

Oct. 20, 1936.

J. W. STEELE

2,058,366

FILM COATING MEANS FOR BLADES

Filed March 21, 1935

Fig. 1.

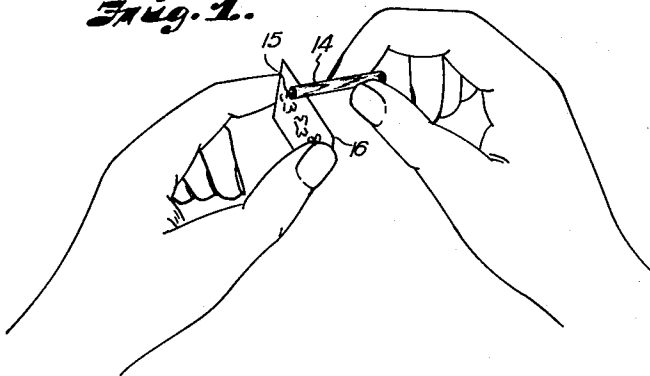


Fig. 2.

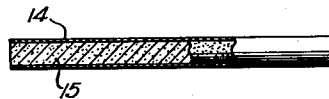


Fig. 3.



Fig. 4.

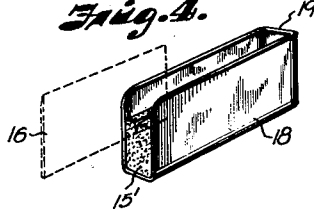


Fig. 5.

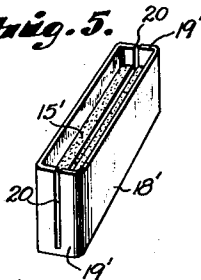


Fig. 6.

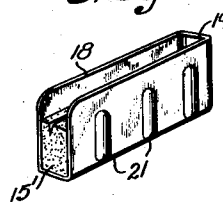


Fig. 8.

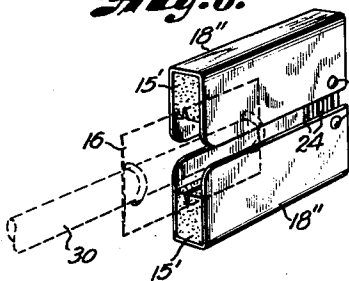


Fig. 9.

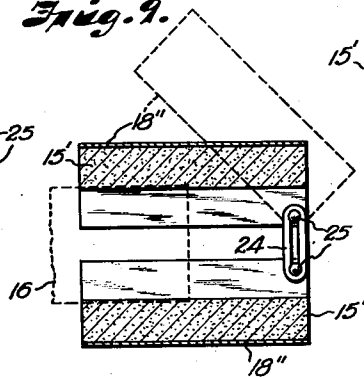


Fig. 7.

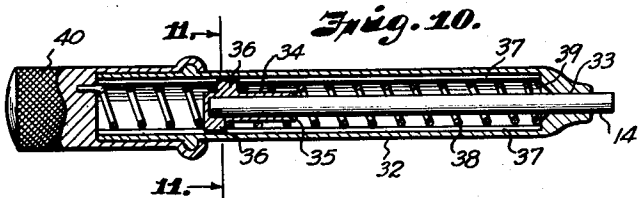
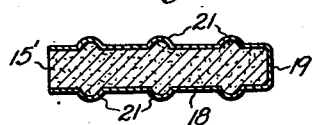
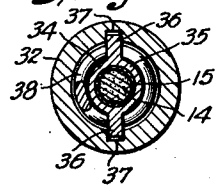


Fig. 11.



INVENTOR:
J.W. Steele.
BY *Chas. W. Howard*
ATTORNEY.

UNITED STATES PATENT OFFICE

2,058,366

FILM-COATING MEANS FOR BLADES

James W. Steele, Kansas City, Mo.

Application March 21, 1935, Serial No. 12,204

7 Claims. (Cl. 91—62.5)

The present invention relates to means for applying a suitable protective coating or film to the sharp portions of instruments having cutting edges or points, such as the cutting edges of razor blades.

I have found that the application of such coatings or films not only serves as an effective means of protection against the deteriorating effects of oxidation, but also improves the cutting properties of the keen cutting edges so treated, and thereby prolongs the useful life of such instruments.

For carrying out the invention I employ a suitable wax-like or lubricating preparation, together with appropriate means serving as a holder or applicator whereby the sharp point or cutting edge to be treated may be easily and quickly subjected to a film-coating treatment, as by a penetrating or rubbing or draw-cutting action, in engagement with said preparation.

Various methods or forms of embodiment of the invention may be employed for the practice of the same, and for a more complete understanding of these, reference will be made to the accompanying drawing wherein such forms are illustrated, after which those features and combinations deemed to be novel and patentable will be particularly set forth and claimed.

In the drawing—

Figure 1 is a perspective view illustrating a tubular form of applicator device embodying the invention, as well as the method of using the same;

Figure 2 is an enlarged sectional view of said device;

Figure 3 is a cross-section of the same on a still larger scale;

Figures 4, 5 and 6 are perspective views of different forms of containers adapted to serve as applicators for the film-coating operation;

Figure 7 is an enlarged sectional view of the device shown in Figure 6;

Figure 8 is a perspective view of another form of construction adapted to serve as an applicator in the treatment of double-edged razor blades;

Figure 9 is a sectional view of the same on a slightly larger scale;

Figure 10 is a sectional view showing a holder for the form of film-coating device illustrated in Figure 1; and

Figure 11 is a section on the line 11—11 of Figure 10.

In the practice of the invention, I make use of a special preparation consisting of a wax-like

substance or composition such as paraffin, having lubricating properties, and of a comparatively soft consistency so that it may be easily cut or penetrated without any harmful action on the cutting edge of keen blades such as safety razor blades, and at the same time adapted to leave an oil or lubricating film thereon. Preferably the preparation may also contain a sterilizing or germicidal ingredient to afford an additional protective function for the operative edge of the blade, and if desired an ingredient may be added for imparting a more agreeable odor to the preparation than that of the natural odor of the wax body.

As a practical and yet extremely simple form of applicator means, I embody the same in a tubular or cartridge form of container such as a tube or straw of suitable material such as paper of a grade or quality adapted to be easily cut without injury to the blade, which tube is not only impregnated through and through, but also filled with the wax-like treating preparation as indicated at 15.

The impregnation of the material of said tube with the preparation 15 renders the paper material more susceptible to a cutting action without injury to the keen cutting edge of the blade, and when filled the applicator is used as illustrated in Figure 1, by holding the blade 16 in one hand while drawing the applicator along the edge of the blade with a wiping or draw-cut movement, with just sufficient pressure to cause the blade to penetrate to a depth equivalent to that of the ground portion of the blade and thereby apply a film extending entirely over both sides of said ground portion.

In Figures 4 to 9 are shown types of holders or containers for holding a supply of the wax-like treating preparation in a manner enabling it to be conveniently applied to the cutting portion of a blade. In Figure 4 the holder is shown as an oblong container 18 for holding a supply 15' of the preparation, said container being closed at one end as indicated at 19 and open at its opposite end for admitting the blade 16 and allowing the latter to be operated by an endwise stroke in cutting engagement with the preparation 15. In Figure 5 the container 18' is illustrated as of the same oblong shape but closed (as indicated at 19') at both ends with the exception of slots 20 to permit the insertion and operation of the blade for treating purposes. In either of the constructions just referred to, however, the container or holder might be formed with suitable depressions or recesses 21 in

its side walls, as illustrated in Figures 6 and 7, for the purpose of more securely holding the block of treating material 15, as might be desirable under some conditions of use.

8 In Figures 8 and 9 is shown a form of applicator construction adapted for simultaneously treating both edges of a double-edged blade in one operation. This construction comprises two oblong holders 18'' containing separate quantities of the treating preparation, and pivotally connected by means of slotted links 24 engaging pins 25 at corresponding end corners of the holders.

15 Thus the holders may be swung to spread them apart (as indicated by dotted lines in Figure 9) for inserting the blade, whereupon bringing the holders together again causes both cutting edges of the blade to cut into the treating material 15', and endwise movement of the blade will effect the proper film-coating operation the whole length of both edges to the same extent.

It may be pointed out that in this form of holder construction (Figures 4 to 9) the treating preparation may be supplied in either the wax block form, or any appropriate means substituted therefor in which the wax-like lubricating material is presented for engagement with the blade surfaces to be treated,—such as felt, leather or other suitable material properly impregnated with the treating preparation for this purpose. It is also pointed out that the use of an oblong holder, having its side walls sufficiently close together, enables the treating operation to be quickly and conveniently carried out without any danger of the cutting edge coming in contact with the container, since the depth to which the blade is permitted to penetrate the treating material may be conveniently limited either by engagement of the fingers with the top edges of the holder, or the same result is reached by the blade holder 30 riding along said top edges of the holder and thus limiting the extent to which the blade is allowed to project within the holder.

45 Figures 10 and 11 show a convenient holder construction for use with the tubular or cartridge form of device illustrated in Figure 1. For this purpose the holder comprises a tubular member 32 having an ejecting bore 33 at one end for fitting the cartridge 14 and allowing the latter to project into position for the blade treating operation.

50 Within the member 32 is mounted an ejector slide 34 having a bore 35 for fitting the inner end of the cartridge 14, and also having a pair of oppositely projecting guide fins 36 for sliding engagement with slideways 37 on the interior of the member 32, which obviously prevents any rotative movement of the slide 34. For effecting longitudinal movement of the slide 34, a coil spring 38 is inserted within the holder member 32 in engagement with the fins 36 (which latter are slightly offset with relation to each other as shown in Figure 10), with one end of the spring seated against the shoulder 39 at the inner end of the bore 33, while the opposite end of said spring is attached to a knurled cap piece 40 suitably journaled upon the corresponding end of said holder member 32. By means of this construction the cartridge 14 may be kept properly protected when not in use, and at times of use may obviously be quickly and conveniently projected and retracted into and out of operative or blade-treating position; and under some conditions such cartridge holding means may be in-

corporated as a part of the blade-holder construction, if deemed desirable.

It will thus be apparent that I have devised an efficient method and means of applying a film or coating of the desired protective and lubricating material to the cutting points or edges of razor blades and the like. Such films or coatings serve the important purpose of not only protecting the keen edges of the blades against the deteriorating effects of rust or oxidation, but moreover, since the treating composition possesses lubricating ingredients, these impart corresponding lubricating properties to the film or coating left upon the blades, whereby a smoother cutting action characterizes the operation of the blades, as in shaving. This more effective action of the blades and the fact that they are protected against rust and the like, results in more comfortable and satisfactory shaving, and naturally, of course, prolongs the useful life of the blades.

20 In either of the designs of applicator construction it will be understood that the supply of the treating preparation is in a form adapted to coat the blade with the desired film of the treating composition and to remove any excess material; for example, in such a treating operation, the cartridge form of applicator will impart the desired film to the blade as the latter cuts into the cartridge, and the material forming the tube or straw 14 also exerts a wiping function, spreading the film, and at the same time removing any excess amount of the treating preparation from the surfaces of the blade.

It will be further seen that the operation of applying the coating or film to the blade is in any case a very simple and convenient matter, that there is no muss or any annoying features connected with the operation; and the details of construction are also extremely simple and inexpensive, much more than offset by the economy effected in the prolonging of the life of the blades and the greater effectiveness secured in their use, particularly noticeable when used for shaving.

While I have shown and described what I now regard as the most suitable and practical methods of practising my invention, I desire to be understood as reserving the right to make whatever changes or modifications may fairly be deemed to fall within the spirit and scope of the appended claims.

What I claim is:—

1. Means for applying a protective and lubricating film to the points or edges of sharp instruments, comprising a treating preparation of wax-like composition containing a lubricating ingredient, and means for holding said preparation and supporting the same in the film-applying operation as the point or edge of the instrument is caused to penetrate the preparation with a combined cutting and wiping stroke.

2. Means for applying a protective and lubricating film to the points or edges of sharp instruments, comprising a treating preparation of wax-like composition containing a lubricating ingredient, and a holder for said treating preparation and open to expose the surface of said preparation to a combined cutting and wiping stroke of the operative portion of the instrument.

3. Means for applying a protective and lubricating film to the points or edges of sharp instruments, comprising a tube of easily cut material filled and impregnated with a treating preparation of wax-like composition containing a lubricating ingredient.

4. Means for applying a protective and lubricating film to the points or edges of sharp instruments, comprising a tube of easily cut material filled and impregnated with a treating preparation of wax-like composition containing a lubricating ingredient, and a holder for said tube provided with means for projecting and retracting the tube into and out of projecting position with relation to one end of said holder.

10 5. Means for applying a protective and lubricating film to the points or edges of sharp instruments, comprising a treating preparation of wax-like composition containing a lubricating ingredient, and a holder for said treating preparation having an opening to admit the operative portion of the instrument into engagement with the surface of said preparation, said holder being also provided with one or more guide slots permitting combined cutting and wiping strokes

20 of said instrument.

6. Means for applying a protective and lubricating film to the edges of cutting blades, comprising a treating preparation of wax-like com-

position containing a lubricating ingredient, and a box-like container for said treating preparation having an opening to expose the surface of the preparation to a combined cutting and wiping stroke of the blade edge, the edges of the open portion of the container serving as guides for the blade holder and limiting the depth to which the blade is allowed to penetrate said preparation.

7. Means for applying a protective and lubricating film to the edges of double-edged cutting blades, comprising a pair of holders each containing a supply of treating preparation of wax-like composition having a lubricating ingredient, and means pivotally connecting said holders for relative movement into and out of treating position with reference to the opposite edges of a blade, the adjacent portions of the holders when in treating position being open to admit the opposite cutting edges of the blade into treating engagement with the respective surfaces of the preparation within the holders.

JAMES W. STEELE.