March 20, 1945. D. A. WALLACE 2,371,859

FLEXIBLE RUBBER MASK

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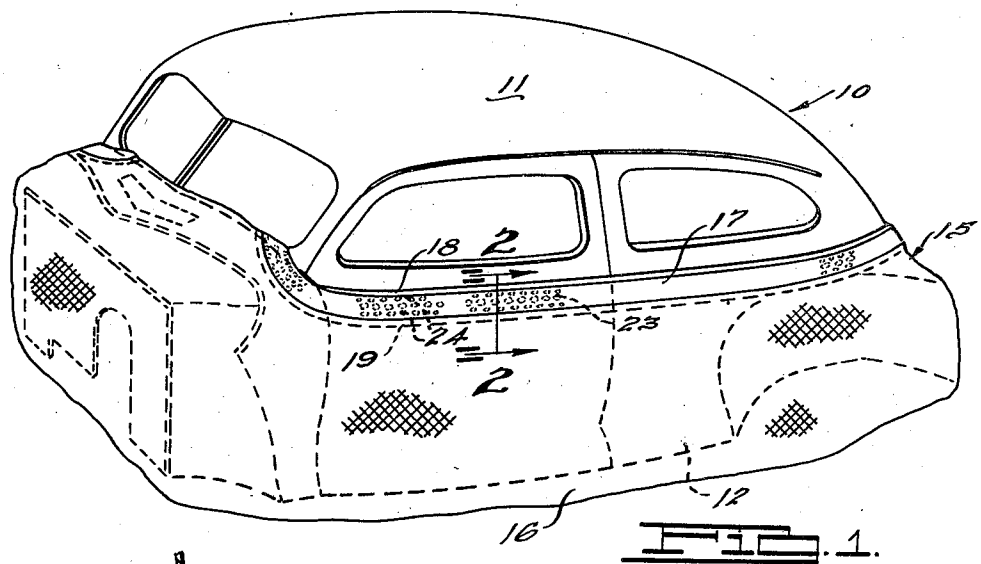


Fig. 1.

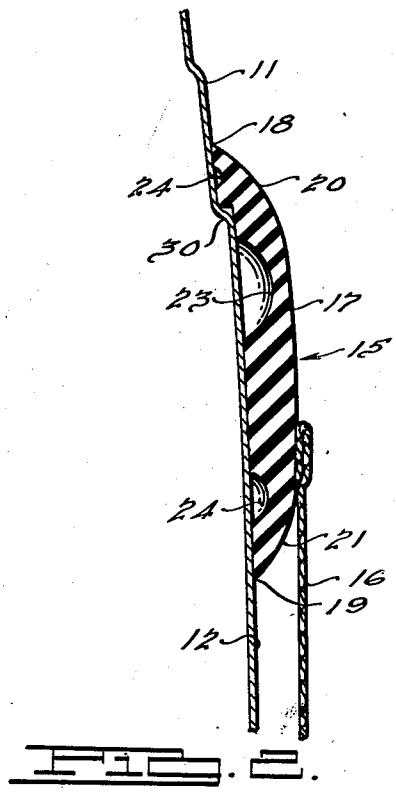


Fig. 2.

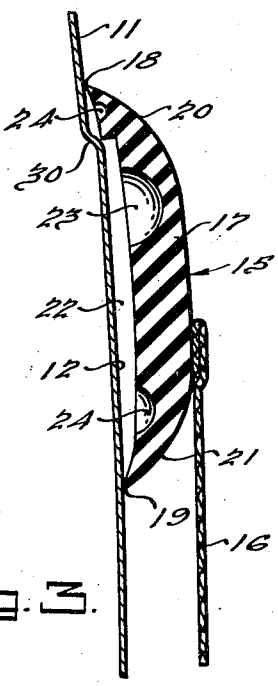


Fig. 3.

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FLEXIBLE RUBBER MASK

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9 Claims. (Cl. 91—65)

My present invention relates to masking devices for use in applying paint or other fluids to portions of surfaces such as the outer surface of a vehicle tonneau or the like. The purpose of the present invention is to permit fluid materials to be applied to certain portions of a surface of which other portions are to be left free of the fluid material, the masking device affording a sharp line of demarcation between the covered and uncovered portions of the surface. The invention is of particular utility in painting two-tone automobile bodies, but other uses therefor will be readily apparent to those skilled in the arts to which the invention is of utility.

An object of the present invention is to provide a masking device which may be used over and over again without losing its effectiveness. The present invention thus achieves considerable savings over prior practices involving the use of adhesive tapes or the like which become torn, or lose their adhesive qualities, during successive handlings.

A further object of the present invention is to provide a masking device including an edging member having means for self-adherence to the surface to which it is applied.

A further object of the present invention is to provide an edging member which includes means for self-adherence to a surface to be applied, said means comprising in part a plurality of suction pockets, some of which are relatively large and function as general placement and weight-supporting pockets and others of which, positioned along the edges of the edging member, are relatively small and serve as definite edge locating pockets.

The foregoing and other objects and advantages of the present invention will be more readily understood from reference to the following specification and drawing wherein like numerals refer to like parts throughout.

In the drawing,

Fig. 1 discloses an automobile tonneau as it is received in the painting department for application of two distinct colors having a sharp line of demarcation between the areas of different color;

Fig. 2 is a partial sectional view on an enlarged scale taken substantially along line 2—2 of Fig. 1; and

Fig. 3 is a view similar to Fig. 2 showing the edging member of the present invention in approximate position but before final application thereof to the surface to be painted.

Fig. 1 discloses an automobile tonneau 10 having an upper portion 11 to which paint of one color is to be applied and a lower portion 12 to which paint of another color is to be applied, the tonneau having the masking device 15 of the present invention applied thereto.

The masking device comprises a flexible fabric-like cover 16 adapted to be draped over the portion from which the paint or other fluid material is to be excluded and an edging member 17 to which the cover 16 is attached. The edging member comprises a relatively wide band of rubber or other rubber-like, resilient material, the band having sufficient body to facilitate handling of the masking device but being sufficiently flexible that any portion thereof may be displaced relative to other portions thereof so as to permit application of the band to surfaces having corners and irregular contours. Preferably the band is provided with sharp edges afforded by sloping the outer surfaces 20 and 21, respectively, away from the edges 18 and 19 toward the central portion of the band so that clear view of the edges may be afforded. Preferably the inner surface of the band is bowed outwardly between the edges 18 and 19 to provide a continuous space 22 between the surface 12 and the inner surface of the band so that when pressure is applied to the outer surface of the band and the air is driven from beneath the band a partial vacuum will be established tending to maintain the band in position. Since this vacuum may be imperfectly established and readily disrupted the inner surface of the band is preferably provided with at least one row of relatively large pockets 23 which may be deformed by pressing inwardly on the outer surface of the band to exclude air therefrom, the pockets thus serving to maintain the band in general position according to the suction cup principle. It is to be appreciated that the material of the band is air-impervious or that the inner surface of the band at least has been so treated as to render the admission of air into the pockets 23 through the material of the band relatively impossible. In use the band may be coated with a viscous material such as glycerine or the like so as to aid the same in maintaining vacuum contact with the surface to be painted, but generally such additional coating material is unnecessary.

Preferably, the material of the band adjacent the edges 18 and 19 is of sufficient hardness to maintain relatively straight conformation, the same preferably being accomplished by curing or vulcanizing the material of the band adjacent the edges to a greater extent than centrally thereof. In order to maintain a clear line of demarcation by preventing the leakage of paint or other

fluid material under the edges of the band a row of small suction pockets **24** may be provided adjacent each edge. The large suction pockets **23** thus function as general positioning and weight-supporting pockets for preliminary application of the band, and greater care may be used in rendering the small suction pockets effective accurately to position the edge **18** or **19** as the case may be.

As shown in Figs. 2 and 3 the edging member is positioned so that its edge **18** is slightly above an offset **30** in the surface of the tonneau. Accordingly, the edge **18** and the closely adjacent inner surface of the edging member within which the pockets **24** are positioned may be offset inwardly from the general plane of the inner surface of the edging member. Such an inwardly offset portion may be found awkward if the edging member is to be applied to an absolutely flat surface and it may be desired to place the edge **19** at the line of demarcation between the painted and unpainted surfaces. Accordingly, the flexible cover **16** is attached along a single line running substantially parallel to the edges **18** and **19** and the relative position of the cover and edging member may be reversed to place the edge **19** uppermost, simply by rotating the edging member 180° about the upper edge of the cover **16**.

It is to be appreciated that the edging member **17** may be used alone when desired, the addition of a flexible cover thereto being advisable for paint spraying applications or the like, but not necessary for some types of work.

It is to be realized that the present invention may be used over and over again as it is only necessary to break the suction between the inner surface thereof and the outer surface of the article being painted in order to remove it from the article. No adhesive substance is necessary and it is unlikely that the edging member will tear or otherwise fail except after long use or under deliberate mistreatment.

Having illustrated and described the preferred embodiment of my invention, it should be apparent to those skilled in the art that the same permits of various modifications in arrangement and detail. All such modifications as come within the scope of the following claims are to be considered a part of my invention.

I claim:

1. An edging member for preventing application of paint or other fluid materials to portions of a work surface during application of such material to the latter comprising a band of flexible material having sufficient body to facilitate handling but being of sufficient flexibility that any portion thereof may be displaced from its normal position relative to adjacent portions so as to permit its application to surfaces of irregular contour and including a main body part provided with longitudinal edge portions having surfaces engageable with said work surface and comprising a vacuum chamber between said longitudinal edge portions having an open side portion adapted to be disposed adjacent said work surface and all parts of its remaining side portions being imperforate for affording self-adherence to such surfaces.

2. An edging member for preventing application of paint or other fluid materials to portions of a work surface during application of such material to the latter comprising a band of soft, rubber-like material having sufficient body to facilitate handling but being of sufficient flexibility that any portion thereof may be displaced from its normal position relative to adjacent portions so as to permit its application to surfaces of irregular contour and including a main body part provided with longitudinal edge portions having surfaces engageable with said work surface and comprising a vacuum chamber between said longitudinal edge portions having an open side portion adapted to be disposed adjacent said work surface and all parts of its remaining side portions being imperforate for affording self-adherence to such surfaces.

3. An edging member for preventing application of paint or other fluid materials to portions of a work surface during application of such material to the latter comprising a band of soft, rubber-like material having sufficient body to facilitate handling but being of sufficient flexibility that any portion thereof may be displaced from its normal position relative to adjacent portions so as to permit its application to surfaces of irregular contour and including a main body part provided with longitudinal edge portions having surfaces engageable with said work surface and comprising a vacuum chamber between said longitudinal edge portions having an open side portion adapted to be disposed adjacent said work surface and all parts of its remaining side portions being imperforate for affording self-adherence to such surfaces, an edge of said band being relatively sharp and the outer surface thereof sloping gradually from said edge toward the center so as to afford clear vision of said sharp edge.

4. An edging member for preventing application of paint or other fluid materials to portions of a work surface during application of such material to the latter comprising a band of soft, rubber-like resilient material having sufficient body to facilitate handling but being of sufficient flexibility that any portion thereof may be displaced from its normal position relative to adjacent portions so as to permit its application to surfaces of irregular contour and including a main body part having longitudinal edge portions provided with sealing surfaces engageable with said work surface and a vacuum chamber between said edge portions having an open side adapted to be disposed adjacent said work surface and all parts of its remaining side portions being imperforate for affording self-adherence to such surfaces, an extremity of one edge portion of said band being relatively sharp and the outer surface thereof sloping gradually from said edge toward the center of said band so as to afford clear vision of said sharp edge, and the material of the band adjacent said sharp edge being considerably harder than the material of the remainder of the band to enable said member to maintain a sharp line of demarcation between painted and unpainted portions of the surface to which it is applied.

5. An edging member for preventing application of paint or other fluid materials to portions of a work surface during application of such material to the latter comprising a band of flexible material having sufficient body to facilitate handling but being of sufficient flexibility that any portion thereof may be displaced from its normal position relative to adjacent portions so as to permit its application to surfaces of irregular contour, said material being substantially air-impervious, and the band comprising spaced longitudinal edge portions having sealing surfaces engageable with said work surface and including an intermediate part having a plurality of pockets

on its inner surface between said longitudinal edge portions each having an open side adapted to be disposed adjacent said work surface and all parts of its remaining side portions being imperforate, said pockets being deformable by inward pressure so as to establish suction therein to maintain the band in its position of use.

6. An edging member for preventing application of paint or other fluid materials to portions of a surface comprising a band of flexible material having sufficient body to facilitate handling but being of sufficient flexibility that any portion thereof may be displaced from its normal position relative to adjacent portions so as to permit its application to surfaces of irregular contour, said material being substantially air-impervious, and the band having a plurality of pockets on its inner surface which may be deformed by inward pressure so as to establish suction therein to maintain the band in its position of use, said pockets including relatively large pockets for general positioning purposes and for supporting the weight of the band and relatively small pockets adjacent an edge thereof for accurately positioning said edge and preventing flow of paint or other fluid material beyond the desired line of demarcation.

7. An edging member for preventing application of paint or other fluid materials to portions of a surface comprising a band of flexible material having sufficient body to facilitate handling but being of sufficient flexibility that any portion thereof may be displaced from its normal position relative to adjacent portions so as to permit its application to surfaces of irregular contour, the longitudinal marginal portions of said band being provided with substantially flat sealing surfaces of substantial width engageable with said first mentioned surface and the inner surface of said band being substantially air-impervious and being bowed outwardly between adjacent longitudinal extremities of said flat surfaces whereby central pressure along the band tends to establish a vacuum between the band and the surface to which it is applied for maintaining the band in position.

8. An edging member for preventing application of paint or other fluid materials to portions of a surface comprising a band of flexible material having sufficient body to facilitate handling but being of sufficient flexibility that any portion thereof may be displaced from its normal position relative to adjacent portions so as to permit its application to surfaces of irregular contour, the longitudinal edge portions of said band being provided with substantially flat sealing surfaces and the inner surface of said band being substantially air-impervious and being bowed outwardly between adjacent longitudinal extremities of said flat surfaces whereby central pressure along the band tends to establish a vacuum between the band and the surface to which it is applied for maintaining the band in position, said inner surface having therein a plurality of suction-cup pockets each provided with only one open side.

9. An edging member for preventing application of paint or other fluid materials to portions of a surface comprising a band of flexible material having sufficient body to facilitate handling but being of sufficient flexibility that any portion thereof may be displaced from its normal position relative to adjacent portions so as to permit its application to surfaces of irregular contour, the inner surface of said band being substantially air-impervious and being bowed outwardly between its edges whereby central pressure along the band tends to establish a vacuum between the band and the surface to which it is applied for maintaining the band in position, said inner surface having a plurality of suction-cup pockets therein including relatively large, centrally disposed pockets for general positioning and weight supporting purposes and relatively small pockets along an edge of the band for accurately positioning said edge.

DAVID A. WALLACE.