March 3, 1936. G. A. BARROWS ET AL 2,032,344

SAFETY SPRING CUSHION FOR GLASS

Filed Aug. 17, 1934

Fig. 1

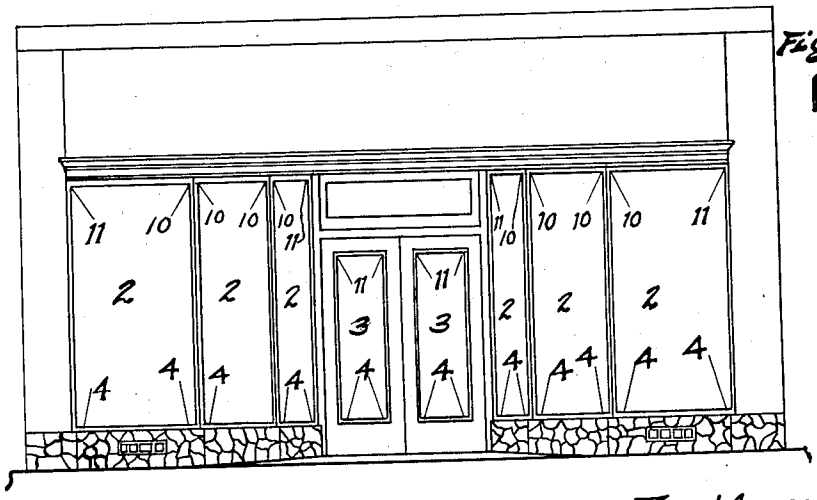


Fig. 10 Fig. 11 Fig. 12

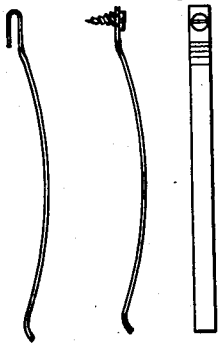


Fig. 2

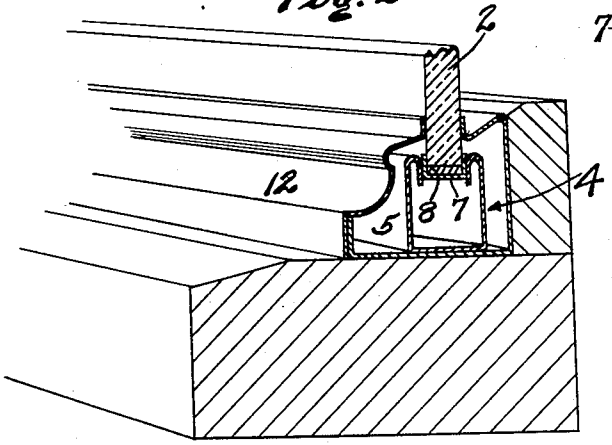


Fig. 14

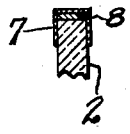


Fig. 13

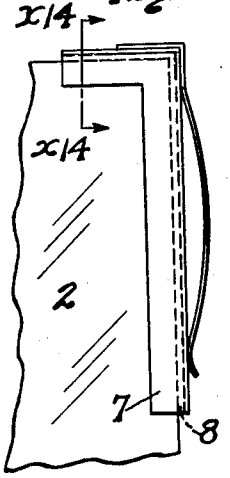


Fig. 4

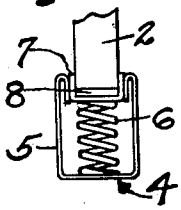


Fig. 5

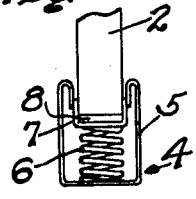


Fig. 3

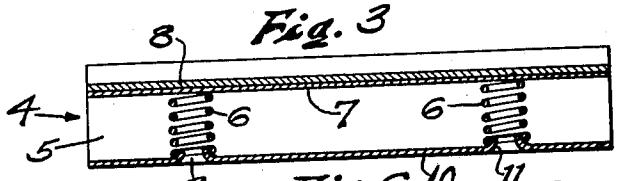


Fig. 6

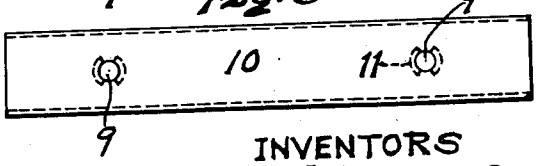


Fig. 7

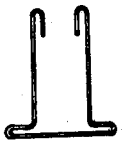
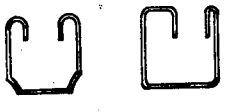


Fig. 8 Fig. 9



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SAFETY SPRING CUSHION FOR GLASS

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Santa Ana, Calif.

Application August 17, 1934, Serial No. 740,234

2 Claims. (Cl. 20—56.4)

This invention is applicable to glass plates in store fronts, business buildings, homes etc., and may also be used with other sheet glass in any capacity.

An object of the invention is to provide a simple, easily applied unit or combination of units and to permit of their use with all sizes of plate or other sheet glass. The units to fit and work in conjunction with all makes of metal sash bars as "Kawneer", "Zouri", "Tyre" or any other make of pattern of metal sash bars, or to be used with wood stops independent of metal sash bars if desired.

The main object of the invention is to eliminate the breakage of glass from earthquake shock and from the shock or jar of trains, trucks or other causes that would have a tendency to cause rigid set glass to crack or break, including wind pressure.

Another object of this invention is to support the glass on safety spring cushions that will be installed under and near each right and left hand lower corner of each light of glass with as many units placed at intermediate points between the two corners as necessary to sustain the load that the size and weight requires and in addition flat type bent springs will be placed at each right and left hand edge of each light of glass at top corners.

An object of the safety spring cushion is to absorb without shock any settlement or movement of the glass from any sudden jar or unnatural condition and the object of the side springs is to eliminate any sudden contact of the glass with the framework of the building due to any movement of the glass plate.

Other objects, advantages and features of invention may appear from the accompanying drawing, the subjoined detailed description and the appended claims.

The accompanying drawing illustrates the invention.

Figure 1 is a view of a typical store front showing locations diagrammatically at which the different members of the invention may be used.

Fig. 2 is an enlarged fragmental perspective view showing the position of the invention as used in conjunction with metal sash bars, omitting the spring.

Fig. 3 is an enlarged side elevation detail in section of the cushion unit.

Fig. 4 is an end elevation of Fig. 3 showing a fragment of plate glass mounted therein.

Fig. 5 is a view analogous to Fig. 4 showing the cushion in a compressed position.

Fig. 6 is a plan view of Fig. 3 looking from the underside and showing the holes therein and lips that hold the springs in place. The plate glass and springs being omitted.

Figs. 7, 8, and 9 show diagrammatically a few of the different shapes of the invention.

Figs. 10 and 11 show detail views of the spring cushion that may be used at the top end of the plate glass.

Fig. 12 is a side elevation of Fig. 11.

Fig. 13 is a fragmental detail sectional view of a modified form of a cushion that may be used at the top corners of the glass showing a fragment of glass therein.

Fig. 14 is a section on line X14—X14 Fig. 13.

Referring to Figure 1 there is shown a typical store front having plate glass 2 and 3 being constructed in the well known manner and showing enough to illustrate how the cushion unit 4 is applied to the plate glass.

The cushion unit 4 may be constructed of 22 gauge cold rolled copper or lighter or heavier weights of copper, brass, black iron or galvanized sheets may be used and comprises a housing 5 provided with springs 6 fixed therein.

A cushion member 7 is mounted in the housing 5 and rests upon the springs 6 and is of U-shaped construction to permit the glass 2 to rest therein.

Interposed between the glass 2 and bottom of the cushion member 7 is a packing 8 that permits a perfect bearing for the glass and may be of leather, rubber, composition or other material.

To hold the springs 6 in place holes 9 are punched through the bottom 10 of the housing by a split punch and the two halves 11 of the metal are turned inwardly over the bottom spring wire on two sides as shown in Figs. 3 and 6 of the drawing.

Referring to Fig. 2 there is shown a sash construction 12 of a modern type and how the cushion unit may be applied.

Figs. 10, 11, and 13 show cushioning means to be used at the top corners of plates to absorb shock caused by any movement of the glass or building.

Fig. 10 shows means intended for use only at top of glass plates where they are separated by division, angle or corner bars.

Figs. 12 or 13 show means to be used at the conjunction of glass plates with jams or frame work of building.

We claim:

1. A cushion unit for glass fronts having a

housing provided with springs therein; to hold said springs in place holes are punched through the bottom of said housing by a split punch and the two halves are turned inwardly over the bottom spring wire of the springs and a U shaped cushion member mounted on said springs and operable in said housing to prevent the glass from breaking when a shock occurs.

2. In a cushion unit for glass fronts having a housing provided with springs therein; means comprising holes punched through the bottom of said housing and the two halves are turned inwardly over the bottom spring wire of the springs to hold said springs in position in the housing; a U shaped cushion member mounted in the housing and resting on said springs; a packing mounted in said cushion upon which rests the glass and said cushion member and glass being operable in said housing to prevent the glass from breaking when a shock occurs.

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