Our invention relates to anti-frost shields for windows. An object of the invention is to provide a device of this character which may be readily applied to windows to prevent the formation of frost thereon or upon a portion thereof during cold weather. Our device is considered particularly applicable to windshields and other windows of motor vehicles, but may be applied to all windows where frost is liable to form and obscure the vision. Devices of this character with which we are familiar have hitherto carried opaque edges, which not only give an unsightly appearance but obscure a portion of the vision through the window. We overcome these objectionable features by employing transparent tape for adhesively securing the edges of the shield to the window in such manner that a dead-air space is produced between the window and the shield. We preferably employ transparent tape which has been subjected to waterproofing treatment in order to insure that the tape shall remain permanently transparent.

The full objects and advantages of our invention will appear in connection with the detailed description thereof, and the novel features of our invention will be particularly pointed out in the claims.

In the accompanying drawing which illustrates some of the forms in which our invention may be embodied,—

Fig. 1 is a view in perspective of an automobile windshield and side window with anti-frost shields made in accordance with our invention secured to the inner sides thereof. Fig. 2 is a fragmentary view in perspective of a transparent plate. In order to secure the shield to a window W, such as the windshield or other window of an automobile, we make use of transparent adhesive tape which preferably has been rendered waterproof. A strip of such transparent tape is designated in Fig. 2 by the numeral 20. Before applying the shield to a window, the marginal face 18 of the shield is preferably covered with a cushion member 22 of the transparent tape as shown in Fig. 6. In order to apply the shield the cushion member 22 attached as above stated is placed against the window and then strips 24 of the transparent tape are secured to the beveled face 16 and to the window so as to extend around the periphery of the shield, as shown in Fig. 7, and thereby form an air-tight joint to produce a dead-air space between the window and the body of the shield.

In the embodiment shown in Figs. 8, 9, 10 and 11, a flat glass plate 26 is provided with an offset peripheral margin produced by cementing narrow glass strips 28 peripherally around one of the faces of the plate. Before applying the shield to a window, a cushion member 30 of the transparent tape is placed over the exposed face of the glass strips 28 and around the peripheral edges of said strips and the edges of the plate, as shown in Fig. 10. The cushion member 30 thus serves not only as a cushion but covers the rough edges of the strips 28 and plate 26. In order to apply the shield the strips 28 covered with the cushion member 30 are placed against the window and then strips 32 of the transparent tape are secured to the margin of the plate 26 and to the window, so as to extend around the periphery of the shield, as shown in Fig. 11, and thereby form an air-tight joint to produce a dead-air space between the window and the body of the shield.

The operation and advantages of our invention will now be obvious. In cold weather the shield can be readily attached to windows such as windshields and other windows of motor vehicles which are liable to become coated with frost which obscures the vision therethrough. On account of the fact that the shield is secured to the window in spaced air-tight relation thereto, a dead-air space is produced which prevents the formation of frost over the area protected by the shield. In the case of motor vehicles driving is made much easier and safer, and in the case of display windows, persons on the outside can readily observe the objects on display on the inside. We consider glass to be a particularly desirable material for the shields, since it is hard and not easily scratched or dulled, and is not liable to
warp or buckle out of shape. The use of transparent tape provides a complete transparent edge. The tape remains permanently transparent, especially when it has been subjected to waterproofing treatment. The transparent edge is not only neater and more slightly than an opaque edge, but does not obscure any portion of the vision through the window. The provision of the transparent cushion not only assists in making an air-tight joint, but avoids the objectionable feature of glass rubbing on glass. Owing to the rigid nature of the glass shield it is not necessary to provide any supporting members between the intermediate portions of the shield and the window even when the shields are made of large size.

We claim:

1. An anti-frost shield for windows, comprising a glass plate having an offset peripheral margin carried therewith adapted to rest upon a window to produce a dead-air space, and transparent adhesive tape secured to said beveled face and a window. BERNARD G. SHAPO, SAMUEL SHAPIRO.