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L. ILLMER

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SPENT RAZOR BLADE HOLDER

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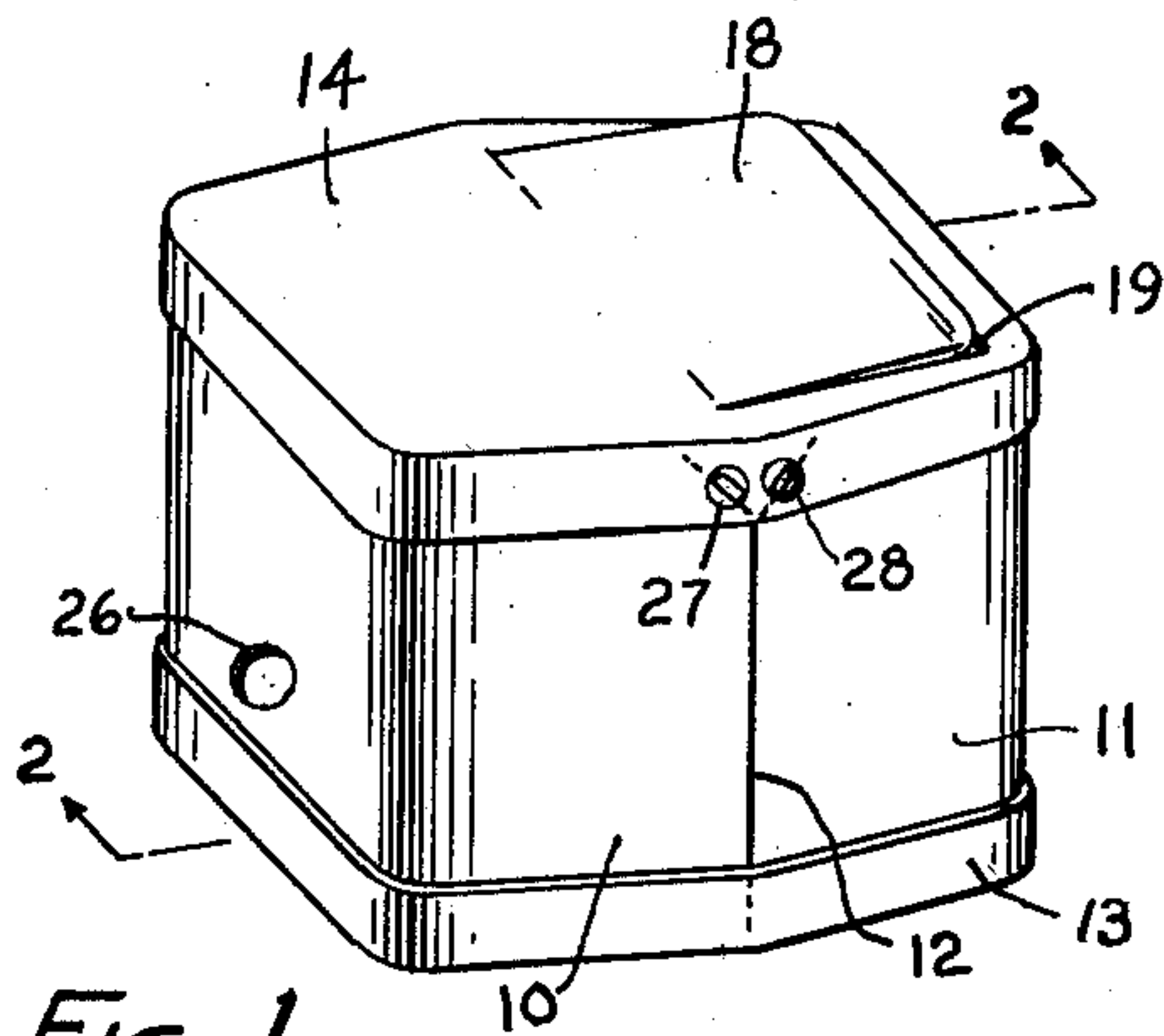


FIG. 1.

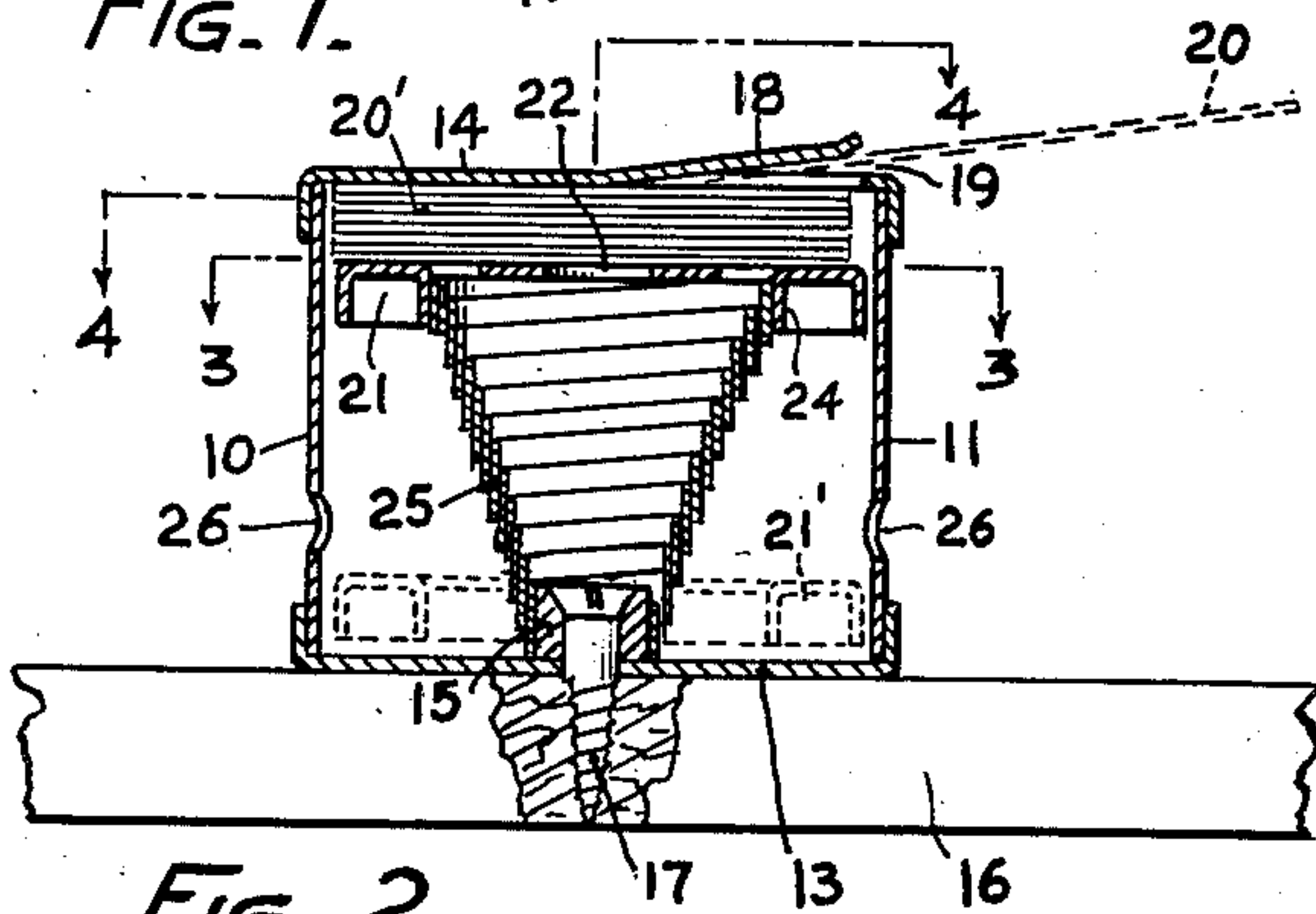


FIG. 2.

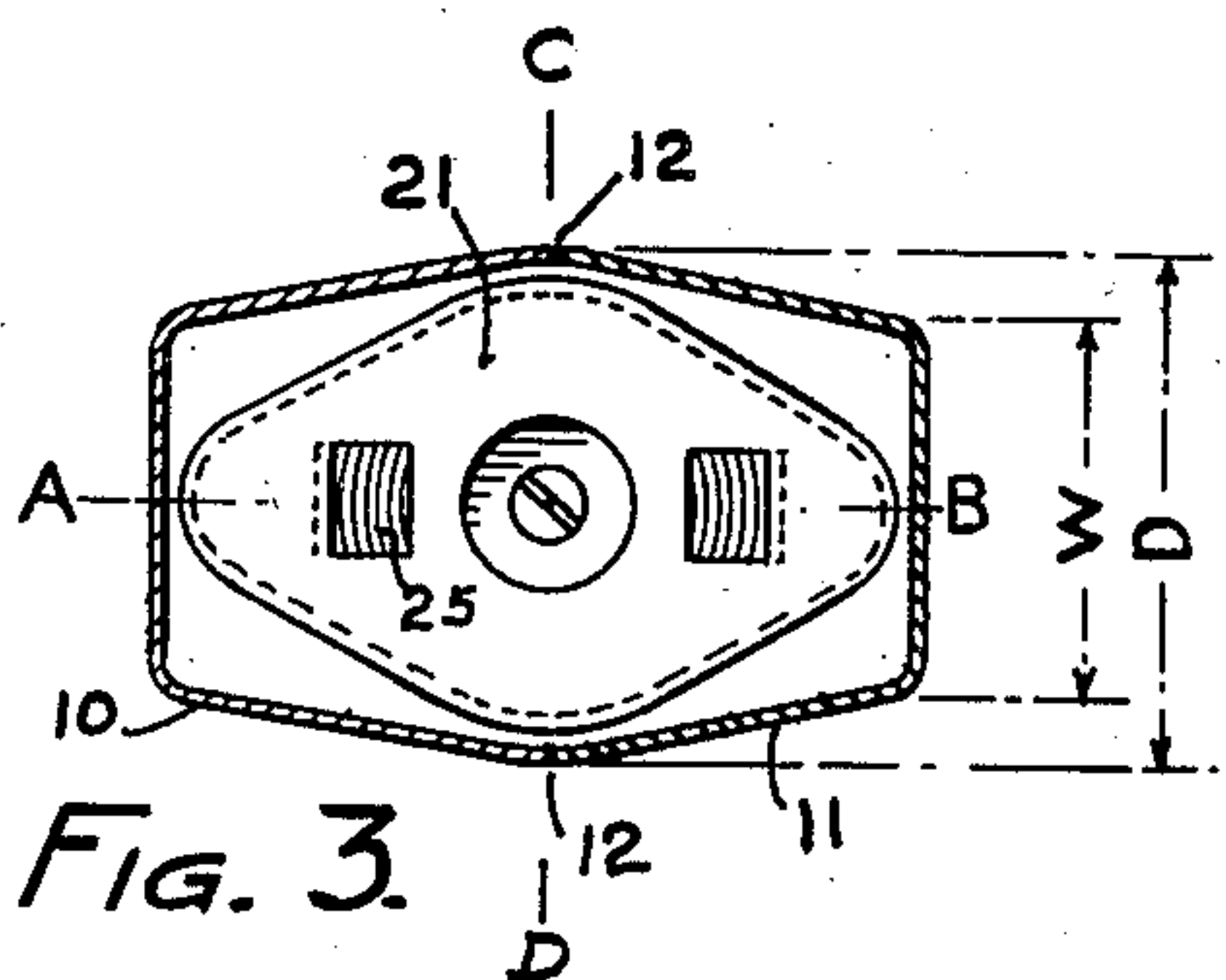


FIG. 3.

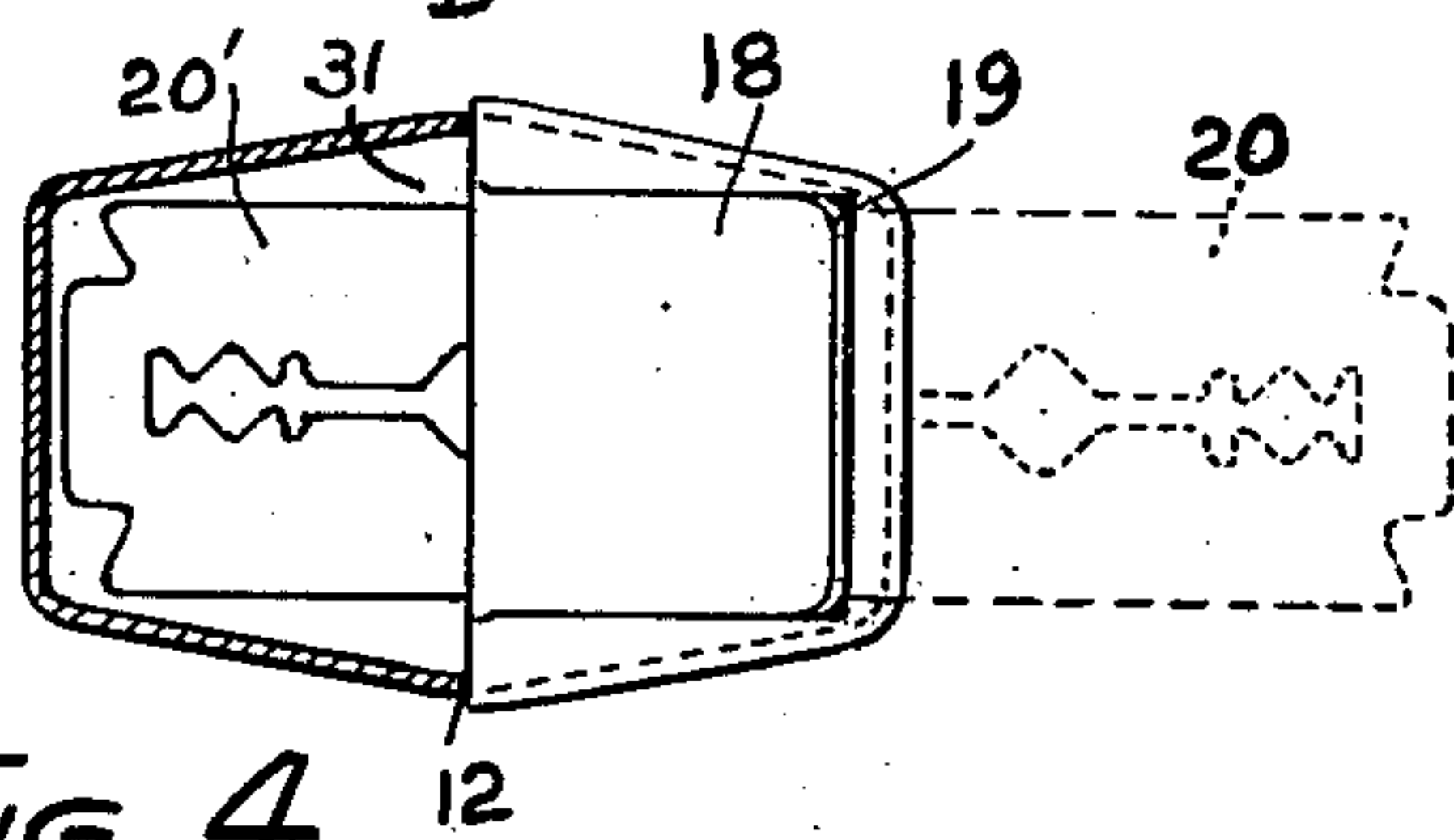


FIG. 4.

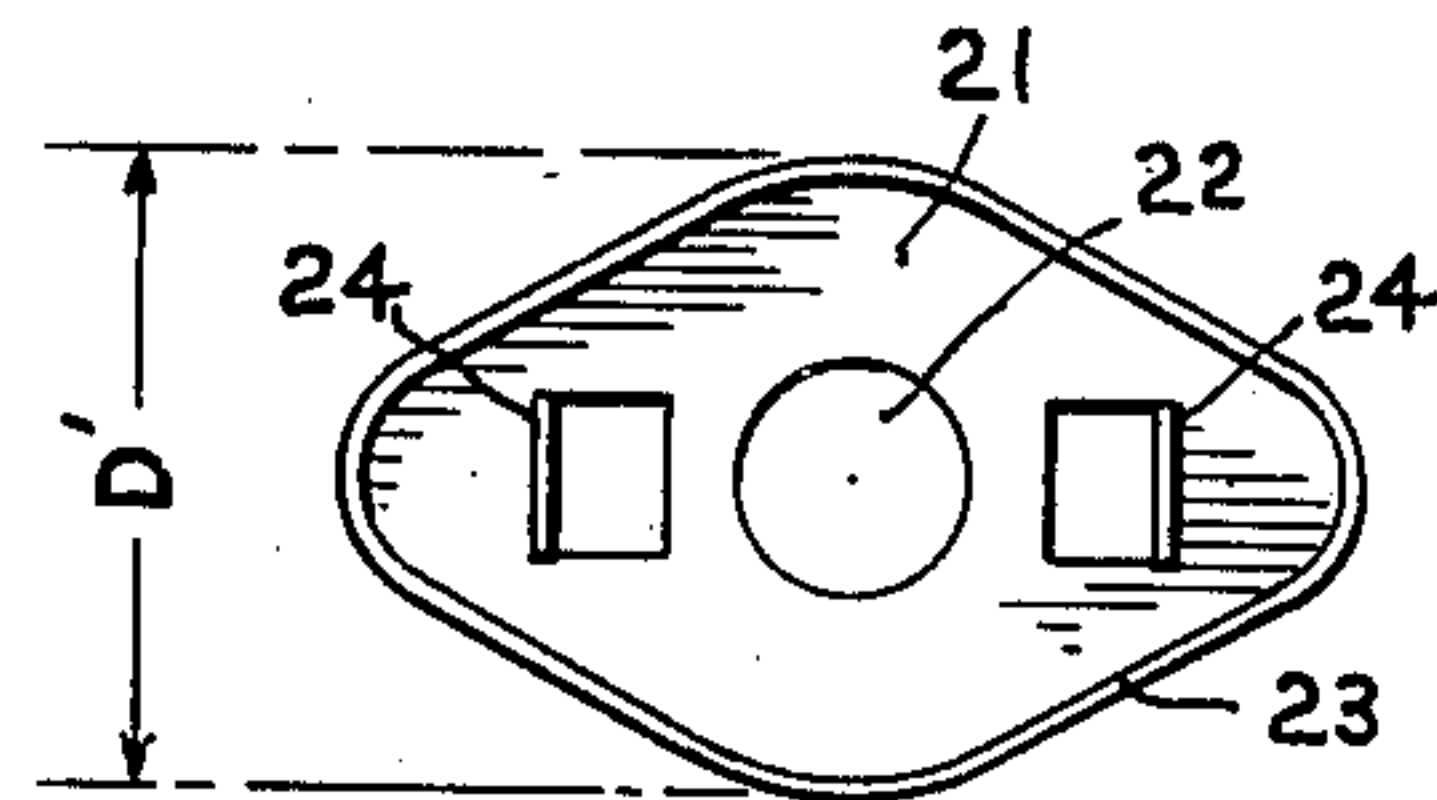


FIG. 5.

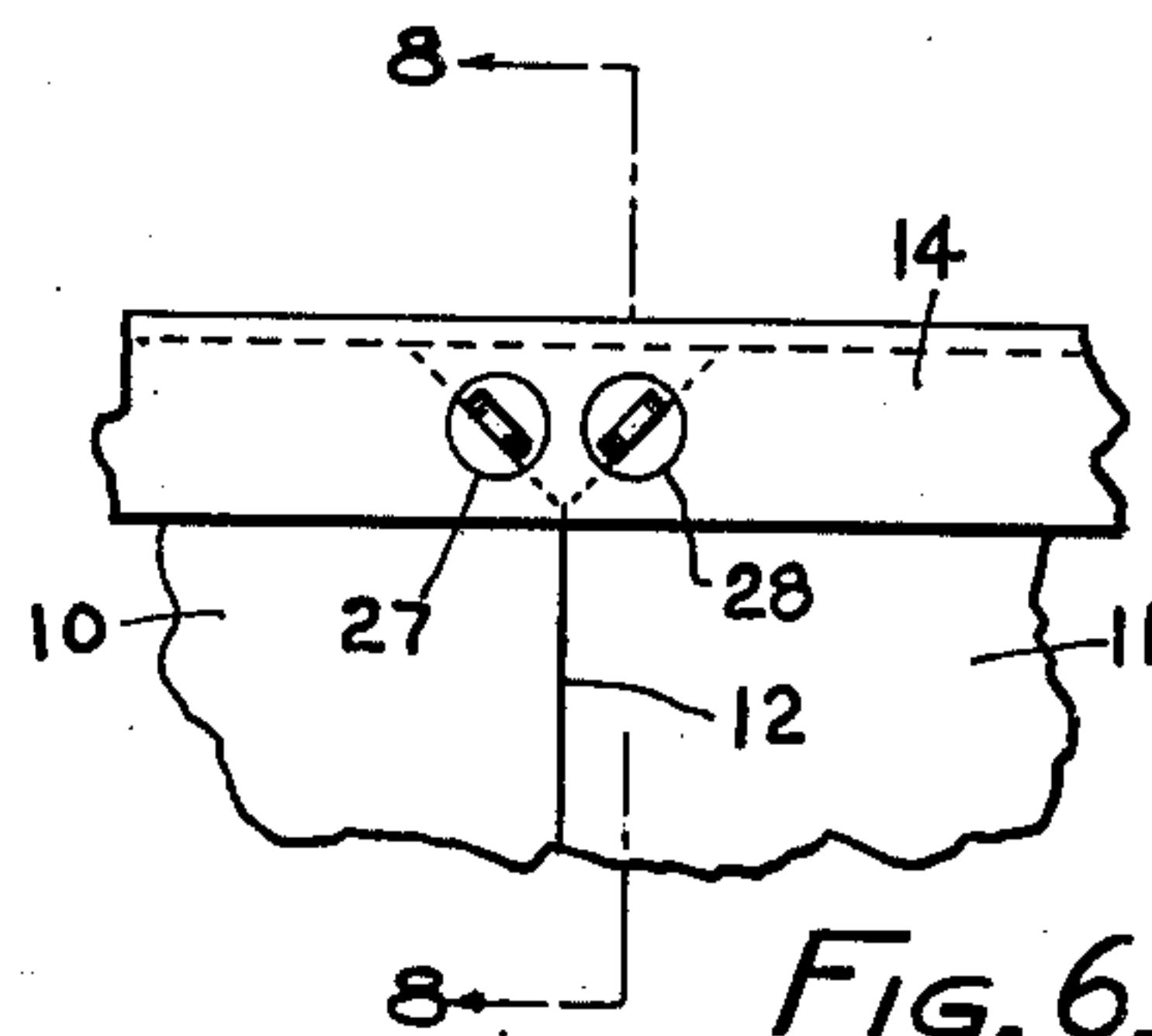


FIG. 6.

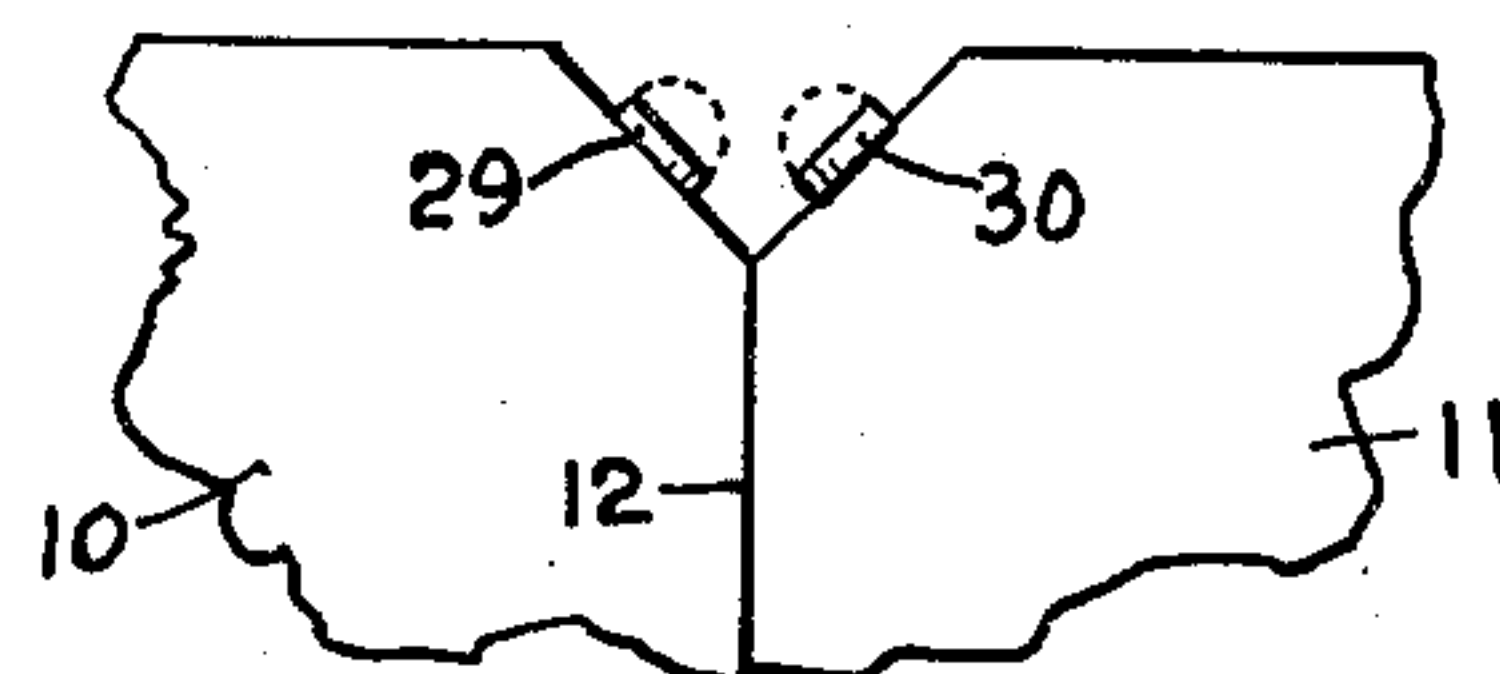


FIG. 7.

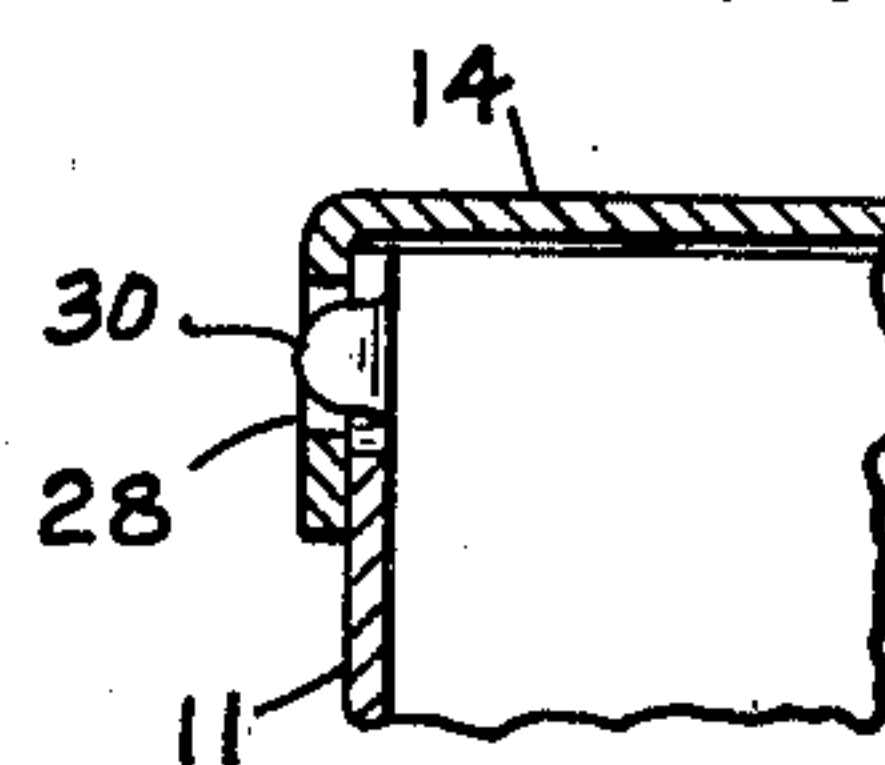


FIG. 8.

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UNITED STATES PATENT OFFICE

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SPENT RAZOR BLADE HOLDER

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5 Claims. (Cl. 206—16)

This invention pertains to a simple, refined, all-metal receptacle for protectively stowing discarded thin razor blades of the conventional standardized size in self-stacking fashion, and more particularly has to do with a neatly trimmed, low cost container in which a plurality of spent blades when successively inserted, are kept compactly stacked in an orderly manner to obviate their messy collection on shelves in bathroom cabinets or the like mirrored closet doors before which self-shaving is frequently done. A grippable holder box of this kind can readily be made to protectively store spent blades therein without hazard to the shaver or injury to others, all of which is likely to occur when an accumulation of such highly sharpened blades become scattered and by handling have to be picked up or otherwise collected out of the reach of children.

The present container is adapted to be held in the user's hand for occasional blade insertion but it may also be fixedly attached to a stationary support for a like purpose. Opposite ends of my split tubular shell may each be closed by a flanged cover or cup-shaped head of which one such is made demountable and preferably provided with a lipped blade receiving slot. A spring actuated follower tray is slidably mounted within said shell and thrusts toward said one head, each newly entered blade being freely slipped in place upon the follower in stacked relation.

An interposed long range follower spring, preferably of the conical volute or laterally collapsible spiral watch spring type, is so tensioned that the gradual tray loading will not interfere with uniformly entering a full quota of used blades without encountering abnormal frictional drag.

The object of my invention is to devise a high grade blade holder of the indicated character capable of being rapidly and economically fabricated on a productive scale at a sufficiently low factory cost to provide for a profitable chain store item through large scale distributors. A further aim is to provide for an effective holder having a decorative appearance and a suitable blade storage space that is generally efficient in promoting the end in view.

Reference is had to the accompanying one sheet of drawings that is illustrative of a preferred embodiment, and in which:

Fig. 1 presents a perspective view of my assembled blade holder and Fig. 2 is a cross-sectional view thereof taken longitudinally along the line 2—2.

Figs. 3 and 4 respectively show transverse sectional views taken along lines 3—3 and 4—4 of Fig. 2, and Fig. 5 details a bottom view of the follower tray.

Figs. 6 to 8 respectively illustrate a suitable style of manipulative cover latch.

Referring in detail to these disclosures, said holder box may comprise a split shell preferably including a pair of reversely mounted semi-tubular casing components 10 and 11 which may either be made up from rolled channeled strip stock cut to length or stamped directly from thin sheet metal into trough shape. The mated abutting wing edges of such split shell may be squared to provide for slippable longitudinal seams such as 12. For reasons that will appear presently these laterally resilient channel flanges or shell wings are preferably flared outwardly with respect to the web width W to afford a relatively larger seam spacing D for the reception of an adequately sized follower spring. As a substitute for complementary shell seams that are initially parted in substantial alignment with the minor axis C—D of Fig. 3, these may likewise be separable along the major axis A—B; also that in some instances, a single seamed tube section might be utilized in lieu thereof.

When operatively assembled, the casing components 10 and 11 form an endless shell contour having a warped annular profile similar to that represented in Fig. 3. Each end of such shell may be equipped with a separately stamped flanged cover or cup shaped head such as 13 and 14. The upstanding flange of the fixedly mounted head 13 may be shaped to snugly embrace the shell perimeter, in which event the wing edge spacing may be initially stamped or rolled to a distance greater than D so as to snap into place when telescoped into the respective heads. If desired, the head 13 may be fixedly secured to one shell end in any suitable manner by soldering, spot welding or the like. Such head may also be centrally apertured to receive an inset bushing 15 through which the assembled casing may be permanently attached to a stationary support 16 by the screw 17 (see Fig. 2).

A similar demountable head 14 telescopically embraces the opposite shell end but this is preferably provided with an overhanging guide lip 18 partially pierced from the cover stock as shown and affording a raised edge that constitutes a blade receiving slot or mouth 19 extending crosswise of the major axis of its head and of the stowed blade. The spent flat razor blade 20 of a standardized Gillette or the like elon-

gated pattern, is intended to be easily pressed lengthwise through said slot as indicated by dotted outline in Figs. 2 and 4. My metallic holder may be given a superficial dip finish or be plated and if desired, the heads may readily be coated differently from the shell.

Slidably mounted interiorly of my shell is a floating carrier or faced follower tray 21 having a central aperture 22 affording access to the screw when the cover 14 is removed and while the tray remains in place. Said sheet metal tray may be stamped to provide for a rim flange 23 and a pair of pierced depending spring centering prongs such as 24 (see Fig. 5). The overall diametral face dimension D' of said tray is kept somewhat smaller than the corresponding interior shell size D to provide clearance therebetween.

A collapsible sustaining spring 25 may be interposed between the follower tray and the fixed head 13 as shown in Fig. 2. This spiral conical spring is preferably of the volute watch leaf type having a long travel range and adapted to collapse edgewise into a small flat space. The inner coil of said spring is intended to grippingly embrace the bushing 15 and its outer coil to be centered within the rim flange 23 and the opposed prongs 24. Such conical spring disposition serves to evenly guide the floatingly mounted tray within the shell bore against tilt and to follow up the tray throughout its extreme travel from head to head. The shell may be kept deeper than the blade length and the carrier prevents the inserted blade from dropping to the bottom head and becoming cocked. The spring tension is preferably so proportioned that when the carrier 21 reaches its outermost position away from the head 13, the initial spring tension will be relatively low to facilitate inserting the first entered blade 20 without abnormal frictional drag.

The successive wedging of spent blades 20 through the slot 19 correspondingly causes said spring to compress and retain the inserted blades against rattle until a full quota of blades such as 20' becomes stacked in an orderly manner upon the face of the floating tray 21. When stacked as in Fig. 2, the spring retained blades are not likely to shake out of the casing slot. A receptacle of convenient grippable size can readily hold a gross of spent blades, whereupon the tray will be displaced into its innermost dotted position designated as 21' and the leaf spring 25 then assumes its collapsed flat position. When the tray is fully loaded and stands in erect position, the maximum vertical spring thrust against the top head 14 is preferably so proportioned as to remain substantially uniform without markedly increasing the frictional drag on part of the last entered blade over said first entered blade. A corresponding round wire spring is usually inept in meeting the present exacting needs.

After the loaded holder has been wholly filled as visualized through the casing peep hole 26, the demountable head 14 upon being removed, allows the holder to unload the stack of accumulated blades. For head removal purposes, its flange may be spacedly apertured at 27 and 28 (see Fig. 6). The underlying corner regions of abutting wing edges may respectively be beveled and provided with duplicated nibs such as 29 and 30 that are severed as indicated by dotted outline and then upturned (see Fig. 7). Each integral appendage is intended to cooperate with one such flange aperture in the latched Fig. 8

manner, it being apparent that the use of but a single nib would satisfy present requirements. By simultaneously pressing adjacent wing regions radially inward toward the cleared follower tray, both complementary nibs are readily unlatched at will. The bore of the assembled shell also remains smooth and free from interior projections likely to obstruct the movement of the floating tray. While any other equivalent cover latch means may be utilized, the described type is simple and free from extraneous attachments or the like parts.

The web length W (see Figs. 3 and 4) is preferably kept to a size that confines the opposed ends of each inserted blade against pronounced rotation about the axial center of the screw 17. Such web dimension except as augmented by the bulged clearance spaces 31, is found to be rather cramped for room in providing a sufficient overall coil diameter for the long range spring 25 possessing the desired qualities. A container shell devoid of a spring actuated tray might also be resorted to but the inserted blades would not be assuredly stacked nor compactly retained in place.

The foregoing disclosures teach the devising of a neat holder in which a stack of spent blades are compactly retained upon a follower tray without allowing them to become disarranged until unloaded. As will be understood by those skilled in this art, certain structural refinements herein disclosed may find application to analogous purposes other than blade container needs, and that various changes in the details and disposition thereof may be resorted to in likewise carrying out my single illustrative embodiment, all without departing from the spirit and scope of the invention heretofore described and more particularly pointed out in the appended claims.

I claim:

1. A receptacle for stowing therein a stack of flat safety razor blades of elongated perimetric pattern or the like and which receptacle comprises resilient trough-shaped sheet metal components assembled in abutting edgewise relation to constitute a longitudinally slit tubular shell having an endless cross-sectionally warped profile whose contour snugly conforms to the respective ends of the stowed blades and leaving a bulged clearance spaced with respect to each of the opposed blade edges, a demountable head having an apertured flange arranged to telescopically embrace one shell end and thereby radially spring inward a slit shell region, said head being provided with blade receiving slot means located interiorly of said flange and extending crosswise to the major axis of a stowed blade, nib means located near the slit edge region of the shell and disposed to latch into the flange aperture when the slotted head is assembled in place, and cover means closing the other shell end.

2. A receptacle for stowing therein a stack of flat safety razor blades of elongated perimetric pattern or the like and which receptacle comprises sheet metal components assembled in abutting edgewise relation to constitute a longitudinally slit tubular shell having an endless cross-sectionally warped profile whose contour snugly conforms to the respective ends of the stowed blades and leaving a widened clearance space with respect to each of the opposed blade edges, a separate head provided with a flange arranged to telescopically embrace each shell end, one such head being provided with guide lip means includ-

ing a blade receiving slot located interiorly of its flange and extending crosswise to the major axis of a stowed blade, a faced follower tray slidably mounted within said shell, a long range coiled spring centrally interposed between the other head and said tray urging the tray face toward the slotted head, said spring having an overall coil diameter materially greater than the blade width and extending into the respective widened clearance spaces and which conforming shell profile portion substantially maintains the stacked blade ends in orderly registry against relative rotation, and means retaining the respective heads in place, said means including a latch device applied to demountably secure one such head.

3. A receptacle for stowing therein a stack of flat safety razor blades of elongated perimetric pattern or the like and which receptacle comprises a vertically disposed tubular shell having an endless cross-sectionally warped transverse profile whose contour snugly conforms to the respective ends of the stowed blades, a separately retained cup-shaped head arranged to telescopically embrace each shell end, the top head being provided with a blade receiving slot extending crosswise of the major axis of a stowed blade, a faced follower tray floatingly mounted within said shell, and a spiral conical spring operatively interposed between the bottom head and said tray thrusting the tray face upwardly toward the top head, said spring being progressively retracted toward its collapsed position by the successive stacked insertion of blades through said receiving slot and being proportioned to maintain a substantially uniform thrust against the top head subsequent to loading the tray face with stacked blades.

4. A receptacle for stowing therein a stack of flat safety razor blades of elongated perimetric pattern or the like and which receptacle comprises a tubular shell having an endless cross-sectionally warped profile whose contour snugly

conforms to the respective ends of the stowed blades and leaving a widened clearance space with respect to each of the opposed blade edges, a separate flanged head arranged to telescopically embrace each shell end, one such head being provided with a blade receiving slot located interiorly of its flange and extending crosswise to the major axis of a stowed blade, a faced follower tray provided with spring receiving means and which tray is floatingly mounted within said shell, a volute spring of the laterally extensible leaf type centrally interposed between the other head and said tray urging the tray face toward the slotted head, said spring having an outer coil diameter materially greater than the blade width and being entered into the spring receiving means of the tray, and means retaining the respective heads in place.

5. A receptacle for stowing therein a stack of flat safety razor blades of elongated perimetric pattern or the like and which receptacle comprises a tubular shell having an endless cross-sectionally warped profile whose contour snugly conforms to the respective ends of the stowed blades, a demountable flanged head arranged to telescopically embrace one shell end, said head being provided with blade receiving slot means located interiorly of its flange and extending crosswise of the major axis of a stowed blade, another head affixed to the opposite shell end and interiorly provided with a centrally disposed tubular bushing, an apertured follower tray slidably mounted within said shell and having its aperture in substantial axial registry with said bushing, and a volute spring of the laterally extensible leaf type operatively interposed between the affixed head and said tray urging the tray flatwise toward the demountable head, said spring having its inner coil grippingly disposed around said bushing and its outer coil arranged to collapse edgewise toward said affixed head.

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