Feb. 19, 1957 V. VAN FLEET 2,781,876

WINDOW GUIDE SPRING ASSEMBLY

Filed Oct. 22, 1954

FIG. 1

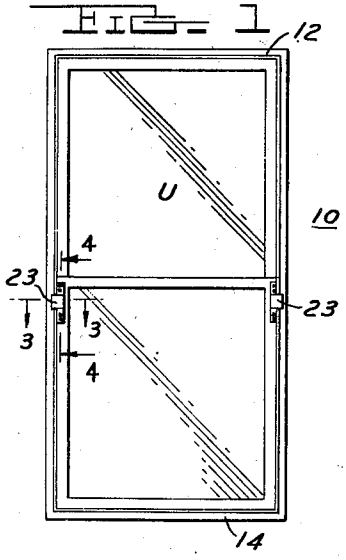


FIG. 2

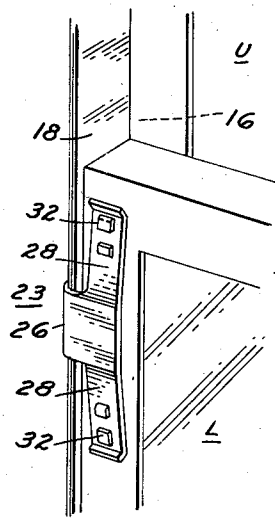


FIG. 4

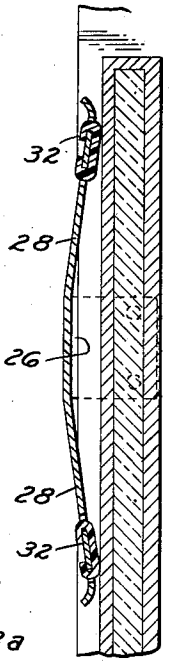


FIG. 3

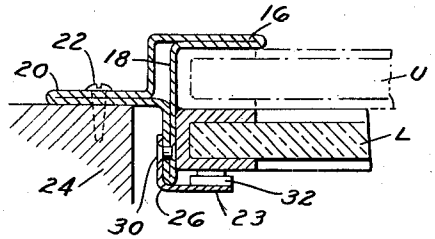


FIG. 5

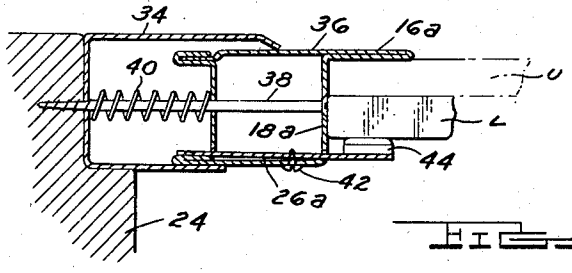


FIG. 6

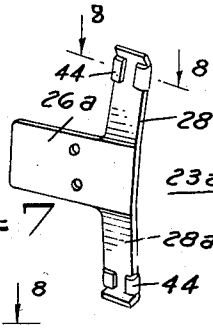


FIG. 7

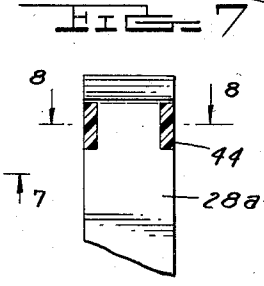
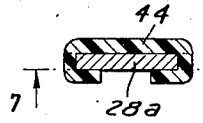


FIG. 8



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WINDOW GUIDE SPRING ASSEMBLY

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5 Claims. (Cl. 189—72)

This invention relates to improvements in sash guide structures and particularly to a sash guide element incorporated in a guide assembly for vertically slidable sashes.

An object is to provide a sash guide assembly having incorporated therein the sash guide element of this invention in such a manner that vertically slidable metal sash may be quickly installed or removed from the sash guides and will be supported therein for vertically slidable movement.

The sash guide element is so associated with the sash guide assembly that the sash are held under yielding spring pressure against vibration or rattle while having permitted slidable movement within the guide assembly.

The sash guide element is so constructed that while it resiliently engages a sliding sash, it presents to the face of such sash a wearing portion which permits the sash to move thereover smoothly and without appreciable resulting abrasion or resistance that would mar the surface of the sash.

It is particularly designed for use with slidable metal sash and such sash is commonly formed of aluminum and it has been found that steel or aluminum parts bearing resiliently against aluminum sash tend to produce scoring or abrasion thereof which results in unsightly defacement of the sash as well as impeding its free slidable movement.

The sash guide element of this application is shown as associated with a sash guide assembly which has a jamb portion generally L-shaped in cross section comprising a bottom wall and an outer side wall. The sash guide element is so secured to this guide assembly that it is opposed to the outer side wall spaced therefrom by the width of the bottom wall and exerts a yielding tension on a slidable sash holding it toward the outer side wall. It is so constructed and mounted that slidable sash may be readily installed within the sash guide or removed therefrom. The guide element itself is so constructed that it may be readily attached to sash guides of a generally L shape but which otherwise vary from each other to fit window openings.

Other objects, advantages, and meritorious features will more particularly appear from the following description, claims, and accompanying drawing, wherein:

Fig. 1 is a front elevation of a window frame having sash guides embodying the invention and within which two slidable sash are disposed;

Fig. 2 is a fragmentary perspective of a portion of a structure showing my improved sash guide element;

Fig. 3 is a horizontal sectional view taken on the line 3—3 of Fig. 1;

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

Fig. 5 is a fragmentary sectional view showing a flush form of sash guide assembly being a modification of the one shown in Fig. 3;

Fig. 6 is a perspective of the sash guide element shown in Fig. 5 removed from the sash guide assembly;

Fig. 7 is a sectional view taken on the line 7—7 of Fig. 8;

Fig. 8 is a sectional view taken on the line 8—8 of Fig. 7.

Fig. 1 shows a storm window assembly wherein two slidable storm sash are supported within the frame. The upper sash is indicated by U. The lower sash is indicated by L. The opposed jamb members of the frame are indicated by the numeral 10. These jamb portions are connected together by a header 12 and a sill portion 14. The sash are shown as glass window sash with metal frames as occurs particularly in Fig. 3. The metal sash may be formed of aluminum, steel, or any other suitable material.

In Figs. 1, 2, and 3 the jamb portion comprises a sash guide having an outer side wall 16, a bottom wall 18, and a securing flanged portion 20, which flanged portion may be fastened by screws 22 or the like to a wood window frame member 24. As shown in Fig. 3 this sash guide is offset slightly outwardly of the wood frame beyond the window opening. In other words it is not flush therein. The sash guide as illustrated is generally L-shaped in cross section and may be formed of metal folded upon itself in the manner illustrated. Such sash guide and the frame of which it forms a part would normally be secured within the window opening outside of the prime windows.

I provide a pair of sash guide spring elements indicated generally by the numeral 23, which are generally T-shaped. Each T shape has an upright portion 26 and a head portion 28. The upright portion 26 is bent into a right angular shape so that its lower end is adapted to overlie the bottom wall 18 of the sash guide. It is secured to such bottom wall by rivets 30 as shown in Fig. 3. It is so shaped and secured to such bottom wall that the head portion 28 of the T shape is supported spaced above the bottom wall and substantially in line with the inner margin thereof. Such head portion is disposed substantially parallel to the outer side wall 16 of the sash guide.

The head portion 28 of the T shape is generally arcuate in contour. Its outer ends project inwardly toward the outer side wall 16 as shown in Figs. 2 and 4. These opposite ends of the head of the T shape are tensioned toward the outer side wall 16 so as to hold a sliding sash engaged thereby toward the said side wall as shown in Figs. 2 and 4.

Each of the opposite ends of the head 28 of the T-shaped spring element is provided with a plastic wear part or button 32. In Figs. 2 and 4 this button is shown as having its opposite ends inserted through apertures in the outer ends of the head portion 28 and turned over as illustrated. The wear button projects beyond the head of the T shape and engages the sliding sash.

It has been found that a plastic known commercially as tenite, which is a cellulose acetate plastic composition, forms a suitable wear button. It permits free slidable movement of a metal sash thereover without undesirably scoring or abrading the same. It does not scuff up the metal sash or impede its movement and when used as shown holds the ends of the head of the T entirely away from metal to metal contact, and forms a peculiarly efficient structure.

In Fig. 5 a modification of the sash guide assembly is illustrated. This is a construction which forms a flush seating upon the wood jamb portion of the window opening. The sash guide comprises a base part 34 having a sash guide part 36 seated therein as illustrated in Fig. 5. This sash guide part 36 is held to its seat within the base part 34 by a screw 38 extended through both parts and into the wood jamb 24. A spring 40 encircles the screw within the base part 34 underneath the sash guide part proper 36 and supports the same as shown in Fig. 5. This

sash guide embodies an outer side wall **16**–*a* and a bottom wall **18**–*a*.

In this construction the T-shaped sash guide spring element is indicated generally by the numeral **23**–*a*. It does not have its upright portion **26**–*a* bent into angular shape as shown in Fig. 3. Such upright portion **26**–*a* extends through apertures in the sash guide **36** as shown in Fig. 5 and is secured thereto by a screw **42** as shown in such figure.

The head portion **28**–*a* of this T-shaped element **23** is provided with suitable tenite wear buttons **44** wrapped therearound and seated within notches formed therein, all as shown in Figs. 6, 7, and 8. The T-shaped spring element is positioned in the same manner and functions in the same manner as the corresponding element described in connection with Figs. 1–4.

It will be noted that these two T-shaped spring elements **23** and **23**–*a* are disposed in complementary positions upon the opposite sash guide strips substantially midway between their ends and in a position to engage the lower sash adjacent its lower end. The upper end of the lower sash is shown as overlying the bottom end of the upper sash and the T-shaped elements hold the two sash outwardly against the outer side wall **16** of the sash guide. This is true whether the T-shaped element is of the character shown in Fig. 3 or as illustrated in Fig. 5. It is readily possible to insert and remove the lower sash L from the framework of the assembly. Such may be done from the inside of the building.

What I claim is:

1. In a sash guide assembly provided with complementary opposed jamb portions for two sliding sash and wherein each jamb portion comprises a sash guide having a bottom wall and an outer side wall disposed generally perpendicularly with respect to each other, a pair of generally T-shaped spring elements secured to complementary opposed intermediate portions of said sash guides, each spring element having its upright part secured to the sash guide with the head of the T shape spaced above the bottom wall of the guide substantially parallel to the outer side wall and in line with that edge of the bottom wall remote from the outer side wall, said head being generally arcuate in shape and with its opposite ends projecting toward and tensioned toward the outer side wall of the guide and each provided with a plastic wear button secured thereto on the concave side and projecting therebeyond toward the outer side wall of the guide to form sliding engagement with a sliding sash mounted within said guide.

2. In a sash guide assembly for a sliding sash wherein the guide has a bottom wall and an outer side wall disposed perpendicularly with respect to the bottom wall and a securing flange projecting away from the opposite side of the bottom wall, a generally T-shaped spring element having an upright portion and a head portion, said upright portion being of a right angular shape and secured to the bottom wall of the sash guide supporting the head portion spaced above such bottom wall substantially in line with the edge thereof which is remote from the outer side wall of the sash guide and substantially parallel to said outer side wall, said head portion being of an arcuate shape with the ends thereof projecting toward the outer side wall of the sash guide, each end of the head portion provided with a plastic wear button projecting therebeyond toward the outer side wall of the sash guide.

3. In a sash guide assembly for sliding sash wherein the guide has a bottom wall and an outer side wall disposed perpendicularly with respect to the bottom wall, a generally T-shaped spring element having an upright portion and a head portion, said upright portion projecting through an aperture in the bottom wall of the sash guide with the head portion disposed above such bottom wall and substantially in line with that edge of the bottom wall remote from the side wall of the sash guide, the head portion of said T-shaped element being of arcuate shape and having its opposite ends provided with plastic wear buttons projecing toward the outer side wall of the sash guide to engage a sliding sash mounted within the guide.

4. A generally T-shaped sash guide spring element having an upright portion and a head portion, said head portion being of arcuate shape and having its outer ends tensioned toward its concave side and provided on said side with wear-resistant plastic adjacent to said ends.

5. In a sash guide assembly provided with complementary opposed jamb portions having a sash mounted therebetween for slidable movement lengthwise therealong and wherein each jamb portion comprises a sash guide having a bottom wall opposed to the edge of the side rail of the sash and an outer side wall disposed generally perpendicularly with respect to the bottom wall and opposed to the outer face of the side rail of the sash; a pair of spring elements, one for each sash guide, secured to the complementary opposed intermediate portions of said sash guides, each spring element having an upright part and a resilient head part with the head part disposed at one end of the upright part and generally perpendicular with respect thereto, said head part being of an arcuate shape and having a plastic wear button adjacent to its free end on the concave side thereof and projecting outwardly beyond the plane of said concave side; each spring element having its upright part secured to the sash guide with which it is associated with the head part of the spring element disposed parallel to the outer side wall of the sash guide and with the plastic wear button held resiliently against the inner face of the side rail of the sash.

References Cited in the file of this patent

UNITED STATES PATENTS

2,292,273	Kaufmann	Aug. 4, 1942
2,463,432	Russell et al.	Mar. 1, 1949
2,654,128	Day	Oct. 6, 1953