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L. W. DUNCAN

WINDOW PROTECTOR

Filed May 22, 1922

Fig. 1.

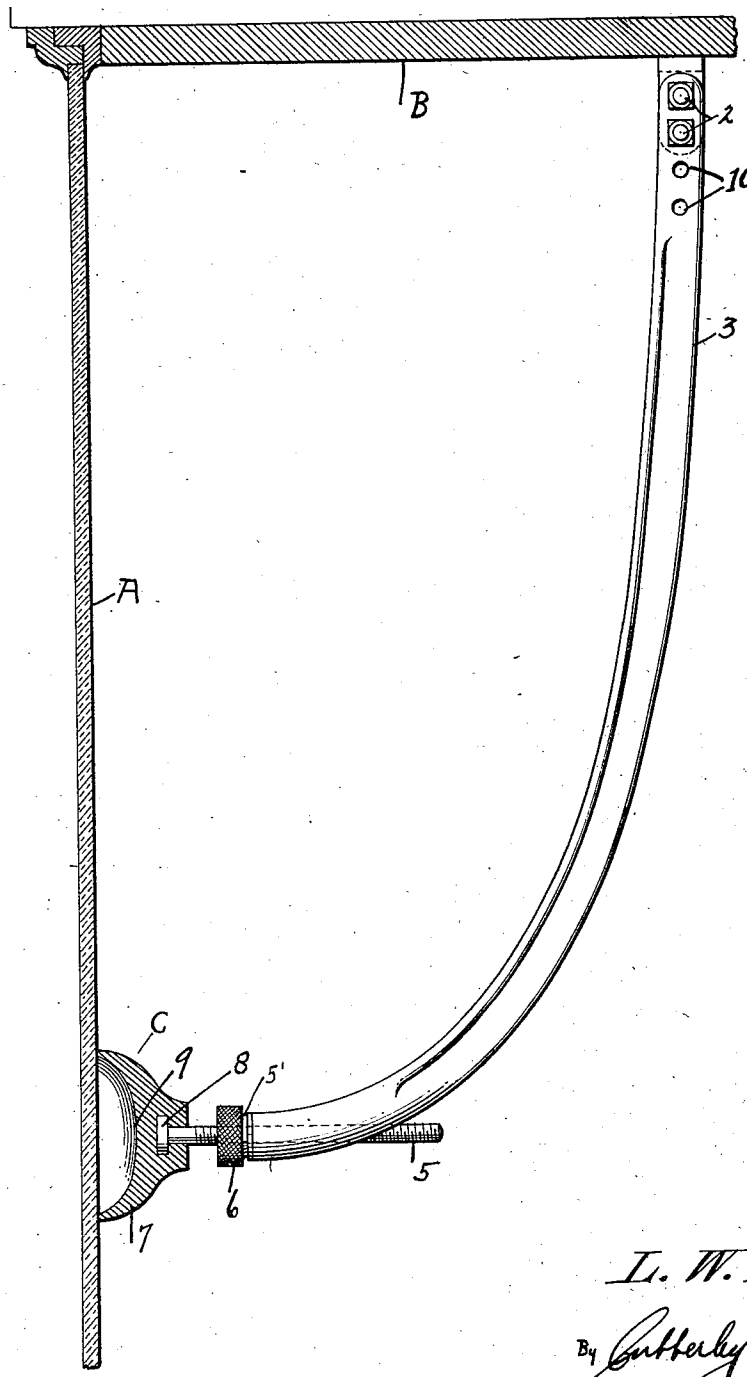
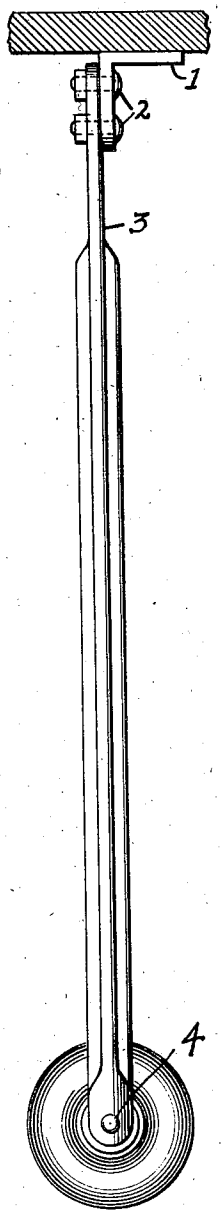


Fig. 2.



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UNITED STATES PATENT OFFICE.

LEE W. DUNCAN, OF FORT WAYNE, INDIANA.

WINDOW PROTECTOR.

Application filed May 22, 1922. Serial No. 562,664.

To all whom it may concern:

Be it known that I, LEE W. DUNCAN, a citizen of the United States, residing at Fort Wayne, in the county of Allen and State of Indiana, have invented certain new and useful Improvements in Window Protectors, of which the following is a specification.

My invention has reference, in general terms, to devices for reinforcing and preventing undue vibration of window glass and the like, and more particularly it is designed for minimizing or absorbing either sudden shocks or prolonged stress and strain through the exertion of sustained and combined cushioning and suction action upon the glass plate or pane.

High and blustering winds both exert pressure and create partial vacuums which cause variable outward and inward stresses upon window glass and consequently a protective device to be effective, must exert a sustained and elastic action both against outward and inward movement of the glass. A device which serves as a fixed stop against inward movement only (caused by pressure of high winds) has a tendency to cause more damage than otherwise, as glass will rebound against it. Furthermore, a certain amount of "give" is desirable, and to this end a device of this character should exert a sustained and elastic cushioning effect rather than be a fixed, comparatively non-resisting stop.

With the foregoing in view, my invention is designed to attain the following principal objects, which briefly stated, are: first, to provide a resilient, sustained reinforcement in the form of a suction cushion for minimizing outward and inward shocks upon a window glass or pane; second, to provide a device which may be quickly applied to any window pane either as a permanent fixture or as a temporary appliance for use in a special emergency; third, to provide means for quickly adjusting the device to exert a varying amount of pressure; and, fourth, to attain the foregoing objects and others of equal importance, with a simple and inexpensive device which may be manufactured and placed on the market at small cost, and which may be applied, or the parts interchanged, without the employment of special skill or tools.

To these and other ends, my invention consists in the construction, arrangement and combination of parts described hereinafter and pointed out in the claims forming a part of this specification.

One embodiment of my invention is represented by way of example in the accompanying drawings, wherein:

Figure 1, is a side view of my invention as applied, showing the vacuum cup in section, and

Figure 2, is a rear view.

In the drawings wherein like characters of reference designate like or similar parts:—

(A) designates a sheet of glass such as a window pane, and (B) a suitable base such as a window casing or a wall. Both are conventional and are shown for the sake of illustration only.

A bracket (1) is provided which is attached to the base (B) and has formed therein openings for the reception of bolts (2) for securing the supporting rod (3) of the device in place. It will be noted that the removal of all but one of the bolts (2) will permit swinging the rod (3) out of the vicinity of the glass (A). The rod (3) is formed flat at its attached end and round at its free end, while intermediate the two ends the same is formed T-shaped in cross-section. The rod (3) is curved throughout its length and the free or round end is provided with an opening (4) designed for the reception of the screw-threaded shank (5) of the foot, generally designated by (C). The shank (5) carries a nut (6) between which and the end of the rod (3) is interposed a spring washer (5′) so that by rotating the nut the shank may be fed through the opening (4), to adjust the foot (C) with respect to the glass (A).

The foot assembly comprises an enlarged rubber vacuum cup (7) which normally engages the surface of the glass (A) and which is attached to the upset head (8) of the shank (5) as shown in Figure 1. It will be seen that adjustment of the shank

will increase or decrease the pressure exerted by the cup (7) upon the glass (A), and the cup constantly maintains a pressure despite vibratory movement of the glass. A special feature of the cup (7) is the relatively straight base (9) to insure a perfect vacuum.

The flat portion at the attaching end of the rod (3) is provided with additional openings (10) to permit of adjustment with respect to the bracket (1).

It is here pointed out that a plurality of rubber vacuum cups may be used, either by arranging them in groups or by providing openings in the T-portion of the shank (3).

In operation the cup (7) exerts both a cushioning and a suction effect upon the glass thereby stabilizing and reinforcing the glass both against inward and outward pressure. The device may be quickly mounted or detached, or swung to an inoperative position by removing all but one of the bolts (2), and the vacuum cup may be readily withdrawn from the glass by operating the thumb-nut (6). Parts which become worn or broken can be replaced without special skill or tools.

While in the foregoing, there has been illustrated and described such combination and arrangement of elements as constitute the preferred embodiment of my invention, it is nevertheless desired to emphasize the fact that interpretation of the invention should only be conclusive when made in the light of the subjoined claims.

I claim:

1. A window protector comprising a support formed with an opening in one of its ends, a shank adapted for slidable and removable engagement within the opening, resilient means for engaging a pane of glass carried by the shank, and means arranged on the shank between the end of the support and the resilient pane engaging means for adjusting the position of the shank with respect to the support whereby to adjust the pressure of the resilient means upon the pane of glass.

2. A window protector comprising a support formed with an opening in one of its ends, a screw-threaded shank adapted for slidable and removable engagement within the opening, resilient means for engaging a pane of glass carried by the shank, and a nut arranged on the shank between the end of the support and the resilient pane engaging means for adjusting the position of the shank with respect to the support whereby to adjust the pressure of the resilient means upon the pane of glass.

In testimony whereof, I affix my signature hereto.

LEE W. DUNCAN.