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A. SANTREY

2,548,396

WINDOW HOLDING SPRING

Filed Aug. 9, 1949

Fig. 1.

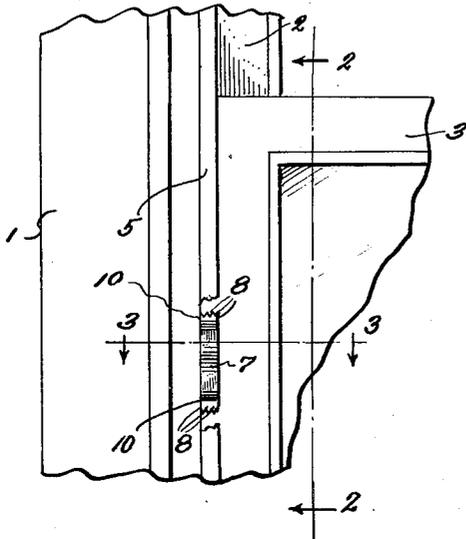


Fig. 3.

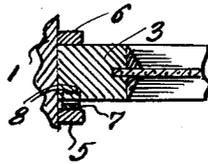


Fig. 4.

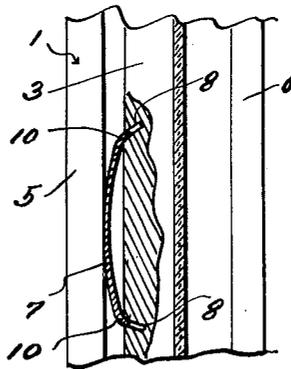


Fig. 2.

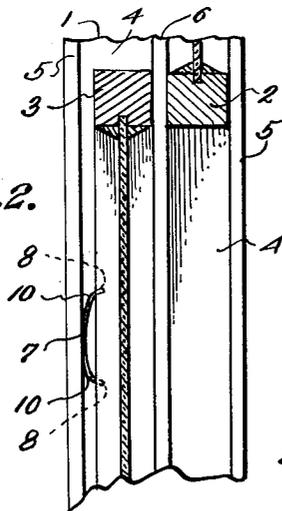
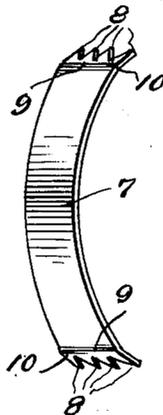


Fig. 5.



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UNITED STATES PATENT OFFICE

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WINDOW HOLDING SPRING

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Application August 9, 1949, Serial No. 109,270

1 Claim. (Cl. 292—76)

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This invention relates to builders hardware and more particularly to a window holding spring constituting an improvement over the window holding spring covered by my prior Patent 2,277,258.

This window holding spring consists of a longitudinally bowed strip of resilient metal having teeth at each end for biting into a window sash and holding the spring strip in a fixed position against the sash and thus causing it to move with the sash and hold the sash in a raised position by frictional engagement with the bead of a window frame and also prevent a window from rattling.

It has been found that the teeth at ends of the spring covered by the issued patent referred to above are liable to slip along the surface of the window sash if the sash is formed of hard wood having a close grain and smooth surface and it is therefore an object of this invention to provide a spring having its end portions bent adjacent its toothed ends in such a manner that the teeth are disposed in such angular relation to the spring strip and the surface of the sash that the teeth will readily embed themselves in the wooden sash and thus firmly hold the strip in place and prevent it from slipping longitudinally when the sash is raised or lowered.

Another object of the invention is to provide a sash holding spring which may be very easily slid transversely into place between a window sash and an overlapping portion of a bead of a window frame where it will be subjected to pressure which will force its teeth into biting engagement with the sash.

The invention is illustrated in the accompanying drawing wherein:

Fig. 1 is a view showing portions of a window frame and sash in front elevation, the bead of the frame being partially broken away in order to disclose the improved sash holding spring strip.

Fig. 2 is a sectional view taken vertically along the line 2—2 of Figure 1.

Fig. 3 is a transverse sectional view taken along the line 3—3 of Figure 1.

Fig. 4 is a sectional view upon an enlarged scale showing the spring strip in place between the sash and the bed of the window frame.

Fig. 5 is a perspective view of the improved sash holding spring.

This window with which the improved spring strip is used is of conventional construction and includes the usual frame 1 and upper and lower sashes 2 and 3 which are slidable in tracks 4

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formed along opposite sides of the frame by the inner and outer beads or stops 5 and the intermediate bead 6. Four of the improved holding strips 7 are preferably used for each sash, there being an upper spring and a lower spring for each side of a sash near upper and lower ends thereof, but it will be understood that additional springs may be provided for very large and heavy sashes if found necessary or a single spring at each side of a small sash may be found sufficient to hold the sash in a raised position and prevent it from rattling.

The springs are of duplicate construction and each is formed as shown in Figure 5. Referring to this figure it will be seen that the spring consists of a strip of spring steel which is of the type used for clock springs. The spring strip is bowed longitudinally so that it is arcuate for its full length and ends of the strip are serrated in order to form each end of the spring with a plurality of teeth 8 having sharp pointed ends which will have a tendency to bite into wood when pressure is applied to the spring strip. After the spring strip has been bowed longitudinally its ends are bent along lines 9 extending across the strip transversely thereof close to the teeth but in slightly spaced relation to the inner ends thereof. Therefore the spring strip will have its terminal portions 10, which are flat, disposed diagonally at a pronounced angle to the main portion of the strip. When the springs are in use they are slid transversely under the beads 5 at opposite sides of a window until they are entirely hidden from view. This is easily accomplished by sliding a metal plate between a side portion of the sash and the overlapping bead and then disposing a spring against the metal plate with its teeth bearing against the plate, pressure being then applied midway the length of the bowed spring by a finger so that it will be sufficiently flattened to allow it to be shifted transversely across the plate and under the bead with a screw driver or like tool. The metal plate is then withdrawn and the spring remains in place. The spring will thus be confined between the sash and the bead and its spring action will force the teeth at the ends of the spring into the wooden sash and the intermediate portion of the spring will have flat contacting engagement with the inner surface of the bead. Portions of the spring strip between its teeth and its bead-engaging portion will still be curved longitudinally and thus allow the strip to slide longitudinally along the inner surface of the bead when the sash is raised or lowered. If raising or lowering of the sash has a tendency

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to shift the spring strip longitudinally the angle at which the end portions 10 of the spring extend will cause the teeth to be forced into the wooden sash and have firmer anchoring engagement therewith. It will thus be seen that the spring strips can not shift longitudinally along the side portion of the sash and that they will also be prevented from moving transversely out of place back of the beads 5. The frictional engagement of the springs with the beads 5 will hold the sash in a partially or entirely opened position and the springs will also hold the sash close against the bead 6 and prevent rattling noises.

Having thus described the invention, what is claimed is:

A window holding device comprising a strip of flexible resilient metal having ends serrated to form teeth, said strip being bowed longitudi-

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nally for approximately its full length but having flat end portions each bent inwardly from the normal curvature of the strip along bend-lines extending transversely across the strip for its full width in close proximity to but slightly spaced inwardly from the base portions of the teeth and thereby providing flat tooth-bearing end portions which remain flat under flexure of the device to maintain the bent relation of the end portions with the bowed portion.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
2,277,258	Santrey	Mar. 24, 1942