March 2, 1937. J. H. HILLIARD 2,072,636

RAZOR

Filed April 25, 1935

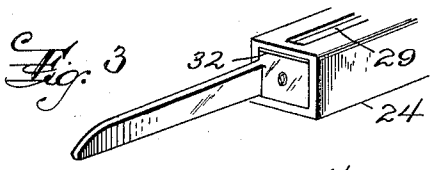


Fig. 3

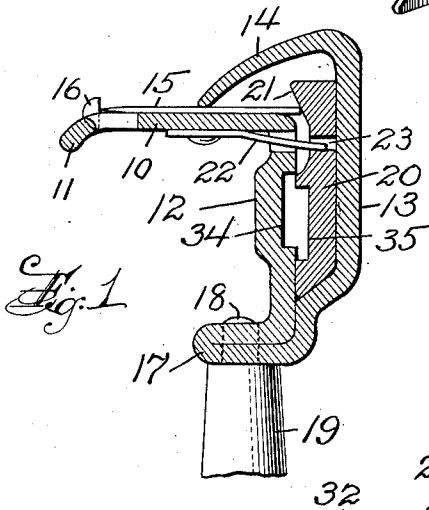


Fig. 1

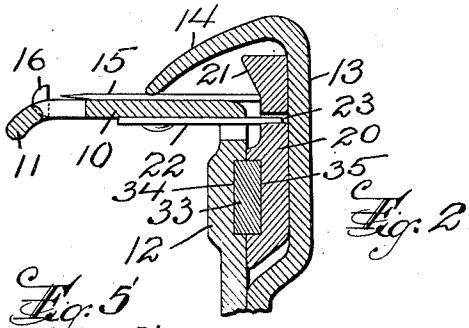


Fig. 2

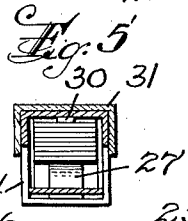


Fig. 5

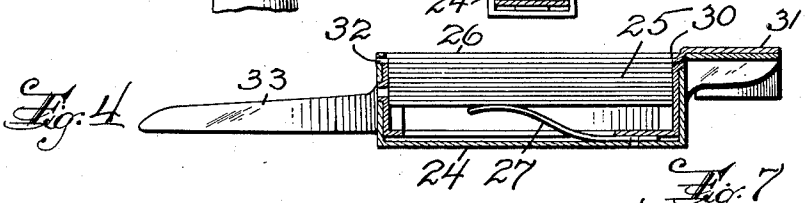


Fig. 4

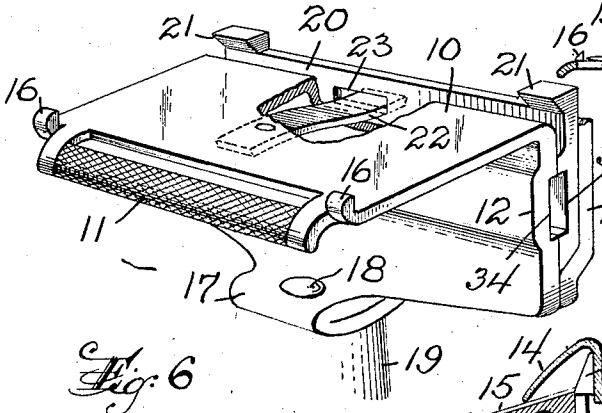


Fig. 6

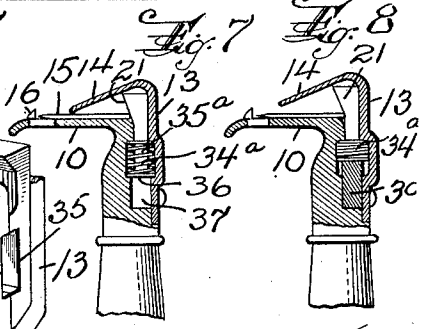


Fig. 7

Fig. 8

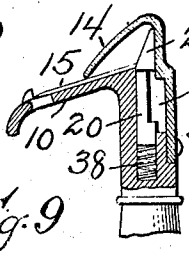


Fig. 9

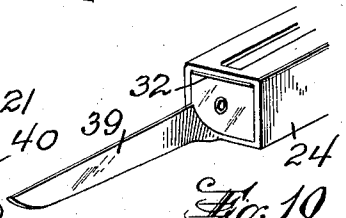


Fig. 10

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UNITED STATES PATENT OFFICE

2,072,636

RAZOR

John H. Hilliard, New York, N. Y., assignor to Magazine Repeating Razor Company, a corporation of New Jersey

Application April 25, 1935, Serial No. 18,126

6 Claims. (Cl. 30—40)

This invention relates to that class of magazine razor in which the magazine of blades is temporarily attached to the razor for the purpose of supplying a fresh blade, the razor being used for shaving apart from the magazine.

The present invention is directed to a razor in which the blade is held in proper shaving position to the guard by a movable part of the shaving head that is provided with a tapered portion that exercises a wedging action against the back edge of the blade. The movable part is preferably made slidable in the shaving head and is held in normal clamping position by a spring. The spring not only holds the movable part in contact with the blade but also holds the movable part against lateral movement.

The invention relates, further, to a co-operation between the movable part and a top plate over the blade that causes the said part to raise the top plate slightly thus relieving the pressure on the top of the blade when the wedge is moved out of contact with a blade in the razor and also out of the path of travel of an incoming blade which latter blade is fed into the razor in rear of its position and is in turn moved forwardly to proper position when the wedge pushes it forwardly on the removal of the blade magazine.

The invention is illustrated in the accompanying drawing in which Figure 1 is a cross-section of a razor embodying my invention with the blade in proper shaving position relative to the guard. Figure 2 is a similar view with the blade in the position it occupies when fed into the razor and showing the actuating finger of the magazine in section and with the movable part lifted by the finger. Figure 3 is a detail perspective of the blade magazine and the finger. Figure 4 is a longitudinal section of the blade magazine.

Figure 5 is a cross section of Figure 4. Figure 6 is a perspective of the shaving head showing Figure 1 with the top plate and part of the blade platform broken away. Figure 7 is a cross-section of a modified form of shaving head. Figure 8 is a similar view showing the wedging part raised and in contact with the top plate to raise the latter. Figure 9 is a cross-section of another modification. Figure 10 is a detail perspective of the end of the blade magazine and its finger used with the shaving head shown in Figure 9.

The shaving head comprises a blade platform 10 with a guard 11 at its front edge and a supporting plate 12. The supporting plate is from a back plate 13. The back plate is provided with a top plate 14 preferably by bending the back plate over. The top plate normally rests on the top face of a blade 15 when a blade is on the blade platform 10. If desired the stops 16 are placed at the front corner of the blade platform to protect the corners of the blade in case the cutting edge of the blade extends along the full length of the blade. The parts are relatively stiff and can be made from one piece of metal, bent over at the bottom to form a fold 17 to receive a stud or screw 18 of a handle 19. The movable part 20 fits in the space between the supporting plate 12 and the back plate 13 and is usually made to slide vertically. The movable part 20 has wedging portions 21 which engage the back edge of the blade and push it forward and also hold it then under the influence of a spring. I show a spring 22 fastened to the under side of the blade platform and extending rearwardly through a hole in the plate 12 and into a slot 23 in the movable part. This spring not only holds the movable part down but also prevents side movement of the said part.

The magazine is in the main not new and comprises a casing 24 in which the stack 25 of blades is housed and held against the slotted top 26 by a spring 27. The top has a slot 29 in which the lip 30 slides. The lip is on the grip 31 and forms an ejector, as it engages the rear edge of the top plate of the stack and slides the blades out through a slit 32 in the front wall of the magazine when the grip is slid forwardly. The magazine is provided with a finger 33 with a tapered end for ready and easy insertion in the razor head. The razor head has an opening for receiving the finger 33 formed by the recess 34 in the supporting plate 12 and the recess 35 in the movable part 20. These recesses are normally not aligned but when the finger 33 is inserted, its taper forces the movable part upwardly, the front inclined face of movable part is raised and its contact with a blade in shaving position is lost. The slit 32 in the magazine is disposed so that the incoming blade is fed as in Figure 2, to the rear of a blade in position. The back edge of the blade usually bears on the movable part for guiding purposes only. After the ejector slide is operated to place a blade in the razor the magazine is withdrawn, the spring pushes the movable part 20 downwardly and the wedging portion 21 pushes the blade forward. When the stops 16 are on the razor they act to limit the forward movement of the blade. The wedging portion is usually placed only at the ends of the movable part 20 as shown in Figure 6, although the wedging portion may extend the width of the shaving head. The parts of the shaving head may be made stiff as the resiliency of the

spring gives the required flexibility to the blade positioning parts of the shaving head.

In Figures 7 and 8 the top plate 14 is made resilient to a slight extent, as in this form the movable part 20 is extended up far enough to engage and slightly raise the top plate when the finger of the magazine is inserted in the shaving head. In this form I show a coiled spring 34, in a stem 35 on the movable part 20 and bearing on the foot 36 on the bottom of the stem. The shaving head is recessed at 37 to receive the finger 33 of the magazine. When the finger is inserted, as in Figure 8, the movable part 20 is raised, it engages the top plate 14, the blade in the razor is released and a fresh blade is inserted. On the withdrawal of the finger the spring 34 returns the wedging portion to its normal position which allows the spring top plate to engage the top face of the blade with sufficient pressure to hold the blade firmly in place.

In Figure 9, I show a modification in which the movable part moves downwardly to release the blade, the movable part retreating against the influence of the spring 38 when the finger 39 is shown canted relative to the slit 32 which causes the blade to be fed at an angle. This is done when it is desired to have the blade platform and the blade inclined downwardly relative to the handle. This is clearly evident from Figures 9 and 10 showing the slot 40 and blade platform 10 at the same angle as the finger 39 and the slit 32 of the magazine.

Various details may be varied without departing from the scope of the invention as set forth in the claims.

I claim:—

1. A safety razor comprising a holder for maintaining a blade in shaving position, a slidable part in the holder, said part including a wedge for yieldingly maintaining the blade by engagement with its back edge, a blade magazine having means for ejection of a blade, and a finger on the magazine and insertable in the holder and having a surface for moving the slidable part out of engagement with the blade.

2. A safety razor comprising a blade holder having a blade platform, a back piece spaced from the blade platform, a slidable part in the space, the part having a wedge for engaging the back edge of a blade, a spring for moving the part, in combination with a blade magazine, means for ejecting a blade endwise from the magazine, and a finger on the magazine adapted for entry into the holder and for positioning the holder and magazine relative to each other, the slidable part and the finger having co-acting surfaces for moving said part out of contact with the blade when the holder and magazine are assembled.

3. A safety razor comprising a shaving head having means for grasping a blade and adapted to receive a blade endwise, the shaving head including a slidable part having a wedging portion for engaging the back edge of the blade, a magazine, a slide on the magazine for ejecting a blade from the magazine endwise into the shaving head, and a finger on the magazine for engaging the shaving head and so positioning the magazine relative to the shaving head, said finger when engaged contacting the slidable part to move the wedging portion out of the path of the ejected blade, and a spring for moving the slidable part into contact with the blade.

4. A safety razor comprising a shaving head including a blade platform and a back plate, said back plate having a forwardly extending top plate to hold a blade on the blade platform, a movable part between the blade platform and the back plate, a wedging portion on the movable part for engaging the back edge of a blade, a spring to hold the movable part in normal position in engagement with a blade, the blade platform and the movable part being recessed on opposed faces, a magazine for blades, means on the magazine for feeding blades therefrom, and a finger in the magazine and adapted to enter the recesses for positioning the magazine on the razor and moving the movable part out of normal position.

5. A safety razor comprising a shaving head including a blade platform and a back plate, the back plate having a forwardly extending top plate to engage the blade on the blade platform, a movable part between the blade platform and the back plate and having a wedging portion, the shaving head having a recess adjacent the movable part, a magazine for blades, a finger on the magazine for entering the recess for positioning the magazine on the razor and moving the movable part out of normal position, the movable part having a portion to engage the top plate whereby the top plate is raised by said movable part when the magazine and razor are assembled.

6. A safety razor comprising a shaving head including a blade platform, a top plate for engaging the top of a blade on the platform, a slidable part having a wedging portion for engaging the back edge of a blade in the shaving head and positioning it in shaving position, a magazine for blades, a finger adapted to engage the shaving head for positioning the magazine in position for feeding a blade to the shaving head, said finger also engaging the slidable part to disengage it from the blade, said slidable part also contacting the top plate to raise it slightly when the blade is not engaged by the slidable part.

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