March 18, 1947. H. A. HULSLANDER, SR 2,417,497

ADHESIVE COATED PRODUCT

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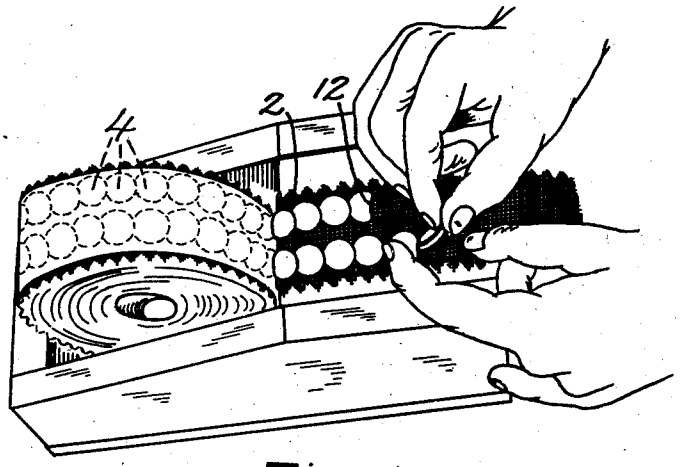


Fig. 1.

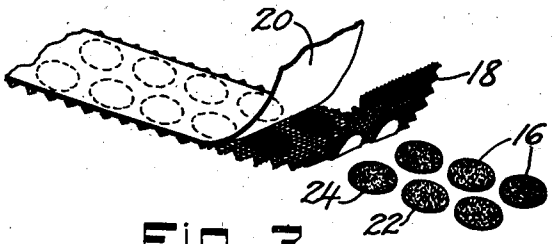


Fig. 3

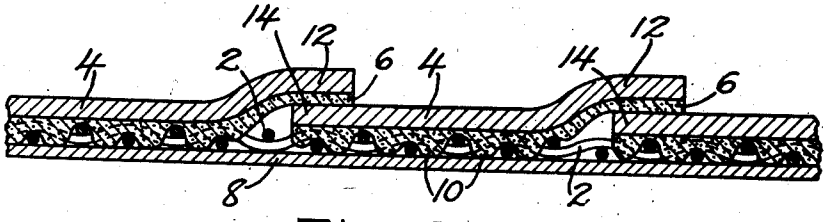


Fig. 2.

INVENTOR.
Harley A. Hulslander, Sr.
BY
Albert Spurry
ATTORNEY

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ADHESIVE COATED PRODUCT

Harley A. Hulslander, Sr., Washington's Crossing, N. J.

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2 Claims. (Cl. 206—58)

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My invention relates to products such as masking discs, labels, transfers and the like which embody a layer of adhesive material. In particular, my invention relates to constructions whereby articles of this character may be handled in large numbers and easily and quickly applied in use.

Masking discs are employed in the aircraft industry and elsewhere for covering bolt holes and other apertures in the surface of an article to be sprayed with paint or similarly treated. These discs are generally formed of paper or other sheet material and have one face thereof provided with a layer of adhesive material. The discs are applied in practice by simply pressing them against the article so that the edges of the disc overlie and adhere to the edges of the aperture and for this reason they generally are provided with a layer of permanently adhesive or "pressure sensitive" material. However, such adhesives have a tendency to dry out or oxidize, or otherwise lose their adhesive properties on exposure to the atmosphere. It therefore is desirable to protect the adhesive coated surface during storage of the product and prior to its use. Moreover, when using such discs in large numbers it is necessary to present the discs in a manner which permits them to be handled easily and quickly and to provide for ready separation of the discs from any protective means employed.

In accordance with the present invention these objections to constructions of the prior art are overcome by providing a strip or sheet of perforate supporting material such as wide mesh fabric, crinoline, gauze, skrim or netting by which the adhesive coated discs are carried so as to present them in an arrangement or assembly which will permit the discs to be readily grasped by the operator and removed from the supporting material for application to the work. Further, in order to prevent drying out or deterioration of the adhesive during storage and prior to use, the product is provided with a layer of imperforate sheet material which is applied over the open mesh fabric and releasably bonded to the adhesive through the openings in the supporting sheet. In this way it is possible to cover and seal the face of the adhesive so as to protect it against deterioration, although the impervious sheet is actually in contact with only a limited area of the adhesive.

One of the objects of the present invention is to provide a package and method whereby pieces or elements having a permanently adhesive surface may be conveniently handled and stored without deterioration of the adhesive.

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Another object of my invention is to provide a construction whereby a large number of masking discs or similar elements may be conveniently assembled and dispensed.

A further object of my invention is to provide a method and means for dispensing masking discs and similar elements in a convenient manner so that they may be readily and quickly removed and applied in use.

These and other objects and features of my invention will appear from the following description thereof in which reference is made to the figures of the accompanying drawing.

In the drawing:

Fig. 1 is a perspective of a typical form of product embodying my invention.

Fig. 2 is a longitudinal sectional view through a portion of the construction illustrated in Fig. 1 and

Fig. 3 is a perspective of an alternative form of product embodying my invention with parts of the assembly shown in separated relation.

In that form of my invention chosen for purposes of illustration and shown in Figs. 1 and 2 I provide a strip of perforate supporting material 2 in the form of open mesh fabric such as crinoline, gauze, skrim, netting or the like. To this material are applied masking discs each of which embodies a layer of backing material 4 such as paper or the like and a layer of adhesive material 6 which is in contact with the open mesh fabric. The adhesive may be of any preferred type but preferably is a permanently adhesive material such as those known in the trade as "pressure sensitive" adhesives, some of which are formed of or contain rubber, resins, or other plastic materials.

The adhesive preferably is of such thickness that it will project at least part way through the openings in the perforate supporting sheet and into contact with an impervious sealing sheet 8 as shown at 10 in Fig. 2. The layer of imperforate sealing material 8 may be formed of paper, Cellophane, holland cloth, or the like, and is applied to the face of the open mesh fabric opposite to that to which the masking discs are applied but engages the adhesive through the openings in the fabric 2. In this way the sheet 8 serves to seal and protect the surface of the adhesive, although it does not actually contact the adhesive throughout the entire area of the disc.

With this construction the masking discs may be made and assembled with the layer of protecting impervious and the layer of open mesh fabric and the resulting strip may be formed into

a roll, as illustrated in Fig. 1 for convenience in shipping and handling large numbers of discs at a time. When the discs are to be used the impervious sealing sheet 8 is stripped from the open mesh fabric or from a suitable length thereof to render a number of the sealing discs available for use and at the same time present the adhesive in a fresh, effective condition. Moreover, the fact that the protective layer 8 does not actually engage the adhesive throughout the entire surface thereof renders it easy to separate the sealing strip while avoiding removal of any substantial amount of adhesive from the masking discs.

The sealing discs may be arranged on the perforate supporting strip in any desired way to facilitate removal and use thereof. As shown in Figs. 1 and 2, the discs are arranged in rows on a strip of crinoline and the front edge 12 of each disc in a row overlaps the rear edge 14 of the preceding disc. The amount of this overlapping is limited and preferably is just sufficient to cause the operation of removing one disc from the strip to turn up or slightly raise the front edge 12 of the following disc. As shown in Fig. 1, no more than about one-fourth of the circumference of each disc should be located beneath an adjacent disc. The removal of each masking disc thereby may be effected easily, but at the same time serves to prepare the next disc for removal and presents it in a form to be readily grasped for removal from the strip and application to the work. Moreover, it is found in actual practice that when an operator grasps such an upturned edge of the disc, with the thumb and fingers, it will be held in position for direct application to the work and need not be manipulated further to arrange it for use. In this way it is possible to apply many times more masking discs in a given length of time than has been possible when using constructions of the prior art. Furthermore, there is no danger of the adhesive drying out or oxidizing during storage or shipment of the product so that quality of the adhesive remains unimpaired and the discs remain securely in place on the work.

In that form of my invention illustrated in Fig. 3 of the drawing, the masking discs 16 are arranged in spaced relation with respect to a layer of open mesh fabric 18, whereas the protective impervious strip 20 is applied in position to seal the exposed face of the adhesive which is shown at 22 on the masking discs 16.

In this construction, as in that shown in Figs. 1 and 2, the adhesive carried by the paper or other backing layer 24 of the masking disc penetrates through the openings in the open mesh fabric 18 so as to contact and be sealed by the protective layer of impervious material 20.

In any of the forms of my invention the masking discs or elements can be of whatever size or shape may be desired. Furthermore, the invention is not limited to its use with masking discs

but may be employed with any preferred type of adhesive coated article such as labels, transfers, stickers, stamps, tape and bandages or medical supplies or other products which embody a layer of adhesive material. Furthermore, the adhesive used need not necessarily be of a permanently adhesive type and in fact the surface to be protected may be of any character which is subject to deterioration on exposure to the atmosphere. In view thereof it should be understood that the forms of my invention illustrated in the drawing and herein described are intended to be illustrative only and are not intended to limit the scope of my invention.

I claim as my invention:

1. An article of manufacture comprising a strip of open mesh fabric having a plurality of masking discs arranged in a row on one face of the fabric strip, said discs each being formed of sheet material having a coating of permanently adhesive material throughout that face thereof adjacent said fabric, and projecting at least part way through the openings therein, the discs in said row each having approximately one-fourth only of the edge thereof overlapping the edge of the preceding disc in a row so that removal of the preceding disc from the fabric will serve to lift and free the edge of an adjacent disc from the fabric whereby it may be grasped for removal, and a layer of impervious sheet material located on the opposite face of said fabric and contacting said adhesive through the openings in said fabric.

2. An article of manufacture comprising a strip of open mesh fabric in the form of a roll having a plurality of masking discs arranged in a row on that face of the fabric strip which faces inwardly in the roll, said discs each being formed of sheet material having a coating of permanently adhesive material throughout that face thereof adjacent said fabric, and projecting at least part way through the openings therein, the discs in said row each having approximately one-fourth only of the edge thereof overlapping the edge of the preceding disc in a row so that removal of the preceding disc from the fabric will serve to lift and free the edge of an adjacent disc from the fabric whereby it may be grasped for removal, and a layer of impervious sheet material located on the opposite face of said fabric and contacting said adhesive through the openings in said fabric.

HARLEY A. HULSLANDER, SENIOR.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
1,901,094	Gabosch	Mar. 14, 1933
2,278,673	Savada et al.	Apr. 7, 1942
2,170,147	Lane	Aug. 22, 1939
2,027,555	Scholl	Jan.14, 1936