(No Model.) 2 Sheets—Sheet 1.

WALTER VANDER HEYDEN WILLSON.

TRANSOM LIFTER.

No. 466,842. Patented Jan. 12, 1892.

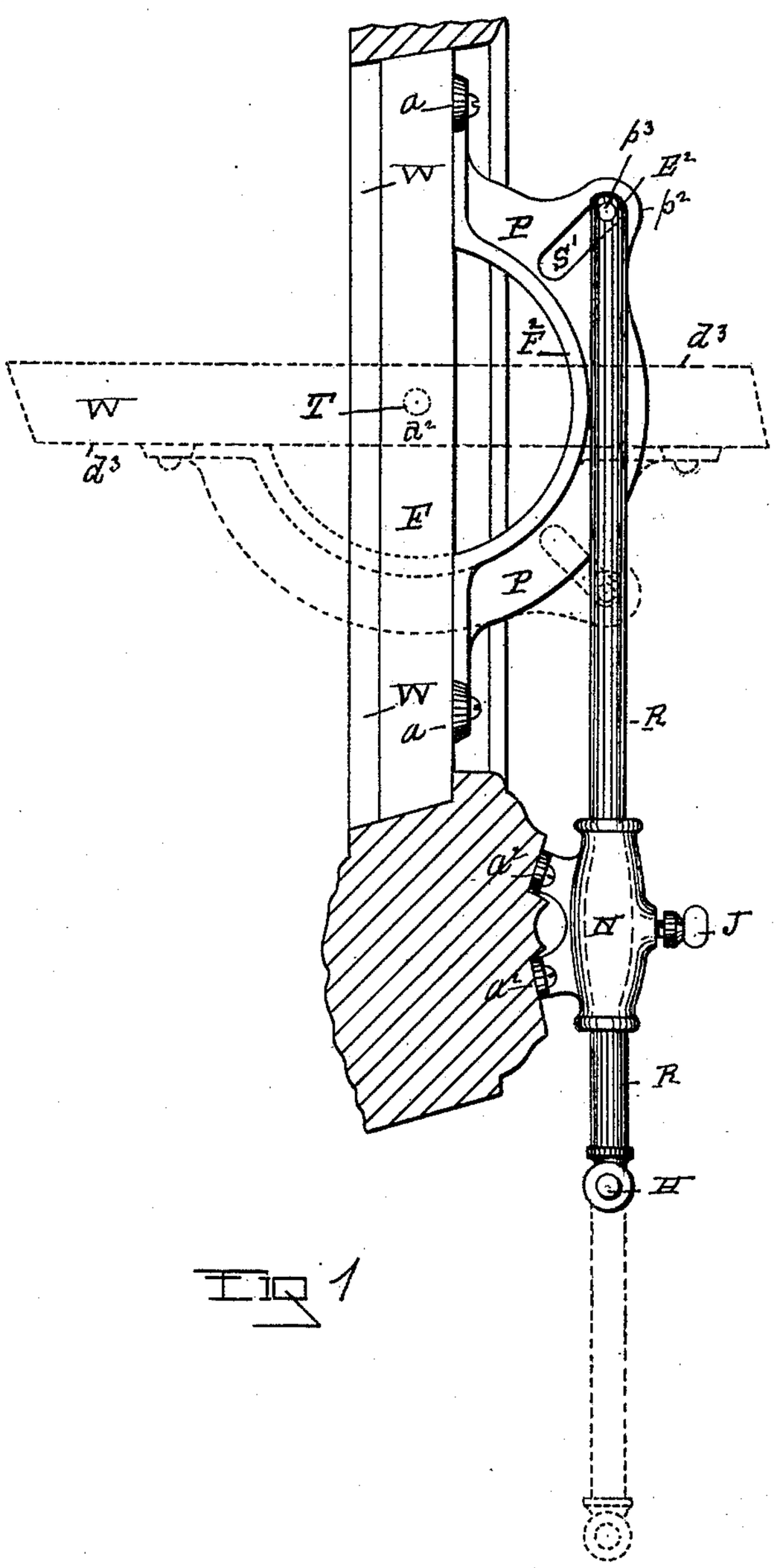

Fig 1

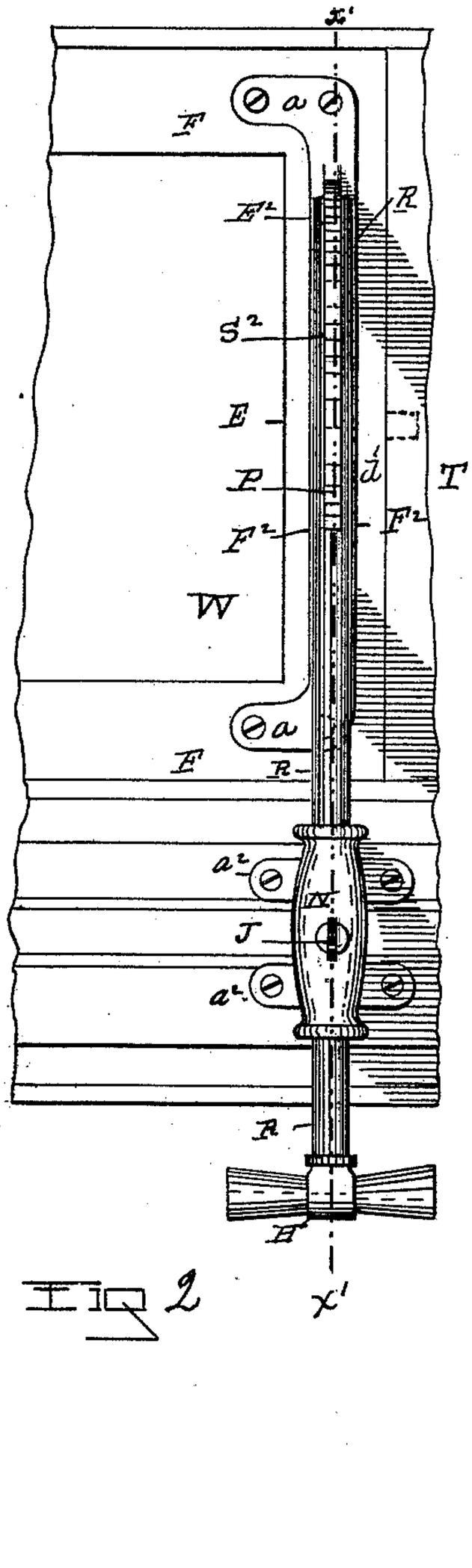

Fig 2

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Charles S. Brimhall
William A. Lovett

Inventor
Walter Vander Heyden Willson
by W E Hagan atty

(No Model.) 2 Sheets—Sheet 2.

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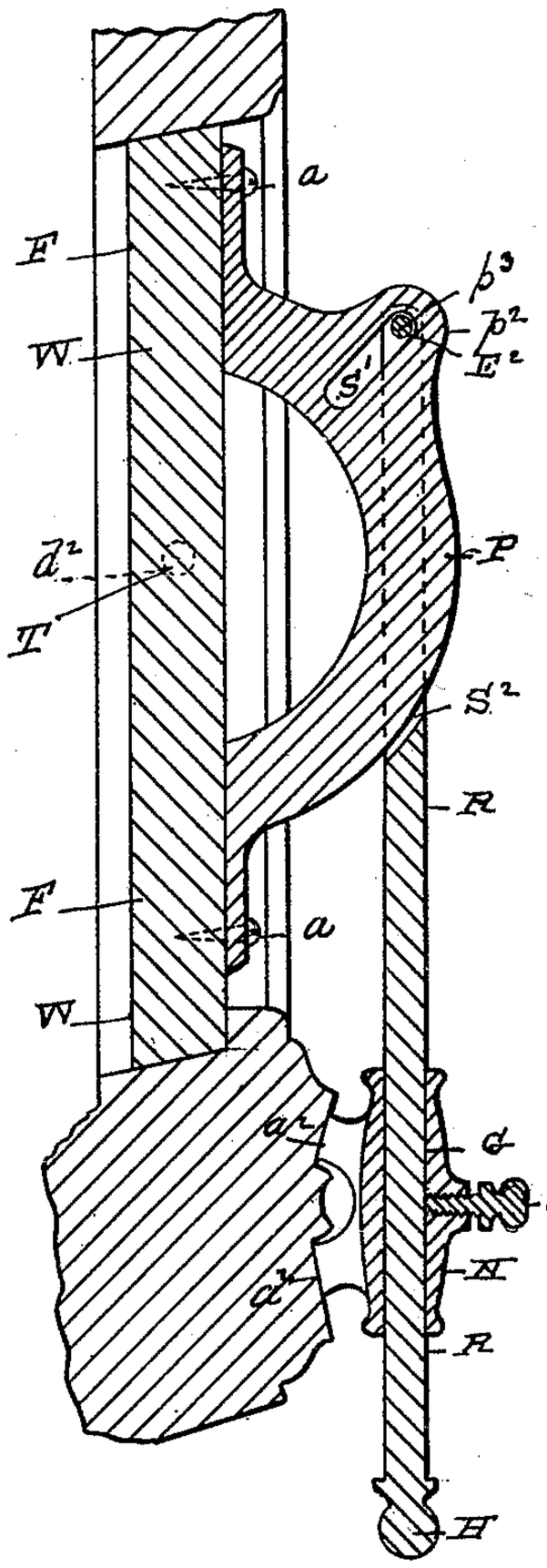

Fig 3

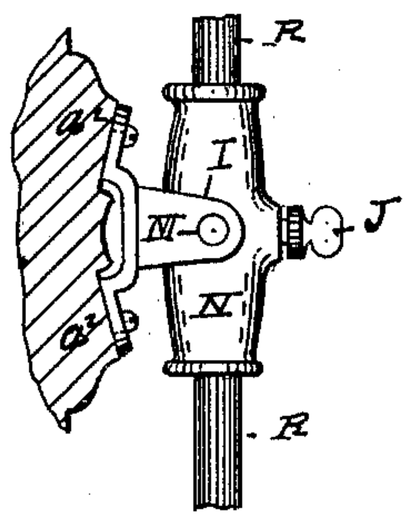

Fig 4

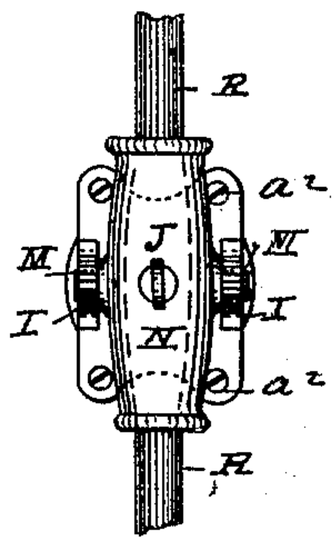

Fig 5

WITNESSES

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UNITED STATES PATENT OFFICE.

WALTER VANDER HEYDEN WILLSON, OF BRUNSWICK, ASSIGNOR OF ONE-HALF TO JAMES IRVING, OF TROY, NEW YORK.

TRANSOM-LIFTER.

SPECIFICATION forming part of Letters Patent No. 466,842, dated January 12, 1892.

Application filed July 13, 1891. Serial No. 399,365. (No model.)

To all whom it may concern:

Be it known that I, WALTER VANDER HEYDEN WILLSON, of the town of Brunswick, county of Rensselaer, and State of New York, have invented a new and useful Improvement in Regulators for Car-Ventilating Windows, of which the following is a specification.

My invention relates to an apparatus for operating and regulating the open or closed position of that class of ventilating-windows which are hung upon end trunnion-bearings and are used in car-windows, it being the purpose of my invention to produce a means by which the ventilating-windows can be secured in a partly or wholly opened position, and which can be operated by a person standing on the car-floor without the intervention or use of a bar or stick to reach the windows.

Accompanying this specification to form a part of it there are two sheets of drawings containing five figures illustrating my invention, with the same designation of parts by letter reference used in all of them.

Of the illustrations, Figure 1 is a side elevation of the mechanism shown as applied to a car-ventilating window illustrated as closed, and dotted lines indicating the position of the apparatus with the window open. Fig. 2 is a front view of the parts shown at Fig. 1. Fig. 3 is a section taken on the line x' x' of Fig. 1. Fig. 4 is a side view of a modified form of slide in which the latter is mounted on trunnions. Fig. 5 is a front view of the modification shown at Fig. 4.

The several parts of the mechanism thus illustrated are designated by letter-reference, and the function of the parts is described as follows:

The letter W designates a car-ventilating window, which is hung upon centrally-located end trunnions T, of which there is one at each end of the window, and each of which journals into the adjacent window-frame, as shown by the dotted line d' of Fig. 2 and the dotted line d^2 of Figs. 1 and 3. Thus hung the window-frame can be swung up into a vertical position to be closed, as shown at Figs. 1 and 3, or swung down in a horizontal position to be opened, as indicated by the dotted line d^3 of Fig. 1.

The letter P designates an arc-form plate, which at its ends is attached at a a to the surface of the window-frame F, at the end E thereof, as shown in Figs. 1, 2, and 3. This arc-form plate is made with a slot S′, formed in its sides in a projection p^2, extending outward therefrom, said slot having a diametrical direction relatively to the arc-form plate.

The letter F^2 designates flanges made on the inner edge of the arc-form plate, with which the rod R engages when operating the arc-form plate to open or close the window, said flanges acting as guides for the rod.

The letter R designates an operating-rod, which at its upper end E^2 is made with a slot S^2 and at its lower end with a handle H. Between the upper and handle ends of this rod it passes through a slide G, made in the tube-form slide part N, which latter is attached at a^2 to the car inside below the window. The rod R at its upper end is made with a slot S^2, adapted for the movement therein of the arc-form plate P.

The letter p^3 designates a pin, which at the upper end of the rod R passes through the slot S′ of the arc-form plate, with each end of said pin secured to one of the opposite sides of the slot S^2, made in the rod R, so as to connect the latter with the arc-form plate P.

The letter J designates a set-screw tapped into the tube-form slide part N at the side thereof, which, when secured interiorly, will engage with the rod R within the slide G.

In the modification shown in Figs. 4 and 5 the tube-form guide part containing the slide G is mounted with side trunnions M, having bearings in the ears I at each side, the function of the modification being to adapt the apparatus for attachment to differing forms of car-interior surfaces where below the ventilating-windows. As thus made and arranged when the rod R by means of its handle H is drawn down through the slide G from its connection made with the plate P by means of the pin p^3 in the slotted end of the rod and the position of the pin within the slot S^2 of the rod and the engagement of the rod with the flange F^2 at each side of the rod the arc-form plate and connected window are caused to turn, the latter moving on its end trunnions to open and assume the position shown by the dotted line d^3 of Fig. 1. When the rod

R is raised, then the window turns, so as to close and assume a vertical position, as shown at Fig. 1. As thus made the rod R may be operated to partly or wholly open the window, and by means of the set-screw the window may be secured in any desired position as to measure of opening.

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

The combination, with a car-ventilating window that is hung upon trunnion-bearings, substantially as described, of an arc-form plate made with a slot S′ and flanges F^2 and attached to the window at one end thereof, a rod R, made with a slot S^2 in its upper end, adapted for the movement therein of the arc-form plate, a pin p^3 in the slotted end of said rod within said slot S′, and the slide G, attached to the car-wall below the window and provided with a set-screw, substantially in the manner as and for the purposes set forth.

Signed at Troy, New York, this 6th day of April, 1891, and in the presence of the two witnesses whose names are hereto written.

WALTER VANDER HEYDEN WILLSON.

Witnesses:
CHARLES S. BRINTNALL,
W. E. HAGAN.