Nov. 23, 1971 A. KOLDE ET AL 3,621,570

RAZOR BLADE TOOL

Filed May 22, 1970

FIG. 1.

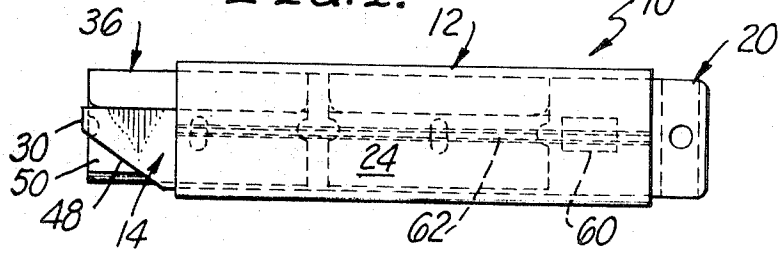


FIG. 2.

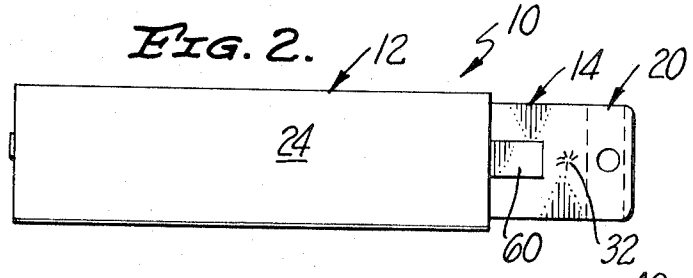


FIG. 3.

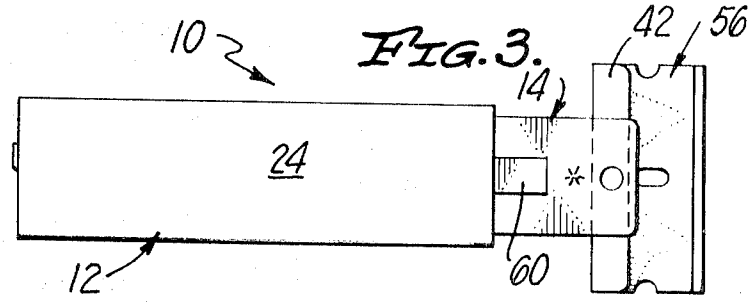


FIG. 5.

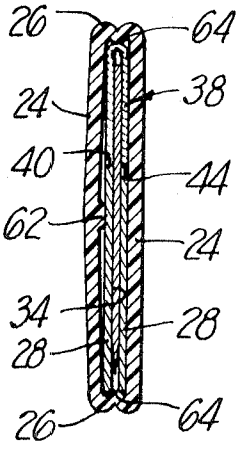


FIG. 4.

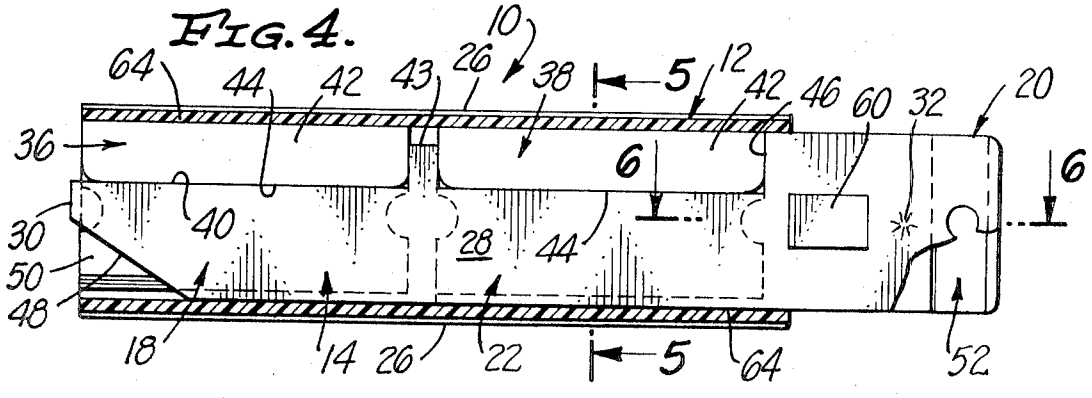
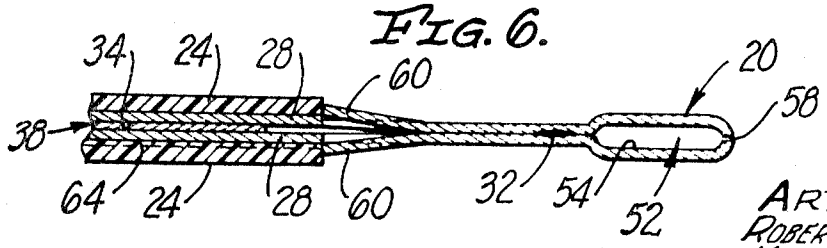


FIG. 6.



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RAZOR BLADE TOOL

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ABSTRACT OF THE DISCLOSURE

A razor blade tool having a flat sheath-like handle containing a blade holder in the form of a flat slide with a spare blade holding means between its ends and cutting blade holding means at its ends for receiving razor blades in positions wherein one cutting blade has its cutting edge extending lengthwise of the slide and an exposed cutting corner at one end of the slide and the other cutting blade has its cutting edge extending crosswise of and exposed beyond the opposite end of the slide. The slide is movable longitudinally of the handle to locate either blade in cutting position beyond the adjacent end of the handle and to locate the blade with the exposed cutting corner in sheathed relation within the handle. Resilient latching detents on the slide releasably lock the slide against movement from the latter blade sheathing position.

BACKGROUND OF THE INVENTION

Field of the invention

This invention relates generally to cutting tools and more particularly to a novel razor blade tool.

Prior art

Pat. No. 2,464,408 discloses a razor blade tool having a sheath-like handle containing a blade holder in the form of flat slide with blade holding means at one end for receiving a safety razor blade. When positioned in the blade holding means, the razor blade has its cutting edge extending lengthwise of the slide and an exposed cutting corner at the end of the slide. The blade holder is movable lengthwise relative to the handle between a retracted position of storage wherein the razor blade is retracted to sheathed relation within the handle and an extended position of use wherein the blade is located beyond the handle for cutting contact of its exposed cutting corner with a work piece. The patented tool is useful for opening cardboard cartons and the like.

SUMMARY OF THE INVENTION

The present razor blade tool is an improvement on the tool of the above mentioned patent and like many existing razor blade tools has a slide with blade holding means at both ends. One blade holding means receives a razor blade in a position wherein its cutting edge extends lengthwise of the slide and a cutting corner of the blade is exposed at the end of the slide as in the patented tool. The slide is movable relative to the handle between an extended position wherein the blade is located beyond the handle for contact of its exposed cutting corner with a work piece and a retracted position wherein the blade is retracted into sheathed relation within the handle. According to one feature of the invention, resilient detents on the slide lock the latter against extension from its retracted position and are depressible by finger pressure to release the slide for extension. The other blade holding means on the slide receives a razor blade in position wherein its cutting edge extends transversely of the slide beyond the adjacent end of the slide.

According to another feature of the invention, the blade holder slide has means for holding a spare blade in the region between the two end cutting blades on the slide. This spare holding means is accessible for insertion and removal of the spare blade by withdrawal of the slide from the handle.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a side elevation of a present razor blade tool with the blade holder in one cutting position;

FIG. 2 is a view similar to FIG. 1 with the blade holder retracted to locate the razor blade in sheathed relation within the tool handle;

FIG. 3 is a side elevation of the tool with a second razor blade mounted on the blade holder and the latter extended to locate the blade in cutting position;

FIG. 4 is an enlarged longitudinal section through the tool;

FIG. 5 is a section taken on line 5—5 in FIG. 4; and

FIG. 6 is a section taken on line 6—6 in FIG. 4.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The illustrated razor blade tool **10** has a flat sheath-like handle **12** containing a blade holder **14** in the form of a flat slide with blade holding means **18**, **20** at its ends and a center spare blade holding means **22**. Handle **12** comprises a flat sleeve which may be fabricated of various materials and by various forming techniques. According to the preferred practice of the invention, however, the handle is fabricated from a suitable plastic, such as poly vinyl chloride (PVC) by an extrusion process. The handle has relative wide and flat side walls **24** joined along their longitudinal edges by narrow edge walls **26**.

The blade holder **14**, like the handle **12**, may be fabricated of various materials and various forming techniques. The illustrated holder is formed from a strip of sheet metal which is bent back on itself into a generally U-shape to form the flat holder slide. This slide has spaced parallel side walls or portions **28** joined at one end, i.e. the end adjacent the blade holding means **18**, by a connecting portion **30**. The opposite ends of the side portions **28** are spot welded at **32**.

The side walls or portions **28** of the blade holder **14** are spaced to provide a narrow intervening slot **34** which defines both the blade holding means **18** and the spare blade holding means **22**. This slot is dimensioned in width to receive with a relatively snug sliding fit two safety razor blades **36**, **38** in end to end relation, as shown. The upper longitudinal edges **40** of the blade holder are recessed to accommodate the enlarged reinforcing backs **42** on the blades and provide upstanding stops **43** along these edges for positioning the blades endwise. As shown in FIGS. 4 and 5, the lower shoulder edges **44** of the blade backs rest on the recessed upper holder edges **40**.

The portion of the blade holder slot **34** adjacent the left end of the blade holder **14** constitutes the blade holding means **18**, and the blade **36** which is contained within this holding means constitutes a cutting blade. As shown in FIG. 4, the connecting portion **30** and stops **43** are spaced lengthwise of the blade holder **14** to restrain the cutting blade against endwise movement. The spare blade **38** is restrained against endwise movement by the stops **43** and shoulders **46** on the blade holder at the right end of the blade.

The blade holding means **18**, **22** receive the razor blades **36**, **38** in positions wherein their lower cutting edges extend lengthwise of the blade holder **14** and are contained within the holder slot **34**. The lower longitudinal edges of the blade holder are beveled at **48** to expose the adjacent cutting corner **50** of the cutting blade **36**.

The right hand extremities of the blade holder side walls or portions **28** are shaped to define a second slot **52** which exends crosswise of the holder and constitutes the blade holding means **20**. Slot **52** has an enlarged portion **54** for receiving the back **42** of a safety razor blade **56** which serves as a second cutting blade and a narrow portion **58** opening through the end of the blade holder for receiving the thin blade portion proper of the blade. Slot **52** is dimensioned to receive the cutting blade **56** with a snug gripping fit. In this regard, it will be understood that the adjacent end portions of the blade holder **14** which define the slot **52** are laterally resilient to provide a blade gripping action.

Blade holder **14** is movable endwise between its position of FIG. 1 and its position of FIGS. 2–4. In the position of FIG. 1, the cutting blade **36** is extended to cutting position beyond the tool handle **12** and the cutting blade **56** is retracted toward the handle. In the position of FIGS. 2–4, the cutting blade **36** is retracted into sheathed relation within the handle and the cutting blade **56** is extended to cutting or scraping position beyond the handle. In each position, the spare blade **38** is sheathed within the handle. The cutting blade **36** and spare blade **38** are inserted and removed by sliding the blade holder **14** from the handle.

According to a feature of the invention, the blade holder **14** is equipped with resilient tongues or detents **60** which are biassed outwardly to their positions of FIG. 6 to engage the adjacent end of the handle **12** and thereby prevent extension of the holder to its position of FIG. 1. These detents comprise flaps which are punched out from the side walls or portions **28** of the holder. The flaps are depressible by finger pressure into the flap openings in the blade holder to release the latter for extension to its position of FIG. 1. According to another feature, the edges and one side of the tool handle **12** are indented at **62, 64** to provide within the handle protrusions which bear yieldably against the blade holder **14** to frictionally retain the latter against movement.

The inventors claim:

1. A razor blade tool comprising:

a sheath-like handle in the form of a flat sleeve having relatively wide side walls joined along their horizontal edges by relatively narrow edge walls and open ends,

a blade holder slidable longitudinally in said handle and comprising a flat slide having spaced side walls joined at said one holder end by an end wall and defining an intervening razor blade receiving slot adapted to receive a safety razor blade with a reinforcing rib edge first to a position wherein the blade edge extends lengthwise of said holder, said holder side walls being recessed along one horizontal edge to accommodate said blade reinforcing rib and beveled along their opposite longitudinal edges at one

holder end to expose a corner of the blade adjacent the latter holder end,

said blade holder being movable longitudinally relative to said handle between a retracted position of storage wherein said one holder end is retracted into the adjacent end of said handle to locate said exposed blade corner in shielded relation within said handle and extended position of use wherein said one holder end projects beyond said adjacent handle end to locate said exposed blade corner externally of said handle for cutting engagement with a workpiece, and

releasable latch means for positively locking said holder in retracted position comprising laterally flexible resilient tongues on opposite sides of said holder which are biased outwardly to engage the other handle end and thereby prevent extension of said holder and are depressable inwardly toward said holder to permit entrance of said tongues with said holder into said other handle end and thereby extension of said one holder end.

2. A tool according to claim **1** wherein:

said blade holder slide comprises a U-shaped member of strip material having side portions forming said slide side walls, a connecting portion forming said said slide end wall, and free end portions forming a second blade receiving slot extending transversely of said slide for receiving in gripping relation the rib of a second razor blade in a position wherein its cutting edge extends transversely of said holder and is exposed at the other holder end.

3. A tool according to claim **1** wherein:

said blade holder slide comprises a U-shaped member of strip material having side portions forming said slide side walls and a connecting portion forming said slide end wall.

4. A tool according to claim **3** wherein:

said holder latching tongues are punched out from said slide side portions to provide in said side portions openings into which said tongues are depressible to permit extension of said blade holder.

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U.S. Cl. X.R.

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