to the slot for providing a resilient finger-grip strip member at one face of the clamp plate, said strip passing loosely with close slidable clearance through the opposite end of the slot to the opposite face of the planar portion of the clamp plate and being thence bent directionally oppositely upon itself at said opposite face of the clamp plate and providing an elongated prong member extending parallelly along said opposite face of the planar portion of the clamp plate in underlying relation to the clamp plate, the free terminal end of the prong extending beyond the planar portion and the upturned prow portion of the clamp plate, and means for maintaining said prong member against upward movement through the slot.

2. A hair-gripping device as set forth in claim 1, the clamp plate having an upturned rearwardly inclined stern portion of lesser length than the extended forward upturned prow portion, the opposite ends of said slot extending between said upturned end portions, and said slot being closed at each of its opposite ends by said upturned portions.

3. A hair-gripping device of the character described comprising an elongated longitudinally slotted clamp plate having a planar portion and having upturned angularly oppositely inclined end portions closing the opposite ends of the slot and extending therebeyond, a continuous strip of resilient material having one end connected resiliently to the forwardly inclined portion of the clamp plate adjacent to a forward end of the slot, said strip extending arcuately from said connection toward the opposite rear end of the slot in relatively spaced overlying aligned relation to the slot for providing a finger-grip member at one face of the clamp plate, said strip passing loosely with close slidable clearance through said rearward end of the slot to the opposite face of the clamp plate and being bent at said opposite face directionally oppositely upon itself substantially parallel with the plane of the clamp plate providing an elongated prong member underlying said slot, the opposite free terminal end of the prong extending beyond the upturned forward prow portion of the clamp plate, and means for maintaining said prong member against upward movement through the slot.

4. A hair-holding device of the character described as set forth in claim 3, and in which said means for maintaining the prong member against upward movement comprises ears inter-engageable between the prong and the side edges of the slot whereby the prong is of greater width than the slot at the position of such ears.

5. A device for gripping a lock of contoured hair comprising an elongated clamp plate member having a planar portion provided with a longitudinal slot therein, the ends of said slot being closed at its opposite ends and spaced from the opposite ends of the clamp plate, the forward and rearward end portions of said clamp plate being inclined angularly upwardly from the plane portion providing, respectively, a forwardly inclined prow and a rearwardly inclined stern at the respective opposite ends of the plate, a continuous resilient strip having one of its ends connected to the forward end portion of the clamp plate adjacent to the corresponding end of said slot and extending from said connection toward the opposite end of the clamp plate in overlying spaced relationship to said slot and thereby providing a finger-grip member overlying the slot, the opposite end portion of said finger-grip member passing loosely with close slidable clearance through the opposite rear end portion of said slot and being angularly turned upon itself directionally oppositely in relatively close underlying substantially parallel relation at the opposite face of the clamp plate providing an elongated prong member the free terminal end of which extends forwardly beyond the planar portion of the clamp plate and said forward upturned prow end portion thereof whereby an angled space is provided between said extended end portion of the prong and said upwardly and forwardly inclined prow portion of the clamp plate.

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