H. E. ADAMS.

SECURING MEANS FOR AUTOMOBILE TOP CLOSURES.

APPLICATION FILED MAR. 7, 1921.

1,424,061.

Patented July 25, 1922.

2 SHEETS—SHEET 1.

Fig. 1.

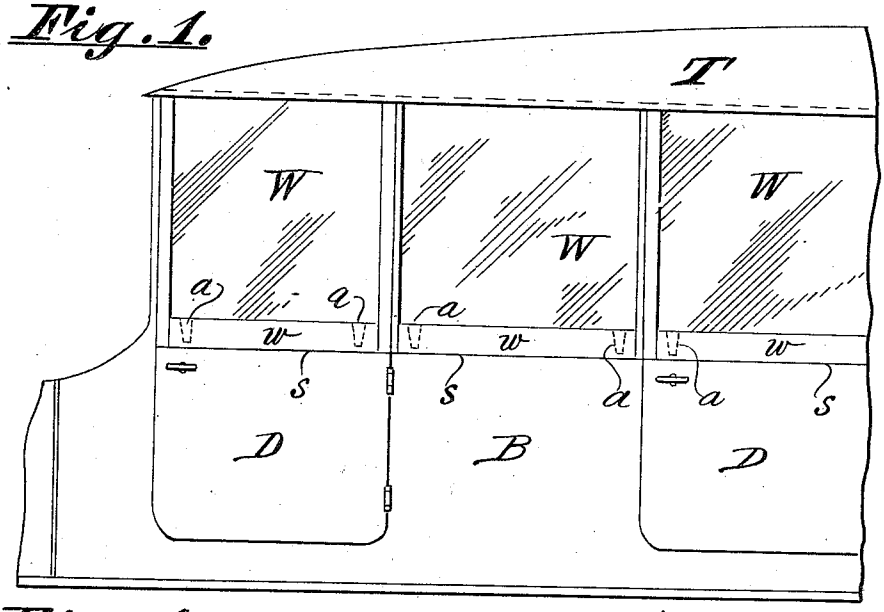


Fig. 4.

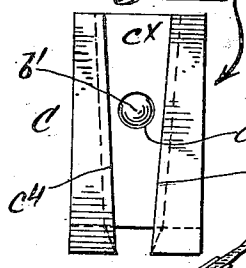


Fig. 2.

cx Fig. 3.

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2 SHEETS—SHEET 2.

Fig. 5.

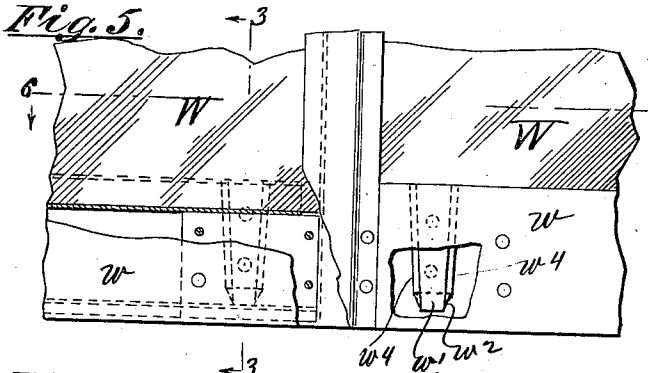


Fig. 8.

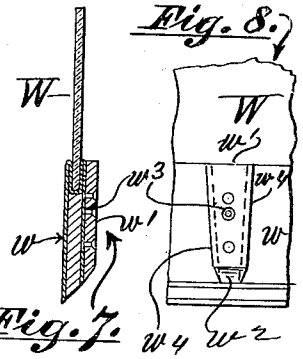


Fig. 6.

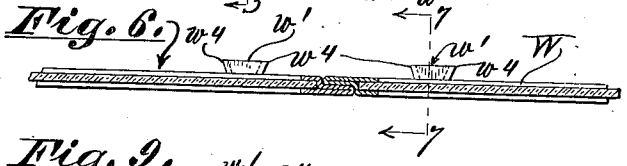


Fig. 7.

Fig. 9.

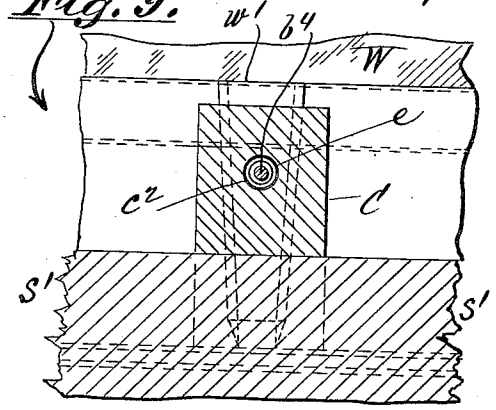


Fig. 10.

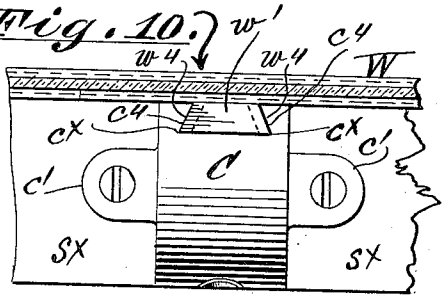


Fig. 11.

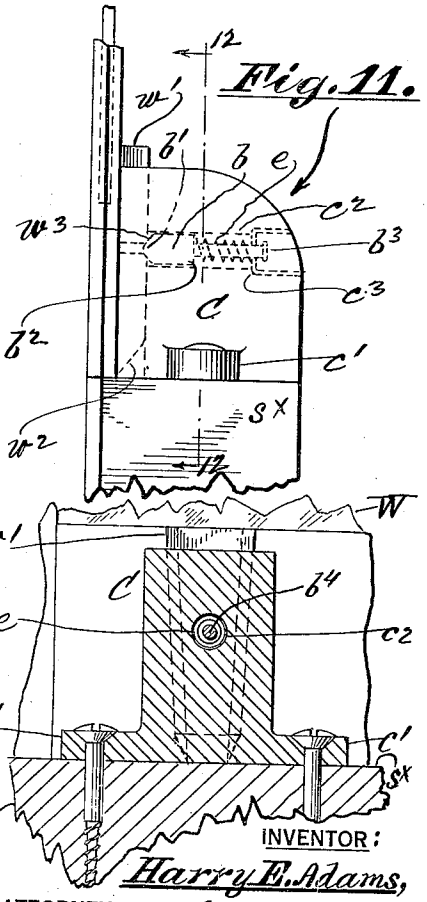


Fig. 12.

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UNITED STATES PATENT OFFICE.

HARRY E. ADAMS, OF NEW YORK, N. Y.

SECURING MEANS FOR AUTOMOBILE TOP CLOSURES.

1,424,061. Specification of Letters Patent. Patented July 25, 1922.

Application filed March 7, 1921. Serial No. 450,375.

To all whom it may concern:

Be it known that I, HARRY E. ADAMS, a citizen of the United States, and a resident of the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Securing Means for Automobile Top Closures, of which the following is a specification.

My improvements relate particularly to means for securing the closure panels employed in conjunction with convertible automobile bodies and tops, designed and adapted for use either in open touring car form, or for equipment in closed limousine form, as may be found most expedient in adapting the car to exigencies incidental to travel, my main object being the provision of conveniently manipulatable and substantially rigid securing devices for the support of the detachable side sashes when positioned on the sills of the car body, and the invention consisting in the specific combination and arrangement of parts described and claimed,—a distinctive feature being the construction, application and utilization of the automatic sash locking mechanism, as hereinafter fully set forth.

In the accompanying drawings,

Fig. 1, is a side view of a portion of an auto-car indicating the positioning and use of my closure sash securing means as related to the car body;

Fig. 2, is a perspective view of the inner side of the lower portion of a sash as secured to a bevelled car body sill;

Fig. 3, is a vertical sectional elevation taken substantially upon plane of lines 3—3, Figs. 2 and 4;

Fig. 4, is a face view of the bolt casing shown in Figs. 2, 3 and 9.

Fig. 5, is an exterior elevation, partly broken away and in section, of the adjacent lower portions of two sashes adapted for support on bevelled sills such as indicated in Figs. 2 and 3;

Fig. 6, is a horizontal section taken upon plane of line 6—6, Fig. 5;

Fig. 7, is a vertical section taken upon plane of line 7—7, Fig. 6;

Fig. 8, is a detail view showing the face of a coupling tongue;

Fig. 9, is a vertical section taken upon plane of line 9—9, Fig. 3;

Fig. 10, is a horizontal section of a sash, showing a top view of my automatic locking device as adapted and applied to a flat sill of a car body;

Fig. 11, is an edge view of the lower portion of a sash, and the top of a flat sill, showing an elevation of the form of my lock casing shown in Fig. 10;

Fig. 12, is a section taken upon plane of line 12—12, Fig. 11.

In Figs. 2 to 7 inclusive, of the drawings, my automatic sash lock for automobile closures is shown as adapted and applied to the bevelled sill of a car body, while in Figs. 8, 9 and 10, it is shown as adapted and applied to a flat sill of a car body,—the construction and functioning of the operative parts being essentially the same in either external form of lock.

Fig. 1, illustrates the positioning and relative location (as *a*, *a*) of my automatic locks for the window sashes W, as attached to the car body, either to the doors D, thereof or directly to the body B itself,—T, representing a demountable top of any desired or well known construction, the horizontal lines *s*, *s*, coinciding with the front edges of the sills, and of the lower front edges of the lower members *w*, of the sash frames in each case.

As applied to a bevelled sill s', (see particularly Figs. 2 and 3) the bottom of each bolt casing C, is made to conform thereto, and is formed with a rear flange *c*, by means of which it is screwed to the rear upper flat portion s^2, of said bevelled sill, whereas when applied to a flat sill s^x, as in the last three figures of the drawings, the bolt casing C, is formed with lateral lugs c', c', for screw attachment to said sill s^x.

In either form the casing C, consists preferably, although not necessarily, of a solid block of metal formed with a recess c^2, extending from front to rear, in which is slidably mounted a bolt *b*, having a peaked outer end or nose b', as shown more particularly in Fig. 3, and indicated in Fig. 9,—said peaked nose b', being for contactural engagement with the wedge shaped lower

end w^2, of a coupling tongue w', rigidly attached to the inner face of the aforesaid lower member w, of the panel or sash frame W, and also for engagement with a mortise w^3, formed for the purpose in the body portion of said coupling tongue w', as also shown more particularly in said Figs. 3 and 9, of the drawings.

Interposed between a shoulder b^2, on the bolt b, and an abutment c^3, in the recess c^2, is a compression spring e, which tends constantly to force the bolt b, outward with its peaked nose b', protuberant into a dove tail groove c^x, formed in the face of the casing C, the extent of such forward thrust of the bolt b, being limited by a stop b^3, on the inner end of the shank b^4, of the said bolt b, said stop b^3, being positioned to engage with the abutment bearing c^3, in such manner as to gauge the extent of intrusion of the bolt nose b', into said dovetail groove c^x, so as to maintain said bolt nose b', (even when the sash or panel is withdrawn) in operative relation to the wedge end w^2, and the socket w^3, of the coupling tongue w'.

The latter is riveted or otherwise rigidly secured to the inner face of the lower member w, of the sash frame, is in the form of a dovetail in cross section, and has downwardly convergent longitudinal sides w^4, w^4, corresponding to and fitting in the longitudinally convergent side walls c^4, c^4, of the dovetail groove c^x, in the face of the casing C.

I thus provide not only for the forcing back of the bolt b, against the resistance of the spring e, by means of the wedge end w^2, of the coupling tongue w', when the latter is inserted in the dovetail groove c^x, but also provide for the functioning of the coupling tongue w', itself as a wedge to fit laterally and firmly, and tightly within the said groove c^x, so that the panel or sash W, will be supported rigidly on the car sill, provided of course that plural locking means such as shown and described are provided for each panel or sash, as indicated particularly in Figs. 1 and 2, of the drawings.

Furthermore, by my construction and arrangement of interlocking parts, the operation of detachably mounting and securing the sash in position upon the car sill, and of removing it therefrom, is rendered automatic in so far as the bolt b, is concerned, the spring e, yielding to conform to either operation, while at the same time affording sufficient resistance, when the parts are in the position shown in Fig. 3, to effectually and positively maintain the sash in position on the sill against displacement by possible jar or concussion incidental to the transit of the car over rough roads or obstructions.

It is to be understood that by the term panel or sash W, as herein used, I mean to include any transparent window panels, or equivalent closure means, used in conjunction with convertible auto-bodies and tops of the class designated.

My automatic locking mechanism is simple and inexpensive, and not liable to get out of order the only operative parts being the spring bolts which are enclosed, isolated and protected by the casing blocks in which they are mounted. Furthermore no manipulation is required other than the insertion or withdrawal of the coupling tongues in the panel into or from the grooves in said casing blocks, so that the mechanism is practically fool proof.

It is to be understood that by the term peak-nosed bolt b, as herein used, I mean to designate any bevelling, chamfering or curvature of the nose of the bolt that will adapt it to yield to pressure exerted by the coupling tongue w'.

What I claim as my invention and desire to secure by Letters Patent is,

1. Securing means for an automobile top closure panel of the character designated, comprising a plurality of automatic locking devices each consisting of a dovetail coupling tongue secured to the lower member of the panel frame, said coupling tongue being formed with a bolt mortise, a casing mounted on the car sill and formed with a dovetail groove for the reception of said dovetail coupling tongue on the panel, and a peak nosed spring bolt mounted in said casing and adapted to engage the said mortise in the coupling tongue, for the purpose described.

2. Securing means for an automobile top closure panel of the character designated, comprising a plurality of automatic locking devices each consisting of a dovetail coupling tongue formed with convergent longitudinal edges, said coupling tongue being wedge shaped at its lower extremity and being also formed with a bolt mortise, a casing mounted on the car sill and formed with a dovetail groove having downward convergent sides for the reception of the said convergent dovetail coupling tongue on the panel, and a peak nosed spring bolt mounted in said casing and adapted to engage the said mortise in the coupling tongue, for the purpose described.

3. Securing means for an automobile top closure panel of the character designated, comprising a plurality of automatic locking devices each consisting of a dovetail coupling tongue formed with convergent longitudinal edges, said coupling tongue being wedge shaped at its lower extremity and being formed with a bolt mortise, a casing mounted on the car sill and formed with a dovetail groove having downward convergent sides for the reception of the said con-

vergent dovetail coupling tongue on the panel, and a peak nosed spring bolt mounted in said casing and adapted to engage the said mortise in the coupling tongue, together with means for limiting the outward thrust of said bolt, for the purpose described.

4. In a device of the character described, a beveled sill, a bolt casing conforming thereto, a bolt slidable in said casing, a coupling tongue having wedge-shaped lower end and having a mortise for engagement by said bolt, and means for automatically gauging the extent of intrusion of the bolt nose in operative relation to said wedge end and mortise.

HARRY E. ADAMS.

Witnesses:
DOROTHY MIATT,
GEO. WM. MIATT.