Dec. 6, 1955 J. G. BAKER 2,725,626

SAFETY RAZOR

Filed July 31, 1953

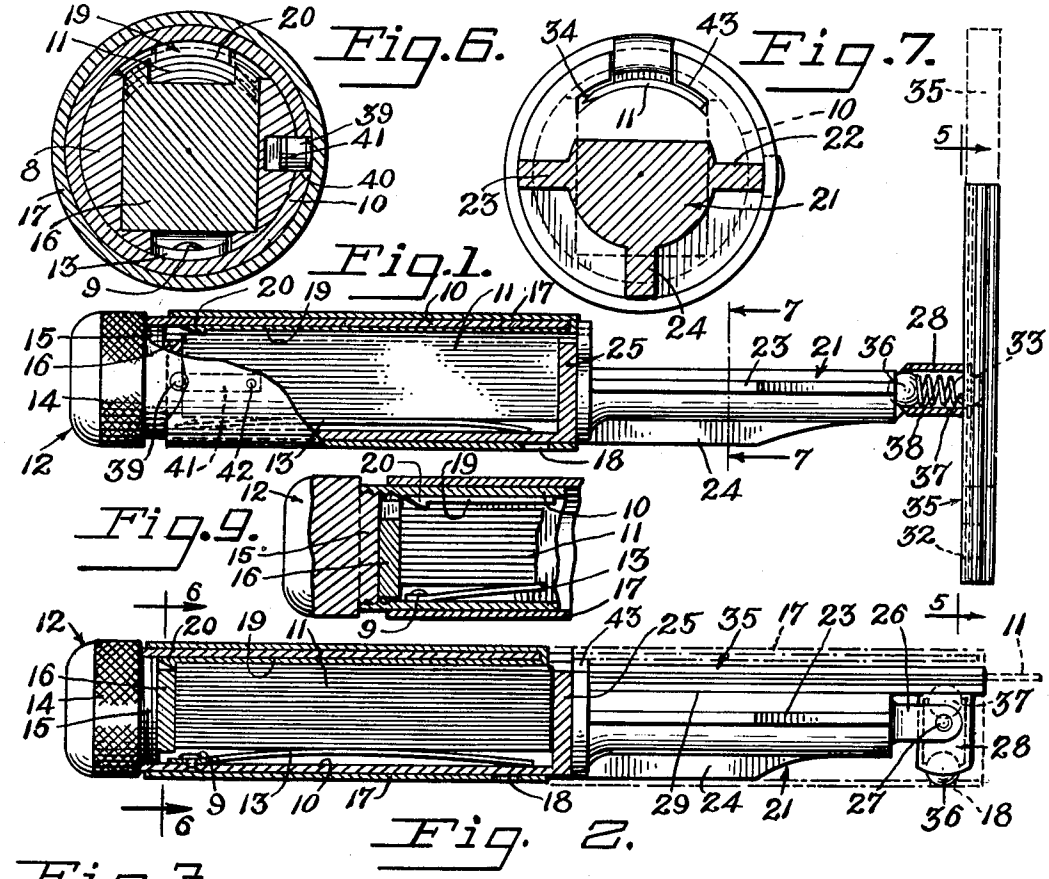


Fig. 6.

Fig. 7.

Fig. 1.

Fig. 9.

Fig. 2.

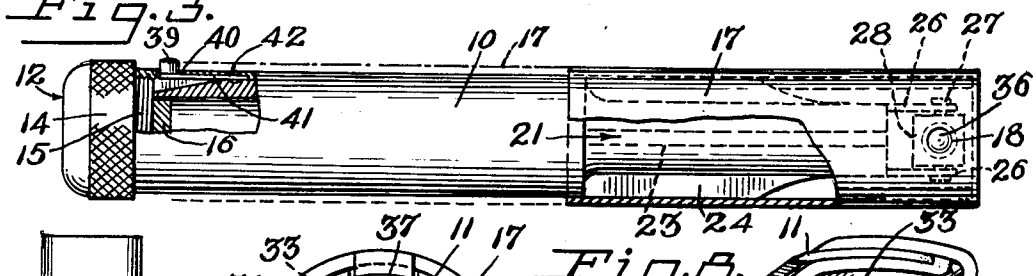


Fig. 3.

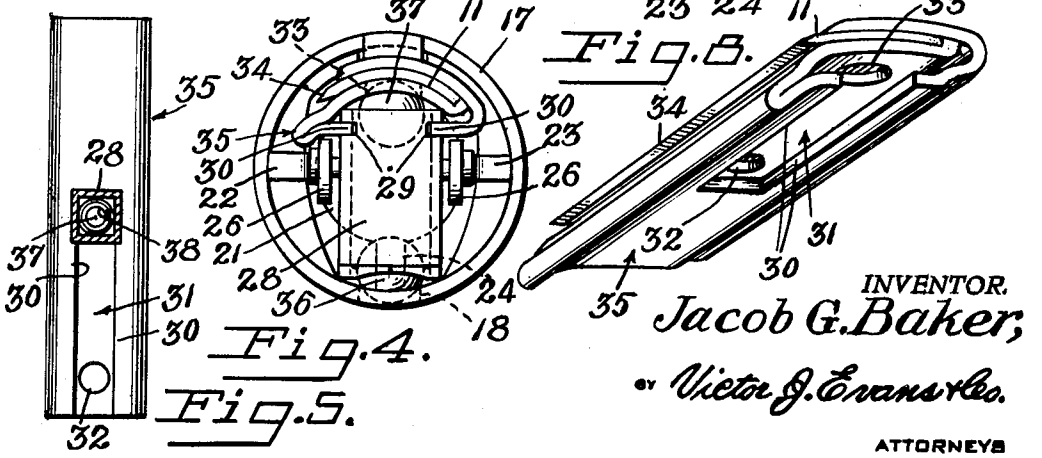


Fig. 8.

Fig. 4.

Fig. 5.

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United States Patent Office 2,725,626
Patented Dec. 6, 1955

2,725,626

SAFETY RAZOR

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Application July 31, 1953, Serial No. 371,537
2 Claims. (Cl. 30—40)

This invention relates to a safety razor.

The object of the invention is to provide a safety razor which can be readily folded or collapsed to occupy a minimum amount of space when it is not being used.

Another object of the invention is to provide a safety razor which can be used in the conventional manner when it is open, there being a novel means provided for ejecting razor blades one at a time into the blade holder or head, there being a means provided for protecting the blade as well as the user and his clothing in the event the razor is being carried in the pocket, luggage, or shaving kit.

A further object of the invention is to provide a safety razor which is extremely simple and inexpensive to manufacture.

Other objects and advantages will be apparent during the course of the following description.

In the accompanying drawings, forming a part of this application, and in which like numerals are used to designate like parts throughout the same:

Figure 1 is a side elevational view of the safety razor in operative extended position ready to be used for shaving, and with parts broken away and in section.

Figure 2 is a view similar to Figure 1, but showing the head folded against the shank.

Figure 3 is a side elevational view, with parts broken away and in section, showing the sleeve extended over the blade as when the safety razor is being carried in a person's pocket, luggage, or kit.

Figure 4 is an end elevational view showing the safety razor in its folded position as in Figure 3.

Figure 5 is a sectional view taken on the line 5—5 of Figure 1.

Figure 6 is a sectional view taken on the line 6—6 of Figure 2.

Figure 7 is a sectional view taken on the line 7—7 of Figure 1.

Figure 8 is a perspective view of the razor blade head or holder.

Figure 9 is an enlarged fragmentary sectional view showing certain constructional details of the razor.

Referring in detail to the drawings, the numeral 10 designates a hollow handle or housing which is adapted to hold a plurality of razor blades 11 therein, Figure 2, and a plug or cap 12 is arranged in engagement with one end of the barrel 10. The plug 12 can be removed when an additional supply of razor blades 11 are to be inserted in the hollow handle 10. The plug 12 includes an outer knurled portion 14 which facilitates the rotation of the plug, and a cylindrical threaded portion 15 extends inwardly from the plug, the threaded portion 15 being arranged in engagement with a threaded portion on the interior of the barrel 10. Arranged contiguous to the inner end of the plug 12 is a stop block 16, and slidably mounted on the barrel or handle 10 is a cylindrical sleeve 17. The sleeve 17 is provided with an opening 18 for a purpose to be later described.

Carried by the sleeve 17 is an arm 19, and the arm 19 is provided with an ejector 20 which is adapted to selectively remove the blades 11 one at a time from the hollow handle 10 and position the razor blades onto the razor blade holder or head as later described in this application.

A spring member 13 is arranged in the bottom of the barrel 10, and the spring member 13 serves to normally urge or bias the razor blades 11 upwardly in the handle 10, the spring member 13 having one end connected to the handle 10 by a suitable securing element such as a rivet 9. A partition 25 may be arranged on an end of the handle 10, and extending from the partition or handle is a shank or stem 21 which includes a plurality of spaced radially extending ribs 22, 23, and 24, Figure 7.

Extending from the outer end of the shank 21 is a pair of apertured ears 26, and pins 27 pivotally connect a tube or casing 28 to the ears 26. The casing 28 is provided with a pair of guide slots 29 which slidably receive therein opposed flanges 30 that are formed in a holder or head 35. The guide flanges 30 which ride in the slots 29 are defined by a cut-out 31, Figure 8, and there is further provided in the head 35 a pair of spaced apart sockets 32 and 33. The cutting edge of the razor blade 11 is indicated by the numeral 34.

Carried by the casing 28 is a pair of balls 36 and 37, and a coil spring 38 is interposed between the pair of balls 36 and 37 for normally urging these balls away from each other.

Arranged adjacent an end of the handle 10 is a button 39, and the button 39 slidably projects through an opening 40 in the handle 10, the button 39 being urged outwardly by means of a spring member 41 that is secured to the handle 10 by a suitable securing element such as a rivet 42.

A suitable slot or cut-out 43 may be arranged in an end of the handle 10 whereby the razor blades 11 can pass therethrough from the interior of the handle onto the head 35.

From the foregoing it is apparent that a safety razor has been provided which combines several features of the common safety razors. Open the device is used in the conventional manner as shown in Figure 1, but by sliding the head from the solid line position shown in Figure 1 to the dotted line position, the ball 37 will be engaged in the hole 33 instead of the hole 32 so that the head 35 can then be pivoted to the position shown in Figure 2 where it is against the shank 21. The sleeve 17 can then be pushed from the normal using position shown in Figure 1 to the position shown in Figure 3 to thereby protect the blade 11 as well as the user and his clothing in the event it is carried in the pocket, luggage, or shaving kit. If a new blade is desired, the sleeve 17 can be retracted to the position shown in Figure 2 by depressing the release button 39 so that the blade pickup catch 20 will slide the blade 11 forward with the sleeve 17 to cause the new blade to take the place of the old blade 11 in the head 35. The sleeve 17 can then be retracted to the position shown in Figure 1 when the user desires to shave.

Figure 2 shows the razor with the sleeve 17 retracted to engage a new blade 11 while the head 35 is in superposed relation with respect to the shank 21. Figure 4 shows an end elevational view of the device when the head is folded against the shank and the flanges 30 sliding in the slots 29 of the casing 28 serve to guide the head 35 during its sliding movement. There is provided an aligning hole 18 in the sleeve 17 which engages the projecting steel ball 36 when the parts are folded to prevent the sleeve 17 from shifting from its closed position. This same steel ball 36 engages an indenta-

tion in the end of the shank **21** to keep the head **35** from folding while in the open position shown in Figure 1. The steel ball **36** is backed up by a stiff steel coil spring **38**, and a second steel ball **37** serves to position the head **35** along the casing **28**, the casing **28** being secured pivotally to the shank **21** by means of pivot pins **27** in the apertured ears **26**.

The cap or plug **12** threadedly engages an end of the handle **10** to close the end of the frame and blade storage chamber within the handle. The blades **11** are fed to the topmost position by means of a leaf spring **13** which is secured to the handle by a rivet **9** and in the normal position shown in Figures 1 and 3, the button **39** keeps the sleeve **17** from retracting beyond the button to the position shown in Figure 2 so that the razor blades will not be engaged by the catch **20** until the button **39** is manually depressed. A plurality of blades **11** can be stored in the handle **10**, and these blades may be stored in a suitable plastic container **8**, Figure 6.

The catch **20** is tapered so that it will ride over the blades **11** when the catch returns to the pickup position shown in Figure 2. As shown in Figure 6 the spring **13** may ride in a suitable slot in the blade package **8**, and a suitable slot may be arranged in the top of the package **8** for receiving the member **19**. The head **35** is shaped to provide a guard and the angle between the blade **11** and the guard part of the head **35** may be 45 degrees with respect to the handle axis.

I claim:

1. A safety razor comprising a hollow cylindical handle, a plurality of superposed razor blades positioned in said handle, a plug including a threaded portion engaging an end of said handle, said plug including an exteriorly knurled knob, a shank extending from said handle, a pair of apertured ears extending from said shank, a casing having a pair of guide slots therein, means pivotally mounting said casing to said ears, a pair of balls carried by said casing, a coil spring interposed between siad balls, one of said balls adapted to engage an end of said shank, a head provided with an elongated cutout defining a pair of flanges for slidably engaging the slots in said casing, there being a pair of sockets in said head for selectively receiving the other of said balls, said head adapted to receive therein a razor blade, said handle having a blade discharge slot adjacent said shank, a spring member for urging said blades toward said discharge slot, a sleeve slidably mounted on said handle and mounted for movement into and out of surrounding relation with respect to said head when the head is in folded superposed relation with respect to said shank, a razor blade ejector carried by said sleeve, and a spring pressed button mounted on said handle for selectively limiting the movement of said sleeve on said handle.

2. A safety razor comprising a handle, a plurality of superposed razor blades positioned in said handle, a plug including a portion engaging an end of said handle, said plug including a knob, a shank extending from said handle, a pair of ears extending from said shank, a casing having guide slots therein, means pivotally mounting said casing to said ears, a pair of balls carried by said casing, resilient means interposed between said balls, one of said balls adapted to engage an end of said shank, a head provided with a cutout defining a pair of flanges for slidably engaging the slots in said casing, there being a pair of sockets in said head for selectively receiving the other of said balls, said head adapted to receive therein a razor blade, said handle having a blade discharge slot adjacent said shank, a spring member for urging said blades toward said discharge slot, a sleeve slidably mounted on said handle and mounted for movement into and out of surrounding relation with respect to said head when the head is in folded superposed relation with respect to said shank, a razor blade ejector carried by said sleeve, and a spring pressed button mounted on said handle for selectively limiting the movement of said sleeve on said handle.

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