March 25, 1930. O. GOETZKE 1,751,476

SAFETY RAZOR AND BLADE

Filed June 4, 1929

Fig. 1.

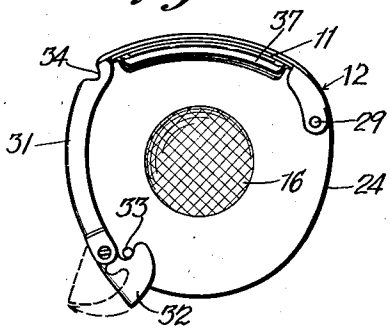


Fig. 2.

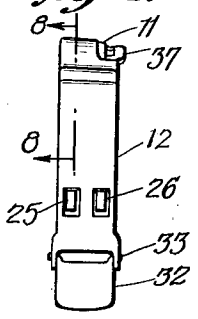


Fig. 4.

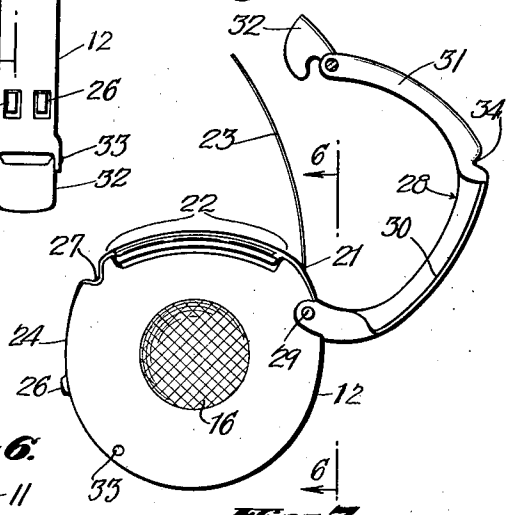


Fig. 3.

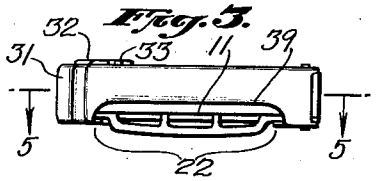


Fig. 5.

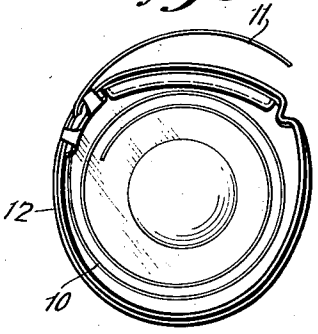


Fig. 6.

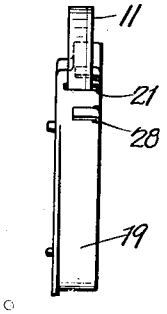


Fig. 7.

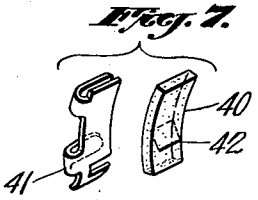


Fig. 8.

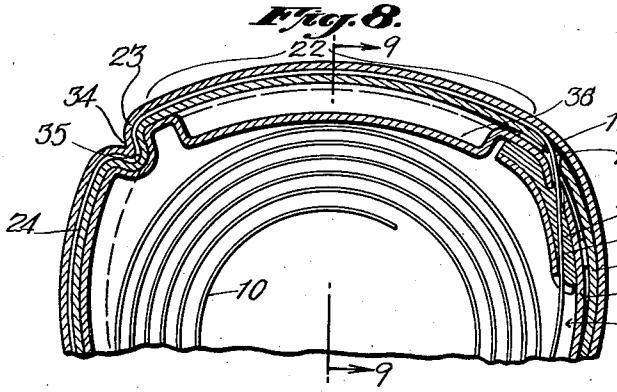
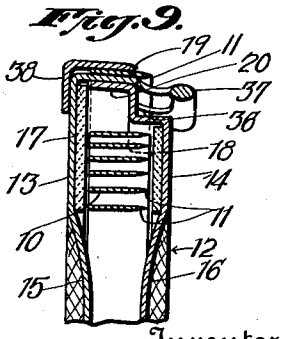


Fig. 9.



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UNITED STATES PATENT OFFICE

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SAFETY RAZOR AND BLADE

Application filed June 4, 1929. Serial No. 368,395.

This invention relates to safety razors and blades therefor.

An object of the invention is to provide a simple, inexpensive and compact safety razor that may be used and cleaned and the blade renewed with a minimum of care and effort.

Further objects of the invention are to provide a safety razor strip that may be drawn into position to provide a continuous succession of razor lengths; to provide a safety razor in which a continuous length of blade may be stored and easily drawn at will to a position to expose successive lengths; to provide a safety razor of the above type in which the razor length or strip of blade is protected from moisture and rust, and to provide means by which the used length of blade may be easily detached and in which the new portions of the blade may be securely held.

With these and other objects in view, the invention comprises a razor and the razor blade described in the following specification and claims.

The various features of the invention are illustrated in the accompanying drawings in which—

Fig. 1 shows a side view of a safety razor embodying a preferred form of invention;

Fig. 2 is an edge view looking from the left in Fig. 1;

Fig. 3 is a top view of the razor shown in Fig. 1;

Fig. 4 is a side view of the razor similar to that of Fig. 1, but showing the guard of the razor blade uplifted to permit a length of blade to be drawn;

Fig. 5 is a vertical sectional view of the razor taken on the line 5—5 of Fig. 3;

Fig. 6 is an edge view of the razor taken on the line 6—6 of Fig. 4;

Fig. 7 is a perspective view showing parts of a means for sealing a stored length of blade from the entrance of water or moisture;

Fig. 8 is a sectional view, on an enlarged scale of a part of the razor, taken on line 8—8 of Fig. 2;

Fig. 9 is a cross-sectional view of the upper part of the razor taken on line 9—9 of Fig. 8.

In my present invention, a long strip of tempered steel is sharpened to razor keenness at one edge and serves as a continuous length of razor blade. This strip is coiled and contained within a flat magazine from which it may be withdrawn as desired through an opening in the periphery of the magazine provided with a suitable water-proof or moisture-proof gasket to prevent the entrance of water or moisture into the magazine.

A razor blade supporting surface is provided at the periphery of the magazine adjacent the opening through which the blade is withdrawn and in position to enable the exposed length of blade to be laid on this supporting surface and project a distance therebeyond. The projecting part of the blade is guided at the periphery beyond the supporting surface.

A guard is so mounted on the magazine that it may be brought downwardly on the exposed razor blade to hold it in position and is provided with means to detach that part of the blade that has been drawn past the blade-supporting surface.

Referring more particularly to the accompanying drawings, a long strip 10 of tempered steel, having one edge sharpened to razor keenness as at 11, is coiled and positioned within a flat magazine 12. The magazine 12 is formed with a pair of side walls 13 and 14 having depressed central portions 15 and 16. The coiled portion of the strip 10 is positioned between a pair of annular celluloid plates 17 and 18 encircling the depressed portions 15 and 16 in the magazine.

The wall 13 is extended at its periphery to form a peripheral wall 19 and the side wall 14 is similarly extended to form an inner peripheral wall 20 adapted to fit within the wall 19. The wall 20 may be detachably secured within the wall 19 but it is preferred to have it permanently secured therein after the strip 10 has been placed within the magazine to ensure against re-filling of the magazine when the razor strip has been completely used.

The strip 10 may be drawn through an opening 21 formed in the peripheral walls 19 and 20 and positioned at the right end of a

flattened razor-supporting length or flattened arc 22 in the outer peripheral wall 19.

A length 23 of the razor strip may be drawn through the opening 21 as shown in Fig. 4 and then bent to lie flatly against the razor-supporting surface or arc 22 and to project on to a peripheral surface 24 beyond the razor-supporting length 22.

A pair of guide projections 25 and 26 are formed on the surface 24 within which the projecting part of the razor strip is guided. A notch 27 is also formed in the peripheral wall between the razor-supporting length 22 and the guide length 24.

The projecting portion 23 of the razor strip is held in position on the supporting length 22 and guide length 24 by means of an angularly shaped guard 28 hinged to the side walls 13 and 14 at 29 and having a flattened or arc-shaped length 30 adapted to fit the razor-supporting length 22 and hold the razor strip tightly thereon. A length 31 at an angle to the length 30 is adapted to overlie the guide length 24 of the magazine and to hold a projecting length of razor blade tightly thereagainst. When in closed position, the guard 28 may be secured by means of a latch 32 hinged to its free end and adapted to engage a holding pin 33 on the side walls of the magazine as shown in Fig. 1.

A depression 34 in the guard 28 is adapted to enter the notch 27 in the peripheral wall of the magazine and by sharply bending the razor strip at this point to break or sever it as at 35, Fig. 8, so that upon again releasing the guard the severed portion may be thrown away and a new length of strip drawn from the magazine to a position on the supporting arc or length 22.

The edge portion of the wall 14 and flange 20 of the magazine is depressed or notched to form a space or groove 36 extending throughout the length 22 to expose the sharpened edge 11 of the razor strip thereon. The peripheral wall 19 is extended and curved downwardly into the depression 36 and is perforated to form a guiding rail or surface 37 in advance of the blade 11 and to thus prevent the blade from cutting the skin during shaving.

It will be apparent, however, that any other suitable form of holes and depressions may be used in place of the specific one shown in the drawings.

The guard 31 is provided with retaining flanges 38 adapted to enclose the peripheral edges of the walls 13 and 14 and thus hold the guard in position. This flange and part of the peripheral wall of the guard is, however, cut away as at 39 throughout the length 22 to expose the outer edge of the razor strip.

To prevent the entrance of water or moisture through the opening 21 into the magazine, a gasket 40 of rubber or other resilient material is mounted beneath the opening 21 by means of a suitable clip 41 and is provided with a cut or slit 42 through which the blade strip 23 is drawn, the resiliency of the gasket tightly closing the opening about the blade and preventing the entrance of moisture.

It will be obvious from the above description that in using the razor it is only necessary to release the latch 32, to swing the guard 28 to the position shown in Fig. 4, to then draw a new length 23 of razor strip from the magazine, to then fold the withdrawn length of strip over the surfaces 22 and 24 and to swing the guard 28 to the position shown in Fig. 1 and fasten it with the latch 32.

Various other modifications may be made by those skilled in the art without departing from the invention as defined in the following claims:

1. A safety razor which comprises a flat magazine having a blade-supporting length in its periphery, an opening to permit strip to be drawn from said magazine into said supporting length and a notch at the end of said length opposite said opening and a guard for said strip movable to a position to overlie said length and having means to enter said notch to engage and sever the strip therein.

2. A safety razor which comprises a flat magazine having a blade-supporting length in its periphery, an opening to permit strip to be drawn from said magazine into said supporting length and a notch at the end of said length opposite a guard hinged to said strip and movable to a position to overlie said length and having means to enter said notch to engage and sever the strip therein, and means for locking said guard in position over said length.

3. A safety razor which comprises a flat magazine having a blade-supporting length in its periphery and a guide length at an angle thereto, an opening to permit strip to be drawn from said magazine into said supporting length and said guide length and a notch between said supporting and guide lengths, a guard hinged to said magazine in position to overlie said guide and supporting lengths and to enter said notch and means for locking said guard.

4. A safety razor which comprises a flat magazine having a blade-supporting length in its periphery and a guide length at an angle thereto, an opening to permit strip to be drawn from said magazine into said supporting length and said guide length and a notch between said supporting and guide lengths, a guard hinged to said magazine in position to overlie said guide and supporting lengths and to enter said notch and means for locking said guard, a strip of safety razor lengths within said magazine and extending through said opening and a moisture-proof seal in said opening.

5. A safety razor which comprises a flat

circular shaped magazine having a flattened arc in its periphery and a depression in an edge of said arc, said magazine having an opening to permit a strip to be drawn from said magazine into a supporting length and a notch at the end of said length opposite a guard hinged to said strip and movable to a position to overlie said length and having means to enter said notch to engage and by pressure to sever the strip therein, and means for locking said guard in position over said length.

6. A compact safety razor comprising a magazine having a flattened arc in its periphery and a depression in an edge of said arc and housing a continuous strip of safety blade lengths, an opening to permit the strip to be drawn from said magazine into a blade supporting length in its periphery, and a notch at the end of said length opposite said opening and a guard for said strip movable to a position to overlie said length and means for entering said notch and engaging and severing the strip therein.

In testimony whereof I hereunto affix my signature.

OTTO GOETZKE.