

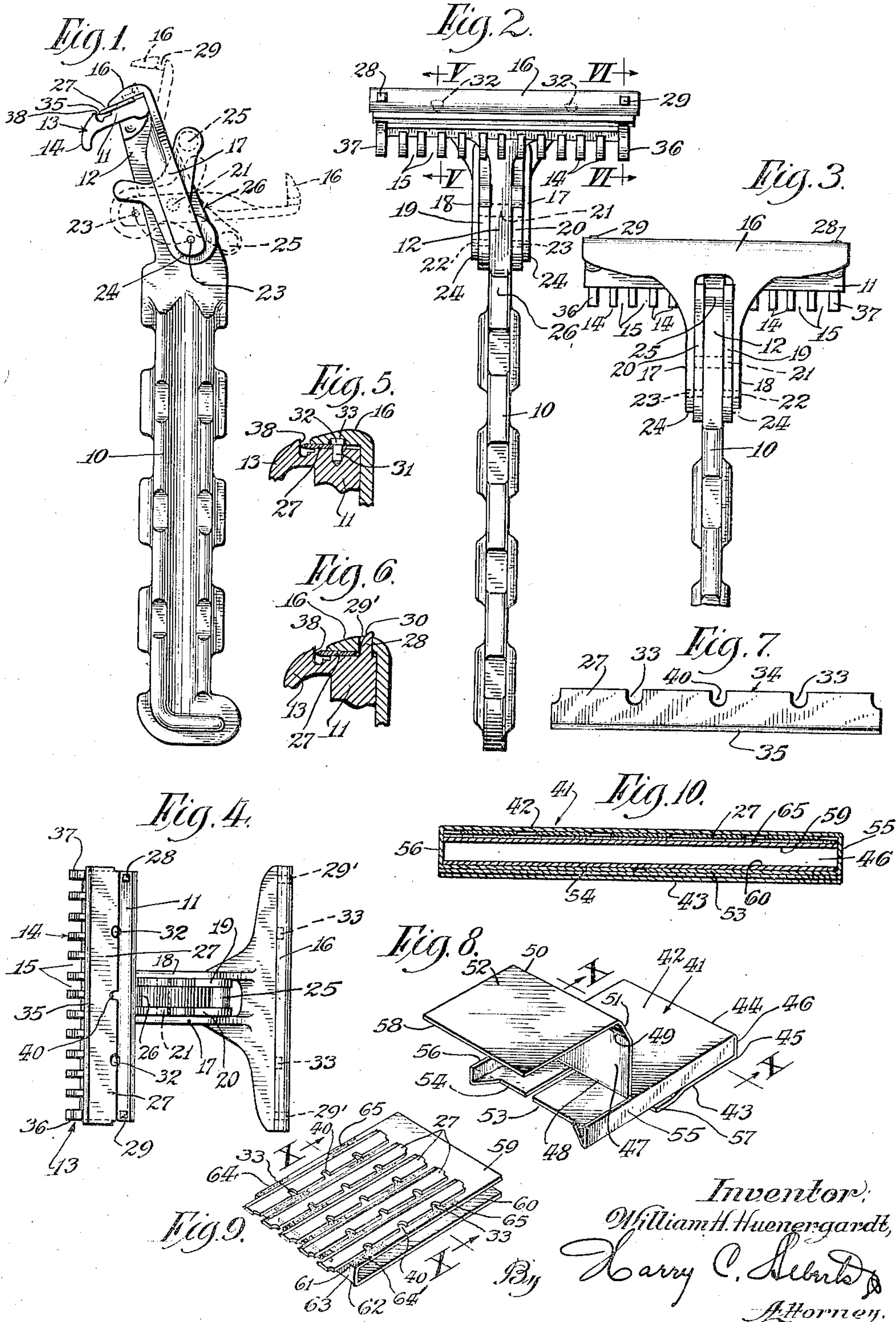
Aug. 2, 1938.

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2,125,503

SAFETY RAZOR

Filed June 15, 1934



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UNITED STATES PATENT OFFICE

2,125,503

SAFETY RAZOR

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Application June 15, 1934, Serial No. 730,696

4 Claims. (Cl. 30—40)

This invention relates to razors and more particularly to safety razors, although certain features thereof may be employed with equal advantage for other purposes and different types of razors.

It contemplates more especially the provision of a novel razor having improved blades and holders therefor.

Many types of razors have heretofore been employed for shaving purposes, and they have been generally used for home shaving. It is true, nevertheless, that the use of razors in the home presents a problem of blade disposal as well as time entailment in the manipulation of the razors. Most safety razors embody a plurality of separable parts that require assembly and dismantling for cleaning purposes as well as blade replacement. This is annoying and occupies considerable time, and perhaps the most paramount problem is the disposal of blades that present a hazard both in handling and disposal with safety.

In view thereof, effective single hand manipulation of a razor is an important advantage as well as the ability to provide an improved and comparatively less expensive blade that is capable of ready disposal with safety. Additionally, it has been found desirable to confine razor blades in a package for attachment thereof to so as to enable the independent removal thereof to meet requirements and to provide for the permanent confinement of used blades to the end of affording protection against the usual hazards of blade handling, thereby rendering their disposal convenient and utterly safe. It will be apparent, therefore, that such expedients will render the use of a safety razor in the home a decided convenience rather than a hazard.

One object of the present invention is to provide an improved razor that is capable of single hand blade manipulation both in the use thereof as well as preparatory thereto.

Another object is to provide an improved razor blade holder that is capable of single hand manipulation for the retention and release of the blade to meet shaving requirements.

Still another object is to provide an improved razor blade that is readily destructible into segments for convenient bathroom disposal with safety.

A further object is to provide an improved razor blade that has a width substantially less than one-half of its length so as to present an inexpensive as well as readily disposable blade.

Still a further object is to provide a substan-

tially elongated razor blade that has a width substantially less than one-half of its length with a plurality of transverse regions of weakness for ready destruction and safe disposal.

A still further object is to provide an improved razor blade container that affords independent removal of the blades as well as providing for the disposal thereof.

Other objects and advantages will appear from the following description of an illustrated embodiment of the present invention.

In the drawing:

Figure 1 is a side view in elevation of a razor blade holder embodying features of the present invention, the dotted outline showing the blade holding parts in released position.

Figure 2 is a front view in elevation of the razor shown in Figure 1.

Figure 3 is a rear view in elevation of the razor shown in Figure 2.

Figure 4 is a plan view of the razor showing the blade holding members in separated or blade released relation.

Figure 5 is a sectional view taken substantially along line V—V of Figure 2.

Figure 6 is a sectional view taken substantially along line VI—VI of Figure 2.

Figure 7 is a plan view of a blade embodying features of the present invention and designed for use in connection with the razor shown in Figures 1 to 4, inclusive.

Figure 8 is a perspective view of a container casing embodying features for confinement of a plurality of blades such as shown in Figure 7.

Figure 9 is a perspective view of the container liner showing the manner of adhesively attaching the plurality of blades thereto.

Figure 10 is a sectional view of an improved razor blade container taken substantially along line X—X of Figures 8 and 9 when the liner and casing are permanently assembled so that the cross-sectional lines X—X of Figures 8 and 9 are coincident.

The structure selected for illustration comprises a handle member 10 which is elongated and of any desired configuration to enable the manual grasp and manipulation thereof in conjunction with a blade holder 11 which is integrally or otherwise connected thereto through the medium of an elongated shank 12 of substantially rectangular cross-section. As shown, the blade holder 11 is of substantially rectangular configuration and possessed of a curved edge 13 to present serrations 14 defined by transverse slots 15 at uniformly spaced intervals therealong

to serve as the razor blade guard in a manner customary with safety razor operation for displacement along the skin to be shaved.

A blade holding cap 16 corresponding in configuration and length with the holder 11, but of lesser breadth so as to enable the confronting application thereto without obstructing the serrated edge 14 and its slots 15, is mounted for movement relative thereto as will appear more fully hereinafter. To this end, the cap 16 is provided with furcations 17 and 18 that are sufficiently spaced to receive the handle shank 12 therebetween and permit the reception of bell-crank levers 19 and 20 for application on both sides of the shank 12 adjacent to the furcations 17 and 18 disposed exteriorly thereof.

It is to be noted that the levers 19 and 20 are pivotally mounted on the shank 12 by means of a pin 21 which extends completely therethrough to serve as a pivotal mount therefor. The levers 19 and 20 are, in turn, connected to the furcations 17 and 18 by means of individual pins 22 and 23 which pivotally connect the extremities of the furcations 17 and 18 to one arm 24 of the respective bell-crank levers 19 and 20 which are interconnected by means of a spacer pin 25 which bridges the rear inclined edge 26 of the shank 12.

As shown, the pivotal handle shank mount 21 for the bell-crank levers 19—20 is disposed in linear alignment with the pin connection 22—23 for the furcations 17—18 of the cap 16 when the latter is in its blade retaining position relative to the holder 11, this requiring the bell-crank levers 19—20 to be displaced to their extreme counter-clockwise position (viewed from Figure 1) as limited by the spacer pin 25 that contacts the inclined edge 26 of the handle shank 12. The spacing of the pivot pins 21 and 22—23 are such as to impart a toggle action that locks the cap 16 in operative blade retaining position confronting the holder 11 with a blade 27 therebetween.

In order to insure a predetermined movement between the cap 16 and blade holder 11 as well as to guide the confronting approach thereof, the blade holder 11 is provided with upstanding lugs 28 and 29 that cooperate with complementary apertures 29' in the cap 16 thereby insuring the correct approach and assembled confronting relation thereof as soon as the parts are in sufficiently close relation to effect registry therebetween. To this end, the lugs 28 are provided with a rounded surface 30 which provides the desired directional approach for securely holding the blade 27 in operative position on the holder 11 and beneath the cap 16.

In order to enable the convenient and proper placement of the razor blade 27 on the holder 11, any suitable means are provided on the holder 11 and the blade 27 so as to serve as a complement of each other in insuring proper registry therebetween prior to the grasp effected by the cap 16 responsive to the manipulation of the bell-crank levers 19 and 20 by thumb contact with the spacing rod 25 which effects the displacement thereof in the desired direction. To this end, the blade holder 11 is provided with a plurality of upstanding studs 31, in this instance two, that have enlarged heads 32 for registry with correspondingly shaped perforations 33 provided for this as well as other purposes in the blade 27.

In the present instance, the blade 27 has notches 33 that communicate with the longitudinal edge 34 thereof disposed parallel to the ground shaving edge 35. As a result, the blade

is placed on the holder 11 so that the notches 33 will surround the major portion of the studs 31 beneath the enlarged head 32 thereof so as to retain the blade 27 in its proper position against the end serrations 36 and 37 comprising a part of the serrated edge 14 of the guard 13. As shown, the end serrations 36 and 37 are provided with an elevated formation defining shoulders 38 that receive the blade shaving edge 35 thereagainst for positioning relative to the studs 31 whose enlarged heads 32 preclude accidental removal in a direction axial to the studs 31. So that the enlarged stud heads 32 do not serve as an obstruction to the cap 16, the latter are provided with correspondingly shaped depressions 39 for freely receiving the stud heads 32 therein to allow the cap 16 to lie flush with and contact the surface of the blade 27 which is thus retained on the holder 11.

It is worthy of note that the apertures 33 that cooperate with the studs 31 on the holder 11, also serve to weaken the blade 27 along transverse regions so as to enable the ready destruction of the entire blade 27 into minute segments for convenient disposal with safety. To this end, the blade 27 may be provided with any number of additional notches 40, in this instance one, disposed intermediate the apertures 33 so that the blade can be reduced to at least four segments for flushing disposal by placement in the lavatory constituting the customary bathroom facility. This is especially effective in conjunction with the elongated blade 27 which has a width substantially less than one-half of its length so as to render the segments comparatively minute, light, and readily disposable.

In the present embodiment, the blade 27 has a width that is approximately one-eighth of its length, and the provision of the transverse perforations 33—40 which extend inwardly to approximately one-half the unground width of the blade 27, serve to weaken the already transversely delicate blade 27 so as to enable the destruction thereof into segments without any difficulty. It is worthy of note that the notches 33—40 need not communicate with the edge 34, but may be provided in the region between the parallel edges 34—35 and the form thereof may vary within a wide range depending upon the dictates of commercial practice.

In order to retain the blades 27 in an orderly protected manner as well as to afford the handling thereof, a novel package or container is provided therefor. The package comprises a casing 41 which is stamped or otherwise shaped from sheet material such as cardboard or heavy paper to provide a top area 42 and a bottom area 43 having transverse parallel crease lines 44 and 45 to define an edge area 46 which determines the depth of the casing or carton 41. As shown, the top area 42 has a longitudinally extending flap 47 which hingedly is attached thereto by virtue of the crease line 48, it terminating in parallel disposed crease lines 49 and 50 which define an edge 51 opposed to and parallel with the edge 44 described supra.

A closure flap 52 extends from the edge 51 to cooperate with the bottom flap 43 which, for the most part, is adhesively secured to lateral flaps 53 and 54 extending from side edges 55 and 56, respectively. As shown, the bottom flap 43 has a free edge 57 which receives the terminal edge 58 of the closure flap 52, thereby completely enveloping the interior and rendering such conveniently accessible to meet requirements of blade

removal and/or disposal as will appear more clearly hereinafter. It will appear, therefore, that the carton 41 is composed entirely from a unitary or single sheet of material which is properly creased and folded to define a casing for a liner described infra.

The carton 41 is provided with a liner for mounting a plurality of blades 27. In the present embodiment the liner comprises a substantially U-shaped sheet of material defining flaps 59 and 60 with intermediary transverse creases 61 and 62 defining an edge 63 slightly less in width than the corresponding dimension of the carton 41 for reception therein. As shown, a plurality of blades 27, in this instance five, are disposed longitudinally for attachment to the flap 59 in any suitable manner as commercial practice may dictate so that one edge of each extends beyond the liner edge 63 for convenient grasp by an attendant or user to effect the removal of the blades 27 as such may be required for shaving purposes.

The blades 27 are longitudinally disposed on the flap 59 in spaced parallel relation for, in this instance, adhesion thereto in a manner deemed most suitable and as commercial practice may dictate. It has been found that transverse layers of paraffin 64 and 65 formed on the flap 59 will, when slightly heated, effect adhesion of the blades 27. Any other suitable adhesive may be employed for that purpose or the blades 27 may be stitched or otherwise secured thereto should such be found more desirable. After the blades 27 have been attached to the liner surface 59, the entire liner is disposed within the carton 41 for permanent attachment therein to preclude removal. Access to the blades 27 is then effected by removal of the closure flap 52, thereby rendering the blade extremities accessible for individual removal.

After the blade has been removed and used in a razor until such has no further value for shaving purposes, it is then proposed to re-deposit the used blade within the carton 41 by projecting or displacing such through a slit 64' provided in the edge 63 so as to reach the interior of the liner when permanently confined within the carton 41. It is apparent, therefore, that the old blades can be disposed by confinement in the carton 41 until the new blades 27 are entirely used. They are then successively confined within the liner by displacement through the slit 64', and the closure flap 52 is then placed in engagement with the bottom flap 51 so that the entire carton can be disposed of together with the used blades without any possible injury to the user thereof and to those that find it necessary to clean receptacles wherein such are disposed as refuse.

With the arrangement of parts above described, it will be apparent that a novel razor, razor blade, and carton have been provided to render the task of home shaving more convenient, less expensive, more speedy, and devoid of any hazard in connection with blade disposal. Because of the comparatively narrow blade and its ability for ready disposal without any accom-

panying hazard, such proves especially attractive because of the small amount of steel necessary for the formation thereof and the correspondingly diminished production costs.

Various changes may be made in the embodiment of the invention herein specifically described without departing from or sacrificing any of the advantages of the invention as defined in the appended claims.

I claim:

1. In a razor, the combination with a handle, of a blade holder member associated with said handle, a cap to confront said blade holder member for receiving a razor blade therebetween, thumb operated bell-crank lever means having a toggle action for mounting said cap to said handle for movement relative to said holder member, and complementary means on said holder member and cap to guide their relative movement in effecting the grasp and release of a blade therebetween.

2. In a razor, the combination with a handle, of a blade holder member associated with said handle, a cap to confront said blade holder member for receiving a razor blade therebetween, thumb operated bell-crank lever means having a toggle action for mounting said cap to said handle for movement relative to said holder member, complementary means on said holder member and cap to guide their relative movement in effecting the grasp and release of a blade therebetween, and blade registry means on said holder member to insure proper placement of a razor blade thereon.

3. In a razor, the combination with a handle, of a blade holder member associated with said handle, a cap to confront said blade holder member for receiving a razor blade therebetween, thumb operated bell-crank lever means having a toggle action for mounting said cap to said handle for movement relative to said holder member, complementary means on said holder member and cap to guide their relative movement in effecting the grasp and release of a blade therebetween, and blade registry means on said holder member and cap to insure proper placement of a razor blade therebetween.

4. In a razor, the combination with a handle, of a blade holder member associated with said handle, a cap to confront said blade holder member for receiving a razor blade therebetween, thumb operated bell-crank lever means having a toggle action for mounting said cap to said handle for movement relative to said holder member, complementary means on said holder member and cap to guide their relative movement in effecting the grasp and release of a blade therebetween, and blade registry means on said holder member to insure proper placement of a razor blade thereon, said blade registry means comprising upstanding pins having enlarged heads for receiving the razor blade thereunder to preclude accidental displacement before said cap is displaced to blade engaging position.

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