United States Patent [19]

Nissen et al.

[11] **3,735,860**

[45] **May 29, 1973**

[54] **ARTICLE HOLDER**

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

[22] Filed: **May 17, 1971**

[21] Appl. No.: **143,959**

[52] **U.S. Cl.** .....**206/16 A**

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

[58] **Field of Search**.....206/1 R, 16 R, 16 A, 206/16.5, 72; 211/126; 214/10.5 R; 248/300, 309, 316 D; 30/90

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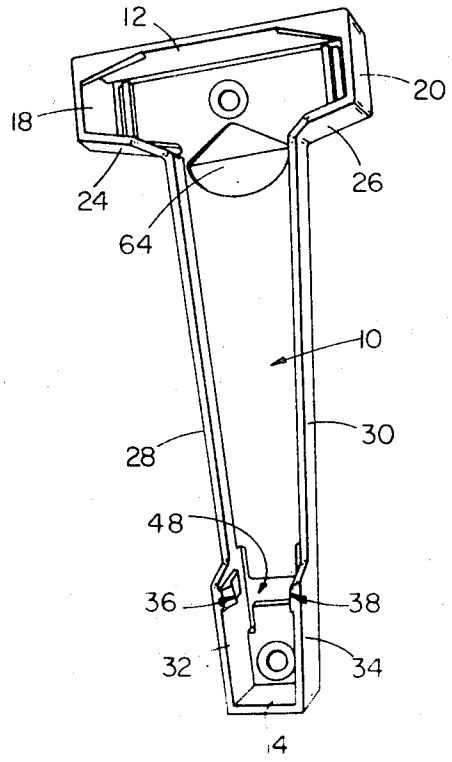
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Primary Examiner—George E. Lowrance
Assistant Examiner—Steven E. Lipman
Attorney—Willis M. Ertman

[57] **ABSTRACT**

A one piece molded plastic holder for a safety razor has a base including support surface portions for the head and handle of the razor, a first stop structure at one end of the base for limiting longitudinal movement of the razor in one direction, a second stop structure at the opposite end of the base for limiting longitudinal movement of the razor in the opposite direction, resilient means connecting one of the stop structures to the base, first securing means for securing the razor head in the holder, and second securing means for securing the razor handle in the holder.

14 Claims, 13 Drawing Figures



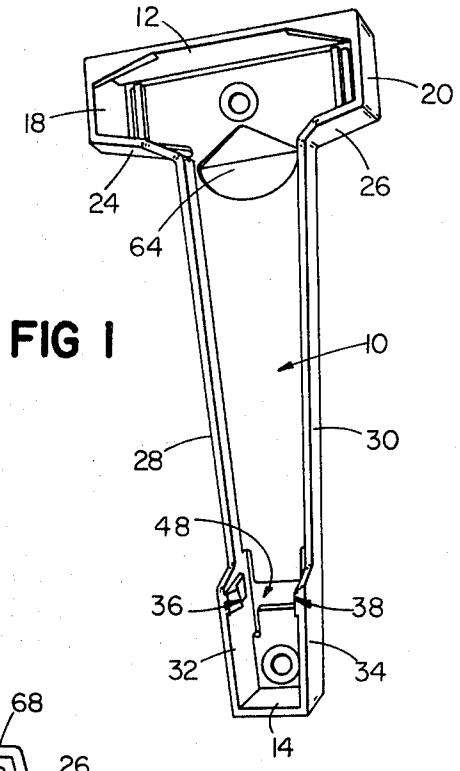


FIG 1

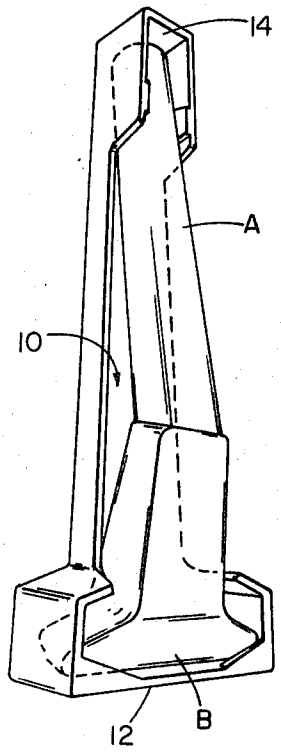


FIG 2

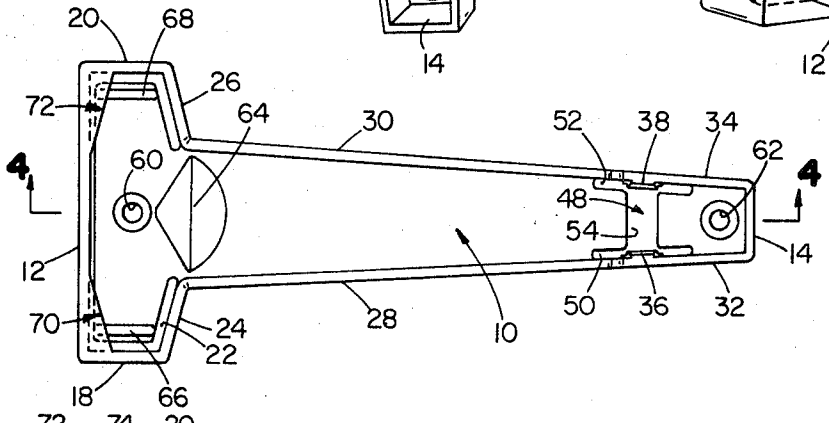


FIG 3

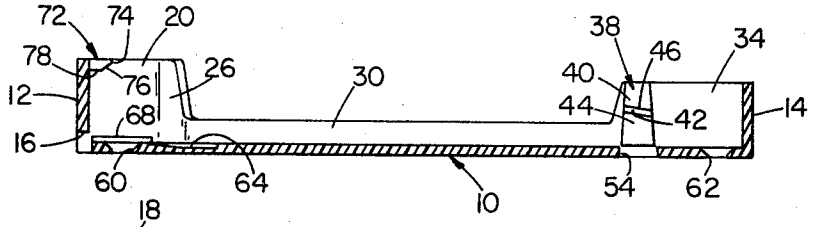


FIG 4

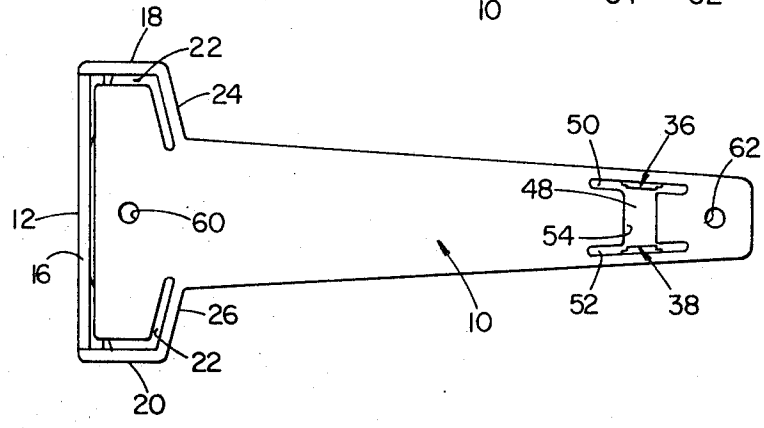


FIG 5

FIG 6

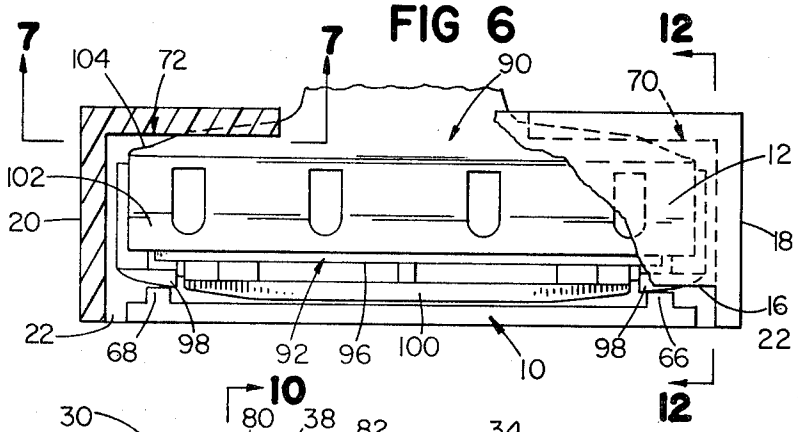
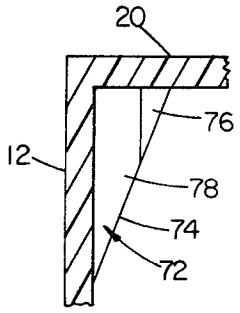


FIG 7



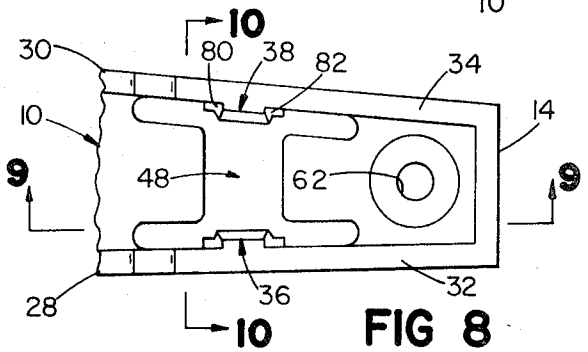


FIG 8

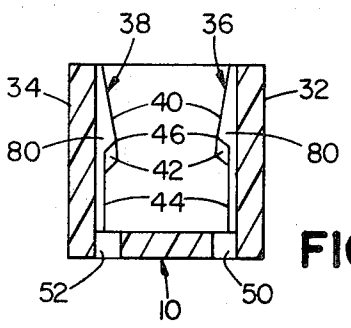


FIG 10

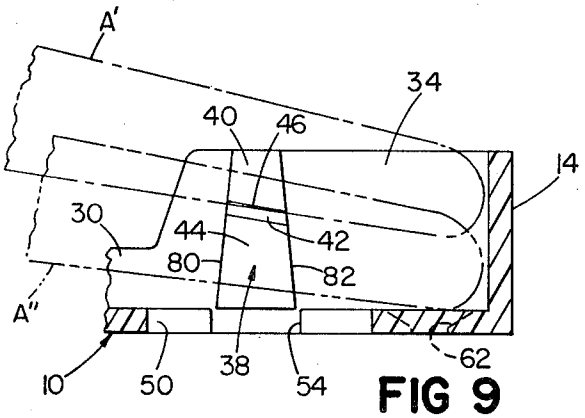


FIG 9

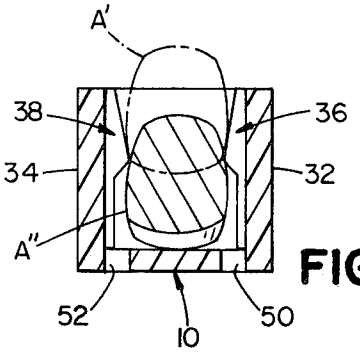


FIG 11

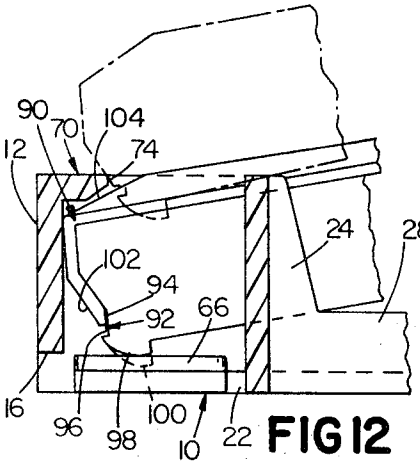


FIG 12

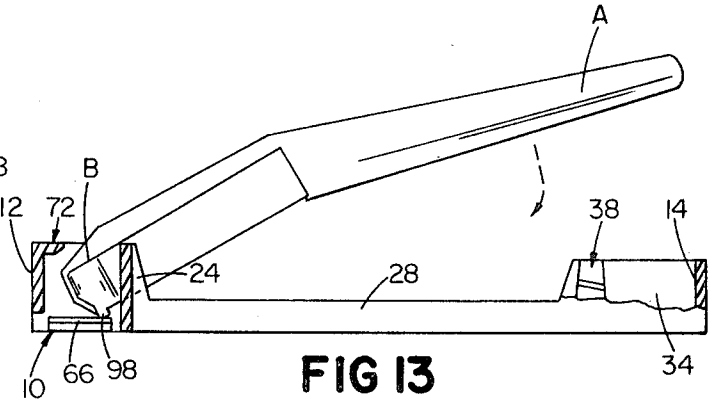


FIG 13

ARTICLE HOLDER

SUMMARY OF INVENTION

This invention relates to article holders and more particularly to holders for razors of the type having an elongated handle and a transversely extending head portion at one end of the handle.

It is an object of this invention to provide a novel and improved holder for a safety razor.

Another object of the invention is to provide a novel and improved holder for a razor that is simple, compact, and inexpensive.

A further object of the invention is to provide a sturdy holder for a razor that functions as a support tray and facilitates transportation of the razor.

Still another object of the invention is to provide a novel and improved one piece support tray for a razor from which the razor may be easily removed and inserted and which provides protection for the sharpened edge of the razor blade, both against damage to the blade and against damage to other objects by the blade.

In accordance with the invention there is provided a holder for a safety razor of the type having an elongated handle and a transversely extending head portion at one end of the handle that comprises a one piece molded plastic member having a base including a support surface portion for the head and the handle, a first stop structure at one end of the base for limiting longitudinal movement of the razor in one direction and a second stop structure at the opposite end of the base for limiting longitudinal movement of the razor in the opposite direction. Resilient means connect at least one of the stop structures to the base. A first securing means secures the razor head and a second securing means similarly secures the razor handle so that the razor is releasably secured in the holder.

In preferred embodiments of the invention, the first and second stop structures are wall structures that extend upwardly from the base, and each wall structure has a transversely extending portion which limits longitudinal movement of the razor and opposed side wall portions which limit lateral movement of the head and handle portions, respectively. The wall portion or structure that cooperates with the razor head is spaced from and connected to the base by integral wall extension portions so that that wall structure may resiliently move relative to the base as the razor head is inserted into the holder. The razor head securing structure is formed integrally with the wall structure that limits longitudinal movement of the head portion while the razor handle securing structure is formed integrally with the wall structure that limits the longitudinal and lateral movement of the handle.

In a particular embodiment the wall structure that limits the longitudinal movement and lateral movement of the head portion includes a transversely extending vertical end wall member and two vertically extending parallel side wall members. The head securing structure comprises a member that extends along the top of the end wall to the adjacent side wall and includes an inclined camming surface for engaging the razor head as it is inserted into the holder. Ribs, parallel to the side walls, are formed in the base and engage protector structure at either end of the blade support platform of the razor, those protector structures sliding along the ribs as the razor is inserted into or removed from the

holder so that the sharpened edge of the blade does not contact a surface of the holder.

The handle movement limiting and securing structure similarly includes a vertically extending end wall and two opposed spaced side walls. The securing structure includes a latch structure formed in each side wall and that portion of the side wall carrying the latch structure is spaced from the base. Each handle latch structure includes an upper outwardly inclined camming surface and a lower inwardly inclined surface that form a latch edge at the junction of the two surfaces past which the razor handle is snapped for latching engagement by the lower surface.

A holder constructed in accordance with the invention provides a sturdy structure for supporting a razor when not in use and facilitates transport of the razor. It is simple, inexpensive, compact and easy to use. The razor may be inserted into the holder either handle end first or head end first and the holder provides protection for the sharpened edge of the blade both during insertion or removal of the razor from the holder and while the razor is stored in the holder.

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

FIG. 1 is a perspective view of a razor holder constructed in accordance with the invention;

FIG. 2 is a perspective view of the razor holder in inverted position with a razor positioned in the holder;

FIG. 3 is a plan view of the razor holder shown in FIG. 1;

FIG. 4 is a sectional view taken along the line 4—4 of FIG. 3;

FIG. 5 is a plan view of the back of the razor holder;

FIG. 6 is an end view of the razor holder, to a larger scale and with parts broken away showing details of the razor head supported in the razor holder;

FIG. 7 is a sectional view taken along the line 7—7 of FIG. 6 of a portion of the razor holder;

FIG. 8 is a plan view of one end of the razor holder showing additional details of the handle latch structure;

FIG. 9 is a sectional view taken along the line 9—9 of FIG. 8;

FIG. 10 is a sectional view taken along the line 10—10 of FIG. 8;

FIG. 11 is a sectional view similar to FIG. 10 showing a razor handle positioned in the latch structure;

FIG. 12 is a sectional view taken along the line 12—12 of FIG. 6 showing details of the razor head latch structure and one mode of inserting or removing a razor from the holder; and

FIG. 13 is a side view, with parts broken away, showing the razor holder and one mode of inserting a razor into the holder.

DESCRIPTION OF PARTICULAR EMBODIMENT

The holder shown in FIGS. 1–5 is molded from a high impact styrene and has a length of 4.75 inches. The holder includes a planar base 10 that is 0.080 inch in thickness with a transversely extending vertical wall 12 at one end that functions to limit longitudinal movement of the razor in one direction and a similar vertical, transversely extending wall 14 at the other end that is parallel to wall 12 and which similarly functions as a stop structure to limit longitudinal movement of the razor in the opposite direction. End wall 12 has a thick-

ness of 0.080 inch, a length of 2.060 inch and a height of 0.605 inch. Its lower surface **16** (FIG. **4**) is spaced 0.120 inch above the bottom of the base. End wall **14** has a thickness of 0.060 inch, a height of 0.525 inch and a width of 0.540 inch.

Extending rearwardly from end wall **12** are parallel side walls **18, 20** that are similarly 0.605 inch in height and 0.080 inch in thickness. These side walls are spaced from base **10** by groove **22** (best seen in FIG. **5**) and are 0.565 inch in length. Transition wall portions **24, 26,** also spaced from base **10** by groove **22,** are 0.080 inch in thickness and each extends inwardly at an angle of 15° to wall **12** for a length of 0.400 inch and then decreases in height at an angle of 18° to the vertical to base side wall portions **28, 30,** each of which has a height above the upper surface of base **10** of 0.165 inch. The thickness of side walls **28** and **30** tapers from 0.080 inch at the head end to 0.060 inch where they join end wall **14.** Adjacent end wall **14** these side walls increase in height to 0.525 inch to form lateral restraint portions **32, 34.**

Formed on each such restraint portion is a latch structure **36, 38,** each of which includes an inclined upper surface **40,** an inwardly inclined intermediate surface **42** and a vertical lower surface **44.** The junction between surfaces **40** and **42** defines a latch edge **46.** The portions of side wall portions **32, 34** that support the latch structures **36, 38,** respectively, are spaced from base **10** by an H-shaped groove **48** (best seen in FIG. **5**) that includes side portions **50, 52** each 0.710 inch in length and 0.060 inch in width, and a center portion **54.**

Formed in the base are two apertures **60, 62** each of which has a chamfered surface for receiving the head of a screw type fastener. Recess **64** in base **10** is provided to accommodate an adjusting mechanism of the razor. Ribs **66, 68,** each 0.030 inch high, 0.060 inch wide and about 0.4 inch long, are disposed parallel to side walls **18, 20,** and spaced inwardly from the adjacent side wall a distance of 0.115 inch.

At the top of end wall **12** and extending between that end wall and each adjacent side wall **18, 20** are securing structures **70, 72.** Each such securing structure includes vertical surface **74** that is disposed at an angle of 12° to wall **12** and contacts the associated side wall at a distance of 0.110 inch from the junction between wall **12** and that associated side wall. Surface **76,** inclined at an angle of 30°, connects surface **74** to a horizontal surface **78,** the transition between surfaces **76** and **78** being parallel to and at a distance of 0.062 inch from wall **12** (as shown in FIG. **7**).

Additional details of the handle latch structures **36, 38** may be had with reference to FIGS. **8–11.** As there shown, each latch structure is a protrusion on the corresponding side wall portion **32, 34,** each protrusion having a width at the top of 0.150 inch and side wall surfaces **80, 82,** each side wall being inclined at an angle of 5° to the vertical. The latch structures are disposed at an angle of 2 ½° to the longitudinal axis of the holder, the forward edge (at side wall **80**) of inclined surface **40** being disposed at an angle of 20°–29′ to the vertical while the rear edge (at side wall **82**) is inclined at an angle of 18°–17′. Surface **42** is inclined at an angle of 45° , and surface **44** is substantially vertical. The latch edge **46** defined by the intersection of surfaces **40** and **42,** is inclined at an angle of 6° to the longitudinal axis of the holder.

This holder is designed for use with a razor similar to that disclosed in Nissen U.S. Pat. No. 3,375,578. Such a razor, as shown in FIG. **2,** has a handle A and a transversely extending head portion B. This particular razor includes a holder (which defines the handle A and has a cap portion **90** (FIG. **12**)) and a cartridge which stores a length of band blade **92** (FIGS. **6** and **12**) that provides a series of shaving edges that extend from a supply position across a planar support platform **94** of the cartridge to a take up position. The blade has a sharpened forward edge **96** which projects beyond the front edge of the blade support platform **94.** A guard surface **98,** at either end of the blade support platform is disposed in front of each end of the blade support platform **94** and extends upwardly in front of the blade **92** at the point at which the blade is bent around a small radius. A guard member **100** extends between the guard projections **98,** and in this type of razor, is adjustable relative to the blade edge **96** to provide a range of shaving geometries.

The razor may be inserted into the holder either head portion first or handle portion first. In the first mode of insertion, the head portion is positioned between side walls **18** and **20** as indicated in FIG. **13** with guard projections **98** resting on ribs **66, 68.** The razor is slid forward until cap **90** abuts end wall **12** as shown in FIG. **12** and then the handle A is rotated downwardly until it reaches the position indicated by line A′ in FIGS. **9** and **11.** In this position surfaces of the handle are resting on the inwardly tapering surface **40** of the handle latch structure. By manual pressure the handle is forced down towards base **10** past latch edges **46,** the latch structures flexing outwardly due to the resilience of the material and as facilitated in part by slots **50** and **52.** When handle reaches the position A″ indicated in FIG. **9** and FIG. **11,** the widest part of the handle is below latch edges **46** and the latch structures spring back so that surfaces **46** overlie the handle and securely latch it in the holder. To remove the razor from the holder, the user merely grasps the handle at a point along the length of side walls **28, 30** (which may be further reduced in height if desirable to facilitate grasping of the handle), the handle is lifted out of the handle latch structure to the position shown in FIG. **13** and then the head portion B is removed from the holder.

Alternatively, the razor may be inserted into the holder handle first. In this mode of insertion, the handle is first positioned as indicated at A′ indicated in FIGS. **9** and **11** and then manually forced to A″ position as above described in latching operation. In this position the inclined surface **102** (FIG. **12**) of cap **90** rests on securing members **70** and **72.** Manual pressure applied to the head B of the razor forces surface **102** downward past surfaces **74,** wall **12** flexing outwardly as permitted by the resilient spring portions of the holder and the cap slides across surfaces **74** into the recess so that projections **98** rest on support ribs **66** and **68.** As surface **104** of the cap **90** slides past surface **74,** the members **70, 72** snap back due to the resilience of the holder material to the position overlying cap **90** substantially as shown in FIG. **12** and the razor is secured in the holder.

Thus, it will be seen that the invention provides a holder which reliably secures the razor. It is a compact, sturdy device which permits convenient storage and transport of the razor and provides protection for the blade both against damage to the blade and damage to other objects by the blade. It will be understood that

the invention may be used with razor configurations other than the described razor and a variety of modifications of the disclosed embodiment will be apparent to those skilled in the art. Therefore, while a particular embodiment of the invention has been shown and described, it is not intended that the invention be limited to the disclosed embodiment or to details thereof and departures may be made therefrom within the spirit and scope of the claims.

What is claimed is:

1. A holder for a safety razor of the type having an elongated handle and a transversely extending head portion at one end of the handle comprising a one piece molded plastic member having a base including support surface portions for said head and said handle, a first stop structure at one end of said base for limiting longitudinal movement of said razor in one direction, a second stop structure at the opposite end of said base for limiting longitudinal movement of the razor in the opposite direction, at least one of said stop structures being spaced from said base, resilient means connecting said one stop structure to said base so that said one stop structure may move relative to said base in a direction away from the other stop structure as the razor is inserted into the holder, first securing means for securing said razor head and second securing means for securing said razor handle so that the razor may be secured in said holder.

2. The holder as claimed in claim 1 wherein each of said first and second stop structures is a U-shaped wall structure that extends upwardly from said base, each said wall structure having a transversely extending end wall portion which limits longitudinal movement of the razor and two opposed side wall portions which limit lateral movement of the engaged razor portion.

3. The holder as claimed in claim 2 wherein said base is narrower than said end wall portion of said one stop structure and said resilient means includes two transition wall portions, each said transition wall portion extending inwardly from a respective side wall portion to said base and permitting said end wall portion to move relative to said base as the razor is inserted into the holder.

4. The holder as claimed in claim 2 wherein said razor head and razor handle securing means are formed integrally with said first and second stop structures, respectively.

5. The holder as claimed in claim 1 for use with a razor that includes a guard member and two guard surfaces, one at each end of said guard member, said holder further including two parallel rib members having surfaces disposed above the plane of said base for engaging said guard surfaces and supporting said guard member so that said guard member does not touch said base.

6. The holder as claimed in claim 1 wherein said second stop structure includes a vertically extending end wall and two opposed spaced side walls and said handle securing means includes latch structure formed in each said side wall, that portion of each side wall carrying said latch structure being spaced from said base.

7. The holder as claimed in claim 6 wherein each said handle latch structure includes an upper inclined camming surface and an intermediate inclined latch surface so that a latch edge is defined at the junction of said two surfaces past which the razor handle is snapped for latching engagement by said intermediate surface.

8. A holder for a safety razor of the type having an elongated handle and a transversely extending head portion at one end of the handle comprising a one piece molded plastic member having a base including support surface portions for said head and said handle, a first stop structure at one end of said base for limiting longitudinal movement of said razor in one direction, said first stop structure including a transversely extending end wall member and two side wall members, said first stop structure being spaced from said base, resilient means comprising integral wall extension portions extending inwardly from each respective side wall member to said base connecting said first stop structure to said base so that said first stop structure may move relative to said base as the razor is inserted into the holder, a head securing means projecting from said end wall member, said securing means including a surface overlying said base for securing the razor head in said holder, and handle securing means for securing the razor handle in said holder.

9. The holder as claimed in claim 8 wherein said head securing means includes two securing members, one at each end of said end wall, each said securing member including a surface overlying said base for securing the razor head in said holder, each said surface being tapered in width, the width decreasing inwardly from the end of said end wall.

10. A holder for a safety razor of the type having an elongated handle and a transversely extending head portion at one end of the handle comprising a one piece molded plastic member having a base including support surface portions for said head and said handle, a first stop structure at one end of said base for limiting longitudinal movement of said razor in one direction, said first stop structure including a transversely extending vertical first end wall member spaced from said base, resilient means including integral wall extension portions connecting the ends of said first end wall member to said base so that said first end wall member may move relative to the base as the razor head is inserted into the holder, a securing member disposed along the top of said first end wall member, said securing member including a surface overlying said base for securing the razor head in said holder, a second stop structure at the opposite end of said base from said first stop structure for limiting longitudinal movement of the razor in the opposite direction, said second stop structure including a vertically extending second end wall member, and handle securing means connected to said base, said handle securing means including two opposed spaced latch members, each said latch member including an upper camming surface and a lower offset surface so that an intermediate latch surface is defined between said upper and lower surfaces past which the razor handle is snapped for latching engagement by said latch surfaces.

11. The holder as claimed in claim 10 wherein said head securing member includes two securing members, one at each end of said end wall, each said securing member including a surface overlying said base for securing the razor head in said holder, each said surface being tapered in width, the width decreasing inwardly from the end of said end wall.

12. The holder as claimed in claim 11 wherein said base has a planar upper surface extending substantially the entire length of said base.

13. The holder as claimed in claim 12 for use with a razor that includes a guard member and two guard surfaces, one at each end of said guard member, said holder further including two parallel rib members having surfaces disposed above the plane of said base for engaging said guard surfaces and supporting said guard member so that said guard member does not touch said base.

14. The holder as claimed in claim 13 wherein said second stop structure further includes two opposed spaced side walls, one of said latch members being formed in each said side wall, that portion of each side wall carrying said latch member being spaced from said base, each said upper surface being outwardly inclined and each said intermediate surface being inwardly inclined so that a latch edge is defined at the junction of said upper and intermediate surfaces past which the razor handle is snapped for latching engagement by said intermediate surface.

* * * * *