

July 19, 1966

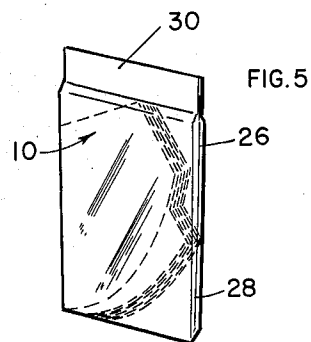
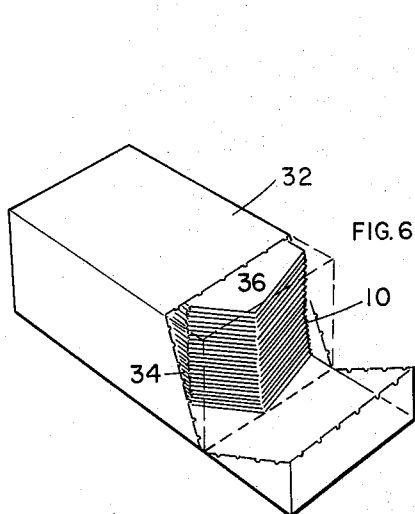
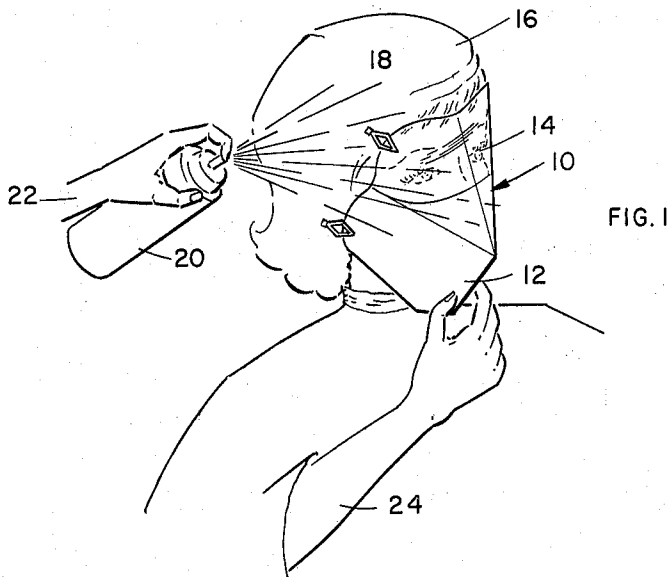
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3,261,027

FACE SHIELDS

Filed June 4, 1962

5 Sheets-Sheet 1



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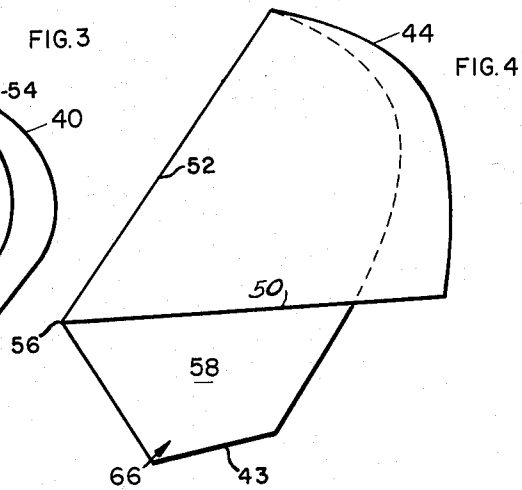
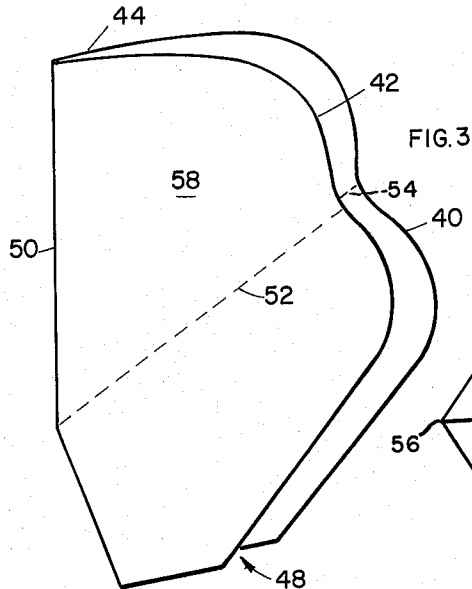
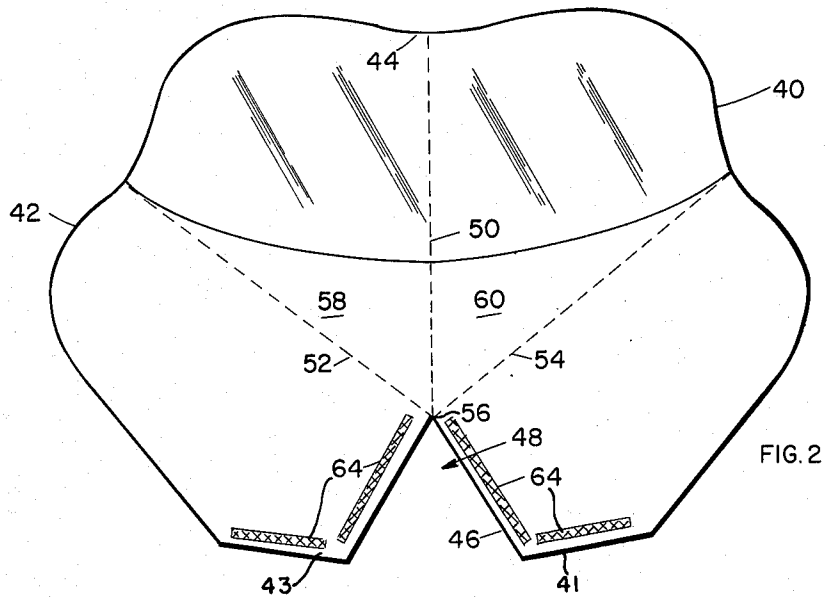
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FACE SHIELDS

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5 Sheets-Sheet 2



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FACE SHIELDS

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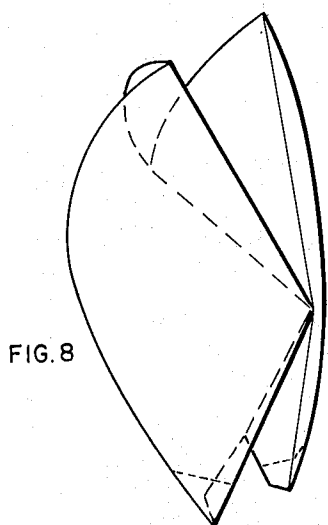


FIG. 8

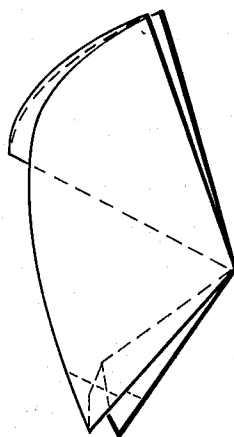


FIG. 7

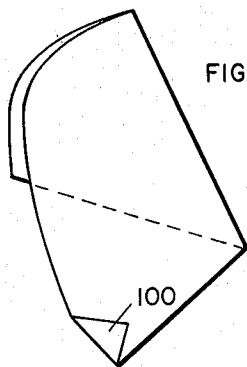


FIG. 9

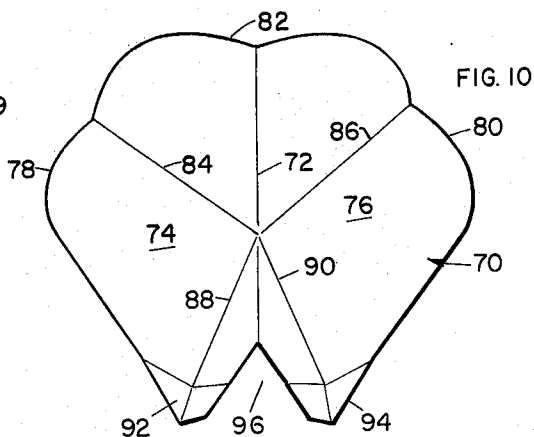


FIG. 10

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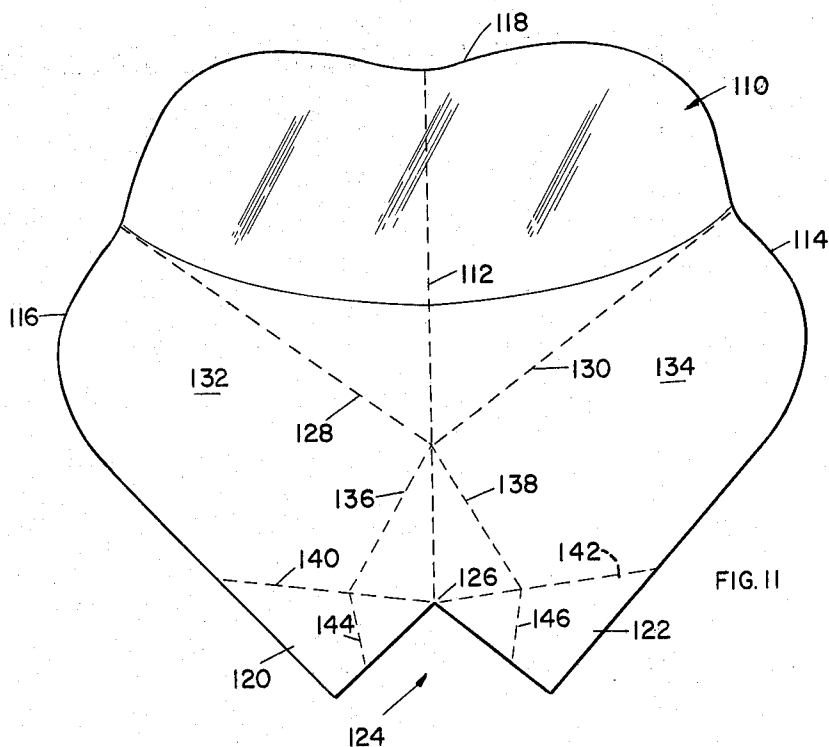
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FACE SHIELDS

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5 Sheets-Sheet 4



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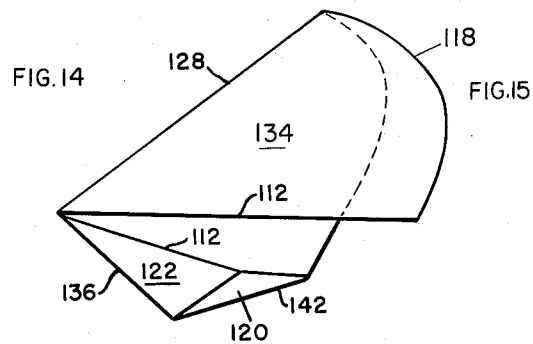
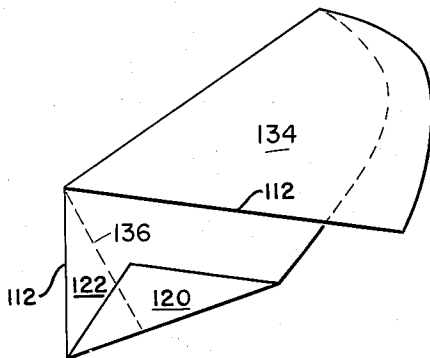
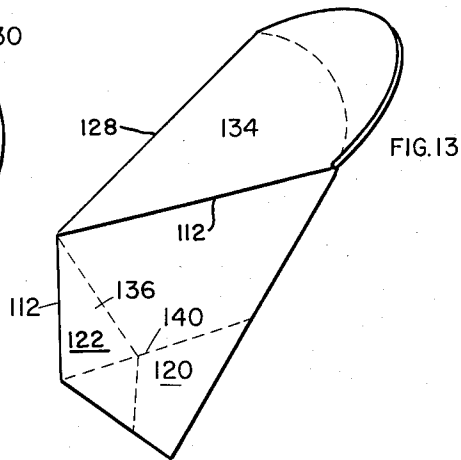
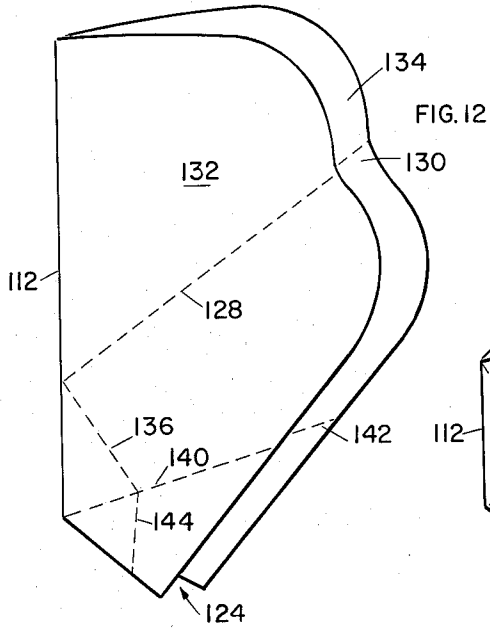
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FACE SHIELDS

Filed June 4, 1962

5 Sheets-Sheet 5



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FACE SHIELDS

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1 Claim. (Cl. 2-174)

This invention relates to a face shield and especially to a temporary shield or mask to protect the face and which is foldable from a piece of flat material or blank, such as paper or the like, and after folding may be stored in a substantially flat condition in a package or dispenser or otherwise and readily removed and opened by hand to be placed over the face for temporary protection when spraying the hair with hair spray or on any other occasion.

At times it becomes necessary to protect the face from some temporary condition which may harm the eyes, the nose or which otherwise cause discomfort. One such occasion is when using present-day hair sprays which are pre-packaged in an aerosol can and which contain certain solvents propelled by various confined gases that sometimes irritate the user. For protection to the customer, sanitary reasons, good will and otherwise, many beauty salons are now providing temporary masks or protection when performing such operations as spraying hair. More permanent types of face shields or masks, such as pre-formed plastic masks and the like, present problems from the standpoint of public health and cleanliness since they are to be used by many people under different uses and soon become soiled or odorous and otherwise objectionable from that standpoint. The only real answer to the problem is in the form of a disposable or temporary face mask or shield of the sort presented in the present invention.

An object of this invention is to provide a temporary and disposable face shield or mask which may be manufactured from flat sheet material and dispensed in a substantially flat folded condition to be readily opened for use.

Another object of this invention resides in the arrangement in a disposable face shield or mask which may be manufactured by die cutting or similar operation and folded into place in an economical and inexpensive manner without complicated folding or mechanical apparatus.

Still another object of this invention resides in the provision of a disposable face mask or shield which may be cut from flat sheet material such as inexpensive paper stock and folded into an almost two-dimensional condition for packaging (except for the thickness of the material after folding) and then which is readily snapped or pulled open by the hand and held in place to provide a three-dimensional, somewhat conical face mask with an apex providing a hand holding place.

Another object of this invention is to provide a disposable face mask or shield which is cut from flat stock such as paper or the like and which may be formed by folding along a substantially central fold line to a bottom connected apex which causes a three-dimensional face mask upon unfolding.

Other and further objects and advantages of my invention will become apparent upon reading the following specification taken in conjunction with the accompanying drawings, in which:

FIG. 1 is a diagrammatic perspective view of a typical use for the present mask shown held in position by a lady receiving a hair spray application and showing the grasping of the apex or junction of the device for easy positioning.

FIG. 2 is a preferred embodiment of the present invention shown in flat plan view as would appear when cut

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flat from a piece of paper stock and having typical fold lines indicated thereon.

FIG. 3 is a side elevation view of the embodiment shown in FIG. 2 folded almost upon itself substantially half-way about the center fold line and showing the anticipation of the next fold which is shown in FIG. 4.

FIG. 4 is a plan view of the embodiment shown in FIGS. 2 and 3 folded to its completed folded condition from the position shown in FIG. 3 by carrying over upon itself along the fold lines shown in FIG. 3.

FIG. 5 is a perspective view of a plastic package of several of the masks or shields of the present invention nested and stored together.

FIG. 6 is a perspective view of a tear-away box containing stacked masks or shields of the present invention, such as those shown in FIGS. 2 through 4, nested and arranged to be removed one at a time from the box.

FIG. 7 is a plan view of a second embodiment of the present invention substantially folded to completed folded condition and utilizing a different cut and fold from that shown in the previous figures.

FIG. 8 is a perspective view of the second embodiment shown in FIG. 7 one step removed from the final fold shown in FIG. 7.

FIG. 9 is a top plan view of the second embodiment shown in FIGS. 7 and 8 as appears in substantially completed, folded condition.

FIG. 10 is a top plan view of the second embodiment shown in FIGS. 7, 8 and 9 in unfolded condition as would appear after cutting and lying flat upon a surface and with the fold lines indicated intersecting thereon.

FIG. 11 is a third embodiment of the present invention showing in top plan view the unfolded device as would appear lying flat and with the fold lines indicated thereon.

FIG. 12 is a perspective view of the third embodiment shown in FIG. 11 folded about the central fold line and substantially folded one time upon itself.

FIG. 13 is a perspective view of the device shown in FIG. 12 folded another time along the upper fold lines.

FIG. 14 is a perspective view of the device shown in FIG. 13 with another fold at the bottom or apex portion.

FIG. 15 is a perspective view of the third embodiment shown in FIG. 14 as finally folded into completed condition.

The mask or shield is designated by reference number 10 and as previously mentioned is disposable and adapted to be manufactured from inexpensive material such as flat paper stock or the like. While in the various embodiments presented herein different folds have been shown it is apparent that the device is a flat folded mask which may be flipped or snapped or pulled open by the hand to create a three-dimensional shield having an apex 12 near the bottom juncture thereof and a conical or curved three-dimensional portion 14 at the upper part which fits over the eyes and forehead to protect a person such as the lady 16 in FIG. 1 from the effects of a hair spray material 18 being dispensed from an atomizer aerosol container 20 held in the hand of a beauty operator 22 or which may be held in the other hand of the lady 16 holding the apex 12 of mask 10 with her hand 24.

As is readily ascertained from either FIG. 5 or 6, a package 26 of a plurality or several of the masks 10 may be constructed in a bag formation with a gusseted side 28 and a saddle closure 30 on the top and the bag may be torn open at any time and the individual mask 10 removed as needed. Likewise, the mask 10 may be stacked flat into column of masks 10 confined in a box or carton 32 having a tear-away portion at one end 34 thereof adapted to expose the ends 36 of each of the individual masks 10 to allow them to be removed one

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at a time either by the operator or by the person receiving the treatment.

Referring to the first embodiment shown in FIG. 2, a flat piece of paper stock or other material has been die cut or otherwise cut in a pattern formation to create a two-dimensional sheet of material having curved, symmetrical and identical opposite sides or side marginal edges 40, 42 with a top portion or top edge 44 and a bottom portion or bottom edge 46 having a substantially medial or central bottom notched portion 48 therein intersecting substantially centrally of the mask. A center fold line 50 extends substantially medially of the width or transverse dimension of the mask and meets with a pair of diagonal fold lines 52, 54 leading from the apex 56 of the notched portion 48 outward to each of the respective sides 40, 42. Sides 40, 42 have respective bottom edges 41, 43 on the bottom of the mask.

This creates substantially two opposed sides 58, 60 defined by imaginary fold line 50 which in turn are foldable into smaller portions about their respective fold lines 52, 54.

As seen in FIG. 3 the embodiment of FIG. 2 is folded first about the central fold line 50 bringing the two sides 58, 60 upon each other to form them into folded, complimentary and substantially identically matching portions which are again folded about the respective lines 52, 54 into the position shown in FIG. 4.

At some stage of the folding of the embodiment of FIG. 2 any suitable securing means such as glue 64 may be applied around the periphery of the marginal edges of the bottom apex portion 48 so that when the folding is completed in the position of FIG. 4 pressure exerted thereat will seal bottom edges 41, 43 together at the apex portion 56 into a three dimensional apex 56 secured together by the glue 64. In place of the glue other fastening means such as staples or stitching or other well-known attachment provisions may be made.

In the operation of the mask shown in FIG. 2, which applies essentially and generally to all the embodiments shown herein, the mask in the position of FIG. 4 after completion of the folding occupies a flat condition which as explained previously may be packaged several in a bag 26 or in a carton 32. When it is necessary or desirable to use one of the masks, the user 16 removes same by grasping at any position such as the apex portion 66 in the embodiment of FIG. 4 and then using the other hand flipping the top of the device open to create a three-dimensional and conical effect in the manner shown in FIG. 1.

In those instances of manufacture or otherwise where it is desirable to create the same mask without the use of glue, staples, or any additional fastening means, the fold of FIGS. 7 through 15 may be used in the two embodiments shown therein.

In the embodiment shown in FIG. 7 through 10, the mask 70 therein, as in the previous embodiment, has a substantially medial and centrally located fold line 72 about which a pair of opposite sides 74, 76 are formed with peripheral side marginal edges 78, 80 of other than a straight line joining at the top to form a curved top or top edge 82. Diagonal lines 84, 86 radiating from an intersection with the central fold line 72 cooperate with other diagonal fold lines 88, 90 leading to bottom flaps 92, 94 formed about a notched or open portion 96 the apex of which intersects with the central fold line 72.

In the folding operation of the embodiment shown in FIGS. 7 through 10, the device is first folded about the central or medial line 72 and then the device is folded in the manner of FIGS. 7 and 8 about the fold line 84, 86 inwardly to form pocket folds. Then the bottom portions 92, 94 are folded together into a single flap 100 which connects the portions together forming a connected apex as in the previous embodiments.

The operation of the embodiment shown in FIGS. 7 through 10, inclusive, is very similar to that in the pre-

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vious embodiment. The flat, folded mask 70 is grasped at the bottom juncture 100 and the other hand is used to open the pocket folds formed between the members 74, 76 at the bottom and top to flip the mask into a three-dimensional position.

A third embodiment of the invention which does not employ glue or other fasteners is shown in FIGS. 11 through 15, inclusive. This embodiment is designated as 110 and comprises a flat piece of material foldable about a central fold line 112 and having outer marginal edges or side marginal edges 114, 116 in other than a straight line connected together along a curved top edge and joining at 118 at the top of the mask 110. The bottom of the flat blank or cut material has a pair of ears or flaps 120, 122 about a cut-out or notched portion 124 having an apex 126 the intersection of which intersects with the imaginary fold line 112. Radiating outwardly from fold line 112 is a pair of diagonal fold lines 128, 130 which serve to fold the two identical and symmetrical sides 132, 134 into two additional symmetrical pieces. Other fold lines 136, 138 radiate from the center point 140 to respective ear flaps 120, 122 where they intersect transverse fold lines 140, 142 leading to the apex 126. Other fold lines 144, 146 complete the fold lines of this embodiment.

Referring to FIGS. 12 through 15 for a sequential understanding of the folding of the device from the flat position of FIG. 11, it is seen that the first folds is made along the center fold line 112 which may either be imaginary, may be printed or may be bossed or scored on the blank. This brings the two sides 132, 134 one upon the other and substantially symmetrically and identical forming a flat piece which is again folded along the respective lines 128, 130 to fold the device upon itself in the manner shown in FIG. 13.

From FIG. 13 the bottom pieces are folded along the respective lines 140, 142 to bring the two ears 120, 122 together to be folded about lines 144, 146 and lines 140, 142 into the position shown in FIG. 15. Thus the bottom or apex portion which is represented for all embodiments as reference numeral 12 in FIG. 1 is permanently connected together without the use of staples, glue or other fasteners.

The operation of the device shown in FIGS. 11 through 15 is substantially the same as that in the previous embodiments in that the device may be stored in flat, compact condition in the manner shown in FIGS. 5 and 6 and removed one at a time and opened by holding the device at the apex portion and snapping the other part of the device open about the medial fold line 112 to form the three-dimensional and substantially conical mask shown in FIG. 1.

While I have shown and described several embodiments of my novel face shield together with suggested and recommended uses and arrangements thereof, this is by way of illustration only and represents only certain selected embodiments and various other alterations, changes, eliminations, deviations, variations, substitutions, and modifications may be made in the embodiments shown and described without departing from the scope of my invention as defined in the appended claim.

I claim:

A disposable face shield, comprising:

- (a) a relatively stiff, self-supporting, flexible, paper-like, impervious-to-hair spray material two dimensional blank having a fold line substantially centrally located thereon,
- (b) a pair of side marginal edges,
- (c) a top edge, said side marginal edges each extending from the top edge,
- (d) bottom edges extending from said fold line at the bottom outwardly to each of a respective marginal side edge, said bottom edges secured together,
- (e) and said fold line in (a) and said secured bottom edges forming therewith,

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(f) a three-dimensional apex at the bottom of said mask to form a place at which said mask may be held which causes said mask when opened to assume a three-dimensional cup-like effect having an area to enclose and protect the wearer's face.

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