Feb. 20, 1951 E. J. GRAY 2,542,510

RAZOR BLADE MAGAZINE

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Fig. 1.

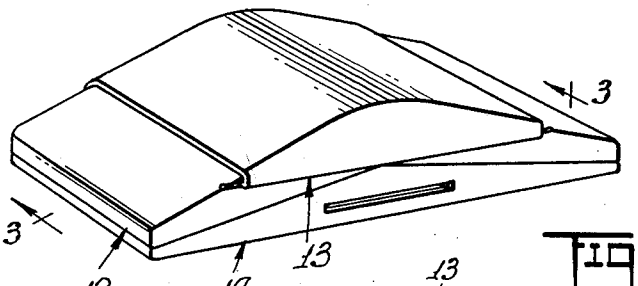


Fig. 2.

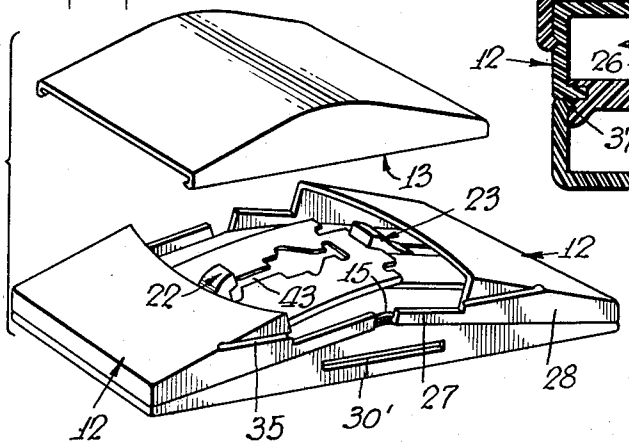


Fig. 4.

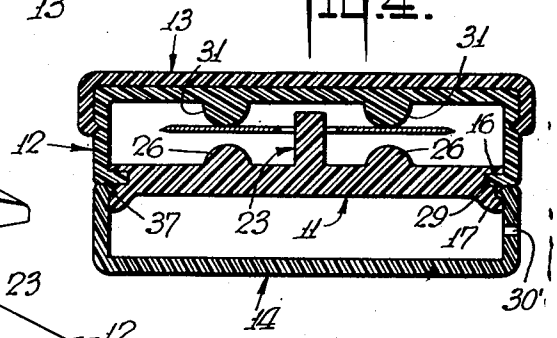
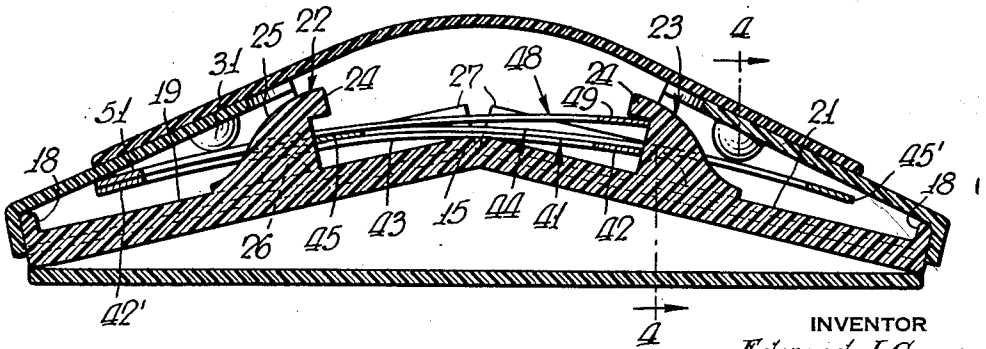


Fig. 3.



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FIG. 5.

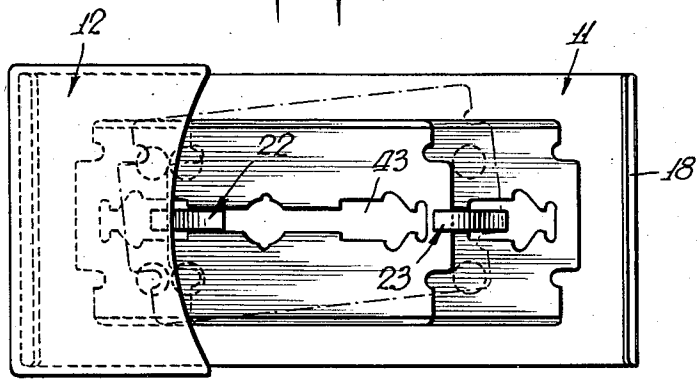
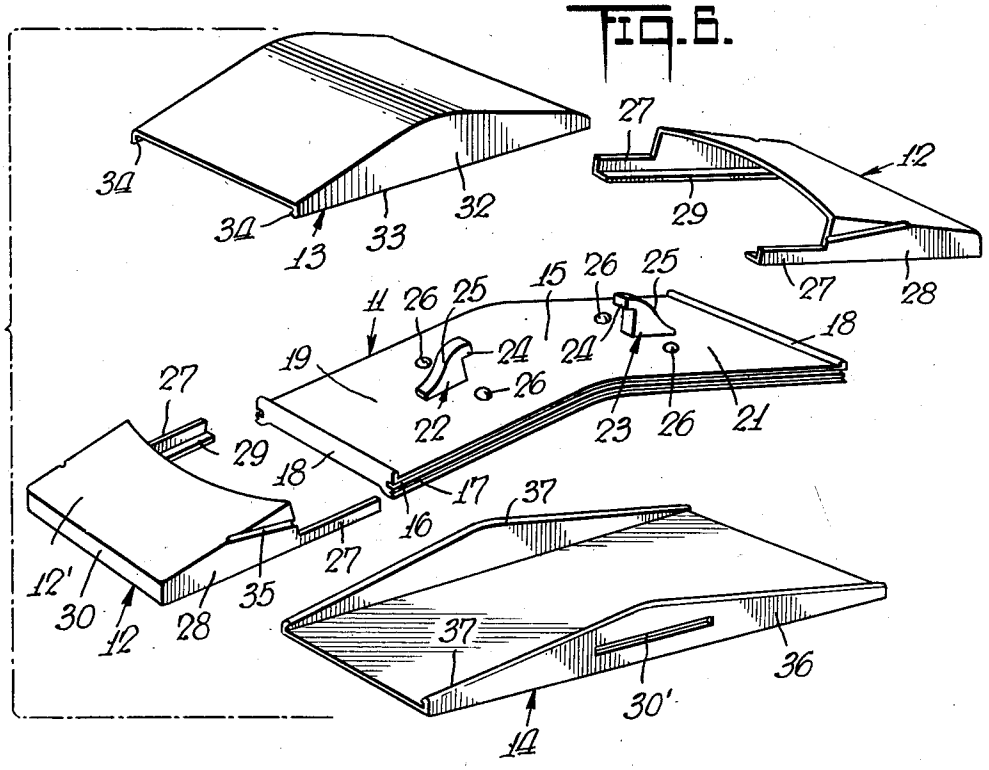


FIG. 6.



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RAZOR BLADE MAGAZINE

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Application March 10, 1948, Serial No. 14,101

16 Claims. (Cl. 206—16)

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This invention relates to razor blade magazines and more particularly to a magazine for dispensing conventional double edge safety razor blades.

It is among the objects of my invention to provide a magazine for double edge safety razor blades that is neat, compact, light in weight and simple and inexpensive to manufacture, having no moving parts that may jam or otherwise become out of order, that may readily be filled in the factory by mass production methods, or in the home by the user without the need for special tools or skill, and without danger of injury to the person, that retains a plurality of razor blades therein without the use of springs or clamps, and holds such blades firmly in place yet ensures convenient and ready removal of only one blade at a time when desired, without danger of jamming thereof or of injury to the edge of the blade or to the fingers of the user.

According to the invention, these objects are accomplished by the arrangement and combination of elements hereinafter described and particularly recited in the claims.

In the accompanying drawings in which are shown one or more of various possible embodiments of the several features of the invention,

Fig. 1 is a perspective view of the assembled device,

Fig. 2 is a view similar to Fig. 1 with the cover removed therefrom,

Fig. 3 is a longitudinal sectional view on a larger scale taken along line 3—3 of Fig. 1,

Fig. 4 is a transverse sectional view taken along line 4—4 of Fig. 3,

Fig. 5 is a top plan view of the device without the cover and one of the end pieces, and

Fig. 6 is an exploded perspective view of the device showing the parts thereof.

Referring now to the drawings, the device desirably comprises five parts including a base 11, a pair of identical end pieces 12, a top cover 13 and a bottom cover 14, all clearly shown in Fig. 6. These parts which are preferably molded from plastic, may be made of metal if desired.

The base 11 comprises a substantially rectangular plate bent slightly at its center to form a flattened inverted V with the peak or elevated portion 15 thereof extending transversely thereacross.

Each of the side edges of the base 11 has a pair of parallel grooves 16 and 17 therein extending the length thereof and each end of base 11 is provided with an upstanding transverse lip 18.

Rising from base 11 on each of the inclined faces 19 and 21 on each side of the elevated portion 15 thereof, are substantially triangular guides 22 and 23 respectively, preferably integral with the base 11 and longitudinally aligned between the side edges thereof. Each of the guides has a laterally projecting finger or stop 24 at its top, which fingers 24 are also longitudinally aligned and extend toward the elevated portion or peak 15, and a downwardly sloping upper edge 25 extending, respectively, toward the ends of the base.

Transversely aligned on the base 11 on each side of the guides 22 and 23, respectively, is a boss 26 which spaces the bottommost blades in the magazine from the base to prevent damage to the edge thereof.

Each of the end pieces 12 is preferably substantially wedge shaped, as shown, and desirably has arms 27 extending, respectively, from each of the depending side walls 28 thereof.

The lower edge of each of the side walls 28 and associated arms 27 has an inturned flange 29 which coacts with the grooves 16 on each side of the base 11, securely yet removably to affix said end pieces to said base 11 with the top portions 12' of said end pieces, respectively, positioned over and spaced from the ends of the base.

The underface of each of the top portions of said end pieces has a pair of transversely aligned bosses 31 thereon, preferably longitudinally aligned with bosses 26 on base 11 when the end pieces are affixed to the latter and displaced from vertical alignment therewith, being situated near the ends of the base.

The top cover 13 which substantially conforms in shape to base 11, has depending side walls 32 in the shape of an isosceles triangle, the bases 33 of which have inturned flanges 34 preferably integral therewith which may be positioned in grooves 35 in each side wall 28 of the end pieces, securely yet removably to retain the top cover 13 slidably mounted thereon.

The bottom cover 14 has upstanding side walls 36 also in the shape of an isosceles triangle, the upper edge of each having an inturned flange 37 which coacts with groove 17 on each side of base 11 rigidly to hold the bottom cover thereon, thereby providing a receptacle beneath the base 11 into which used razor blades may be inserted through a slot 30' in one of the side walls 36.

Assembly

To assemble the device, the base 11 is positioned directly over the bottom cover and pressed thereinto. As the plastic or metal bottom cover 14 is

slightly resilient, the side walls 36 thereof will spread sufficiently apart under such pressure to permit inturned flanges 37 to snap into grooves 17 on each side of the base 11, thereby securely holding the bottom cover in place. The end pieces 12 are then positioned with their flanges 29 aligned with the ends of grooves 16 and thereupon slid therein until the rear wall 30 of the end piece 12 abuts against upstanding lip 18 on the base. Top cover 13 may then be slid over the end pieces 12 so that its inturned flanges 34 engage and are positioned in grooves 35 in the side wall 28 of the end pieces 12.

Loading the magazine

To load the magazine with the top cover 13 and end pieces 12 removed therefrom, a conventional double edged razor blade 41, as shown in Fig. 3, is positioned on the base with one end 42 thereof positioned under finger 24 of guide 23 and with guide 22 extending through longitudinal slot 43 in the blade 41, in which position the other end 42' of blade 41 will extend beyond guide 22. A second blade 44 is then positioned on blade 41 with one end 45 positioned under finger 24 of guide 22 and with guide 23 extending through longitudinal slot 43 on blade 44, in which position the other end 45' of blade 44 will extend beyond guide 23. This stacking procedure is repeated until the desired number of blades are in the magazine.

End pieces 12 are then affixed to the base in the manner heretofore described. With the end pieces 12 in the position shown in Fig. 3, bosses 31 thereof will press downward on the end portions of the blades extending beyond the respective guides 22 and 23, thereby exerting tension on and depressing such blades and bending them over elevated portion 15 which acts as a fulcrum. This will cause the other ends of the blades beneath the associated fingers 24 to rise, thereby limiting the movement of the blades and securely retaining them in place against said fingers 24 by reason of their tensed condition caused by the bending thereof.

As the bottommost blades 41 and 42 will be seated on bosses 26, the cutting edges of such blades will be spaced from the base and thereby protected from dulling or chipping.

With the magazine thus loaded, the top cover may be affixed thereon in the manner heretofore described to prevent the entry of dirt or dust into the magazine and facilitate handling thereof.

To remove a blade it is merely necessary to slide open the top cover and move the top blade 48, as shown in Fig. 3, longitudinally of the base 11 away from guide 23. As the end 49 of such blade is disengaged by finger 24, the resiliency of the blade will cause it to straighten so that its end 49 rises above guide 23 and may readily be grasped between the fingers and pulled. As the end 51 of blade 48 abuts against the sloping surface of guide 22, it will readily ride up the latter to permit convenient removal of the blade.

It is to be noted, as shown in Fig. 5, that if the user, when withdrawing the blade, should inadvertently move it out of longitudinal alignment with the base, the slides of the guides will abut against the edges of slots 43 in the blade, thereby preventing the cutting edges of the blade from rubbing against the walls of the end pieces with resultant injury to the blade.

When the top blade is pulled during removal, the end of the blade below will be forced against the associated guide and consequently only one blade can be removed at a time with no danger of jamming.

The magazine herein described is attractive, is easy to transport and simple to use. Even with wet hands, a blade may readily be removed therefrom and the inconvenience and difficulty incurred in removing the wrapping from paper covered blades is dispensed with.

As many changes could be made in the above construction and many apparently widely different embodiments of this invention could be made without departing from the scope of the claims, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. A magazine for a plurality of stacked resilient safety razor blades, said magazine comprising a base, a fulcrum on said base for said blades, means on said base on one side of said fulcrum to engage one end of the topmost blade in such stack, means on said base on the other side of said fulcrum to engage one end of the second blade when said topmost blade is removed from the top of such stack, and means to depress the free ends of each of such blades respectively and pivot the latter on said fulcrum, whereby as the pivotal movement of such blades is limited by said blade engaging means such blades will be tensed and securely retained on said base with one end of the uppermost blade of such stack engaged by its associated blade engaging means.

2. A magazine for a plurality of stacked resilient safety razor blades, said magazine comprising a base, an elevated portion on said base to engage a portion of the underface of the bottommost blade in such stack, means on said base on one side of said elevated portion to engage one end of such topmost blade in such stack, means on said base on the other side of said elevated portion and longitudinally aligned with said first named means to engage one end of the second blade when said topmost blade is removed from the top of such stack, and means to depress the free ends of each of such blades respectively and bend the latter over said elevated portion to tense such blades, whereby such blades will be securely retained on said base with an end of the uppermost blade engaged by its associated blade engaging means.

3. A magazine for a plurality of stacked resilient safety razor blades of the type having a longitudinal slot therein, said magazine comprising a substantially rectangular base, having an elevated portion extending transversely thereacross to engage a portion of the underface of the bottommost blade in such stack, means on said base on one side of said elevated portion to engage one end of such topmost blade in such stack, and extending through the slot in the second blade from the top of such stack, means on said base on the other side of said elevated portion, and longitudinally aligned with said first named means, to engage one end of such second blade when said topmost blade is removed and extending through the slot in such topmost blade, and means at each end of said base to depress the free ends of each of such blades respectively and bend the latter over said elevated portion, thereby to tense such blades, whereby the latter will be securely retained on said base with one end of the topmost blade on such stack

engaged by its associated blade engaging means.

4. A magazine for a plurality of stacked resilient safety razor blades of the type having a longitudinal slot therein, said magazine comprising a substantially rectangular base having an elevated portion extending transversely thereacross to engage a portion of the underface of the bottommost blade in such stack, means on said base on one side of said elevated portion to engage one end of such topmost blade in such stack, guide means on said base on the other side of said elevated portion and extending through the slot in such topmost blade, means rigid with said guide means to engage one end of the second blade from the top of such stack when said topmost blade is removed, guide means rigid with said first named engaging the means and extending through the slot in such second blade, and means at each end of said base to depress the free ends of each of such blades respectively and bend the latter over said elevated portion, thereby to tense such blades, whereby the latter will be securely retained on said base with one end of the topmost b'ade in such stack engaged by its associated blade engaging means.

5. The combination set forth in claim 4 in which means are provided, associated with said guide means to space the cutting edges of the bottommost blade from said base.

6. As an article of manufacture, a magazine for a plurality of resilient safety razor blades of the type having a longitudinal slot therein, said magazine comprising a base having a fulcrum point thereon, a pair of upstanding guides rigid with and longitudinally aligned on said base on each side of said fulcrum respectively, blade end engaging means on each of said guides and depressing means for such blade ends affixed to and positioned over said base on each side of said fulcrum point respectively.

7. As an article of manufacture, a magazine for a plurality of resilient safety razor blades of the type having a longitudinal slot therein, said magazine comprising a substantia'ly rectangular base having an elevated portion extending transversely across the center thereof, a pair of upstanding guides rigid with and longitudinally aligned on said base on each side of said elevated portion respective'y, blade end engaging means on each of said guides, and means to depress one end of each of such blades affixed to and positioned over said base at each end thereof respectively.

8. As an article of manufacture, a magazine for dispensing stacked resilient safety razor blades of the type having a longitudinal slot therein, said magazine comprising a substantially rectangular base having an elevated portion extending transversely across the center thereof, a pair of upstanding guides rigid with and longitudinally aligned on said base on each side of said elevated portion respectively along the middle of said base, blade end engaging means rigid with each of said guides and extending laterally inward therefrom and longitudinally aligned therewith, and means to depress one end of each of such blades, said means compressing an end piece affixed to and positioned over said base at each end thereof, respectively, whereby when said magazine is loaded, said end pieces will straddle the ends of such blades and depress such ends.

9. The combination set forth in claim 8, in which means are provided on the underface of each of said end pieces to engage the top face of the topmost blade in such stack.

10. As an article of manufacture, a magazine for dispensing resilient safety razor blades of the type having a longitudinal slot therein, said magazine comprising a substantially rectangular base having an elevated portion extending transversely across the center thereof, a pair of upstanding guides rigid with and longitudinally aligned on said base on each side of said elevated portion, respectively, and longitudinally aligned thereon, said guides each having a laterally extending finger rigid therewith, respectively, at the top thereof and longitudinally aligned therewith adapted to engage an end of such blades, and means to depress one end of each of such blades, said means comprising an end piece affixed to and positioned over said base at each end thereof, respectively, whereby when said magazine is loaded, said end pieces will straddle the ends of such blades and depress such ends.

11. The combination set forth in claim 10, in which said base has a groove in each of its side edges extending along the length thereof and said end pieces each have depending side walls with inturned flanges at the lower edges thereof, said flanges coacting with said grooves securely yet detachably to connect said end pieces to said base.

12. The combination set forth in claim 10, in which said base has a groove in each of its side edges extending along the length thereof, and an upstanding transverse lip at each end thereof, and said end pieces each has a depending rear wall and depending side walls with inturned flanges at the lower edges thereof, said flanges coacting with said grooves securely yet detachably to connect said end pieces to said base and said depending rear wall abutting against said transverse lip properly to position said end pieces on said base.

13. The combination set forth in claim 10, in which a bottom cover is provided having upstanding side walls adapted to coact with the side edges of said base to grip the latter, one of said side walls having a slot therein whereby a receptacle may be formed beneath said base into which used blades may be inserted.

14. The combination set forth in claim 10, in which said base has a groove in each of its side edges extending along the length thereof and in which a bottom cover is provided having upstanding side walls with inturned flanges at the upper edges thereof, one of said walls having a slot therein, said flanges coacting with said grooves securely to affix said bottom cover to said base whereby a receptacle is formed by said bottom cover beneath said base into which used blades may be inserted.

15. The combination set forth in claim 10, in which said end pieces each having depending side walls and a top cover is provided having depending side walls with means thereon to slidably engage the side walls of said end pieces.

16. The combination set forth in claim 10, in which said base has a pair of superposed grooves in each of its side edges extending along the length thereof, said end pieces each having depending side walls with inturned flanges at the lower edges thereof to coact with the uppermost grooves securely yet detachably to connect said end pieces to said base, in which a top cover is provided having depending side walls with means thereon to slidably engage the side wall of said end pieces and in which a bottom cover is pro-

vided having upstanding side walls with inturned flanges at the upper edges thereof, one of said walls having a slot therein, said flanges coacting with the bottommost grooves securely to affix said bottom cover to said base, whereby a receptacle is formed by said bottom cover beneath said base into which used blades may be inserted.

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