United States Patent [19]

Ferrier, Jr.

[11] **3,760,938**

[45] **Sept. 25, 1973**

[54] **COMBINED MAGAZINE RECEPTACLE FOR USED BLADES AND PROTECTIVE COVER FOR SAFETY RAZOR HEADS HAVING BLADES THEREIN**

[76] Inventor: **Ted L. Ferrier, Jr.**, P.O. Box 1451, Dallas, Tex.

[22] Filed: **Sept. 28, 1970**

[21] Appl. No.: **75,892**

[52] **U.S. Cl.** ..... **206/16 BC**, 30/90, 206/16 A

[51] **Int. Cl.**..... **B65d 85/54**

[58] **Field of Search**..... 206/16 A, 16 B, 16 BC, 206/16 C, 38 R, 47 R; 30/34 R, 40, 90; 132/80; 312/246; D4/17, 19; D33/23, 26; D9/186

[56] **References Cited**

UNITED STATES PATENTS

2,344,962	3/1944	Benjamin	206/16 BC
2,697,276	12/1954	Austin	30/90 UX
D149,614	5/1948	Carr	30/90 UX
D148,931	3/1948	Hopkins	30/90 UX
2,330,639	9/1943	Testi	206/16 C UX
1,979,123	10/1934	Taylor, Jr.	30/90 UX
1,937,756	12/1933	Glass	30/90 X
2,935,183	5/1960	Barnes, Jr.	206/16 A

FOREIGN PATENTS OR APPLICATIONS

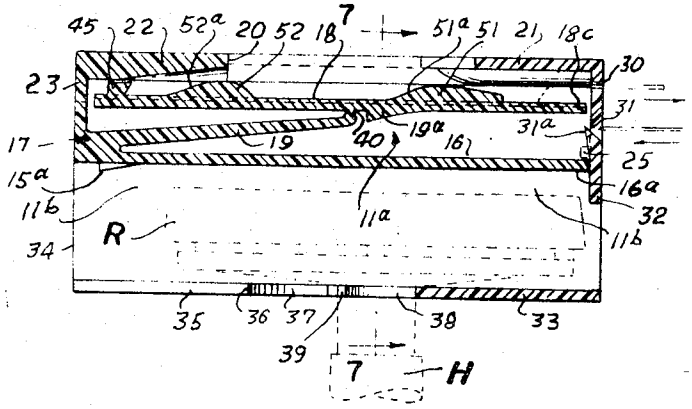
708,825	10/1931	France	30/90

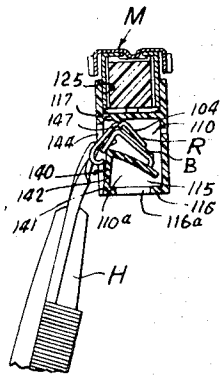
Primary Examiner—Herbert F. Ross
Assistant Examiner—Steven E. Lipman
Attorney—E. Hastings Ackley

[57] **ABSTRACT**

A magazine for new safety razor blades for storing and dispensing blades for use and a receiver and guard for covering the head of a safety razor having a blade therein to protect the edge of the blade against damage and prevent the blade from damaging other items. The dispenser and guard is designed for use with double edge blade razors and for single edge blade razors. A receptacle for used blades is also incorporated.

12 Claims, 31 Drawing Figures





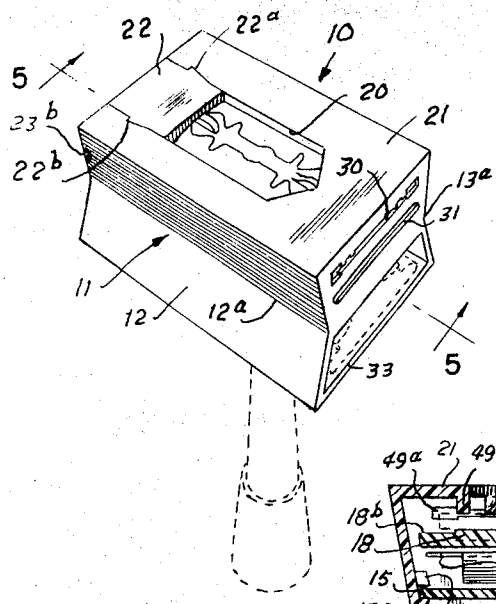


Fig. 1

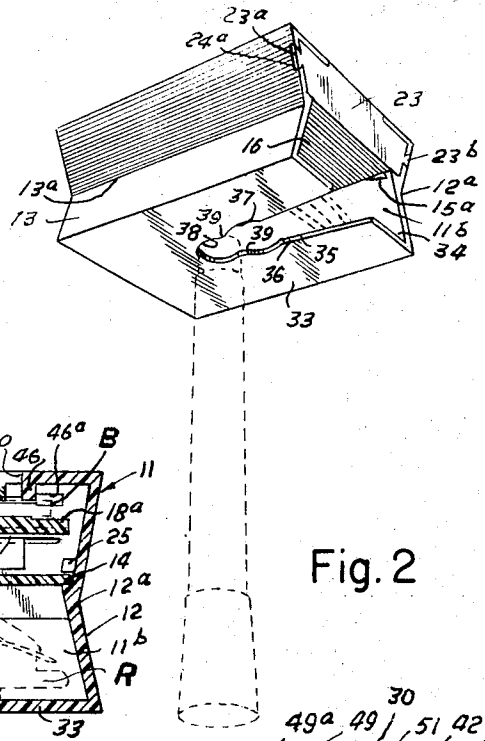


Fig. 2

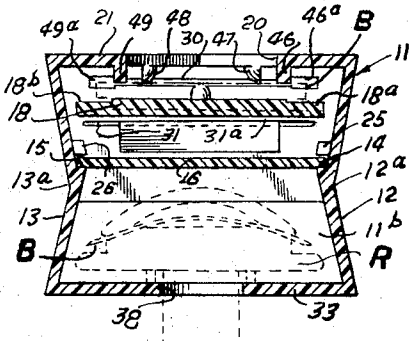


Fig. 7

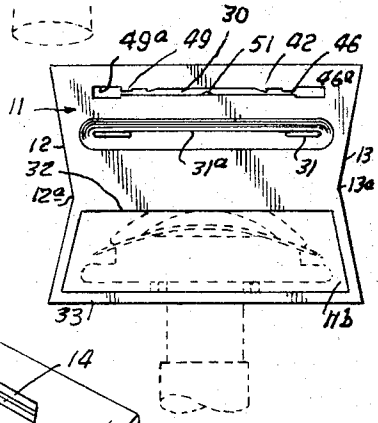


Fig. 4

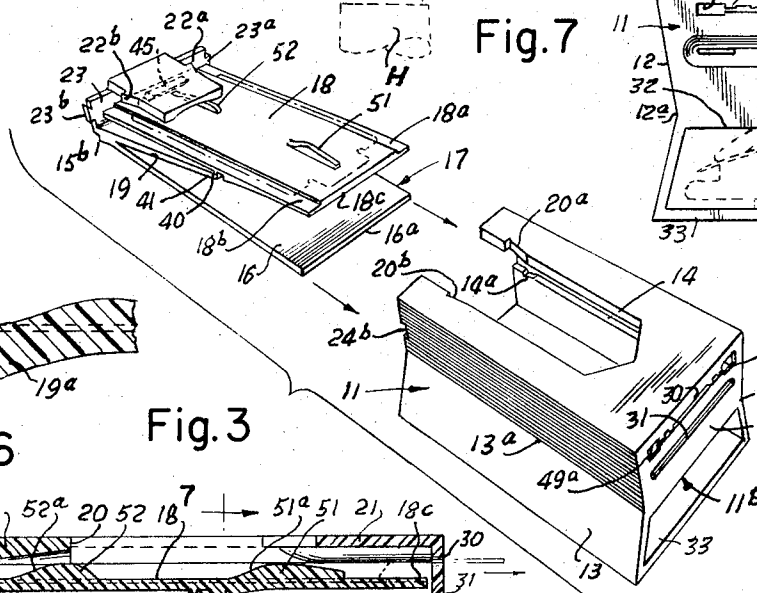


Fig. 3

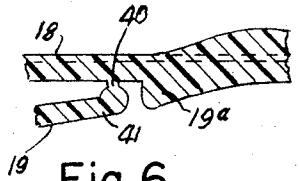


Fig. 6

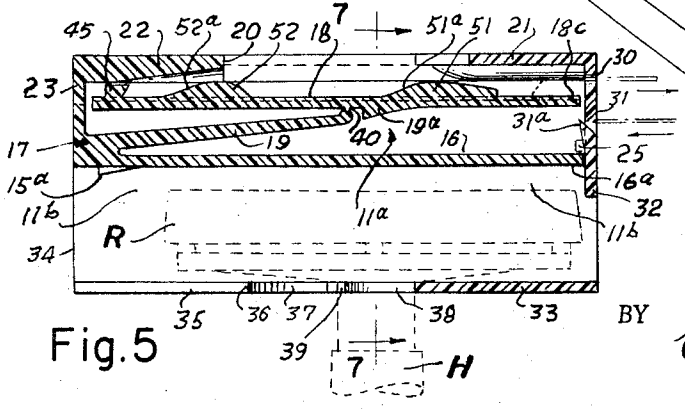


Fig. 5

INVENTOR
Ted L. Ferrier, Jr.

BY Espastings Ackley
ATTORNEY

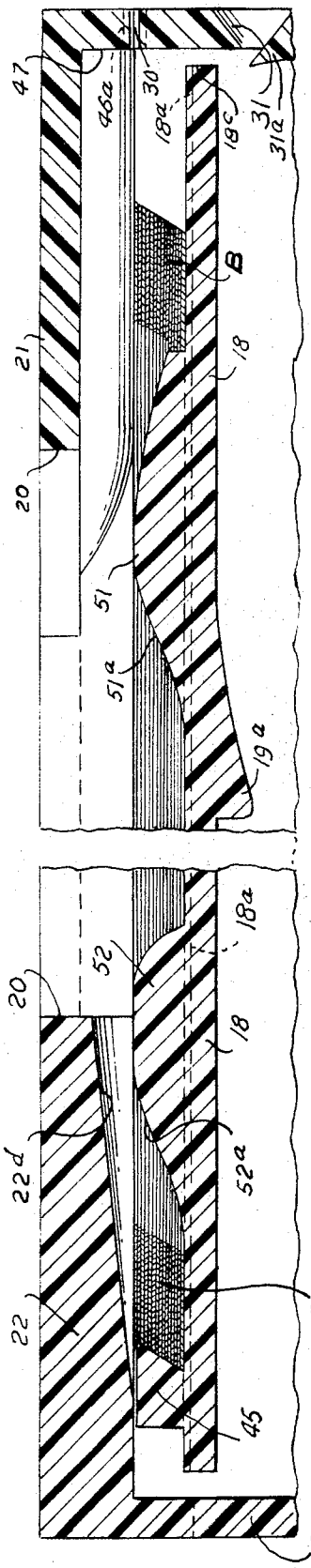


Fig. 5-A

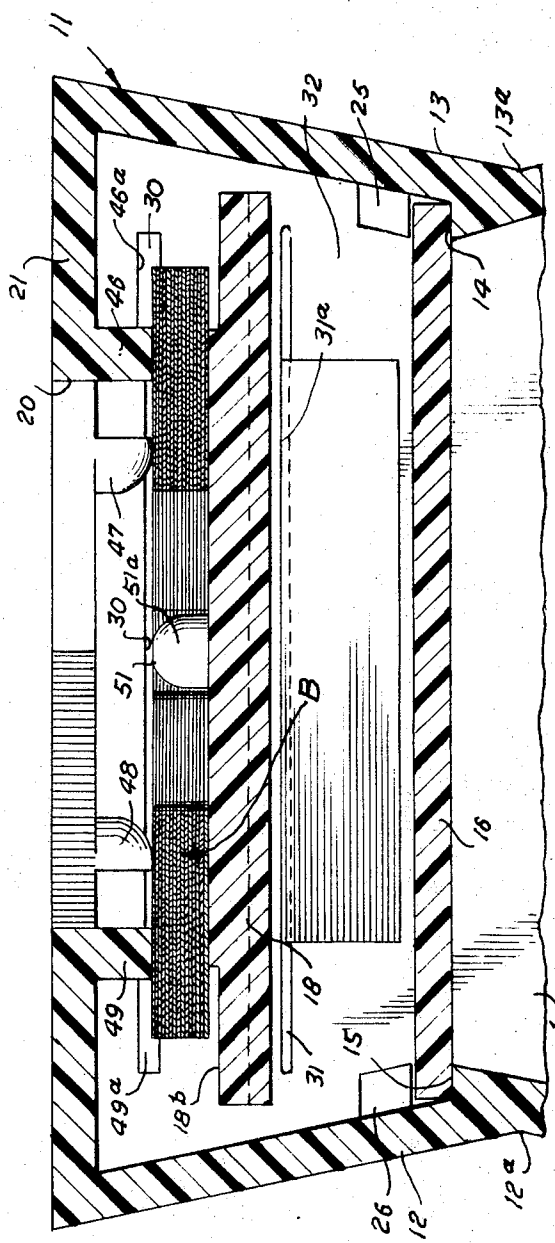


Fig. 7-A

INVENTOR
Ted L. Ferrier, Jr.

BY Keyes, Hastings & Ackley
ATTORNEY

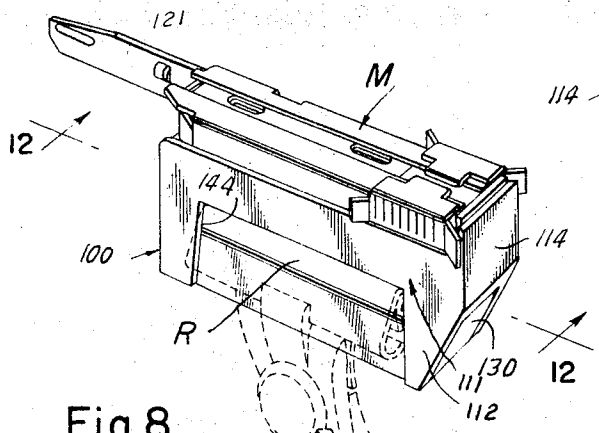


Fig.8

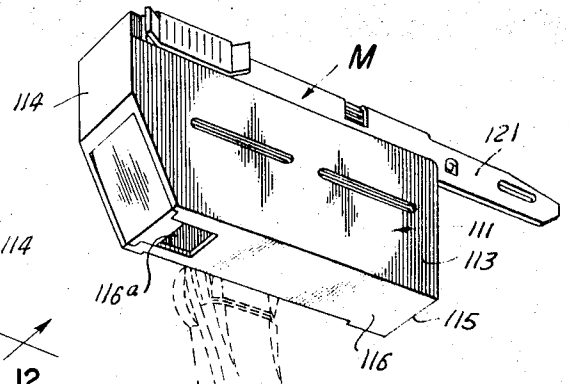
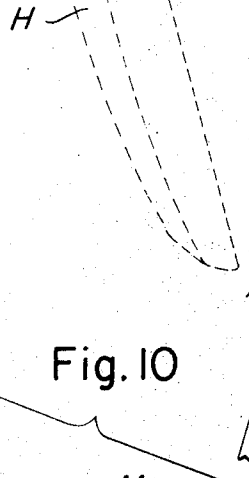


Fig.9



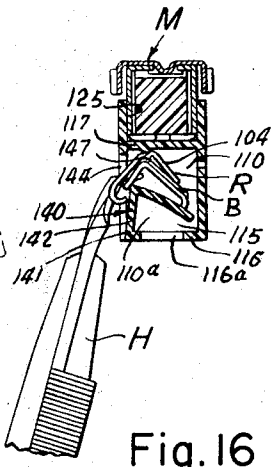
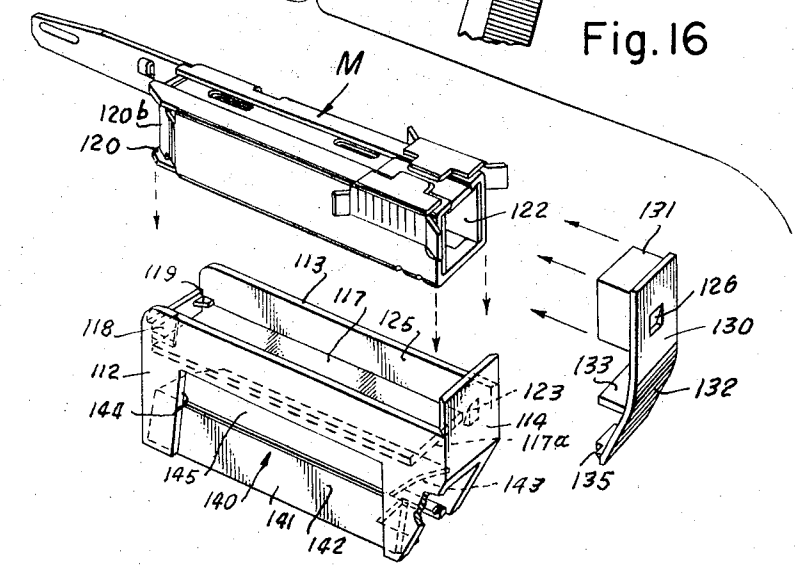


Fig. 10

Fig. 16



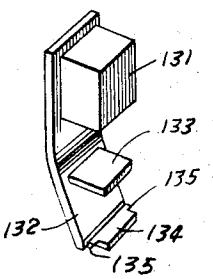


Fig. 11

INVENTOR
Ted L. Ferrier, Jr.

BY Espastings Ackley
ATTORNEY

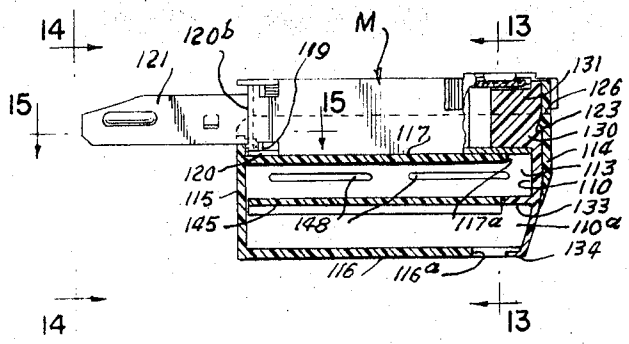


Fig. 12

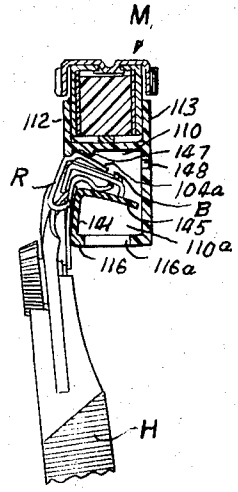


Fig. 13

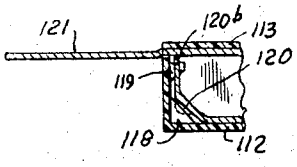


Fig. 15

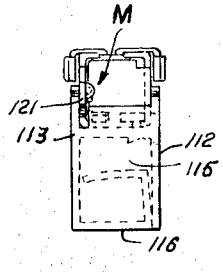


Fig. 14

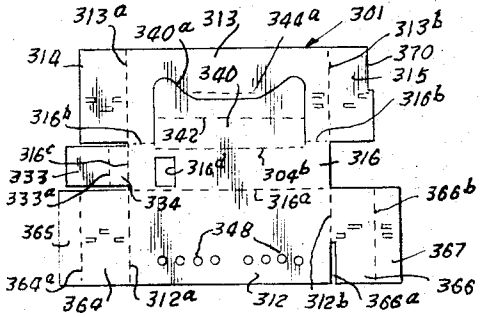


Fig. 20

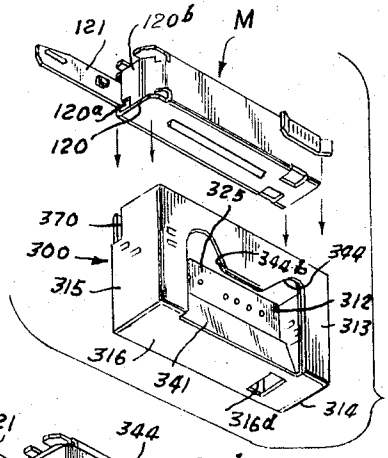


Fig. 23

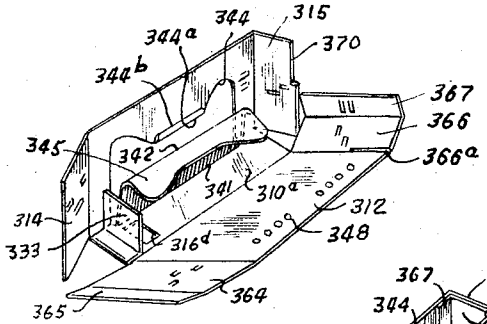


Fig. 21

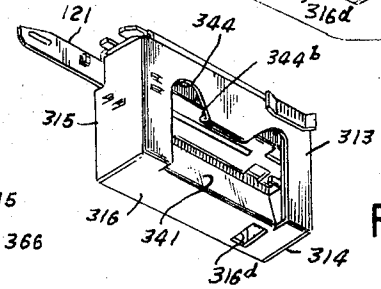


Fig. 24

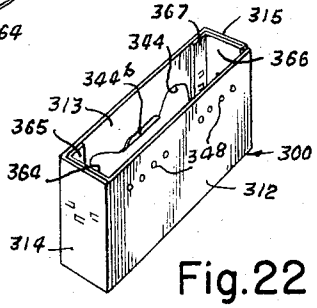


Fig. 22

INVENTOR
Ted L. Ferrier, Jr.

BY Cyrastings Ackley
ATTORNEY

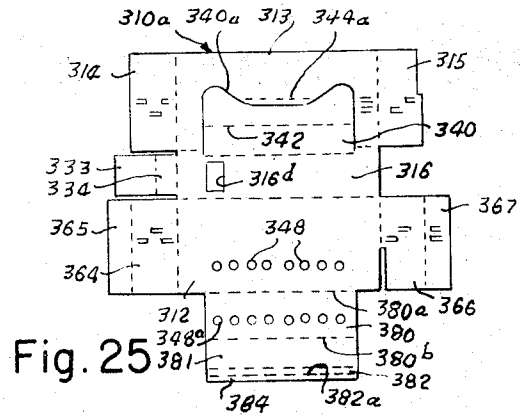


Fig. 25

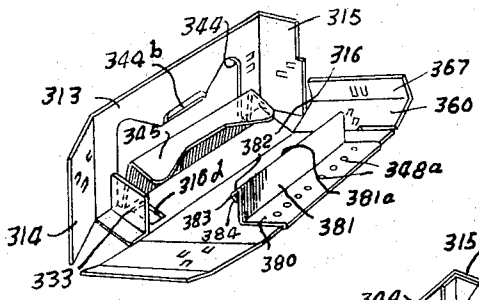


Fig. 26

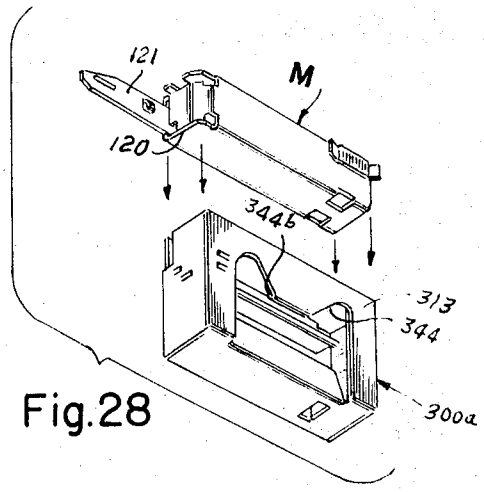


Fig. 28

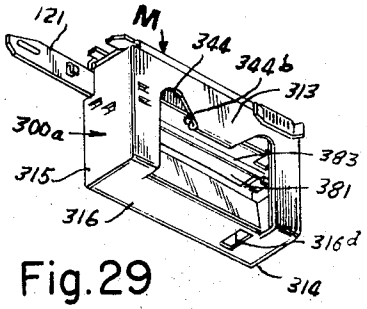


Fig. 29

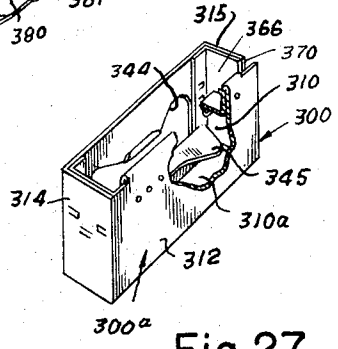


Fig. 27

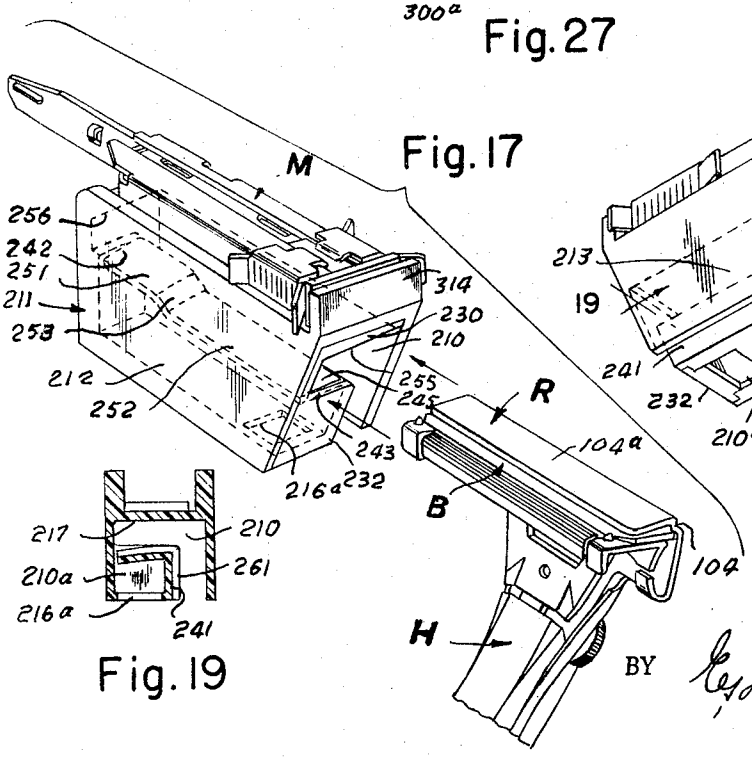


Fig. 17

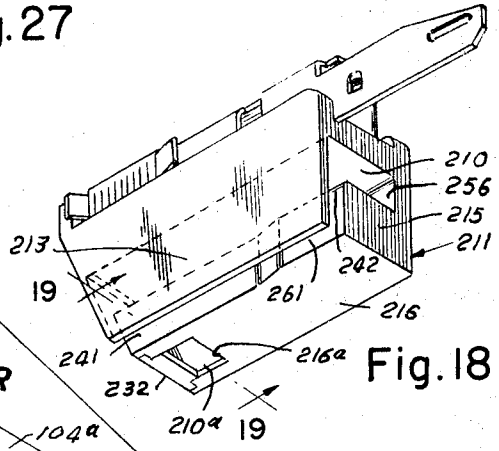


Fig. 18

Fig. 19

INVENTOR
Ted L. Ferrier, Jr.

BY Cyrastings Ackley
ATTORNEY

COMBINED MAGAZINE RECEPTACLE FOR USED BLADES AND PROTECTIVE COVER FOR SAFETY RAZOR HEADS HAVING BLADES THEREIN

This invention relates to new and useful improvements in protective guards for the heads of safety blade razors, and to magazines for dispensing blades for use in such razor.

It is one object of the invention to provide a new and improved protective cover for the head of a safety razor having a blade therein to protect the edges of the blade against damage and to prevent the blade from cutting items against which it might be brought into contact.

A particular object of the invention is to provide a protective guard for a safety razor head having a blade therein for protecting the blade against damage and for preventing the blade from damaging other items, and wherein a magazine of new blades is a composite part of the protective guard, and wherein a receptacle may be provided for used blades.

Another object of the invention is to provide a protective cover or guard for heads of safety razors having blades therein adapted to fit the commonly used safety razors, having a magazine dispenser for new blades attached to the guard for dispensing new blades for carrying new blades handy to the safety razor for use therewith, and a receptacle is provided for used blades when the blade of the safety razor has been replaced with a new blade.

An important object of the invention is to provide a guard for the head of a safety razor having a blade therein for protecting the blade and preventing the blade from damaging other items with which it may come in contact, and wherein a magazine new blade dispenser is incorporated as a part of the protective device, the protective device being adapted to be combined with commonly available magazine dispensers of at least one type presently on the market.

Another object of the invention is to provide a protective cover or guard for the head of safety razors having blades therein which is economical to manufacture, simple to use, small in size and provides means for carrying a magazine of new blades with the safety razor for use therewith as needed, and for receiving used blades to prevent discarding the same where persons could be injured by them.

Additional objects and advantages of the invention will be readily apparent from the reading of the following description of a device constructed in accordance with the invention and reference to the accompanying drawings thereof, wherein;

FIG. 1 is a perspective view from above of the upper portion of a safety razor guard, dispensing magazine and used blade receptacle adapted to fit double edged blade safety razors;

FIG. 2 is an isometric view of the underside of the guard and dispenser of FIG. 1;

FIG. 3 is an exploded view of the case and the blade carrying support for the magazine and base of the used blade receptacle;

FIG. 4 is an end view of the device showing the retaining end of the guard;

FIG. 5 is a longitudinal vertical sectional view taken on the line 5 — 5 of FIG. 1;

FIG. 5–A is a greatly enlarged sectional view of the upper portion of the device as shown in FIG. 5.

FIG. 6 is an enlarged fragmentary view of the connecting web between the spring and the dispensing support for the new blades;

FIG. 7 is a transverse vertical sectional view taken on the line 7 — 7 of FIG. 5;

FIG. 7–A is a greatly enlarged sectional view of the new blade dispenser and used blade receptacle comprising the upper portion of the device as shown in FIG. 7;

FIG. 8 is an isometric view from above and the rear end of a modified form of the guard and dispenser;

FIG. 9 is an isometric view from below and the rear of the other side of the device of FIG. 8;

FIG. 10 is an exploded view of the guard and used blade receptacle and the dispenser with the means for securing the dispenser in place on the guard;

FIG. 11 is an isometric view of the securing means shown in FIG. 10 from a point above and the inner side of the same;

FIG. 12 is a vertical longitudinal sectional view through the guard, receptacle and dispenser of FIG. 8;

FIG. 13 is a vertical transverse sectional view taken on the line 13 — 13 of FIG. 12 and showing a razor in place in the guard chamber;

FIG. 14 is an end view of the device taken on the line 14 — 14 of FIG. 12;

FIG. 15 is a fragmentary horizontal cross-sectional view taken on the line 15 — 15 of FIG. 12;

FIG. 16 is a vertical transverse sectional view similar to FIG. 13 showing the device in use with another type of safety razor;

FIG. 17 is an isometric view of a modified form of the guard, receptacle and dispenser for single edge injector blade razors;

FIG. 18 is an isometric view from below of the opposite side and end of the guard and dispenser of FIG. 17;

FIG. 19 is a transverse vertical sectional view of the guard, receptacle and dispenser receiver taken on the line 19 — 19 of FIG. 18;

FIG. 20 is a plan view of a metal blank from which a modified type of metal protective device or guard, used blade receptacle and dispenser holder is formed;

FIG. 21 is a view showing the metal guard and receptacle partially shaped from the blank of FIG. 20;

FIG. 22 shows the guard and receptacle of FIG. 21 completely folded into shape;

FIG. 23 is an exploded view showing a blade dispenser being fitted into place in the guard and receptacle;

FIG. 24 shows the dispenser in place in the guard as a combination guard, dispenser and used blade receptacle;

FIG. 25 is a plan view of a metal blank for a further modified form of protective guard, used blade receptacle and dispenser holder made of metal;

FIG. 26 is a view similar to FIG. 21 showing the guard and receptacle being folded into shape from the blank;

FIG. 27 shows the guard and receptacle completely folded into shape;

FIG. 28 is an exploded view similar to FIG. 20 showing the dispenser in position to be fitted into the guard and receptacle to complete the assembly; and

FIG. 29 shows the completed modified guard, dispenser and receptacle.

In the drawings, the numeral 10 designates generally a combined guard, blade magazine and used blade receptacle for double edged blade safety razors. A hous-

ing or shell **11** is preferably made of a slightly flexible or resilient plastic, such as polyallomer or high or medium impact styrene, and is formed in substantially a rectangular configuration in plan view and has a longitudinally extending reduced mid-portion **12***a* and **13***a* in its sides **12** and **13**, respectively, extending from end to end thereof and providing upstanding internal longitudinal supporting shoulders **14** and **15** within the housing or shell at substantially mid-height for carrying a base or dividing plate **16**, forming the lower portion or base of a blade storage and dispensing mechanism **17** (FIG. **3**), also made of resilient plastic like the housing, which fits in the upper portion of the housing. The blade dispensing mechanism includes a support **18** for new blades and a spring arm **19** carried at one end of the base **16** for biasing the support **18** toward an aperture or operating access opening **20** in the upper cover **21** of the housing or shell, through which the blades may be manipulated to be dispensed manually as will be hereinafter explained. A latch tongue **22** is formed integral with the upper end of the end wall **23** of the blade dispensing mechanism which extends upwardly from the base plate **16**, as shown in FIGS. **3** and **5**. A pair of inwardly extending lugs **25** and **26** are formed on the interior of the side walls **12** and **13**, respectively, of the shell or housing above the shoulders **14** and **15**, and these lugs engage over and hold the free end **16***a* of the base plate **16** downwardly against the upwardly facing shoulders **14** and **15** in the upper section **11***a* of the shell. A detent recess **14***a*, shown as V-shaped, is formed in the upper surface of the shoulder **14** and a similar recess is formed in the shoulder **15** for receiving detent catch members **14***b* and **15***b* on the opposite sides of the cover plate **16**. Dove-tail locking lugs **23***a* and **23***b* are formed on the opposite sides of the upright end member **23** and engage in corresponding dove-tail recesses or slots **24***a* and **24***b* formed in the ends of the upper portions of the side walls **12** and **13**, respectively, for locking the dispenser mechanism **17** in place in the upper section **11***a* of the shell or housing **11**. The latch tongue **22** also has retaining detent catch members **22***a* and **22***b*, shown as V-shaped, formed on its opposite edges which engage in correspondingly V-shaped catch recesses **20***a* and **20***b*, formed in the opposing side edges of the opening **20**, as shown in FIG. **1**, to securely lock the dispenser mechanism in place in the housing. The end wall **23** closes the open end of the upper section **11***a* of the housing through which the mechanism is inserted above the shoulders **14** and **15**.

A new blade exit or dispensing aperture **30** and tapered used blade inlet or receiving aperture **31** are formed in the opposite integral closed end wall **32** of such upper section of the housing or shell, and a flexible inwardly and upwardly inclined lip **31***a* closes the middle portion of the inlet **31**. The end wall **32** of the shell extends downwardly to a point spaced above the bottom wall or base **33** of the shell and provides means for limiting movement of a razor blade head in the lower section or receiver chamber **11***b* formed in the lower portion of the shell below the dividing plate **16**.

A longitudinally extending inwardly tapered recess **35** is formed in the bottom wall of the housing and has a pair of spaced substantially circular segmental arcuate retaining recesses **37** and **38**, respectively, for gripping the handle H of a razor below the head to prevent displacement of the razor from within the receiver chamber **11**a. The inner recess **38** at the inner end of the slot **35** is smaller than the adjacent recess **37** and is designed to receive and grip the smaller razor handles, while the recess **37** receives and grips the larger handles of commonly available razors, and the protuberances **36** and **39** at the edges of the arcuate recesses, and the resilient plastic of the case, permit the handles to enter the recesses without destruction or damage to the bottom wall **33** of the receiver chamber **11***b* which forms a guard for the razor head R and the exposed sharp edges of the blade B carried by the razor head.

The blade support and pressure plate member **18** of the dispenser mechanism is connected transversely at its central portion by a thin web **40** to the outer reduced end **41** of the spring arm **19** of the dispenser mechanism, as clearly shown in FIGS. **3**, **5** and **6**. The web extends completely across the width of the pressure or support plate **18**, and permits the plate to tilt about that line of connection, as well as move downwardly as result of flexing of the elongate tapered spring arm **19**.

A plurality of razor blades of the double edged type, designated generally B, are supported on the upper surface of the pressure plate **18** and are pressed upwardly into engagement with the lower ends of a plurality of laterally spaced longitudinally extending rib slide members **46**, **47**, **48** and **49** formed on the underside of the top or cover **21** of the housing. The ribs reduce the frictional contact of the upper surfaces of the blades with the cover of the housing. Relieved spaces **46***a* and **49***a* are provided in the outer ends of the blade dispensing aperture **30** laterally outwardly of the ribs **46** and **49**, respectively, to prevent the sharp edges of the blades from contacting the cover of the case. Similarly, relieved sections **18***a* and **18***b* are formed along the side edges of the upper surface of the pressure plate or support member **18** for the same purpose.

The blades are held against movement rearwardly off the pressure plate toward the end wall **23** of the dispenser by an upstanding undercut stop shoulder **45** extending transversely on the upper rear surface of the plate, and are guided by a pair of upstanding longitudinally aligned spaced guide ribs **51** and **52** formed on the central portion of the pressure plate **18** and extending longitudinally thereof. The guide rib **51** is spaced inwardly from the outer end **18***c* of the support or pressure plate, while the rib **52** is disposed near the stop shoulder **45** on the plate, and these ribs extend upwardly through and cooperate with the axial openings in the blades to hold the blades in place on the support against lateral movement thereon and to guide the longitudinal movement of the blades as they are moved out of the dispensing mechanism.

As a blade is moved by the thumb of the user pressing against the upper blade through the opening **20** in the cover **21** of the housing **11**, the rear portion of the support plate **18** may tilt downwardly pivotally about the web **40** to permit the blade to pass over the sloping rear upper surface **52***a* of the projecting guide rib **52**, so that the closed end at the rear of the opening in the blade will pass over the guide rib. The blade will be guided in its longitudinal movement by the engagement of the sides of the opening in the blade with the guide rib **51**, and will slide along the lower edges of the slide ribs **46** – **49**, inclusive. As the blade is moved toward the exit or delivery opening **30**, the closed rear end of the axial opening in the blade will engage and move over the sloping rear upper surface **51***a* of the guide rib **51**, and

the outer end 18c of the support member 18 may tilt downwardly about the web 40 on the spring arm 19 to permit the rear end of the axial opening or slot in the blade to pass over the guide rib 51 and the blade to pass out through the delivery opening 30. As the support plate 18 tilts, the guide rib 52 on the support plate prevents additional blades from moving with the uppermost blade and retains the blades in place on the support plate. The upper edges of the guide ribs 51 and 52 are convexly shaped and the underside of the tongue 22 is concavely relieved at 22*d* to permit the upper blade to move therepast without catching thereon, but also to permit only one blade to be moved off the support plate at a time.

It will therefore be seen that the razor blades B may be slid off the support plate 18, being guided by the guide ribs 51 and 52 in their longitudinal movement through the delivery opening 30 in the end wall 32 of the housing 11, until the blade may be engaged in the usual manner on the razor head between the two clamping portions of the head for use. It will also be seen that the guide ribs 51 and 52 retain the additional new blades in place on the supporting plate 18 until another new blade is to be dispensed.

Used dull blades taken from the razor head may be inserted through the receiving aperture 31 in the end wall 32 of the housing 11 into the space in the upper section 11a of the housing between the base or divider plate 16 and the blade supporting pressure plate 18 and below the spring arm 19, where they will be retained by the lip 31*a* and remain until the housing is discarded after all new blades have been used. A deflector 19*a* on the underside of the pressure plate 18 guides the blades downwardly past the end 41 of the spring arm as the blades are inserted in the used blade receptacle.

When the razor is not in use, the head R having the blade B therein, as shown in dotted lines, may be inserted through the open end 34 of the receiver guard chamber 11*b* and slipped longitudinally of the head into such chamber until the head engages the end wall 32 at the opposite end of the chamber, or until the handle is disposed in one of the retaining recesses 37 and 38 in the slot 35. The lower chamber section 11*b* of the housing therefore provides a positive cover or guard for the razor head having the sharp exposed edges of the blades therein, to protect the blade edges against damage and prevent the edges of the blade from damaging other materials with which they might otherwise come in contact.

It will be seen that the device provides not only a guard for the head and blade in place in the head, but also provides a dispensing magazine for storing and dispensing new blades when desired for use. In addition, the upper section 11*a* of the housing between the supporting plate 18 and the divider plate 16 may be used as a receptacle for used blades which have been removed from the razor after they have become dull with use or otherwise. All parts of the case, the guard, the dispenser and the receptacle are preferably formed of a resilient plastic which is of sufficiently strong formulation to retain its shape and to provide the desired resiliency for the spring arm and the handle gripping recesses, and which does not have sharp or scraping edges, or hard surfaces which would dull blades in the dispenser magazine or guard chamber should they contact it.

It is particularly worthy of note that the razor head having the blade clamped therein may be used for shaving, then rinsed and wiped or shaken relatively dry and inserted within the guard receiver chamber 11*b* where the blade edges are protected from damage and from damaging other personal items, such as a shaving kit, or wearing apparel, or the hands of the user, or the like, and that new blades for the razor are carried in the dispensing mechanism 17 forming a part of the guard. Also, that a separate receptacle section is provided for used dull blades after they have been removed from the razor.

While a particular dispensing mechanism and used blade receptacle has been illustrated and described, it is believed readily apparent that dispensers and used blade compartments such as are shown in the patents to Shnitzler, U.S. Pat. No. 2,671,555, and Metzler, U.S. Pat. No. 2,669,348, may be incorporated in the housing 11 above razor head guard receiver chamber 11*b* for use with such guard chamber.

A modified form of the guard and dispensing mechanism 100 is shown in FIGS. 8 through 16, wherein the guard body is formed of one of the flexible resilient plastics of desired characteristics and is provided with means for receiving an injector blade dispensing magazine M of the type used for single edged blades of the well known "Schick" or similar single edged blades, for single edge injector type razors. The dispenser itself is one commonly available on the market and may be inserted in place in the guard for use without modification, or, if desired, the guard may be reused time after time with additional dispensers.

In this form of the device, the guard and used blade receptacle 100 is shown as substantially rectangular in shape, with a case or body portion 111 having upright side walls 112 and 113, one closed end wall 115 and a short retainer wall 114 at the other end, and a planar bottom 116. A longitudinal horizontal supporting wall 117 is formed in the intermediate portion of the body 111 and extends from the closed end 115 thereof to a point spaced from the lower end of the retaining wall 114. The supporting wall 117 extends between the side walls 112 and 113 of the case and forms a cover for the receiver or guard chamber 110 and used blade receptacle 110*a* formed in the case 111 between the supporting wall 117 and the bottom 116. The upper surface of the support wall 117 is disposed below the upper edge of the end closure wall 115, and a triangular retaining rib 118 and a projecting lug 119 are formed adjacent the side walls 112 and 113, respectively, of the housing spaced above the upper surface of the supporting wall 117 for engaging over each side of the projecting flange 120 on the bottom of the dispenser magazine M to hold the free end of the dispenser having the insert key 121 thereon in place in the upwardly opening trough 125 formed above the support wall 117 between the side walls 112 and 113 and the end walls 114 and 115.

As shown in FIG. 15, the triangular retaining member 118 engages over one corner of the flange 120 of the dispenser magazine M, while the lug 119 is spaced inwardly from the wall 113 a slight distance and engages in the opening between the end wall 120*b* and the bottom flange 120 of the dispenser as seen in FIGS. 13 and 15.

The retaining wall 114 has an angular toothed detent catch 123 formed on its inner surface and disposed to engage in a mating aperture 126 formed in the outer

surface of a latching member **130**, which has a rectangular boss **131** on its opposite surface adapted to engage in the recess **122** in the rear end of the dispenser magazine M. When the boss **131** is engaged in the recess **122**, the depending leg **132** of the latch member **130** may be inserted downwardly through the space between the end **117***a* of the supporting wall **117** and the retaining end wall **114** of the case or housing. A central transverse rib **133** formed on the inner surface of the latch member **130** is disposed in the chamber **110** substantially medially between the supporting wall **117** and the bottom **116** of the case. A lip member **134** is formed on the lower end portion of the inner surface of the leg **132** of the latch member and is shaped to be disposed in the open end of a used blade entrance slot or opening **116***a* at that end of the base **116** of the housing. A pair of V-shaped catches **135** project laterally along the lower end of the leg **132** outwardly from the sides of the lip member **134** and are arranged to engage in complemental V-shaped notches **136** formed in the upper surface of the base **116** on either side of the slot **116***a* to hold the leg **132** in place between the sides **112** and **113** of the case. The detent catch member **123** on the housing engages in the detent recess **126** on the latch member to hold the latch member in place in the housing and prevent undesired displacement of the dispensing magazine M from its position in the chamber **125**.

A supporting and retaining tongue member **140** is provided in the receiver guard chamber **110** of the body, being formed integral at its lower end **141** with the base **116** and having an upright portion **142** extending upwardly within the side wall **112** of the chamber **110**, and longitudinally between the closed end **115** and a point **143** below the end **117***a* of the support wall **117**. The tongue member has an arcuate flexible supporting tongue **145** which extends downwardly and inwardly from the upper end of the upright portion **142** thereof into the chamber **110** to provide a concavo-convex flexible razor head support which may be flexed in said chamber. The tongue member **140** is sufficiently flexible and resilient to permit the support tongue **145** to swing about the connection of the lower end **141** of the upright portion **142** with the base, while the support tongue **145** may also flex about its connection with the upper end of the upright portion **142** to permit the guard and blade edge of a single edge injector blade type safety razor of the "Schick" type to be inserted through a lateral aperture or opening **144** in the side wall **112** to engage the upper convex surface of the support tongue **145** and be supported thereby within the receiver guard chamber **110**.

A longitudinally extending lock rib **147** is formed on the underside of the supporting wall **117** spaced inwardly and lying parallel to the upper edge of the aperture **144** in the side wall **112**, and this rib provides a catch and detent means for engaging the pressure plate **104** of the razor head H of a non-adjustable injector razor, as shown in FIG. **16**. The head will slip into the opening **144** with the face bar or guard sliding along the convex surface **146** of the resilient supporting tongue member **145** until the inner portion of the handle next to the head rests against the upper portion of the upright section **141**, and the upper end of the blade clamp member **104** engages the depending latching rib **147**, as shown in FIG. **16**. Also, however, another form of injector blade safety razor, such as the adjustable blade exposure "Schick," may be inserted in the chamber **110** until the catch rib **104***a* on the pressure plate of the razor engages within the space between the latching rib **147** and the upper edge of the opening **144**, as shown in FIG. **13**, to hold the head of the razor in place in the receiver guard chamber **110** with the sharp blade edge enclosed in the chamber. Longitudinal vent slots **148** are provided in the side wall **113** of the guard housing below the supporting wall **117** and above the resilient supporting tongue member **145** to permit the razor head and blade to dry, to prevent rusting, and to prevent the trapping of water in the container or transmittal of water to clothing or luggage.

It is believed readily apparent that a used razor blade may be inserted through the opening **116***a* into the used blade receptacle **110***a* below the flexible support tongue **145**, and that the rib **133** on the leg **132** of the latch member extending between the side walls **112** and **113** closes the upper end of the used blade receptacle **110***a* between the end **143** of the support tongue **145** and the leg of the latch member to retain the used blades in place in the used blade receptacle.

It will be seen that in this form of the combination razor guard, new blade dispenser magazine and used blade receptacle, the body or housing **111** of the guard is designed to receive, support and hold in place therein a commercially available type of blade dispensing container magazine for flat single edged blades. Also, if desired the guard may be used repeatedly with the new blade magazine dispensers as the blades of each magazine are completely used up and disposed of by the user, though such is not usually desirable or convenient. Also, the used blades may be emptied from the receptacle **110***a* when the latch member **130** is operated to release the dispenser from its position in the housing.

The guard and dispenser may be used as a stand to hold the razor handle upright. The flat surface above the aperture through which the user engages the blades to dispense them provides a surface for supporting the guard and the dispenser and the razor with the handle upright.

Also, this double edged blade guard and dispenser are adapted to have the dispenser offset laterally of the guard so that the dispenser lies in a common plane with the guard and the blades may be dispensed from either end of the dispenser. Also, the dispenser may be mounted on the guard with the closed end of the blade handling mechanism integral with the closed end of the guard chamber, and the case for the dispenser form a sleeve slidable onto the blade dispensing mechanism for dispensing blades outwardly from the opposite end thereof, and for receiving used blades at such opposite end. The handle of the razor would come out through the slot on the end of the guard opposite the dispenser.

A slightly modified form of the combination guard, blade dispenser and used blade receptacle is shown in FIGS. **17** through **19**, wherein the guard body or housing **211** is also formed of resilient flexible plastic material in the same manner as the form of FIGS. **8** through **16**. In this form, however, the razor head receiver or guard chamber **210** is open at its opposite ends through the closed end wall **215** at one end and through the leg **232** of the latch member **230** at the opposite end of the body. The side wall **212** of the body is connected directly to the bottom **216** thereof and the upright section **241** of the tongue supporting member extends up-

wardly from the bottom 216 and has the resilient flexible tongue member 245 extending inwardly and downwardly from the upper end 242 of the upright portion 241 toward the side wall 212, as shown in FIG. 19. The end 242 of the tongue member 245 adjacent the end wall 215 is free of connection thereto and disposed closely adjacent the inner surface of that end wall so as to flex downwardly within the chamber 210 below the divider supporting wall 217. The opposite end 243 of the tongue member is disposed adjacent the inner surface of the leg 232 of the latch member so that the tongue member 245 provides the used blade receptacle 210*a* between the base 216 and the underside of the tongue member 245 and the end wall 215 and latch member leg 232. The upper surface of the tongue member 245 has the portion 251 between its mid portion and the end nearest the end wall 215 of the housing offset vertically from the upper surface 252 of the tongue member nearest the latch member 230. The shoulder 253 between the two offset surfaces is inclined to facilitate entry of razor heads into the receiver chamber 210.

Adjustable type single edge blade injector razors have a greater thickness in the head portion than the non-adjustable injector razors shown in FIG. 16. Accordingly, the adjustable razors are inserted through the opening 255 through the latch member 230 and the portion of the head at the handle engaged on the surface 252 with the blade disposed within the chamber 210. Non-adjustable blades have a lesser thickness between the face bar or guard and the pressure plate of the head and are inserted through the opening 256 in the end wall 215 and engage the offset higher surface 251 on the tongue member to be retained thereby in the guard chamber 210. Similarly, the upright portion 241 of the tongue member 240 exposed in the receptacle 210 is offset toward the side wall 213 to provide an upset portion 261 coextensive with the upset portion 251 near the opening 256 in the end wall 215. The inclined offset surface 263 between the surface 241 and the upset surface 261 facilitates movement of the razor heads through the chamber. The narrower non-adjustable razor head, such as is shown in FIG. 16, is thus disposed in the portion of the chamber 210 with the parts of the head adjacent the blade engaging the upset offset portions 251 and 261 of the upright arm 241 and the supporting tongue member of the guard member, while the adjustable blade injector shaver razors are disposed in engagement with the surfaces 241 and 252 of the upright member and the tongue member, respectively.

All other parts of the device are identical to those of the form illustrated in FIGS. 8 through 16, and will not be again described.

In this form of the device, the razor head is inserted longitudinally into the guard member 210 and frictionally engages the swingable tongue member 245 to be held in place therein. The used blades are inserted through the opening 216*a* in the bottom wall 216 in the same manner as in the form previously described. The injector is also mounted on the guard body 211 in the same manner as the form first described, being secured thereon by the latch member 230 which is held in engagement with the magazine M by the retainer wall 214 in the manner already described.

All advantages of the device of FIGS. 8 through 16 are also present in this form of the device.

Still another form of the combination razor guard, dispenser and used blade receptacle is shown in FIGS. 20 through 24. This form of the device is made of sheet metal from a blank 301 having a base 316 outlined by side fold lines 316*a* and 316*b* and an end fold line 316*c*. A side wall 312 is outlined by fold lines 312*a* at one end and 312*b* at its opposite ends and by the fold line 316*b* of the base. An end closure wall 364 projects from one end of the side wall 312 and has upper and lower edges and a side edge defined by a fold line 364*a* between the end wall and a flap 365, and an opposite side edge defined by the fold line 312*a*. Similarly, an end wall 366 has upper and lower ends and side edge defined by the fold line 312*b* and a cut-away 366*a* formed therein, and an opposite side edge defined by a fold line 366*b* between the end wall 366 and a supporting flap 367. A side wall 313 is defined by the fold line 316*a* and by end fold lines 313*a* and 313*b*, respectively, aligned with the ends of the base and of the fold lines 312*a* and 312*b*, respectively, of the opposite side wall. An end closure wall 314 is joined to the side wall 313 by the fold line 313*a*, and a similar end closure wall 315 is joined to the end of the side wall 313 along the fold line 313*b* and has a cut away slot 370 formed in the outer edge of the end wall 315 spaced from the fold line 313*b* and disposed to register with the cut away portion 366*a* of the end flap 366. A stop wall 333 is joined by a fold flap 334 along the fold line 333*a* and the fold flap 334 is joined with the base 316 along the fold line 316*c*. A cut line 340*a* defines a resilient supporting tongue member 340 formed integral with the side wall 312 to be formed therefrom when the device is erected. As clearly shown in FIG. 20, the cut line 340*a* extends across the fold line 316*b* and a fold line 340*b* is formed between the ends of the cut line 340*a* and the base 316.

Suitable vent perforations 348 may be provided along the upper portion of the side wall 312 parallel to the fold lines 316*a*. Also, connecting and supporting tabs are formed in the end walls 314, 364 and the tab 367, and side wall 313 and disposed to be deflected or deformed inwardly toward the interior of the housing to engage in registering openings in the end walls and side walls when the same is folded into shape, as is seen in FIG. 21, to connect the members together. Stop and connecting tabs in the end wall 315 and registering apertures or tabs formed in the end wall 366 provide stops for the dispenser magazine as will be describd hereinafter.

The blank 301 is folded along the fold lines and the stop member 333 is brought into the upright position shown in FIG. 21 by bending the fold flap 334 back inwardly over the upper surface of the base 316 and the stop member upwardly perpendicular to the base. The side wall 312 is bent along the fold line 316*a* to an upright position and the end wall 364 is bent along the fold line 312 to lie parallel to the fold line 316*c* of the base member, and the flap 365 bent to lie along the fold line 316*b*. The connector flap 367 is bent inwardly along the fold line 366*b* to lie along the fold line 316*b* parallel to the inner surface of the side wall 313. The end wall 366 is bent along the fold line 312*b* and the lugs in the end closure walls, flap and side walls are deformed inwardly through the registering lug openings to connect the closure flap, side wall and end walls together to hold the same in an erect condition and to provide stops and retainer lugs for the outlet end of the dispenser magazine M.

The end wall **364** at the opposite end of the side wall **312** is folded along the fold line **312***a* to lie above and in alignment with the adjacent end of the base **316** defined by the fold line **316***c*, and the flap **365** is bent along the fold line **364***a* to lie along the inner surface of the side wall **313.** The closure wall **314** is bent along the fold line **313***a* to abut the end wall **364** and the tabs in the end closure walls **314** and **364** are bent inwardly to secure the end walls together in erected position and provide projecting stop means for the rear end of the dispenser mechanism M. When the device is assembled in this fashion, the free end of the cut away tongue member **340** is bent along the fold line **340***b* to form an upright portion **341** extending upwardly in the opening **344** defined by the cut line **340***a*, and the free end of the tongue member is bent along the fold line **342** inwardly into the chamber **110** to extend inwardly and downwardly from the fold line **342** at the upper end of the upright portion **341** toward the side wall **312.** The metal guard case now closely resembles the plastic guard case of the form of FIGS. **8** through **16,** inclusive. The downwardly extending edge portion of the side wall at the opening **344** in the side wall is bent along the fold line **344***a* to provide a stop shoulder **344***b* for engaging the groove **104** of the razor head pressure plate **104***a* to hold the same in place in the guard chamber **310.** The space beneath the inturned tongue member **345** and the base **316** and between the end wall **315** and the stop member **333** provides a used blade receptacle **310***a*. A slot **316***d* is formed in the base **316** adjacent the upstanding stop member **333,** through which the blades may be inserted into the blade receptacle **310***a*.

The flange **120** on the bottom of the dispenser magazine M is supported by the lower tabs on the end walls **315** and **366** and the side wall **313** and tab **367,** while the upper lugs engage in the opening **120***a* in the lower portion of the end wall **120***b* of the magazine above the flange **120** while the upper lugs on the side wall **313** and tab **367** engage above the opposite corner of the flange **120** to hold the forward or discharge end of the magazine in place in the guard housing. Similarly, the rear end of the magazine base is supported on the lower lugs in the end walls **364** and **314,** while the upper lugs in such end walls engage above the base plate at such end of the magazine to retain the magazine in place in the upper open chamber **325** of the housing. The space between the base or lower wall of the magazine M and the flexible tongue member **345** provides the guard chamber **310,** while the space beneath the tongue member **345** and the bottom wall **316** of the housing defines the used blade receptacle into which blades may be inserted through the aperture **316***d* in such bottom wall.

In this form of the combination guard, dispenser and used blade receptacle, the magazine M is securely connected or secured to the guard body and is not adapted to be removed therefrom for any reason. This provides an inexpensive guard and used blade receptacle. If desired, a rib similar to the rib **147** of FIG. **13** may be formed along the underside of the base **120** of the magazine spaced inwardly from the catch shoulder **344***b*, whereby the pressure plate **104***a* of the non-adjustable injector blade safety razor may be inserted into the guard chamber **310** and have the pressure plate groove **104** engage the rib **347** to hold the head in place in the chamber with the sharp blade edge enclosed therein for protectiong against damage.

In addition, the adjustable type injector razor, such as is shown in FIG. **13,** may be inserted through the aperture **344** until the pressure plate **104***a* thereof engages the catch shoulder **344***b* is engaged between the stop shoulder **344***b* and the flange or rib **347** on the magazine in the same manner as in the device shown in FIG. **13.**

The metal case is adapted for manufacture as a part of the magazine dispenser to provide a guard chamber and used blade receptacle which may be attached to the injector type razor head for protecting the blade in the head against damage, or against damaging other items or persons or property, in the same manner as the forms previously described.

A still further slight modification of the device of FIGS. **20** through **24** is shown in FIGS. **25** through **29,** inclusive, wherein the side wall **313** of the device is provided with a fold flap **380** joined to the side wall **312** along a fold line **380***a* and joined at its opposite side along fold line **380***b* to a supporting flange **381** which has a fold line **381***a* defining one edge thereof and also defining one edge of one side **382** of a V-shaped rib member **383.** The opposite side **384** of the V-shaped rib member **383** is defined by a fold line **382***a* which forms the apex of the rib between the sides **382** and **384.** The V-shaped rib member **383** is formed by bending the side **384** toward the member **382** along the fold line **382***a* and then bending the side **382** along the fold line **381***a* until the free edge of the side **384** abuts the underside of the projecting flange **381.** The fold flap **380** is bent along the fold line **380***a* to lie along the inner surface of the side wall **312,** as clearly shown in FIG. **26,** and the flange member **381** is disposed perpendicular to the side wall **313** with the V-shaped rib member **385** projecting toward the base wall **316.** Drain apertures **348***a* in the flap **380** register with the apertures **348** in the side wall **312** when the flap is folded to contact the side wall.

The flange member **381** is disposed to lie parallel to and in a common horizontal plane with the stop catch member **344***b* and to provide a catch rib corresponding to the catch rib **147** of the form of the device shown in FIGS. **8** through **16,** inclusive, for engaging the pressure plate groove **104** of the non-adjustable injector blade razor. The upper surface of the flange **381** also provides a support for the underside or bottom of the magazine M when the magazine is inserted in the case.

All other features of construction of this form of the combination guard, magazine and used blade receptacle are the same as those of the form illustrated in FIGS. **20** through **24,** inclusive, with the exception of the supporting flange **381** and retainer rib **383.**

It will also be seen that the forms of FIGS. **1** through **7** may be used as a stand to hold the razor handle upright, the flat surface of the upper cover **21** being placed on any flat surface, such as a medicine cabinet shelf or the like, to support the razor with the head down for proper drying or the like and the handle up for ease of grasping for use. Shelf space is conserved by such use of the device.

It is also readily apparent that the double edged blade guard and dispenser may be arranged with the dispenser offset laterally of the guard portion of the housing, so that the dispenser lies in a common plane with the guard and blades are dispensed from the end of the

dispenser alongside and parallel to the guard chamber. The dispenser for the double edged blade may also be mounted on the guard chamber in such a manner that the closed end of the blade handling mechanism **17** is formed integral with the closed end of the guard chamber and the case for enclosing the blade handling or dispensing mechanism is slidable onto such mechanism with the openings for dispensing the blades disposed at the end of the sleeve opposite the guard so that the blades are dispensed outwardly from the end of the sleeve opposite the opening in the opposite end of the guard for receiving the razor head in the guard chamber. Also, the used blades may be receivable in an opening at such end. The latter two variations of the guard and dispenser for the double edged blades is not believed as desirable as the form illustrated and described in FIGS. **1** through **7**, but are obvious modifications thereof.

It will, therefore, be seen that a combination guard for the head of safety razors, having the sharp edges of razor blades clamped therein and exposed, has been provided with a magazine for dispensing new blades for use in the razor and a receptacle for receiving and containing used, dull blades. It will also be seen that the device is adaptable for use with double edged blade razors and with single edged injector type razors. While the device has been described as useable with single and double edge razors it is readily apparent that it is adapted for use with any other type safety blade razor.

It will be noted that all forms of the device completely enclose the cutting edge or edges of the razor blade in the razor head when the head is inserted into the guard chamber, and that the cutting edge of the blade is held out of engagement with any part of the guard chamber or housing while the razor head is being inserted in the guard chamber and in which it is disposed so that the blade is not damaged while in place in the guard chamber, or while being inserted into or removed from same.

The foregoing description of the invention is explanatory only, and changes in the details of the constructions illustrated may be made by those skilled in the art, within the scope of the appended claims, without departing from the spirit of the invention.

I claim:

1. A safety razor head guard and blade dispenser mechanism including: a housing having elongate side walls and end walls joining said side walls, a top cover and a bottom cover extending parallel to and spaced from each other forming a receptacle, one of said side and end walls having an opening therethrough into said receptacle adapted to pass into said receptacle the head of a safety razor to receive and hold in a protected position in said receptacle the head of a safety razor with a blade clamped therein with its cutting edge exposed; and a dispenser mechanism in said housing on the top cover of said receptacle containing and dispensing new, unused razor blades for use in the razor, said dispenser mechanism having means providing an opening therein opposite the top cover of said receptacle providing access therethrough to the one of the new blades contained therein disposed in a position adjacent the opening, said razor head being removable from said receptacle to receive a new blade from said dispenser.

2. A combination razor guard and blade dispenser of the character set forth in claim **1**, including: means on said receptacle for receiving the handle of the razor; and retaining means for holding the handle to retain the head against unintentional displacement from the receptacle.

3. A safety razor head guard and blade dispenser mechanism of the character set forth in claim **1**, wherein the dispenser mechanism comprises: an elongate casing, and resilient blade support means in said casing biasing new blades in said dispenser mechanism toward the top cover thereof; and a blade exit opening in one end wall of the casing through which the blades may be ejected therefrom.

4. A safety razor head guard and blade dispenser mechanism of the character set forth in claim **1**, wherein the dispenser mechanism comprises: a generally rectangular casing having side walls, end walls, a cover and a bottom, said casing having at one end wa'l a blade exit opening; blade supporting means supporting new razor blades in stacked rotation within the casing; said casing having an opening in its cover exposing the adjacent blade in the casing in position to be moved from said casing outwardly through the exit opening from the casing.

5. A combination razor guard and blade dispenser of the character set forth in claim **4**, wherein said casing has an imperforate bottom carrying a resilient arm and forming a dividing wall between said dispenser mechanism and the razor head receptacle therebelow.

6. A combination razor guard and blade dispenser of the character set forth in claim **4**, wherein a used blade inlet opening is formed in an end wall of the casing of the dispenser opening in the casing below the blade support and above the bottom of the dispenser mechanism to provide a receptacle for used blades.

7. A safety razor head guard and blade dispenser mechanism of the character set forth in claim **4**, wherein the receptacle for receiving the razor head has a longitudinally extending opening from one end thereof to the middle and retaining means is provided at the inner end of the longitudinal opening for engaging the handle of a razor disposed in said guard receptacle.

8. A safety razor head guard and blade dispenser of the character set forth in claim **4**, wherein said dispenser mechanism is adapted to receive a plurality of stacked double edge razor blades having longitudinal slots in their mid portion; said means supporting said blades in stacked relation and including upright guide means extending longitudinally along the mid-portion of the supporting means toward the exit opening, a resiliently supported blade support biasing the stack of blades toward the opening in the cover of the casing into position adapted to be engaged by the thumb or finger of the user for movement of the blade nearest said opening from the support through the exit opening in the end wall of the casing.

9. A combination receiver and guard for a safety razor head having a blade clamped therein with its cutting edge exposed in operative position and a dispenser for new blades including: a body having side walls, end walls, a top, and a bottom; a receiver and guard chamber in said body, having an entrance opening formed in a sidewall of said body being adapted to receive through said entrance opening and hold in said chamber in a protected enclosed position the head of a safety razor having a blade clamped therein with its cutting edge exposed in operative position, said razor head

being supported in said chamber with the cutting edge of the razor blade in said head being inserted first through said opening transversely of the chamber; detent means on the body adjacent the entrance opening engaging and holding said razor head in place in said chamber; magazine dispenser means in the top of said body parallel to and substantially coextensive with and spaced from the receiver and guard chamber holding and dispensing unused razor blades for use in the safety razor; and a receptacle in said body, parallel to and spaced from said dispenser means and from said receiver and guard chamber, having an opening thereinto through one of said end walls, said receptacle being adapted to receive through said opening the used or dull blades from the safety razor and to hold said blade therein against displacement from said receptacle.

10. A safety razor head guard and blade dispenser mechanism including: a housing having a razor head guard receptacle therein adapted to receive and hold in a protected position the head of a safety razor with a blade clamped therein with its cutting edge exposed; a used blade receptacle adapted to receive and contain used or dull blades; trough means on said housing, spaced from and disposed substantially parallel to the razor head guard receptacle, having an opening thereinto facing to the exterior of the housing on the side thereof opposite said razor head guard receptacle, said trough means receiving and supporting a blade dispensing mechanism therein spaced from and adjacent the head guard receptacle and retaining means on said housing releasably engaging and holding said blade dispensing mechanism in position in said trough means.

11. A safety razor head guard and blade dispenser of the character set forth in claim **10,** wherein the head guard receptacle, the used blade receptacle and the dispenser supporting trough means and retaining means are formed as a unit.

12. A razor guard and blade dispenser of the character set forth in claim **10,** wherein detent retaining means and a resilient supporting means are provided in the razor head guard receptacle engaging and resiliently retaining the razor head in place in the guard receptacle with the blade covered.

* * * * *