Sept. 28, 1943. N. TESTI 2,330,639

SAFETY RAZOR APPLIANCE

Filed June 4, 1943

Fig. 1

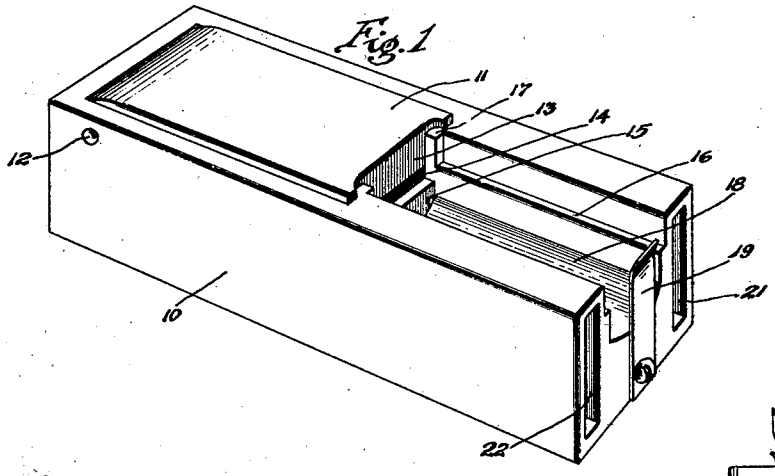
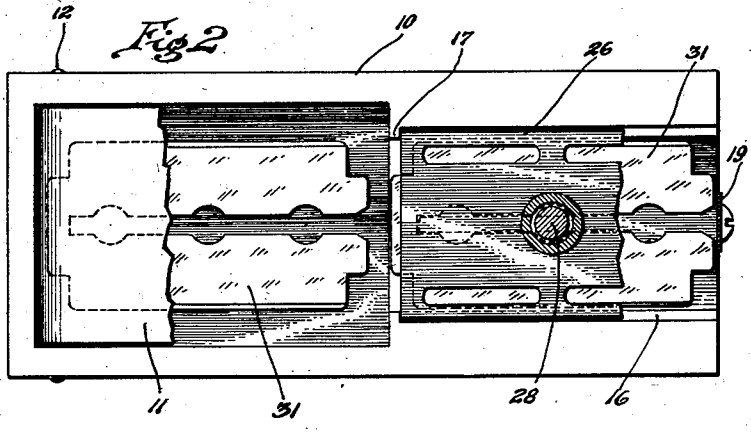
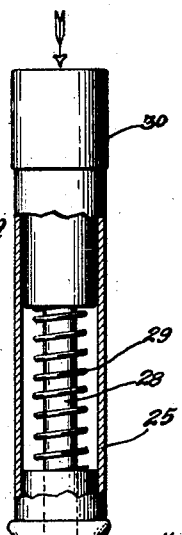


Fig. 2





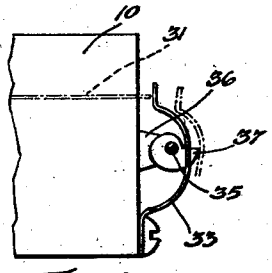


Fig. 5

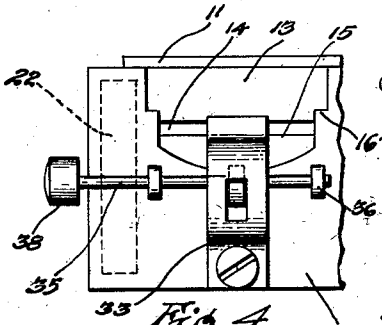


Fig. 4

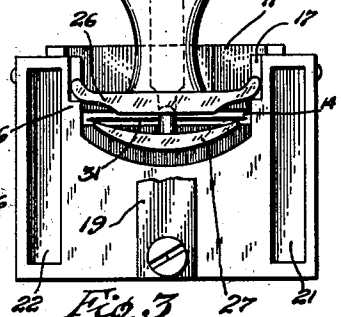


Fig. 3

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UNITED STATES PATENT OFFICE

2,330,639

SAFETY RAZOR APPLIANCE

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Application June 4, 1943, Serial No. 489,618

10 Claims. (Cl. 30—90)

This invention relates to safety razors employing replaceable blades and consists in an appliance which includes a receptacle for used blades and means for transferring into the receptacle used blades one at a time from a razor presented in a predetermined position adjacent to the blade receptacle.

Much attention has been paid to the provision of magazines for supplying fresh sharp blades to safety razors but little attention has been paid heretofore to the problem of expeditiously, cleanly and safely removing used blades from safety razors and at the same time disposing of them so as to eliminate the menace of loose used blades. Under the best conditions the user will remove a used blade from his razor after each shaving operation, carefully clean and dry both the blade and razor and return the blade to its shaving position in the razor in preparation for subsequent use. It frequently happens, however, that, on account of careless habits or press of time a used blade may be left without cleaning in the safety razor for several days and thus accumulates rust and dried debris which interferes with the free removal of the blade. The user is then extremely likely to cut his fingers in forcibly removing such reluctant blades.

An object of the present invention aims to obviate this danger by providing for the quick and safe removal of a used blade from the safety razor and its immediate delivery into a blade receptacle of substantial capacity. With these ends in view an important feature of my invention consists in the combination of a blade receptacle with razor supporting means adjacent thereto and a device for transferring the blade from a razor presented on the supporting means and into the blade receptacle, all in a single operation or in related and progressive steps.

In accordance with a more specific feature of my invention the blade-ejecting device may take the form of a spring-operated impact member which may be tensioned and then released to strike one end of the used blade and kick or shoot it out from between the cap and guard of the safety razor directly into the blade receptacle from which in the ordinary course of use it need not be removed until a substantial number of blades has been safely collected. Accordingly, an important feature of my invention consists in a blade-receptacle in combination with means for gauging a safety razor in position adjacent to the receptacle and means for ejecting a blade by impact from the razor and delivering it to the receptacle.

These and other features of the invention will be best understood and appreciated from the following description of a preferred embodiment thereof, selected for purposes of illustration and shown in the accompanying drawing, in which:

Fig. 1 is a view in perspective of the appliance;

Fig. 2 is a plan view in which the cover of the blade receptacle is shown as partially broken away and a portion of a safety razor is shown in position for the blade-ejecting step;

Fig. 3 is a view of the appliance in front elevation showing a safety razor in blade-ejecting position, a portion of its barrel being broken away;

Fig. 4 is a view in front elevation of a modified form of appliance;

Fig. 5 is a corresponding fragmentary view in side elevation.

The invention is herein shown as embodied in an appliance designed for use with a safety razor of the "Gillette" type employing thin flexible open-end blades of commercial type, although it is in no sense limited to this or any specific type of safety razor or blade but with appropriate modification may be adapted for any type of safety razor employing removable interchangeable blades.

As shown in Fig. 1 the appliance has an elongated rectangular body 10 which may be molded from plastic material or fabricated of wood or light metal. The body 10 is hollow and its left-hand end as herein shown is shaped to provide a blade receptacle which is enclosed by a cover 11 mounted on a pintle 12 to swing on a horizontal transverse axis and having at its free end a downturned transverse flange 13. Spaced below the flange 13 by a sufficient distance to provide a blade inlet slot 14 is a stationary transverse wall 15. A pair of longitudinal shoulders or ribs 16 is located in spaced relation upon the inner side walls of the appliance below its upper surface and in position to engage and support the parallel longitudinal edges of the guard 26 of a safety razor. Between the ribs 16 is provided a curved longitudinal partition 18 which, with the ribs, defines a trough providing clearance space in which the cap 27 of a safety razor may be freely suspended when the razor is supported with the edges of its guard upon the ribs 16. The space beneath the longitudinal partition 18 is utilized as an extension or addition to the blade receptacle

already described as located beneath the cover 11, that is to say, a used blade may slide rearwardly beneath the transverse wall 15 and lie under the longitudinal partition 18. The supporting ribs 16 terminate at their inner ends in upstanding posts 17 which constitute stops for engaging the end of the safety razor guard and so gauging its position of presentation with respect to the blade receptacle and the blade inlet slot 14.

The blade-ejecting device as shown in Figs. 1–3 comprises a leaf spring 19 which is secured to the front end of the body 10 below the longitudinal partition 18 and projects upwardly so that its upper end is located substantially opposite to a blade lying between the cap and guard of a safety razor when the latter is properly presented to the appliance. If desired the walls of the appliance may be designed to include a pair of longitudinal pockets 21 and 22 for the reception of packages of unused blades which are thus maintained as a convenient supply where they are readily accessible to the user.

The safety razor herein shown comprises an elongated guard 26, a cap 27 having an inner concave blade-shaping face and being carried by the end of a spindle 28. This spindle is telescopically received within the handle of the razor and surrounded by a compression spring 29 tending at all times to move the spindle and cap upwardly, in Fig. 3, into blade-engaging position. The handle is closed by a cylindrical nut 30 through which the spindle 28 may be moved longitudinally into blade-releasing position by longitudinal movement of the nut or moved into blade-clamping position by rotation of the nut through a threaded connection (not shown). The razor herein described is disclosed in more detail in my co-pending application, Serial Number 488,571, filed May 26, 1943. In using this razor the cap may be temporarily separated from the guard by endwise pressure upon the nut 30 and a free passage thus provided for the insertion of a blade, with or without a protective cover. When pressure upon the nut is released the spring 29 moves the cap toward the guard with pressure sufficient to bow the blade. The bowed blade may be locked against endwise movement while its protective cover is stripped therefrom. Subsequently, rotation of the nut 30 affects clamping engagement of the blade between the cap and guard.

In using the appliance above described the nut 30 of the razor handle is first rotated, reversely to release the spindle from positive engagement and then the razor is presented to the appliance with its guard 26 resting upon the ribs 16 and gauged in the longitudinal position determined by the stops 17. Up to this point the blade is maintained in bowed position by the action of the spring 29. Having thus presented the razor, however, the nut 30 may be depressed by the user against the pressure of the spring 29 to some such position as that shown in Fig. 3 in which the blade is substantially released and permitted to assume flat condition. In this flat position it is located at the same level and in alignment with the slot 14. The spring 19 is now deflected outwardly and then released so that it snaps inwardly at its upper end striking the right-hand end of the blade with sharp impact and driving or kicking it toward the left out of the razor through the slot 14 and into the blade receptacle beneath the cover 11. The impact of the spring 19 is sufficient to loosen the blade from any adherence either to the cap or guard caused by accumulated debris in the razor. It will be noted, moreover, that the lower face of the guard is so located that even if the blade sticks thereon it may still be transferred directly from the safety razor to the blade receptacle. The appliance is of such size and the receptacle of such dimensions that it will hold a substantial number of used blades, for example, a year's accumulation. At the end of that time the cover 11 may be raised and the used blade permanently disposed of.

Instead of tensioning and releasing the ejecting spring 19 by hand mechanical means may be provided, if desired, for that purpose. Such mechanism is illustrated in Figs. 4 and 5 in which the curved leaf spring 33 is secured as before to the end face of the appliance but in this instance it is provided with a vertical slot designed to receive a portion of a spiral cam 37 mounted on a transverse shaft 35 which is journalled in bearing lugs 36 and provided at its outer end with an operating head 38. When this is rotated the cam 37 forces the spring 33 outwardly under increasing tension until a drop off point is reached in the periphery of the cam. When this drop off point passes the edge of the slot in the spring the spring is released and allowed to snap inwardly to engage and eject a blade 31 in the manner already explained.

Having thus disclosed my invention and described in detail an illustrative embodiment thereof, I claim as new and desire to secure by Letters Patent:

1. A safety razor appliance comprising a body having a blade-receptacle therein, razor supporting means adjacent to the receptacle, and manually-operated means for kicking a blade out of a razor presented on such supporting means and into said blade-receptacle.

2. A safety razor appliance comprising a body having an elongated blade-receptacle therein, means for supporting a safety razor by its side edges in a position adjacent to the receptacle, and spring operated means for kicking a blade endwise out of a razor presented on such supporting means and into said blade receptacle.

3. A safety razor appliance comprising a body having a blade-receptacle therein, means in said body for gauging a safety razor in position adjacent to the receptacle, and spring operated means for impelling a blade out of a safety razor located by said gauging means and into said receptacle.

4. A safety razor appliance comprising a body having a blade receptacle therein with an inlet slot, means for gauging a safety razor with its blade in alignment with said slot, and means for ejecting a blade by impact from a safety razor so gauged and thereby shooting the blade through said inlet slot into the receptacle.

5. A safety razor appliance comprising a body having supports for the guard of a safety razor spaced with clearance space between them, means for gauging the position of a guard on said supports, and a spring operated impact device movable to strike a blade in the razor lying flat adjacent to the razor guard.

6. A safety razor appliance comprising a body having horizontal supports spaced apart to underlie the outer edges of the guard of a safety razor and to provide a clearance space for the cap of a razor below its guard, a blade-receptacle at one end of the supports, and a spring operated

impact device at the other end of the supports movable to strike a blade lying on the said cap.

7. A safety razor appliance comprising a hollow body shaped to provide a blade-receptacle, razor-locating ribs leading toward said receptacle on either side of an inlet slot opening into the receptacle, and a spring-operated impact device for shooting an open-ended blade from a razor located on said ribs through said slot.

8. A safety razor appliance comprising an elongated body having a covered blade-receptacle in one end and a pair of spaced parallel longitudinal shoulders in the other end depressed below the upper surface of said body and a transverse wall separating said ribs from the blade receptacle and having a blade inlet slot located in alignment with a blade contained in a razor resting on said ribs, whereby an open-ended blade may be pushed directly from the razor through the said inlet slot.

9. A safety razor appliance comprising a body enclosing a blade-receptacle and having razor supporting means adjacent thereto, a spring-operated blade ejector movable to contact a blade in the razor, and manually-operated means for actuating said ejector.

10. A safety razor appliance having a rectangular body enclosing a blade-receptacle and having opposed shoulders spaced to support a safety razor presented in vertical position by the edges of its guard member thereby leaving the cap of the razor freely suspended in the space between them, a transverse wall having a blade inlet slot disposed at the inner end of said shoulders and below their level, a spring blade ejector mounted at the outer end of the body of the receptacle, and a rotary cam having an abrupt drop-off point mounted on said body for rotation in contact with said blade ejector.

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