Feb. 2, 1965 B. A. NAUMANN 3,167,804

LUBRICATING ATTACHMENT FOR ELECTRIC RAZORS AND THE LIKE

Filed Oct. 28, 1963

Fig. 3.

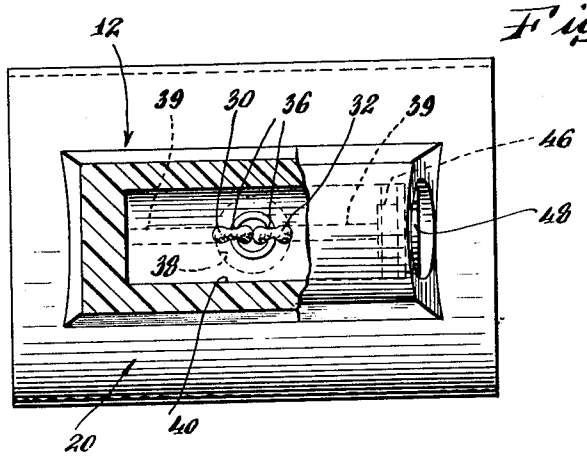


Fig. 5.

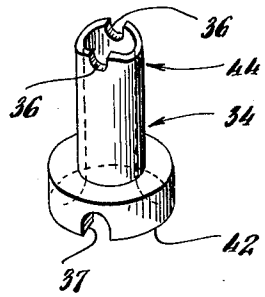


Fig. 2.

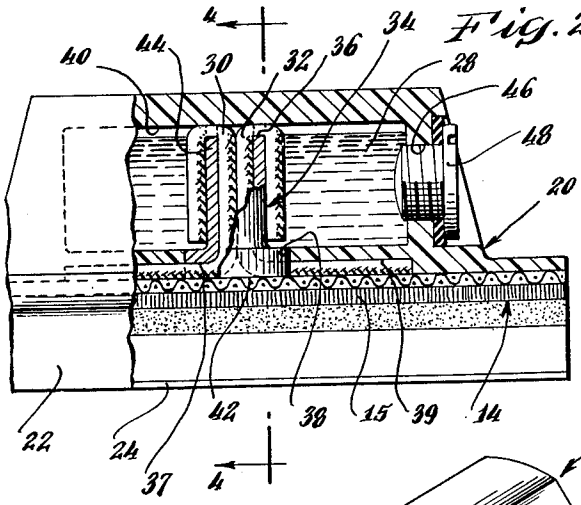


Fig. 4.

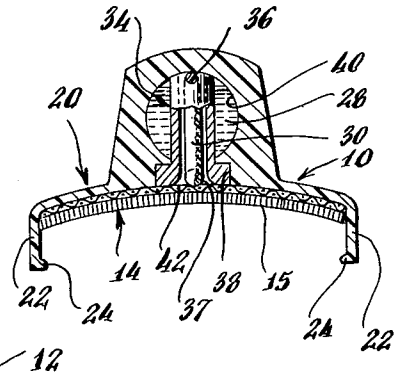
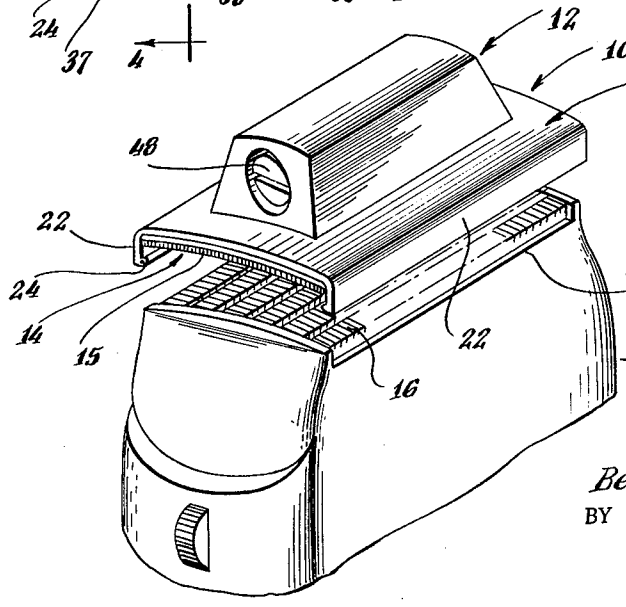


Fig. 1.



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LUBRICATING ATTACHMENT FOR ELECTRIC RAZORS AND THE LIKE

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6 Claims. (Cl. 15—563)

This invention relates to apparatus for lubricating the combs and cutters of electric razors and the like, and more particularly, to a lubricator which provides lubrication for the razor cutting members while protecting them from damage.

Electric razors employing a fast moving cutter bearing against a perforated comb are in wide use. The high speed cutter must smoothly traverse the comb for best performance.

Further, electric razors generally do not perform well during hot or humid weather since perspiration and moisture affect the comb and cutter running surfaces as well as causing corrosion and pitting thereof.

The razor comb should also be protected from damage and electric razor cutting head covers are used for this purpose. Many electric razor users neglect using these protective covers, however, with resulting damage to the cutting head.

Accordingly, it is an object of this invention to provide a lubricating attachment for electric razors and like devices;

Another object of the invention is to provide a lubricating attachment of the above character which also protects the razor cutting head;

A further object of the invention is to provide a lubricating attachment of the above character which can contain a reservoir of lubricating oil;

Another object of the invention is to provide a lubricating attachment of the above character which is relatively inexpensive in manufacture and easy to use;

Other objects of the invention will in part be obvious and will in part appear hereinafter.

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

For a fuller understanding of the nature and objects of the invention, reference should be had to the following detailed description taken in connection with the accompanying drawing, in which:

FIGURE 1 is an exploded, partial perspective view of the lubricating attachment of the invention and an electric razor.

FIGURE 2 is a side view in partial section of my razor lubricating attachment.

FIGURE 3 is a top view in partial section of my lubricating attachment.

FIGURE 4 is an end sectional view taken along lines 4—4 of FIGURE 2.

FIGURE 5 is a perspective view of the wick retaining stud.

Like reference characters refer to like parts throughout the several views of the drawings.

Referring now to FIGURE 1, it will be seen that the invention in general comprises an automatic lubricating attachment **10** having a lubricant reservoir **12** on the attachment top and a lubricant distributing pad **14** on the under side of the attachment for applying lubricant evenly over the comb surface **16** of the electric razor **18**. As will be more fully described hereinafter, lubricant is fed to the distributor pad **14** from the reservoir **12** by capillary action for application to the razor cutting head when the attachment is placed over the razor head.

The lubricant in the reservoir **12** will not spill or feed to the distributor pad at an excessive rate because of the capillary action provided. The distributor pad **14** is preferably made of a soft textile material that closely conforms to the cutting head **16** when the attachment is in place. Thus the lubricant is effectively distributed over substantially the entire cutting head.

Referring now to FIGURES 2–4, the invention will be described in more detail. The attachment **10**, which is preferably made of molded plastic, comprises a curved cover portion **20** which has a pair of longitudinal clip extensions **22** which may be provided with beads **24** to engage indentations **26** along the sides of the razor head (FIGURE 1). Thus the attachment may be snapped into place when held over the razor cutting head when the razor is not in use. When held in such a position, the lubricant distributing pad **14** is provided with lubricant from chamber **28** in reservoir section **12**. Chamber **28** provides lubricant to the distributor pad **14** through a pair of wicks **30**, **32** which pass through a hollow stud **34** provided with notches **36** at its upper end.

As shown n FIGURES 2, 4 and 5, stud **34** is also preferably of plastic material and is fitted into opening **38** in the underside of the cover portion **20** and through the reservoir chamber **28** to abut the top of inner surface **40** of chamber **28**. The stud **34** may be sealed in opening **38** with a plastic solvent and has its bottom surface **42** substantially flush with the bottom of cover plate **20**. The top portion **44** of stud **34** is also sealed by plastic solvent to the top surface **40** of chamber **28**.

As best seen in FIGURES 4 and 5, notches **36** are under-sized to squeeze the wicks **30** and **32** when stud **34** is secured in place as shown. Thus the lubricant in chamber **28** will not spill or flow in excessive amounts regardless of the position of the lubricating attachment. Notches **37**, which may be slightly larger than notches **36** permit the wicks **30** and **32** to be extended in elongated grooves **39** in the bottom of cover portion **20**. Grooves **39** are shaped to maintain wicks **30**, **32** in contact with distributor pad **14** without disrupting the contour of surface **15** thereof.

Again referring to FIGURES 2 and 3, it will be seen that lubricant reservoir chamber **28** is filled through a threaded fill opening **46** which is then sealed by the threaded plug **48**. The lubricating oil then flows by capillary action from the reservoir chamber **28** through the wicks **30**, **32** to the lubricant distributing pad **14**. The preferred lubricant is a highly refined oil of relatively low viscosity such as mineral oil. Such an oil has no irritating effect on the skin and will remain in the reservoir for a substantial length of time and under varying conditions of temperature without turning rancid or changing viscosity.

The distributor pad **14** can be made of a number of textile or like materials which will provide capillary flow of the lubricant from the wicks **30**, **32** to substantially cover the surface **15** with lubricant. A material such as mohair or the like which will conform to the razor comb and extend slightly into the small openings of the comb provides a good distributor pad surface.

It has been found that the useful life of a comb and cutter for an electric razor is substantially extended by my invention. Not only does my lubrication attachment continuously provide a thin film of lubricating oil through the openings of the razor comb, but the incentive to the user to place the lubricating attachment on the razor after each use is increased. Thus, the razor is not only lubricated but is also protected against damage.

The invention is also applicable to the protecting and lubricating of similar cutting devices such as clippers, in which case the cover and lubricant distributing pad are

shaped to contact the cutting members of the clippers or like device.

Since the lubricant is fed to the distributor pad **14** by capillary action, the reservoir **28** holds a 6 months supply or more of lubricant. The attachment may be kept on the razor during travelling since the lubricant cannot spill to damage clothing or other articles packed near the razor.

The attachment is inexpensive to manufacture since the cover **20**, reservoir **12**, and wick stud **34** are preferably made of molded plastic. In use the lubricating attachment of my invention has been found to substantially improve the performance of electric razors and to extend their useful life by providing protection against physical damage as well as reducing wear of the moving parts of the cutting head.

It will thus be seen that the objects set forth above, among those made apparent from the preceding description, are efficiently attained and, since certain changes may be made in the above construction without departing from the scope of the invention, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

It is also to be understood that the following claims are intended to cover all of the generic and specific features of the invention which, as a matter of language, might be said to fall therebetween.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. Apparatus for lubricating electric razors and the like comprising, in combination,
   - (A) a cover shaped to fit over the cutting head of an electric razor or the like,
     - (1) said cover having means for being detachably secured to the cutting head of an electric razor or the like,
   - (B) a lubricant distributor pad on one side of said cover,
   - (C) a lubricant reservoir on said cover, and
   - (D) wick means connecting said reservoir to said distributor pad

whereby lubricant from said reservoir is passed to said distributor pad through said connecting means to lubricate the cutting head of an electric razor or the like when said cover is secured thereto.

2. Apparatus for lubricating electric razors and the like comprising, in combination,
   - (A) a cover shaped to fit over the cutting head of an electric razor or the like,
   - (B) a lubricant distributor pad secured to and substantially covering the underside of said cover,
   - (C) a lubricant reservoir on the other side of said cover,
   - (D) means forming a wick passage from said reservoir to said distributor pad,

     - (1) said wick passage means including a constricted portion, and
   - (E) a wick extending from said reservoir through said wick passage means to said distributor pad,
     - (1) the normal cross-sectional area of said wick being greater than the cross-sectional area of said constricted portion of said passage

whereby said wick provides lubricant from said reservoir to said distributor pad by capillary action, said wick being compressed by said constricted portion of said passage to prevent excess flow of lubricant from said reservoir.

3. The apparatus defined in claim 2 wherein the underside of said cover is provided with means forming a lateral groove from said wick passage means whereby said wick is positioned in said groove and covered by said lubricant distributor pad to convey lubricant to said pad without disrupting the contour thereof.

4. Apparatus for lubricating electric razors and the like comprising, in combination,
   - (A) a cover portion shaped to fit over the head of an electric razor or the like,
   - (B) a lubricant reservoir on top of said cover portion,
     - (1) said reservoir having an upper inner surface,
   - (C) means forming an opening through said cover portion from said reservoir,
   - (D) a hollow stud in said opening,
     - (1) said stud having a notched end secured to said upper inner surface of said reservoir,
   - (E) a lubricant distributor pad of textile material
     - (1) secured to the underside of said cover portion, and
   - (F) a lubricant wick
     - (1) extending from said reservoir to said distributor pad through said notched end and said stud,

whereby lubricant is metered from said reservoir to said lubricant distributor pad through said wick by capillary action.

5. The apparatus defined in claim 4 wherein the opening formed when said stud notched end is secured to the upper inner surface of said reservoir is smaller in cross-sectional area than the normal cross-sectional area of said wick, whereby said wick is constricted at said notched end to prevent excessive flow of lubricant therethrough.

6. The apparatus defined in claim 5 wherein said cover portion is provided with means forming a lateral groove from said opening in said cover to accommodate said wick therein without disrupting the contour of said lubricant distributor pad.

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