June 4, 1935. J. L. GLASER ET AL 2,004,046

EYELASH CURLER

Filed Feb. 4, 1933 2 Sheets-Sheet 1

Fig. 1

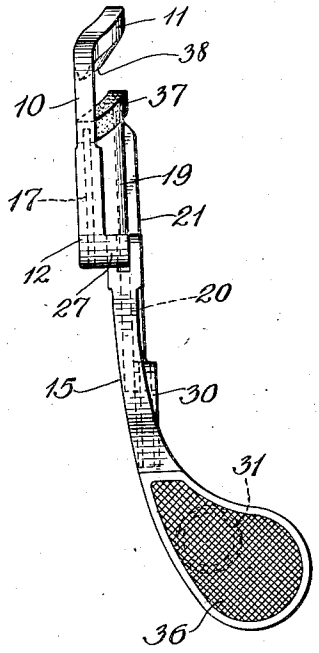


Fig. 2

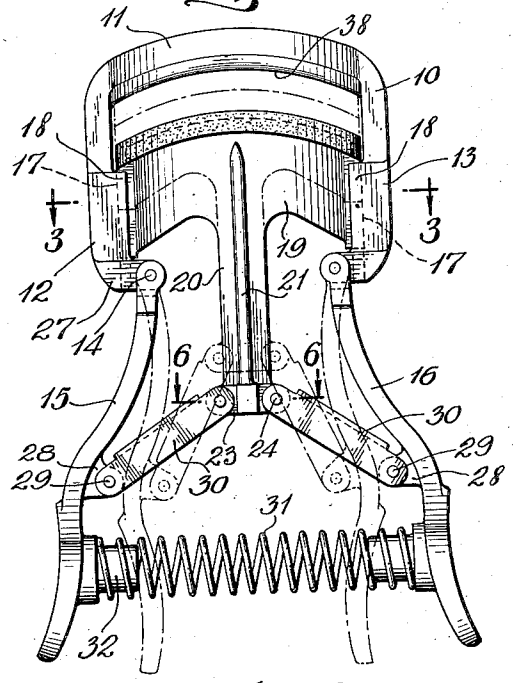


Fig. 6

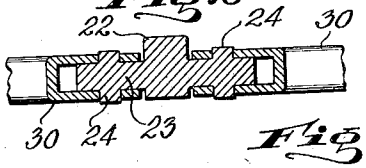


Fig. 3

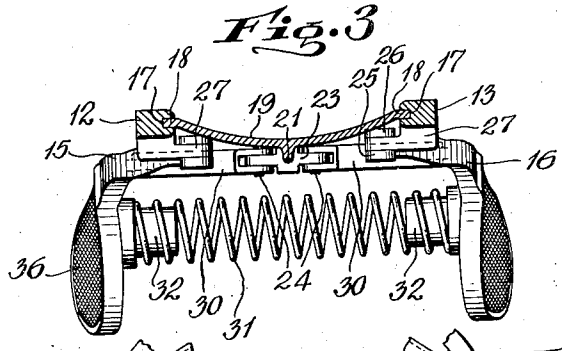


Fig. 5

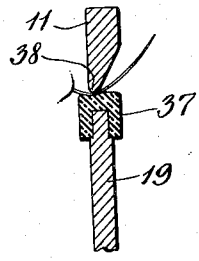
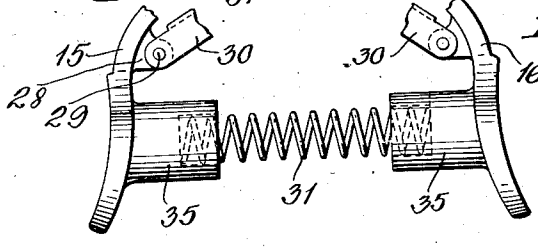


Fig. 4



Jacob L. Glaser
Samuel Segal
INVENTORS.

BY

ATTORNEY.

June 4, 1935. J. L. GLASER ET AL 2,004,046

EYELASH CURLER

Filed Feb. 4, 1933 2 Sheets-Sheet 2

Fig. 7.

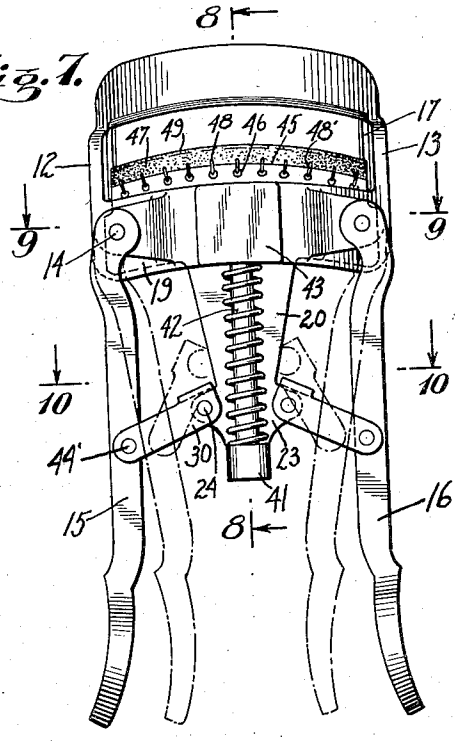


Fig. 8.

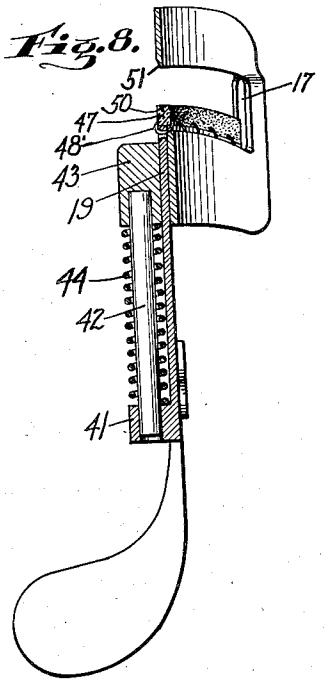


Fig. 9.

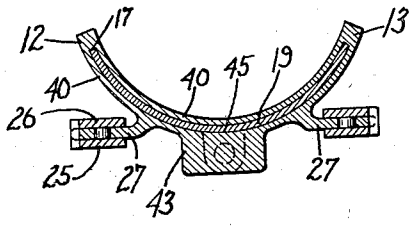
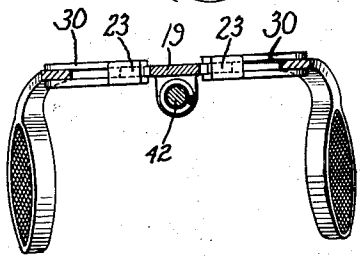


Fig. 10.



Jacob L. Glaser
Samuel Segal
INVENTORS.

BY

ATTORNEY

Patented June 4, 1935

2,004,046

UNITED STATES PATENT OFFICE

2,004,046

EYELASH CURLER

Jacob L. Glaser and Samuel Segal, Brooklyn, N. Y.; said Segal assignor of one-fourth to C. M. Palmer, New York, N. Y.

Application February 4, 1933, Serial No. 655,264

18 Claims. (Cl. 132—32)

The subject matter of this invention is an instrument for improving the appearance of a person's eyes and is especially concerned with a functionally and structurally improved manually actuated and conveniently manipulated device having opposed complementary clamping members for curling or crimping the lashes of eye lids.

The invention has for one of its objects to provide an eye lash curling device comprising a one piece frame within which a clamping instrumentality is slidably disposed and guided and to which is hingedly secured a pair of manipulating arms or wings for slidably moving the clamping instrumentality towards and against a complementary clamping part of the frame.

The invention has for another object the provision of a hair curling device in which the complementary clamping instrumentality is actuated by a pair of diverging and pivotally movable links or the like actuated by the opposed manipulating arms hingedly carried by the frame to shift the clamping instrumentality within the frame.

The invention has for a further object the provision of a clamping instrumentality having a depending portion which is interconnected with associated manipulating arms by pivotal channel shaped links normally rendered ineffective through the action of resilient means acting against the arms.

Another object contemplates the provision of a clamping instrumentality having a resilient gripping member suitably grooved or striated as to be bodily carried to and from the complementary clamping portion of the frame during the process of moving said instrumentality to or from its effective clamping position.

The invention has a still further object to provide an improved eye lash curler which will stand up under considerable usage and which when out of adjustment may be readily readjusted by the removal and replacement of relatively few and inexpensive parts.

A still further object comprehends the provision of a one piece eye lash receiving frame having integral depending slotted or grooved channels in which vertical marginal portions of the clamping instrumentality are guided to and from the complementary clamping part of the frame, the clamping instrumentality embodying a centrally arranged depending portion pivotally carrying laterally disposed links having their remote terminals pivotally mounted to contiguous manipulating arms or wings and still other objects, advantages, and features of the invention are to improve generally the simplicity and efficiency of the eye lash curler of the character referred to which is durable and reliable in operation and which is economical to manufacture.

The invention accordingly comprises the features of the construction, the combination of elements and arrangement of parts, which will be exemplified in the construction hereinafter set forth and the scope of the application thereof will be indicated in the appended claims.

For a clearer understanding of the invention attention is directed to the embodiments shown in the accompanying drawings in which:—

Fig. 1 is a side elevation of an eyelash curler according to the invention; Fig. 2 is a front elevation thereof shown in expanded or normally inoperative position in full lines, or, collapsed or in effective crimping position in the dash and dot lines; Fig. 3 is a section on the line 3—3 of Fig. 2; Fig. 4 is a fragmentary view illustrating a modified form of holding the arms or wings of a hair curler of the type in accordance with the invention, normally ineffective; Fig. 5 is a fragmentary sectional view across the clamping portion of the frame and the shiftable clamping instrumentality in their operative relation for crimping an eyelash; Fig. 6 is a section along the line 6—6 of Fig. 2.

Fig. 7 is a view in elevation showing the preferred embodiment of the invention; Fig. 8 is a section on the line 8—8 of Fig. 7; Fig. 9 is a section taken on the line 9—9 of Fig. 7 and Fig. 10 is a section on the line 10—10 of Fig. 7.

The eyelash curler according to the invention comprises an inverted and substantially U shaped frame or yoke generally designated 10. As shown the frame is a one piece member die casted or a stamping and includes an upper horizontal arcuate bar 11 from the sides of which integrally depends the vertical guide elements 12 and 13.

The lower portions of the guide elements are slightly turned inwardly and include the suitably arranged transverse posts 14 on which respective arms or wings 15 and 16 are pivotally mounted.

Each of the depending guide elements includes a vertically disposed slot 17 in which the rectilinear vertical side marginal portions 18 of the shiftable clamping instrumentality, broadly denoted 19 are slidably guided.

The clamping instrumentality 19 forms in association with complementary clamping bar 10 a pair of jaws between which the hair to be processed is properly held and modulated or shaped. To this end the clamping instrumentality comprises an appropriately curved plate as shown, having the straight integral side marginal portions 18 disposed in alinement and integrally de-

pending centrally from the curved plate is a suitable extension 20, which if desired may be prevented from buckling by being reinforced in any well known manner, as for example, by the provision of integral reinforcing ribs as 21 or 22, the lower portion of extension 20 having integral lugs or ears 23 to which is cast or otherwise suitably secured protuberances 24.

According to the showing of Fig. 7, corresponding sides of the guide elements may be interconnected by a suitable strengthening brace 40, which aid to guide the curved clamping member or instrumentality and also prevents the latter from buckle and further operates to effectively hold the opposed guiding elements or sides a predetermined distance apart and thus prevents the frame from buckling.

The clamping instrumentality which consists of the arcuate plate slidably guided in the elements 12 and 13 and the depending extension 20 with its integral lower ears or lugs is a one piece member which according to the invention may be a die casting or stamping.

The manipulating arms or wings each include at their upper ends a pair of spaced lugs or ears 25 and 26 which closely straddle respective terminal portions or lugs 27 extending from the lower portion of the frame, the ears 25 and 26 being appropriately pivotally fastened to an adjacent transverse pin 14 associated with the terminal portions 27.

Intermediate the ends of each swingable arm in the form according to Fig. 2 there is provided an enlarged portion or ear 28 in which is suitably secured the post 29, which may be cast integral with its ear or may be independent thereof.

Interconnecting the ears 28 of the manipulating arms and corresponding ears as 23 of the depending extension 20 and pivotally mounted to their posts which may be cast thereon or otherwise appropriately secured thereto within the scope of the invention, such as by the fastening thereto of rivets or the like, are the channel shaped links 30.

The terminal portions of the links are adapted to straddle an adjacent ear of its associated arm and of the extension 20. These portions are also perforated so as to be snapped on to the overhanging protuberances or posts of its contiguous ear, consequently, forming pivotal connections therewith.

A helicoidal spring 31 interposed between the inside faces of the lower manipulating portions of the arms has its terminal suitably fastened to inwardly extending studs as 32 carried by the arms. The spring exerts an outward pressure to the arms to maintain the upper portions of the channel shaped links against an associated ear 23 of the depending extension 21, these ears therefore effectively serving as an abutment and stop for the adjacent transverse portions of the associated channel links when the eyelash curler as shown in Fig. 2 is in its expanded non-operative position.

In the form according to Fig. 4, the terminal portions of the spring may be suitably fastened to exert an outward thrust to the arms within hollow studs 35 carried by the lower portions of the arms which may also be provided with outside roughened faces 36 of the type illustrated in Fig. 3 to facilitate the gripping thereof.

If desired, the inwardly disposed terminals 27 of the guide elements 12 and 13 may be offset forwardly out of the plane of said elements, as shown in Fig. 3 to permit ease of insertion of the clamping instrumentality within its guides in the frame.

The upper portion of the clamping instrumentality is provided with a suitable resilient grooved or striated guard member 37 of rubber, or equivalent thereof, which may be sprung over the upper portion and straddle the latter as shown in Fig. 5.

When the arms are brought from the full line position in Fig. 2 to the dash and dot line position, the resilient guard or covering 37 for the upper part of the clamping instrumentality cooperates with the lower beveled edge 38 of the frame to crimp the hair, or eyelash, in the manner illustrated in Fig. 5.

With the manipulating arms of the crimping device in their normal position, the resilient guard 37 of the movable jaw is clear from the upper bar or jaw 11 of the frame, and the two jaws are sufficiently spaced to permit the insertion of an eyelash of an eye lid. Having suitably positioned the eyelash, the manipulating arms are brought gradually towards each other. This causes the links to shift the clamping instrumentality with its resilient covering bodily towards the lashes which with further inward movement of the arms are firmly gripped and modulated as heretofore stated due to the closing of the gap between the cooperating surfaces of the complementary jaws, which impart the desired pressure.

After having modulated the lashes manual pressure at the bottom portions of the arms may be removed and due to the action of the spring between the arms, the latter may automatically return to their normal position.

In the preferred embodiment of the invention illustrated in Figs. 7 to 10 inclusive corresponding sides of the depending side elements 12 and 13 of the frame are interconnected by an appropriate brace as 40 and these serve to prevent transverse play of the clamping instrumentality as the latter is guidably moved in the depending channels 12 and 13.

The extension 20 integrally depending from the slidable clamping plate or instrumentality 19 is provided at its lower end with a perforated lug or collar 41 which is slidably guided on the free end of the cylindrical stud 42, the latter having its upper end fixedly attached to a suitable boss or enlargement 43 suitably carried by the forward brace 40.

In order to normally maintain the upper part of the clamping instrumentality away from the upper jaw, a helicoidal spring 44 is provided which preferably encircles stud 42 and has its upper end abutting the fixed boss 43 and its lower end seated on the movable collar.

As shown in Fig. 9, the boss 43 is integral with the forward brace 40 and its rear arcuate face 45 thereof is flush or merges with the corresponding inner curved faces of the forward brace, thus facilitating the guiding of the clamping instrumentality 19 between the spaced braces 40.

Ears as 23 of the lower part of extension 20 are utilized for pivotally supporting the inner ends of the channel shaped links 30 which are pivotally mounted on suitable posts 24 carried by the lugs. The outer ends of links 30 straddle an associated wing or arms as 15 and are pivotally secured thereto by a suitable pin or rivet 44'.

The upper part of the clamping instrumentality includes a flat transverse face 45 and spaced slightly below said face, a plurality of spaced perforations 46 is provided. Mounted on the flat

face 45 is a strip 47 of rubber or of other suitable material.

Arranged adjacent the bottom flat face of the resilient strip is a plurality of perforations 48 and through corresponding perforations of the rubber strip and the clamping instrumentality, a thin thread of cotton, leather or other appropriate stock 48' is passed, such that the rubber strip may be sewed or stitched to the upper part of the clamping instrumentality, the bottom face of the resilient strip being flat transversely with respect to its longitudinal axis and corresponds in configuration to the flat face 45 of the clamping instrumentality.

Top face 49 of the elongated rubber strip 46 is provided with a narrow longitudinally disposed groove or striation 50 which receives the beveled edge 51 of the upper jaw when the arms 15 and 16 are manipulated towards each other for shifting the clamping instrumentality bodily towards the upper part of the frame.

The eyelashes to be processed are arranged within the space between the beveled edge of the upper jaw and the rubber strip of the lower jaw. When the arms are moved towards each other, the rubber strip moves against the beveled edge 51 and further inward pressure on the wings compresses the rubber strip slightly causing the eyelashes to be firmly clamped and properly shaped.

The groove 50 cooperating with the beveled edge 51 facilitates the shaping of the eyelashes and the reception of the beveled edge in the groove 50 maintains to effectively hold the rubber strip in operative alinement and against transverse displacement, and thus properly balances the rubber strip in its desired clamping position.

When finger pressure is applied to the manipulating portion of the pivoted wings 15 and 16, the links operate to shift the clamping instrumentality bodily upwardly in the frame and toward the upper jaw and the spring 50 is compressed. Upon the release of the finger pressure, spring 44 acts downwardly and against the slidable collar 41, thus automatically moving the lower jaw away from the upper, which action also causes the arms 15 and 16 to move their greatest distance of separation.

In the broader aspects of the invention we do not desire to be understood as limiting its embodiments to details herein shown illustratively as a wide variety of modifications may be made within the scope of the appended claims without departing from the spirit of the invention.

We claim:

1. In an eyelash curler, the combination of, a frame having depending slotted sides, a clamping plate carrying a resilient striated element, said plate being interposed between said sides and having integral marginal portions thereof guided in the slots of said sides, a member extending from said plate and below said sides, arms pivoted to the latter, links pivoted to the member and arms, and means operative to hold said element away from a complementary clamping portion of said frame.

2. In an eyelash curler, the combination of, a frame, a clamping member movably guided in said frame, manipulatable arms hingedly connected to said frame, links pivotally connecting said arms and a portion of said clamping member, and spring means for holding the member away from a complementary portion of said frame, said means being compressible upon the manipulation of said arms towards each other and the movement of the arms towards each other causing said links to shift said member into clamping relation with said frame.

3. In an eyelash curler, the combination of, a frame having an arcuate bar, sides depending from said bar, said sides each being provided with a slot, a clamping member movably guided in the slots of said sides and mechanism for moving said member into and out of clamping relation with said bar.

4. In an eyelash curler, the combination of, a frame having an arcuate bar with depending slotted sides, a clamping member movably guided in said slots, means for moving said member into and out of clamping relation with said bar, and means to prevent buckling of said member.

5. In an eyelash curler, the combination of, a frame having an arcuate bar, a clamping member movably guided in said frame, means for moving said member into and out of clamping relation with said bar, and means connected to said frame to prevent transverse displacement of said member in its movement towards and away from said bar.

6. In an eyelash curler, the combination of, a frame having an arcuate bar with depending sides of a clamping member movably guided in said frame, means for moving said member into and out of clamping relation with said bar, and spaced braces connected to said sides to guide said member in its movement to and from said bar and prevent transverse displacement therebetween.

7. In an eyelash curler, the combination of, a frame having an arcuate bar with depending slotted sides, a clamping member comprising a plate having marginal portions slidably disposed and guided in the slots of said sides, the plate having an extension depending therefrom, arms hingedly mounted on said sides, and links pivotally connected to said extension and arms.

8. In an eyelash curler, the combination of, a frame having an arcuate bar with depending slotted sides, a clamping member having portions slidably disposed and guided in the slots of said sides, the plate including a depending extension, arms hingedly mounted on the lower portions of said sides, channel shaped links pivotally connected to said extension and arms, and a resilient member snugly embracing one end of said member and cooperating with said bar so as to effectively crimp a hair disposed therebetween upon the manipulation of said arms.

9. In an eyelash curler, the combination of, a frame having sides including grooves, a plate interposed between said sides and having portions slidably guided in said grooves, a resilient member mounted on said plate and having sides straddling and closely embracing one end of said plate, and means for moving the resilient member into and out of clamping relationship with said frame.

10. In an eyelash curler, the combination of, a yoke having slotted sides interconnected by a common intermediate bar constituting a complementary clamping portion, a plate slidably mounted in the slots of said sides, a resilient member mounted on said plate, and hinged means connected to said sides and to a portion extending from said plate for moving the resilient member into and out of clamping relationship with said complementary clamping portion.

11. In an eyelash curler, the combination of, a frame having an arcuate bar with depending slotted sides, a plate slidably mounted in said frame having portions guided in the slots of said

sides, arms hingedly connected to offset portion of said frame, links pivotally connected to said arms and a depending portion of said plate, a resilient member mounted on said plate, and spring means cooperating to normally hold said resilient member away from said bar, the spring being compressible upon the movement of the arms towards each other to bring said resilient member into clamping relationship with said bar.

12. In a device of the class described, the combination of, a frame having guiding elements, a clamping member having portions slidably guided between said elements, a grooved resilient element stitched to said clamping member, arms pivotally connected to said frame, links pivotally connected to the arms and said member and spring means for normally holding said resilient element away from a complementary clamping portion of said frame.

13. In a device of the class described, the combination of, a frame having sides including grooves, a clamping instrumentality having portions slidably arranged in said grooves, spring means for normally holding said instrumentality away from a complementary portion of said frame and pivoted means for actuating said instrumentality towards a portion of said frame.

14. In an eyelash curler, the combination of, a frame comprising a complementary arcuate clamping portion and having depending sides, an arcuate plate movably guided between said sides, a grooved resilient clamping member stitched to said plate, spring means for normally holding said resilient member away from said complementary clamping portion of said frame and hinged means for moving said spring means to compress the grooved portion of said member against the complementary portion of said frame.

15. In an eyelash curler, the combination of, a frame having a stationary and complementary clamping portion, a clamping member bodily carrying a resilient element having a longitudinally disposed striation, said clamping member being movably guided relative to said frame, manipulatable arms hingedly connected to said frame, links pivotally connected to said arms and to a portion of said clamping member, spring means for normally holding said striated element away from said stationary and complementary clamping portion of said frame and for urging said arms away from each other and laterally, said spring means being compressible upon the manipulation of said arms towards each other causing said links to shift said member and dispose the striation of said resilient element into compressible and clamping relation with said stationary clamping portion.

16. In an eyelash curler, the combination of, a frame comprising spaced sides and an arcuate complementary clamping portion, an arcuate plate normally guided between said sides and having a depending portion, a resilient clamping member mounted on the upper portion of said plate and having a longitudinally disposed groove, spring means, said frame and depending portion having means for supporting said spring means for normally holding said resilient clamping member away from said complementary clamping portion of said frame, arms pivoted to said sides, link means pivotally connected to said arms and said depending portion, said link means being displaceable upon the manipulation of said arms towards each other to bodily displace the groove of said resilient clamping member to receive and cooperate with an arcuate edge of said complementary clamping portion for crimping eyelashes, said spring means being compressible upon the movement of the arms towards each other, said spring means being expandible upon the release of pressure on said arms to automatically urge said plate downwardly and said arms laterally, the movement of said plate downwardly causing said groove to move away from said arcuate edge.

17. In an eyelash curler, the combination of, a frame having an arcuate edge, an arcuate plate movably guided between the sides of said frame, a resilient clamping element carried at the upper portion of said plate and having a longitudinally disposed groove, spring means normally holding said resilient element away from said arcuate edge and hinged means normally resisted against movement by said spring means for bodily moving said plate and element towards said edge whereby said longitudinally disposed groove of said element straddles said edge to effectively crimp eyelashes interposed between said edge and said resilient element.

18. In an eyelash curler, the combination of, a frame comprising a complementary arcuate clamping portion and having depending slotted sides, an arcuate plate slidably guided in the slots of said sides, spaced arms hingedly connected to said frame, links pivotally connected to said arms and a depending portion of said plate, a resilient member stitched to said plate, spring means, said depending portion and a portion of said frame having means for supporting said spring means, the latter normally holding said member away from said complementary clamping portion, the spring means being compressible upon the movement of the arms towards each other to bring said resilient member into clamping relationship with said complementary arcuate clamping portion.

SAMUEL SEGAL.
JACOB L. GLASER.