R. J. STEWART.

SHOCK ABSORBER.

APPLICATION FILED JAN. 22, 1919.

1,320,288.

Patented Oct. 28, 1919.

2 SHEETS—SHEET 1.

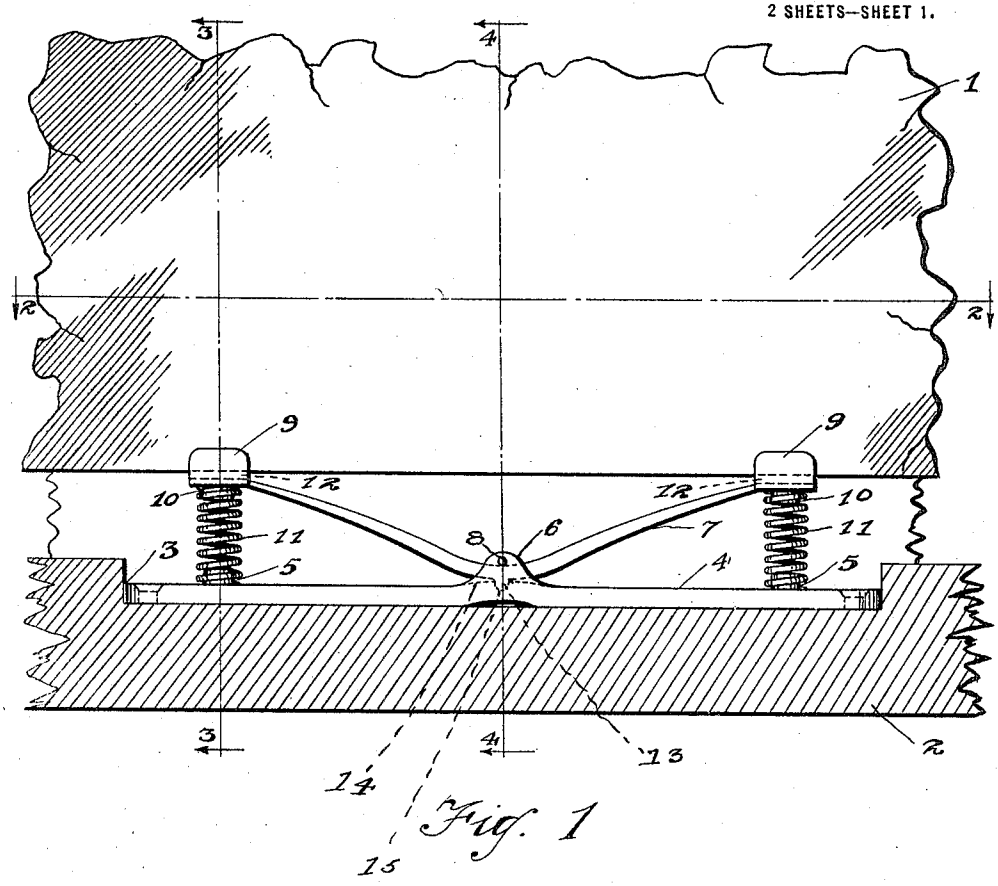


Fig. 1

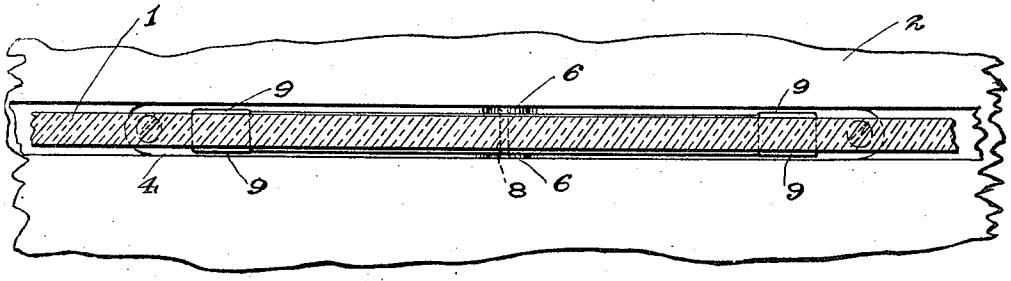


Fig. 2

Witness
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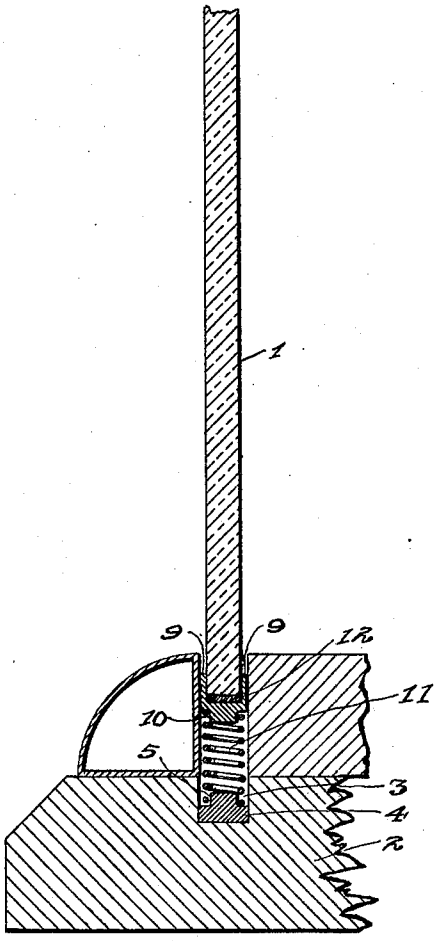


Fig. 3

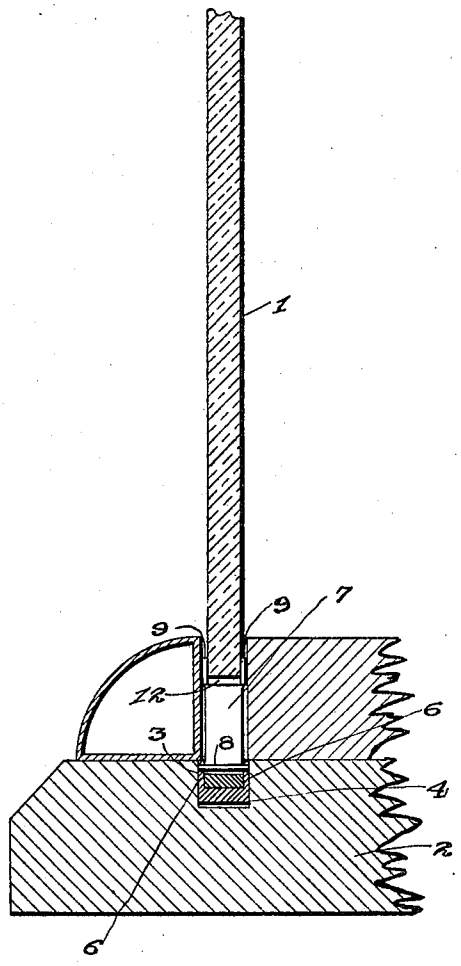


Fig. 4

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UNITED STATES PATENT OFFICE.

ROBERT JIMISON STEWART, OF CHILLICOTHE, MISSOURI.

SHOCK-ABSORBER.

1,320,288. Specification of Letters Patent. Patented Oct. 28, 1919.

Application filed January 22, 1919. Serial No. 272,596.

To all whom it may concern:

Be it known that I, ROBERT JIMISON STEWART, a citizen of the United States, residing at Chillicothe, in the county of Livingston and State of Missouri, have invented new and useful Improvements in Shock-Absorbers, of which the following is a specification.

Incident to the settling of buildings, and to the natural vibration to which they are subjected plate glass windows are frequently broken, as are other glass plates which rest upon a sound foundation.

From experience I have found that providing yieldable supports for window and other glass plates that the same will be amply protected even when the building, upon which they are arranged settles to a determined degree or is subjected to a determined vibration.

It is therefore the object of this invention to produce a shock absorber for plate glass windows and for other glass plates which shall be of a simple construction, easily positioned to effectively support the plate.

Other objects and advantages will appear as the nature of the invention is better understood, reference being had to the accompanying drawings, in which:

Figure 1 is an elevation partly in section illustrating the application of the improvement.

Fig. 2 is a sectional view approximately on the line 2—2 of Fig. 1.

Fig. 3 is a sectional view approximately on the line 3—3 of Fig. 1.

Fig. 4 is a sectional view approximately on the line 4—4 of Fig. 1.

While in the accompanying drawings I have illustrated the improvement attached to the lower edge of an ordinary plate glass for windows, it is to be understood that the same is not to be restricted in its useful application to sash panes and also that the device may be arranged not only at the bottom of the plate but at the sides thereof, and if necessary at the top. It is further to be understood that the improvement is to be constructed in various sizes to suit different thicknesses of glass plates and unless specifically set forth may be constructed of any desired material.

In the drawings a portion of a glass plate is indicated by the numeral 1 and a portion of a window frame by the numeral 2. The frame is preferably notched as at 3 receiving therein the base plate 4 of the improvement, the said plate being secured in the notch by screws or other fasteners. The plate, upon its upper face, adjacent to the ends thereof is provided with upstanding teats 5, and is centrally provided, upon its opposite edges with upstanding lugs 6. Between the lugs 6 is arranged an arched spring member 7, the central bowed portion of which being retained between the lugs or ears through the medium of a transverse pin 8 passing through the said lugs or ears. The spring 7 has its outer face centrally provided with a transverse tongue 13 and the base plate 4, between the ears thereof is rounded outwardly as at 14 and is centrally provided with a transverse groove 15 designed to receive the tongue 13 when the central and rounded portion of the spring is arranged between the ears. When the device is employed on the sides or on the top of a window frame or casing, a rivet or pin 8 is passed through openings in the ears 6 resting against the outer centrally rounded portion of the spring and retaining the spring on the base plate.

The spring 7 is gradually reduced in thickness from the center to the ends thereof, and the said ends have their sides provided with outstanding ears 9 and their inner surfaces provided with depending teats 10. The teats 10 are arranged opposite the teats 5 of the plate 4 and provide retaining elements for helical springs 11.

Preferably a cushion member 12 is arranged between the ears 9, and on these cushion members the edges of the plate 1 rest.

From the foregoing it will be noted that the plate 1 may either tilt or yield in a downward direction and the shock to which it is subjected in such yielding will be absorbed by the improvement. It will be further seen that the shock absorber is of a simple construction, may be easily applied and is thoroughly efficient for the purpose for which it is devised.

Having thus described the invention, what is claimed as new, is:—

1. A shock absorber for glass plates including a flat base having upstanding teats adjacent to the ends thereof and having its sides centrally provided with upstanding lugs and the surface between the lugs concaved, a bowed spring having its central rounded portion received between the lugs and resting on the concaved surface of the

support, a pin passing through the lugs over the center of the spring, said spring being gradually decreased in thickness from its center to its ends, upstanding ears on the sides of the spring at the ends thereof, a cushion member between the ears and receiving thereon a glass plate, teats upon the under face of the ends of the spring opposite the teats of the support, and helical springs between the support and the ends of the spring engaged by the teats.

2. A shock absorber for glass plates comprising a centrally bowed spring having its ends formed on the sides thereof with outstanding ears to receive a glass plate therebetween, a supporting plate for the spring, said spring having its central portion provided with an outstanding tongue, a supporting plate centrally provided with spaced lugs receiving therebetween the central portion of the spring, said supporting plate having a transverse groove receiving the tongue of the spring, and helical springs between the supporting plate and the ends of the bowed spring.

In testimony whereof I affix my signature.

ROBERT JIMISON STEWART.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."