March 2, 1954 J. MUROS 2,670,841

BLADE DISPENSING PACKAGE

Filed Sept. 25, 1948 2 Sheets-Sheet 1

Fig. 1

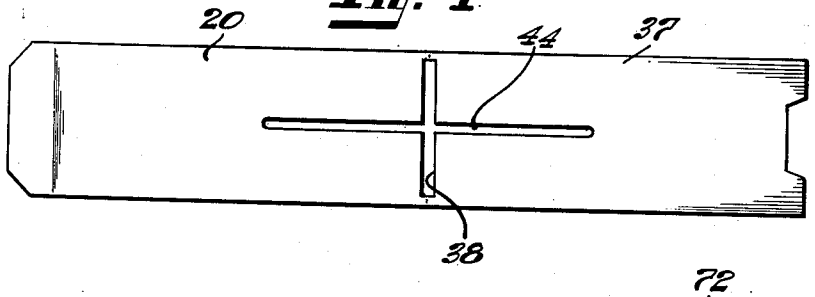
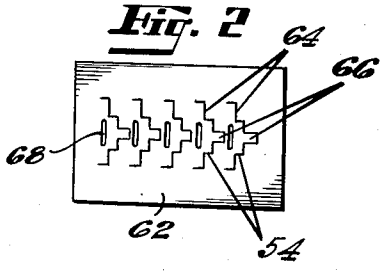


Fig. 2



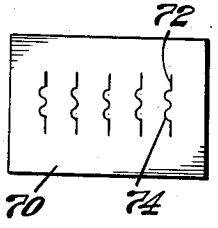


Fig. 3

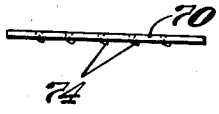


Fig. 4

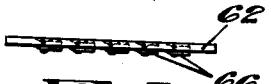


Fig. 5

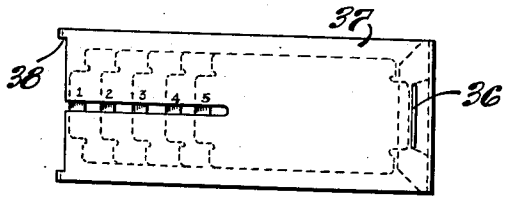


Fig. 6

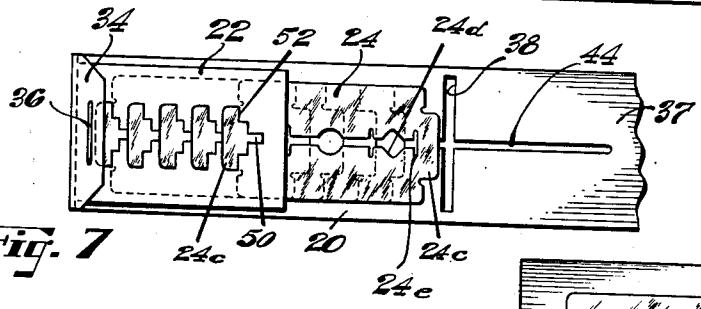


Fig. 7

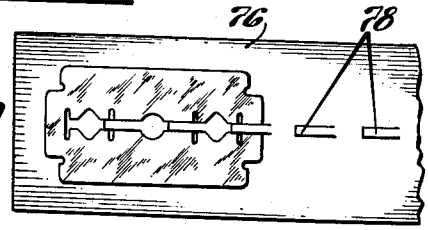


Fig. 9

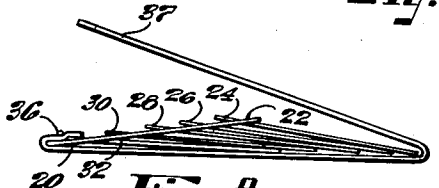


Fig. 8

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BLADE DISPENSING PACKAGE

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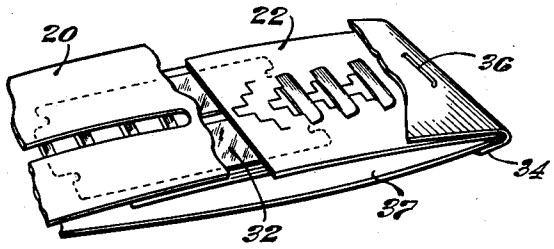


Fig. 10

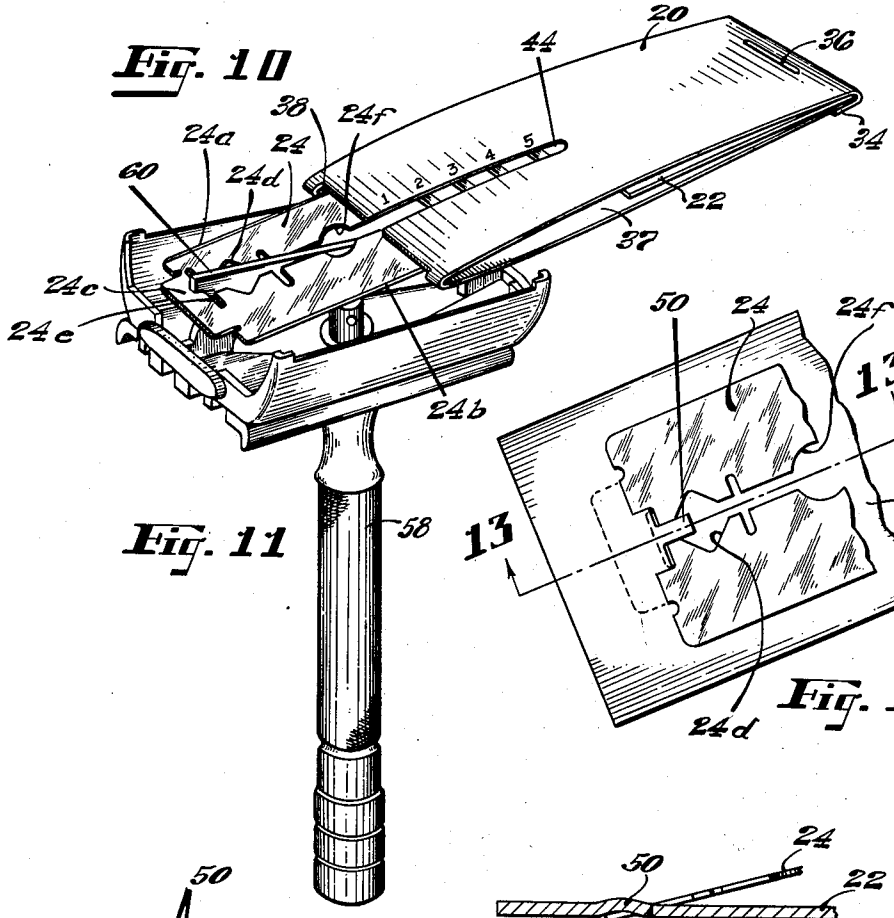


Fig. 11

Fig. 12

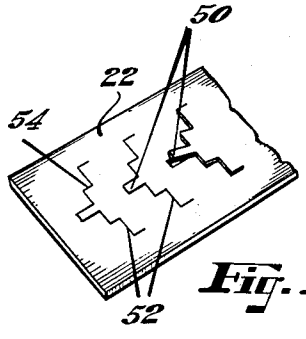


Fig. 14

Fig. 13

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BLADE DISPENSING PACKAGE

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Application September 25, 1948, Serial No. 51,161

8 Claims. (Cl. 206—16)

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This invention relates to an improved blade supporting and dispensing package in which a series of double edge blades are supported in a unique manner whereby portions of the blades are located in such relative position to one another as to facilitate successive disengagement of individual blades from the package either by hand or by means of a razor for which the blades are intended.

It is a general object of the invention to improve methods of dispensing and handling razor blades and to provide a safe, efficient and exceedingly simplified blade dispensing package. More specifically it is an object to design an improved means of detachably securing unwrapped double-edge blades in a folded cover type of package and to provide for a novel blade transfer operation in the course of which the blades are at all times held in a protected position and yet they may be selectively detached from the package without having to come into contact with the fingers of the user, thus avoiding danger of cutting, both in extracting the blade from the dispensing package and inserting it in a razor.

Another specific object of the invention is to devise a carrier or blade supporting member for securing a small number of unwrapped blades in stacked relation with each blade being individually attached to the carrier in such a manner that it is held in place by a limited restraining force applied so as to positively prevent accidental release of a blade and yet enable a blade to be withdrawn easily and smoothly without having to tear away any portion of the blade supporting member.

With the foregoing objects in mind I have provided a blade package included in which is a novel outer folded wrapper or cover, formed with two distinct blade openings which cooperate with one another to facilitate removal of successive blades from the pack. This desirable result is achieved by locating one of the blade openings transversely of the wrapper along folded portions thereof in a position to constitute a convenient blade dispensing aperture. Communicating with this transverse blade dispensing aperture is the second blade opening which extends longitudinally along central portions of the wrapper throughout a substantial part of its length. This general arrangement has the notable advantage of exposing and giving access to intermediate body portions of individual blades, particularly when the blades are stacked in longitudinally overlapping relation within the wrapper.

Another desirable feature of the invention is the provision of a carrier strip which is especially suited for use in combination with the wrapper described above. The carrier strip is mounted in the wrapper and is designed to support and secure with a light restraining force a selected number of blades of the double edge type in such relative position that the blades project forwardly from the strip to present free ends. By resorting to a longitudinally overlapped arrangement of the blades, there is readily obtained a spacing of the free ends with respect to one another and these free ends when viewed through the longitudinal slot of the wrapper, present a series of transversely disposed spaced apart blade mid-sections, which are available to facilitate separation of individual blades and allow them to be slid forwardly of the pack.

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The blade securing means is preferably built into the carrier strip and includes a series of stepped tongues formed by transverse slits which define openings sufficiently large to receive and have passed therethrough the reduced ends of double edge type blades. A distinctive feature of the stepped tongue construction is a pronounced elongation of the tongues which are of a length so chosen as to extend across the reduced end portion of razor blades engaged in the transverse slits and to permit the tips of the tongues to become frictionally engaged with the complementary edges of the body of the strip from which the tongues are struck. Frictional engagement of the tongues in the strip serves to lightly restrain blades and yet permit them to be drawn forwardly smoothly and without the need for a suddent tug or tearing away of any part of the tongue or body portion of the strip.

These and other objects and novel features of the invention will be more fully understood and appreciated from the following description of preferred embodiments of the invention selected for purposes of illustration and shown in the accompanying drawings in which:

Fig. 1 is a plan view of the blade cover or wrapper in a fully extended and flat position;

Figs. 2 and 3 are plan views illustrating two different forms of tongued carrier strip construction, and Figs. 5 and 4 are corresponding edge views of the same;

Fig. 6 is a plan view of the closed dispensing package;

Fig. 7 is a corresponding view of the open package;

Fig. 8 is a view in side elevation of the package in partially opened condition;

Fig. 9 is a fragmentary plan view illustrating another form of carrier strip construction;

Fig. 10 is a fragmentary view corresponding to Fig. 6 with parts broken away;

Fig. 11 is a view in perspective illustrating the package in association with a safety razor, a blade being partly withdrawn;

Figs. 12 and 13 are fragmentary views on a larger scale illustrating the carrier strip construction; and

Fig. 14 is a view in perspective corresponding to Figs. 2 and 5 but on a larger scale.

The blade dispensing package of the invention has been devised having in mind the need for an economy size package of unwrapped blades of the double edge type, in which a relatively small number of blades are to be packaged for merchandising purposes where it is desired to maintain the cost of packaging and handling at the lowest possible level consistent with proper blade protection. The following description of the book of blades should be read therefore with reference to a five-blade book, or a book containing some other limited number of blades.

The more essential parts of the dispensing package of the invention include a stack of longitudinally overlapping blades; blade securing elements; and a light flexible wrapper which is folded upon itself to provide top and bottom cover portions, thereby constituting a folded cover type of blade container. With a stack of overlapping blades arranged to be supported flatwise within this container, it is found that a blade dispensing aperture may be very conveniently furnished by forming in the wrapper a transversely located slot which extends along the folded end of the wrapper in a position substantially in register with forward extremities of blades in the stack.

The blade securing elements comprise a series of elongated tongues struck out of a constituent blade supporting material. Preferably the tongues are struck out of a separate carrier strip which is located within the wrapper although the tongues may also be formed directly in the wrapper itself. In either case, it is inherent in the design of the package that the blades be supported in longitudinally overlapping relation, and that the tongues extend from the wrapper in the same general direction as the projecting blade extremities to the end that each blade may be gripped lightly from two opposite sides with the tongues extending into interlocking relation with the strip and thus providing limited restraining action for securing each blade in place.

Thus in one desirable form of the invention shown in Figs. 1 and 6–8 inclusive, numeral **20** denotes a flexible wrapper element which is conveniently made from a material such as paper, plastics and the like. Numeral **22** refers to a carrier strip which is separately formed and fastened to the wrapper as hereinafter described. Numerals **24**, **26**, **28**, **30** and **32** indicate a series of longitudinally overlapping razor blades representative of the double edge type which is desired to be packaged and merchandised. Each of the blades is constructed with two opposite cutting edges, as for example in the case of blade **24**, by cutting edges **24***a* and **24***b*. Located between these cutting edges of blade **24** are two opposite reduced end portions **24***c*. Extending between the two reduced end portions **24***c* is a median slot which is formed to include a butterfly shaped opening **24***e*, a diamond shaped opening **24***d* and a circular opening **24***f*, as illustrated in Fig. 11.

The wrapper **20** is of a width somewhat greater than the width of a double edge type blade and is provided further with a turned end **34** which may be secured in folded condition, for example by means of a staple fastener **36** passed through the two layers of wrapper material. At its intermediate portions the wrapper **20** is folded over upon itself in a manner such that there will be provided a cover portion **37** adapted to extend into engagement with the inturned end **34** of the wrapper, as has been indicated in Fig. 11.

Transversely located and extending along the folded portions of the wrapper is the blade dispensing aperture comprising a slot **38** noted in Fig. 1, and more clearly shown in Fig. 11. This slot extends between the edges of the folded sections of the wrapper throughout a distance slightly exceeding the width of a blade and leaving at either side thereof two U-shaped connecting webs which serve as hinge members for swinging the cover **37** into a raised position as suggested in Fig. 8.

Intersecting the blade dispensing slot **38** is a second blade exposing slot **44** (Fig. 7), located centrally and longitudinally of the wrapper so that it extends throughout a substantial part of both the body of wrapper **20** and its cover portion **37**. As a result, when the cover is placed in a substantially closed position, there are presented two slots located in register one with the other.

The carrier strip **22** is attached between the wrapper sides in some convenient manner such as for example by means of the staple fastening **36**, as indicated in Fig. 7. It will be noted that the carrier strip is materially shorter in length than the body portion of wrapper **20**, measured longitudinally, and in general the strip has its forward edge terminating at a point closely adjacent to the inner extremity of the blade exposing slot **44** (Fig. 7). In thus limiting the length of the carrier strip, it becomes possible to support a series of overlapping blades with free ends which project beyond one another and beyond the end of the carrier strip. Such a blade arrangement has been illustrated in Figs. 6, 7 and 8. This arrangement of the blades also locates the ends of the blade slots beyond the end of the carrier strip so that the blades are accessible for engagement through the medium of the slots therein.

Numeral **50** denotes a series of blade securing tongues which are formed by transverse slits **52** in the carrier strip **22** shaped to include stepped portions **54**. The tongues are characterized by a pronounced elongated shape and are of a length greater than the width of one of the reduced end portions of a blade measured longitudinally of the blade. Also the width of the transverse slits **52** exceeds slightly the width of any one of these reduced end portions measured in a direction transversely of the blade.

The stepped tongue and blade relationship described is made use of to secure a series of blades in the manner illustrated in detail in Figs. 7, 8 and 10. From an inspection of these figures, it will be observed for example that the reduced end **24***c* of blade **24** is inserted in a respective blade slit **52** of the carrier strip **22** and projects through the opposite side thereof. In this position, the shouldered portions of the blade bear against adjacent uncut sections of the carrier strip and therefore keep the blade from being forced inwardly beyond a limited distance.

When the shouldered portions of the blade **24** are thus engaged against the carrier strip, the

included tongue 50 extends over and across the central section of reduced end portion 24c of the blade, and then projects forwardly and inwardly through the median slot of the blade. With the tongue in this position, advantage may be taken of its elongated character to press the tip of the tongue downwardly into the plane of the carrier strip where edges of the tongue may be brought into frictional engagement with the immediately adjacent complementary edges of the slot in the strip from which the tongue is struck as shown in Fig. 13.

In the arrangement described, blade 24 is held transversely from two opposite sides and forward longitudinal movement of the blade is impeded by the interlocked tongue 50 to an extent that accidental displacement of the blade is avoided. On the other hand, the blade is only lightly restrained and in response to a slight tug or pull readily comes away from the carrier strip, overcoming the frictional holding force of the tongue in the carrier strip. If desired, the holding force of a tongue may be increased by providing for engagement of the stepped portions of the tongue with respective complementary strip portions. Such an arrangement is conveniently arrived at by constructing the stepped portions of the tongue with a length measured longitudinally of the carrier strip such that the forward edges of the stepped portions of the tongue may project into the butterfly opening of a blade when the latter is fully inserted in the strip.

The blade assembly described may be utilized in either one of two ways but is especially suitable for carrying out a blade transferring operation in which the fingers do not come into contact with a blade at any point during the transfer. This is exemplified in Fig. 11 by the relative positions of a razor 58 in which the blade 24 is partially installed. As noted therein, a central blade guiding rib, which may be conveniently referred to as a spider hook 60, has been engaged through the median slot of blade 24 and hooked over the solid reduced end 24c, making use of the longitudinally disposed blade exposing slot 44 to enter the spider hook through the wrapper cover 37. It will be seen from Figs. 10 and 11 that the solid ends of the blades span the slot 44 in uniformly spaced relation. The blade has been then partly withdrawn from its secured position by moving the razor forwardly of the wrapper or alternatively by drawing the wrapper away from the razor while the latter is held in a stationary position. This movement has resulted in the engaged reduced end of blade 24 having forced its respective interlocking tongue 50 upwardly away from adjacent carrier strip portions, thus releasing the blade. The operation of installing blades is completed by separating the dispensing package from the razor and closing the blade holding sides or jaws of the latter member.

In using the razor in the manner described, good results may be obtained by inserting the extremity of the spider hook through the elongated slot 44 from either side of the package, i. e. through the cover 37 or through the body portion of the strip 20. When so desired, manual removal of blades may be carried out in the usual way by merely turning back the cover 37 and gripping the forward blade in the stack between the thumb and forefinger. Those portions of the blade ends visible in the slot 44 may also be designated with consecutive numbers

printed or otherwise applied to the exterior surface of the wrapper in a proper relative position so that there may be quickly noted the number of blades remaining in the pack at any given time.

In Figs. 2 and 5 there is illustrated a slightly modified type of blade holding stepped tongue construction. Numeral 62 indicates a carrier strip having transverse slits 64 which define stepped tongues 66. In addition to their stepped formation, the tongues are made with depressed internal sections 68 that form in the other side of the tongues blade holding ribs that enter the perforations in the end of each blade after it has been inserted through the transverse slots 64. The ribs thus serve to more positively restrain a blade from detachment.

Still another form of tongue element in a carrier strip has been illustrated in Figs. 3 and 4, in which numeral 70 denotes a carrier strip formed with slits 72, defining serrated tongue elements 74, whose purpose and function correspond in general to those of the tongues already described.

I may also desire to utilize a blade wrapper member such as that shown in Fig. 9 in which numeral 76 denotes the wrapper element and numeral 78 refers to tongues formed integral with the wrapper. Similarly, these tongues are employed to secure reduced ends of blades in overlapping relation, with the tips of the tongues being placed in interlocking relation with adjacent portions of the wrapper. It will be noted however that in this form of blade support, the reduced ends do not pass through the supporting member but are held entirely on the surface of this member and the tongues merely extend over the reduced end section of the blade.

Having thus disclosed my invention and described in detail illustrative embodiments thereof, I claim as new and desire to secure by Letters Patent:

1. A blade dispensing package comprising a body portion and a cover secured in hinged relation to the body portion by connecting webs, the webs being spaced apart to provide a blade dispensing aperture, the body portion and cover being further formed with a centrally disposed blade exposing slot which communicates with the blade dispensing aperture, a series of overlapping double edge blades located between the body portion and cover, the blades having solid reduced end portions which are spaced apart from one another and which extend in spaced relation transversely across the blade exposing slot.

2. A blade dispensing package including a carrier strip formed with a series of transverse slits which define stepped tongues, a plurality of double edge blades located on the strip in longitudinally overlapping relation, each of said blades presenting reduced end portions separated by a median slot having transverse extensions, reduced end portions of each blade being engaged through the transverse slots, the stepped tongues extending across the reduced end of respective blades through the median slot and its median extension into frictional engagement with complementary body portions of the strip, thereby to contact blades from two opposite sides and yieldably secure them.

3. A blade dispensing package including a wrapper folded upon itself to provide two opposite side wall portions, the folded portion of the wrapper being cut away to define a blade dispensing slot, said wrapper having a centrally lo-

cated opening extending from one side wall across the blade dispensing slot into the opposite side wall to provide a continuous blade exposing slot, a stack of longitudinally overlapping blades supported in the wrapper, the blades being formed with median slots which are located in register with the blade exposing slot, reduced end portions of the blades projecting transversely across the blade exposing slot in spaced apart relation.

4. A blade dispensing package including a wrapper of sheet material having a short carrier strip secured to one end thereof and being folded between its ends to enclose said strip, a series of longitudinally slotted blades secured to the carrier strip in longitudinally overlapping relation and disposed with their slots extending beyond the end of the carrier strip, the wrapper having a blade exit slot in its fold and a longitudinal slot intersecting the exit slot and exposing a slotted portion of each blade in the wrapper whereby successive blades may be engaged through the medium of their respective slots and withdrawn from the wrapper.

5. A blade dispensing package comprising a wrapper having a fold therein, a series of longitudinally slotted blades having solid ends supported in longitudinally overlapping relation in the wrapper, the wrapper being formed with a transverse exit slot at its fold and having a carrier portion with spaced transverse slots in each of which one end of a blade is inserted, the blades extending beyond the end of the carrier portion toward the exit slot, and the wrapper being longitudinally slotted to expose the solid free ends of the blades, whereby they may be engaged and drawn out of the wrapper.

6. A blade dispensing package comprising a wrapper having a slotted fold and an intersecting longitudinal slot, a series of longitudinally slotted blades with solid ends arranged in longitudinally overlapping relation within the wrapper and with their solid ends spaced uniformly apart and spanning the longitudinal slot of the wrapper where they may be engaged from outside the wrapper and withdrawn through the slot in its fold without opening the wrapper.

7. A blade dispensing package comprising a wrapper having a fold therein with an exit slot in the fold and a long narrow longitudinal slot leading from the fold, a series of longitudinally slotted blades having solid ends and supported in longitudinally overlapping relation in the wrapper with one end of each blade-slot exposed through the said longitudinal slot whereby successive blades may be engaged and withdrawn from the package.

8. A blade dispensing package as defined in claim 7 in which a carrier strip with spaced transverse slots is attached to and enclosed by the wrapper, the solid ends of each blade being inserted in a transverse slot of the carrier strip.

JOSEPH MUROS.

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