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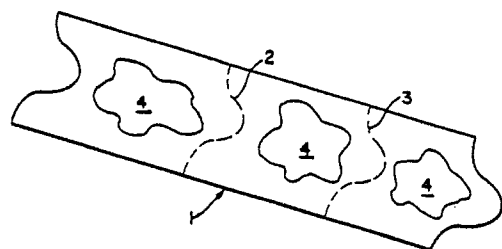
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54 **Cosmetic sample strip dispenser and strips adapted to be dispensed therefrom.**

57 A plurality of samples (4, 8, 54) of a cosmetic product, such as nail enamel, lipstick, powder or cream makeup, fragrance and the like, each comprising a quantity suitable for one sample dose, are provided on a sheet or continuous strip (1, 7, 10) of material. The strip (1, 7, 10) is provided with perforations (2, 3, 20) between adjacent dose units to permit a prospective customer to tear off one or several samples at a time from the strip (1, 7, 10). The sheet or strip (1, 7, 10) can be provided on a reel (11, 80) for convenient and compact disposition at the point of purchase. In one embodiment the sample strip (10) is divided into a plurality of individual pieces (22,...30) arranged seriatim and connected in end-to-end fashion. The individual pieces (22,...30) are separated from each other as the strip

(10) is incrementally fed through a dispensing tip (68) of a cartridge (58) which controls the dispensing operation to insure that the samples are dispensed one at a time in a hygienic manner. The cartridge (58) can be mounted in a display unit (112) along with a plurality of similar cartridges (58).

**FIG. 1**



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COSMETIC SAMPLE STRIP DISPENSER AND STRIPS ADAPTED TO BE DISPENSED THEREFROM

The present invention relates to strips adapted to be dispensed from dispensing apparatus in such a manner that each strip is separated into a plurality of individual pieces, and, more particular, to such strips and apparatus which are especially useful in the dispensing of product or test samples.

Users of cosmetics often prefer to try a sample of a particular cosmetic preparation, such as lipstick, mascara, rouge, etc., before actually purchasing it. Thus, it is common in the cosmetics industry to provide point-of-purchase samplers. The samplers are often in the form of a container or tray which is available for public use. That is, one and the same sampler may be used by various different consumers. The indiscriminate use of such samplers creates a potentially non-hygienic condition, as well as the possibility that diseases may be transmitted from one user to another. Also, the uncontrolled use of such samplers could result in waste if, for instance, a user overindulges herself or himself.

In the past, it has been proposed to prepackage numerous different types of articles in a continuous strip consisting of a plurality of individual packages adapted to be manually separated from the strip by a user (see, for instance, U.S. Patent No. 4,387,831 in which items such as batteries, razor blades, pens and lipstick are so packaged and U.S. Patent Nos. 3,709,403 and 3,858,722 in which items such as toothpicks, needles, drill bits and pens are so packaged). However, such a packaging technique has not, heretofore, been applied to test samples of any type, let alone to cosmetic test samples which, in order to be effective and acceptable to consumers, would necessitate the quick and easy access to a transferable cosmetic preparation such as a powder, paste or cream, whose sanitary condition must be substantially maintained until it is sampled by a consumer.

In summary, the present invention comprises a device for providing discrete individual sample dose units of cosmetic product, comprising an elongated flat support strip the width of a single dose unit and intermittently spaced quantities of cosmetic products comprising single samples thereof. In preferred embodiments, the elongated strip can be wound onto a spool and a plurality of such spools can be disposed on a common axis side by side at the point of purchase to provide the customer with a variety of samples from which to choose. Another embodiment is a sheet containing a plurality of single sample doses of a product. The sheet can, if desired, be perforated to permit sample doses to be detached from the sheet.

In accordance with another aspect of the

present invention, the strip for use in a dispenser which includes a dispensing tip and a pair of force exerting members adapted to exert a force against the strip as the strip passes through the dispenser tip comprises a pair of side edges and dividing lines which extend across the strip from one of its side edges to an opposite side edge. The dividing lines are also spaced apart along the length of the strip such that the strip is divided into a plurality of individual pieces arranged seriatim and connected in end-to-end fashion. As used herein, the term "dividing lines" means any kind of line of demarcation which defines a weakened boundary region adapted to facilitate separation of two adjoining pieces. Thus, this term includes, but is not limited to, tear lines, crease lines, score lines, die cut lines, lines formed by perforations, etc.

Each of the individual pieces of the strip includes a nose section which has a size and shape selected such that it is spaced from both side edges of the strip. A midsection extends rearwardly from its associated nose section and terminates at a nose section of a trailing piece, the midsection extending across the strip from one side edge to an opposite side edge. A tail section includes a pair of legs, each leg extending rearwardly from its associated midsection and terminating at a midsection of a trailing piece. One leg is arranged adjacent to one side edge of the strip, while the other leg is arranged adjacent to the other side edge of the strip, whereby the legs straddle a nose section of the trailing piece so as to present contact surfaces for force-exerting members of a dispensing tip.

In operation, as the strip passes through the dispensing tip, the force-exerting members do not exert any substantial force on the trailing piece until its midsection reaches the force-exerting members at which time the leading piece can be separated from the trailing piece along an interposed dividing line by pulling on the leading piece as the trailing piece is maintained substantially stationary due to the force exerted on its midsection by the force-exerting members. Both legs have a length selected such that, upon the separation of the leading piece from the trailing piece, a nose section of the trailing piece, which now becomes a leading piece, projects outwardly from the dispensing tip a distance sufficient to permit it to be gripped by a user.

If each of the individual pieces contains a transferable cosmetic sample, which typically would be in the form of a powder, paste or cream, the strip is provided with a protective covering adapted to inhibit contamination of the samples

and to thereby maintain their integrity until a desired sampling operation takes place. In the event that the strip is provided in roll form, the protective covering also functions to inhibit the samples from being rubbed off onto the back of the strip. By attaching the protective covering to the marginal portions only of the strip, the covering will only be attached to the midsection and the tail section of a separated piece, whereby the covering can be readily lifted off of the nose section to expose all or part of the test sample contained thereon.

In accordance with another aspect of the present invention, the force-exerting members of the dispenser constantly exert a compressive force against marginal portions only of the strip in a direction generally perpendicular to a longitudinal axis of the strip in the event that the strip is flat) or to an imaginary line which is tangent to a longitudinal axis of the strip (in the event that the strip is curved). This compressive force creates drag on a trailing piece supplied to the dispensing tip as a result of the withdrawal therefrom of a leading piece which is connected to the trailing piece. By calculating the drag such that it is greater than the tensile force required to separate the leading piece from the trailing piece, the leading piece can be separated from the trailing piece by pulling on the leading piece as the trailing piece is maintained in the dispensing tip due to the drag which acts on the trailing piece to inhibit its movement as the leading piece is separated therefrom.

In one embodiment, the dispensing tip includes a passageway through which the strip passes during a dispensing operation. A runway is positioned on one side of the passageway, while a pair of resilient fingers is positioned on an opposite side of the passageway in contact with or in close proximity to the runway. The fingers extend into the passageway far enough to create an interference fit for the strip. Thus, as the strip moves through the passageway, the fingers cooperate with the runway to squeeze the strip therebetween.

The dispenser can be provided in the form of a disposable cartridge. If the strip is provided in the form of a roll, the cartridge can be equipped with a holder adapted to hold the roll such that the strip can be unwound therefrom.

In order to facilitate the separation of two adjoining pieces, the fingers may be provided with cutting ribs designed to completely or partially cut otherwise unsevered or non-weakened portions of the strip at preselected locations along an interposed dividing line prior to the complete separation of the pieces. Such complete or partial severing of otherwise unsevered or non-weakened portions of the strip reduces the tensile force required to fully separate the pieces.

A plurality of cartridge-type dispensers may be

removably mounted in a housing adapted for point-of-purchase display. Thus, several different types and/or colors of cosmetic samples or similar samples can be separately dispensed from a single unit. When all of the individual test samples have been dispensed from one of the dispensers, that particular dispenser can be supplied with a new sample strip and reused or the entire dispenser can be disposed of and replaced with a new cartridge-type dispenser, which would include a new sample strip.

For a better understanding of the present invention, reference is made to the following detailed description considered in conjunction with the accompanying drawings, in which:

Figure 1 is a perspective view of one strip comprising the device of the present invention;

Figure 2 is a perspective view of another embodiment of the present invention;

Figure 3 is a perspective view of an embodiment of this invention comprising a flat sheet containing several samples;

Figure 4 is a perspective view of a plurality of spools embodying the device of the present invention;

Figure 5 is a partial plan view of a sample strip constructed in accordance with one aspect of the present invention, a portion of the strip being broken away to facilitate consideration and discussion;

Figure 6 is an exploded perspective view of a cartridge constructed in accordance with another aspect of the present invention and adapted to dispense the sample strip shown in Figure 1;

Figure 7 is an exploded side elevational view of the cartridge illustrated in Figure 2;

Figure 8 is an exploded front elevational view of the cartridge illustrated in Figure 2;

Figure 9A is a cross-sectional view which shows the relationship between the cartridge illustrated in Figure 2 and the sample strip illustrated in Figure 1 during one stage of a strip-dispensing operation, the cross section of the strip being taken along line 5A-5A in Figure 1;

Figure 9B is a cross-sectional view which is similar to Figure 9A but which shows a further operating stage, this time the cross section of the strip being taken along line 5B-5B in Figure 1;

Figure 9C is a cross-sectional view which is similar to Figure 9A but which shows a still further operating stage, this time the cross section of the strip being taken along line 5C-5C in Figure 1;

Figure 10 is a front perspective view of a display unit adapted to receive the cartridge illustrated in Figures 6-8, as well as a number of similar cartridges, for the purpose of dispensing a number of strips like the one illustrated in Figure 1; and

Figure 11 is a cross-sectional view which illustrates how the strip of Figure 5 and the cartridge of Figures 6-8 are mounted in the display unit of Figure 10.

The present invention is useful in allowing customers to sample cosmetic products which they are considering buying, while avoiding waste of the product. As used herein, the term "cosmetic product" is intended to cover makeup, fragrance, and toiletry products.

Referring to Figure 1, the present invention includes support strip 1 which is preferably made of thin gauge cardboard, paper or plastic material such as PVC sheet, polyethylene sheet, and the like.

The support strip 1 should be sufficiently stiff so that it does not fold over on itself of its own weight, but should be capable of moderate flexibility so that it can be rolled onto a reel. The strip 1 is typically half an inch to two inches wide. The strip can be opaque, in which case it is preferably black or another color which will not interfere with evaluation of the color of a sample of cosmetic product placed thereon. In one preferred embodiment it will be advantageous to make the support strip transparent. In another preferred embodiment the support strip has a light colored area on which the product is deposited, and black areas adjacent thereto to provide color contrast.

Strip 1 does not have to be perforated, since individual samples can simply be cut off the strip with scissors. Preferably, for easier detachment, strip 1 is intermittently perforated as shown in Figure 1 at reference numerals 2 and 3. The perforations can be in a straight line, or can trace a curved path as they progress from one edge to the other of strip 1. The perforation should permit the strip to remain integral during handling, but should permit dose units to be selectively detached from the strip by moderate manual force applied in a direction parallel to the length of the strip. Means are well known in the plastic art for providing perforations having three characteristics. Strip 1 can comprise any desired number, from 10 to 20 up to 500, to 1,000 or more single dose units separate by the indicated perforations.

Strip 1 additionally comprises single sample quantities 4 of the cosmetic product disposed on each dose unit defined by successive perforations 2 on strip 1. The form in which the cosmetic product is deposited on the strip 1 for sampling depends to some extent on the physical properties of the product, and on the property that is to be sampled, but otherwise the product sample can take any form desired by the marketer.

When the product is a nail enamel, eyeliner, mascara, or equivalent product capable of drying to a thin film, the sample of cosmetic product on strip

1 can comprise simply a small quantity thereof spread onto the center of each dose unit to form a film thereof. When the product comprises a perfume, cologne, or equivalent product in which the primary attribute is the scent, the product can be microencapsulated in a known manner and the microcapsules deposited in known fashion onto each dose unit of the strip 1. This would permit the customer to sample the product needed by merely sniffing it or by lightly scratching the microcapsules to cause them to break and thereby release additional scent.

When the product is a powdery material, a thin film of it can be deposited onto each dose unit as is the case for the nail enamel and equivalent products. If desired, a sufficient amount of the powdery material can be deposited to permit the customer to rub some of it onto her hand or face from the dose unit.

In a preferred embodiment, the strip device of the present invention further comprises an opaque, colored, patterned or transparent top strip 5 whose width and length are identical to that of the strip 1. This embodiment is shown in Figure 2. The support strip 1, and cosmetic sample 4, are as shown in Figure 1. Top strip 5 is cut, or provided with perforations, at the same location as the perforations in strip 1. The top strip 5 should be releasably attached to the support strip 1 between each successive set of perforations 2. In that way, when a single dose unit is detached from the strip the top strip will remain attached to the support strip on that dose unit. Preferably, the top strip is attached to the support strip 1 by pressure adhesive at two, three or four points, as shown as 6 in Figure 2, or along one edge, thereby allowing the customer to lift the top strip to sample the tactile properties of the cosmetic product. The top strip, especially if it is transparent, permits the customer to sample the cosmetic product visually. The top strip also advantageously prevents the product from being rubbed or transferred onto the bottom of the support strip 1 when the strip is rolled onto a reel.

In another embodiment, the top sheet is sealed to the support sheet on three edges, leaving a fourth edge unsealed so that the customer can insert a finger tip into the resulting small envelope and can neatly withdraw small quantities as desired of the product.

When the product being sampled in the present invention is in a liquid or pasty semi-liquid form, the top strip is preferably sealed completely to the support strip around the edges thereof to form a small packet or envelope of the product being sampled. Care should be taken in forming the packets and the seams which are adjacent the perforation such that the act of grasping the ex-

posed lower edge of one packet and forceably detaching it from the strip along its perforations will not inadvertently cause the packet to rupture. This embodiment of the present invention is particularly useful for a product such as creams, lotions, and products having equivalent characteristics. Satisfactory single-sample quantities of such products are 0.25 to 1 fluid ounce.

In another alternative, shown in Figure 3, the present invention comprises a support sheet 7 which can have the same characteristics of stiffness, flexibility and visual appearance as discussed above for support strip 1. A plurality of single dose quantities 4 of cosmetic product are carried on support sheet 7, and a top sheet 8 is superimposed over the support sheet. Top sheet 8 is preferably transparent, and is attached releasably to support sheet 7 by spots 6 of adhesive. If desired, the support sheet 7 and top sheet 8 can be perforated so that individual dose units can be detached from the sheet. In this embodiment, the top sheet should be releasably adhered (or sealed) to the support sheet in each dose units that the top sheet stays attached after the dose unit is detached.

Sampling devices in accordance with the present invention can readily be manufactured by known processes. For instance, a sheet of plastic material can be slit to the desired width, perforated in accordance with known techniques, and the cosmetic product deposited in single dose quantities onto each dose unit between successive perforations. In the embodiments including a top strip, that sheet can likewise be cut to size, perforated as desired, and attached to each dose unit after the sample of cosmetic material is deposited thereon. The top strip can be attached with spots of glue or a narrow strip of glue, or by appropriate heat using a heated mandrel of the type conventionally used to fuse plastic sheets together. Likewise, dose units comprising sealed packets of liquid or semi-liquid material can be formed using conventional technology employed in the art of sealing plastic packets.

Alternatively, the top strip can be removably attached to the support strip by a thin layer of an appropriate adhesive permitting removal of the top strip. This adhesive can be placed adjacent one, two, three, or all four edges of the dose unit. In this embodiment, the user detaches a dose unit from strip 1 and then peels off the top strip to reveal the sample of cosmetic product.

The top strip can be made of thin plastic film or sheet, or can be paper when the top strip is not required to contain a quantity of liquid product. However, when the entire dose unit comprises a sealed packet of material, it can be made entirely of paper glued together to provide the required sealing to retain the liquid contents until such time

as they are released by the customer.

As shown in Figure 4, a strip of samples prepared in accordance with this invention can be wound onto a spool 13, and several spools can be placed side by side on a common axle 11 in a holder 15. The holder 15 can be placed on the countertop in a store, where prospective customers can detach dose units to sample the product.

The invention can also comprise the strips mentioned above on which a series of different products are placed in sequence on the strip. In this way, a customer can examine and compare numerous different shades, scents, and/or textures all at once. Strips with such a series of different products can also be used on point-of-purchase displays to show the range of product varieties that are available. In addition, individual sample doses can be inserted into cartons containing the actual product, so that they are visible through small windows in the cartons. This lets the customer see the actual shade of the product being purchased, without having to open the carton.

With reference to Figure 5, a sample strip 10, which is preferably made from a material having sufficient flexibility such that the strip 10 can be provided in the form of a roll (see Figure 6), includes an upper surface 12, a lower surface 14 (see Figure 6) and side edges 16, 18. Dividing lines 20, which extend across and through the strip 10, are spaced along the length of the strip 10 so as to divide the strip 10 into a plurality of individual pieces 22, 24, 26, 28, 30 arranged seriatim and connected in end-to-end fashion by nicks 32, 34, 36 which interrupt the dividing lines 20 at preselected locations therealong.

To facilitate consideration and discussion, only the piece 24 will now be described in greater detail and in relation to its adjoining piece 26, it being understood that all of the pieces 22, 24, 26, 28, 30 are essentially identical to each other. Bearing such an understanding in mind and bearing in mind further that the strip 10 is designed to be fed in the direction of arrow 38, the piece 24 includes a nose section 40, a midsection 42 and a tail section 44. The nose section 40 has a size and shape selected such that there is a space between it and the side edges 16, 18 of the strip 10. The midsection 42 extends rearwardly from the nose section 40 and terminates at a nose section 46 of the piece 26, which follows or trails the piece 24 as the strip 10 is fed in the direction of the arrow 38. Unlike the nose section 40, the midsection 42 extends across the entire width of the strip 10. The tail section 44 includes legs 48, 50 which extend rearwardly from the midsection 42 and terminate at a midsection 52 of the piece 26. The leg 48 is arranged adjacent to the side edge 16 of the strip 10, while the leg 50 is arranged adjacent to the side edge 18 of the strip

10, whereby the legs 48, 50 straddle the nose section 46 of the piece 26.

Returning now to a general discussion of strip 10 without any particular reference to the pieces 24, 26, the strip 10 includes cosmetic samples 54 which are arranged such that each of the pieces 22, 24, 26, 28, 30 contains one of the samples 54. Each of the samples 54 can be a transferable cosmetic preparation, such as lipstick, rouge or mascara, or color swatches. Of course, it should be understood that the strip 10 does not have to contain the samples 54, regardless of whether they consist of a cosmetic preparation, a color swatch or any other conceivable type of sample. Thus, the strip 10 could simply bear a number or some other type of identifying indicia.

In order to inhibit the samples 54 from becoming contaminated before they are dispensed, a protective covering 56, which is preferably transparent, is applied to the upper surface 12 of the strip 10. The covering 56 also functions to inhibit the smearing or other inadvertent dispersion of the samples 54. For instance, without the covering 56, the samples 54 would tend to rub off onto the lower surface 14 of the strip 10 when the strip 10 is provided in the form of a roll (see Figure 6). It should also be noted that the dividing lines 20 extend through the covering 56 (see Figures 9A and 9B). Thus, the covering 56, like the strip 10 itself, is divided into a plurality of individual pieces arranged seriatim and connected in end-to-end fashion, such pieces of the covering 56 matching the pieces 22, 24, 26, 28, 30 of the strip 10. The covering 56 is releasably adhered to the strip 10 along the side edges 16, 18 only. Thus, when, for instance, the piece 22 is separated from the piece 24, the piece of the covering 56 overlying the piece 24 can be readily lifted from the nose section 40 of the piece 24 to thereby expose at least the portion of the sample 54 contained on the nose section 40 (this general condition being illustrated in Figure 6). If desired, the portion of the covering 56 overlying the entire piece 24 could be completely removed thereby exposing the sample 54 in its entirety.

With particular reference now being made to Figures 6-8, a cartridge 58 for dispensing the strip 10 includes a body 60 and a head 62. The body 60 has sidewalls 64, 66. A dispensing tip 68 including a runway 70 adapted to support the lower surface 14 of the strip 10 as the strip 10 is fed through the dispensing tip 68 in the direction of arrow 72 during a dispensing operation. The runway 70 is provided with recesses 74, 76 and a notch 78 whose functions will be described below. The opposite end of the body 60 includes ears 80 (see Figure 8) adapted to receive a core (not shown) on which the strip 10 is wound such that the strip 10 can be unwound as it is fed incrementally through the

dispensing tip 68. A clip 82, the function of which will be described below, is suspended between the sidewalls 64, 68. Openings 84, 86 formed in the sidewalls 64, 66, respectively, flank the clip 82 for a purpose to be described below.

The head 62 includes resilient fingers 88, 90 which are cantilevered from a bridge 94 which rests on the sidewalls 64, 66 of the body 60. Hooks 96, 98 depend from opposite sides of the bridge 94 so as to releasably engage the openings 84, 86, respectively, in the sidewalls 64, 66, respectively, of the body 60, when the head 62 is applied to the body 60. The fingers 88, 90 are arranged at an inclined angle selected such that contact pads 100, 102 provided on the free ends of the fingers 88, 90, respectively, are pressed against the runway 70, whereby the fingers 88, 90 themselves extend into a passageway 104 (see Figures 9A-9C) through which the strip 10 passes during a dispensing operation to be described in greater detail below. Before discussing the dispensing operation, it should be noted that the fingers 88, 90 extend far enough into the passageway 104 to create an interference fit for the strip 10. Despite the existence of this interference fit, the natural resiliency of the fingers 88, 90 permits them to be deflected away from the runway 70 by the strip 10 upon the initial feeding of the strip 10 into the passageway 104, whereby the strip 10 is interposed between the runway 70 and the contact pads 100, 102 of the fingers 88, 90, respectively. Also, although cutting ribs 106, 108 depend from the contact pads 100, 102, respectively, the contact pads 100, 102 are able to engage the covering 56 of the strip 10 due to the alignment of the ribs 106, 108 with the recesses 74, 76, respectively, (see Figures 5A-5C) for a purpose to be described below.

Making general reference to Figure 5 and particular reference to Figures 9A-9C and assuming that the piece 22 and any preceding pieces (not shown) have been removed from the strip 10 to thereby leave the piece 24 as the so-called "leading piece" and the piece 26 as the so-called "trailing piece", the fingers 88, 90 cooperate with the runway 70 to constantly squeeze the leading piece 24, including the matching piece of the covering 56, between the contact pads 100, 102 and the runway 70. As a result of such squeezing action, a compressive force is exerted against the marginal portions of the midsection 42 of the leading piece 24 (i.e., those portions of the midsection 42 which lie adjacent to the side edges 16, 18 of the strip 10), such force having a component acting in a direction generally normal to a plane containing the runway 70 (see Figure 5A). At this stage of the dispensing operation, the cutting ribs 106, 108 push two laterally spaced portions of the strip 10 into the recesses 74, 76, respectively, without ac-

tually cutting or otherwise weakening the strip 10.

As the leading piece 24 is pulled outwardly from the dispensing tip 68 in the direction of the arrow 72, the contact pads 100, 102 of the fingers 88, 90, respectively, engage the portions of the covering 56 which overlie the legs 48, 50 of the tail section 44 such that most if not all of the compressive force is still exerted against the leading piece 24 (see Figure 9B). At this stage of the dispensing operation, the cutting ribs 106, 108 reach the dividing line 20 (which extends through the covering 56 as well as the strip 10 itself) just before they reach the nicks 34, 36, respectively. Upon reaching the nicks 34, 36, the ribs 106, 108 sever or otherwise weaken the nicks 34, 36, whereby the tensile force required to separate the leading piece 24 from the trailing piece 26 is reduced to thereby facilitate such separation. If the legs 48, 50 tear during this stage of the dispensing operation as they are apt to do because of their narrow width, the torn portions of the legs 48, 50 will not become jammed in the recesses 74, 76 of the runway 70 due to the fact that the recesses 74, 76 are open in the direction of the arrow 72 (see Figure 6).

When, as a result of the further movement of the leading piece 24 in the direction of the arrow 72, the contact pads 100, 102 disengage the portions of the covering 56 which overlie the legs 48, 50, the compressive force exerted by the fingers 88, 90 through the contact pads 100, 102 is now exerted on the midsection 52 of the trailing piece 26, thereby creating drag on the trailing piece 26 (see Figure 9C). By calculating the drag such that it is greater than the tensile force required to separate the leading piece 24 from the trailing piece 26, the leading piece 24 can be separated from the trailing piece 26 by pulling on the leading piece 24 as the trailing piece 26 is maintained in the dispensing tip 68 due to the drag which acts on the trailing piece 26 to inhibit its movement as the leading piece 24 is separated therefrom.

While continuing to make specific reference to Figures 9A-9C but while also making reference to Figure 2, a notch 110 formed between the fingers 88, 90 of the head 62 communicates with the passageway 104 on one side thereof, the passageway 104 communicating on an opposite side with the notch 78 formed in the runway 70 of the body 60. The notches 78, 110 cooperate to facilitate the gripping of the strip 10 when the strip 10 is present in the dispensing tip 68.

With reference now to Figure 6, a display unit 112 includes a single row of sample strips, each of which is identical to the sample strip 10 and which is mounted on a cartridge (see Figure 11) identical to the cartridge 58. Alternatively, the display unit 112, which includes a base 114 and a moveable lid 116, could be provided with two or more rows of

sample strips arranged one above the other.

Referring to Figure 11, the cartridge 58 is removeably inserted into a casing 118 which is mounted in a socket 120 provided in the base 114. More particularly, an opening 122 in the casing 118 receives the hook 82 of the cartridge 58 such that the cartridge 58 can be inserted into or removed from the casing 118 by deflecting the hook 82. The lid 116 can be rotated in the direction of arrow 124 relative to the casing 118 between a closed position (indicated in solid lines), in which the lid 116 substantially covers the cartridge 58 after its insertion into the casing 118, and an open position (indicated in phantom), in which the lid 116 uncovers the casing 118 to permit the insertion or removal of the cartridge 58. When the cartridge 58 is in place, the discharge tip 68 thereof extends outwardly from a discharge slot 126 formed between the lid 116 and the casing 118.

It will be understood that the embodiment described herein is merely exemplary and that a person skilled in the art may make many variations and modifications without departing from the spirit and scope of the invention. All such modifications and variations are intended to be included within the scope of the invention as defined in the appended claims.

### Claims

1. A device for providing discrete individual sample dose units of cosmetic product, characterized by an elongated flat support strip (1; 7) the width of a single dose unit and intermittently spaced quantities of cosmetic product comprising single samples (4) thereof.

2. The device according to claim 1, characterized by perforations (2, 3) in said support strip (1) between each of said intermittently spaced quantities of cosmetic product, whereby a dose unit can be detached from said device.

3. A device according to claim 1 or 2, characterized by a top strip (5; 8) covering and releasably attached to said support strip (1; 7) wherein said top strip (5, 8) has the length and width of said support strip (1; 7) and is attached to said support strip (1; 7) in each dose unit, said top strip (5; 8) covering the cosmetic product on said support strip (1; 7), and wherein said top strip (5, 8) is sealed to said support strip (1) so as to form a pocket between said top strip (5; 8) and said support strip (1; 7) such as wherein said top strip (5, 8) is continuously sealed to said support strip (1; 7) along all four edges thereof to form a container for said single sample (4) of cosmetic product.

4. A device according to claim 3 characterized by perforations (2, 3) in said support strip (1) between each of said intermittently spaced quantities of cosmetic product and perforations in said top strip (5) which overlies said perforations (2, 3) in said support strip (1), whereby a dose unit can be detached from said device.

5. The device according to claim 3 or 4, characterized in that said top strip (5; 8) and said support strip (1; 7) are transparent and wherein in each dose unit said top strip (5; 8) is detachably adhered to said support strip (1; 7).

6. A strip for use in a dispenser which includes a dispensing tip and a pair of force-exerting members adapted to exert a force against said strip as said strip passes through the dispensing tip, characterized in that said strip (10) comprises a pair of side edges (16, 18) and dividing lines (20) which extend across said strip (10) from one (16) of said side edges to the other (18) of said side edges and which are spaced apart along the length of said strip (10) such that said strip (10) is divided into a plurality of individual pieces (22,...30) arranged seriatim and connected in end-to-end fashion, each of said pieces including a nose section (40) which has a size and shape selected such that said nose section (40) is spaced from both of said side edges (16, 18) of said strip (10), a midsection (42) which extends rearwardly from said nose section (40) to a nose section of a trailing piece and which extends across said strip (10) from one (16) of said side edges to the other (18) of said side edges, and a tail section (44) which includes a pair of legs (48, 50) extending rearwardly from said midsection (42) to a midsection of the trailing piece, one of said legs (48) being arranged adjacent to one of said side edges (16) of said strip (10) and the other of said legs (50) being arranged adjacent to the other of said edges (18) of said strip (10) such that said legs (48, 50) straddle the nose section of the trailing piece so as to present contact surfaces for the force-exerting members (100, 102, 106, 108) of the dispenser (58) as the strip (10) passes through the dispensing tip (68), whereby the force-exerting members do not exert any substantial force on the trailing piece until the midsection (42) of the trailing piece reaches the force-exerting members (100, 102, 106, 108) at which time the leading piece can be separated from the trailing piece along one of said dividing lines (20) by pulling on the leading piece as the trailing piece is maintained substantially stationary due to the force exerted on the midsection thereof by the force-exerting members (100, 102, 106, 108), and both of said legs (48, 50) having a length selected such that upon the separation of the leading piece from the trailing piece the nose section (40) of the trailing piece, which

now becomes a leading piece, projects outwardly from the dispensing tip (68) a distance sufficient to permit it to be gripped by a user.

7. A strip according to claim 6, characterized in that each of said pieces contains a sample (54), such as a transferable test sample, said test samples being applied to one surface of said strip (10).

8. A strip according to claim 6 or 7, wherein said strip (10) is in the form of a roll.

9. A strip according to any one of claims 6 to 8, characterized in that said strip (10) includes a covering (56) removably applied to said one surface of said strip (10), whereby said covering (56) prevents contamination of said samples (54) and prevents said sample (54) from being rubbed off onto an opposite surface of said strip (10).

10. A strip according to any one of the preceding claims characterized in that said strip includes nicks (32, 34, 36) which interrupt each of said dividing lines (20) at preselected locations therealong to thereby connect each of said pieces (22,...30) to an adjoining piece, said dividing lines (20) otherwise extending completely through said strip (10).

11. A dispenser for a strip (10) which is divided into a plurality of individual pieces (22,...30) arranged seriatim and connected in end-to-end fashion, characterized in that said dispenser (58) comprises a dispensing tip (68), having a passageway (104) through which the strip (10) passes during a dispensing operation, and exerting means (70, 100, 102, 106, 108) for constantly exerting a compressive force against marginal portions only of the strip (10) in a direction generally perpendicular to a longitudinal axis of the strip (10), in the event that the strip (10) is flat, or to an imaginary line which is tangent to a longitudinal axis of the strip (10), in the event that the strip (10) is curved, to thereby create drag on a trailing piece of the strip (10) which trailing piece is supplied to said dispensing tip (68) as a result of the withdrawal from said dispensing tip (68) of a leading piece of the strip (10) which leading piece is connected to the trailing piece, such drag being greater than the tensile force required to separate the leading piece from the trailing piece whereby the leading piece can be separated from the trailing piece by pulling on the leading piece as the trailing piece is maintained in said dispensing tip (68) due to the drag which inhibits movement of the trailing piece as the leading piece is separated therefrom.

12. A dispenser according to claim 11, characterized in that said exerting means includes supporting means (70) for supporting one surface of the strip (10) and contacting means (100, 102, 106, 108) for contacting an opposite surface of the strip (10) in the vicinity of the marginal portions thereof, said contacting means (100, 102, 106, 108) being

yieldingly urged toward said supporting means (70), whereby said supporting means (70) and said contacting means (100, 102, 106, 108) cooperate with each other to squeeze the strip (10) therebetween.

13. A dispenser according to claims 11 or 12, characterized in that said dispenser includes a cartridge (58) having a head (62) and a body (60).

14. A dispenser according to claims 12 or 13, characterized in that said supporting means includes a runway (70) provided on said body of said cartridge (58) and said contacting means includes a pair of fingers (100, 102) cantilevered from said head (62) of said cartridge (58), each of said fingers (100, 102) having a free end which is yieldingly urged into contact with said runway (70).

15. A dispenser according to claim 14, characterized in that said free end of each of said fingers includes a contact pad (100, 102) and wherein said free end of each of said fingers includes severing means (106, 108) for severing the strip so as to promote its separation into individual pieces.

16. A dispenser according to claim 15, characterized in that each of said severing means includes a rib (106, 108) depending on a corresponding one of said contact pads (100, 102) and wherein said severing means includes a pair of recesses (74, 76) provided in said runway (70), each of said recesses (74, 76) being aligned with a corresponding one of said ribs (106, 108) and wherein each of said recesses (74, 76) has a leading end which is open.

17. A dispenser according to any one of claims 14 to 16, characterized in that said fingers (100, 102) have a natural resiliency which permits them to be deflected away from said runway (70) in response to the feeding of the strip (10) into said passageway (70) to thereby permit the strip (10) to pass through said dispensing tip (58).

18. A dispenser according to any one of claims 11 to 17, characterized in that the strip (10) is in the form of a roll and said body (60) of said cartridge (58) includes holding means (64) for holding the roll such that the strip (10) can be unwound therefrom and wherein said body (60) of said cartridge (58) includes mounting means (82) for removably mounting said cartridge (58) in a housing (112).

19. A dispenser according to any one of claims 14 to 18, characterized by comprising a first notch (110) formed between said fingers (100, 102) of said head (62) and a second notch (78) formed in said runway (70) of said body (60), said first and second notches (110, 78) being in general alignment with each other so as to aid a user in gripping the strip (10) when the strip (10) is present in said dispensing tip (68).

20. A combination, characterized by a strip (10) which is provided in the form of a roll and a dispenser which includes a dispensing tip (68) and exerting means (70, 100, 102, 106, 108) for exerting a force against said strip (10) as said strip (10) is unwound from said roll and passes through said dispensing tip (68),

said strip (10) including a pair of side edges (16, 18) and dividing lines (20) which extend across said strip (10) from one (16) of said side edges to the other (18) of said side edges and which are spaced apart along the length of said strip (10) such that said strip (10) is divided into a plurality of individual pieces (22,...30) arranged seriatim and connected in end-to-end fashion, each of said pieces (22,...30) including a nose section (40) which has a size and shape selected such that said nose section (40) is spaced from both of said side edges (16, 18) of said strip (10), a midsection (42) which extends rearwardly from said nose section (40) to a nose section of a trailing piece and which extends across said strip (10) from one (16) of said side edges to the other (18) of said side edges, and a tail section (44) which includes a pair of legs (48, 50) extending rearwardly from said midsection (42) to a midsection of the trailing piece, one of said legs (48) being arranged adjacent to one of said side edges (16) of said strip (10) and the other of said legs (50) being arranged adjacent to the other of said side edges (18) of said strip (10) such that said legs (48, 50) straddle the nose section of the trailing piece so as to present contact surfaces for said exerting means (70, 100, 102, 106, 108), as said strip (10) passes through said dispensing tip (58), whereby said exerting means (70, 100, 102, 106, 108) does not exert any substantial force on the trailing piece until the midsection (42) of the trailing piece reaches said exerting means (70, 100, 102, 106, 108) at which time the leading piece can be separated from the trailing piece along one of said dividing lines (20) by pulling on the leading piece as the trailing piece is maintained substantially stationary due to the force exerted on the midsection (42) thereof by said exerting means (70, 100, 102, 106, 108), and both of said legs (48, 50) having a length selected such that upon the separation of the leading piece from the trailing piece a nose section (40) of the trailing piece, which now becomes a leading piece, projects outwardly from said dispensing tip (58) a distance sufficient to permit it to be gripped by a user.

21. A combination according to claim 20, characterized in that each of said pieces (22,...30) contains a transferable test sample (54), said test samples (54) being applied to one surface of said strip (10); and wherein said strip (10) includes a covering (56) removably applied to said one surface of said strip (10), whereby said covering (56) prevents

contamination of said samples (54) and inhibits said samples (54) from being rubbed off onto an opposite surface of said strip (10).

22. A combination according to claim 20 or 21, characterized in that said dispenser includes holding means (64) for holding said roll such that said strip (10) can be unwound from said roll as it is incrementally fed through said dispensing tip (58).

23. A combination according to any one of claims 20 to 22, characterized in that said strip (10) includes nicks (32, 34, 36) which interrupt each of said dividing lines (20) at preselected locations therealong to thereby connect each of said pieces (22,...30) to an adjoining piece, said dividing lines (20) otherwise extending completely through said strip (10), and wherein said dispenser includes severing means (106, 108) for severing at least some of said nicks (32, 34, 36) prior to separating the two adjoining pieces attached by said nicks (32, 34, 36).

24. A combination according to any one of claims 20 to 23, characterized in that said exerting means includes supporting means (70) for supporting said opposite surface of said strip (10) and contacting means (100, 102) for contacting marginal portions only of said one surface of said strip (10), said contacting means (100, 102) being yieldingly urged toward said supporting means (70), whereby said supporting means (70) and said contacting means (100, 102) cooperate with each other to squeeze said strip (10) therebetween.

25. A combination according to any one of claims 20 to 24, characterized in that said dispenser is in the form of a disposable cartridge (58), said cartridge (58) including mounting means for removeably mounting said cartridge (58) in a housing (112).

26. Apparatus for dispensing a sample strip (10) roll which is divided into a plurality of individual pieces (22,...30) arranged seriatim and connected in end-to-end fashion, characterized by comprising a housing (112) and a plurality of cartridge-type dispensers (58), each of said dispensers (58) including holding means (64, 80) for holding the sample strip roll such that the strip (10) can be unwound therefrom, a dispensing tip (68), having a passageway (104) through which the strip (10) passes as it is unwound during a dispensing operation, and exerting means (70, 100, 102, 106, 108) for constantly exerting a compressive force against marginal portions only of an unwound portion of the strip (10), such compressive force being exerted in a direction generally perpendicular to a longitudinal axis of the unwound portion of the strip (10), in the event that the unwound portion of the strip (10) is flat, or to an imaginary line which is tangent to a longitudinal axis of the unwound portion of the strip (10), in the

event that the unwound portion of the strip (10) is curved, to thereby create drag on a trailing piece of the unwound portion of the strip (10) which trailing piece is supplied to said dispensing tip (68) as a result of the withdrawal from said dispensing tip (68) of a leading piece of the unwound portion of the strip (10) which leading piece is connected to the trailing piece, such drag being greater than the tensile force required to separate the leading piece from the trailing piece, whereby the leading piece can be separated from the trailing piece by pulling on the leading piece as the trailing piece is maintained in said dispensing tip (68) due to the drag which inhibits movement of the trailing piece as the leading piece is separated therefrom.

27. Apparatus according to claim 26, characterized by further comprising mounting means (82) for removeably mounting said dispensers (58) in said housing (112).

28. Apparatus according to claim 27, characterized in that said dispensers (58) are arranged in a row within said housing (112) such that said dispensing tips (68) extend outwardly from said housing (112) through a common discharge slot (126) therein.

FIG. 1

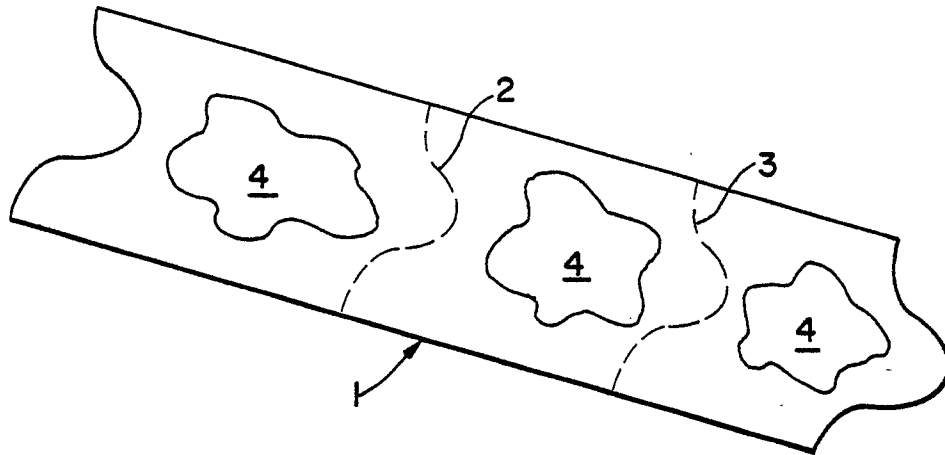


FIG. 2

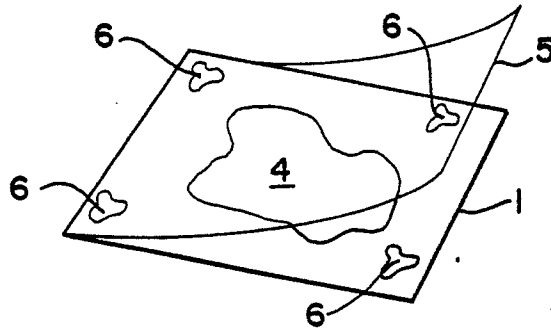


FIG. 3

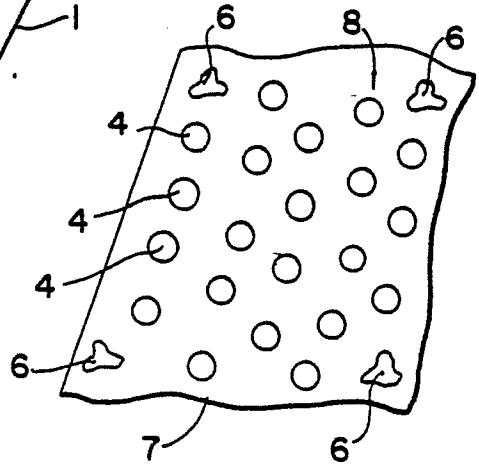


FIG. 4

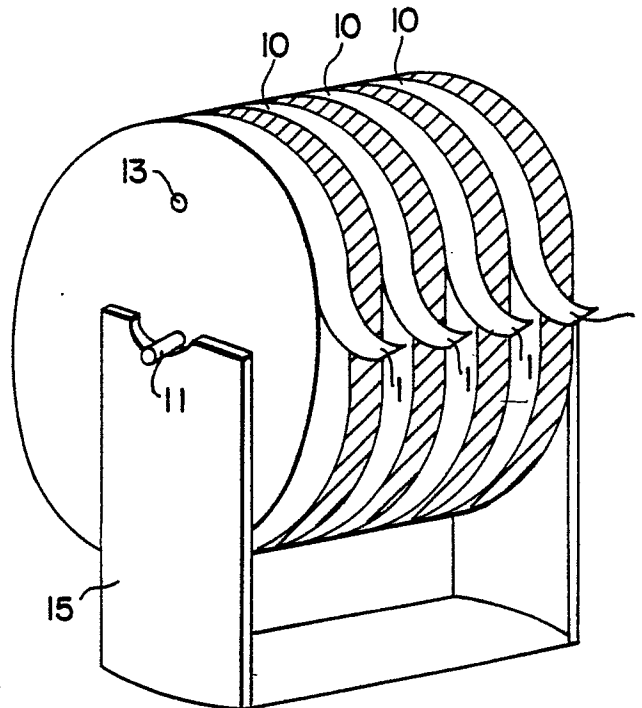


FIG. 5

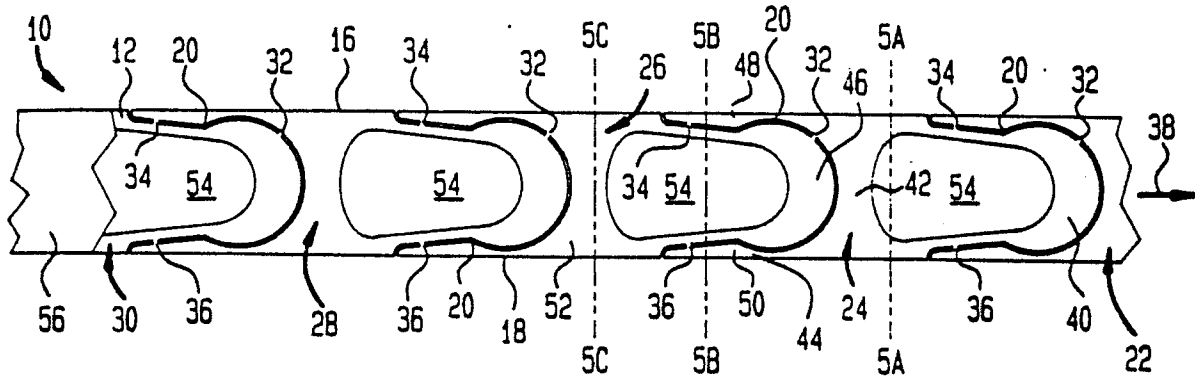


FIG. 9A

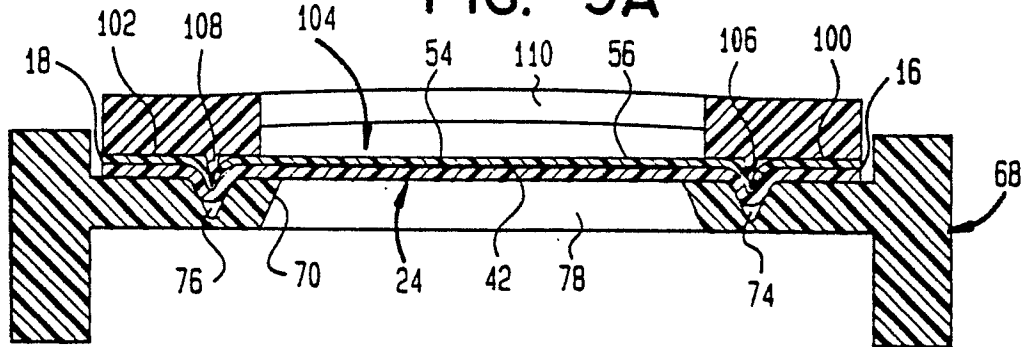


FIG. 9B

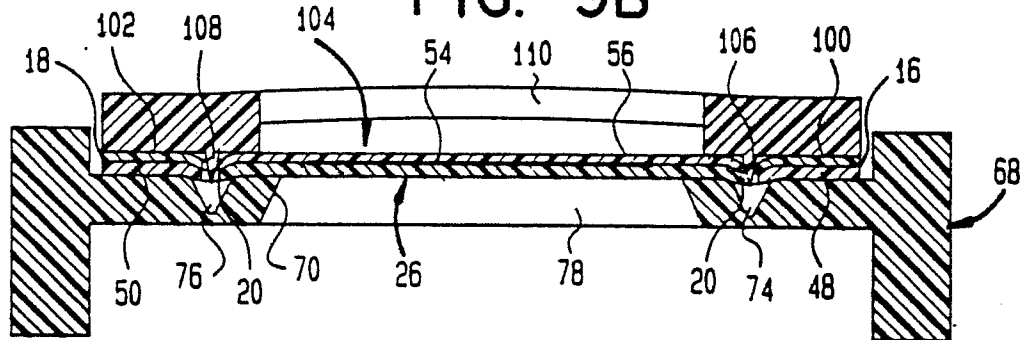


FIG. 9C

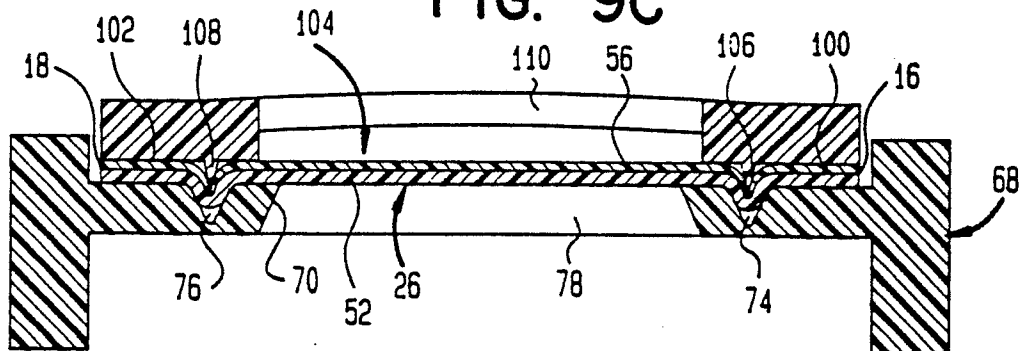


FIG. 6

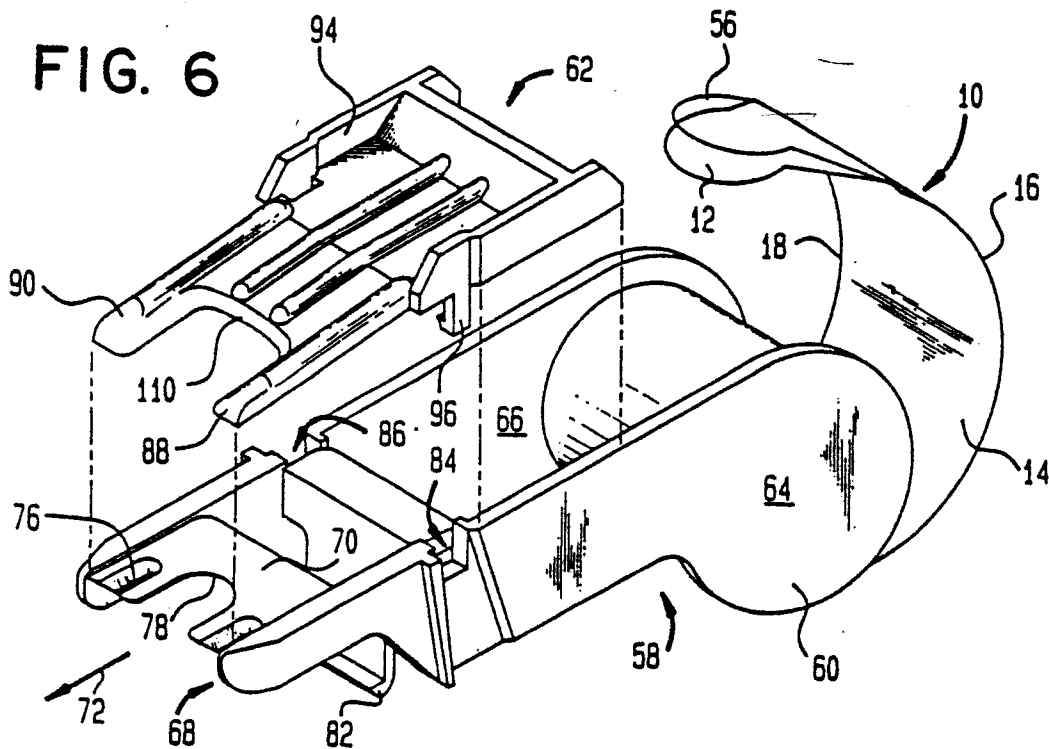


FIG. 7

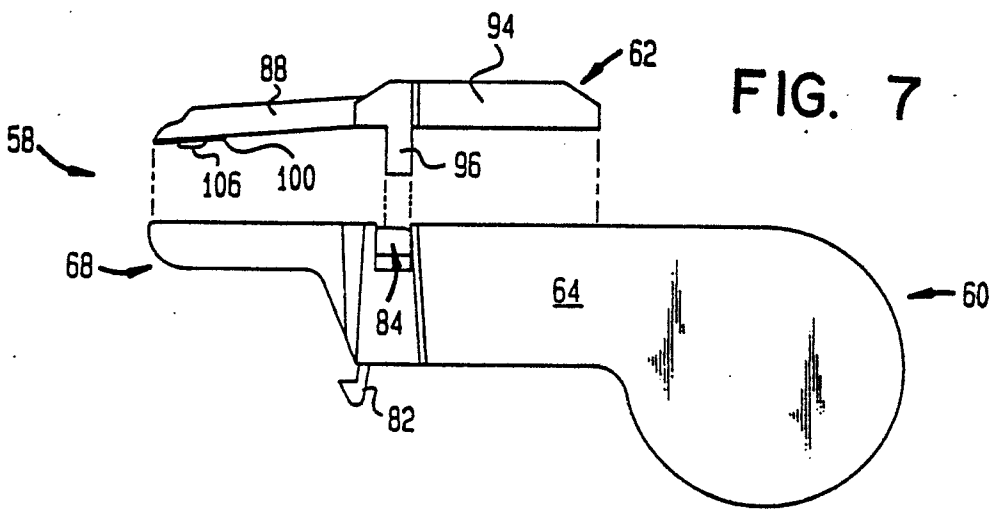
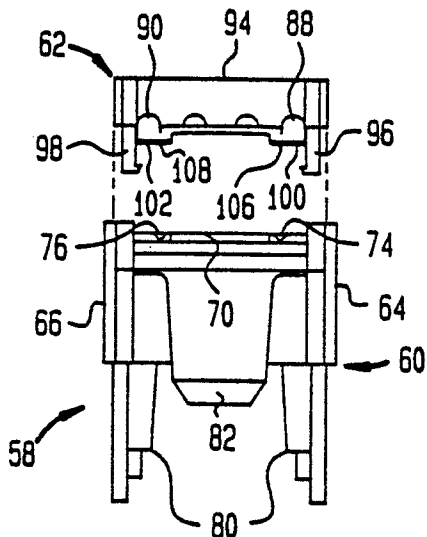


FIG. 8



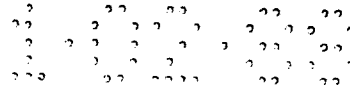


FIG. 10

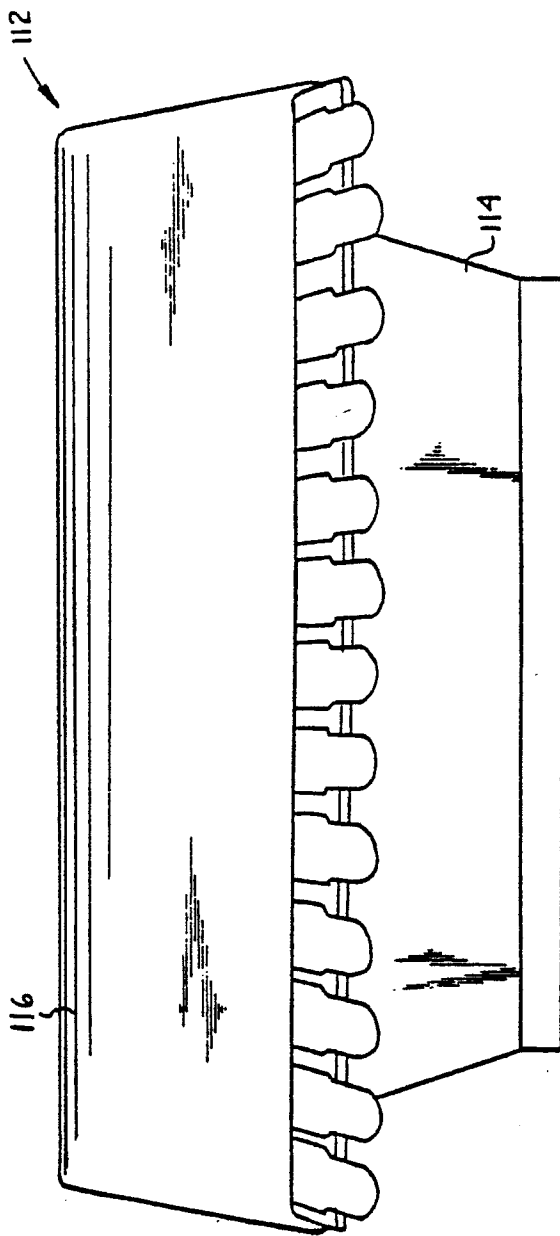




FIG. 11

