

July 29, 1952

J. G. ROBERTS

2,604,979

CONTAINER FOR RAZOR BLADES

Filed Oct. 31, 1946

2 SHEETS—SHEET 1

Fig. 1.

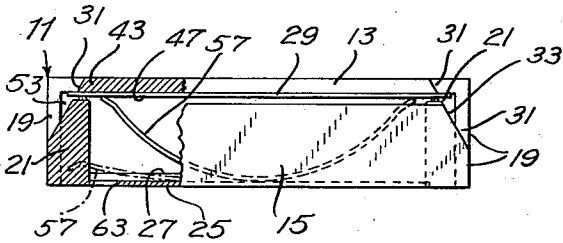


Fig. 3.

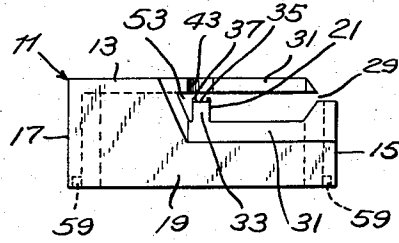


Fig. 2.

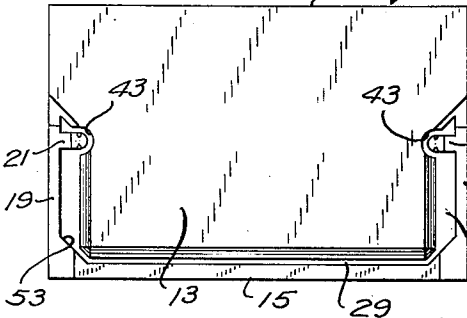


Fig. 4.

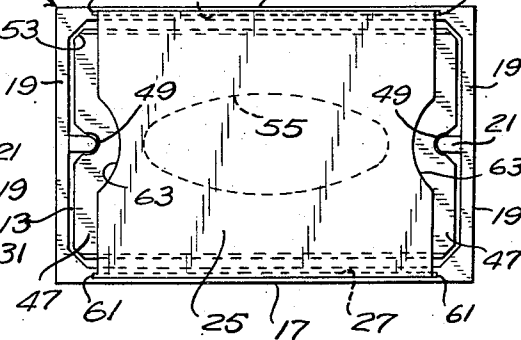


Fig. 5.

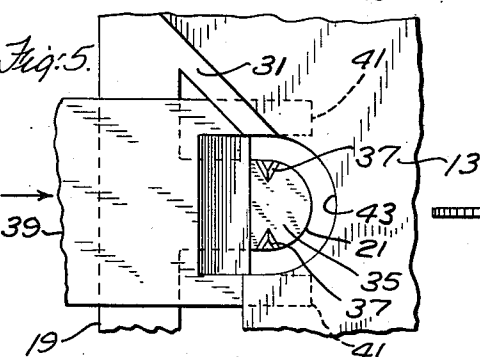


Fig. 6.

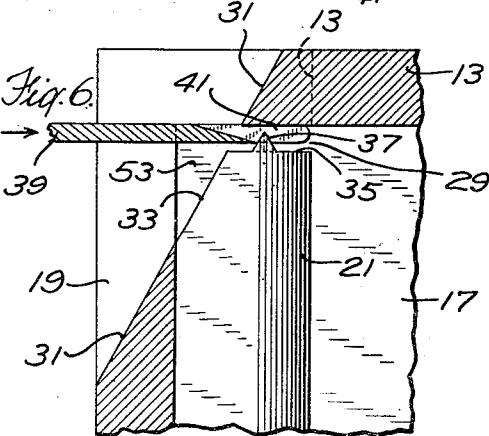
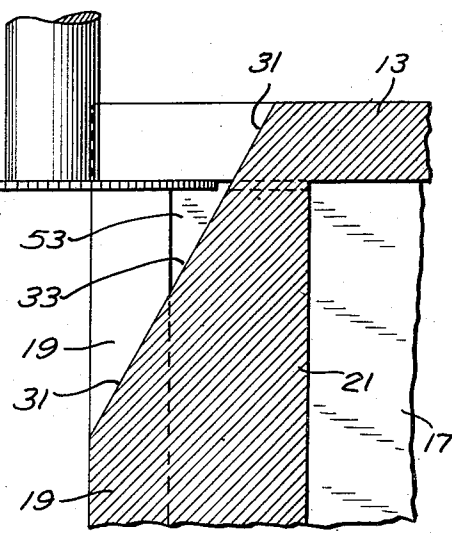


Fig. 7.



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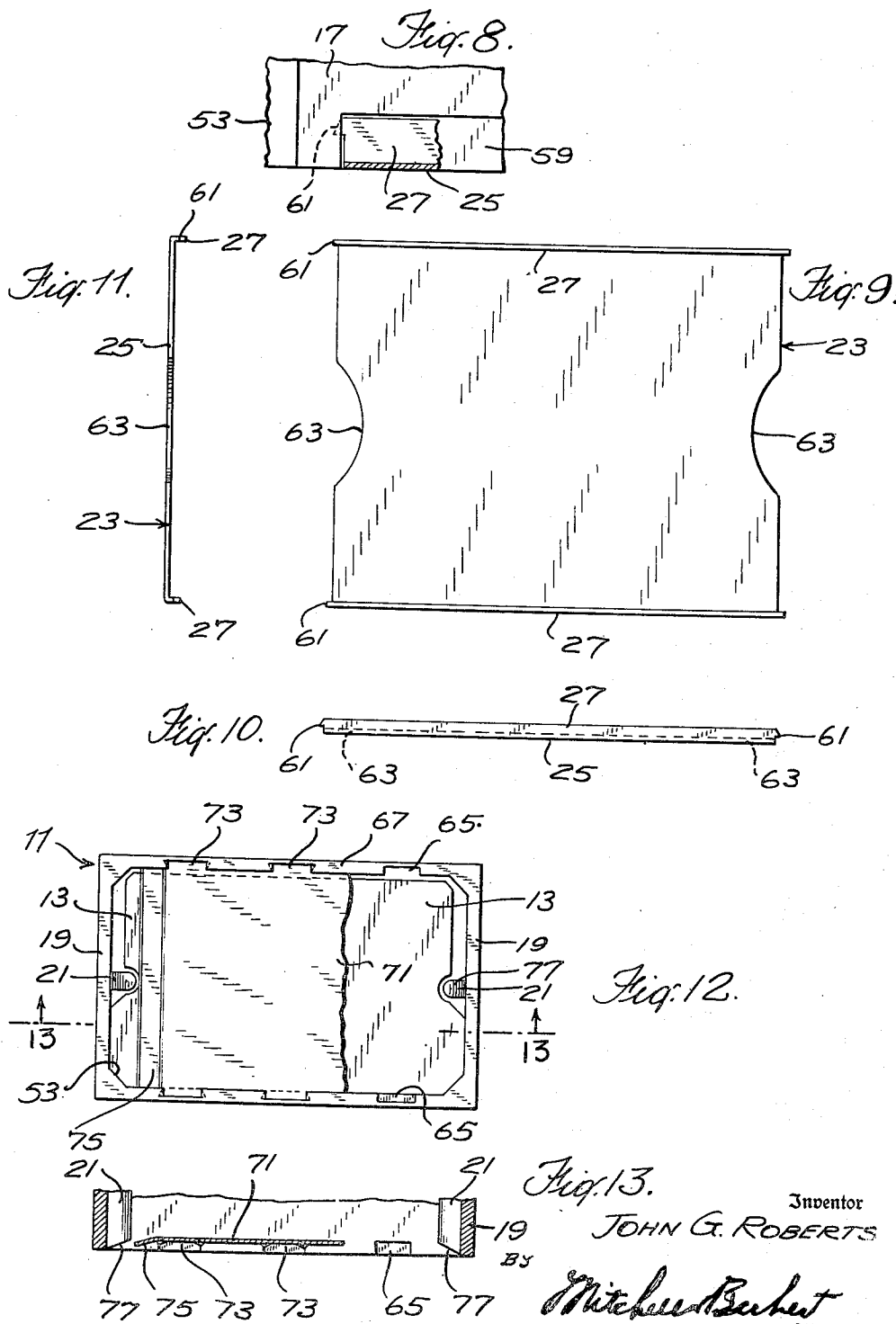
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2 SHEETS—SHEET 2



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CONTAINER FOR RAZOR BLADES

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Application October 31, 1946, Serial No. 706,937

1 Claim. (Cl. 206—16)

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This invention relates to containers for razor blades. Its objects are to simplify such structures; reduce their size and economize in the material used and in the manufacturing and loading procedures; while providing adequate strength and stability, proper functioning, complete blade protection and the utmost in convenience to the user.

These objects are attained in a container made in two sections, one, an upper section, comprising a roof and side and end walls formed in a mold, preferably of plastic material such as cellulose acetate, and the other a lower section, constituting the floor, formed of sheet material, preferably a thin metal stamping, rigidly secured to the side walls and preferably lying flush with the bottom edges thereof.

The invention is especially adapted for holding blades, without individual paper wrappers, of rectangular contour with recesses in their unsharpened end edges and bevelled at their corners, and to a type of container from which such blades may be withdrawn over a side wall one at a time by grasping them at their unsharpened end edges while within the container. The end walls of the container are provided with blade-retaining means, preferably in the form of ribs, that engage a stack of the blades within their recesses and with a dispensing slot that is formed between the roof and walls and is effectively sized to permit the removal of one blade at a time by trimming off a small amount of the molded material. To provide for the protection of the rearward sharp edge of the topmost blade in the event it is moved rearwardly the meeting edges of the rear wall and end walls of the container are filled in sufficiently to contact the blade at its bevelled corners and thus withhold that edge from contact with the rear wall.

An entrance slot for used blades is provided at the bottom by shortening the floor section at one end or, preferably, two such slots are thus provided, one at each end. The complete package includes, preferably, a spring of thin sheet metal abutting the floor, bowed upwardly, having recesses in its ends and generally conforming to the contour of the blades.

A special feature concerns the attachment of the lower, the floor section, to the molded upper section. The lower edges of the front and rear side walls have notches extending upwardly, and preferably open inwardly, and the sheet material, constituting the floor, has extended portions corresponding to, and slightly wider at their extremities than, the notches so that upon

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pressure applied vertically to join them the two container sections will interlock by the sinking of those extremities into the material of the side walls within the notches. By turning the extended portions of the floor upwardly, which is preferable, the floor can be caused to lie flush with the lower edges of the side walls, and by elongating these portions and the notches in each side wall, to more than half the length of the wall, which also is preferable, the floor though thin is substantially stiffened.

In the drawings, Fig. 1 is a front side view partly in mid-section of the complete container in its preferred form. It shows a single blade and the spring as extended; also, the same spring, in broken lines, as it would be flattened under a full stack.

Figs. 2 and 3 are a plan and an end view, respectively, of the upper section of the container.

Fig. 4 is a bottom view of the complete container showing a blade therein but omitting the spring.

Figs. 5 and 6 are an enlarged plan and a front view, respectively, of a fragment of the container together with a fragmentary showing of a trimming tool (in mid-section in Fig. 6) for sizing the dispensing slot.

Fig. 7 is a fragmentary view in mid-section of an alternative structure similar to Fig. 6, and showing an alternative tool for sizing the slot.

Fig. 8 is an enlarged inside view of fragments of the two sections of the container showing how they interlock.

Figs. 9, 10 and 11 are enlarged plan, side and end views, respectively, of the floor sections in the preferred form.

Fig. 12 is a bottom view of an alternative construction for the container with part of the floor section broken away.

Fig. 13 is a side view of a fragment of the floor section of Fig. 12 with a fragment of the upper section of the container on section line 13—13 of Fig. 12.

Referring to Figs. 1 to 11, which collectively, except in Fig. 7, show the container in its preferred form, 11 is the upper section of molded material, preferably a plastic such as cellulose acetate, comprising a roof 13, a front side wall 15, a rear side wall 17, end walls 19 and ribs 21; and 23 is the lower or floor section of sheet material, preferably thin metal such as cold rolled steel or hard brass comprising the floor proper 25 and extended portions 27 thereof upturned at the front and rear sides. A dispensing slot 29 is provided in the upper section. It is bounded

above by the roof and below, by the upper edge of the front wall. This excessively wide slot is continued around each end of the front wall and along the end walls up to, including and just beyond the ribs 21. The upper end edges of the upper section are bevelled off, as shown at 31, on an angle with reference to the roof of about 60 degrees to permit easy edgewise finger engagement of the topmost blade. This bevelling takes in the surfaces 33 of the ribs, which extend close to the roof. Preferably, on the upper surface 35 of each rib at both the front and rear edges thereof particles 37 of the molded material are cast within the boundaries of the slot and these particles are trimmed off to increase the width of the slot at their locations to something more than the thickness of a single blade but less than that of two blades. The trimming is accomplished, preferably as shown in Fig. 6, by a chisel-like tool 39, that may be flanked on both sides by prongs 41, which by their advance position can slide under the roof to guide the cutting edge. The roof has an indentation 43 to avoid any overlapping of the rib and roof that would complicate the mold. An alternative structure in this respect is shown in Fig. 7, where, as molded, the rib joins the roof and the slot is sized by a saw 45.

Blade 47 of a type for which the container is best adapted, is shown in Figs. 1 and 4. It is rectangular in outline and without extensions at its ends. It has, instead, indentations 49 bevelled away at the entrances thereto and is thus adapted to embrace the ribs. All blades within the container are thus held against lateral movement except the topmost blade, which may be moved forwardly over the side wall 15 and out of the container through the slot when grasped at its ends in the fingers. The blades are slightly cut away, preferably by bevelling, at their corners 51 and fillets 53 of the molded material are provided at the meeting edges of the side and end walls. These fillets serve to strengthen the container and extend inwardly so as to be closer to the blade corners than are the side walls to the lateral edges of the blades, thereby serving, at the rear, to protect the topmost blade from coming into contact with the rear wall, should it be pushed back before it is withdrawn. This blade has, preferably, an elongated perforation 55 extending towards the indentations at its ends. It is preferably double-edged and, in the several respects herein set forth, is especially adapted for use in a razor described in my copending application, Serial Number 706,936, filed October 31, 1946.

To maintain a stack of blades in the container with the topmost against the roof a leaf spring 57 abutting the floor, upturned at its ends and having generally the contour of the blades should be provided. When flattened under a full stack of blades, as shown in broken lines, it will straddle the ribs as do the blades. Its maximum useful extension would occur when all blades but one are removed. It may be somewhat wider than the blades so as to be stopped against considerable lateral movement by contact with the side walls.

The lower edges of the front and rear walls of the container have notches 59 (Figs. 3 and 8) extending upwardly and preferably open inwardly. In the preferred construction there is a single notch in each of these walls extending nearly the full length thereof and matching the upwardly extending portions 27 of the floor section except that by lateral extensions 61 at their extremities

these portions are made slightly wider than the notches, so that upon pressure applied vertically to join the two sections these lateral extensions, which are preferably of keystone shape, as best shown in Fig. 8, will be forced into the material of the side walls within the notches thereby effectively interlocking the sections. The floor may thus be caused to lie flush with the lower edges of the side walls, thereby providing minimum height of the container for a given blade capacity. The upturning of the extended portions of the floor section over its entire length simplifies this section with respect to its contour and stiffens the floor lengthwise thereby permitting the use of thin and easily fabricated sheet metal. While there is some lateral flexibility due to the thinness of the material, there is an advantageous characteristic, as will be explained in connection with the use of the container as a depository for discarded blades.

For the deposit of discarded blades an entrance slot is provided at one or, preferably, each end of the container by extending an end portion of the floor towards but terminating it short of the end wall. As shown best in Figs. 4 and 9 this end portion has an indentation 63 opposite the rib 21, thereby providing a slot that conforms generally to the contour of the combined wall and rib and is adapted to cause the discarded blade while being thrust into the container to flex laterally. The slot may be made narrower than it otherwise could be because the floor can also flex somewhat laterally. When nearly all the way in the bevelled entrance to its indentation 49 guides the blade laterally. When all the way in the blade unflexes and is securely held in place under the spring.

An alternative arrangement of notches in the side walls and extended portions of the floor section, as shown in Figs. 12 and 13, is one in which there are several notches 65 in each of the side walls 67 and 69 and the floor 71 has corresponding extended portions 73, preferably formed inversely whereby they are slightly wider at their extremities than the notches. Thus on jointure of the two container sections the extended portions will be deflected downwardly at their extreme lateral edges as they did into the wall material and will thus wedge firmly into the notches. In this arrangement the floor lies somewhat above the lower wall edges, the end portion 75 of the floor is bent downwardly, preferably on a slant, and the lower surface 77 of the rib is raised, preferably also on a slant, thereby leaving a narrow but sufficient blade entrance slot to the container.

The container as herein described has a capacity preferably of about fifty blades of 0.006-inch thickness and the blades may be protected by saturating the stack with a highly fluid lubricant in the manner set forth in my copending application, Serial Number 661,741, filed April 12, 1946, now Patent No. 2,569,072, granted Sept. 25, 1951.

The container is most easily loaded by letting an entire stack of blades down into its upper section while in inverted position, then placing the spring upon the stack and finally completing the package by forcing the floor section in place as has been explained. It should be understood that some of the sharp corners may be rounded as desired, and other modifications in design may be made without departing from the invention as defined in the following claim.

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I claim:

A container section of molded material conforming to a stack of razor blades of generally rectangular contour with recesses in the ends thereof, comprising a rear wall, a front wall, an end wall, a rib supported by said end wall in position to engage said stack within said recesses, and a roof supported by said rear wall and said end wall rearwardly of said rib, said container section having an excessively wide dispensing slot bounded above by said roof and below by said front wall and by said rib, and by said end wall forwardly of said rib, and being provided with a small particle of its material of truncated shape and high enough upon the upper surface of said rib to close said slot to all but a single blade at a time.

JOHN G. ROBERTS.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,791,586	Todd -----	Feb. 10, 1931
1,935,311	Cook -----	Nov. 14, 1933
1,957,804	Reich -----	May 8, 1934
2,287,487	Roberts -----	June 23, 1942
2,312,502	Testi -----	Mar. 2, 1943
2,411,669	Roberts -----	Nov. 26, 1946
2,418,677	Testi -----	Apr. 8, 1947
2,436,025	Steinbach -----	Feb. 17, 1948