

(No Model.)

G. E. SCHAIRER.
SASH HOLDER.

No. 530,660.

Patented Dec. 11, 1894.

Fig. 1.

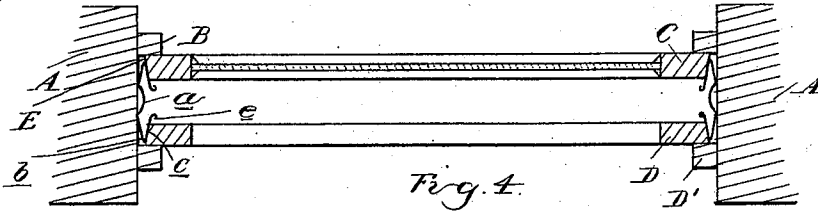


Fig. 4.

Fig. 3.

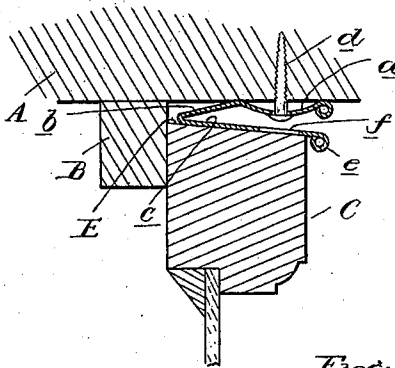


Fig. 6.

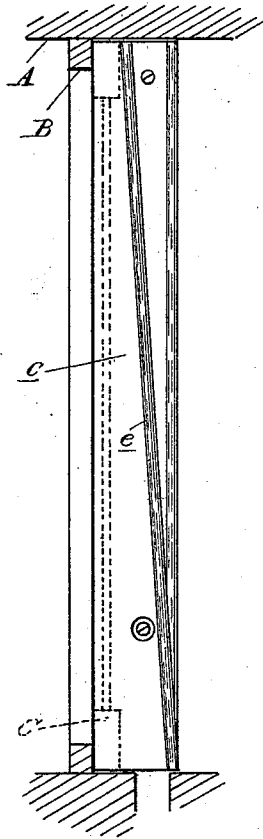


Fig. 5.

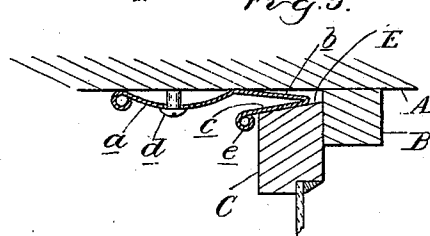
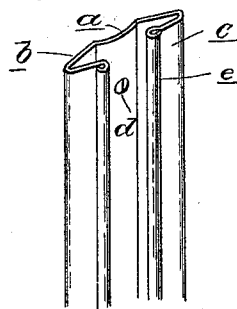


Fig. 2.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE EDWARD SCHAIRER, OF SALINE, MICHIGAN.

SASH-HOLDER.

SPECIFICATION forming part of Letters Patent No. 530,660, dated December 11, 1894.

Application filed December 19, 1893. Serial No. 494,134. (No model.)

To all whom it may concern:

Be it known that I, GEORGE EDWARD SCHAIRER, a citizen of the United States, residing at Saline, in the county of Washtenaw and State of Michigan, have invented certain new and useful Improvements in Sash-Holders, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to a new and useful improvement in "sash holders" and consists in the construction and arrangement of parts hereinafter described and definitely pointed out in the claims.

In the drawings, Figure 1 is a horizontal section through a window frame and sash, such as used on railway cars, showing my invention applied thereto. Fig. 2 is a detached perspective view of one end of one of the sash holders shown in Fig. 1. Fig. 3 is a similar perspective view of a slightly modified form. Fig. 4 is a horizontal section through the frame and part of a sash showing the modification shown in Fig. 3 as in use. Fig. 5 is a section similar to Fig. 4 showing another modification. Fig. 6 is a vertical section through a window frame of a street car showing a modification of my invention.

A is a window frame. B are stops thereon. C is the window sash of an ordinary railway car window and D is the blind frame; D', the stops therefor. The vertical edges of the sash are beveled, as shown at E narrowing toward the edge which is farthest from the stop. Between the beveled edges of the sash and the window frame I arrange a spring sash holder so constructed that the tension of the spring will act in such a manner upon the frame as to force the sash against the stops and at the same time allow for the racking or warping of the frames or sash without materially affecting the ease with which the sash can be moved in its frame.

In Figs. 1 and 2 I have shown a double device adapted to adjoining sash, such for instance as the window and blind sash of the ordinary railway car, while in Figs. 3, 4 and 5 I have shown a device adapted for use in connection with a single sash. The construction which I preferably employ for the double sash comprises a centrally arch shaped supporting section *a* having contact with the

frame only at its edges, the spring arm *b* extending from the edges of the supporting strip and at an angle from the frame and the bearing or guide strip *c* extending backward from the ends of the spring arm *b* and adapted to bear against the sides of the window sash. The supporting strip is provided with suitable apertures to receive securing screws *d*, which enter the frame between the sash. The outer edges of the strips *c* I preferably provide with a bead or bar *e* which serves as a guide or parting strip for the rear edge of the sash. The strips *a b c* I preferably make of a single piece of sheet metal bent into the shape described, but it is evident that many modifications of my invention may be devised, and I do not desire to limit myself to this precise construction.

The parts thus described are intended to operate as follows: Being assembled, as shown in Fig. 1 it is evident that the spring guide strip *c* will act with its tension against the bevel face E on the sides of the sash, which will tend to force the sash against the stops B and thereby hold the sash against rattling, and make a wind proof and dust proof joint. Now it frequently happens in street or steam railway cars that the window frames or sash become racked or warped which makes it very difficult if not impossible to move the sash. With my construction I provide ample room between the edges of the sash and the face of the frame, so that in case either the frame or the sash changes its shape from any cause the sash may still be moved in the frame, there being but slightly greater tension on the sash at one point than at the other, in case of such change of shape, and it does not materially affect the ease of operation of the sash. By tightening or loosening the screws *d* the supporting strip *b* is forced more or less in or out, and I am thus enabled to regulate the tension of the holder to a nicety.

In Fig. 3 I show a structure embodying substantially that described for Fig. 1, except that it is for a single sash and the outer edge of the spring strip is made plain, that is I omit the bead or bar *e*, the securing strip *a* in that construction being entirely beneath the spring strip. This is employed with the upper and lower window sash, the sash holder

being arranged between the stop and the parting strip. In this construction I arrange apertures *f* through the spring strip *c* through which the securing screws may be inserted. 5 If desired the parting strip may be omitted and in that case the bead *e* will act as a parting strip. I do not consider this construction desirable, however, as it is difficult to make a tight joint between the meeting edges of the 10 sash.

In Fig. 5 I have shown a construction in which the securing strip is arranged outside of the spring strip instead of beneath it.

In Fig. 6 I have shown a device especially 15 intended for street cars the sash of which may be let down into the side frames, of the car by swinging out the lower end of the sash in the usual and well known manner. In this construction the inclined spring strip *c* 20 gradually widens toward its lower end to permit of swinging the sash in the manner described.

What I claim as my invention is—

1. A sash holder consisting of a spring having one edge bent back at an incline and a 25 curved spreading extension and securing means engaging the extension for varying

the pitch of the bent edge, substantially as described.

2. In a window, the combination with a 30 frame the stop and sash, the latter having a beveled side edge, of a fastener consisting of a substantially V-shaped spring interposed between the sash and frame with its apex adjacent to the stop, and arranged to press outwardly from the frame in the direction of and 35 against the beveled edge of the sash whereby the spring will force the sash against the stop, substantially as described.

3. A sash-holding spring, consisting of a 40 strip of metal having its edge bent back to form a substantially V-shaped holding portion, the outer edge of the bent back portion being turned up to form a stop, and a securing means passing through the strip at a point 45 beyond the V-shaped section, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE EDWARD SCHAIRER.

Witnesses:

MYRON WEBB,
JAMES A. DELL.