Jan. 14, 1941. R. E. JONES 2,228,768

HAIR CLIPPING AND SHAVING DEVICE

Original Filed Dec. 10, 1935

Fig. 1

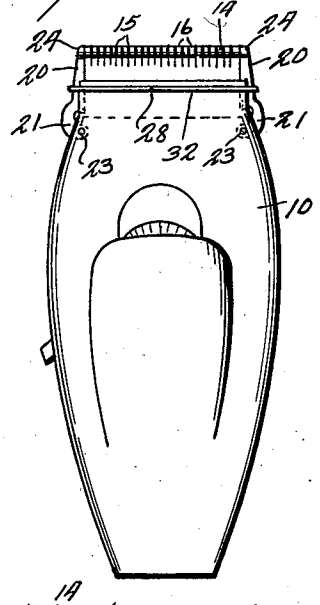


Fig. 2

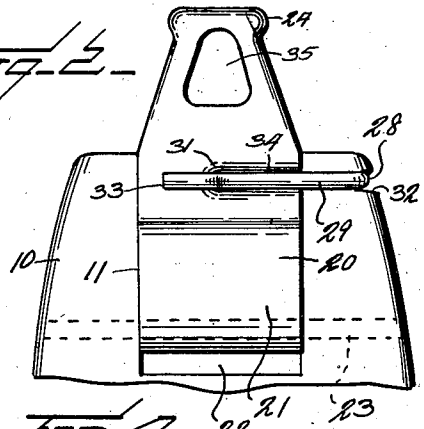


Fig. 8

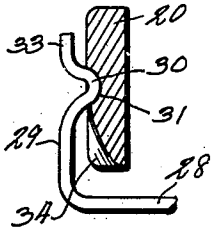


Fig. 4

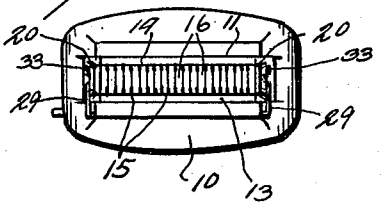


Fig. 3

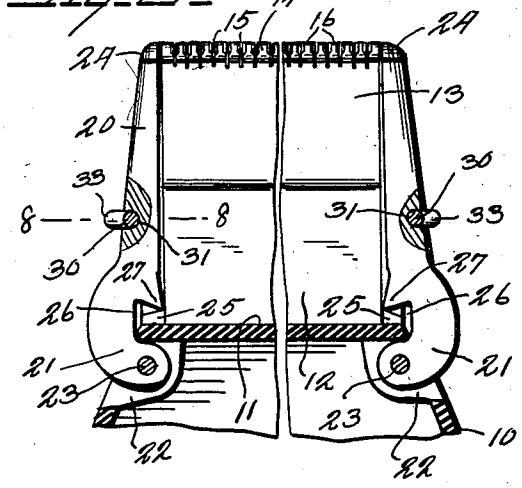


Fig. 5

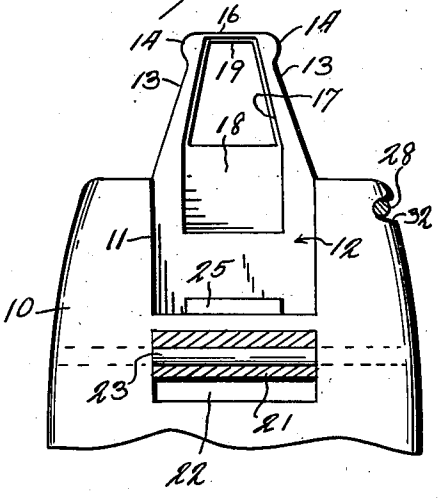


Fig. 6

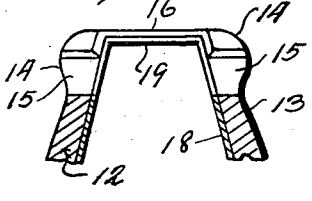
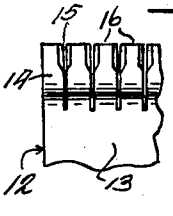


Fig. 7



Inventor

R. E. Jones

By Watson & Coleman

Attorney

Patented Jan. 14, 1941

2,228,768

UNITED STATES PATENT OFFICE

2,228,768

HAIR CLIPPING AND SHAVING DEVICE

Ralph E. Jones, Grand Rapids, Mich.

Application December 10, 1935, Serial No. 53,809
Renewed September 13, 1937

32 Claims. (Cl. 30—43)

This invention relates to certain improvements in shaving or hair clipping devices of the character generally shown in the patent to Schick, #1,757,978, granted May 13, 1930. Shaving devices of this general character employ an outer shaving head which is channel-shaped in cross section and transversely slotted and within said shaving head is disposed a cutter or shearing member which is reciprocated by an electric motor or other means so as to clip off or shear off hairs that protrude through the slots of the head.

Devices of this kind as placed upon the market are open to the objection that there are two relatively sharp corners on each side of the shaving head and two relatively sharp corners at the extremities of the shaving head. These corners, when the instrument is pressed against the face or other part, are annoying and uncomfortable, particularly inasmuch as the device must be pressed firmly against the face in order that it shall cut properly and make a "clean shave." In devices of this kind, the channel-shaped head is held in place against accidental detachment by means of a set screw passing through a channel-shaped recess in the handle, which recess contains the head. Due to the very rapid vibrations given to the cutter within the head, this set screw often becomes loosened and in that case, the head is liable to fall out, carrying with it the cutter, and the cutter and head may drop against some very hard object as, for instance, a washstand, floor or the like, and damage the cutter head or the cutter itself, thus rendering the instrument impossible for use until these parts have been replaced or duplicated at considerable expense.

The general object of the present invention is to avoid the objections heretofore referred to by forming the lateral edges of the channel-shaped head with rounded beads at the longitudinal corners of the head, which rounded beads at their outer portions merge into the transversely straight surface of the channeled head, thus presenting a curved surface for engagement with the cheek instead of the right angular corner which is present in this instrument as found upon the market.

Another object of this invention in this connection is to form these beads with slots that are enlarged towards their outer ends so that the hairs may be guided into place, thus facilitating the cutting operation.

A further object is to provide guards mounted upon the handle of the device and which extend across both ends of the channel-shaped head, which will hold the channel-shaped head in position without the necessity of using a set screw, and in this connection, to provide a clip which will engage these guards and hold them closed until the clip is removed.

A still further object is to perform this function by the provision of two guards hinged to the handle or body of the device, which guards may be turned up to a position against the open ends of the channel-shaped member or head to thereby hold the channeled head and cutter from accidental detachment and provide a clip which, when in position, has a positive engagement with these guards and will not permit the guards to open accidently.

A still further object is to so form the extremities of these guards that they are longitudinally rounded and merge at their upper ends into the upper flat face of the channeled head and to form the extremities of the guards transversely rounded so that no sharp end corners will be presented in manipulating the device over the face.

Other objects have to do with the details of construction and arrangement of parts as will appear more fully hereinafter.

My invention is illustrated in the accompanying drawing wherein—

Figure 1 is a side elevation of a shaver to which my improvements are applicable, Figure 1 showing these improvements applied;

Figure 2 is a very greatly enlarged end view of the upper portion of the handle showing a guard closed and held in place by the clip;

Figure 3 is a side elevation partly in section of the cutter carrying end of the handle, showing the manner in which the guards are pivoted to this handle and how these guards engage with the channeled member to hold it in place;

Figure 4 is a top plan view of the structure shown in Figure 1;

Figure 5 is an elevation of the cutter carrying end of the handle but with the guard turned outward, the pivoted head portion of the guard being shown in section;

Figure 6 is a greatly enlarged fragmentary vertical section through the end of the channeled member and of the cutter;

Figure 7 is a fragmentary side elevation of the structure shown in Figure 6;

Figure 8 is a section through one of the guards on the line 8—8 of Figure 3.

Referring to this drawing, 10 designates a handle which is formed at its cutter carrying end with a transverse open-ended channel 11. Disposed within the channel 11 is a head 12, which is held from movement by means which will be later described. That portion of the head which projects beyond the extremity of the handle has inwardly and upwardly inclined side faces 13 terminating in beads 14 which extend along the channeled head. The outer end of this head is

formed with transversely extending slots 15, as shown in Figure 7, these slots being very close together and defining a transversely extending series of knives, as they may be called, 16. The head 12 is formed with a longitudinally extending passage or channel 17 within which is disposed a reciprocating cutter shown in Figure 5 and designated 18. This cutter fits this channel and at its upper end the cutter is formed with a plurality of transversely extending slots defining a plurality of transversely extending cutting knives 19, as shown in Figure 6. So far, I have described, except for the beads 14, the ordinary and common construction of a shaver of this particular type. The cutter 18 is rapidly reciprocated longitudinally of the channeled head 12 by an electric motor contained within the handle 10. This forms no part of my invention, and as it is well known, I have not attempted to illustrate it.

In shavers of this type, the channeled head 12 is normally held in place by a set screw passing through the upper end of the handle 10. As before stated, this set screw, due to the rapid vibrations of the cutter, is very likely to be jarred loose and if loose permits the channeled head and the cutter to drop out of the handle. In order to avoid this, I have provided at each end of the channel 11 a guard, as shown in Figure 3. These guards are designated 20. Each guard at its lower end has an inwardly curved arm or equivalent element 21, which extends into a recess 22 formed in the handle or body 10, and each guard is pivoted to the body by means of a transversely extending pivot pin 23. Thus each guard may be turned down into a position at right angles to the longitudinal axis of the handle or into the position shown in Figure 3, where the guards are juxtaposed to the open ends of the channel 11 and the open ends of the channel 17. Each of these guards at its outer end is rounded, as at 24, so that its outer face extends longitudinally of the guard and inward towards and merges into the flat upper face of the channeled head 12.

It will thus be seen that the lateral corners of the channeled head 12 are rounded by reason of the provision of the beads 14, while the ends of the channeled head are rounded off by means of the curved surfaces 24 of the guards and the four junctions of these curved surfaces are also rounded. Each end of the head 12 is provided with a lip 25, having a sloping upper surface, as shown in Figures 3 and 5, and just above the pivot 23, each of the guards 20 is formed with a recess 26 and a lug 27 which forms the outer wall of the recess and which overhangs the corresponding lip 25, so that when the guards are in the position shown in Figure 3, they not only prevent any longitudinal movement of the head 12 within the channel 11, but they prevent any outward movement of the head 12 out of the channel 11. Thus the head 12 with the cutter is held firmly in place by the guards against any accidential detachment, as shown most clearly in Figure 3.

The guards 20 are held in the position shown in Figures 2 and 3 by means of a clip 28, the ends of which clip are angularly bent at 29 to extend across the outer face of each guard. The clip near its extremities has each of its arms formed with a depressed portion 30, as shown in Figure 8, the corresponding guard 12 having therein a recess 31 to receive this depressed portion of the clip so that when the clip is in place, it positively locks into the guards and prevents any accidental detachment of the clip. Preferably the handle adjacent its cutter carrying end will be provided with a transversely extending groove 32, as shown in Figure 2, into which the body of the clip is received so as to prevent the clip from being accidently pushed outward or upward in Figure 2. The extremity of the clip is outwardly bent, as at 33, so as to form means whereby the clip may be readily sprung outward to release it from its engagement with the guards and permit its withdrawal from the guards. Preferably each guard is formed with a groove 34 which extends inward from one side edge of the guard to the recess 31, as shown in Figure 8, so as to permit the clip to be readily pushed into place, or in other words, guide the portion 30 of the clip into position.

It will be seen that when the clip is in place, it is held from any accidental detachment and that it holds the guards 20 in the position shown in Figure 3 and in turn these guards prevent any possible accidental detachment of the head 12 or the cutter which reciprocates within the head.

Another feature of my invention consists in forming the slots 15 in the beads 14 wider at their outer ends than at their inner ends, as shown in Figures 6 and 7, so that as the instrument is passed over the face, the hairs will be guided into position in these slots 15. It will be understood that Figure 7 is very much exaggerated and that the spaces between the slots are shown as relatively wide, whereas, as a matter of fact, the slots are very close together.

It will be seen with this construction that I have entirely eliminated the shap-edged corners which in the ordinary shaver of this type form an obstruction to the free passage of the shaver over the face, particularly over those portions of the face wherein the flesh is depressed for any reason. The beads 14 extend, as before stated, longitudinally along the entire lateral faces of the head 13 at the outer end thereof while the rounded ends of the guards 24 eliminate the right angular corners at the extremities of the head 12. Thus smooth rounded surfaces are presented at the side edges and end edges of the head 12, permitting the razor to glide easily and smoothly over the face. Furthermore, these guards 20 act to lock the head 12 in its channel 11 and prevent any accidental detachment of this head either by falling out of the channel longitudinally of the handle or dropping out of the ends of the channel 11. The clip 28 interlocks in the recesses 30 with the guards so that this clip cannot be accidently withdrawn or fall off. The clip must be positively pushed out in order to free the guards; then the guards may be turned down to a position at right angles to the longitudinal axis of the handle and the head 12 with the cutter within it may be readily withdrawn. It will be seen that each guard, as shown in Figure 2, is provided with an opening 35, which is coincident with the ends of the channel 17, so that by blowing through this opening 35, the blast of air will blow the hairs which may have collected in channel 17 out through the opposite guard.

While I have particularly described my improvements with relation to a particular form of shaver, I wish it distinctly understood that these improvements are applicable to any form of hair clippers operating on the same general principle.

It will be seen that I have secured the following advantages by my construction:

First, comfort for the person whose beard is being clipped or shaved;

Second, security against interruption of the mechanical functioning of the clipping machine;

Third, security against damage to fragile and expensive parts;

Fourth, ease in disassembling for cleaning and ease in reassembling the parts, and

Fifth, neatness in construction and appearance.

I am aware of the fact that certain shaving devices of this same general character have transversely rounded shearing heads and transversely rounded cutters operating within the shearing heads. These transversely rounded shearing heads, of course, do not present sharp longitudinal corners but, nevertheless, they have sharp end corners and, hence, the provision of the guards on such shaving devices as last described, is desirable and does away with these sharp corners.

While I have described both guards **20** as being hinged or pivoted by means of the pivot pins **23**, I do not wish to be limited to this as it is obvious that one of these guards, or both of them, might be permanently fixed in closed position and rigidly attached to the handle. If one guard were permanently fixed, the head **12** might still be secured in its position in the handle by the means which I have already described. If both guards were permanently fixed, however, the lugs **27** and the lips **25** would be eliminated and separate means provided for holding the head **12** in position. However, I prefer to make both of these guards pivoted guards and to secure the head in place by the means which I have described.

What is claimed is:

1. A hair clipping device of the character described, including an outer transversely slitted channeled head and a cutter reciprocating within the channel of the head, the head at its longitudinal outer edges being transversely rounded, the transversely rounded surfaces merging into the outer surface of the head, and elements disposed at the ends of the channeled head, each having a longitudinally rounded surface at its extremity merging into the outer surface of the head at the ends thereof.

2. A hair clipping device of the character described, including a handle, a head having open ends and detachably mounted on the handle, the head being transversely slitted at its outer end, a cutter reciprocating within the head, the head at its longitudinal outer edges being formed with transversely rounded surfaces merging into the outer surface of the head, and guards disposed at the open ends of the head and mounted on the handle and locking the head to the handle, one of said guards being pivotally supported whereby it may be turned away from the head to permit the removal of the head from the handle.

3. A hair clipping device of the character described, including a handle, a head mounted upon the handle, the head being transversely slitted at its outer end, a cutter reciprocating within the head, the head at its longitudinal outer edges being formed with transversely rounded surfaces merging into the outer surface of the head, and guards disposed at the ends of the head and mounted on the handle and locking the head in place upon the handle, one of said guards being pivotally supported whereby it may be turned away from the head to permit the removal of the head from the handle, the extremities of both of said guards being rounded to merge into the outer surface of the head.

4. A hair clipping device of the character described, including a handle, a head carried by said handle, the head being transversely slitted at its outer end, a cutter reciprocating within the head, the head at its longitudinal outer edges being formed with transversely rounded surfaces merging into the outer surface of the head, guards disposed at the ends of the head and mounted on the handle, one of said guards being pivotally supported whereby it may be turned away from the head to permit the removal of the head from the handle, the extremities of both of said guards being rounded to merge into the outer surface of the head, and means for detachably holding the pivoted guard against the extremity of the head.

5. A hair clipping device of the character described, including a handle, a head disposed upon said handle, the head at its outer end being transversely slitted, a cutter reciprocating within the head and guards mounted upon the handle and extending over the ends of the head, one of said guards being pivoted to the handle whereby it may be turned down to permit the removal of the head from the handle or turned up to prevent said removal, and a removable resilient clip adapted to embrace the guards.

6. A hair clipping device of the character described, including a handle, a head carried by the handle, the head at its outer end being transversely slitted, a cutter reciprocating within the head and guards mounted upon the handle and extending over the ends of the head, the guards locking the head upon the handle, one of said guards being pivoted to the handle whereby it may be turned down to permit the removal of the head from the handle or turned up to prevent said removal, and a removable resilient clip adapted to embrace the guards, the guards being formed with depressions and the clip having protuberant portions adapted to engage in said depressions.

7. A hair clipping device of the character described, including a handle, a head carried by said handle, the head at its outer end being transversely slitted, a cutter reciprocating within the head, guards pivoted upon the handle and adapted when turned to one position to bear against the ends of the head and lock it in place against removal and when turned outward to permit the head to be removed from the handle, the head being provided in its opposite ends with outwardly projecting lips and the guards having inwardly projecting lugs engaging over said lips to thereby lock the head from movement away from the handle, and means locking said guards in position against the ends of the head.

8. A hair clipping device of the character described, including a handle, a head carried by the handle, the head at its outer end being transversely slitted, a cutter reciprocating within the head, guards pivoted upon the handle and adapted when turned to one position to bear against the ends of the head and when turned outward to permit the head to be removed from the handle, the head being provided in its opposite ends with outwardly projecting lips and the guards having inwardly projecting lugs engaging over said lips to thereby lock the head from

movement away from the handle, and means locking said guards in position against the ends of the head, said means comprising a spring clip having angularly bent arms, each arm being formed with a depressed portion and an outwardly extending extremity, each guard having a recess in its outer face within which said depressed portion engages.

9. A hair clipping device of the character described, including a handle, a head carried by said handle, the head at its outer end being transversely slitted, a cutter reciprocating within the head, guards pivoted upon the handle and adapted when turned to one position to bear against the ends of the head and when turned outward to permit the head to be removed from the handle, the head being provided in its opposite ends with outwardly projecting lips and the guards having inwardly projecting lugs engaging over said lips to thereby lock the head from movement away from the handle, and means locking said guards in position against the ends of the head, said means comprising a spring clip having angularly bent arms, each arm being formed with a depressed portion and an outwardly extending extremity, each guard having a recess in its outer face within which said depressed portion engages, the handle having a channel within which the body of the clip is disposed when the clip is in operative position.

10. A hair clipping device of the character described, including a handle, a head carried by the handle, the head at its outer end being transversely slitted, the longitudinal edges of the head being formed with slitted beads merging into the outer face of the head, guards pivoted upon the ends of the handle for movement into position against the ends of the head, each of said guards being apertured coincident with the ends of the head, the extremities of the guards being rounded and merging into the outer surface of the head, the guards being movable upon their pivots to a position at right angles to the ends of the head, each of said guards on its inner face having an inwardly projecting lug and the head having outwardly projecting lips with which said lugs are engageable when the guards are closed against the head and means holding said guards in place against the ends of the head comprising a spring clip having a body portion and angularly extended arms, the arms of the clip being formed with protuberances and the outer faces of the guards having depressions within said protuberances, the handle being formed with a channel for the reception of the body portion of the clip and each guard having a channel extending to the depression.

11. A hair clipping device including a handle, a transversely slitted channeled head mounted on the handle and having a flat outer surface, a cutter reciprocating within the channel of the head, and elements carried by the handle and disposed at the ends of the head, each having a rounded surface at its extremity merging into the outer surface of the head at the respective ends thereof.

12. A hair clipping device of the character described, including an outer transversely slitted channeled head having a flat outer surface and flat lateral surfaces and a cutter reciprocating within the channel of the head, a handle upon which the head is mounted, guards mounted upon the handle, each of said guards having a longitudinally and transversely curved outer surface merging into the outer and lateral surfaces of the head, one of said guards being hingedly mounted upon the handle for movement toward or away from the head, one of said guards and the adjacent end of the head being formed with interlocking portions to prevent the longitudinal movement of the head away from the handle, and means for holding the hinged guard in a position parallel to the opposite guard.

13. A hair clipping device including a handle, a transversely slitted channeled head having a flat outer surface and flat lateral surfaces, the lateral edges of the head being rounded and merging into the lateral surfaces, a cutter reciprocating within the channel of the head, and elements disposed at the ends of the head mounted upon the handle and locking the head on the handle, each of said elements having a surface rounded longitudinally and transversely and merging into the outer and lateral surfaces of the head.

14. A hair clipping device of the character described, including a handle, an outer transversely slitted channeled head carried by the handle, guards carried by the handle and disposed at the open ends of the head, the adjacent surfaces of the head and guards being formed with interlocking lugs and recesses to hold the head in place on the handle.

15. A clipping device of the character described, including an outer transversely slitted channeled head and a cutter reciprocating within the channel of the head, a handle upon which the head is carried, and guard elements mounted on the handle and disposed at the ends of the channeled head, at least one of said elements being shiftable to permit the removal of the cutter from the channeled head.

16. A clipping device of the character described, including a handle, a head mounted upon said handle and having open ends, the head being transversely slitted at its outer end, a cutter reciprocating within the head, and guards mounted upon the handle and disposed at the open ends of the head, one of said guards being pivotally supported for movement away from the adjacent open end of the channeled head to permit the removal of the head from the handle or permit the removal of the cutter.

17. A device of the class described including a transversely slitted channeled head having a flat face terminating at each side in rounded surfaces into which the slits extend, a cutter reciprocating within said head, and elements at the ends of the head each having longitudinally and transversely rounded surfaces at their outer ends merging into the face of said head and into the said rounded side surfaces.

18. A device of the class described including a transversely slitted channeled head having a flat face, a cutter reciprocating within said head, and elements at the ends of the head parallel to the slits therein and each having longitudinally and transversely rounded surfaces at their outer ends merging into the face of asid head.

19. A device of the class described including a chambered head having a transversely slitted face terminating at each side in rounded surfaces into which the slits extend, a cutter reciprocating within the head in operative relation to its said face, and members at the ends of the heads having rounded surfaces at their outer ends complementing and merging into the rounded surfaces of said head and into its said face.

20. A device of the class described including a chambered head having a transversely slitted face terminating at each side in rounded surfaces into which the slits extend, a cutter reciprocating within the head in operative relation to its said face, and parts at the ends of the head complementing and merging into the rounded surfaces of said head and into its said face.

21. A device of the class described including a slitted channeled head open at the ends thereof, a cutter movable within the head, and externally bulging elements having exterior rounded surfaces secured to each end of the channeled head, the exterior rounded surfaces merging into the outer surface of said head, at least one of said elements being readily removable to uncover an end of the channel of the head and permitting removal of the cutter through the end thus uncovered.

22. A device of the class described having an open-ended channeled head, and rounded guard elements hinged to the device at the opposite ends of said head.

23. A device of the class described including a handle, an open-ended channeled head, a cutter within the head, and rounded guard elements at the open ends of said head, said elements being hinged to said handle.

24. In an apparatus of the class described, the combination of a handle having a tranverse channel-like recess in its outer end, a head removably mounted in said recess and chambered to receive a reciprocating cutter, said head having curved bead-like portions on each side at its outer end and a flat end face between said curved side portions, the curvature of said curved side portions merging into the face, the face having a plurality of transverse slits which extend into the curved side portions providing spaced combined guard and shear bars, head end members constituting guards for the cutter chamber of the head and having curved outer ends comprising curved side portions complementing the curved side portions of said head and curved end portions merging with said curved side portions and with the face of the head, a cutter within said head operatively associated with said shear bars thereof, and means for detachably securing said head to said handle.

25. In an apparatus of the class described, the combination of a handle, a head chambered to receive a reciprocating cutter, said head having curved bead-like portions on each side at its outer end and a flat end face between said curved side portions, the curvature of said curved side portions merging into the face, the face having a plurality of transverse slits which extend into the curved side portions providing spaced combined guard and shear bars, head end members constituting guards for the cutter chamber of the head, and having curved outer ends comprising curved side portions complementing the curved side portions of said head and curved end portions merging with said curved side portions and with the face of the head, and a cutter within said head operatively associated with said shear bars thereof.

26. A hair clipping device including a handle, an outer hollow cutting head having an outer face and side faces, a movable cutter disposed within the outer head, and guards mounted on the ends of the hollow outer head, each guard having a longitudinally and transversely rounded outer face merging into the outer face and the side faces of the cutter head whereby to provide rounded ends and corners for said head extending flush with the outer and side faces thereof.

27. A hair clipping device including a handle, an outer hollow cutting head having an outer face and side faces, a movable cutter disposed within the outer head, and guards mounted on the ends of the hollow outer head, each guard having a longitudinally and transversely rounded outer face merging into the outer face and the side faces of the cutter head whereby to provide rounded ends and corners for said head extending flush with the outer and side faces thereof, each guard being relatively thick at a point coincident with the inner end of the longitudinally curved portion of its face.

28. A hair clipping device including a handle, an outer hollow cutting head having an outer face and side faces, a movable cutter disposed within the hollow head, guards disposed on the ends of the hollow head, each guard having a longitudinally and transversely rounded outer face merging into the outer face and the side faces of the cutter head whereby to provide rounded ends and corners for said head extending flush with the outer and side faces thereof, and means for detachably locking the cutting head to the handle.

29. A hair clipper of the character described including a handle, an outer hollow cutting head having an outer transversely slitted face and side faces, a movable cutter disposed within the hollow head, guards mounted on the head and having a longitudinally and transversely rounded outer face merging into the slitted face and the side faces of the cutter head whereby to provide rounded ends and corners for said head extending flush with the outer and side faces thereof, and means detachably holding the head in place upon the handle.

30. A hair clipper including a handle, a hollow cutting head disposed on said handle and having a transversely slitted wall and side walls and having a base resting flat against the end of the handle, guards disposed at the ends of the cutting head, each guard being relatively thick at its outer end and transversely and longitudinally curved to merge into the outer face of the slitted wall and the outer faces of the side walls of the head whereby to provide rounded ends and corners for said head extending flush with the slitted wall and outer faces of the side walls thereof, one of said guards at its inner end being attached to the handle, and means for holding the cutting head in place on said handle.

31. An electric razor structure having a head provided with a chamber opening through the respective opposite ends of the head, and end flaps for said chamber hinged to said structure adjacent said ends of the head.

32. An electric razor structure having a head provided with a chamber opening through the respective opposite ends of the head, and end flaps for said chamber hinged to said structure adjacent said ends of the head, said end flaps having rounded upper sections forming rounded end extensions and bearing surfaces for the razor head.

RALPH E. JONES.

Disclaimer

2,228,768.—*Ralph E. Jones*, Grand Rapids, Mich. HAIR CLIPPING AND SHAVING DEVICE. Patent dated Jan. 14, 1941. Disclaimer filed Feb. 21, 1948, by the inventor.

Hereby disclaims claims 17, 18, 19, 20, 24, and 25 of said patent.

[*Official Gazette March 30, 1948.*]