March 15, 1960 C. F. HENLEY 2,928,531

MAGAZINES FOR HOLDING WAFER-TYPE RAZOR BLADES AND OTHER THIN ARTICLES

Filed June 3, 1957 3 Sheets-Sheet 1

Fig. 1.

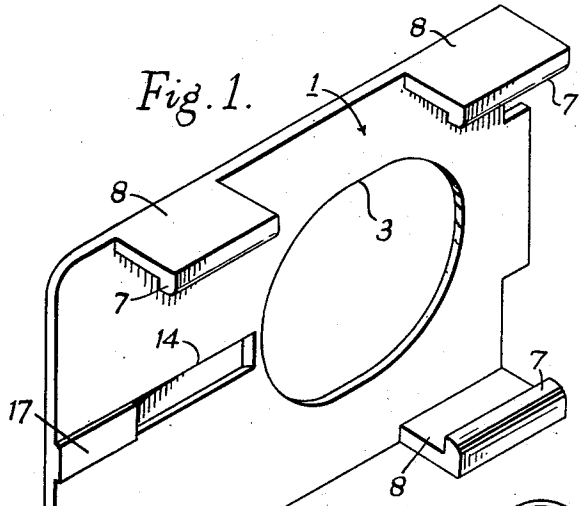
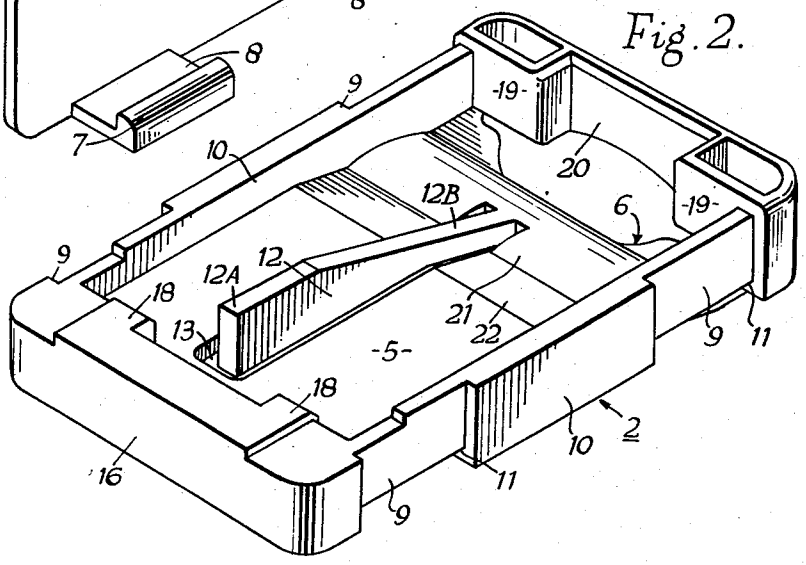


Fig. 2.



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Fig. 3.

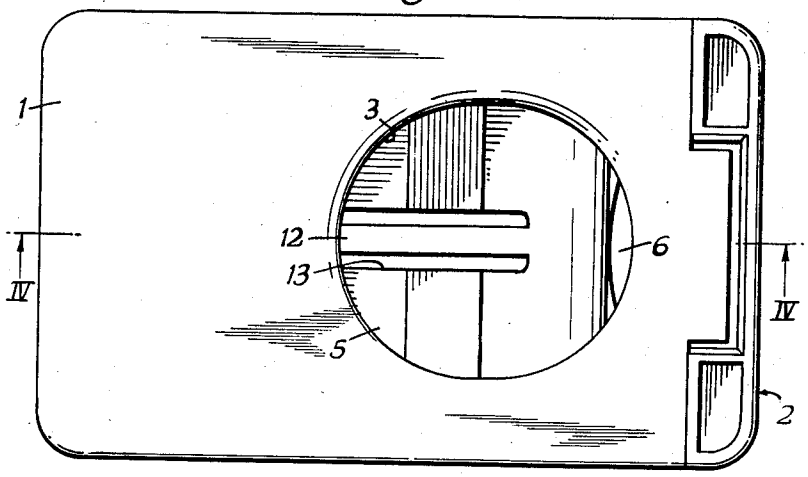


Fig. 4.

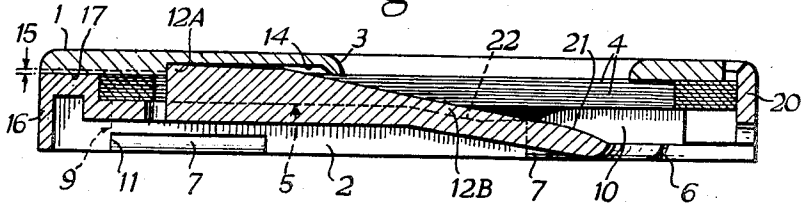
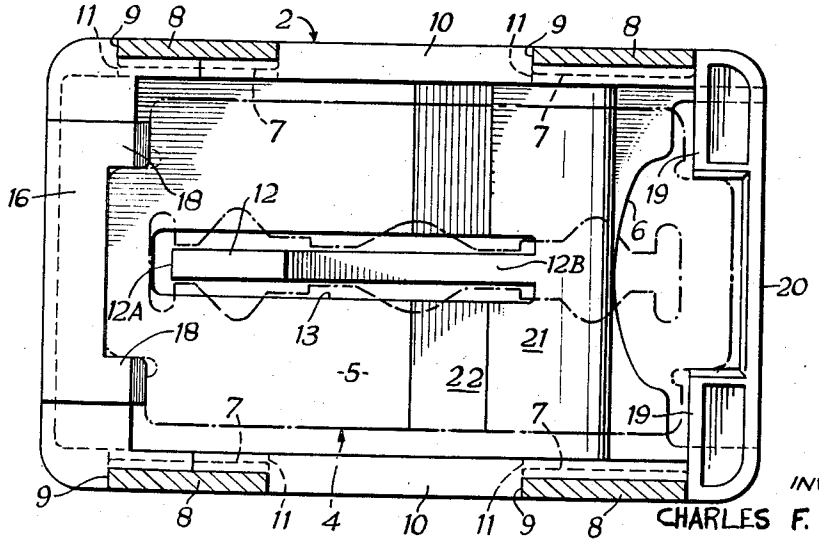


Fig. 5.



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Fig. 6.

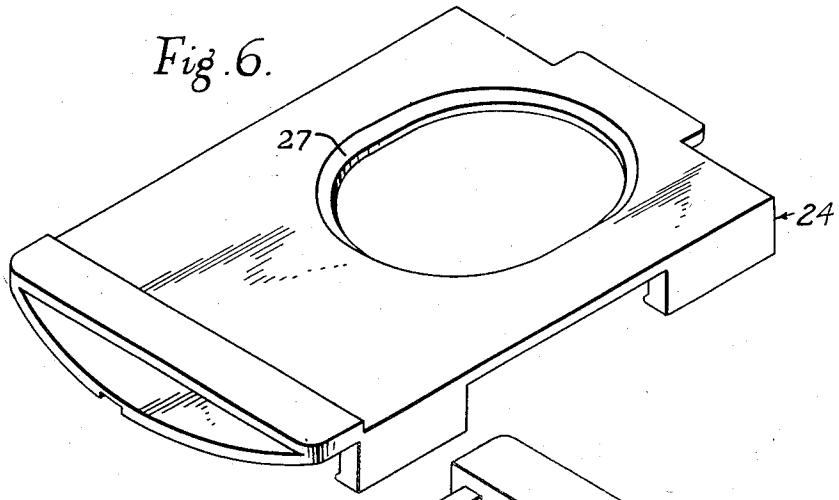
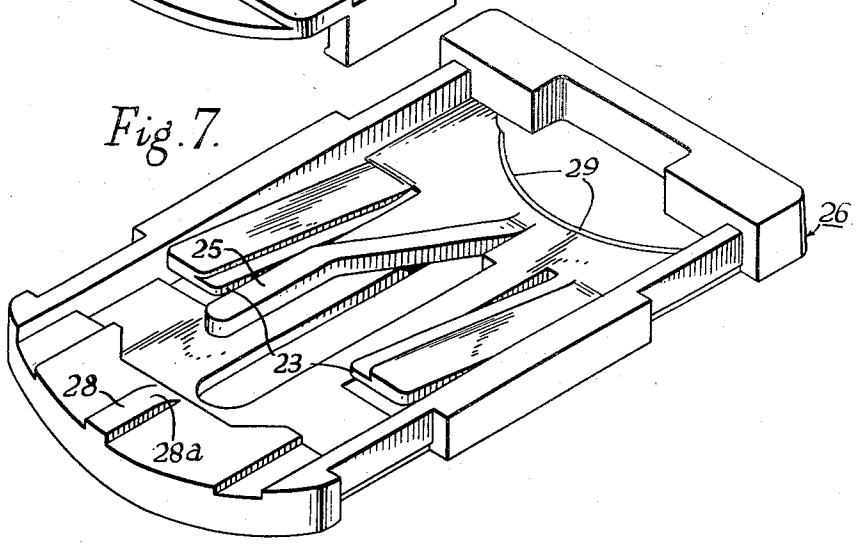


Fig. 7.



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2,928,531

MAGAZINES FOR HOLDING WAFER-TYPE RAZOR BLADES AND OTHER THIN ARTICLES

Charles Frederick Henley, Woodside Park, London, England, assignor to Ever-Ready Razor Products Limited, London, England, a British company

Application June 3, 1957, Serial No. 663,173

9 Claims. (Cl. 206—16)

This invention relates to magazines for holding wafer-type razor blades which are longitudinally and centrally slotted. One of the objects of this invention is to provide an improved blade magazine of the type in which a stack or pile of blades is located within a flat casing having an apertured top, so that the uppermost blade can be engaged by the tip of a thumb or finger through said aperture and slidably removed in an endwise direction through a slit at an end of the casing.

Another object of the present invention is to provide an improved magazine of this type, in which no loose parts are employed in the assembled magazine.

A further object of the invention to provide an improved magazine of the type referred to, for dispensing thin flexible double-edge razor blades and for receiving used blades without increasing the size of the magazine above that required to house a given number of new blades.

Another object of the present invention is to provide a magazine of the type referred to in which a longitudinally arranged key upstands from the floor of the magazine and reaches at one end to the top or almost to the top of the magazine for engaging the aligned longitudinal slots in the stacked blades, the other end of said key sloping up from the magazine floor adjacent to a used blade opening therein.

The blade locating key may be slightly flexible and formed integral with the floor of the magazine.

Another object of the invention is to provide a blade magazine having a floor provided adjacent the used blade reception opening with a clearance extending beneath approximately half of the blades, so that by application of finger or thumb pressure through the opening in the top of the magazine the new blade or blades therein are tilted so as to bias the front end of the uppermost new blade, or a single new blade remaining in the magazine, into sliding contact with the magazine roof, and thus into full alignment with the blade ejection opening, through which said new blade can then be ejected by being pushed lengthwise.

A further object of the invention is to provide such a magazine which has means to prevent blades passing accidently out of the slit-like opening adjacent the magazine top, without interfering with positive ejection of the blade as and when required.

A still further object of the invention is to provide a blade magazine of the kind referred to which has means for resiliently urging the blades toward the underside of the apertured top or cover of the magazine, said means preferably comprising one or more leaf spring elements constituting integral parts of the floor or bottom of the magazine.

Embodiments of the invention employing a blade locating key of the form already referred to are illustrated by way of example in the accompanying drawings, wherein:

Figures 1 and 2 are perspective views looking at the underside of a magazine cover, and the upperside of a magazine body respectively,

Figure 3 is a plan view of the closed magazine,

Figure 4 is a longitudinal sectional elevation on line IV—IV of Figure 3, showing a stack of blades therein,

Figure 5 is a plan view of the body of the magazine, with the outline of the blade stack indicated in dot-dash lines,

Figure 6 is a perspective view of the upperside of the cover of a modified form of magazine, and

Figure 7 is a perspective view similar to Figure 2 of the body of the modified magazine.

The blade magazine illustrated in Figures 1 to 5 inclusive is composed entirely of two parts, a cover 1 and a body 2, shown separated in Figures 1 and 2. The cover 1 constitutes the roof or top of the magazine and is provided with an aperture 3 into which the tip of a thumb or a finger can be introduced to contact the uppermost of a stack of centrally slotted double-edge wafer blades 4 held in the magazine (see Figure 4). The tray-like body 2 is provided in its floor 5, at one end thereof, with an opening 6 through which used blades can be inserted into the magazine, so as to lie beneath the remainder of the stack of unused blades 4.

The two component parts of the magazine, that is, the cover 1 and the body 2, are conveniently made as plastic mouldings, and attachment of the parts may be effected, as shown, by forming longitudinal ridges 7 on lugs 8 which depend from the cover 2 and fit within external gaps 9 in the opposite long side walls 10 of the body 2, said ridges 7, by reason of the inherent resiliency of the plastic material used, being adapted to snap into recesses 11 formed in the under edges of walls 10.

Within the tray-like body 2 is a tongue element formed integral with, and thus anchored at one end to the body floor 5. This tongue element forms a longitudinal key 12 which is accommodated in part in a longitudinal slot 13 in the floor 5, and which, by reason of its springy character, normally holds its outer end 12A within a recess 14 formed in the underside of the cover 1 when this is assembled to the body 2, as shown in Figure 4.

The key 12 also engages within the aligned longitudinal central slots of the stacked double-edge wafer blades 4, thereby forming one, and if desired, the sole means of locating the blades while being ejected, thus preventing side movement of the blades and the possibility of the edges getting damaged.

At that end of the magazine whereat an unused blade is to be ejected by endwise movement, a shallow transverse gap 15 (see Figure 4) is provided between the cover 1 and the end wall 16 of the body 2, but this gap 15 is guarded by a narrow longitudinal rib 17 formed on the underside of cover 1, said rib 17 being aligned longitudinally with the recess 14. The resilient character of the comparatively thin cover 1 permits of slight yielding as the end of the uppermost blade presses against the radiused (or bevelled) inner end of rib 17.

It will be understood that the blades 4 are protected from damage due to side movement thereof, through the combined action of the cover recess 1, the flexible key 12, and the rib 17 throughout practically the whole period of ejection, since, as will be appreciated, after the initial stage of the ejecting movement the rib 17 drops into the central slot of the blade until lifted again at the final stage of ejection. Additional blade location is provided, as shown, by internal formations 18, 19 of the body end walls 16, 20 respectively, which receive therebetween projecting end portion of the razor blades 4.

The key 12 for engaging the aligned longitudinal central slots of blades 4 extends at its anchored end into a portion of the floor 5 of the magazine body 2, which is made lower than the remainder of said floor. This lower portion of floor 5, which conveniently slopes right down to

the end inet opening 6 provided for the admission of used blades, may be continuous or, as shown, consists of a curved ramp 21 terminating at the opening 6, and an intermediate flat, inclined ramp 22.

Pressure applied to the stack of blades 4 through aperture 3, that is, above the ramps 21 and 22, causes the blades to tilt or flex longitudinally and thus facilitate endwise ejection of the uppermost blade.

It is normally intended that a worn blade should be returned to the magazine by being inserted endwise through the used blade inlet opening 3, the sloping portion 12B of the key 12 allowing of the forward end of the used blade which is being inserted to slide up the key, while the resiliency of the key 12 permits the inserted used blade to be added beneath the depleted stack of new blades 4. Eventually all new blades will have been ejected and replaced by worn blades, and the filled magazine can then be discarded. Even if the blade capacity of the magazine is not maintained by inserting a worn blade for every new blade removed, the remaining new blades, or even a single blade can be tilted or flexed sufficiently by reason of the floor ramps 21, 22 to bring its forward end into alignment with the blade outlet 15.

In the modified construction shown in Figures 6 and 7, the blade tilting ramps 21, 22 are dispensed with and spring means are provided to urge the blades toward the underside of the cover 24. Preferably, as shown, leaf spring elements 23 are provided parallel to and on opposite sides of the key 25, said leaf spring elements 23 being constituted by pressed-up portions of the floor of the body 26. The stacked blades, which are enclosed within the magazine during assembly of the cover 24 to the body 26, are thereby urged toward the underside of the cover. The uppermost blade, accessible through cover aperture 27, may be slid over the free end of key 25 and out through a slit-like opening formed between the cover 24 and the body 26. A slideway 28 on the body 26 prevents accidental delivery of a blade but by reason of a ramp 28*a* at its inner end endwise removal of the uppermost blade through said slit openings is facilitated. Used blades are inserted through the opening 29 and slide up the springs 23.

I claim:

1. A razor blade magazine comprising a flat casing having at the same end of said casing a longitudinally-restricted thumb opening in the top and a used-blade-receiving opening in the floor thereof, a blade-dispensing slot at the other end thereof, and a longitudinally arranged key extending forwardly toward said other end and upwardly from the floor of the magazine and unitary therewith at one end near and forward of said used-blade-receiving opening and depressibly resilient near said end and reaching at its other end to the top of the magazine for engaging the aligned longitudinal slots in stacked blades stored in said magazine, said one end of said key sloping up from adjacent the magazine floor opening.

2. A blade magazine according to claim 1, wherein the top of the magazine is provided on its underside with two longitudinally spaced surfaces defining therebetween a recess for the entrance therein of a web, and a web-extending upwardly at a point beyond one end of the longitudinal slot of at least the topmost blade of a stack of blades and adapted to extend into said slot to hold said blade against accidental ejection.

3. A blade magazine according to claim 1, wherein the magazine floor has a ramp portion which extends upwardly from said used blade-receiving slot, and which permits of tilting or flexing of the blades under finger or thumb pressure applied through the apertured magazine top.

4. In combination, a razor blade container having top, bottom, side, and end walls, the top of one of said end walls terminating slightly below said top wall to provide a forward blade-dispensing slot, said bottom wall being formed at a portion thereof toward said one of said end walls to provide elevated platform means to maintain the blade ends toward said one of said end walls in an elevated position, a thumb opening in a portion of the top wall remote from said one of said end walls whereby pressure of the user's thumb against the upper surface of a blade will cause the blade to move toward said slot in an inclined position and movement of the user's thumb toward the first-mentioned end wall will cause the blade to enter and protrude from said slot, a double-edge razor blade therein, said blade having a central longitudinal opening therein, a thin longitudinally-extending protuberance extending downwardly from a laterally-central portion of said top wall at a point proximate to said one of said end walls and interior of the central portion of said slot to provide frictional resistance to the ejection of a blade thru said slot, a rearwardly and downwardly disposed used-blade-receiving opening, and a blade-guiding tongue extending forwardly and upwardly into said central opening from the bottom wall at a point near and forward of said used-blade-receiving opening and being integral with the bottom wall at said point and being depressibly resilient in a portion thereof.

5. A razor blade dispenser comprising a bottom wall, a stack of blades lying thereon and having longitudinal blade-locating slots therein, an end wall at the forward end of said stack, a resilient top wall forming with said end wall a shallow forward slot thru which a blade may be ejected, said bottom wall being formed to provide an elevated platform commensurate with the forward portions of said blades and a rearward depression commensurate with the rearward portions of said blades, a rearward thumb opening in said top wall at least part of which overlies at least part of said depression, a rearwardly and downwardly disposed used-blade-receiving slot, and a blade-guiding tongue extending forwardly and upwardly from the bottom wall and being integral therewith at a point forwardly of but near said rear wall and being depressibly resilient in a portion thereof.

6. A dispenser as in claim 5 wherein said top wall is provided centrally of the sides thereof with a downward protuberance extending over a forward end of said stack.

7. A razor blade dispenser comprising a bottom wall formed to provide an elevated platform at a forward portion thereof and an upwardly inclined ramp at the rear portion thereof and leading to said platform, a stack of resilient blades in said dispenser and disposed above said platform and said ramp, a top wall having therein a rearwardly disposed thumb opening at least part of which overlies said ramp, at least a portion of said platform being disposed forwardly of said thumb opening, means providing an upper forward dispensing slot thru which a blade may be dispensed by downward and forward pressure thereon thru said thumb opening which will tilt the stack of blades on the ramp and resiliently bend a blade being dispensed, means providing a lower rearward used-blade-receiving slot thru which a blade may be inserted rearwardly of said ramp and caused to ride up said ramp and extend over said platform, and a blade-guiding tongue extending forwardly and upwardly from and being integral with a portion of said ramp near and forwardly of the last-mentioned slot and being depressibly resilient in a portion thereof.

8. A razor blade container having top, bottom, side and end walls, a blade-dispensing slot in proximity to the upper portion of one of said end walls, a used-blade-receiving slot in proximity to the lower portion of the other of said end walls, a thumb opening in a portion of the top wall proximate to said other of said end walls, the bottom wall being upwardly inclined in a direction away from the second-mentioned slot at a position beneath at least a portion of said thumb opening and providing an elevated platform portion intermediate said upwardly-inclined portion and said one of said end walls, and a blade-guiding tongue extending upwardly and forwardly from the bottom wall and being integral therewith at a

point near and forwardly of said second-mentioned slot and being depressibly resilient in a portion thereof.

9. A razor blade container having top, bottom, side, and end walls, a blade-dispensing slot in proximity to the upper portion of one of said end walls, a used-blade-receiving slot in promixity to the lower portion of the other of said end walls, and a thumb opening in a portion of the top wall proximate to said other of said end walls, ramp means extending upwardly and forwardly of the used-blade-receiving slot, shoulder means laterally exterior of said upwardly-inclined means and spaced interiorly from said side walls, and a blade-guiding tongue extending forwardly and upwardly from and integral with said bottom wall at a point near the second-mentioned slot and being depressibly resilient to a portion thereof.

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