



1

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PROTECTED ADHESIVE ARTICLE

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This invention relates to removable protective backing layers for and in separable adherent contact with the permanently tacky surface of an article bearing a coating of contact adhesive, and the invention resides more particularly in an improved divided backing for the adhesive article which is easily grasped by the fingers for removal, the divided portions of the backing meeting along a line traversing the adhesive surface of the article which line is underlaid with a folded preempting strip which is, itself, easily removable by reason of its folded character, the preempting strip acting to maintain the margins of the divided backing adjacent the meeting line free to provide finger grip areas.

In certain instances, permanently tacky adhesive coated materials are used in making up individual articles of specialized shape. Such individual articles, in contrast to materials in bulk form, cannot be rolled upon themselves to protect the permanently tacky adhesive surface. Instead, protection must otherwise be provided usually by a layer of backing material which is removed at the time of use. Usually the backing material is applied to the adhesive material while in a bulk state and articles are then severed from the bulk material by die cutting or other similar process. As a result, the margins of the adhesive material and the backing material are identical or nearly so and great difficulty is experienced in attempting to separate the backing from the adhesive material because of the lack of finger grip areas unless some special provision is made.

Some have attempted to solve the problem of facilitating removal of the backing from an adhesive article of the type above described by the use of a divided backing in which the two portions meet at upwardly folded edges which provide finger grips for removal of the two portions of backing. This arrangement produces a thickening of the finished unit and incipient creasing of the adhesive material which is highly objectionable in certain instances. Others have employed a divided backing, divided along a line which changes direction rapidly, so that when the adhesive material is bent in the vicinity of the dividing line, points or edges of the backing material, due to its inherent stiffness, are separate from the adhesive surface to permit such points to be grasped. Such a construction is only feasible where the adhesion, called aggressiveness of the adhesive, is moderate as compared with the stiffness of the backing. Where highly aggressive adhesives are employed, such a method of removal of the backing is not feasible.

It is an object of this invention to provide a divided backing for an adhesive coated article having a permanently tacky adhesive coating thereon over the entire area which will involve a minimum thickening of the article at the meeting point of the backing parts so that the article will not be distorted to a substantial degree in the vicinity of the meeting line of the divided backing.

Another object of this invention is to provide an article of the class described having a backing which may be grasped for removal conveniently and effectively even

2

though an adhesive of substantial aggressiveness is employed.

The foregoing and other objects and advantages of this invention will appear from the description following which is set forth by reference to the accompanying drawing hereto attached and forming a part hereof, in which drawing there is shown by way of illustration and not of limitation, one form in which the adhesive article of this invention may be embodied.

In the drawing:

Fig. 1 is a perspective view of an adhesive article having a divided protective backing constructed in accordance with this invention, the same being shown in the form of a photograph mounting closure,

Fig. 2 is a top plan view in section, viewed through the plane 2—2 indicated in Fig. 1,

Fig. 3 is an enlarged, detailed, fragmentary, top plan view in section of the central portion of the article shown in Fig. 1, through the plane 2—2 there indicated,

Fig. 4 is a fragmentary, enlarged, detailed view in perspective showing the action at the outset of the removal of the divided backing from an article of the type appearing in Fig. 1, and

Fig. 5 is a fragmentary, detailed, sectional view of the margin of another form of the article of this invention.

An adhesive article having a protective backing constructed in accordance with this invention in the form appearing in the drawing may be made up of an adhesive-material portion 1 bearing a coating of permanently tacky adhesive 2. The portion 1 may be cut to such shape as may be dictated by the use to which the article is to be put, such as, for example, a mask or a mounting designed to cover or protect certain specific areas of an article of definite construction and shape. In the instance chosen for illustration, portion 1 is designed to complete the mounting of a photographic film bearing a pair of stereoscopic images.

Up to the time of use, the adhesive layer 2 should be protected to prevent the portion 1 from becoming prematurely attached to extraneous objects and to prevent the adhesive layer from becoming impaired by dust, lint, evaporation of constituents, oxidation, etc. To this end, the adhesive coating 2 is covered by backing sheets 3 and 4 which meet without overlapping along a dividing line 5. The margin of the backing sheet 3, adjacent the meeting line 5, is deflected outwardly from the adhesive layer 2 to form a finger grip portion 6 and similarly the margin of the backing 4 to form finger grip portion 7.

The outward deflection of finger portions 6 and 7 for clarity is shown, greatly exaggerated, in the drawing. In an article, as actually constructed, such deflection is barely perceptible and not sufficient to substantially thicken the article adjacent the meeting line 5. The finger portions 6 and 7 are, however, separated from the adhesive layer 2 by a preempting strip 8 having an attached base 9 and a folded back portion 10. The preempting strip 8 is preferably formed of any thin plastic film or integrated sheet stock, such as regenerated cellulose film, polyvinyl chloride film, polyester film, chlorinated rubber film or the like in thicknesses of approximately 0.00025" or less up to 0.003".

The preempting strip 8, for clarity, is shown in the drawing as greatly exaggerated both in thickness and as to its outwardly bowed configuration in its folded back portion 10. In the article as actually constructed, the extreme thinness of the film material from which the preempting strip 8 is constructed, as compared with the backing material 3 and 4, precludes any substantial thickening at the central area of the article along the dividing line 5. Large numbers of similar articles, so constructed, may be stacked and packaged without apparent increase in bulk adjacent the area of meeting line 5. As a result, articles

3

thus packaged and delivered to the user come to the user's hands without any incipient creasing or distortion or other damage to the adhesive portion 2.

When the article is to be placed in use, it is convenient to fold the same as indicated in Fig. 4, grasping the finger portions 6 and 7 as is indicated and with steady continuous pulling to remove the backing portions 3 and 4. As soon as the backing portions 3 and 4 have been removed the folded back portion 10 of the preempting strip 8 may then be grasped by the fingers and removed by steady pulling. The adhesive portion 1 is thus freed ready to be applied to any object desired.

The folded back portion 10 of the preempting strip 8 is purposely constructed to be no wider than the base portion 9. In this way the folded back portion 10 cannot become so attached to the adhesive layer so as to defeat its purpose of furnishing a means for removal of the preempting strip 8.

It is apparent, from the construction, above described, that bulk material in long and semicontinuous runs or webs may be prepared with a preempting strip folded and applied longitudinally of the web. This may be immediately followed by application of continuous longitudinally extending backing material. The composite bulk material thus prepared can thereafter be conveniently die cut or otherwise severed into individual portions or articles for subsequent use, thus providing a rapid and convenient method for the manufacture of articles of the type herein described. If it is desired, the articles may be prepared in groups, only partially severed by incompletely die cutting, with portions of the backing remaining continuous, or other similar means may be provided for dispensing an article constructed in accordance with this invention in multiples or lots. As an example, so-called double coated tape, having a permanently tacky adhesive coating on both sides may be furnished with a continuous divided backing on one side and may then be wound in rolls to be dispensed therefrom.

The backing material forming the portions 3 and 4 may be formed of any suitable sheet material which will not adhere permanently to the adhesive or split or feather leaving portions which impair the effectiveness of the adhesive on removal. Among the materials suitable for this purpose are glassine or parchment papers with or without coating treatments to either integrate the surface fibres thereof or to render the surface thereof adhesive in known manner.

In most instances, it is desirable that the meeting line 5 pass through a central area of the article so that the backing portions 3 and 4 are approximately equal in size. In certain instances, however, advantages may derive from placement of the meeting line 5 closer to one margin than to another. In some instances it may be useful to place the preempting strip 8 entirely along one margin of the adhesive portion 1 and to apply but a single backing sheet to protect the entire article. In such a case the meeting line 5 becomes a margin of the article as indicated in Fig. 5, wherein 11 is the adhesive article and 12 is the adhesive coating thereon. 13 is a backing sheet terminating at 14. 15 is a preempting strip having a base 16 and a folded back portion 17. It will be noted that the finger grip portion 14 of the backing sheet 13 may extend beyond the margin of the adhesive article 11, itself, thus furnishing additional protection and facilitating removal of the backing 13.

The preempting strip employed in this invention is not to be confused with film strips heretofore applied without finger grip means for their removal. Such strips permanently mask the adhesive coating and render the article useless for certain purposes where uninterrupted adhesion over the entire surface is important.

I claim:

1. In a backing protected article having a permanently tacky adhesive coating thereon, the improvement in the

4

backing thereof consisting of a preempting strip formed of relatively thin integrated material extending across a portion of the surface of the adhesive coating on said article and having a base portion in separable adherent contact with said coating and a finger grip portion secured to said base portion, and a backing sheet of protective backing material in separable adherent contact with other portions of the surface of said adhesive coating and having a finger grip portion overlying said preempting strip.

2. In a backing protected article in accordance with claim 1 wherein the finger grip portion of said preempting strip is a portion of said strip folded on the strip itself.

3. In a backing protected article in accordance with claim 1 wherein the margins of the backing sheet are coincident with the margins of the article.

4. In a backing protected article in accordance with claim 1 wherein the backing sheet is divided along a meeting line which traverses said preempting strip.

5. In a backing protected adhesive article of the permanently tacky adhesive type, the improvement consisting of a sheet material article having a permanently tacky adhesive coating thereon; a preempting strip member formed of relatively thin integrated plastic film material extending across a medial minor portion of the surface of the adhesive coating on said article, said preempting strip member having a base portion in separable adherent contact with said coating and a folded back finger grip portion; and a set of relatively thicker backing members of protective sheet material in separable adherent contact with other portions of the surface of said adhesive coating on opposite sides of said preempting strip and meeting above the same to form finger grip portions overlying the folded back portion of said preempting strip, said finger grip portions of said backing and preempting strip members being of sufficient width to permit the same to be grasped in the fingers to permit removal of said members.

6. In a backing-protected adhesive article of the permanently tacky adhesive type, the improvement consisting of a sheet material article having a permanently tacky adhesive coating thereon; a preempting strip member formed of relatively thin plastic film material extending across a minor portion of the surface of the adhesive coating on said article, said preempting strip member having a base portion in separable adherent contact with said coating and a folded back finger grip portion; and a backing member of relatively thicker protective sheet material in separable adherent contact with other portions of the surface of said adhesive coating and having a finger grip portion overlying the folded back portion of said preempting strip; said finger grip portions of said backing and preempting strip members being of sufficient width to permit the same to be grasped in the fingers to permit removal of said members.

7. In a backing protected adhesive article of the permanently tacky adhesive type, the improvement consisting of a sheet material article having a permanently tacky adhesive coating thereon; a preempting strip member formed of relatively thin plastic film material extending along a margin of the article, said preempting strip member having a base portion in separable adherent contact with a marginal portion of said coating and a folded back finger grip portion; and a backing member of relatively thicker protective sheet material in separable adherent contact with other portions of the surface of said adhesive coating and having a finger grip portion overlying the preempting strip; said finger grip portion of said backing on preempting strip members being of sufficient width to permit the same to be grasped in the fingers to permit separation from the adhesive coating.

References Cited in the file of this patent

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