

M. ROUNDS.
 CONVERTIBLE CAR.
 APPLICATION FILED AUG. 7, 1908.

933,268.

Patented Sept. 7, 1909.

2 SHEETS—SHEET 1.

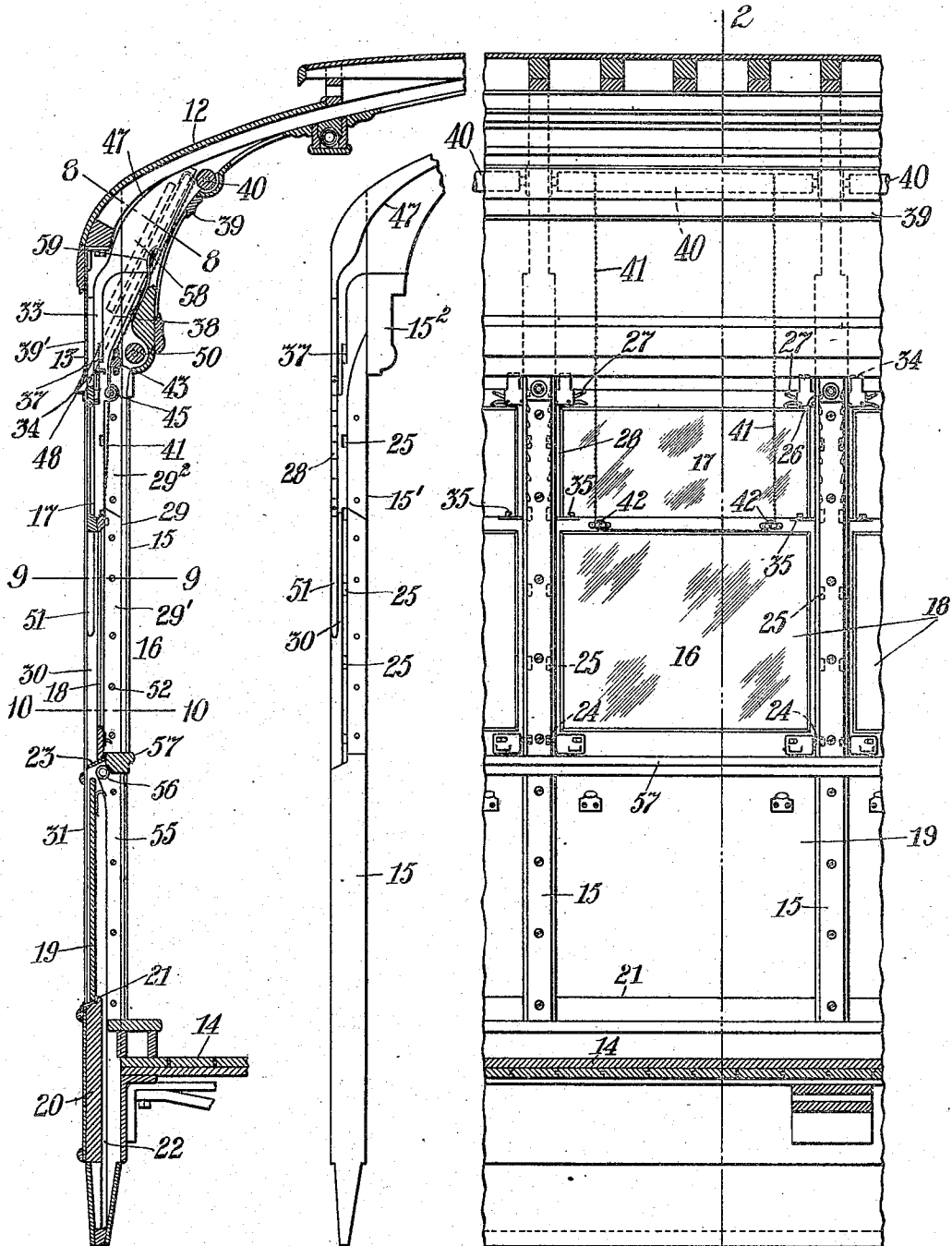


Fig. 2.
 Witnesses.
 Sydney E. Taft.
 Ernest A. Telfer.
 Fig. 3.

Fig. 1.
 Inventor.
 Myron Rounds.

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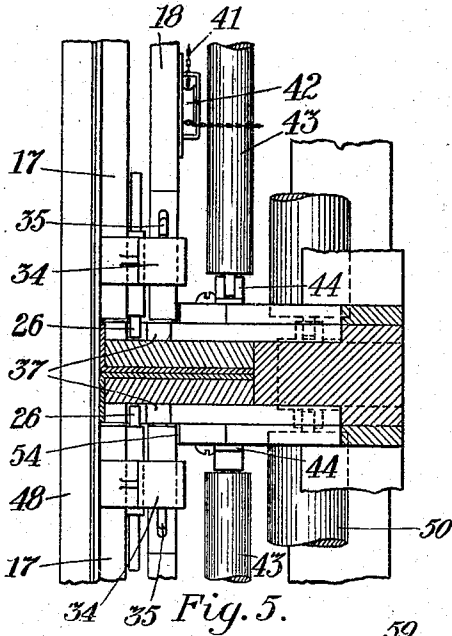


Fig. 5.

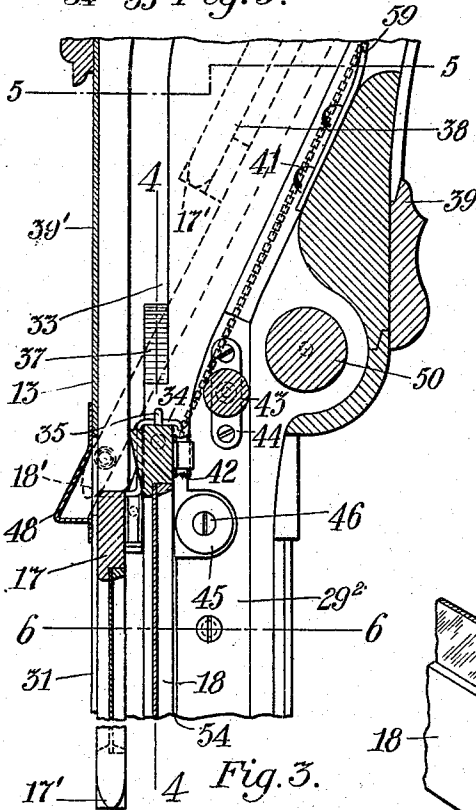


Fig. 3.

Witnesses.
 Sydney E. Taft.
 Ernest A. Gelfin.

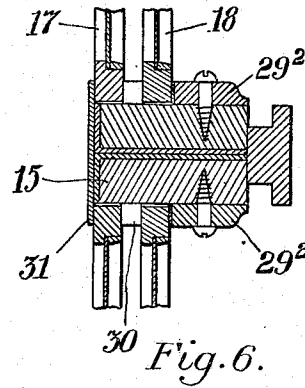


Fig. 6.

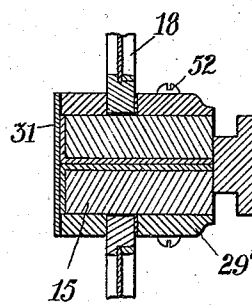


Fig. 10.

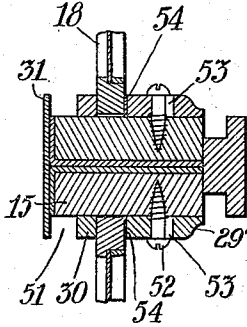


Fig. 9.

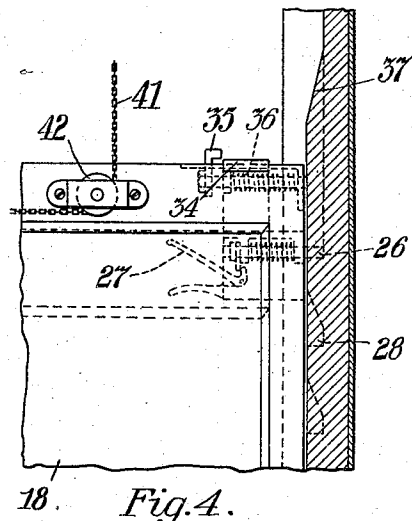


Fig. 4.

Inventor.
 Myron Rounds

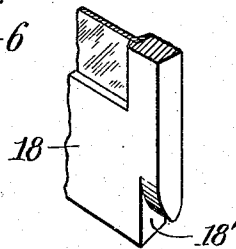


Fig. 11.

UNITED STATES PATENT OFFICE.

MYRON ROUNDS, OF BOSTON, MASSACHUSETTS.

CONVERTIBLE CAR.

933,268.

Specification of Letters Patent.

Patented Sept. 7, 1909.

Application filed August 7, 1908. Serial No. 447,394.

To all whom it may concern:

Be it known that I, MYRON ROUNDS, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Convertible Cars, of which the following is a specification.

This invention relates to improvements in convertible cars, that is, in a car in which it is desired to change the same from a closed to an open car. To accomplish this the sides of the car are closed by means of a series of panels which are adapted to be dropped into panel receiving chambers and a series of sashes, preferably an upper and a lower sash, said upper and lower sashes being adapted to be moved upwardly into a sash receiving chamber in the roof of the car.

The invention consists in improved means whereby the two sashes may be raised together and held locked together in the sash receiving chamber in the roof of the car.

The invention further consists in the combination, with the sashes, of a sash balance so arranged with reference to the sashes that the means connecting the sash balance to the sashes pulls at an angle to the sashes when they are in their closed position and thus assists, when the sashes are raised, in tipping them to an inclined position in the roof.

The invention further consists in a holder adjacent to the lower end of the sash chamber which extends longitudinally of the car and is adapted to receive the lower end of one of the sashes and hold said sash, when said sash is in its inclined position within the sash chamber.

The invention further consists in the construction of the guideways for the sash and the relative location of the sash chamber thereto, the lower corners of the lower sash being cut out, as hereinafter described, whereby a straight post may be used and the guides for the sash made parallel from the arm-rail to the top of the upper sash, the lower end of the chamber for the sash terminating substantially at the top of the upper sash, so that the projection of the sash chamber is very slight and is located above the top of the upper sash, as well as the curtain roll, the advantage derived from this construction being that the curtain roll and the inner wall of said chamber do not project over the seat in the car below the top of

the upper sash when said upper sash is in the position indicated in Figure 2, so that when a person rises from the seat there is no danger of the head or hat of the person striking the casing which surrounds the curtain roll.

The invention consists finally in the combination and arrangement of parts set forth in the following specification and particularly pointed out in the claims thereof.

Referring to the drawings: Fig. 1 is an inside elevation, partly in section, of a portion of one side of my improved convertible car. Fig. 2 is a detail sectional elevation taken on line 2—2 of Fig. 1, looking toward the right in said figure. Fig. 3 is an enlarged section taken on line 2—2 of Fig. 1, illustrating a portion of the sash chamber and the sashes, the lower sash being partly raised. Fig. 4 is a detail sectional elevation of a portion of the upper and lower sashes, a portion of the post being shown in connection therewith in section, on line 4—4, Fig. 3. Fig. 5 is a sectional plan taken on line 5—5 of Fig. 3. Fig. 6 is a section taken on line 6—6 of Fig. 3. Fig. 7 is a detail elevation of one of the posts. Fig. 8 is a section taken on line 8—8 of Fig. 2. Fig. 9 is a section taken on line 9—9 of Fig. 2. Fig. 10 is a section taken on line 10—10 of Fig. 2. Fig. 11 is a perspective view of one of the lower corners of the lower sash.

Like numerals refer to like parts throughout the several views of the drawings.

In the drawings, 12 is the roof of the car, 13 the side and 14 the floor. In the side of the car are a series of posts 15, 15 which have openings 16, 16 therebetween and each of these openings is closed by an upper sash 17, a lower sash 18 and a panel 19. The panel 19 extends across the space between the posts immediately above the floor and rests, when closed, upon a base-board 20 in the side of the car. When it is desired to lower this panel the same is slightly raised to clear the lip 21 and is then lowered into a recess 22 inside the base-board 20. The lower sash 18 rests, when closed, upon the window stool 23 and is locked in its closed position by means of spring bolts 24, 24 which are adapted to spring into recesses 25, 25 in the post 15 and thus lock the lower sash either in its closed position or partly open in a manner well known to those skilled in this art. The upper sash is also adapted to be

locked in different positions by lowering the same from its closed position, this locking means consisting of a spring bolt 26 which is actuated by a lever 27 and is adapted to engage the teeth upon the rack 28 on the side of the post 15. This means of locking the upper sash for ventilation is well known to those skilled in the art.

The lower sash 18, when in its lowermost position, is guided between two stop beads or guides 29 and 30. The stop bead 30 is discontinued at the bottom of the upper sash when said upper sash is in its closed position, as in Fig. 2, and said upper sash is guided on the outside thereof by the guide-strip 31. The upper sash 17 has brackets 34 fast thereto which extend upwardly from the casings of the spring bolts 26 and these brackets extend outwardly over or across the top of the lower sash 18, so that when said lower sash is raised, as illustrated in Figs. 3 and 4, the upper edge of the lower sash will abut against the under side of the bracket arms 34, 34 and the two sashes 17 and 18 will then move upwardly together. The lower sash has spring catches 35, 35 upon its upper edge and each of these spring catches is normally held in the position illustrated in Fig. 4, so that when the lower sash is raised the spring catch will be out of alinement with the bracket arm 34, but as soon as the two sashes have been raised a slight distance together then the spring catch 35 is carried toward the side of the lower sash by a spring 36 and the hooked catch 35 then passes over the bracket arm 34. This locks the upper and lower sashes to each other so that one cannot be moved without the other, and this locking occurs during the raising of the lower and upper sash, at the time when the outer end of the catch 35 moves down the incline 37 formed in the post 15. Thus, the two sashes are locked together and when the sashes are lowered the reverse movement will take place and the spring catch 35 will be thrown out of engagement with the bracket arm 34 as soon as the spring catch rides up the incline 37 in its downward movement.

A sash receiving chamber 38 is located in the roof of the car, said roof forming the upper and a portion of the outer wall of said chamber, the inner wall 39 of said chamber extending at an incline from the roof downwardly to a point substantially on a level with the top of the upper sash when the upper sash is closed, the panel 39' forming the lower portion of the outer wall of the chamber 38. This chamber 38 is adapted to receive the two sashes when they are raised thereinto and placed in an inclined position therein. To assist in this raising of the sashes a sash balance 40, well known to those skilled in this art, is provided, said sash balance being connected by a chain 41 to the

lower sash 18. The chain 41 is connected at its two ends to the sash balance and extends in U-form around the two sheaves or guide pulleys 42, 42 which are rotatably mounted upon the upper end of the lower sash 18. Said chain is further guided by a guide-roll 43 suitably journaled in its opposite ends in plates 44, 44 fast to the posts 15, and these guide-rolls bear against the opposite sides, respectively, of the lower sash, as the sashes are being raised into the sash chamber, as hereinbefore set forth. The upper edge of the sash 18 engages, as the sashes are raised into the sash chamber, ribs 47, 47 in the upper portion of said sash chamber. When the sashes are in their inclined position, as indicated in Fig. 2 in dotted lines, in the sash chamber, the lower end of the sash 18 rests in a holder 48 which extends longitudinally of the car and is fastened to the outside thereof beneath the letter board or panel 39', so that it may be easily removed. The holder 48 also serves to shed the rain and divert the same from the windows.

A curtain is attached to a spring-curtain roll 50 journaled in suitable plates fastened to the posts 15. The stop bead or guide 30 is cut out at 51 to allow the upper sash to be dropped for the purpose of ventilation. The stop beads 29 are made in two parts 29' and 29'', the part 29' being fastened to the posts 15 by means of screws 52 (Fig. 9) and these screws extend through slots 53 in said stop beads and are screwed into the posts 15 so that by loosening said screws the stop bead may be adjusted and pressed closely against the lower sash, a strip of felt 54 being preferably supplied upon the inner edge of said stop beads in order to make a tight joint in cold weather. Stop beads 55 are also supplied, fastened to the posts 15 to assist in guiding the panels 19 into the recesses 22 when said panels are dropped in order to make the car an open car.

The operation of changing the car from a closed to an open car is as follows: Assuming the parts to be in the relative positions illustrated in Figs. 1 and 2, the panels 19 are raised until the lower edge thereof clears the lip 21 and are then pushed inwardly and dropped into the recess 22, thus opening all of the space between the post from the lip 21 to the arm rail 57. The bolts 24, 24 upon the lower sash are then pushed backwardly out of the recesses 25 in the posts 15 and said lower sash is then pushed up until the upper edge thereof abuts against the bracket arm 34. The two sashes 17 and 18 will then move together and after they have been moved up a slight distance the catches 35 will slide down the incline 37 and over the bracket arms 34, 34, thus locking the upper and lower sashes together relatively to each

other. The catches 35 and the bolts 26 will then slide along the recessed portion or groove 33 until they pass out of said groove into the open space 58 located thereabove at opposite sides of the sash chamber 38. The upper edge of the lower sash 18 will then contact with the ribs 47, 47 upon opposite sides of said sash chamber and upon pushing the sashes still farther upwardly they will be tipped to an inclined position and will fall over upon the springs 59 fast to the wall 39 upon opposite sides of said sash chamber. The sash balance 40, during this upward movement of the sashes, will pull thereon at an angle thereto through the chain 41. The lower edge of the upper sash 17 is rounded off at 17' to clear the wall 39' of the chamber 38, as the sashes are being tipped into the inclined position aforesaid. The lower sash 18 is cut out at 18', 18' at its lower corners on opposite sides thereof, as illustrated in Fig. 11, in order that said window at its opposite lower corners may clear the guide-strip 31 when being tipped into the inclined position aforesaid. Finally after the sash has been raised to its highest point in the sash chamber the same is allowed to drop and the lower end of the sash 18 will enter the holder 48, as shown in dotted lines (Fig. 2). During the first part of this upward movement of the sashes the inner faces of said sashes, upon opposite sides, will bear against and be guided by the guide-rolls 45, 45 and during all of the upward movement of said sashes hereinbefore described the chain 41 will be pulling inwardly upon the upper end of the sash 18 so as to tip the same into the inclined position indicated in dotted lines (Fig. 2).

In reversing the above described operation, to make a closed car of the open car, the panels 19 are drawn upwardly out of the recess 22 and the lower end thereof slipped over the lip 21, as shown in Fig. 2. The sashes are then raised slightly until the lower end of the sash 18 is moved out of the holder 48; then the sashes are dropped and as the spring catches 35 arrive opposite the incline 37 upon the posts 15, said spring catches will be pushed toward each other or away from their respective posts until said catches disengage the bracket arm 34. The spring bolts 26 will stop the downward movement of the upper sash 17 when said upper sash has arrived in the position illustrated in Figs. 2 and 4 by engaging the upper teeth of the racks 28, and the lower sash now being freed from the upper sash and the upper sash being stationary, said lower sash may be lowered until the lower edge thereof rests against the window stool 23, as illustrated in Fig. 2.

It will be seen that when the sashes are raised into the inclined position illustrated in Fig. 2 in the sash chamber 38, there is no

danger of the same dropping accidentally, as they are firmly fixed in position by reason of the lower edge of the sash 18 resting in the holder 48, and also by reason of the sash balance 40 and chain 41 connected thereto and acting to hold them in their raised position.

If it is desired to lower the upper sash 17 for ventilation, independently of the lower sash 18, the spring bolts 26 are moved backwardly and said sash allowed to drop to the desired height when the bolts are released and spring into engagement with the racks 28. If it is desired to raise the lower sash 18 independently of the upper sash 17, the spring bolts 24 are moved backwardly out of their respective recesses 25 and said window moved upwardly until said spring bolts are in a position in alinement with other recesses 25, when said spring bolts are released and snap into said recesses, allowing the lower sash to be partly raised.

It will be noted, by reference to Fig. 7, that the post 15 is formed of a single straight piece of lumber extending from the top to the bottom thereof, the inner face of said post 15' lying in a vertical plane substantially from the bottom to the height of the top of the upper sash, when said upper sash is in the position illustrated in Fig. 2, and the upper end of said post is widened in order to form a support for the inner inclined wall of the chamber 38 by adding thereto a wooden bracket or extension piece 15². The advantages of this construction are that, as hereinbefore stated, the inner wall of the chamber is at such a height above the head of the person seated in the car that if said person stands up, his head or hat will not collide with said inner wall of the chamber 38, and moreover, the construction adds greatly to simplicity and economy, as the same requires very much less lumber and labor to produce it, than would be required if the inner face of the post could not be formed upon a straight line or in the vertical plane aforesaid. This construction is rendered possible by the small area and depth of the chamber 38 and by the fact that the upper and lower sashes are cut out upon their lower outer edges and in their lower corners, respectively, so that the sashes can be raised and tipped into their inclined position in the chamber without widening the post below the top of the upper sash when said upper sash is in the position illustrated in Fig. 2.

Having thus described my invention, what I claim and desire by Letters Patent to secure is:

1. A convertible car having, in combination, a plurality of posts with openings therebetween, a sash in each of said openings, a chamber in the roof of said car adapted to receive said sash, a sash balance,

and means connecting said sash balance to said sash and adapted to hold said sash in an inclined position in said chamber.

2. A convertible car having, in combination, a plurality of posts with openings therebetween, a sash in each of said openings, a chamber in the roof of said car adapted to receive said sash, and a sash balance located at one side of the plane of the inner face of said sash when said sash is in said opening, and means connecting said sash to said sash balance, whereby said sash may be held in an inclined position in said chamber.

3. A convertible car having, in combination, a plurality of posts with openings therebetween, a sash in each of said openings, a chamber in the roof of said car adapted to receive said sash, a spring-actuated sash balance located at one side of the plane of the inner face of said sash when said sash is in said opening, and a flexible member connecting said sash to said sash balance, whereby said sash may be held in an inclined position in said chamber.

4. A convertible car having, in combination, a plurality of posts with openings therebetween, a sash in each of said openings, a chamber in the roof of said car adapted to receive said sash, a spring-actuated sash balance located at one side of the plane of the inner face of said sash when said sash is in said opening, two guide pulleys fast to said sash, and a flexible member extending around said pulleys with its opposite ends fast to said spring sash balance, whereby said sash may be held in an inclined position in said chamber.

5. A convertible car having, in combination, a plurality of posts with openings therebetween, a sash in each of said openings, a chamber in the roof of said car adapted to receive said sash, a sash balance, means connecting said sash balance to said sash and adapted to hold said sash in an inclined position in said chamber, and a holder extending longitudinally of said car adapted to receive and hold the lower end of said sash in said inclined position.

6. A convertible car having, in combination, a plurality of posts with openings therebetween, a sash in each of said openings, a chamber in the roof of said car adapted to receive said sash, a spring-actuated sash balance located at one side of the plane of the inner face of said sash when said sash is in said opening, a flexible member connecting said sash to said sash balance, whereby said sash may be held in an inclined position in said chamber, and a holder extending longitudinally of said car on the outside thereof adapted to receive and hold said lower end of said sash when in said inclined position.

7. A convertible car having, in combination, a plurality of posts with openings therebetween, a sash in each of said openings, a chamber in the roof of said car adapted to receive said sash, a spring-actuated sash balance located at one side of the plane of the inner face of said sash when said sash is in said opening, two guide pulleys fast to said sash, a flexible member extending around said pulleys with its opposite ends fast to said spring sash balance, whereby said sash may be held in an inclined position in said chamber, and a holder extending longitudinally of said car adapted to receive and hold the lower end of said sash when in said inclined position.

8. A convertible car having, in combination, a plurality of posts with openings therebetween, a sash in each of said openings, a chamber in the roof of said car adapted to receive said sash, a letter board and a detachable holder extending longitudinally of said car on the outside thereof beneath said letter board adapted to receive and hold the lower end of said sash when said sash is in an inclined position within said chamber.

9. A convertible car having, in combination, a plurality of posts with openings therebetween, an upper and a lower sash in each of said openings, a chamber in the roof of said car adapted to receive said sashes, one of said sashes adapted, when raised, to engage and lift the other, a sash balance located at one side of the planes of the inner faces of said sashes, and means connecting said sashes to said sash balance, whereby said sashes may be held in an inclined position in said chamber.

10. A convertible car having, in combination, a plurality of posts with openings therebetween, an upper and a lower sash in each of said openings, a chamber in the roof of said car adapted to receive said sashes, a bracket on said upper sash projecting over said lower sash, whereby when said lower sash is raised it will engage said bracket and lift said upper sash, a sash balance located at one side of the planes of the inner faces of said sashes, and means connecting said lower sash to said sash balance whereby said sashes may be held in an inclined position in said chamber.

11. A convertible car having, in combination, a plurality of posts with openings therebetween, an upper and a lower sash in each of said openings, a chamber in the roof of said car adapted to receive said sashes, a bracket on said upper sash projecting over said lower sash, whereby when said lower sash is raised it will engage said bracket and lift said upper sash, a sash balance located at one side of the planes of the inner faces of said sashes, and a flexible

member connecting said lower sash to said sash balance, whereby said sashes may be held in an inclined position in said chamber.

12. A convertible car having, in combination, a plurality of posts with openings therebetween, an upper and a lower sash in each of said openings, a chamber in the roof of said car adapted to receive said sashes, a bracket on said upper sash projecting over said lower sash whereby when said lower sash is raised it will engage said bracket and lift said upper sash, a sash balance located at one side of the planes of the inner faces of said sashes, two guide pulleys fast to said lower sash, and a flexible member extending around said guide pulleys, with its opposite ends fast to said sash balance.

13. A convertible car having, in combination a plurality of posts with openings therebetween, an upper and a lower sash in each of said openings, means movably mounted on one of said sashes and adapted to lock one of said sashes to the other against movement relatively to each other, and stationary means by which said locking means is permitted to be operated to lock said sashes when said sashes are moved upwardly.

14. A convertible car having, in combination, a plurality of posts with openings therebetween, an upper and a lower sash in each of said openings, said sashes each adapted to be moved independently of the other, means to lock each of said sashes independently of the other to said posts, and means adapted to be operated by sliding one of said sashes to lock said sashes one to the other against movement relatively to each other.

15. A convertible car having, in combination, a plurality of posts with openings therebetween, an upper and a lower sash in each of said openings, a bracket on said upper sash projecting over said lower sash adapted to be engaged by said lower sash when the latter is raised, and a catch on said lower sash adapted to engage said bracket when said lower sash is raised, whereby said sashes are locked one to the other against movement relatively to each other.

16. A convertible car having, in combination, a plurality of posts with openings therebetween, an upper and a lower sash in each of said openings, a bracket on said upper sash projecting over said lower sash adapted to be engaged by said lower sash when the latter is raised, a spring actuated catch on said lower sash, and stationary means adapted to release said catch to allow the same to be moved into engagement with said bracket when said lower sash is raised, whereby said sashes are locked one to the other against movement relatively to each other.

17. A convertible car having, in combina-

tion, a plurality of posts with openings therebetween, an upper and a lower sash in each of said openings, means movably mounted on one of said sashes and adapted to lock one of said sashes to the other against movement relatively to each other, and stationary means by which said locking means is permitted to be operated to lock said sashes when said sashes are moved upwardly, said stationary means adapted to operate said locking means to unlock said sashes one from the other when they are lowered.

18. A convertible car having, in combination, a plurality of posts with openings therebetween, an upper and a lower sash in each of said openings, a chamber in the roof of said car adapted to receive said sashes, means adapted to be operated by sliding one of said sashes, to lock said sashes one to the other against movement relatively to each other, a sash balance connected to one of said sashes, and means connecting one of said sashes and said sash balance, whereby said sashes may be held in an inclined position in said chamber.

19. A convertible car having, in combination, a plurality of posts with openings therebetween, a sash in each of said openings, said car provided with a chamber in the roof adapted to receive said sash, and means located in the upper part of said chamber adapted to be engaged by the upper edge of said sash when raised, a sash balance, and means connecting said sash to said sash balance and arranged to pull on said sash at an angle when the same is lowered, whereby when said sash is raised it is guided into and held in an inclined position in said chamber.

20. A convertible car having, in combination, a plurality of posts with openings therebetween, a sash in each of said openings, said car provided with a chamber in the roof adapted to receive said sash, means located in the upper part of said chamber adapted to be engaged by the upper edge of said sash when raised, on one side thereof, and a guide roll adapted to engage said sash on the opposite side thereof, whereby said sash is guided into an inclined position in said chamber.

21. A convertible car having, in combination, a plurality of posts with openings therebetween, a sash in each of said openings, said car provided with a chamber in the roof adapted to receive said sash, means located in the upper part of said chamber adapted to be engaged by the upper edge of said sash when raised on one side thereof, a guide-roll adapted to engage said sash on the opposite side thereof, a sash balance, and means connecting said sash to said sash balance, and means connecting said sash to

said sash balance and arranged to pull on said sash at an angle when the same is lowered, whereby said sash, when raised, is guided into an inclined position and held in said inclined position in said chamber.

22. A convertible car, having, in combination, a plurality of posts with openings therebetween, an upper and a lower sash in each of said openings, a bracket on said upper sash projecting over said lower sash adapted to be engaged by said lower sash when the latter is raised, a catch on said lower sash, and stationary means adapted to permit said catch to be operated to engage said bracket when said lower locked sash is raised, whereby said sashes are locked one to the other against movement relatively to each other.

23. A convertible car having, in combination, a plurality of posts with openings therebetween, an upper and a lower sash in each of said openings, a bracket on said upper sash projecting over said lower sash adapted to be engaged by said lower sash when the latter is raised, a catch on said lower sash, and an incline on one of said posts adapted to permit said catch to be operated to engage said bracket when said lower sash is raised, whereby said sashes are locked one to the other against movement relatively to each other, said incline adapted to operate said catch to disengage said bracket when said sashes are lowered, whereby said sashes are unlocked one from the other.

24. A convertible car having, in combination, a plurality of posts with openings therebetween, an upper and a lower sash in each of said openings, said posts being provided with guide-ways for said sashes having parallel sides extending from the top of said upper sash to the bottom of said lower sash when said sashes are closed, a chamber in the roof of said car adapted to receive said sashes, a bolt on said upper sash adapted to slide transversely thereof into recesses provided in one of said posts, and a vertical groove in said posts into which said bolt may be moved.

25. A convertible car having, in combination, a plurality of posts with openings therebetween, an upper and a lower sash in each of said openings, said posts being provided with guide-ways for said sashes having parallel sides extending from the top of said upper sash to the bottom of said lower sash when said sashes are closed, a chamber in the roof of said car adapted to receive said sashes, and a bolt on said upper sash adapted to slide transversely thereof into recesses provided in one of said posts, said post provided with a vertical groove in alinement with said bolt and extending from the top of said upper sash when the same is closed upwardly into said chamber.

26. A convertible car having, in combination a plurality of posts with openings therebetween, an upper and a lower sash in each of said openings, said posts being provided with guide-ways for said sashes having parallel sides extending from the top of said upper sash to the bottom of said lower sash when said sashes are closed, a chamber in the roof of said car adapted to receive said sashes, a bolt on said upper sash adapted to slide transversely thereof into recesses provided in one of said posts, said post provided with a vertical groove in alinement with said bolt and extending from the top of said upper sash when the same is closed upwardly into said chamber, a bracket on said upper sash extending over the top of said lower sash, a catch on said lower sash slidable transversely thereof and adapted to engage said bracket whereby said sashes are locked together, and an incline adapted to bring said catch toward or away from said bracket as said sashes are being moved upwardly or downwardly, respectively, whereby said sashes may be locked together or unlocked from each other, respectively.

27. A convertible car having, in combination, a plurality of posts with openings therebetween, an upper and a lower sash in each of said openings, means adapted to lock one of said sashes to the other, said posts being provided with guideways for said sashes and a chamber in the roof of said car adapted to receive said sashes, the inner wall of said chamber inclined and terminating at its lower end substantially at the height of the top of said upper sash when said upper sash is closed, the inner faces of said posts lying in a substantially vertical plane from the bottom thereof to the bottom of said chamber and having inclines thereon in alinement with the guideways for the lower of said sashes for the purpose specified.

28. A convertible car having in combination a plurality of posts with openings therebetween, an upper and a lower sash in each of said openings, said posts provided with guideways for said sashes, an arm-rail, a chamber in the roof of said car adapted to receive said sashes, the inner wall of said chamber inclined and terminating at its lower end substantially at the height of the top of said upper sash when said upper sash is closed, the inner face of each of said posts lying in a substantially vertical plane from said arm-rail to the bottom of said chamber.

29. A convertible car having, in combination, a plurality of posts with openings therebetween, an upper and a lower sash in each of said openings, a chamber in the roof of said car, said posts being provided with an inner and an outer guide-strip for said sashes, said lower sash being cut out at its lower corners, whereby said sashes may be

moved upwardly into an inclined position in said chamber.

30. A convertible car having, in combination a plurality of posts with openings there-
5 between, an upper and a lower sash in each of said openings, a chamber in the roof of said car having a vertical lower outer wall, said posts being provided with an inner and an outer guide strip for said sashes, said
10 lower sash being cut out at its lower corners and the lower outer edge of said upper sash being rounded to clear said outer wall, whereby said sashes may be moved upwardly into an inclined position in said chamber.

15 31. In a car, two posts with an opening therebetween, a sash in said opening, stop beads adjustably fastened to said posts and arranged to bear against the inner face of said sash.

20 32. In a car, two posts with an opening therebetween, a sash in said opening,

stop beads provided with slots extending transversely thereof and screws projecting through said slots and into said posts, whereby said stop beads may be adjusted 25 toward and away from said sash.

33. In a car, two posts with an opening therebetween, a sash in said opening, stop beads provided with slots extending trans-
versely thereof and screws projecting 30 through said slots and into said posts, and a strip of felt fast to each of said stop beads adjacent to said sash, whereby said stop beads may be adjusted toward and away
35 from said sash.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

MYRON ROUNDS.

Witnesses:

CHARLES S. GOODING,
LOUIS A. JONES.