L. J. BERG.

TRANSOM RATCHET.

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938,952.

Patented Nov. 2, 1909.

Fig. 1.

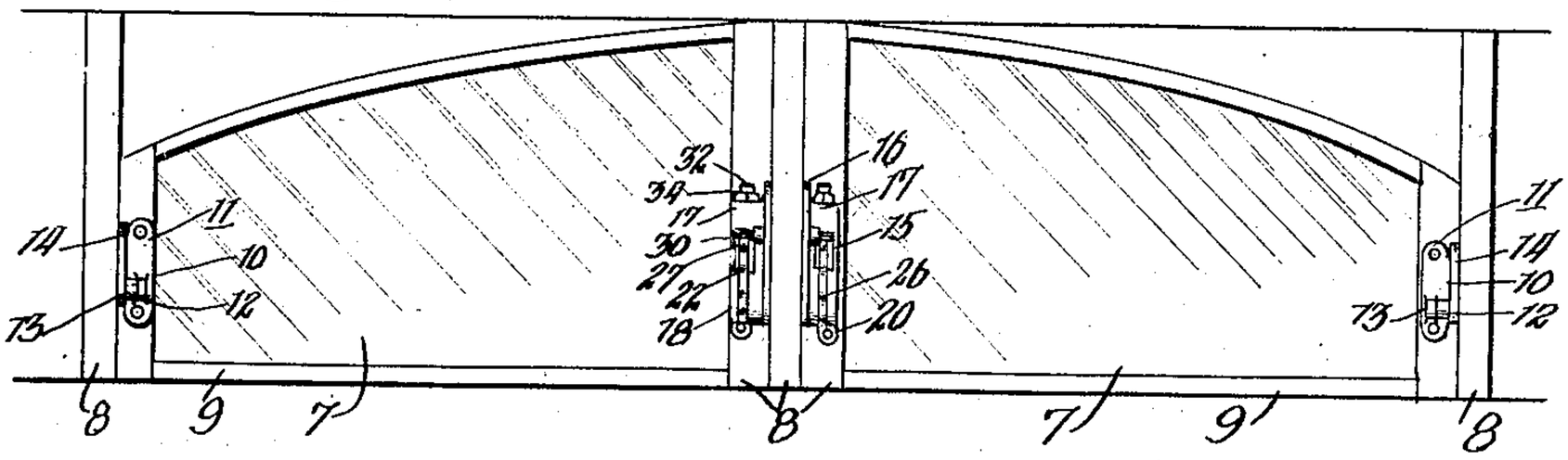


Fig. 2.

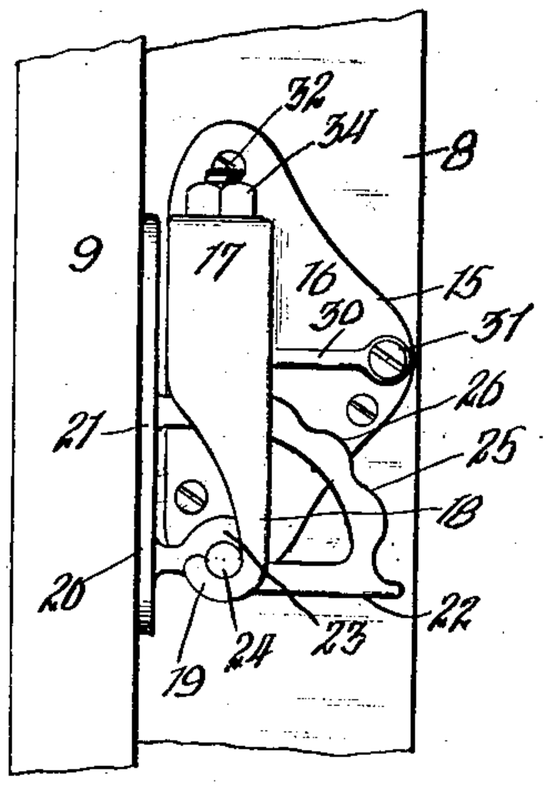


Fig. 3.

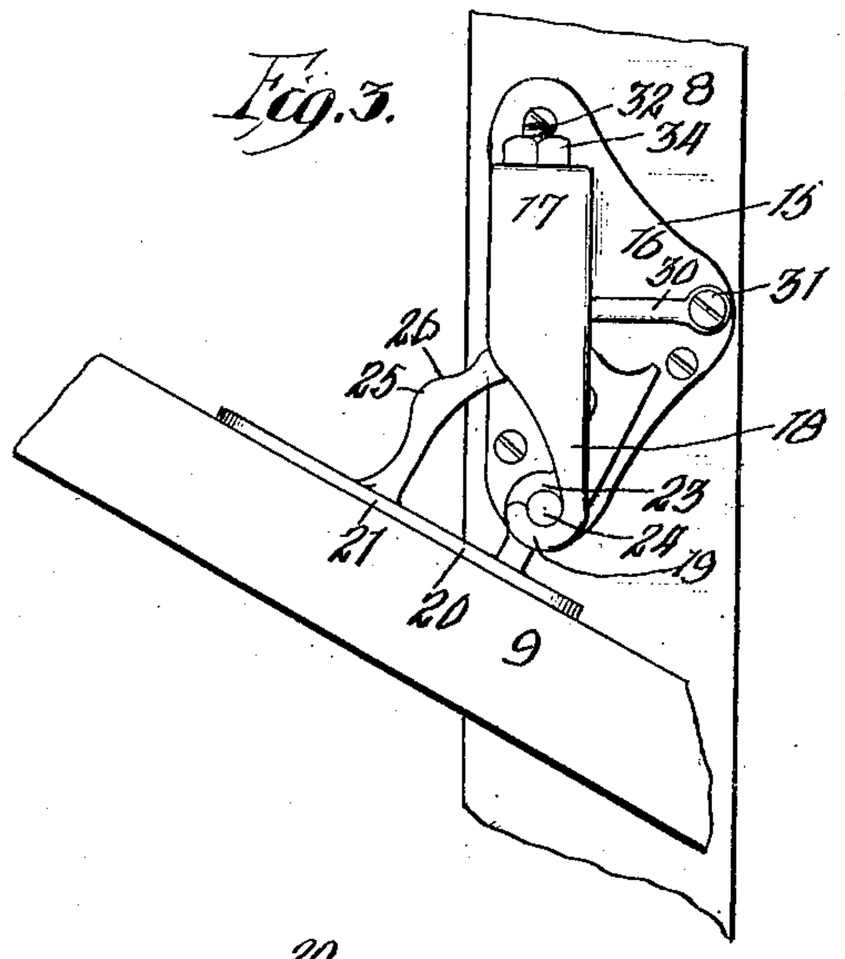


Fig. 4.

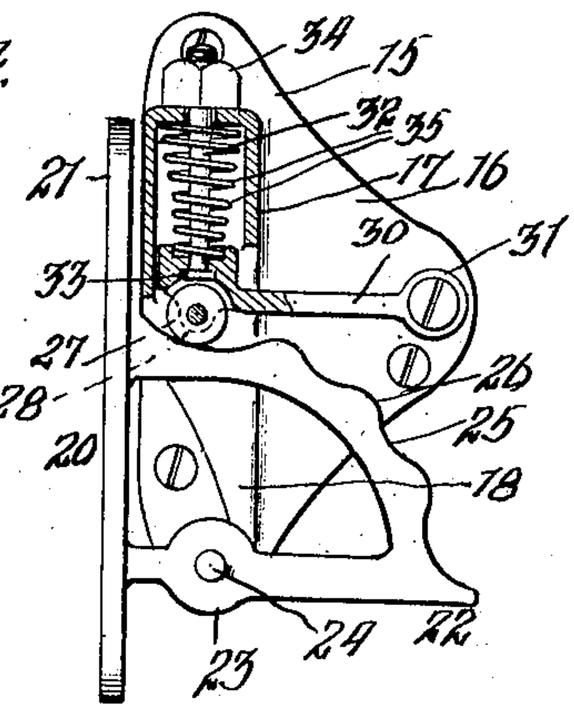


Fig. 5.

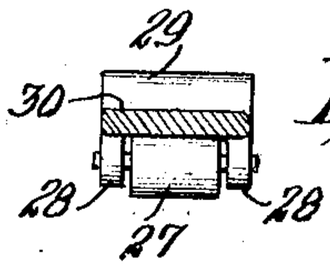
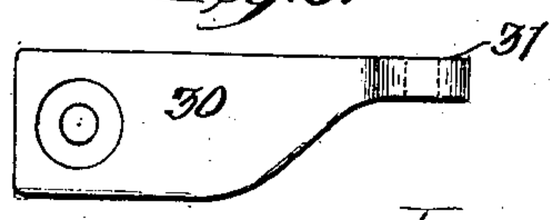


Fig. 6.



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UNITED STATES PATENT OFFICE.

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TRANSOM-RATCHET.

938,952. Specification of Letters Patent. Patented Nov. 2, 1909.

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To all whom it may concern:

Be it known that I, LARS J. BERG, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Transom-Ratchets, of which the following is a specification.

The present invention relates, more particularly, to improved transom ratchets of the type applicable for use in regulating the position of ventilating windows in the deck sash of a passenger car; and has for its object to construct a device for maintaining the ventilator in any desired position of adjustment, and for holding said ventilator in a secure and firm position when so adjusted; and to construct a device which is simple in operation, durable in construction, and cheap of manufacture.

Other objects will appear from a detailed description of the invention, which consists in the features of construction and combination of parts hereinafter described and claimed.

In the drawings, Figure 1 is an outside view of the car ventilating windows of the type ordinarily used in the construction of passenger cars; Fig. 2 a side view of the ratchet mechanism in its closed position; Fig. 3 a view similar to Fig. 2, showing the parts in position when the transom is in a partly lowered position; Fig. 4 a somewhat enlarged side view of the ratchet mechanism, partly in section; Fig. 5 a detail of the roller; and Fig. 6 a plan view of the arm for carrying the roller.

As shown in Fig. 1, the ordinary car ventilating windows 7 are placed between fixed standards or supports 8 in the construction ordinarily used in cars, and the ventilator 7 comprises a framework 9, at one end of which is attached a pivot 10 consisting of a plate 11 affixed to the frame 9 of the ventilating window, projecting from which is an ear 12 which engages a lug 13 attached to a plate 14, secured to the framework 8 of the car body, and a pin projects from the ear 10 into the lug 13, forming a pivot for that end of the ventilating window around which it swings. On the opposite end of the ventilating frame 9 is attached the ratchet mechanism for maintaining the window in any desired position of adjustment. This mechanism comprises a fixed portion 15 which consists of a plate 16 attached to the framework 8 of the car body; and, formed integrally with the plate 16, is a housing 17 which has its front and rear walls, at their lower end, cut away, and its side walls extending downwardly in a tapered formation, forming legs 18, the ends of which are bent to form hooks 19.

The movable section 20 of the ratchet mechanism consists of a plate 21 which is secured to the framework 9 of the ventilator window. Formed integrally with said plate is a segmental portion 22 the base of which has formed thereon a hub 23 which has projecting therefrom trunnions 24, about which the hooked ends 19 of the legs 18 of the fixed portion 15 are positioned. The curved portion of the segmental rack 22 has formed on its face a toothed surface 25, which consists of a series of round teeth 26 upon which a roller is adapted to travel. The roller 27 is carried between ears 28 formed integrally with a head 29 projecting from the inner end of an arm 30. The arm 30 is pivotally secured at its outer end 31 to the plate 16. And, passing through the head 29, is a rod 32, which is upset at its lower end 33, the upset portion being slightly countersunk into the head 29, and the rod 32 is screw threaded at its upper end to receive a nut 34. Interposed between the head 29 and the top of the housing 17, and surrounding the rod 32, is a coil spring 35, which holds the roller 27 under a spring tension against the surface of the toothed edge 25 of the segmental rack 22. It will thus be seen that as the roller 27 travels over the toothed surface 25 of the segmental rack, when it strikes the depressions in the toothed surface of the rack, the roller being under the forcible spring tension that it is, will be held in a firm enough position to withstand the jars or vibrations ordinarily received in the upper ventilating windows of a railroad car.

By manipulation of the nut 34 the rod 32

can be drawn upwardly, causing the roller 27 to be drawn upwardly therewith, thus allowing the roller to contact only the upper portion of the toothed surface of the segmental rack and making the window easy of manipulation.

It will be seen that when it is desired to open the windows for the purpose of ventilating the car, it will be possible, with this device, to open them all to the desired degree. When the windows are fully opened, they will turn down to a position at right angles to the window casing, and the windows may be adjusted to intermediate positions, and when so adjusted will be firmly held by the engagement of the roller with the depressions of the rack.

The method of hinging or pivoting the arm 30 is one which holds the roller firmly against the face of the rack and permits it to ride up and down thereon, and at the same time prevents any lateral play which would tend to cause a disagreeable rattling of the window and create friction, which would tend to wear out and loosen up the parts.

What I claim as new and desire to secure by Letters Patent is:

1. In a transom ratchet, the combination of a fixed section and a movable section, the movable section adapted to travel with the transom and having a pivotal bearing in the fixed section, and means attached to the fixed section and kept in constant engagement with the movable section for retaining it in various positions, substantially as described.

2. In a transom ratchet, the combination of a fixed section and a movable section, the movable section adapted to travel with the transom and having a pivotal bearing in the fixed section, and a toothed surface on the movable section adapted to be constantly engaged by locking means attached to the fixed section said locking means lying in tangential relation to the toothed surface and adapted to hold the movable section in any desired position, substantially as described.

3. In a transom ratchet, the combination of a fixed section and a movable section, the movable section adapted to travel with the transom and having a pivotal bearing in the fixed section, a toothed surface on the movable section adapted to be constantly engaged by locking means attached to the fixed section said locking means lying in tangential relation to the toothed surface and adapted to hold the movable section in any desired position, and trunnions on the movable section adapted to be engaged by the side walls of a housing attached to the fixed section, substantially as described.

4. In a transom ratchet, the combination of a fixed section and a movable section, the movable section comprising a plate attached to the frame of the transom, a segmental rack formed with said plate, trunnions protruding from the base of the segmental rack portion, the fixed portion comprising a plate and a housing attached to the plate, the side walls of which are adapted to engage the trunnions on the base of the segmental rack portion, a roller incased by said housing and adapted to be held under spring tension against the face of the segmental rack portion of the movable section for holding the movable section in any desired position, substantially as described.

5. In a transom ratchet, the combination of a fixed section and a movable section, the movable section comprising a plate attached to the frame of the transom, a segmental rack formed with said plate, trunnions protruding from the base of the segmental rack portion, the fixed portion comprising a plate and a housing having its front and rear walls cut away at their lower portions, side walls extending downward in a tapered formation, and bent to form hooks at their lower ends to engage the trunnions of the segmental rack portion, a roller incased in said housing and adapted to be held under spring tension against the face of the segmental rack portion of the movable section for holding the movable section in any desired position, substantially as described.

6. In a transom ratchet, the combination of a fixed section and a movable section, the movable section comprising a plate attached to the frame of the transom, a segmental rack formed with said plate, trunnions protruding from the base of the segmental rack portion, the fixed portion comprising a plate and a housing having its front and rear walls cut away at their lower portions, side walls extending downward in a tapered formation, and bent to form hooks at their lower ends to engage the trunnions of the segmental rack portion, a roller carried by ears formed with a head protruding from the end of a pivotally attached arm, said roller adapted to be held under spring tension against the face of the segmental rack portion of the movable section for holding the movable section in any desired position, substantially as described.

7. In a transom ratchet, the combination of a fixed section and a movable section, the movable section comprising a plate attached to the frame of the transom, a segmental rack formed with said plate, trunnions protruding from the base of the segmental rack portion, the fixed portion comprising a plate and a housing having its front and rear walls cut away at their lower portions, side walls extending downward in a tapered formation and bent to form hooks at their lower ends to engage the trunnions of the segmental rack portion, a roller carried by ears formed on a head protruding from the

end of a pivotally attached arm, a rod passing through the head and upset at its lower end, the upper end of the rod screw threaded to receive a nut, a spring interposed between the head and the top of the housing and encircling the rod for holding the roller in engagement with the face of the segmental rack portion of the movable section for holding the movable section in any desired position, substantially as described.

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