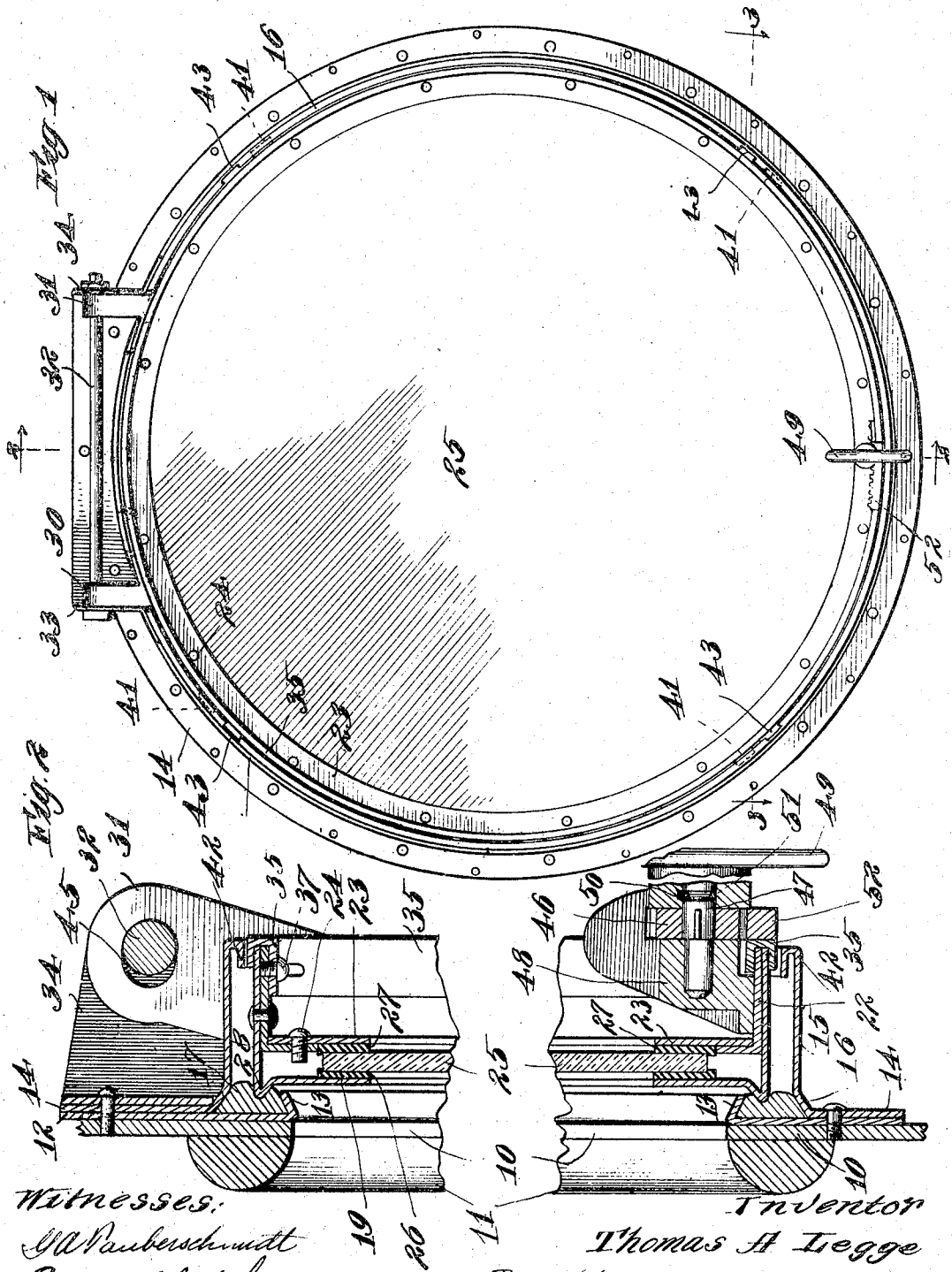


T. A. LEGGE.
CAR WINDOW.

APPLICATION FILED JULY 6, 1908.

Patented Dec. 7, 1909.

2 SHEETS—SHEET 1.



Witnesses:

W. A. Pauberschmitt
E. M. Klatcher

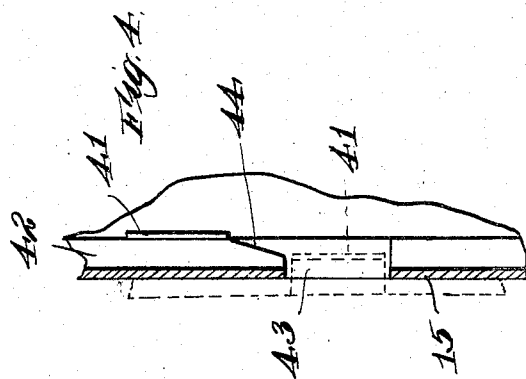
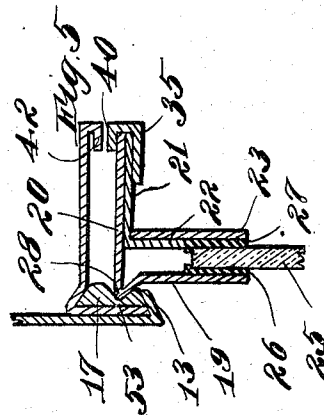
Inventor

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Attys

942,270.

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1914



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UNITED STATES PATENT OFFICE.

THOMAS A. LEGGE, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE ADAMS & WESTLAKE COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

CAR-WINDOW.

942,270.

Specification of Letters Patent.

Patented Dec. 7, 1909.

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To all whom it may concern:

Be it known that I, THOMAS A. LEGGE, a citizen of the United States, and resident of Chicago, county of Cook, and State of Illinois, have invented certain new and useful improvements in Car- Windows, of which the following is a specification, and which are illustrated in the accompanying drawings, forming a part thereof.

This invention relates to circular windows for railway cars, its object being to provide simple and secure locking means and to generally improve the construction of the frame and sash; and it consists in the structure hereinafter described, and which is illustrated in the accompanying drawings, shown on different scales, in which—

Figure 1 is an inside elevation of the window; Fig. 2 is a detail section on the line 2—2 of Fig. 1; Fig. 3 is a detail section on the line 3—3 of Fig. 1; Fig. 4 is a detail of the locking mechanism; and Fig. 5 is a detail cross-section of the window casing and sash showing a slightly modified form of construction.

At 10 there is represented the side wall of a railway car, and at 11 a beading applied to the outer surface of the wall encircling the window opening.

The base plate of the window casing is shown at 12, and is in the form of an annulus having an inturned and backwardly-inclined flange 13 at its inner edge. To the plate 12 is applied an annulus angular in cross-section, one of its leaves 14 bearing against the outer portion of the plate 12, and its other leaf 15 projecting inwardly therefrom. The leaves 14, 15, are in perpendicular relation, and are united by a fillet section 16, inclined opposite from the flange 13 and spaced apart from the latter, and forming therewith a pocket within which is seated a rubber cushion 17. The frame thus formed is secured to the side 10 of the car by any suitable means, as by screws or rivets 18.

The window sash comprises an annular plate angular in cross-section, one of its leaves 19 forming a seat for the glass and its other leaf 20 extending inwardly at right angles and forming the side wall of the sash; and a second annular angle plate one leaf, 21, of which fits within the leaf 20 of the first-named plate, its other leaf 22 projecting inwardly parallel with the leaf 19.

A glass-retaining plate 23, annular in form, lies in contact with the leaf 22 of the inner sash plate, and is secured thereto by means of screws, as shown at 24. The glass 25 is held between the plate 19 and retaining plate 23, there being interposed between it and each of these plates a ring of rubber or other soft material, as shown at 26, 27. The leaf 19 of the outer sash plate is offset inwardly to form a projecting rib, as shown at 28, for engaging the cushion 17, and thereby insuring a weather-proof joint.

The sash is provided with hinge lugs 30, 31, secured by means of a pivot rod 32 to ears 33, 34, projecting upwardly from the window casing, thereby permitting the sash to be swung upwardly for the purpose of opening the window.

The window is locked by means of an oscillatable ring 35, substantially U-shaped in cross-section, and mounted upon the inner edge of the sash. This locking ring is secured in place by means of studs, as 36, 37, sitting through suitable slots, as 38, 39, in the ring and being fixed in the sash, the range of movement of the ring 35 being determined by the length of these slots.

The outer flange 40 of the ring 35 is provided with a plurality of outwardly-directed fingers 41, which cooperate with an inturned flange 42 at the inner edge of the window casing member 15. The flange 42 is cut away, as shown at 43, to permit the entry of the fingers 41 as the window is closed, and at one side of each of these recesses the lower edge of this flange is given an inclined or cam face 44, which is engaged by the fingers 41 as the ring 35 is moved, thereby forcing the sash inwardly and firmly against the cushion 17.

Further movement of the ring 35 brings the fingers 41 into contact with the straight portion of the inner edge of the flange 42, thereby positively locking the window. These locking fingers may be as numerous as may be desired, four of them being shown and being spaced apart approximately 90 degrees, thereby insuring a uniform closing pressure upon the sash throughout its entire circumference and thus preventing any tendency of the sash to bend or buckle. A further safeguard against distortion of the sash consists in an elongation of the perforations 45 in the hinge lugs 30 and 31, for

receiving the pivot 32, permitting some play of the sash in a direction perpendicular to the side wall of the car.

The locking ring 35 is controlled by means of a gear 46, mounted on a spindle 47 journaled in a block 48 secured by any suitable means to the sash frame, preferably at its lower side. The spindle 47 is provided with a handle or hand-wheel 49 at its outer end, and is secured within its bearings by means of a pin 50 set in the block 48 and engaging an annular groove 51 in the spindle. The gear 46 meshes with a rack 52, secured by any suitable means to the ring 35. The sash having been lowered and by hand forced inwardly until the fingers 41 have entered the recesses 43, the handle or hand-wheel 49 is turned, thereby shifting the ring 35 and bringing the fingers 41 into engagement first with the cams 44 to force the sash inwardly and then with the straight portions of the flange 42 of the casing member to complete the locking operation.

In Fig. 5 a slight modification in the window casing is shown, the inner leaf 53 of the outer member of the casing being turned inwardly toward the flange 13 of the base-ring of the casing and forming the seat for the cushion 17.

I claim as my invention—

1. In a window, in combination, an annular casing comprising a wall plate having an instanding flange, and an angle plate having one leaf secured to the wall plate, a cushion between the flange of the wall plate and the instanding leaf of the angle plate; and a sash bearing on the cushion.

2. In a window, in combination, a casing comprising a circular wall-plate having an instanding flange the outer edge of which is overturned and provided with radially-dis-

posed cam faces; a sash fitting within the flange of the casing; an oscillatable ring carried by the sash and having radial fingers engageable with the cam faces.

3. In a window, in combination, a casing comprising a circular wall-plate having an instanding flange the outer edge of which is overturned and provided with radially-disposed cam faces; a sash fitting within the flange of the casing; an oscillatable ring carried by the casing and having radial fingers engageable with the cam faces; a rack mounted on the ring; a hand-controlled spindle journaled in the casing, and a pinion carried by the spindle and engaging the rack.

4. In a window, in combination, a casing comprising an annular wall plate having its inner edge instanding, an annular angle plate having its radial leaf seated upon the wall plate and its instanding leaf spaced apart from the instanding edge thereof and having the edge of its instanding leaf overturned inwardly and provided with cam faces; and a sash comprising a pair of inter-fitting annular angle plates, their radial leaves being spaced apart and their instanding leaves being secured together, and an oscillatable annulus U-shaped in cross-section and riding upon the edges of the instanding leaves of the angle plates, the outer leaf of the annulus carrying radially-projecting fingers engageable with the cam faces of the casing, and its inner leaf having circumferentially-disposed slots, and studs fixed in the fixed sash members and projecting through such slots.

THOMAS A. LEGGE.

Witnesses:

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