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BLADE DISPENSING PACKAGE

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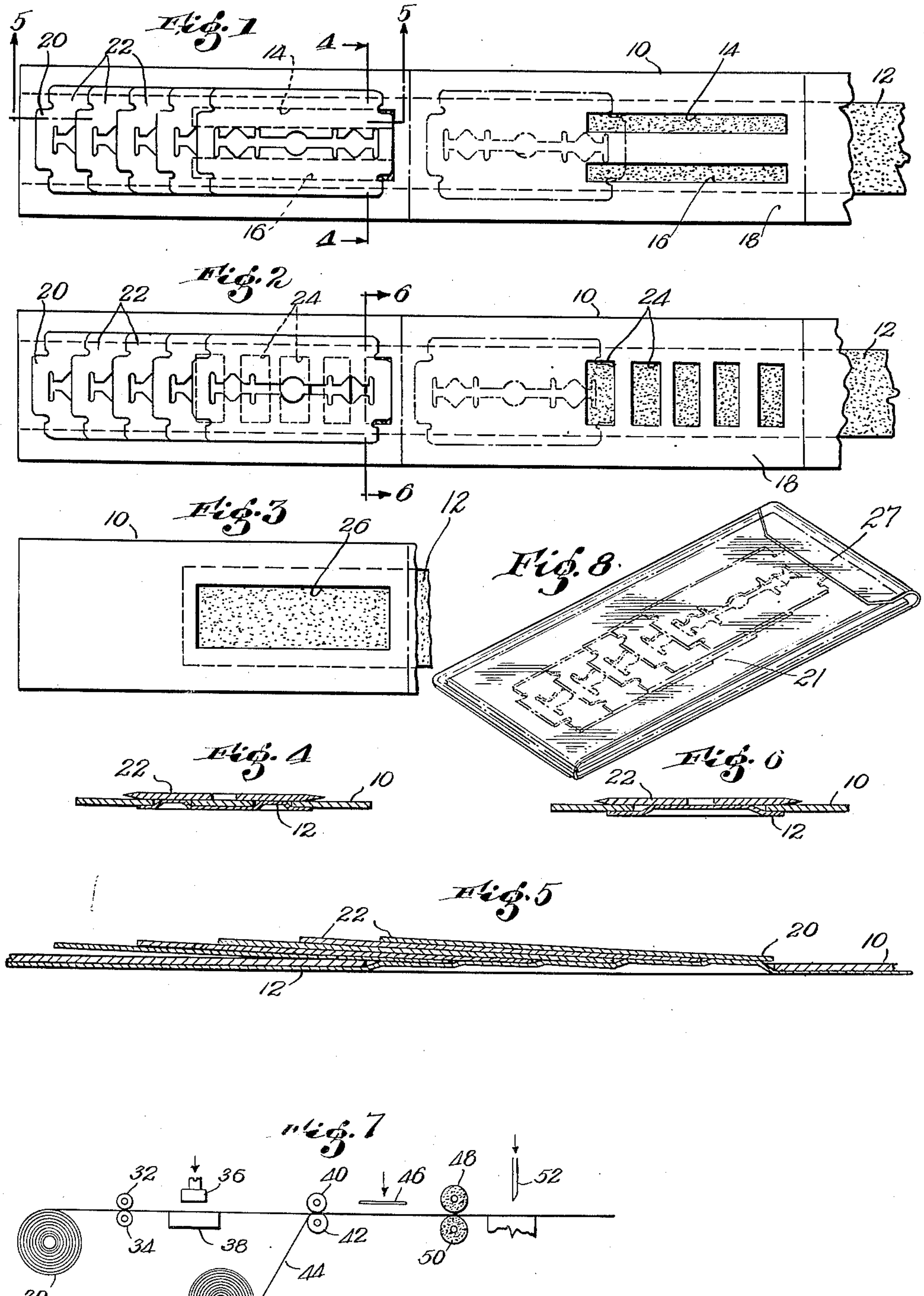

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BLADE DISPENSING PACKAGE

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This invention relates to a razor blade dispensing sales package of the type in which a small number of unwrapped blades are enclosed in an inexpensive wrapper made up of an envelope and a carrier strip, the latter member being provided with adhesive blade-holding areas by means of which the blades are detachably secured to the strip. The invention is herein exemplified as embodied in a package of safety razor blades of the double-edge type although it is not limited to that type or blades of any specific shape.

An object of the invention is to devise an improved method of packaging and dispensing blades which is conveniently made by combining adhesive material with a carrier strip on which a limited number of double-edged blades may be detachably held to constitute a compact blade sales package. Another object of the invention is to devise an outstandingly cheap method of assembling and retaining the several blades in a relatively secure position, from which they may be readily detached or removed as desired, without difficulty or danger of cutting.

In packaging a very small number of blades, a principal concern is in maintaining as low as possible the cost of materials and assembly, and arrangements which involve separate fastening and wrapper means for each blade are therefore less desirable. The razor blade dispensing package of the invention furnishes an exceedingly simple and satisfactory device for this purpose by combining adhesive material with a carrier strip. Individual paper wrappers often employed are rendered unnecessary and bare blades are rapidly secured to the strip by the very simple operation of bringing them into contact with the adhesive bearing areas with a light pressure.

An important feature of the invention therefore is a novel strip of blades in which a thin carrier strip is combined with a length of adhesive tape applied longitudinally of the carrier member. The intermediate body portions of the carrier strip are cut away to expose adhesive surfaces which normally occur in recessed relation with respect to the surface of the strip on which the blades are to be supported. When a series of blades are located on the carrier strip in longitudinally overlapping relation, their reduced end portions may conveniently be brought into contact with the exposed portions of adhesive, which under the influence of light compressive forces exerted simultaneously against the blades and the adhesive tape element, will become forced through the openings in the carrier strip into the plane of the surface of the strip, where

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they function to detachably secure the blade ends described.

By means of this arrangement, the strip and adhesive tape cooperate to selectively hold and support the blades in such a manner that each blade throughout a large part of its surface and especially along the cutting edges, will be maintained out of contact with the adhesive. At the same time the blades are satisfactorily held for packaging purposes and can be very conveniently disengaged by pulling them away from the adhesive surface. The type of opening formed through the carrier strip to expose adhesive surfaces may vary in shape and size. One desirable type consists in a plurality of spaced-apart, relatively narrow openings which may extend either longitudinally or transversely between edges of the strip. In the case of the transversely extending openings, there are formed relatively narrow intervening strip portions which are readily bent and they thus furnish flexing portions by means of which the blades may be tipped into a raised position to facilitate handling and removing. The transverse openings may also be of a width which corresponds substantially to or exceeds slightly the width of the reduced end portion of a blade. Such a choice of opening allows the blade ends to be fitted snugly into the recessed adhesive areas and a supporting effect is exerted along the edges of the reduced end, tending to resist twisting or lateral displacement of the blade relative to the strip body.

Another feature of the invention is the combination of an adhesive tape member with the carrier strip, with the adhesive tape being located at the upper side of the carrier strip. The adhesive tape, when employed as described on the upper surface of the carrier strip, may likewise take various forms and shapes and extend in various ways along the surface of the carrier strip, in all cases providing for the cutting edges of the blades being maintained out of contact with adhesive material.

Still another important feature of the invention is the use of adhesive material coated directly on the carrier strip, and in this connection a very desirable arrangement consists in a series of parallel lines lying in spaced-apart relation and extending longitudinally of the strip. The edges of the blades, as well as those intermediate portions of the blades which come into contact with a razor holding mechanism when in use, are also maintained out of contact with the adhesive material.

These and other objects and novel features will

be more readily understood and appreciated from the following description of the preferred embodiments of the invention selected for purposes of illustration, and shown in the accompanying drawings, in which

Fig. 1 is a plan view illustrating a carrier strip and a series of blades secured on the strip by an underlying adhesive tape member exposed in cut-out areas of the carrier strip;

Fig. 2 is another plan view of a carrier strip similar to that shown in Fig. 1 and indicating another form of adhesive exposing areas;

Fig. 3 is a plan view of a carrier strip showing still another shape of cut-out area and the exposed adhesive material;

Fig. 4 is a cross section taken on the line 4—4 of Fig. 1;

Fig. 5 is a cross-section taken on the line 5—5 of Fig. 1;

Fig. 6 is a cross section taken on the line 6—6 of Fig. 2;

Fig. 7 is a diagrammatic view illustrating a method and apparatus for attaching blades in accordance with the arrangement illustrated in Figs. 1 to 6 inclusive;

Fig. 8 is a perspective view illustrating a blade and strip assembly received in an outer wrapping or envelope member.

The several forms of blade dispensing packages shown in the drawings are designed for use in merchandising a small number of blades and although not limited to any specific number, are especially suitable for containing and dispensing a pack of four or five blades of the double-edged type above noted. The various structural details, together with the features and advantages hereinafter set forth, should be read with reference to a four or five blade pack, bearing in mind the low cost requirements connected with such relatively small units as well as the general size limitations involved.

The principal parts of the blade dispensing package of the invention include a blade carrier strip, adhesive means combined with the strip in a fixed position to contact in well-defined areas with and selectively hold blades, and some form of outer wrapper or envelope for removably containing the strip and blades. It is essential that the carrier strip serve as a protective medium for maintaining the double cutting edges of the blades in a shielded position and this is achieved by employing a strip whose width exceeds the width of a blade. When disposed flatwise on such a relatively wider strip and covered from above by the outer wrapper or casing, the blades are in general supported in much the same manner as a knife when inserted in a sheath, thus furnishing the desired protection. It is also inherent in the adhesive blade holding package of the invention that the cutting edges of the blades are maintained at all times out of contact with the adhesive, a result which is secured by maintaining the adhesive material in spaced relation to both the edges of the strip and the cutting edge of the blades.

Thus in the embodiment of the invention shown in Figs. 1–5 inclusive, numeral 10 indicates a blade carrier strip having attached at the under side thereof, as viewed in Fig. 1, a length of adhesive material 12 such as for example adhesive tape. The sticky side of the tape engages against the under side of the strip. The width of the tape is substantially less than the width of the carrier strip as shown. At points intermediate the edges, the strip 10 is cut away to form longitudinally extending openings which expose adhesive bearing areas 14 and 16 of the tape 12. These areas normally occur in slightly recessed relation with respect to the blade supporting surface 18 of the strip. The openings in the strip are preferably arranged to occur in spaced relation to one another so as to provide two parallel bands of adhesive.

A series of blades 22 are arranged on the strip in longitudinally overlapping relation with reduced ends 20 of the blades being progressively secured along underlying portions of the adhesive bearing areas 14 and 16. As shown at the right-hand side of Fig. 1, the adhesive bearing areas 14 and 16 extend throughout a part only of the length of the strip so that the lowermost blade (indicated in broken lines) has its reduced end portion overlying the adhesive areas 14 and 16 for a short distance only, with the unsecured remainder of the blade including its sharpened cutting edges maintained out of contact with the adhesive material. It is pointed out that in this way the possibility of adhesive material being transferred to the blade is greatly minimized, especially along those portions of the blade which are to be received in a razor holding mechanism.

As herein shown the blades are overlapped to an extent such that the end portion only of the slot in each underlying blade is exposed.

The exposed areas of adhesive resulting from removing portions of the carrier strip may take other desirable forms, such as illustrated in Fig. 2, by adhesive areas 24 which extend transversely of the strip in spaced relation as shown. The length of these additional adhesive areas may conveniently be chosen to correspond to the width of reduced blade ends 20 and they thus furnish a carefully limited area of adhesion. It will also be observed that since the adhesive areas occur in slightly recessed relation to the surface of the carrier strip, the severed edges of the strip lie closely adjacent to corresponding edges of the reduced ends, tending to support the blades against laterally applied forces. This increases the stability of the blades in the sales package. A greater amount of stability and holding may if desired be achieved by increasing the size of the adhesive bearing areas even to the extent of having a single continuous adhesive area running longitudinally of the strip in spaced relation to its edge, and such an arrangement has been shown in Fig. 3 as illustrated by adhesive area 26.

The carrier strip, blades and adhesive tape member described form a relatively thin, light and compact unit which is readily packaged in a simple outer container such as for example the wrapper member 21, shown in Fig. 8. The wrapper consists of an envelope body and flap portion 27 made for example of a thin translucent material such as cellophane, paper or other substance. It is intended that various other types of outer wrappers may be utilized. In thus providing a unique strip of blades and a sheath in and out of which the strip of blades may be slid as desired, there is achieved a pleasing streamlined appearance and an attractive novel mode of blade removal adding materially to the sales appeal of the package.

In Fig. 7 there has been suggested a method and means of assembling blades on a carrier strip provided with adhesive bearing areas. Numeral 30 denotes a roll of carrier strip stock drawn through small rolls 32 and 34 and passed between reciprocating dies 36 and 38 which form open-

ings of the desired shape in the strip. From here the strip moves between two presser rolls 40 and 42 and at this point it comes into contact with a web of adhesive tape 44 which becomes firmly attached at the under side of the strip. Immediately thereafter blades 46 are successively dropped down on to the strip to become lightly engaged with the exposed areas of the adhesive tape. A light pressure may be exerted on the blades by means of soft rubber rolls 48 and 50 and the strip is then severed by means of a cutter 52.

Applying pressure as described causes the adhesive to become more firmly bonded to the blade with the tape and adhesive portions immediately underlying the opening in the carrier strip becoming forced upwardly to a slight extent, as may be seen from an inspection of Fig. 5, thus taking a position substantially in the plane of the upper surface of strip 10. To aid this displacement an adhesive tape of relatively pronounced flexibility may be employed such as is exemplified by a strip of cellophane coated with an adhesive of the character referred to.

A preferred type of adhesive material includes a backing or liner on which is coated a layer of an adhesive composition such as a chlorinated rubber compound. These substances have the property of being sensitive to pressure to develop strong adhesion for contacting surfaces. Other desirable forms of adhesive material of well known character may however be employed such as are commonly employed in conventional adhesive tape products.

It is pointed out that the method of assembling blades described offers a minimum of operational difficulties and can be very rapidly carried on to greatly simplify and cheapen the blade packing operation, as well as obviating the need for individual blade wrappers and the entailed separate handling. This saves labor and material on the one hand while furnishing the consumer with a more convenient dispensing package on the other hand. Cutting the carrier strip and removing intermediate portions as described also has the virtue of creating localized flexing ability transversely of the strip, at points between the several blades, so that in removing the uppermost blade it may be conveniently tipped upwardly from the remaining blades, thus placing it in a more accessible position for handling and reducing the danger of cutting.

An alternate arrangement to securing the adhesive element at the under side of the carrier strip is to apply it on the upper surface of the carrier strip, in such a manner that the adhesive layer occurs uppermost.

The strip of blades of the invention may also take still a third general form and consists essentially in coating or otherwise applying adhesive directly to the upper surface of the carrier strip without employing any backing or support such as is present in an adhesive tape element of the type described in connection with the strip of blades in Figs. 1–6 inclusive.

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 including a carrier strip presenting a plurality of recessed adhesive bearing areas extending longitudinally of the strip in spaced relation to the edges of the strip and to one another, and a plurality of double-edges razor blades detachably secured to the adhesive bearing areas in longitudinally overlapping relation.

2. A blade dispensing package including a carrier strip presenting at one side thereof a plurality of recessed adhesive surfaces disposed in parallel relation in the strip and in spaced apart relation to one another, a series of blades arranged in longitudinally overlapping relation on the strip, each of said blades having a reduced end portion only which is detachably secured to a recessed adhesive surface which has been forced upwardly into the plane of the strip surface and the other portions which are unsecured and rest on an underlying blade.

3. A blade package of the character described in claim 2 in which the blades are longitudinally slotted and overlapped to the extent that one end only is exposed of the slot in each of the overlapped blades.

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