

April 21, 1942.

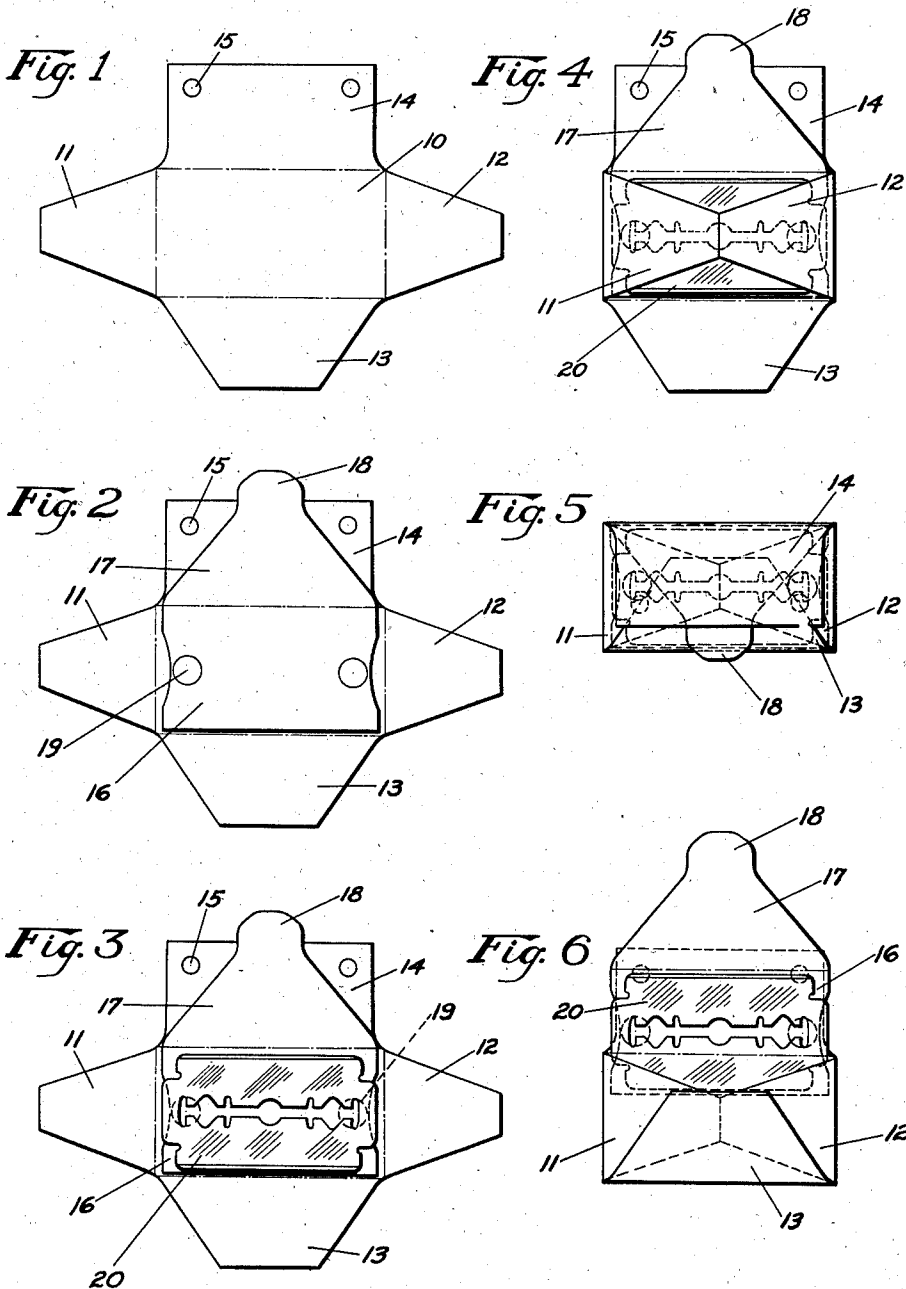
J. MUROS

2,280,442

PROTECTED BLADE

Filed June 2, 1939

3 Sheets-Sheet 1



INVENTOR
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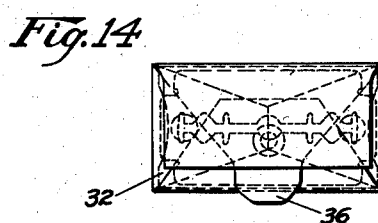
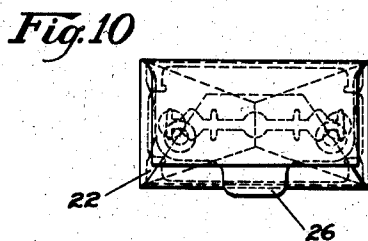
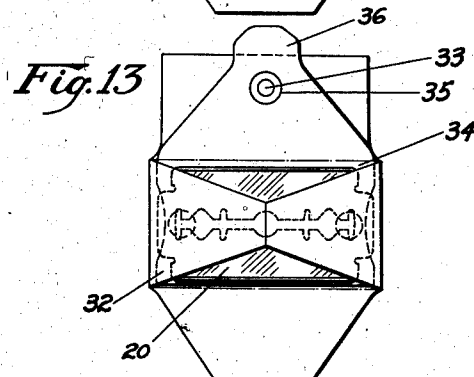
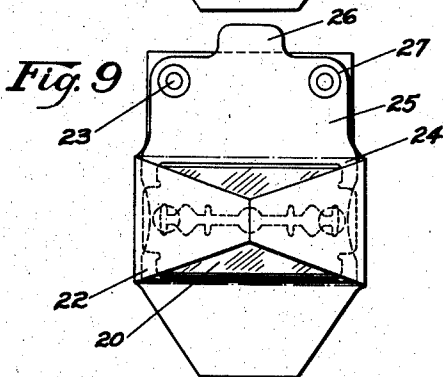
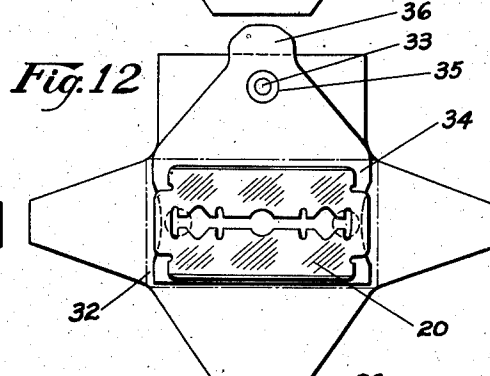
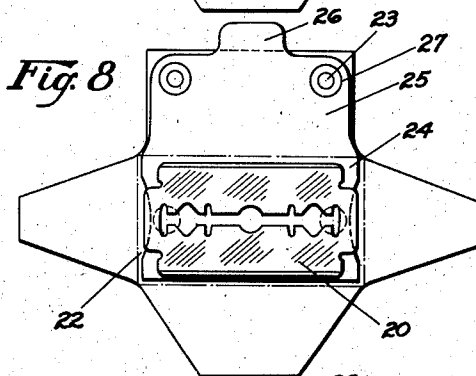
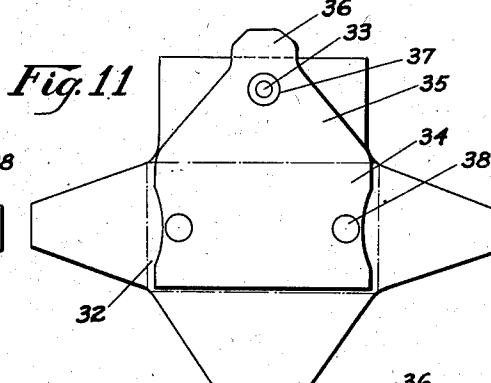
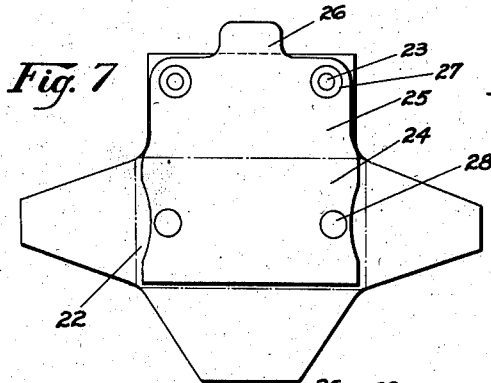
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3 Sheets-Sheet 2



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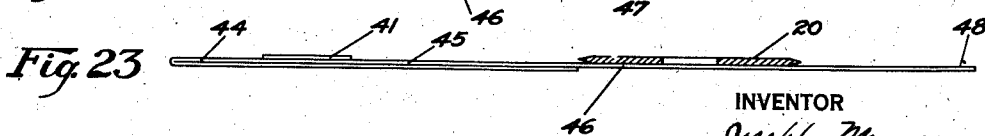
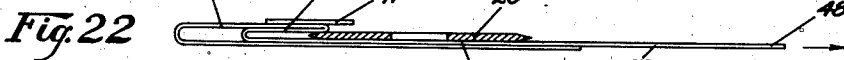
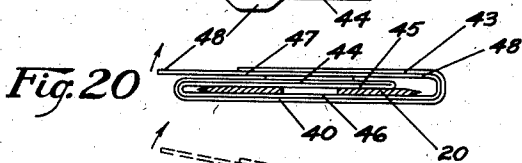
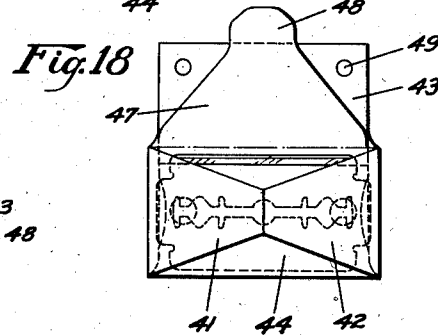
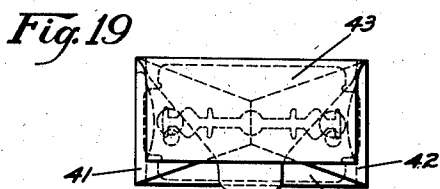
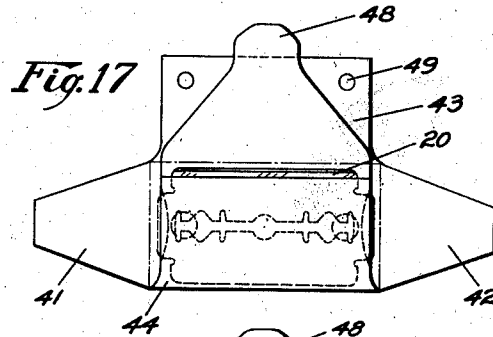
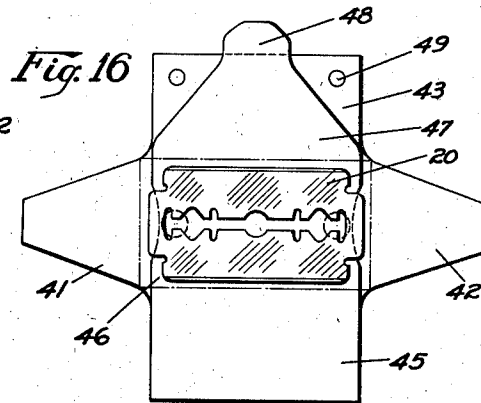
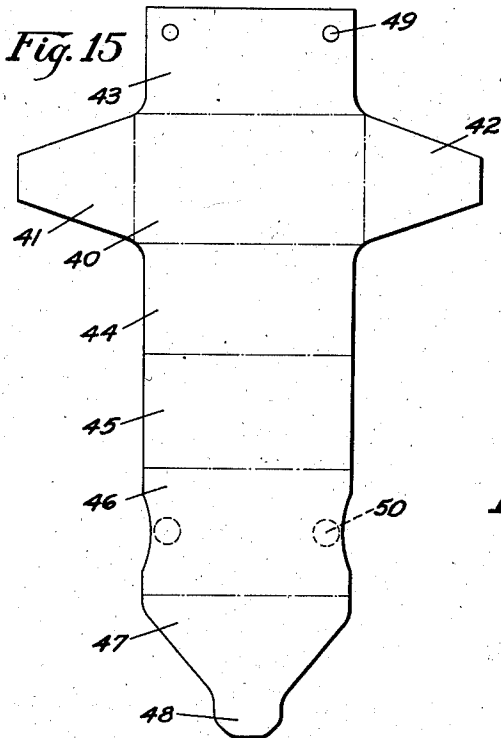
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PROTECTED BLADE

Filed June 2, 1939

3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

2,280,442

PROTECTED BLADE

Joseph Muros, Cambridge, Mass., assignor to Gillette Safety Razor Company, Boston, Mass., a corporation of Delaware

Application June 2, 1939, Serial No. 277,046

6 Claims. (Cl. 206—46)

This invention relates to the packaging of fine edge blades, such for example as safety razor blades. It consists in a novel wrapping by which the user is enabled to withdraw in one motion a single blade from a sealed envelope wherein the blade has been fully protected from moisture and from damage to its keen shaving edge.

Blade manufacturers desire to dispense safety razor blades in printed or lithographed envelopes having an attractive appearance and artistic appeal to the purchaser. Practical considerations render it necessary in many cases to protect the blade from moisture by completely or partially enclosing it in a waterproof wrapping, and to protect the keen edge of the blade by holding it definitely out of contact with the folds of its envelope and wrapper. Accordingly, it is the practice to attach the blade temporarily to a flat portion of its wrapping by spots of adhesive or by an interlocking configuration. All these expedients have been successfully used in the past but at some sacrifice to the convenience of the user in that it is sometimes inconvenient to open the sealed blade-enclosing envelope, more especially to find a starting place for withdrawing the blade conveniently and without danger to the user or damage to the blade edge from contact with its wrapping.

In one aspect the present invention consists in a sealed envelope containing a safety razor blade and presenting an easily located tab or tongue, the assembled unit being so organized that by merely pulling the tab the seal of the outer envelope may be broken and the blade withdrawn therefrom with its sharp edge guarded against injury from contact with the outer envelope.

In its preferred form a characteristic of my invention consists in a blade envelope combined with a sheet wrapper in such a manner that one flap of the envelope and one flap of the wrapper are folded simultaneously into contact with a previously folded part of the envelope. In this way, a tongue of the wrapper may be arranged to project freely out from under a sealed flap of the envelope and all the steps of wrapping and sealing may be carried out at a high rate of speed in automatic machinery.

I contemplate using either an envelope and a separate wrapper or so shaping the envelope blank that it may have the additional function of the usual wrapper, or using a composite blank partly of oiled or waxed paper. Moreover, while the blade package herein shown is shaped to release the blade by widthwise movement it would

be within the scope of my invention so to design the envelope and wrapper as to release the blade by endwise movement.

Various constructions of wrapping or of envelope and wrapping may be employed to achieve the desired results and some preferred embodiment thereof will now be described for purposes of illustration. In the accompanying drawings—

Fig. 1 is a plan view of a blank for a blade envelope;

Fig. 2 is a plan view showing a wrapper blank in position upon the envelope blank of Fig. 1;

Fig. 3 is a view similar to Fig. 2 showing a blade in position to be wrapped;

Fig. 4 corresponds to Fig. 3 but shows the end tabs of the envelope folded upon the blade;

Fig. 5 is a plan view of the complete protected blade package employing the blank of Fig. 1;

Fig. 6 is a view indicating an intermediate step in the withdrawal of the protected blade;

Fig. 7 is a plan view of a blank for a blade envelope of modified construction shown with the wrapper blank in position thereon;

Fig. 8 corresponds to Fig. 7 and in addition shows a blade upon the wrapper blank;

Fig. 9 corresponds to Fig. 8 but shows the end tabs of the envelope folded upon the blade;

Fig. 10 is a plan view of the complete protected blade package;

Figs. 11 to 14 respectively correspond to Figs. 7 to 10 and illustrate an envelope and wrapper of slightly different shape;

Fig. 15 is a plan view of a blank for a combined envelope and wrapper;

Fig. 16 is a corresponding view showing the blank folded once and a blade placed thereon;

Figs. 17 and 18 are corresponding views showing successive folding steps;

Fig. 19 is a plan view of the complete protected blade package employing the blank of Fig. 15.

Fig. 20 is a cross-sectional view on an enlarged scale of the package shown in Fig. 19;

Fig. 21 is a cross-sectional view on the same scale corresponding to Fig. 18;

Fig. 22 is a corresponding sectional view showing the package unsealed and the blade being partially withdrawn; and

Fig. 23 is a similar view showing the blade fully withdrawn.

The blade envelope blank shown in Fig. 1 is of a well-known commercial type designed to exhibit the printed insignia of the manufacturer and comprises a rectangular body portion 10 having oppositely arranged tapering end tabs 11

and 12, a tapering front flap 13 and a rectangular back flap 14. In preparing such a blank for automatic wrapping machinery it is customary to provide the inner face of the back flap 14 with spots 15 of adhesive which are effective in the final wrapping step to seal the completed envelope.

In Fig. 2 a wrapper blank of oiled or wax paper is shown as assembled in position upon the envelope blank. The wrapper blank herein shown comprises a rectangular body 16 having concave end edges and merging into a tapering back flap 17 which terminates in a tab or tongue 18. The flap 17 of the wrapper is substantially the same width as the back flap 14 of the envelope blank while the tongue 18 is designed to project somewhat beyond the outer edge of the flap 14. The wrapper blank is herein shown as provided with two spots 19 of grease or other adhesive suitable for temporarily attaching the blade lightly to the body portion of the wrapper.

In Fig. 3 a blade of commercial type is shown in its assembled position upon the wrapper. The blade selected for illustration is of well-known commercial type sharpened on both longitudinal edges and having reentrant corner recesses which define elongated unsharpened end portions in the blade. The blade 20 is placed upon the body 16 of the wrapper and held thereon by the adhesive spots 19 with its sharpened edge definitely located within the longitudinal edges of the body 16 of the wrapper and with its unsharpened end portions projecting slightly beyond the concave end edges of the wrapper.

In the wrapping operation the end tabs 11 and 12 of the envelope blank are first folded inwardly as suggested in Fig. 4 into immediate contact with the surface of the blade. The front flap 13 of the envelope is then folded inwardly over the end flaps, its fold line corresponding substantially to the edge of the body 16 of the wrapper and making no contact with the sharp edge of the blade 20. Finally the back flap 14 of the envelope and the back flap 17 of the wrapper are simultaneously folded inwardly as indicated in Fig. 5 and the back flap is adhesively secured by the spots 15 to the folded front flap 13 thus securely sealing the envelope. Similarly in this folding operation the fold line of the two flaps is located at a definitely placed distance beyond the other sharp edge of the blade 20 so that in the folding operation there is no contact with either sharp edge of the blade. It will be noted that the tapering shape of the blade flap 17 of the wrapper permits that part of the back flap 14 of the envelope having the adhesive spots 15 to be brought into direct contact with the folded front flap 13.

It will be noted that in the sealed envelope the tab or tongue 18 projects between the spaced adhesive areas of the spots 15, out from beyond the edge of the folded back flap 14. The tongue 18 emerges in flat condition from beneath the edge of the flap 14 within the contour of the envelope and extends slightly beyond the contour of the envelope being thus rendered conspicuous and easy of location by the user even without a close inspection of the package. Accordingly, when he desires to assemble the blade for use, all that is required is to pull the tab 18 upwardly breaking the seal of the envelope and swinging open the back flap 14 and then in a single continuous movement drawing the wrapper with the attached blade out from the envelope as indicated in Fig. 6. It will be seen that

in this operation the sharp edge of the advancing blade is completely guarded by its wrapper from contact with the envelope. As soon as the blade has been moved out or partially out of the envelope the unsharpened ends of the blade 20 which project beyond the concave edges of the wrapper may be grasped by the user and the blade separated from its wrapper preparatory to insertion in the safety razor.

In the modification illustrated in Figs. 7-10 the envelope blank 22 is similar to that already described being provided with adhesive spots 23 upon the inner face of its back flap. The oiled or waxed wrapper comprises a body portion 24 shaped to underlie the blade and a flap 25 which in this instance is substantially co-extensive with the corresponding flap of the envelope 22 and is provided with a tongue 26 which projects beyond the edge of the flap. The flap 25 of the wrapper is perforated to provide a pair of spaced holes 27 located in registration with the adhesive spots 23 of the envelope. The body 24 of the wrapper blank is provided with a pair of spots of grease or other adhesive by which the blade may be temporarily secured thereto.

In Fig. 8 the blade 20 is shown as positioned upon the body 24 of the wrapper which itself is superposed upon the envelope blank and it will be noted that the cutting edges of the blade are spaced within the longitudinal boundaries of this part of the wrapper. In Fig. 9 the end flaps of the envelope are shown as folded inwardly into direct contact with the surface of the blade 20. The packaging of the blade is completed by folding the front flap of the envelope inwardly upon the folded end flaps and then folding the back flap together with the flap 25 of the wrapper down upon the folded front flap of the envelope. The adhesive spots 23 are effective through the holes 27 to seal the back flap of the envelope to the folded end flaps, or to the end flaps and folded front flap of the envelope, while the tongue 26 of the wrapper projects out from under the edge of the folded back flap of the envelope and in a position symmetrically spaced with respect to the adhesive areas 23.

A similar and an equivalent but slightly modified construction is illustrated in Figs. 11 to 14. In these figures the envelope 32 is provided with a single spot of adhesive 33. The waxed or oiled wrapper 34-35 is provided with a projecting tongue 36 with single hole 27 registering with the adhesive spot 33 of the envelope. When the envelope and wrapper are folded upon the blade as suggested in Figs. 12-14 the adhesive spot 33 acting through the hole 35 seals the back flap of the envelope to the front flap directly in line with the projecting tab 36. The protected blade packages of Figs. 10 and 14 are adapted to be opened by seizing the tongue 26 or 36 and pulling it upwardly to break the seal of the envelope, and continuing the movement until the blade-attached wrapper is withdrawn from the now unsealed envelope.

An important advantage of the construction of Figs. 7-14 is that the framing of the adhesive spots 23 or 33 by means of the holes 27 or 37 in the flap of the wrapper tends to break the adhesive seal effectively and without the formation of shreds of the envelope material which might otherwise be drawn across and dull the sharp edge of the blade.

In the modification illustrated in Figs. 15-23 the envelope and wrapper are in effect combined in a single blank of the contour shown in Fig. 15.

This blank comprises a rectangular body portion 40 having tapering end tabs 41 and 42 and a back flap 43. The front flap of the blank is extended into a series of connected sections or panels 44, 45, 46 and 47 herein shown as defined by their respective fold lines. The panels 44 and 45 are of the same width and slightly narrower than the body portion 40 of the blank. The panel 46 is wider being of the same width as the body portion 40 and provided with concave end edges. The end panel or flap 47 has tapering edges and terminates in a projecting tongue 48. The back flap 43 is provided with a pair of adhesive spots 49 and the panel 46 is provided on its under surface with a pair of spots of grease 50 or other adhesive by which the blade may be temporarily attached thereto.

The blank shown in Fig. 15 may comprise a single sheet of paper of uniform character or the wrapper portion including the panel 45, 46, 47 and the tongue 48 may be waxed or oiled or it may be cut from separate material and secured to the main blank by adhesive or otherwise.

In packaging a blade 20 the blank of Fig. 15 is first doubled by being folded on the line separating the panels 44 and 45, thus superposing the panel 45 over the panel 44, the panel 46 over the body portion 40, and the tapering panel or flap 47 over the back flap 43, all as shown in Fig. 16. The blade 20 may then be placed upon the uppermost surface of the panel 46 and secured thereto by the grease spots 50. In the next operation the front flap which now comprises the superposed panels 44 and 45 is folded inwardly upon the blade as shown in Fig. 17 thus locating two plies beneath the blade and two plies above it. In the next folding step the two end tabs 41 and 42 are folded inwardly upon the front flap as shown in Fig. 18 and the package is shown at this stage in cross-section in Fig. 21. In the final folding step the back flap 43 and the flap 47 are simultaneously folded down upon the folded end tabs 41 and 42 and the back flap 43 is sealed to the end tabs by the adhesive spots 49 which clear the edges of the flap 47 by reason of its tapering shape. In this folding step the tongue 48 projects between the spaced adhesive areas of the spots 49 outward from beneath the edge of the back flap 43 and beyond the contour of the sealed envelope as well shown in Fig. 19 and also in Fig. 20. A two-ply envelope or wrapper is thus provided in which the blade is fully protected against moisture by the inner wrapper ply while the outer ply is suitable for printed insignia.

In removing the protected blade the user has only to seize the tongue 48, pull it upwardly to break the seal of the rear flap 43 of the envelope and continue to pull upon this tongue until it reaches the straight line position shown in Fig. 21. Then as the pulling is continued the blade 20 is carried outwardly upon its panel 46 from beneath the folded end tabs 41 and 42. In this operation the material of the panel 45 is gradually unfolded or rolled outwardly until it lies flat in the condition shown in Fig. 23 wherein the blade 20 is entirely exposed and may be easily grasped by its unsharpened end edges which project beyond the concave edges of the panel 46 and removed for use in a safety razor.

Having thus disclosed my invention and described several preferred embodiments thereof for illustrative purposes but not by way of limi-

tation, I claim as new and desire to secure by Letters Patent:

1. A protected blade having an envelope with oppositely arranged flaps folded thereover, a wrapper of sheet material attached to the blade and folded with a tapered flap interposed between the superposed envelope flaps and extended beyond them, the envelope flaps being sealed to each other outside the boundaries of the interposed tapered wrapper flap.

2. A protected blade having an attached wrapper folded with portions above and below the blade and with a projecting tongue at one edge of the wrapper, the blade and its wrapper being enclosed in an envelope having flaps folded between the blade and one side of the wrapper and a flap sealed in spaced areas with the tongue of the wrapper projecting outwardly from beneath the said flap of the envelope between said sealed areas, whereby the flap may be lifted with the tongue and the envelope opened.

3. A blade envelope having back and front flaps folded over each other upon an enclosed blade and sealed in spaced areas, and a wrapper of sheet material folded with leaves above and below the blade within the envelope, the lower folded part being attached to the blade and the upper folded part overlying one of the envelope flaps and having a tongue in one edge projecting out from the envelope between said sealed areas and in position to be grasped by the user and lifted with the overlying flap of the envelope.

4. A protected blade having an enclosing envelope and a waterproof blank of sheet material to which the blade is temporarily attached and which has portions folded above and below the blade, the envelope having one flap folded over the blade beneath the upper leaf of the wrapper and another flap folded with a portion of said blank upon the envelope flap first-mentioned and sealed thereto at spaced points, and the blank having a tongue in one edge projecting outwardly beyond the flaps of the envelope and emerging between the sealed points of the envelope flap within the contour of the envelope.

5. A protected blade having an envelope with flaps folded over all four edges of the blade, and a waxed paper wrapper folded with portions above and below the blade, the upper portion covering three of the envelope flaps and having a tongue in one edge projecting out beneath the edge of the fourth flap of said envelope and within the contour of the envelope, the said fourth flap being sealed to the envelope at points on opposite sides of the zone in which the said tongue lies.

6. A protected blade of approximately rectangular outline having an inner wrapper of waterproof paper comprising portions folded widthwise and lying above and below the blade, one of said portions including a centrally disposed tongue projecting outwardly beyond one edge of the enclosed blade, and an outer envelope including two overlapping flaps sealed to each other by spaced adhesive spots located substantially symmetrically with respect to the projecting tongue, the said tongue passing between the adhesive spots, and one of the flaps underlying and the other overlying the tongue-carrying portion of the wrapper, whereby the flap of the envelope may be lifted and the adhesive areas may be simultaneously broken by lifting said tongue.

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