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3,430,341

DISPOSABLE MULTI-BLADED SAFETY RAZOR

Filed Sept. 8, 1966

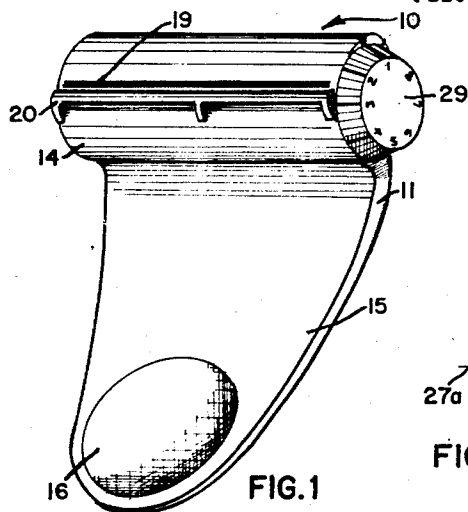


FIG. 1

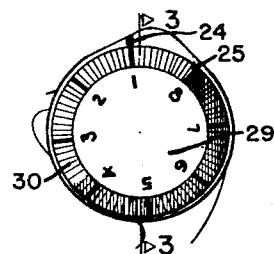


FIG. 2

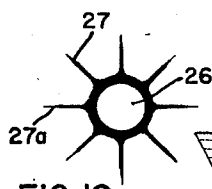


FIG. 10

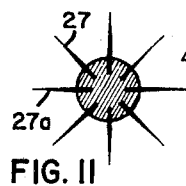


FIG. 11

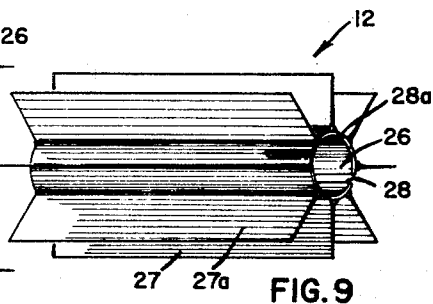


FIG. 9

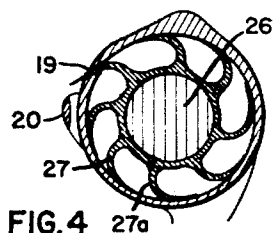


FIG. 4

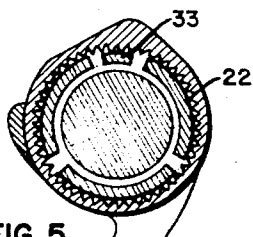


FIG. 5

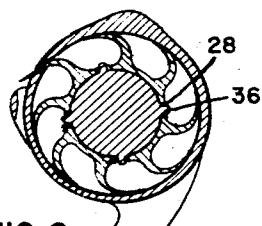


FIG. 6

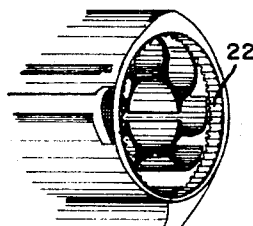


FIG. 7

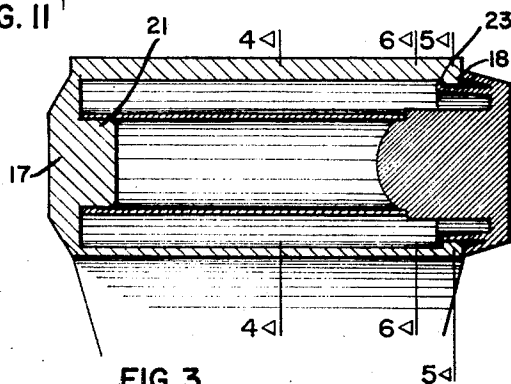


FIG. 3

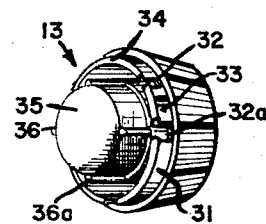


FIG. 8

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3,430,341

DISPOSABLE MULTI-BLADED SAFETY RAZOR

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1 Claim

ABSTRACT OF THE DISCLOSURE

A disposable multi-bladed safety razor comprising a substantially cylindrical blade magazine having a longitudinal blade guide slot in its side wall and a longitudinally extending blade guard arranged adjacent and beneath said longitudinal blade guide slot, a multi-bladed element having flexible blades with sharpened shaving edges revoluble carried in said blade magazine, and knob means associated with said blade magazine and said multi-bladed element for revolving said multi-bladed element in said blade magazine.

This invention relates to safety razors and more particularly relates to disposable multi-bladed safety razors.

The present practice of loading and unloading conventional type safety razors having separate razor blades and blade holders is inefficient and dangerous. As is known, usually the razor blade must be inserted and removed from the holder manually, and there is therefore an attendant hazard of cutting the fingers. Or, the blade may be inserted incorrectly in the holder, and any such misalignment of the blade with respect to the holder may cause the shaver to cut himself. Also, it is difficult to find an entirely safe way to dispose of used razor blades, and they may continue to be a hazard, especially to children even after they have been discarded. And further, although it is known to provide multi-bladed safety razors with detachable and disposable cartridges or blade holders, such safety razors are now relatively expensive.

It is accordingly a primary object of the invention to overcome the above and other disadvantages by providing a simple, compact and inexpensive disposable multi-bladed safety razor.

It is a further object of the invention to provide such a multi-bladed safety razor wherein there is no necessity to load individual blades or multi-bladed cartridges; wherein there is no necessity to dispose of used razor blades; and wherein there is no necessity to make any adjustment of razor blades in the blade holder.

It is a further object of the invention to provide a safety razor of this character, which is extremely simple in construction, thoroughly reliable, hazard free, and effective in operation, assuring comfort to the user without the liability of cutting the skin during shaving.

It is a further object of the invention to provide a multi-bladed safety razor wherein the blades are loaded at the factory and no manual manipulation of blades is necessary when blades are used in succession.

It is a further object of the invention to provide a multi-bladed safety razor which is so simple and economical to manufacture that it is more practicable to discard the entire safety razor mechanism, including blade holder, handle and used blades, rather than attempt to reuse any of the parts.

Other objects, advantages and features of the invention will be best understood from a consideration of the following detailed description taken in connection with the accompanying drawings forming part of this specification, which for purposes of illustration discloses preferred embodiments of the invention, with the understanding however, that the invention is not confined to any strict con-

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formity with the showing of the drawings, but may be changed or modified so long as such changes or modifications mark no material departure from the salient features of the invention.

In the accompanying drawings:

FIG. 1 is a perspective view of the safety razor in accordance with the invention;

FIG. 2 is a view in end elevation of the head of the safety razor shown in FIG. 1;

FIG. 3 is a view in vertical longitudinal section, taken on line 3—3 of FIG. 2;

FIG. 4 is a view in cross section taken on line 4—4 of FIG. 3;

FIG. 5 is a view in cross section taken on line 5—5 of FIG. 3;

FIG. 6 is a view in cross section taken on line 6—6 of FIG. 3;

FIG. 7 is a perspective view looking into the blade magazine of the safety razor, with the blade-control knob detached;

FIG. 8 is a perspective view looking into the blade control knob which has been detached from the blade magazine of the safety razor;

FIG. 9 is a perspective view of the multi-bladed element of the invention;

FIG. 10 is an inner end view of the multi-bladed element shown in FIG. 9; and

FIG. 11 is an inner end view of another type of multi-bladed element.

Similar reference characters indicate corresponding parts throughout the several views of the drawing.

Now, referring to the drawing in detail, the safety razor constituting the present invention, generally designated by a reference numeral 10 may include a one-piece integral razor body 11, a one-piece integral multi-blade element 12, and a one-piece integral razor blade control knob 13. At its upper extent, the body 11 may include a blade holder or magazine 14, and at its lower extent body 11 may include an inwardly curved palm-fitting handle 15, which may be tapered toward its lower extremity distant the magazine 14, and which may have a protuberance to form a round raised thumb grip 16, on the inside of the handle proximate its lower edge.

The magazine 14, shown as an integral part of the razor body 11, may be generally cylindrical and may have a closed end 17, an open end 18, a longitudinally extending blade guide slot 19, and a longitudinally extending blade guard bar 20. Inside the magazine 14 proximate its closed end a button or knob member 21 may be provided to receive multi-blade element 12, in the manner particularly shown in FIG. 3. Inside the magazine 14 proximate its open end a multiplicity of circumferential teeth 22 and an annular groove 23 may be provided, to receive blade control knob 13, in the manner particularly shown in FIGS. 3 and 5. Outside the magazine 14 proximate its open end two indexing marks 24 and 25 may be provided for a purpose to be more particularly described.

The multi-bladed element 12, shown in FIG. 9, may include a cylindrical blade carrying core 26, a multiplicity of flexible razor blades 27, 27a, etc., which may extend radially outward with respect to the axis of said element, and a number of longitudinally extending circumferential slots 28, 28a, etc., to engage razor blade control knob 13 in the manner shown in FIGS. 3 and 6. As shown in FIGS. 4, 5 and 7 when multi-bladed element 12 is placed in blade magazine 14, its blades may be flexed to dispose their sharpened shaving edges tangentially with respect to the cylindrical wall of magazine 14.

The razor blade control knob 13 may include an outer dial portion 29 and an outwardly tapered knurled portion 30. Under its knurled portion 30, knob 13 may in-

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clude an inwardly extending short cylindrical portion 31, which may be slotted as shown at 32, 32a, etc. Cylindrical portion 31 may be adapted to provide a blade lock 33, to engage with teeth 22, and may have an annular ridge 34, to fit into annular groove 23, all in a manner believed to be fully illustrated in FIGS. 3, 5, 7 and 8. Still further inward knob 13 may have an inwardly projecting button or stopper member 35, which may carry longitudinally extending raised ridges such as 36, 36a, etc., to engage the circumferential slots 28, 28a, etc., in the manner clearly shown in FIG. 6.

When the safety razor of the invention is assembled and ready for its first use, the numeral 1 on the dial 29 will be opposite the indexing mark 25, and the first blade will be in place, but with its sharpened edge withdrawn into the blade slot 19. Then in order to position the first blade in the shaving attitude shown in FIGS. 4 and 6, the dial 29 may be rotated counterclockwise until the numeral 1 is opposite the indexing mark 24, as shown in FIG. 2. When it is desired to change blades, for example after the first blade has been used, the dial 29 may be rotated clockwise until the numeral 2 is opposite the indexing mark 25. This brings the second blade into place, but with its sharpened edge withdrawn into blade slot 19. Then in order to position the second blade in the shaving attitude shown in FIGS. 4 and 6, the dial 29 may be rotated counterclockwise until the numeral 2 is opposite the indexing mark 24. All the blades may be changed in succession by repeating this procedure.

It is contemplated that when all the blades of the multi-bladed element have been used the entire razor mechanism will be discarded. However, as is clear from FIG. 7, the used multi-bladed element may be easily replaced when the knob 13 has been removed from magazine 14.

While the invention has been described in detail and reference has been made to specific applications thereof, it is to be understood that the invention herein disclosed is not limited to such specific applications, and 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.

What is claimed is:

1. A disposable multi-bladed safety razor comprising a substantially cylindrical blade magazine having a longi-

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tudinal blade guide slot in its side wall and a longitudinally extending blade guard arranged adjacent and beneath said longitudinal blade guide slot, a multi-bladed element having flexible blades with sharpened shaving edges revolvably carried in said blade magazine, and knob means associated with said blade magazine and said multi-bladed element for revolving said multi-bladed element in said blade magazine; said multi-bladed element having a tubular core with longitudinal slots in said tubular core adjacent an end of said tubular core which is proximate said knob means, and said knob means having a portion extending into said tubular core which has longitudinal ridges to engage said longitudinal slots; said blade magazine having teeth circumferentially disposed inside said blade magazine near its end proximate said knob means, and said knob means having a locking member to yieldably engage said circumferential teeth; said blade magazine having an annular groove in its wall near its open end and inside said circumferential teeth, and said knob means including an annular ridge distant the outer face of said knob means, to engage said annular groove of said blade magazine.

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U.S. Cl. X.R.

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