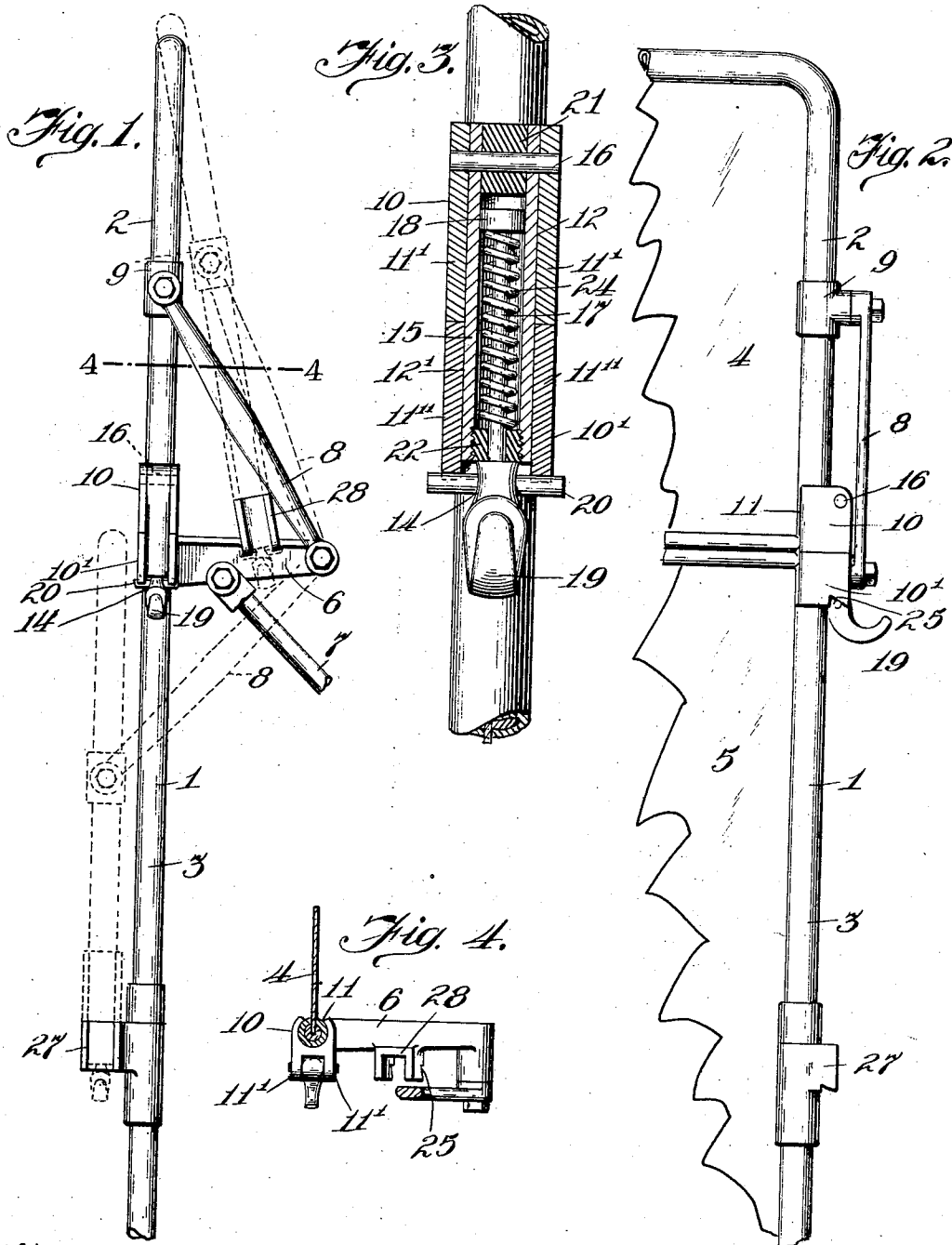


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WIND GUARD FOR VEHICLES.
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WIND-GUARD FOR VEHICLES.

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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 divisional application of an application filed by me February 11, 1908, Serial No. 415,276.

This invention relates to windguards for vehicles, and refers more specifically to that type of collapsible windguards or shields in which the upper sash is adapted to be lowered or folded over the lower one when not in use.

Among the salient objects of the invention are to provide a construction in which the upper sash may be lowered out of the way when not in use, or may be shifted to an intermediate position to permit of the driver seeing ahead without looking through the upper glass, and at the same time affording him the protection of the latter; to provide in a device of this character, the upper sash of which is adjustable to various angles, a construction that amounts essentially to a wide base support for the lower part of the upper sash whereby the latter is made strong and rigid in its various operative positions; to provide in such a construction means for effectively supporting the lower edge of the upper sash when the latter is in each of its intermediate positions; to provide means for locking the lower edge of said upper sash when in any of its three positions; to provide a simple and reliable construction of comparatively few parts which to a great extent dispenses with the usual bolts, screws, etc., for confining the upper sash in position; and in general to provide an improved construction of the character referred to.

The invention will be readily understood from the following description, reference being had to the accompanying drawing, in which—

Figure 1 is a side elevation of my device, shown in extended position, the base connection and a part of the side brace being broken off; and the intermediate and lowered positions of the upper sash being shown in dotted lines; Fig. 2 is a fragmentary rear elevation taken at right angles to the view shown in Fig. 1; Fig. 3 is an enlarged sec-

tional detail of the spring lock and associated parts, a fragmentary portion of the sash being shown in elevation; Fig. 4 is a sectional detail on lines 4—4 of Fig. 1.

Referring to the drawings, 1 designates as a whole my improved collapsible wind guard, which is more particularly adapted for use with automobiles or other motor vehicles, and comprises a movable upper sash 2 and a stationary lower sash 3, the latter being rigidly fixed in the rear of the hood in the usual manner. The sash members are preferably made tubular in form and surround and confine the plates of glass 4 and 5, respectively. Upon the upper part of the lower sash member 3, and at either side thereof, are rigidly secured a pair of horizontally extending bracket supports or arms 6. These bracket arms 6 together with the sash frame form the lower member of the structure. To the lower side of each arm 6 is rigidly connected a brace-rod 7 which extends forwardly and downwardly and is attached to the front part of the vehicle frame as usual. At the outer end of each arm 6 is pivotally mounted a take-down supporting rod 8, which is likewise pivotally secured to a collar 9 rigid with the upper sash 2.

In order that the upper sash may be reliably locked upon the lower portion when in use, I provide at the lower side of the upper sash, at each corner a pair of bracket supports 10 which are adapted to rest upon and register with similar brackets 11 upon the upper corner of the lower sash frame 3. The upper and lower sets of bracket supports are similar in construction, and are respectively clamped rigidly to their sash members, as shown at 11, and they each have out-standing webs 11' and 11'' the spaces between which form sockets 12 and 12' as seen more clearly in Figs. 2 and 4. The lower ends of the webs 11'' are undercut to form notches 25 for a purpose hereinafter described.

Upon the sash frame 3, at the respective lower sides thereof, are secured brackets 27 generally similar in construction to the bracket members 10', except that the jaws thereof are offset and in the rear of the plane of the sash frame, as seen in Fig. 1. These brackets cooperate with locking mech-

anisms 14, hereinafter described, to support and confine the upper sash in its lowered position. Other similar pairs of bracket members 28 extend rearwardly and upwardly from the horizontal supports 6 and these brackets also cooperate with the respective locking devices 14 to confine the upper sash in its intermediate position.

Describing the locking devices 14, there being a similar one at each side of the upper sash, 15 designates a hollow tubular member arranged to fit between the webs or jaws of one of the upper pair of brackets 10 and pivotally secured therein by means of a pin or bolt 16. Within this tube is mounted to reciprocate a spring-pressed rod 17, which is provided at its upper end with an enlarged head portion 18 for confining the upper end of a coiled expansion spring 24 upon the rod. The lower end of this rod extends downwardly beyond the tube 15 and terminates in a hook-shaped latch head or handle 19 carrying a cross pin 20. The lower end of spring 24 engages a screw plug 22 threaded into the end of the tube 15, and through which plug the rod 17 works freely. A filling plug 21 is rigidly fixed within the upper end of the tube 14 by means of a cross pin 16. The construction and management of these parts are such that the ends of the cross-pin 20 are held in spring-pressed engagement with the inclined notches 25 and this pressure causes the body of the tube to swing inwardly and hug the bottom wall of the socket in which it lies. The parts are thus held effectively against rattling. To release the upper sash, the latch-hook is drawn down to release the cross-pin from the notches, whereupon the locking device is swung outwardly on its pivot 16 from between the jaws 10'. These locking mechanisms are so arranged that when the upper sash is swung into either of its other two positions, they may be engaged with the brackets 27 or 28, depending upon the position into which the upper sash is swung. It will thus be seen that the locking devices not only secure the upper sash firmly in the desired position, but also through the action of their springs effectually prevent rattling.

The operation of my device will be understood from the foregoing description but may be briefly described as follows: Assuming that the device is in the position shown in full lines in Fig. 1, *i. e.* with the upper sash resting vertically above the lower one, and that it is desired to lower the upper sash out of the way, the operator will first pull the rods 17 downwardly against the action of their respective springs by means of the thumb handles 19, until the cross pins 20 can spring clear of their respective notches 25, whereupon the operator will swing the lower sash back until it is clear of the lower one. The upper sash can now, by

means of the pivotal connections of the rod 8, be swung to its lower position, as shown in dotted lines in Fig. 1, and the cross pins 20 slipped into the notches 25 of the brackets 27. Similarly the upper sash may be swung to its intermediate position, as seen in dotted lines in Fig. 1, and locked to the brackets 28.

It frequently happens that because of snow, rain or sleet, the driver of a vehicle cannot readily see through the upper glass. Heretofore it has been necessary in such cases to lower the upper sash, thus depriving the driver of its protection at a time when he is most in need of it. The swinging of the upper sash to its intermediate position, and there locking it, obviates this difficulty inasmuch as the relative positions of the sash members are such at this time as to permit the driver to readily see enough of the road ahead of him through the opening formed between the meeting edges of the sash members to enable him to steer while at the same time he is fully protected by the upper glass. It will also be noted that the intermediate position of the upper sash is such as to in no way effect the efficiency of the device as a wind shield.

I am aware that it has heretofore been proposed to construct a two-part wind guard, the upper sash of which is connected to the lower by a pair of links which in any other position than when the two parts are in the same plane, constitute the only connection and support between said parts. My construction, in contradistinction, utilizes its links as braces for the upper sash while the real supports for the latter are the parts upon which the said sash is carried at its base edge, so that the structure is as rigid with the sash in tilted position as when the two are alined.

While I have herein shown one preferred embodiment of my device, it is apparent that it may be changed more or less in details of construction without in any manner departing from the spirit of the invention.

I claim as my invention:

1. A windguard for vehicles comprising an upright lower sash, supporting brackets connected with the upper portions of the sash at each side and extending laterally therefrom, an upper sash, links connecting the sides of the upper sash with said supporting brackets at points remote from the lower sash, means for locking said upper sash either in alinement with the lower sash, or in tilted relation to the lower sash with its lower edge offset and spaced away from the upper edge of said lower sash, and means for supporting the lower end of said upper sash when lowered into position alongside of, and approximately parallel with the lower sash.

2. A windguard for vehicles comprising a

lower sash, bracket supports connected with the upper portion of the sash at each side thereof and an upper sash adapted to be tilted relative to the lower sash with its lower edge spaced away from the upper edge of said lower sash, links each pivotally connected at one end to the upper sash and at the other end to the corresponding bracket support at a point remote from the lower sash and means for locking said upper sash in alined or tilted position.

3. A windguard for vehicles comprising an upright lower sash, bracket supports connected with the upper portion of said sash at each side thereof, and extending laterally therefrom, an upper sash, links connected to the sides of the upper sash and to the respective bracket supports at points remote from the lower sash, said brackets supporting the lower edge of said upper sash in tilted relation to the lower sash with its lower edge offset and spaced away from the upper edge of said lower sash, and means for locking the lower edge of said upper sash in either its alined or tilted position.

4. A windguard for vehicles comprising a lower sash, supporting brackets connected with the upper portion of the sash at each side thereof, and extending laterally therefrom, an upper sash, links each connected at one end to the sides of the upper sash and at its other to said supporting brackets at points remote from the lower sash, said brackets supporting the lower edge of the upper sash when in tilted relation to the lower sash with its lower edge offset from the upper edge of said lower sash, and means for locking said upper sash in its alined or tilted relation to the lower sash.

5. In a windguard for vehicles, the combination with a lower frame member, supporting brackets connected to said lower frame member and extending laterally therefrom, an upper frame member, means pivotally connecting the sides of said upper frame member to said bracket supports at points remote from said lower frame member, whereby said upper member may be swung into three positions relative to the lower member, and means for locking said upper frame members in any of said positions.

6. In a wind guard for vehicles, the combination with a lower section provided with bracket arms projecting laterally therefrom at an abrupt angle, to the plane of said section, an upper sash frame member, links pivotally connected to the sides of said upper sash frame member and to said bracket supports, said links permitting said upper member to be moved pivotally and swung into three or more positions relative to the lower section, and means for locking said upper member in upright extension of, and in the same plane with, said lower section, and also in upstanding relation to the lower section

but with the proximate edges of the two sections spaced apart and offset from each other to provide a sight opening.

7. A wind guard for vehicles comprising a lower sash provided near its upper end with a pair of supporting arms projecting outwardly therefrom at an abrupt angle to the plane of the lower sash, an upper sash, connecting links forming pivotal connections between said upper sash and the outer ends of said supporting arms, whereby the upper sash may be swung into tilted relation to the lower sash with its lower edge offset and spaced away from the upper edge of said lower sash, and means for locking said upper sash to the sub-structure in said tilted position and lying in a different plane from the plane of said supporting links whereby the parts thus locked together constitute a polygonal-sided braced structure.

8. A wind guard for vehicles comprising an upright lower sash, a movable sash adapted to be superposed on the lower sash, laterally extending sash supports at the upper edge of the lower sash, means for adjustably locking the lower edge of the upper sash to said laterally extending sash supports in various angles of adjustment relatively to the lower sash, and brace links connecting the upper sash with the substructure.

9. In a wind guard for vehicles, the combination with normally upper and lower sash members, of links each pivotally connected at one end to the upper section at points remote from the lower edge of the latter, and at its other end to the lower section whereby the upper member may be swung into tilted relation to the lower member with its meeting edge offset and spaced away from the meeting edge of the lower member, means on which the meeting edge of said upper member is supported when in offset position, and means for locking said upper member in said latter position.

10. In a foldable wind shield for automobiles, the combination of a lower section, a normally upper section, a pair of pivots forming a transverse axis upon which said normally upper section may be oscillated, and means for connecting and holding said upper section rigidly in a plurality of operative positions comprising manually adjustable take-down supports connected to said pivots of the upper section and at their opposite ends movably connected to the lower section, and an additional connecting support, arranged to form in conjunction with said take-down supports, the upper section and the substructure, a polygonal sided bracing structure which occupies a bracing position when the upper section is arranged in upstanding relation to the lower section but with the proximate edges of the two offset and spaced apart to provide a clear sight opening and locking devices for lock-

ing said upper section rigid with said bracing structure when the upper section is in alinement with the lower section or when it has its lower edge offset from the upper edge of the lower section.

11. In a sectional wind shield, the combination of a lower section, a normally upper section, brackets adjacent to meeting edges of the sections, having arms extending outward from the plane of, and connecting to one of said sections and locking devices for rigidly locking the upper section in two positions of adjustment viz; in alinement with the lower section and also with the lower edge of the upper section offset and spaced away from the top edge of the lower and locked to said bracket arms at points remote from the plane of the section which carries said brackets.

12. In a wind guard for automobiles, the combination with a sub-structure, of a movable upper member mounted above the sub-structure and supported thereby, said upper member having an unconfined upper margin and adapted to be swung into a plane at an incline to the plane of the sub-structure with its lower edge offset therefrom, so as to present a sight opening between the top of the latter and the lower edge of the movable member, and a bracing structure supported by the sub-structure and connected to the movable upper member for bracing the latter when it is swung into its inclined position.

13. In a wind guard for automobiles, the combination with a lower member, of a movable upper member having an unconfined free upper margin, said upper member being adapted to be swung into position in which its lower edge is offset and spaced away from the upper edge of the lower member to form a sight opening, means for supporting the upper member comprising links secured at one end by a stationary pivot to the upper member at points intermediate the upper and lower margins of the latter and at their other end to the lower member, said links being locked against endwise movement and means for locking the upper section in its upstanding and in its offset position.

14. In a wind guard for automobiles, the combination with a lower member, of a movable upper member having an unconfined free upper margin and adapted to be swung into a position with its lower edge offset and spaced away from the upper edge of the lower member to form a sight opening, links pivotally connecting the two members, said links being locked against endwise movement and connected to the upper member at points intermediate the lower and upper margins of the latter and means for locking said upper member in its offset position.

15. In a wind guard for automobiles, the

combination with a lower member of a movable upper member mounted above the lower member, said upper member having a free unconfined upper margin and adapted to be swung into a position with its lower edge offset and spaced away from the upper edge of the lower member to form a sight opening, a link at each side of the guard pivotally connecting the two members and supporting the upper member, said links being locked against endwise movement and means for locking the upper member in its offset position at points distant from the pivotal connection of the links with the upper member.

16. In a wind guard for automobiles, the combination with a lower member, of a movable upper member mounted above the former and adapted to be swung into a position with its lower edge offset and spaced away from the upper edge of the lower member to form a sight opening, said upper member having a free unconfined upper margin, links supporting the upper member and pivotally connected at their ends to the upper and lower members said links being locked against endwise movement on their pivots and means for bracing the upper member in its offset position at points spaced away from the pivotal connection of the links.

17. In a wind guard for automobiles, the combination with a lower member, of a movable upper member, having a free unconfined upper margin, said upper member being adapted to be swung into a position with its lower edge offset and spaced away from the upper edge of the lower member to form a sight opening, links pivotally supporting the upper member and means for locking the upper member in its offset position at points distant from the pivotal connection of the links with the upper member.

18. In a wind guard for vehicles, the combination with a lower member, of a movable upper member mounted above the lower member and adapted to be swung into a position with its lower edge offset and spaced away from the upper edge of the lower member to form a sight opening, said upper member having a free unconfined upper margin, means for pivotally supporting the upper member, the pivotal connections thereof being at points intermediate the upper and lower margins of the upper member, and means for bracing the upper member when it is swung into its offset position.

19. In a wind guard for automobiles, the combination with a lower member, of a movable upper member adapted to be positioned so that its lower edge is offset and spaced away from the upper edge of the lower member to form a sight opening, said upper member being supported so as to have a free unconfined upper margin, links connect-

ed at one end to the upper member and at their other end to the lower member, said links locking the upper member against endwise movement and means for bracing the upper member in its offset position at points distant from the connections of the links with the upper member.

20. In a wind guard for automobiles, the combination with a lower member, of a movable upper member mounted above the lower member and arranged to be swung into a substantially vertical plane or at a plane inclined thereto with its lower edge offset from the lower section, so as to present a sight opening between the lower and upper members, said upper member also being supported so as to have a free unconfined upper margin, links pivotally connecting the upper and lower members and means for bracing

said upper member when in its inclined position.

21. In a wind guard of the character described, the combination with a base structure, of an upper member adjustable to a plane with the base structure, or at an angle thereto with its lower edge offset from said base structure, or parallel with said base structure, bracing members mounted at each side of the base structure and supporting the upper member and means carried by said base structure for locking the upper adjustable member in each of its three positions of adjustment.

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Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."