

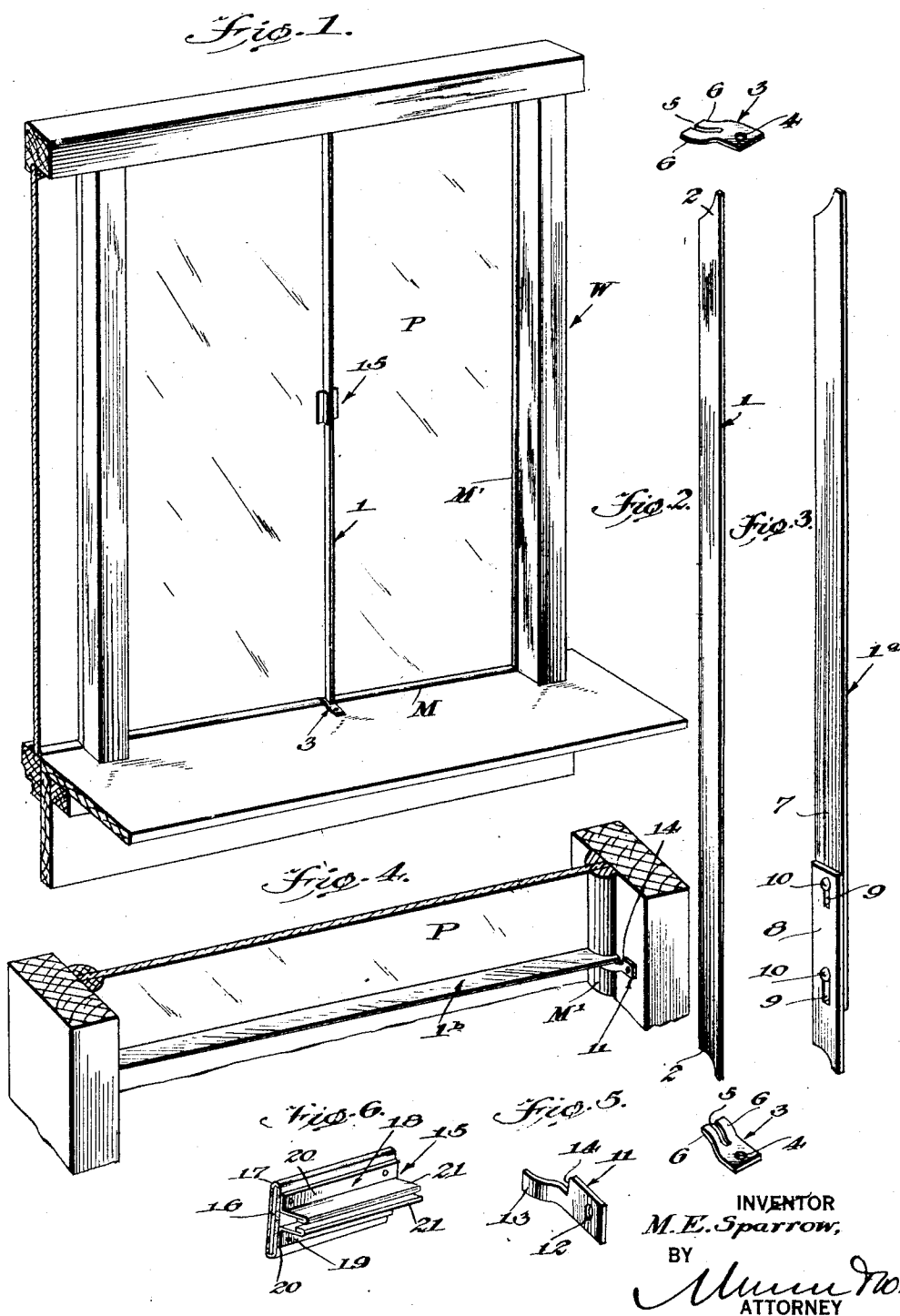
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GLASS PROTECTOR FOR WINDOWS AND DOORS

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GLASS PROTECTOR FOR WINDOWS AND DOORS

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This invention relates to protectors for plate and other glass windows and doors.

In certain sections of the country severe wind storms are frequent which blow or suck out the glass windows and doors and it is to prevent this that this invention is designed.

A primary object of the invention is to provide simple, quickly applicable means for protecting glass windows and doors against such damage.

Another object is to provide means of this character which may be readily put up for protection when a wind storm is approaching and when the weather is calm it may be removed and stored away in position ready for emergency.

Another object is to provide improved packing means for insertion between the protector and the pane to prevent possible damage to the pane and operating as a packing or wedge to insure a close fit between the protector and the pane.

In carrying out these objects, the invention is susceptible of a wide range of modification without departing from the spirit or sacrificing any of the advantages of the claimed invention; there being shown in the drawings for illustrative purposes a preferred and practical form, in which:

Figure 1 is a perspective view of a window showing one of these improved protectors in use and in which one of the pads is employed;

Fig. 2 is a perspective view of one of the protectors detached with the mounting therefor shown in juxtaposition;

Fig. 3 is a similar view showing a slightly different form of protector;

Fig. 4 is a perspective view of a section of a window showing one of the protectors arranged as a horizontal brace or support for the window pane;

Fig. 5 is a detail perspective view of one of the brackets used in supporting the horizontal brace;

Fig. 6 is a similar view of one of the reinforcing pads.

In the embodiment illustrated a window W is shown having the usual plate glass pane P, the surface of which is of sufficient size as

to be broken by severe wind storms when exposed. To protect these panes P applicant's device is provided and in this form of the invention is shown as a heavy metal strip 1 of a length sufficient to extend the full length of the pane P the ends thereof being curved or shaped as shown at 2 to conform to the molding M which secures the pane in place. This strip 1 is arranged edgewise against the pane P as is shown clearly in Fig. 1 and the ends thereof are secured in position by means of clips or socket brackets 3 one being mounted at the top of the window and the other at the bottom and which are exactly alike being composed of a spring metal plate apertured at 4 for attachment to the window sill or header and which has the other end thereof offset and bifurcated longitudinally to receive in the space 5 between the furcations 6 the end of the protecting brace or bar 1 to be mounted.

In the use of this protector the securing brackets or sockets 3 are permanently mounted on the window frame at the top and bottom of the pane as shown clearly in Fig. 1 and the bar or brace 1 is removably engaged with the sockets to adapt it to be quickly put into place when a wind storm is approaching and which when not desired for use it may be removed and hung by the window or stored in any suitable place. To mount the rods or braces in position for use one end thereof is inserted in the top socket member 3 with the concaved or bevelled corner towards the glass so that it will fit snugly against the window sash molding. The rod is then dropped down with the other end engaged with the bracket member 3 on the window sill and it will be securely held in this position and brace the window pane against force of the wind. It is of course understood that these protectors may be mounted on either side of the window or both if desired since often times the glass is jerked out by the suction of the wind as well as forced inward.

In the form shown in Fig. 3 the brace or protector 1^a is made in two sections 7 and 8 connected for longitudinal adjustment to vary the length of the brace to adapt it to

fit windows of different sizes. As shown the connection is made by means of slots 9 formed in one section through which project headed screws 10 which when tightened up will hold the sections in adjusted position. Otherwise the protector is the same as that shown in the other figures and described above.

In Fig. 4 a protector or brace 1^b is shown for horizontal use being especially designed for narrow long window panes and which is made similar to those above described, being of a length to span the space between the molding M' arranged at opposite sides of the window sash as is shown clearly in Fig. 4. This protector 1^b is mounted on brackets 11 secured to the side members of the window sash as is shown in Fig. 4 and which are constructed of heavy spring steel apertured at 12 for attachment to the window sash and having a laterally offset longitudinally extending spring finger 13 designed when the bracket is in place to project laterally from the window sash a sufficient distance to receive and support the ends of the protector 1^b. When in position this protector 1^b rests on the supporting fingers 13 and the shoulders 14 at the inner ends of the fingers form an abutment for the protector to prevent its inward movement and thereby adapt it to securely brace the window pane against being forced inwardly by the wind.

A reinforcing pad 15 is shown at Fig. 6 and designed to be mounted on anyone of the protectors in position between the window pane P and the opposed edge of the bar constituting the protector as is shown clearly in Fig. 1. This pad 15 is composed of a rectangular plate 16 around which is wrapped a piece of thick felt or rubber 17 which is secured to the plate 16 by means of spring metal clamps 18 and 19 which are bolted to the plate 16 on the rear face thereof and in spaced relation to each other and between which is designed to be fitted the protector in connection with which it is to be used. These spring clamps are made L-shaped in cross section with the flanges 20 thereof extended in opposite directions and bolted to the plate 16 and with their flanges 21 extended outwardly parallel with each other and which form clamps or grips for engaging the opposite sides of the protector and yieldably hold the pad in operative position thereon. As shown the flanges 21 have their edges turned inwardly against their faces to form reinforcements. The bolt holes in the pressure plate 16 will preferably be punched with a tapered punch from the outside so that the bolts will fit in flush with the metal.

While these pads 15 are preferably used between the protectors and the window pane they are not indispensable but prevent all looseness and rocking between the parts and any desired number of them may be employed on a protector, one being shown in Fig. 1 and

which are adjustable longitudinally on the protector to position it to any desired position.

It is obvious that by arranging the bar or metal strip with its edge towards the glass a strong bracing power is provided to resist the force of the wind.

From the above description it will be obvious that these protectors may be cheaply constructed and quickly applied and removed so that when a wind storm is seen to be approaching they may be set in place in the manner above described and will effectively brace the pane against the wind and avoid the breaking of the pane.

While these protectors are described for use in guarding plate glass obviously they may be used for any other kind of glass.

Without further description it is thought that the features and advantages of the invention will be readily apparent to those skilled in the art, and it will, of course, be understood that changes in the form, proportion and minor details of construction may be resorted to, without departing from the spirit of the invention or its scope as claimed.

I claim:

1. A window pane protector comprising a member of a length to span the pane from edge to edge and to be arranged in close proximity to said pane throughout its length, said member being free and independent of said pane, and means for securing said member in operative position.

2. A window pane protector comprising a member of a length to span the pane in connection with which it is to be used from one edge to the other, and to be arranged in close proximity to said pane throughout its length, said member being separable from and independent of said pane, and means for detachably mounting said member against the pane.

3. A window pane protector comprising a heavy flat metal strip adapted to be disposed edgewise against one face of the window pane and independently thereof and to extend from edge to edge thereof, and means for securing the ends of said strip to the window sash.

4. A window protector comprising a flat metal strip adapted to extend from edge to edge of the pane in connection with which it is to be used and separable from and independent of said pane, said strip having the inner corners thereof shaped to fit the attaching molding of the pane, and brackets for detachably securing said ends to a supporting structure.

5. A window protector comprising a flat metal strip adapted to extend from edge to edge of the pane in connection with which it is to be used, said strip having the inner corners thereof shaped to fit the attaching molding of the pane, and brackets having sockets

to detachably receive the ends of said strip and support it in operative position.

5 6. A window protector comprising a brace adapted to extend from edge to edge of a pane in connection with which it is to be used, said brace being composed of sections adjustably connected to adapt it to fit panes of different width, and means for securing said brace in operative position.

10 7. A window pane protector comprising a member of a length to extend from edge to edge of the pane in connection with which it is to be used, means for mounting said member in contact with one face of the pane, and
15 a pad to be mounted slidably on said protector between it and the pane.

8. A window pane protector comprising a heavy metal strip provided with means for securing the ends thereof to a supporting
20 structure, and a reinforcing and packing pad mounted for longitudinal adjustment on said strip.

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