United States Patent [19]

Petrillo

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[45] **Sept. 17, 1974**

[54] **PACKAGE FOR RAZOR BLADE UNIT**

[75] Inventor: **Richard J. Petrillo,** Norwell, Mass.

[73] Assignee: **The Gillette Company,** Boston, Mass.

[22] Filed: **Dec. 27, 1971**

[21] Appl. No.: **212,352**

Related U.S. Application Data

[63] Continuation-in-part of Ser. No. 124,304, March 15, 1971, abandoned.

[52] **U.S. Cl.** **30/40.2,** 206/356

[51] **Int. Cl.** **B26b 21/24,** A45d 27/24

[58] **Field of Search** ..... 30/34 R, 32, 40–42, 30/90; 221/27, 28, 29, 87; 206/16 B, 16 A, 16 C, 16 BC; 220/20, 22; 312/35

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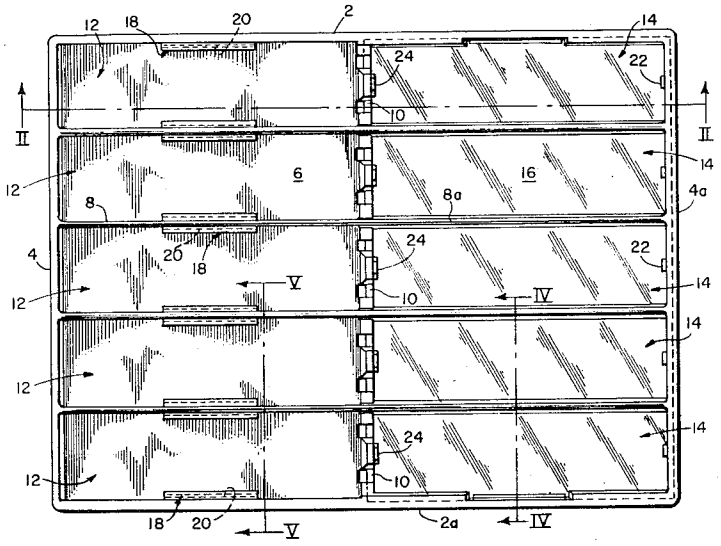
Primary Examiner—Al Lawrence Smith
Assistant Examiner—Gary L. Smith
Attorney, Agent, or Firm—Willis M. Ertman

[57] **ABSTRACT**

This invention relates to a package for containing and dispensing razor blade units. The package further is adapted to receive a razor handle for use with the blade units in such manner as to facilitate connection of the handle to a blade unit. The package is further adapted to facilitate interchange of blade units on the handle, and finally, to act as a repository for used blade units.

14 Claims, 25 Drawing Figures



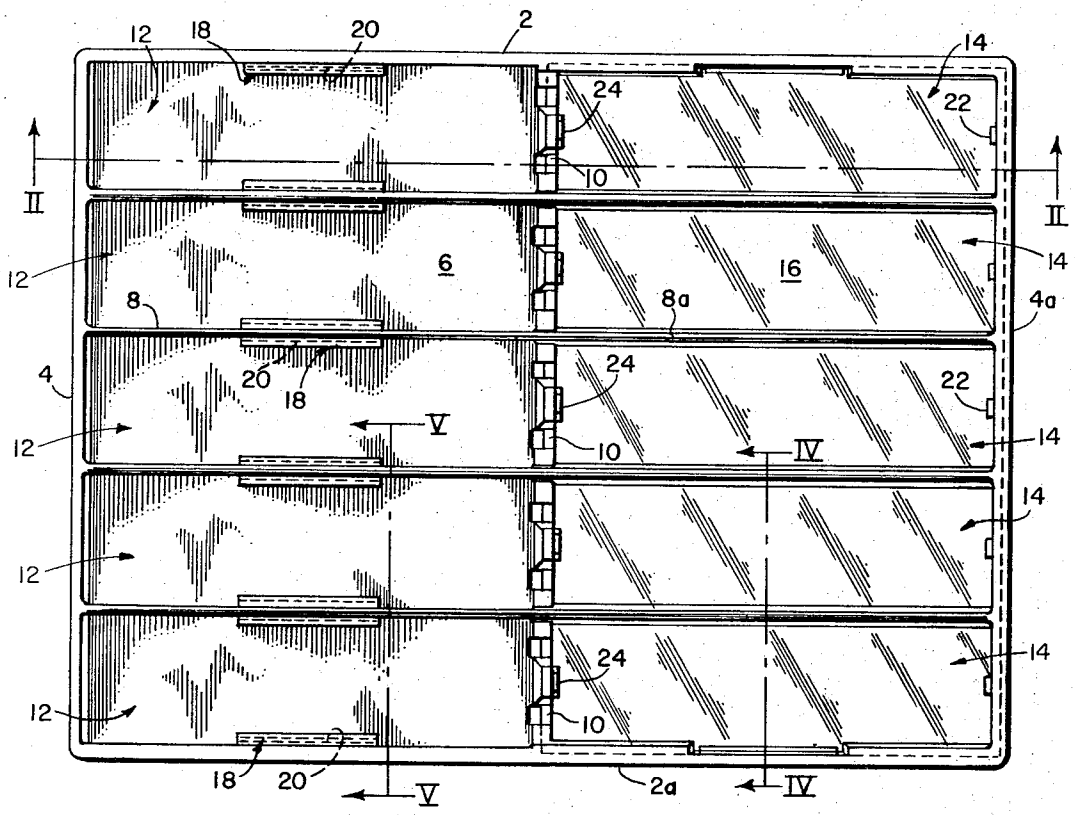

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Fig. 1

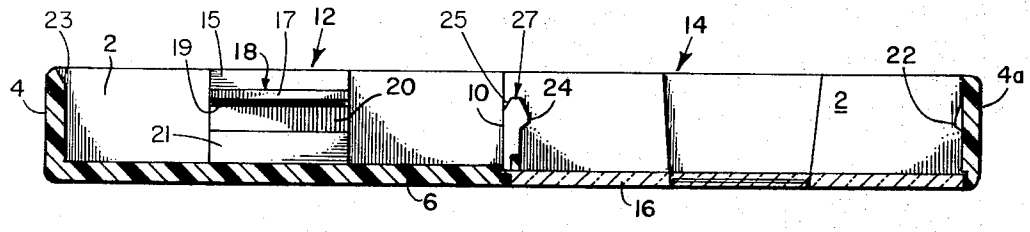
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Fig. 2

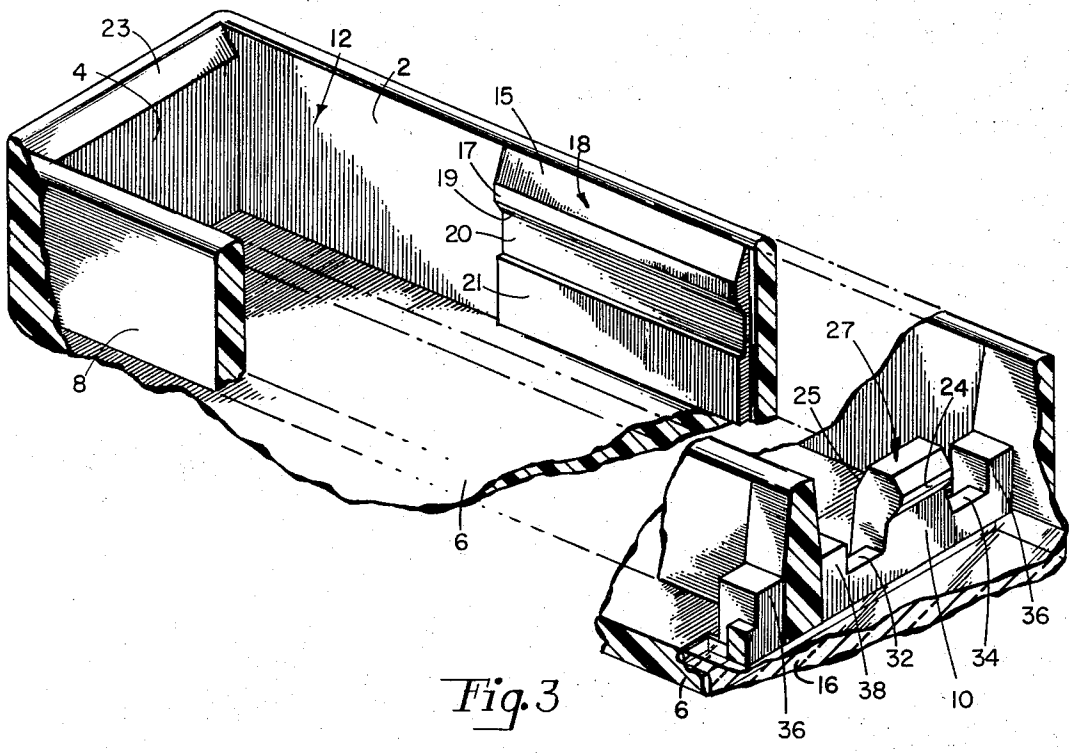
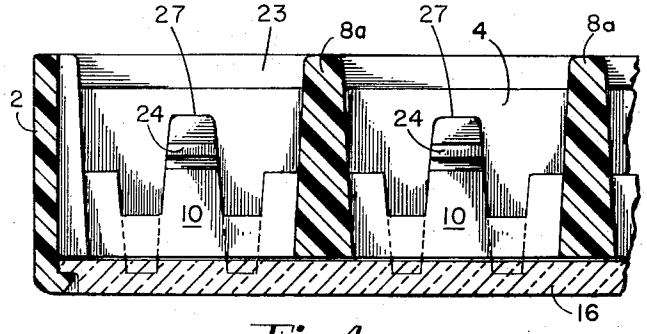


Fig. 3



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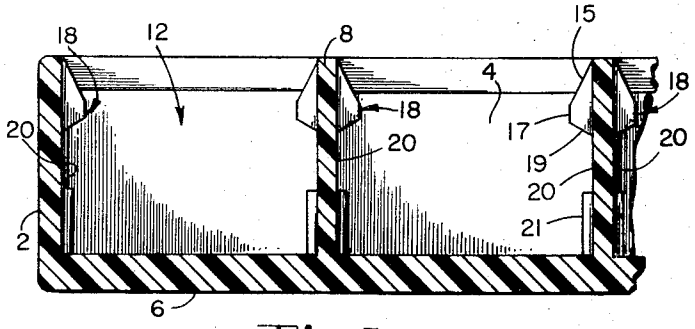


Fig. 5

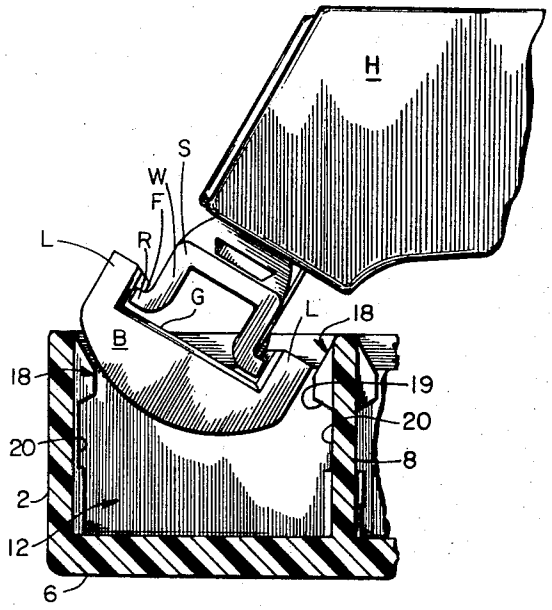


Fig. 6

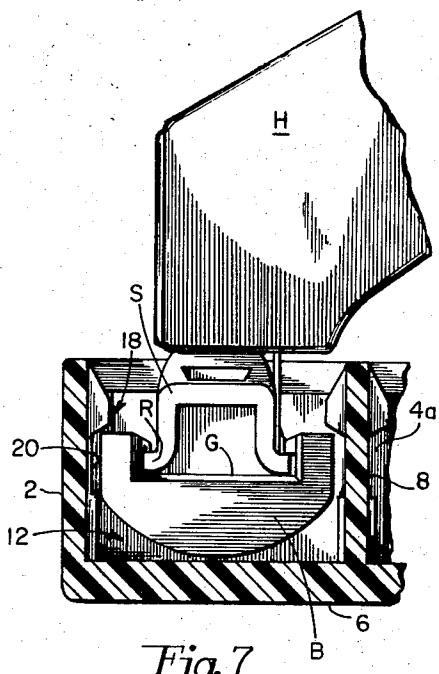
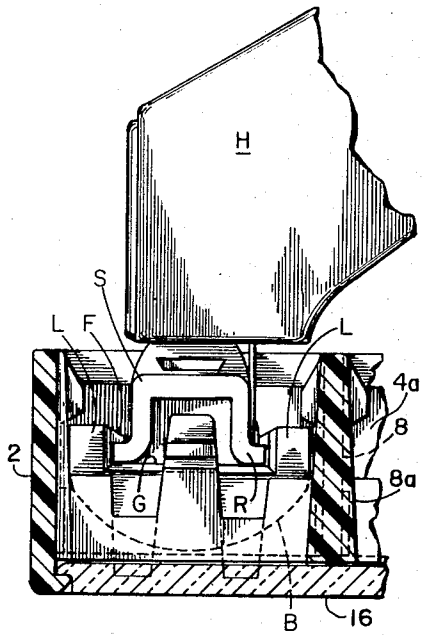


Fig. 7



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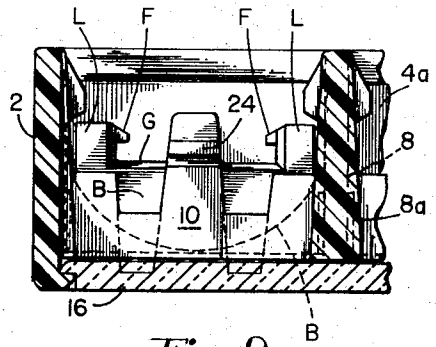

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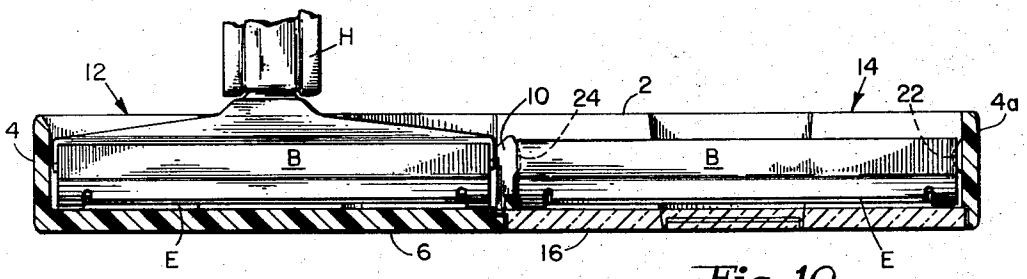

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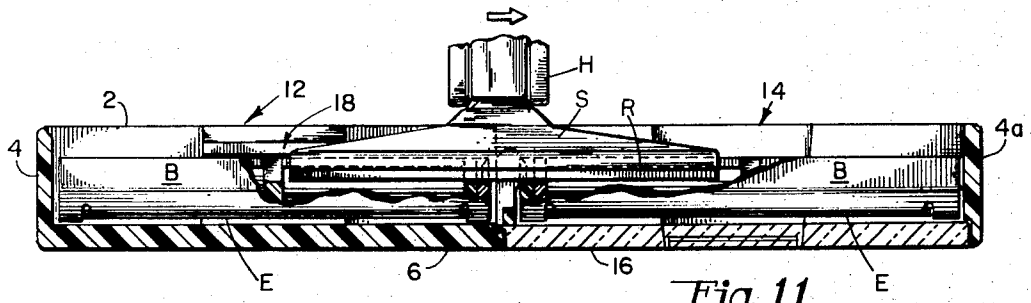

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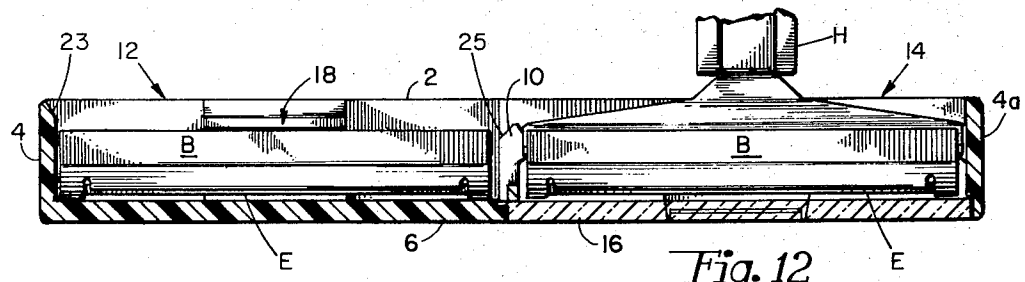

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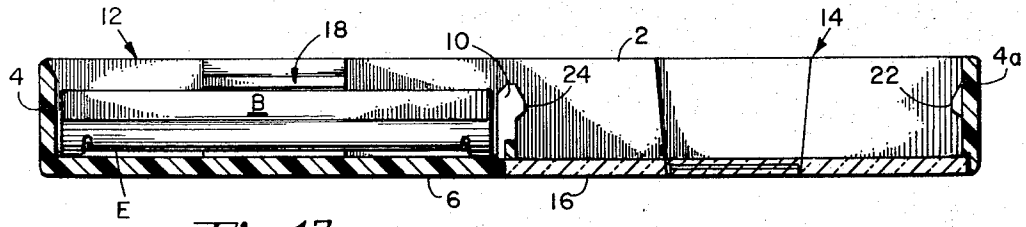

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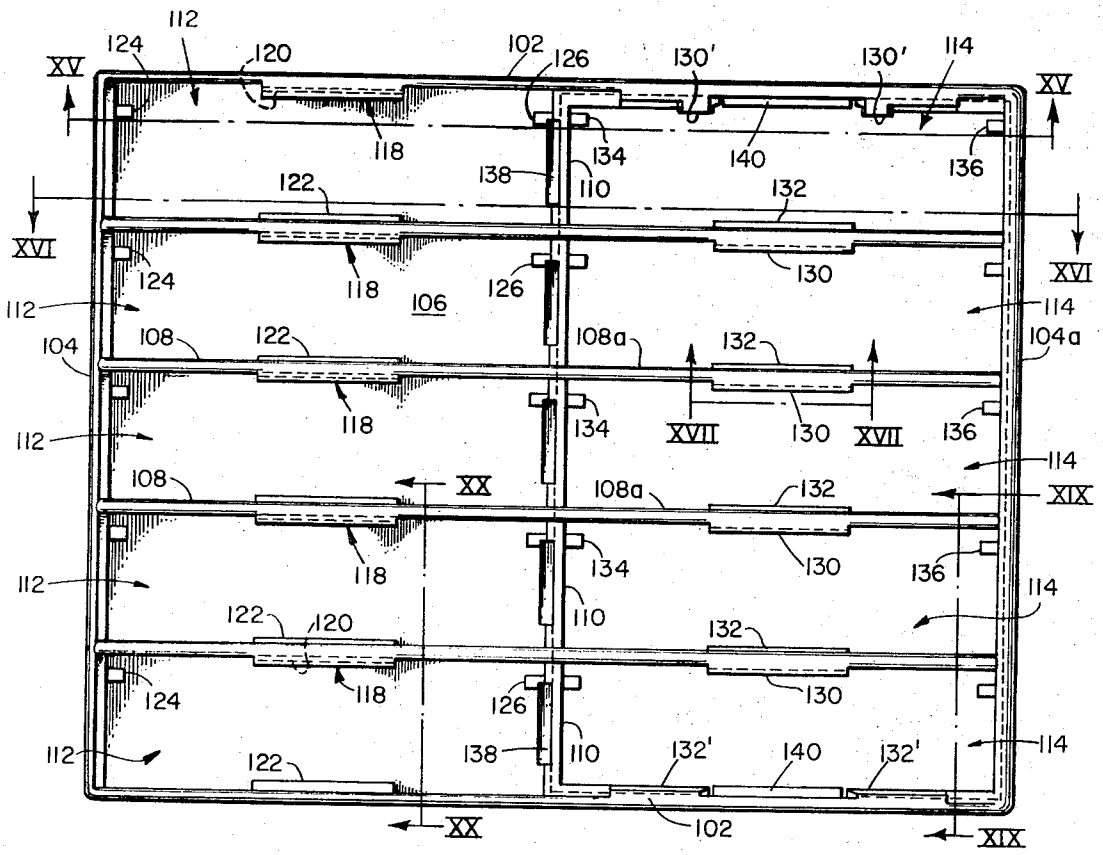

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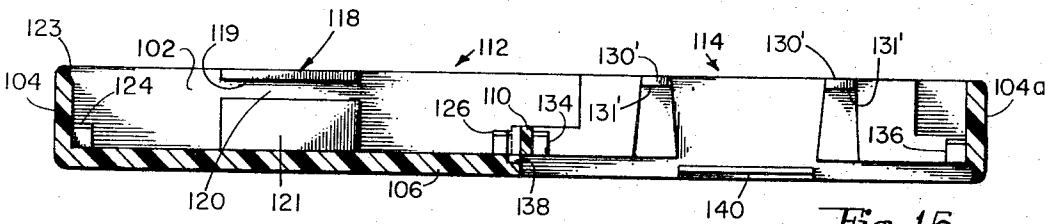
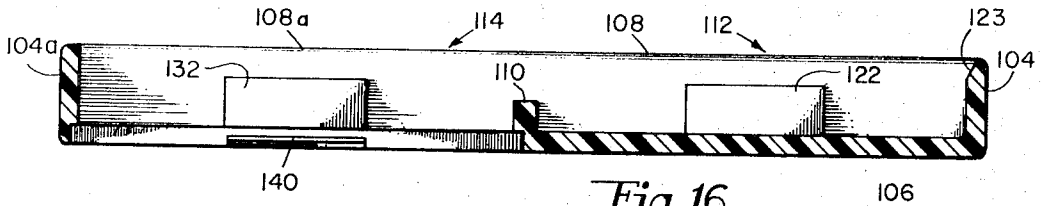


Fig. 15



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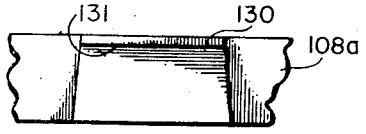
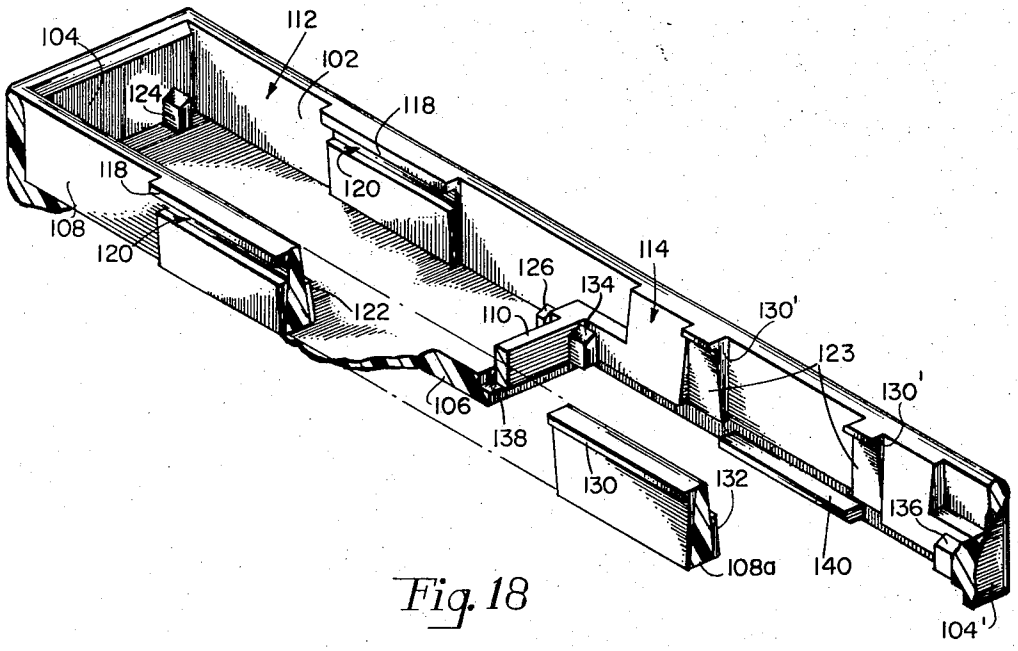


Fig. 17



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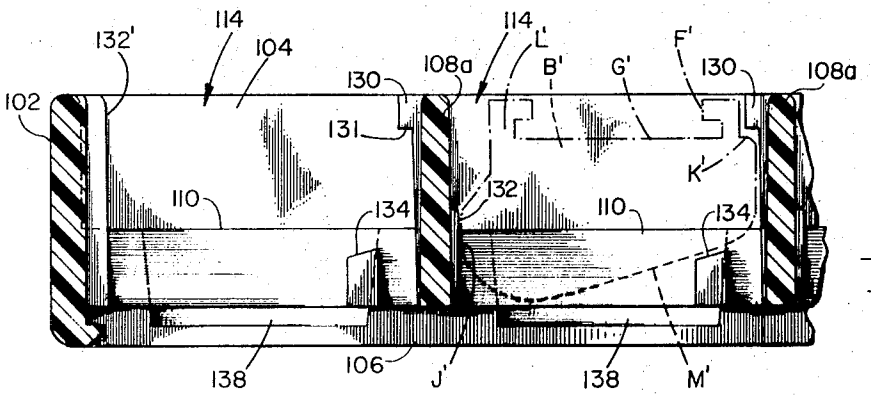
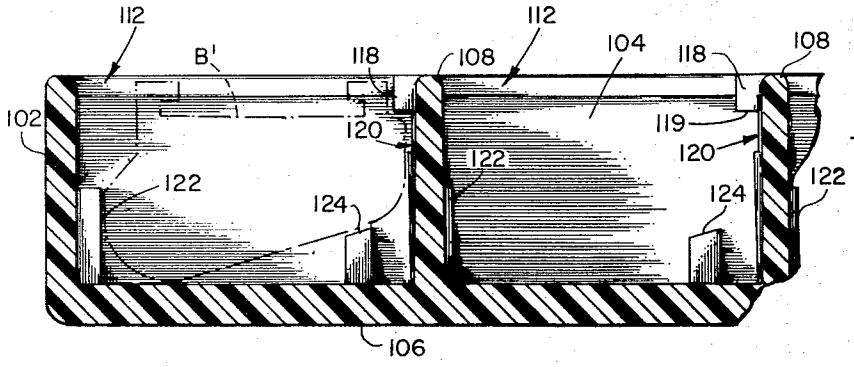


Fig. 19



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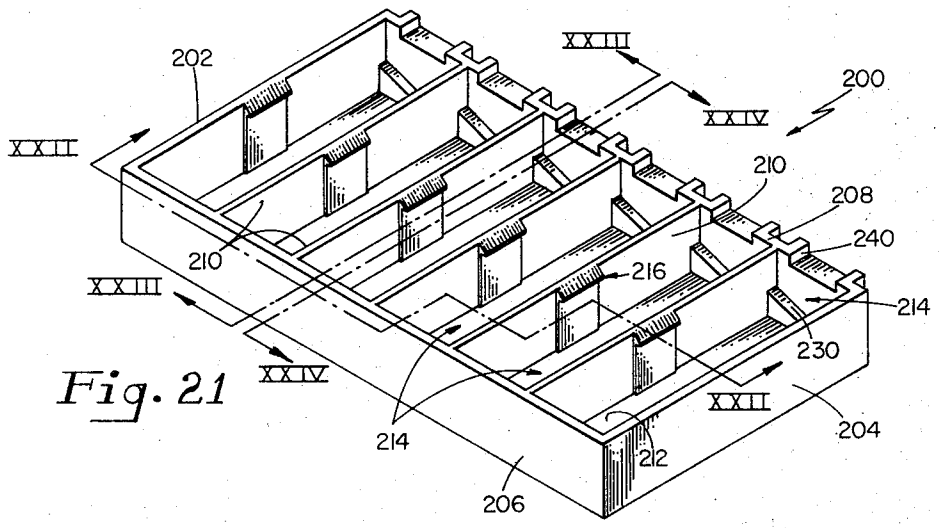

Fig. 21

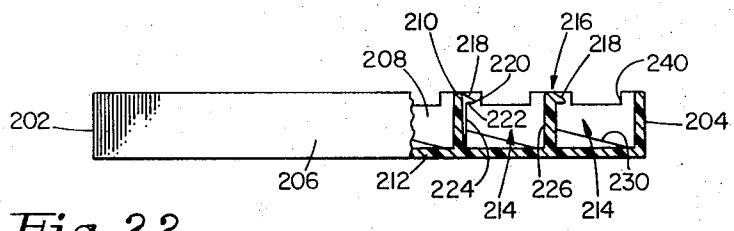

Fig. 22

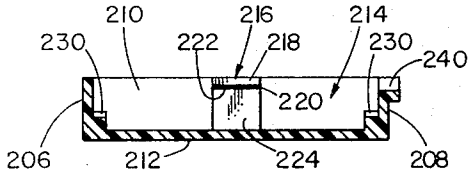

Fig. 23

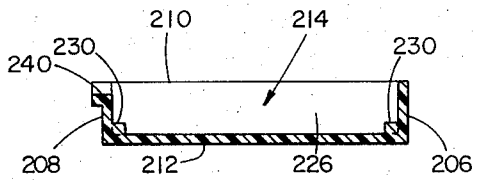

Fig. 24

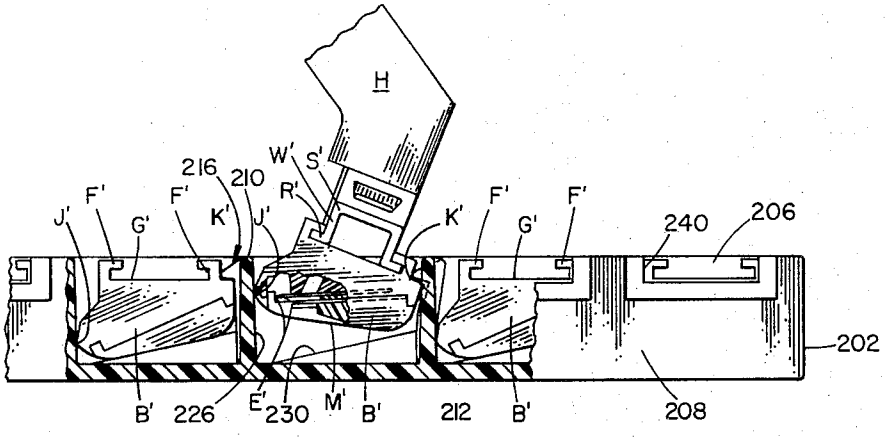

Fig. 25

PACKAGE FOR RAZOR BLADE UNIT

This application is a continuation in part of my copending U.S. patent application Serial No. 124,304, filed Mar. 15, 1971 entitled "Blade Assembly Package", now abandoned.

SUMMARY OF THE INVENTION

This invention relates to packages and more particularly to packages for razor blade units of the type that have a relatively rigid body portion that includes a guard structure and a blade element permanently secured to the body portion to provide a fixed geometrical relation between the guard structure and the cutting edge of the blade element.

It is an object of this invention to provide a novel and improved package for retaining a plurality of blade units and permitting each such retained blade unit to be individually dispensed for use as required. A proposed shaving system employs a razor blade permanently secured to a body of plastic material with coupling structure formed in the body to enable the blade unit to be connected to a cooperating razor handle for use in shaving. Examples of such blade units are disclosed in copending U.S. Pat. application Ser. Nos. 124,069 now abandoned and 124,068, now Pat. No. 3,724,070. Such blade units are particularly suited for use in conjunction with a razor handle of the type disclosed in U.S. Pat. application Ser. No. 124,216, now abandoned, and it is a specific object of this invention to provide a package for holding a plurality of such razor blade units which permits those razor blade units to be mounted on the appropriate razor handle and removed from the package without the necessity of the user touching the blade unit.

Another object of the invention is to provide a novel and improved package for razor blade units which provides a convenient repository for used blade units and is adapted to receive a used blade unit from a razor handle without the necessity of the user touching the used blade unit.

Another object of the invention is to provide a novel and improved package for a razor blade unit which facilitates the coupling of a blade unit in the package to a cooperating handle, the interchange of blade units on the handle and the disposal of used blade units.

A further object of the invention is to provide a novel and improved razor blade package which is economical to manufacture and convenient in use.

In accordance with the invention there is provided a razor blade unit dispensing package that defines a series of separate chambers, each chamber being open at one side to permit the insertion or removal of a blade unit. Each chamber further includes structure for releasably retaining a blade unit therein and one wall of each chamber functions as a barrier which obstructs movement of the blade unit in a transverse direction while permitting movement of a handle coupling structure into and out of the chamber in that transverse direction for engagement and/or disengagement with coupling structure of the blade unit.

In one embodiment, the blade unit securing structure includes two latch members, that are disposed at opposite ends of the chamber, each of which has upper and lower camming surfaces, one latch member being mounted on the barrier member and being in the form of a pedestal member so that the latch members may

flex to permit insertion and removal of the blade unit from the chamber and the other latch member projecting from an end wall. In another form, the securing structure includes two similar latch members that are disposed on the side walls of the chamber and engage a bottom surface of the coupling structure. In another embodiment arranged to retain blade units of the type disclosed in application Ser. No. 124,068, now Pat. No. 3,724,070, each chamber has a projecting latch member that overlies an offset surface of the blade unit when that blade unit is disposed in the chamber, this latch member being located centrally of a side wall and having a length less than one half the length of the chamber. The transverse dimension of the chamber is coordinated with and less than the corresponding (Width) dimension of the blade unit so that the blade unit is in firm frictional engagement with internal surfaces of the chamber and the blade unit offset surface is urged beneath the latch surface so that the blade unit is retained in the chamber. Support structure in the chamber positions the blade unit so that the plane of the blade unit coupling structure is disposed parallel to the base of the package while the blade elements are disposed at an angle to the base of the package. In removing a blade unit from this package, the handle coupling structure is connected to the blade unit coupling structure and then rotated upwardly, camming the guard surface along the surface opposed to the latch member and generally pivoting the blade unit about a point defined by the projecting latch member so that the blade unit is easily removed from the chamber. The opposed chamber surface may consist of one of more projecting surfaces spaced along the opposed wall of configuration appropriate to the desired function of the particular blade unit securing technique. Either or both the opposed surface and the latch member may have a camming surface to facilitate the insertion and/or withdrawal of the blade unit from the chamber. The wall surface carrying the latch member and the opposed wall surface may be molded integral with the base or may be separate therefrom as a function of flexibility appropriate to the particular securing and removal mechanism the thickness and the nature of the wall materials.

The configuration of the barrier structure is coordinated with the position of a blade unit coupling structure in the chamber so that the cooperating coupling structure of that handle unit may enter freely into the chamber while the barrier member impedes the transverse movement of the blade unit in the chamber, thus facilitating the coupling of the handle member to the blade unit.

In particular embodiments, two series of chambers are disposed in aligned relationship end to end with a common barrier member disposed between each two corresponding chambers. In such embodiments, one series of chambers may receive used blade units while the other series of chambers stores new blade units. The operator inserts a used blade unit attached to the handle into an empty chamber in the first series and then moves the handle transversely (the barrier member restraining the used blade unit in the first chamber) releasing the used blade unit and simultaneously attaching the handle coupling structure to the aligned coupling structure of the new blade unit in the adjacent chamber. When the handle structure is fully engaged with the blade unit, the handle is moved in an outward

direction overcoming the resistance of the securing structure and removing a new blade unit from the chamber.

A blade unit package in accordance with the invention provides a convenient and safe storage arrangement for razor blade units with the sharpened edges of each razor blade unit in a protected position, both from the standpoint of potential external damage from external sources to the sharpened edges of the blade and from the standpoint of harm to the user inadvertent cutting. The package is economical to manufacture and may be molded of plastic material as a single unit or as a composite structure.

Other objects, features and advantages of the invention will be seen as the following description of particular embodiments of the invention progresses, in conjunction with the drawings in which:

FIG. 1 is a top plan view of a package constructed in accordance with the invention;

FIG. 2 is an elevational sectional view taken along the line II—II of FIG. 1;

FIG. 3 is an enlarged perspective view of a portion of the package shown in FIG. 1;

FIG. 4 is an elevational sectional view of a portion of the package shown in FIG. 1 taken along the line IV—IV of FIG. 1;

FIG. 5 is an elevational sectional view similar to FIG. 4 taken along the line V—V of FIG. 1;

FIG. 6 is an elevational sectional view similar to FIG. 5 illustrating the insertion of a used blade unit into a chamber;

FIG. 7 is an elevational sectional view similar to FIG. 6 showing a used blade unit fully positioned in a chamber;

FIG. 8 is an elevational sectional view similar to FIG. 4 showing the handle and blade unit in the position shown in FIG. 7;

FIG. 9 is a sectional elevational view similar to FIG. 8 with the handle removed;

FIG. 10 is an elevational sectional view similar to FIG. 2 showing the handle and a used blade unit in the lefthand chamber and a new blade unit in the righthand chamber;

FIG. 11 is an elevational sectional view similar to FIG. 10 which shows the handle traversing from the left chamber to the right chamber;

FIG. 12 is a sectional elevational view similar to FIG. 10 which shows the handle having progressed to a position fully within the righthand chamber with the used blade unit remaining in the lefthand chamber;

FIG. 13 is an elevational sectional view similar to FIG. 10 which shows the righthand chamber emptied by withdrawal of the handle with the new blade unit attached thereto;

FIG. 14 is a top plan view of a second embodiment of the invention;

FIG. 15 is an elevational sectional view taken along the line XV—XV of FIG. 14;

FIG. 16 is an elevational sectional view taken along the line XVI—XVI of FIG. 14;

FIG. 17 is an elevational sectional view of a portion of the package shown in FIG. 14 taken along the line XVII—XVII of FIG. 14;

FIG. 18 is an enlarged perspective view of a portion of the package shown in FIG. 14;

FIG. 19 is an elevational sectional view taken along the line XIX—XIX of FIG. 14;

FIG. 20 is an elevational sectional view taken along the line XX—XX of FIG. 14;

FIG. 21 is a perspective view of still another embodiment of the invention;

FIG. 22 is an elevational view partially in section taken along the lines XXII—XXII of FIG. 21;

FIG. 23 is an elevational sectional view taken along the line XXIII—XXIII of FIG. 21;

FIG. 24 is an elevational sectional view taken along the line XXIV—XXIV of FIG. 21; and

FIG. 25 is a sectional view of a portion of the package shown in FIG. 21 indicating the mode of removing a blade unit from a chamber by the handle.

DESCRIPTION OF PARTICULAR EMBODIMENTS

The dispensing package shown in FIGS. 1 and 2 defines a first set of five rectangular blade unit receiving compartments or chambers **12** in side to side alignment and a second set of five similarly aligned compartments or chambers **14.** Each chamber **14** is aligned end to end with a corresponding chamber **12** and separated from that chamber by a barrier wall **10.** The package has a perimeter defined by side walls **2, 2***a*, and end walls **4, 4***a* which are integral with and upstanding from the bottom base wall or platform **6.** Spacer walls **8, 8***a* extend from end wall **4** to end wall **4***a* and are disposed parallel to side walls **2** and **2***a*. The walls **2, 4, 6, 8** and **10** may be molded as an integral unit of plastic material, or, as shown in the drawings, all or a portion of the bottom wall **6** may be separate member having a novelty or decorative construction, as, for example, a clear plastic see-through portion **16** that defines the bottom wall of chambers **14.**

Each chamber **12** is defined at one end by a portion of end wall **4,** at the other end by a barrier wall **10,** and on either side by a divider wall **8** or by a divider **8** and a side wall **2** or **2***a*. Formed on the side and divider wall surfaces of each chamber **12** is a horizontally extending latch projection or lug portion **18,** a recess portion **20** and a planar projection **21.** Each latch projection includes an inclined upper surface **15,** a vertical transition surface **17** and an inclined lower surface **19** and is adapted to function as retaining means for securing a blade unit in the chamber **12.** The upper surface **23** of end wall **4** is inclined to facilitate insertion of a blade unit into chamber **12** while a similar inclined surface **25** is provided on pedestal portion **27** of barrier **10.**

Each chamber **14** is defined at one end by a portion of end wall **4***a*, at the other end by a barrier wall **10,** and on either side by a divider wall **8***a* or by a divider wall **8***a* and a side wall **2.** Structure for retaining a blade unit in each chamber **14** includes a latch projection or lug **22** of configuration similar to latch projection **18** that projects inwardly from the end wall **4***a* and a cooperating similar latch projection of lug **24** that projects into the chamber **14** from the barrier wall **10.** As shown in FIGS. **3** and **4,** each barrier wall **10** includes a central relatively narrow pedestal portion **27** from which lug **24** projects, recess portions **32, 34** on either side of the upstanding pedestal **27** and portions **36, 38** that are attached to the barrier wall **8** (or at either end to side wall **2** or **2***a*).

This package is designed to store and dispense razor blade units B of the type disclosed in patent application Serial No. 124,069 now abandoned, filed Mar. 15, 1971 in the name of Roger L. Perry, the blade unit to

be inserted and removed from the package through the use of a cooperating razor handle H of the type disclosed in U.S. Pat. application Ser. No. 124,216 now abandoned, filed Mar. 15, 1971 in the name of Roger L. Perry. As indicated in FIGS. **6–9,** each blade unit has a coupling structure formed integrally with the blade unit body B, that carries two blades having opposed edges E. The blade unit has a length of 1.56 inch, a width of 0.43 inch and a depth of 0.23 inch. The coupling structure includes a pair of spaced legs L, that extend away from body B, each leg having an inwardly extending flange F at the foot thereof so that two spaced grooves are defined in the base of the blade unit between flanges F and the lower planar surface G of the body B. The cooperating handle H has a coupling structure S formed as a U-shaped member that has two spaced parallel walls W, the upper ends of which are bent outward to define two parallel rails or runners R. The grooves defined by the flanges F and base G of the blade unit B are engaged by the runners R on the handle H typically by sliding runners R into the grooves, to effect a connection between the handle H and the blade unit as shown in FIG. **6.**

The package would ordinarily be presented to the consumer or operator with all of the first chambers **12** empty and a new blade assembly disposed in each second chamber **14.** Each new blade unit is held in its chamber **14** by engagement of latch projections **22, 24** with the bottom surface G of the blade unit. The pedestal **27** of barrier **10** flexes under pressure to permit insertion and release of the blade assembly. It will be noted (e.g., in FIG. **8**) that the intermediate walls **8***a* of the second chambers **14** are somewhat thicker than the corresponding walls **8** of the first chambers and are pyramidal in cross-section to snugly engage the blade units and retain them in proper alignment in chamber **14.**

For illustrative purposes, it will be assumed that an operator has a handle H with a used blade assembly disposed thereon. In operation, the handle H is manipulated by the operator so as to present the used blade assembly to one of the empty chambers **12** as shown in FIG. **6.** The blade assembly is introduced into chamber **12** as shown in FIG. **6** so that the lower end of one leg L is placed beneath a latch projection **18** and then the handle H is rotated in a counter-clockwise direction, camming the other leg L past the opposed latch projection **18** to the position shown in FIGS. **7** and **10** where the latch surface **19** of each lug **18** overlies the lower end of each leg L of the blade unit, securing the blade unit in the chamber **12** and preventing that blade assembly from falling from the chamber when the package is inverted. The cutting edges E of the blade unit face the bottom of the chamber and thus are not accessible for accidental or harmful cutting. The end wall **4** and barrier wall **10** of the chamber **12** restrict the endwise movement of the used blade unit.

The U-shaped configuration of support S of the handle H is such that it may be slid out of the blade unit grooves by endwise movement as shown in FIGS. **8** and **11,** the projecting pedestal **30** of barrier wall **10** not obstructing the handle movement while other portions of the barrier **10** preventing endwise movement of the used blade assembly. Thus, it will be seen that, in addition to acting as a yieldable latch means for the retention of a new blade unit in chamber **14,** each barrier **10** serves to prevent endwise movement of the used blade unit in the aligned first chamber **12** while permitting lateral movement of the razor handle H from the first chamber **12** to the second chamber **14.**

As the handle moves from chamber **12** to chamber **14,** it progressively becomes disengaged from the used blade unit while slidingly engaging a new blade unit in the aligned chamber **14.** Continued transverse movement of the handle H places the handle entirely within the aligned second chamber **14** with the support structure S connected to the coupling structure of the new blade unit and completely disengaged from the used blade unit, the latter being safely retained in the aligned chamber **12.** The assembly of handle and blade unit is then withdrawn from the package, the barrier **10** yielding in leaf spring fashion to permit disengagement of the blade unit surface G and movement past the lugs **22, 24.** When it is desired to discard that blade unit, it is inserted into and latched in an open chamber **12** and then the handle H is slid laterally to release the used blade unit and pick up a new blade unit. When all the first chambers **12** are filled with used blade assembly units, the package may be discarded without danger, the cutting edges E all being safely enclosed.

Another embodiment is shown in FIGS. **14–20.** This embodiment is designed for use with a blade unit of the type disclosed in U.S. Pat. application 124,068, filed Mar. 15, 1971 in the name of Francis W. Dorion, Jr., now U.S. Pat. No. 3,724,070 and the same type of razor handle. This package is molded of a suitable plastic such as high impact styrene and has a first set of five blade unit chambers **112** and a second set of five aligned blade unit chambers **114,** each chamber being 1.58 inch long and slightly less than one half inch wide. A barrier member **110,** 0.10 inch high separates each chamber **112** from a corresponding aligned chamber **114.** The package has side walls **102** and end walls **104, 104***a* which project upwardly **0.29** inch from bottom base wall **106.** Divider walls **108, 108***a* extend between end walls **104, 104***a* and are parallel to side walls **102.** Formed at the top of the upper divider wall of each chamber **112, 114** (as viewed in FIG. **14**) are one or more projecting lugs **118, 130, 130′,** the lower surface of which defines a horizontal latch surface **119, 131, 131′.** A recess **120** and a projecting surface **121** is provided below each lug in the chambers **112,** a projecting surface **123** is provided below each lug in chamber **114,** and one or more cooperating abutment projections **122, 132** are provided in the opposite wall. The horizontal space between lug **118** and cooperating abutment **122** or between lug **130** and cooperating abutment **132** is 0.397 inch. A pair of support projections **124, 126** or **134, 136** are provided in the base of each chamber to support the blade unit so that its base surface G′ is parallel with the bottom wall **106.** Latch recesses **138** and projection **140** engage corresponding surfaces of a transparent insert (not shown) similar to insert **16** of the embodiment shown in FIGS. **1–13.**

The blade unit for use with this package has a transverse length of 1.56 inch, a width of 0.43 inch and a depth of 0.26 inch. The upper end surfaces M′ of body B′ are disposed at an angle of about 17° to the surface G′. The blade unit includes two parallel offset blade edges E′, a guard J′ and an offset surface K′ (0.025 inch in length) where the rear leg L′ joins body B′, the distance between points J′ and K′ being 0.46 inch.

In operation, walls **108** flex as a used blade unit is inserted into a compartment **112** with the blade unit body

B′ being supported as indicated in FIG. **20** by projections **124** and the offset rear surface K′ being latched by projecting lug **118.** The interference fit between surfaces J′ and K′ and surfaces **118** and **122** is such that projecting surface **122** urges body B′ toward lug **118** to firmly secure the used blade unit in chamber **112.** In that position, the handle runners R are aligned with the grooves in the new blade unit disposed in the adjacent aligned chamber **114.** The handle is slid transversely across barrier wall **110** which restrains the used blade unit, disengaging the runners R from the used blade unit while simultaneously engaging the runners in the grooves of the new blade unit in the aligned chamber **114.** Movement of the handle H is continued until the handle is entirely within chamber **114** and thus connected to the new blade unit and completely disengaged from the used blade unit, the latter being retained in its chamber **112** by frictional engagement with projections **118** and **122.** The new blade unit is then removed from the chamber by upward rotational movement of the handle of the (in the clockwise direction as indicated in FIG. **19**), camming the guard surface J′ of the blade unit past projection **132** into the space above surface **132,** so that the blade unit being easily removed from the chamber **114.** The entire blade unit changing operation and disposal of used blade unit is accomplished without the necessity of the operator touching the blade unit.

Still another embodiment of the invention is shown in FIGS. **21–25.** The package **200** is a one-piece molded plastic structure designed for use with the same type of blade units as the embodiment shown in FIGS. **14–20** and includes side walls **202, 204,** end walls **206, 208,** and divider walls **210,** all of which are upstanding from base **212** to form a series of six chambers **214.**

Each chamber **214** has a length of about **1.58** inch, a width slightly less than one half inch and is defined at one end by a portion of end wall **206** and at the other end by a portion of end wall **208,** and on either side by a divider wall **210** (the outer wall of each end chamber being defined by a side wall **202** or **204**). Formed on the wall on the upper side of each chamber is a latch structure **216** that projects inwardly from the vertical surface and has a length of about ¼ inch. Structure **216** includes an inclined upper surface **218,** a vertical surface **220,** a horizontal latching surface **222** and a lower extension **224.** Surface **220** is disposed about 0.05 inch from the plane of the supporting wall. The opposite surface **226** of the chamber is planar. On either end of the chamber adjacent the end wall **206, 208** is a support structure **230** of the same configuration for engaging the top end surfaces M′ of the blade unit so that the base surface of the coupling structure is supported in alignment with the plane of the base **212** of the package. The end wall **208** at each chamber **214** has a recess **240,** 0.30 inch in width and 0.08 inch in depth that is disposed so that it is aligned with the coupling structure of a blade unit latched in chamber **214.**

In use, the package is supplied with new blade units (of the type disclosed in U.S. Pat. application Ser. No. 124,068, now U.S. Pat. No. 3,724,070) in five of the six chambers **214.** The operator inserts a used blade unit attached to a handle H into the empty (typically the uppermost) chamber by snapping surface K′ under latch lug surface **222** and engaging the guard surface J′ against the opposed wall surface **226** to secure the blade unit in the chamber. The handle H is then slid laterally through the recess **240** in end wall **208.** The used blade unit is thus retained in the chamber **214** and the handle H is free to pick up a new blade unit in the next chamber. The coupling structure is inserted through the recess **240** of that chamber with the runners R being slid into engagement in grooves of the blade unit coupling structure, and then when the runners are fully engaged with those grooves, the handle is rotated upwardly as indicated in FIG. **25,** camming the guard surface J′ along surface **226** and flexing the central portion of the wall carrying latch lug **216** as indicated in FIG. **25** to remove the blade unit from the chamber.

While particular embodiments of the invention have been shown and described, various modifications thereof will be apparent to those skilled in the art and therefore it is not intended that the invention be limited to the disclosed embodiments or to details thereof, and departures may be made therefrom within the spirit and scope of the invention as defined in the claims.

What is claimed is:

1. A package for retaining and dispensing razor blade assemblies,

the package comprising bottom means and wall means upstanding therefrom defining first and second adjacent chambers in endwise alignment, each said chamber having an open top and being adapted to receive a blade assembly,

a blade assembly disposed in one of said chambers, said blade assembly having slidably engageable, transversely extending coupling structure for connecting engagement with a handle for use in shaving operations,

barrier means disposed in said package between said adjacent chambers for preventing movement of said blade assembly in said one chamber from said one chamber to the other chamber,

said barrier means defining an opening to permit sliding movement of the handle into and out of said one chamber in a direction transverse to said open top for connecting engagement and/or disengagement with the coupling structure of said blade assembly in said one chamber,

and means disposed in each said chamber on said wall means for inhibiting removal of a blade assembly therefrom,

said removal inhibiting means in said one chamber comprising projecting lug means including opposed inwardly extending lugs disposed on said barrier means and on an end wall of said one chamber opposite said barrier means.

2. The package as claimed in claim **1** in which said barrier means is yieldable to release said second blade assembly from said second chamber.

3. A package of razor blade units, each said razor blade unit including a body and at least one blade element permanently secured to said body, said body including slidably engageable coupling structure extending transversely of said body for connection to a handle,

the said package including a rectangular base, a peripheral wall upstanding from said base, a plurality of spaced partition walls within said peripheral wall and upstanding from said base, said partition walls being disposed parallel to one another and to portions of said peripheral wall to define a series of generally rectangular open top chambers disposed in a row,

each said open top chamber being defined by side and end wall surfaces upstanding from said base and said chambers being separated from one another by said partition walls, the opposite sides of each said partition wall defining side wall surfaces of two adjacent chambers,

a series of said razor blade units disposed in said series of chambers,

structure within each said chamber for releasably retaining a blade unit therein, said blade unit retaining structure including a securing surface projecting inwardly from the wall surface of said chamber to overlie a surface of a blade unit disposed in said chamber and cooperating with a chamber surface in opposed relation to said projecting surface to receive a blade unit therebetween and secure said blade unit in firm frictional engagement in said chamber,

the open top of each said chamber enabling a blade unit to be introduced into said chamber by inward movement through said open top towards said package base and secured in said chamber by engagement by said blade unit retaining structure and to be removed from said chamber through said open top by outward movement away from said package base, said outward movement overcoming the securing force of said blade unit retaining structure and releasing the blade unit, said side and end walls preventing introduction or removal of a blade unit into or from said chamber in either lateral or transverse directions,

and each said chamber having an opening in one end wall through which a handle may be introduced and removed in a direction parallel to said partition walls to engage the disengage respectively from the coupling structure of a blade unit within said chamber.

4. The package as claimed in claim **3** wherein said blade unit securing structure includes two latch members that are disposed at opposite ends of the chamber, each said latch member having upper and lower camming surfaces, one latch member projecting inwardly from one end wall surface, and the other latch member being on the opposite end wall surface and being in the form of a pedestal member, said other latch member being adapted to flex away from said one latch member to permit insertion and removal of said blade unit from the chamber.

5. The package as claimed in claim **3** wherein said securing surface of each said chamber is located on and projects inwardly from one of said side wall surfaces, said securing surface having a length less than one half the length of said chamber.

6. The package as claimed in claim **3** wherein said securing surface is adapted to define a fulcrum point and the chamber surface opposite said securing surface is adapted to engage a surface of said blade unit which is cammed along said opposite chamber surface as the blade unit is rotated about said fulcrum point.

7. The package as claimed in claim **3** wherein each said securing surface is adapted to define a fulcrum point and the chamber surface opposite said securing surface is adapted to engage a blade unit surface, said blade unit surface being cammed along said opposite chamber surface as said blade unit is rotated about said fulcrum point, and further including support structure in each said chamber for positioning said blade unit so that said blade unit coupling structure is adjacent said opening, said support structure being adapted to position said blade unit in said chamber so that the top surface of said blade unit is inclined with respect to the base of said package and the portion of said top surface spaced furthest from the base of said package is adjacent said fulcrum point.

8. The package as claimed in claim **3** and further including structure defining a second series of generally rectangular open top chambers, said first and second series of chambers being disposed in aligned relationship end to end with each said opening defining wall disposed between each two corresponding chambers.

9. The package as claimed in claim **8** wherein the wall structure of each said chamber includes two parallel spaced walls that define a transverse dimension that is coordinated with the corresponding width dimension of said blade unit, each said securing surface is integral with one of said partition walls so that said blade unit in said chamber is in firm frictional engagement with said opposed cooperating surfaces of said chamber, each said securing surface is adapted to define a fulcrum point and the chamber surface opposite said securing surface is adapted to engage a blade unit surface which is cammed along said opposite chamber surface as the blade unit is rotated about said fulcrum point, and further including support structure above said base for positioning a blade unit so that said blade unit coupling structure is disposed adjacent said opening, said support structure being adapted to position said blade unit in said chamber so that the top surface of said blade unit is inclined with respect to the base of said package and the portion of said top surface spaced furthest from the base of said package is adjacent said fulcrum point.

10. The package as claimed in claim **3** in which first and second chambers are in endwise alignment and are separated by said partition wall, and said partition wall permits sliding movement of said handle from said first chamber to said second chamber.

11. A package of razor blade units, each said razor blade unit including a body and at least one blade element permanently secured to said body, said body including slidably engageable coupling structure extending transversely of said body for connection to a handle,

the said package including a base, aa plurality of spaced partition members upstanding from said base, said partition members being disposed to define a series of open top blade unit receiving compartments disposed in a row,

a series of said razor blade units disposed in said series of compartments, one blade unit in each compartment of said series of compartments,

structure within each said compartment for releasably retaining a blade unit therein, said blade unit retaining structure including an inwardly projecting securing surface that overlies a surface of a blade unit disposed in said compartment and cooperating with a compartment surface in opposed relation to said projecting surface to receive a blade unit therebetween and secure said blade unit in firm frictional engagement in said compartment,

the open top of each said compartment enabling a blade unit to be introduced into said compartment by inward movement through said open top towards said package base and secured in said com-

partment by engagement by said blade unit retaining structure and to be removed from said compartment through said open top by outward movement away from said package base, said outward movement overcoming the securing force of said blade unit retaining structure and releasing the blade unit,

structure restricting movement of a blade unit in said compartment in lateral and transverse directions,

and each said compartment having an opening through which a handle may be introduced in a transverse direction to slidably engage the coupling structure of said blade unit within said compartment, said blade unit being removable from said compartment by movement of the handle with the attached blade unit away from said package base.

12. The package as claimed in claim **11** in which said retaining structure comprises inwardly extending lugs disposed on opposed walls of said chamber.

13. A package of razor blade units comprising a series of generally rectangular open top chambers, each said chamber having side wall surfaces and end wall surfaces; a series of razor blade units disposed in said series of chambers, each said razor blade unit including a body, and at least one blade element held by said body, said body including slidably engageable coupling structure extending transversely of said body; structure within each said chamber for releasably retaining a razor blade unit therein; the open top of said chamber enabling a razor blade unit to be introduced into said chamber by inward movement through said open top and secured in said chamber by engagement by said retaining structure and to be removed from said chamber through said open top by outward movement, said outward movement overcoming the securing force of said razor blade unit retaining structure and releasing said razor blade unit, the side wall surfaces and end wall surfaces of each said chamber preventing introduction of said razor blade unit into or removal of said razor blade unit from said chamber in either lateral or transverse directions, and each said chamber having an opening in one of said end wall surfaces through which a handle may be introduced in a transverse direction to slidably engage the coupling structure of said blade unit within said chamber, movement of said handle in a direction away from said chamber after said razor blade unit is secured to said handle overcoming the securing force of said razor blade unit retaining structure and releasing said razor blade unit so that said razor blade unit is withdrawn from said chamber.

14. The package as claimed in claim **13** and further including support structure above said base in each said chamber for positioning said blade unit so that said blade unit coupling structure is disposed in alignment with said opening in said end wall surface.

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UNITED STATES PATENT OFFICE

CERTIFICATE OF CORRECTION

Patent No. 3,835,532 Dated September 17, 1974

Inventor(s) Richard J. Petrillo

It is certified that error appears in the above-identified patent and that said Letters Patent are hereby corrected as shown below:

Column 4, line 26, change "base" to --(base)--;
line 31, after "be" insert --a--.

Column 8, line 52, change "said second" to --a--.

Column 9, line 12, change "the" to --one of said--;
line 12, change "surface" to --surfaces--;
line 15, change "projecting" to --securing--;
line 35, change "the" to --and--.

Column 10, line 38, change "partition" to --end-- (each occurrence);
line 47, change "aa" to --a--.

Column 11, line 20, change "walls" to --surfaces--;
line 20, change "chamber" to --compartment--.

Signed and sealed this 26th day of November 1974.

(SEAL)
Attest:

McCOY M. GIBSON JR.
Attesting Officer

C. MARSHALL DANN
Commissioner of Patents