March 25, 1924. 1,488,394

H. E. T. JENSEN

WINDOW TIGHTENER

Filed March 4, 1922

Fig. 1

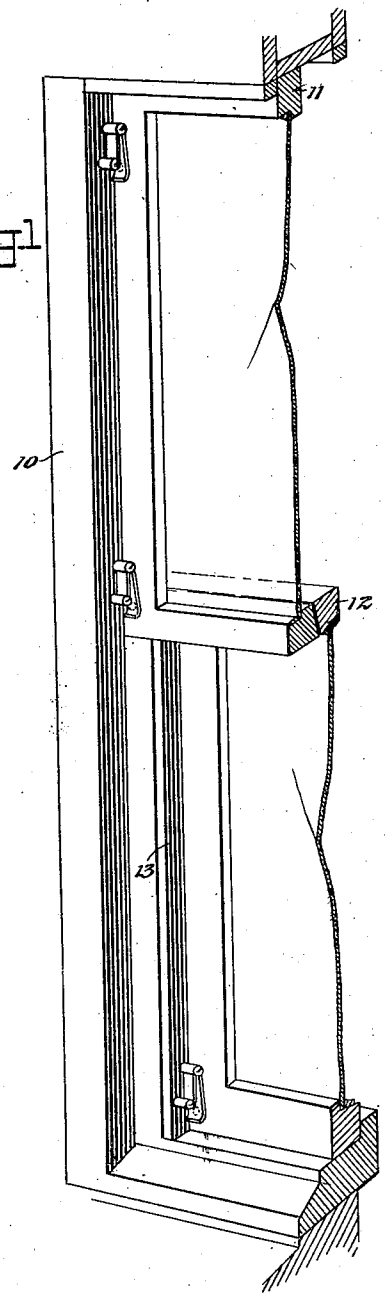


Fig. 2.

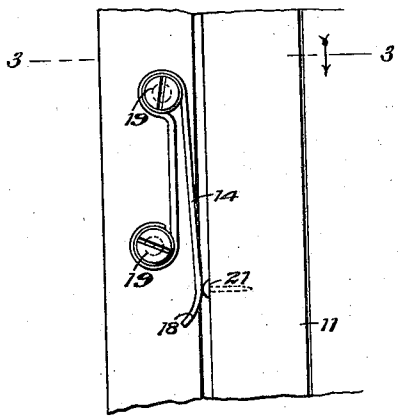


Fig. 3.

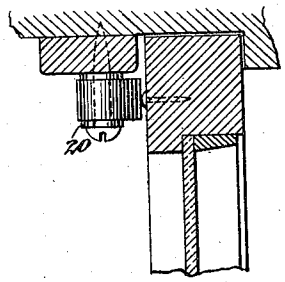
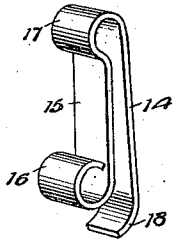


Fig. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

HANS ESBESEN THEODOR JENSEN, OF MINEOLA, NEW YORK.

WINDOW TIGHTENER.

Application filed March 4, 1922. Serial No. 541,187.

To all whom it may concern:

Be it known that I, HANS ESBESEN THEODOR JENSEN, a citizen of Denmark, and a resident of Mineola, in the county of Nassau and State of New York, have invented a new and Improved Window Tightener, of which the following is a full, clear, and exact description.

This invention relates to window tighteners.

The general object of the invention is the provision of a cheap, simple and efficient window tightener which may be mounted on the frame without altering or mutilating the same, and which has provided in conjunction therewith means for mounting on the sash adapted to be engaged by the window tightener, so that the latter does not wear the sash when it is moved up and down.

This object is accomplished by providing a spring somewhat the shape of a staple and providing, in conjunction with one arm of the spring, means for attaching it to the window frame thus allowing a free arm which engages with means supplied in conjunction with the window sash to force the sash tightly against the parting stops.

This and other objects of the invention will be more clearly understood from the following detailed description and accompanying drawings, of which—

Figure 1 is a perspective view of a number of window tighteners in position on a window frame, and engaging means provided on the window sash;

Figure 2 is a side elevation of the window tightener in position on the window frame;

Figure 3 is a section along the line 3—3, Figure 2;

Figure 4 is a perspective view of the spring of the window tightener.

Referring to the above-mentioned drawings, a window frame 10 is shown, in which the sashes 11 and 12 are slidably mounted and separated by means of the parting stops 13.

A spring is formed from some resilient metal and made to somewhat resemble a staple, being provided with two arms 14 and 15. The arm 15 has provided at its lower end a ring member 16 formed by rolling up the lower end of the arm. On the top of the spring another ring 17 is formed and offset to lie in alinement with the ring 16. The lower end 18 of the arm 14 is curved inward toward the arm 15 so that it will slide over projections on the window sash. Screws 19 are provided for projecting through the rings 16 and 17 to attach the arm 15 of the spring to the window frame. Washers 20 are provided in conjunction with the screws 19 for spacing the spring from the frame so that the free arm 14 as it swings about the screw in the ring 17 will not wear the frame. Washers are also provided between the heads of the screws and the spring. This allows the screws to be driven home more tightly without interfering with the operation or the swinging of the free arm 14 of the spring.

Means are mounted on the window sash for engaging the free arm 14 of the spring, causing it to compress the window sash tightly against the parting stop. In this particular case, the means for engaging the spring is a round-headed nail 21 which is driven into the sash. In positioning the spring care is taken to space it from the sash a distance sufficient to allow the sash to pass freely without rubbing against it. The head of the nail 21 is of sufficient height so that it engages the arm 14 of the spring and through this projection 21 the spring forces the sash into tight engagement with the parting stop so as to prevent rattling.

It will appear from the foregoing that a window tightener has been provided which may be applied without altering any of the parts of the window. Further, this window tightener does not cause any wear upon the window sashes thus spoiling their appearance.

I would state in conclusion that while the illustrated example constitutes a practical embodiment of my invention I do not limit myself strictly to the exact details herein illustrated since manifestly the same can be considerably varied without departing from the spirit of the invention as defined in the appended claims.

Claims:

1. A window tightener of the character described, comprising a base plate, a ring formed on the lower end of the base plate, a spring arm integral with the base plate, and a second ring member formed at the junction of the base plate and the spring arm.

2. A window tightener of the character described, comprising a spring plate having a ring member formed on its lower end, said spring plate being doubled back upon it-

self forming a base plate, and a spring arm and a ring member formed at the point of doubling the plate back upon itself to form said spring arm.

3. In combination with a window frame in which sashes are slidably mounted, a sash tightener of the class described, comprising a spring similar in shape to a staple, a ring formed on the end of one arm of the spring, an offset ring formed on the top of the spring arm, means for attaching the arm of the spring on which the ring is formed to the window frame, and means associated with the window sash for engaging the spring when the sash is in its closed position, causing the latter to be forced against the frame.

4. In combination with a window frame in which sashes are slidably mounted, a sash tightener of the class described, comprising a spring shaped somewhat to resemble a staple, a ring formed on the lower end of one arm of the spring, an offset ring formed in the upper end of said spring and offset so as to be in alinement with the ring formed on the lower end of one arm, means for projecting through said rings to attach the spring to the frame, said upper attaching means serving as a post about which the free arm of the spring may swing, and means mounted on the window sash for engaging the spring to prevent the window sash from rattling.

5. In combination with a window frame in which sashes are slidably mounted, a sash tightener of the class described, comprising a spring shaped to resemble a staple, means associated with the lower end of one arm for attaching it to the window frame and spacing it therefrom, means associated with the upper end of the spring for attaching it to the window frame, spacing it therefrom and providing a post means about which the free arm of the spring may swing, and means mounted on the window sash for engaging the free arm of the spring thus causing the window sash to be held tightly.

6. In combination with a window frame in which sashes are slidably mounted, a sash tightener of the class described, comprising a spring shaped similar to a staple, a loop formed on the lower end of one arm of the spring, an offset loop formed on the top of the spring to lie in alinement with said first-mentoined loop, means associated with said loops for attaching the spring to the window frame and spacing it therefrom, and means mounted on the sash with which the free arm of said spring engages to hold the window tight.

HANS ESBESEN THEODOR JENSEN.