C. K. PICKLES.

CAR.

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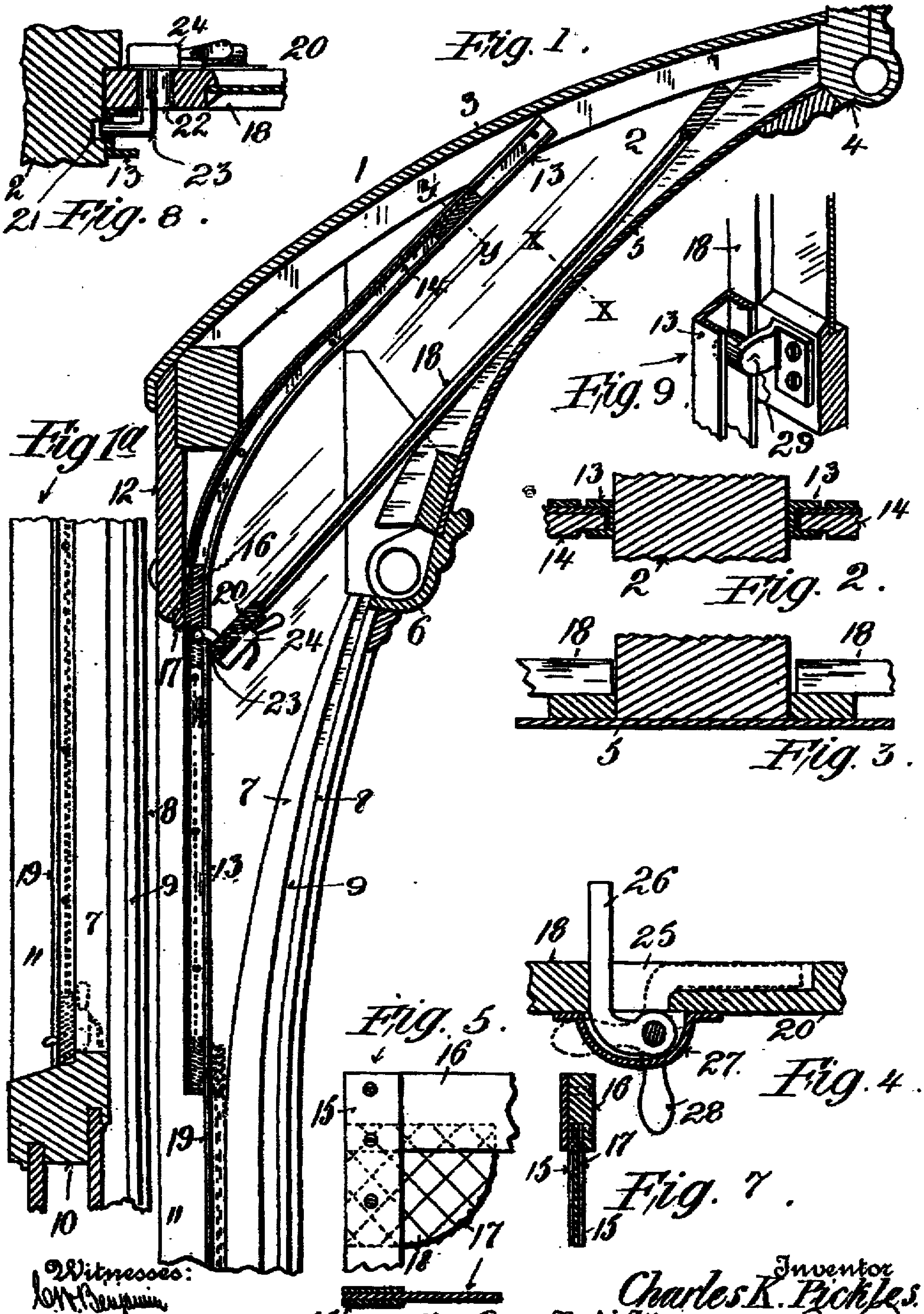

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CAR.

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To all whom it may concern:

Be it known that I, CHARLES K. PICKLES, a citizen of the United States, and a resident of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Cars, of which the following is a specification.

The object of my invention is to provide a car with a plurality of sashes in each window in which one sash is flexible and may be transparent and adapted to be raised independently or in conjunction with the other sash so as to open the window of the car in which the sash is placed; and also to provide a window in which the sashes may be lowered either jointly or severally, so that when my improved car is used, the windows may be opened as much as desired and the sashes stored under the roof when not in use and at the same time the conventional lines of a car are unchanged. This object is accomplished by my invention, certain embodiments of which are hereinafter more particularly described.

For a more particular description of my invention, reference is to be had to the drawings forming a part hereof, in which,

Figure 1 is a sectional view of a car provided with my improvements, only that part of the car which is changed is shown. Fig. 1ª is a similar view to Fig. 1, except that the lower part of the window is shown and not the upper. Fig. 2 is a sectional view taken on the line *y—y* of Fig. 1. Fig. 3 is a sectional view taken on the line *x—x* of Fig. 1. Fig. 4 shows a modified form of sash hoist. Figs. 5, 6 and 7 show certain details relating to my improved flexible and transparent sash. Fig. 8 is a detailed view showing a sash bolt of a peculiar form and mounted in a peculiar way. Fig. 9 shows a fixed pintle which may be used.

Throughout the various views of the drawings, similar reference characters designate similar parts.

My improved car 1 is provided with a stanchion 2 of the conventional form which supports a roof 3, deck rail 4, head-lining 5, curtain box 6, inside parting strips 7 and 8 respectively, forming a curtain groove 9 between them, a window sill 10, outside parting strip 11 and letter-board 12, and all these parts are of the conventional form so that a more detailed description is not necessary.

Immediately below the roof 3 and secured to the stanchion 2 is a curved guide 13 which is preferably a small channel iron secured by screws or other suitable means to the stanchion 2. This guide 13 is preferably shaped as shown in Figs. 1 and 2. A flexible sash 14 slides in the groove of the guide 13 and because it is flexible it easily takes its curve. This sash 14 is preferably formed with flexible side strips 15 rigid end strips 16, a transparent medium 17, such as celluloid, held in the sash as glass is held in the ordinary sash for street cars, and suitable wiring inserted in said transparent medium 17 just as wire is inserted in wired glass for windows or otherwise. If desired, the medium 17 need not be transparent but may be opaque, in such a case, metal such as sheet metal may be substituted, but this is not desirable because of its light-excluding properties. The lower strip 16 of the sash 14 has a projection 17 adapted to strike against the letter-board 12 and prevent the further upward movement of the said flexible sash 14.

The lower sash 18, when the window is closed, as indicated by dotted lines in Figs. 1 and 1ª, overlaps the upper sash when it is in its lowest position, in the conventional manner, and this lower sash 18 is guided on one side by a projecting metal stop 19 which forms a continuation of the inner wall of the guide 13 and on its other side the sash is guided by the parting strip 7 which is of the conventional form. The sash 18 is of the usual form, and is provided at its lower rail 20 with a slot 22, horizontally disposed, through which extends the bolt 23 which is L-shaped and extends from a sash lock 24 of the conventional form. The peculiarity of this construction is that when the sash lock 24 is actuated, the bolt 23 is withdrawn from the opening 21 in the plane of the sash 18 and this bolt 23 never does get in the plane of the sash 18 but is always in the plane of the lower strip 16 of the sash 14, so that when the lower sash is raised so that its lower rail is abreast of the lower rail of the upper sash, the two sashes are raised together, until their joint movement is limited by the stop 17 which impinges against the letter board 12. When the sashes are lowered the bolt 23 is withdrawn from the hole 21 where it happens to be located, and then the two sashes descend together until the lower rail 16 of the sash 14 reaches the

lower end of the guide 13 when its movement is stopped and the sash 18 then continues in its appropriate guide way until it reaches the position shown by dotted lines in Figs. 1 and 1ª. At no time do the upper and lower sashes 14 and 18 respectively, enter the same slideway. The only slideways for the sash 14 are the grooves in the guides 13. The sash 18, not being flexible, requires much more room for its slideway when taking the inclined position shown in Fig. 1 so that it moves between the inside parting strip 7 and the inner wall of the guide 13 or its extension 19.

In Fig. 4 is shown a projection which may be applied to the sash 18 when the sash bolt is of the conventional form, that is one that passes in the plane of the sash or substantially in that plane. In this modification, shown in Fig. 4, the lower rail 20 is suitably recessed at 25 to receive a bolt 26 pivoted in the bracket 27 on the inside of the sash and actuated by handle 28 which moves in the slot in the bracket 27. By throwing the handle 28 the bolt 26 is correspondingly thrown either into the slot 25 or perpendicular thereto so as to engage the lower edge of the sash 14 when the sash 18 is raised.

In Fig. 9 is shown a further modification which may be attached to the lower side or end-piece of the sash 18 which consists essentially of an offset pintle 29 adapted to enter the guide 13. When this embodiment of my invention is used, the guide 13 must be extended the length of the window and suitable provision must be made, such as a stop, not shown, to limit the movement of the sash 14 in the upper part of the slideway 13.

While I have shown and described certain embodiments of my invention, it is obvious that it is not restricted thereto as it may be changed in various forms, all of which come within its scope and the terms of the claims hereto annexed.

What I claim is:—

1. In a car, a pair of stanchions forming a window between them, upper and lower sashes adapted to close said window, or to be raised therefrom immediately under the roof, one of said sashes being transparent and flexible.

2. In a car, a pair of stanchions adjacent to each other and adapted to form a window between them, guides fixed to each of said stanchions and a flexible and transparent sash with wire reinforce adapted to slide in said guides.

3. In a car, a pair of stanchions adapted to form a window between them, guides secured to said stanchions, upper and lower sashes adapted to move in paths defined by said guides, said upper sash being flexible and transparent, and said lower sash being provided with a projection at its lower edge adapted to engage said upper sash.

4. In a car, a pair of stanchions, guides secured thereon, upper and lower sashes whose movements are determined by said guides, said upper sash being flexible and said lower sash being rigid, and a projecting bolt on said lower sash adapted to engage the lower edge of said upper sash so that said two sashes may be raised simultaneously.

5. In a car, a pair of stanchions, guides thereon, upper and lower sashes whose movements are determined by said guides, said upper sash being flexible and said lower sash being rigid, and a projecting bolt on said lower sash adapted to engage the lower edge of said upper sash so that said two sashes may be raised simultaneously.

6. In a car, a window having upper and lower sashes, one of said sashes being provided with a flexible and transparent medium.

7. In a car, a window having upper and lower sashes, one of said sashes being provided with flexible side rails and a flexible transparent medium.

8. In a car, a window having upper and lower sashes, one of said sashes being provided with a flexible and reinforced transparent medium.

9. In a car, a window provided with upper and lower sashes, curved guide ways for said upper sash, said upper sash being composed of flexible side rails, end rails and a transparent medium and said lower sash being provided with a bolt adapted to enter said guide way so that both sashes may be raised simultaneously.

10. In a car, a pair of stanchions, guides secured thereon, a flexible upper sash and a rigid lower sash whose movements are determined by said guides, and a bolt projecting from the lower sash into the guideway of the upper sash whereby both sashes may be raised simultaneously.

Signed at the city of New York, New York, this 1st day of April, 1908.

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Witnesses:
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