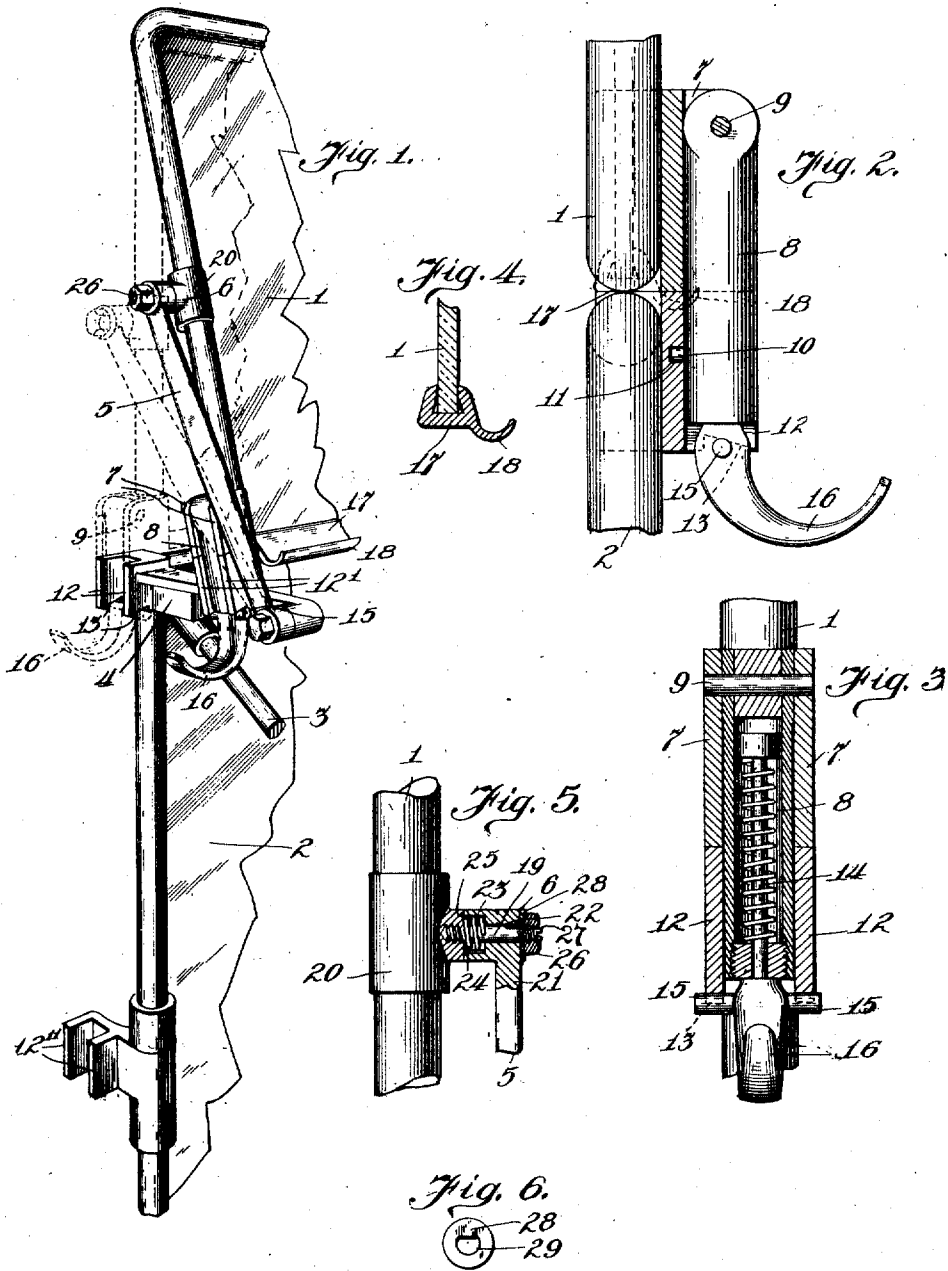


M. L. WILLIAMS.
 WIND GUARD FOR VEHICLES.
 APPLICATION FILED JUNE 8, 1908.

1,000,137.

Patented Aug. 8, 1911.



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WIND-GUARD FOR VEHICLES.

1,000,137.

Specification of Letters Patent.

Patented Aug. 8, 1911.

Application filed June 8, 1908. Serial No. 437,219.

To all whom it may concern:

Be it known that I, MARTIN L. WILLIAMS, a citizen of the United States, residing at South Bend, in the county of St. Joseph and State of Indiana, have invented certain new and useful Improvements in Wind-Guards for Vehicles, of which the following is a specification.

This invention relates to windguards for vehicles, and refers more specifically to that type of collapsible windguards for automobiles which comprise an upper and lower sash separated by horizontal meeting rails or sash frame members, and the upper member being movably supported so as to be capable of being lowered alongside of the lower sash when not in use.

Among the salient objects of the present invention are to provide means for preventing the drip from the upper sash from flowing over the lower sash or from obscuring a sight-opening which in certain positions of the sash is formed between their proximate edges; to provide means for locking the upper sash member positively against lifting or bouncing movements relatively to the lower sash and in this way entirely preventing or minimizing rattling; to provide means for preventing lateral movement of the upper sash relatively to the supporting frame members and in this way obviating or minimizing rattling; and in general to provide improvements in the details of construction and arrangement of a mechanism of the character referred to.

The invention consists in the matters hereinafter described, and more particularly pointed out in the appended claims.

In the drawing—Figure 1 is a fragmentary view showing in perspective one of the end portions of a mechanism embodying the invention, it being understood that both ends are alike; Fig. 2 is a detailed sectional view through the adjacent parts of the sash frame through which the locking mechanism is applied; Fig. 3 is a sectional view taken at right angles to that of Fig. 2, showing the same parts; Fig. 4 is a cross sectional view through the lower sash rail of the upper sash; Fig. 5 is a detail, with parts in section, of one of the pivot mechanisms whereby the upper sash is supported. Fig. 6 is a detail

view of the flattened washer forming part of one of the pivoted connections.

Referring to the drawings, 1 and 2 designate respectively and as a whole the upper and lower sash members, the latter being fixedly supported in upright position and held rigid by means of braces 3 which connect with horizontally disposed brackets 4 extending forwardly from the upper portions of the lower sash. The upper sash is movably supported upon a pair of links 5, one at each side of the structure, each link being pivotally connected at its lower end with the forward end of one of the brackets 4 and at its opposite end with a pivot clip 6 located approximately midheight of the upper sash.

The upper sash is capable of being secured rigidly in either of two elevated positions, and is also capable of being lowered into a position parallel with and immediately in rear of the stationary lower sash. To lock the movable sash in either of the three positions mentioned, it is provided at each of its lower corners with a locking mechanism comprising a pair of supporting and confining ears or flanges 7, 7, (see Fig. 3) a latch link designated as a whole 8 pivotally mounted as at 9 so as to spring laterally outward from, and inwardly into, position between said ears 7, and a confining stud 10 rigid with the inner side of the outer member or shell of the latch link and adapted to engage a suitable recess or socket 11 formed in the subjacent part of the lower sash frame. Upon the lower sash frame, in the present instance shown as formed integrally with the bracket member 4, are provided two confining ears 12, 12, with which the upper ears or confining flanges 7 are adapted to be brought into register, so that the latch link may lie between the two sets of ears and by bridging the meeting joint between the upper and lower sashes, lock these two parts together. The lower edges of the ears 12 are of undercut or hooked form, as indicated at 13 (Figs. 1 and 2), and the latch link comprises a spring-supported locking bar or link 14 which terminates at its lower end in a pair of outstanding studs 15 adapted to engage the hooked portions 13 of the confining ears, and a finger-hold or hook 16 where-

by the link may be pulled downwardly against the tension of the spring. The spring-pressed member 14 acting against the inwardly and upwardly inclined lower edges 5 of the members 12 tends to hug or crowd against the side frame of the sash and so operates to hold the stud 10 in its socket 11, and at the same time prevent said parts from rattling. The stud 10, on the other 10 hand, supplements the elastic link mechanism by holding the upper sash positively against bouncing, and in this manner minimizes rattling.

Upon each bracket 4, preferably located 15 about midlength of the latter, are arranged locking ears 12', which are counterparts of the locking ears 12 hereinbefore described, and are suitably inclined and located so that when the upper sash is tilted into the 20 position indicated in Fig. 1 it may be locked to these ears instead of in vertical register with the lower sash. Similarly, upon the lower portions of the side rails of the lower sash, and arranged somewhat in rear of the 25 latter, are other locking ears 12'' which are similar to the ears 12 and serve to hold the upper sash against movement in its lowered position.

One of the important features of the present invention resides in providing means at 30 the lower edge of the upper sash for collecting and carrying off the water which may collect upon the upper sash and flow down across the latter. In the preferred embodiment illustrated, the lower sash rail 35 17 (see Fig. 4) is provided with an integral trough-shaped extension 18 projecting outwardly from the front side of the sash and extending entirely across the latter. 40 The ends of the trough are open, so that the water will be freely discharged therefrom. The sash rail having the trough-shaped extension is conveniently made by drawing the metal in suitable cross sectional 45 form through a suitable drawing die, but, of course, may be otherwise constructed.

Another feature of the present invention consists in the provision of anti-rattler means in the pivot joints which unite the 50 parts. Referring to Fig. 5, 19 designates a pivot stud rigid with the pivot clip 20 of the sash rail, and 21 designates the connecting end of one of the links 5, which is suitably apertured to fit accurately upon 55 said pivot stud, as indicated at 22, and is counterbored or enlarged, as indicated at 23, to provide a spring chamber in which is arranged a coiled spring 24 which is under compression in said chamber between 60 the inner end of the latter and the opposed shoulder 25 which surrounds the pivot stud 19. This arrangement insures a constant separating thrust between the clip 20 and 65 link, which prevents rattling. The link is held upon the pivot stud by means of a nut

26, and in order to obviate the tendency of this nut to work loose by reason of the pivotal movements of the sash link, I flatten one side of the threaded portion of the pivot stud, as indicated at 27, and mount upon this 70 flattened portion a washer 28 having a similarly shaped, *i. e.* non-circular, aperture 29 which fits accurately upon the stud. Inasmuch as the washer is thus locked against rotary movement, and is interposed between 75 the nut and the moving part of the link, there is no tendency of the nut to work loose. The anti-rattler spring obviously operates to hold these parts under tension and against rattling. Substantially the same mechanism 80 is preferably embodied in the joints between the lower ends of the links and the outer ends of the supporting brackets.

It will be obvious that the details of construction may be modified without departing 85 from the invention, and I do not therefore wish to be understood as limiting myself to these precise details, except in so far as they are specifically claimed.

I claim as my invention:

1. In a windguard for vehicles, the combination with a stationary lower frame member and a movable upper frame member, of links pivotally connecting said frame members, a spring actuated link pivotally 95 connected to one of said frame members, a socketed member mounted on the outer side of the other frame member and adapted to receive said link for yieldably locking said upper member against movement, and a 100 transversely extending member carried by said link for positively locking the upper member against movement in the direction permitted by said spring actuated link.

2. In a wind-guard for vehicles, the combination with a stationary lower frame member, of a movable upper frame member, links pivotally connected at their ends to the respective frame members, a spring actuated locking link for yieldably locking 110 said upper member against movement, and a stud projecting from said locking link and adapted to engage a socket formed in the lower member when said upper member is in locked position. 115

3. In a wind-guard for vehicles, the combination with a stationary lower frame member, of a movable upper frame member, links pivotally connecting said frame members together, spring actuated links pivotally 120 connected to the upper frame member, locking ears carried by the lower frame member and adapted to receive and hold said links in locked position, and supplementary locking mechanism carried by said 125 first locking mechanism and engaging said stationary frame member.

4. In a wind guard for vehicles, the combination with a lower frame member, of an 130 upper frame member movable relative to the

lower member, links pivotally connecting said frame members, a spring actuated link pivotally connected to said upper member and having a socket engaging arm at its lower end, a socket member carried by the lower frame member and adapted to receive said socket engaging arm, and supplementary locking mechanism carried by said link and engaging said lower frame member.

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Witnesses:

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