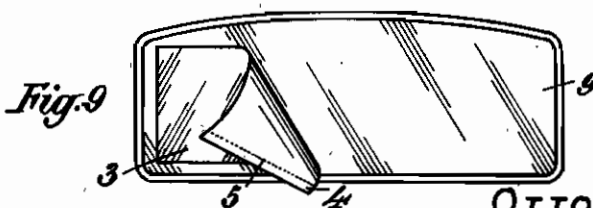
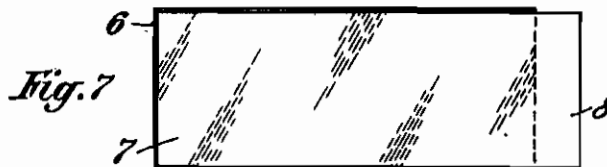
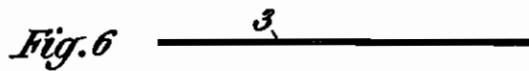
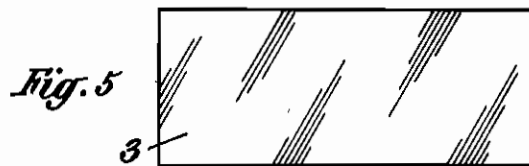
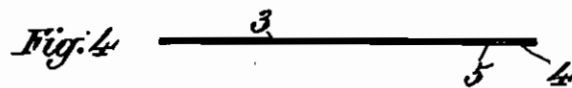
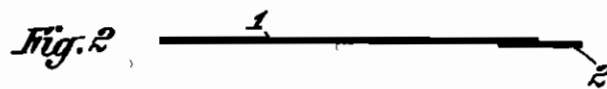


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## TRANSPARENT CLEAR SIGHT FOIL SHEET MATERIALS

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The present invention relates to new and useful improvements in transparent foil sheet material and it pertains more particularly to the utilization of transparent foils, such especially as those made from cellular glass (Zellglas) (preferably a 5 cellulose vitreous substance mixed with gelatine), for the purpose of maintaining a clear sight of window panels. This invention may be profitably utilized in particular with the windows of motor vehicles.

Foils of the type just referred to are well known under the designation "clear sight sheets". It is also known in the art to provide the inner surface of windows, especially those of motor vehicles, with such clear sight sheets, this being done for the purpose of preventing moisture from condens- 10 ing on such surfaces whereby they would be dimmed or clouded.

However the use of clear sight sheets has been heretofore but a quite limited one, this being mainly due to the fact that the hereunto known methods of applying such sheets were not easily practicable. On the contrary, they required a number of skilful operations on the part of the user as well as the preparation and employment 20 of adhesives, hot water, etc. what has proved to be very cumbersome if, for instance, a clear sight sheet had to be applied during a drive. Moreover, since in the known methods of applying clear sight sheets and for the existing types of such sheets it was necessary to provide them with an adhesive coating directly before their applying onto a window panel, there has been always present the danger of such clear sight sheets being soiled, so that their transparency would be impaired.

These and other drawbacks of the known clear sight sheets and of the methods serving to apply them on window panels have been felt to be so important that they prevented any substantial development of the utilization of such clear sight 30 sheets in practice.

The primary object of this invention is to provide a clear sight sheet of the type above described which may be conveniently stored and handled under any circumstances and may be readily applied on the desired surface without involving the necessity of having recourse to any separate accessory materials such as adhesives or the like or performing any preparatory operations like that of providing the clear sight sheet with a coating of adhesive shortly before its being 40 applied onto a window panel.

A further object of the invention is to provide a clear sight sheet material carrying on one of its surfaces a coating of adhesive of unlimited dura-

bility, such for instance as are the so called dry adhesives. These latter may be composed of a cellulose ester with an appropriate softener or they may represent a mixture of gelatine and glycerine capable of firmly sticking on the glass if slightly pressed thereunto.

Still a further object of this invention is to provide a clear sight foil material carrying on one of its surfaces a coating of adhesive capable of 45 firmly sticking on a previously moistened glass panel.

Still a further object of the invention is to provide an adhesive coated clear sight foil material carrying on its plain (uncoated) surface an easily removable protective paper sheet to be removed after the foil has been in adhering condition onto the glass. Thereby a soiling of the foil when 50 said latter is being handled in any way or applied onto the desired surface is absolutely avoided.

A further object of the invention is to provide an adhesive coated clear sight foil material which when unrolled from its storing and transporting 55 rolled condition will not be soiled or affected as to its transparency and adhesiveness by contact with dirty fingers.

With the above and other objects in view, reference is had to the accompanying drawings illustrating several examples of embodiment of this invention in diagrammatical representation.

In the drawings:

Fig. 1 is an elevation of an embodiment of this invention;

Fig. 2 is a longitudinal section of the embodiment according to Fig. 1;

Fig. 3 is an elevation of another embodiment of this invention;

Fig. 4 is a corresponding longitudinal section;

Fig. 5 is an elevation representing a simplified modification of the embodiments of Figs. 1, 2 and 3, 4.

Fig. 6 is a corresponding longitudinal section.

Fig. 7 is an elevation of a further embodiment of this invention;

Fig. 8 is a corresponding longitudinal section;

Fig. 9 is a perspective view of a motor vehicle window panel having a clear sight foil according to this invention partially applied thereto. In this latter instance the clear sight foil is of the type according to its embodiment represented on 50 Figs. 3 and 4.

Referring more particularly to Figs. 1 and 2, a clear sight foil 1 provided on one of its surfaces with a coating of a so called dry adhesive (not represented) has attached thereto on its oppo-

site surface at the narrow end of said foil a protective strip 2 made from a strong paper web. The purpose of said paper web is to afford a hold of the foil 1 when said latter is being unrolled. After the foil has been applied to the panel, said protective strip 2 may be removed.

In the embodiment of Figs. 3 and 4 the transparent foil comprises two parts 3 and 4 divided by a row of perforations 5. The part 3 represents the clear sight foil proper which may be adherently applied onto a panel, whereas the part 4 has the purpose of providing a hold of the foil when said latter is being unrolled. The part 4 may be separated from the main part 3 when said latter has been applied onto the panel which has to be protected for clear sight. Both the protective paper strip 2 of the embodiment according to Figs. 1 and 2 and the detachable part 4 shown on Figs. 3 and 4 represent means enabling an easy handling of the clear sight foil out of contact with the fingers of the user. Such provision may be necessary if there is a danger of the foil going to be impaired in its transparency and/or adhesiveness by a direct contact with the fingers of the user. However if the clear sight foil material is handled with sufficient precaution and if the fingers of the user are substantially clean, such protective means may be dispensed with. In this latter instance a simplified modification of the embodiments of both Figs. 1, 2 and Figs. 3, 4 may be used.

Such simplified modification is shown on Figs. 5 and 6. In this modification the transparent clear sight foil material 3 has but a dry adhesive coating of any of the compositions disclosed in this specification provided on one of its surfaces and no means whatever to hold said foil or to protect it. This extremely simple structure may be easily applied onto a window panel if slightly pressed thereto. Provided that the fingers of the user are substantially clean, such foil will not be impaired in its transparency and adhesiveness by its direct contact therewith.

It is obvious that the modification of Figs. 5 and 6 may be readily transformed into that of Figs. 1 and 2 or Figs. 3 and 4, if provided with a protective strip as 2 or respectively with a row of perforations such as 5.

In the embodiment of Figs. 7 and 8, the foil 6 has to be applied onto a panel which it is desired to

protect against the condensation of moisture. In a similar way as with the other embodiments of this invention said foil 6 is formed of a transparent material (such as cellular glass) (Zellglas) and it is provided on one of its surfaces with a coating of a so called dry adhesive. On the opposite surface of the foil 6 a protective sheet 7 is applied which extends at 8 beyond a narrow side of said foil 6. Also this strip portion 8 extending beyond the foil enables said foil 6 to be held when it is unrolled, and said protective sheet 7 is removed from said foil 6 together with said strip portion 8 when the foil has been applied onto the desired glass panel.

A similar protective sheet may be also used with other examples of embodiment and in particular with those according to Figs. 1 to 6.

The manner of applying a clear sight foil according to this invention is represented by way of example on Fig. 9. A foil 3 made from a transparent material such as cellular glass is represented here as being just applied by the method of this invention onto a window panel 8 of a motor vehicle. The foil 3 has a structure as per Figs. 3 and 4 of the drawings heretofore explained in detail.

From the foregoing it will be seen that the present invention provides a self adhering clear sight sheet foil material in which the transparent foil has a dry adhesive coating provided thereon consisting of a cellulose ester with an appropriate softener or a mixture of gelatine and glycerine. By these means the adhesive coated foil may be conveniently stored and handled as well as readily applied onto any desired glass panel by merely pressing it onto said panel. Thereby there is no more necessity of having a separate adhesive prepared and applied onto the foil immediately before said latter has to be secured on a window panel. Moreover this invention provides effective means to protect the foil from being soiled by dirty fingers and from being affected in its adhesiveness when it is unrolled and applied onto the desired panel. At the same time the new and improved clear sight sheet foil material according to this invention is simple and cheap to manufacture, easy to store and convenient in handling.

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