

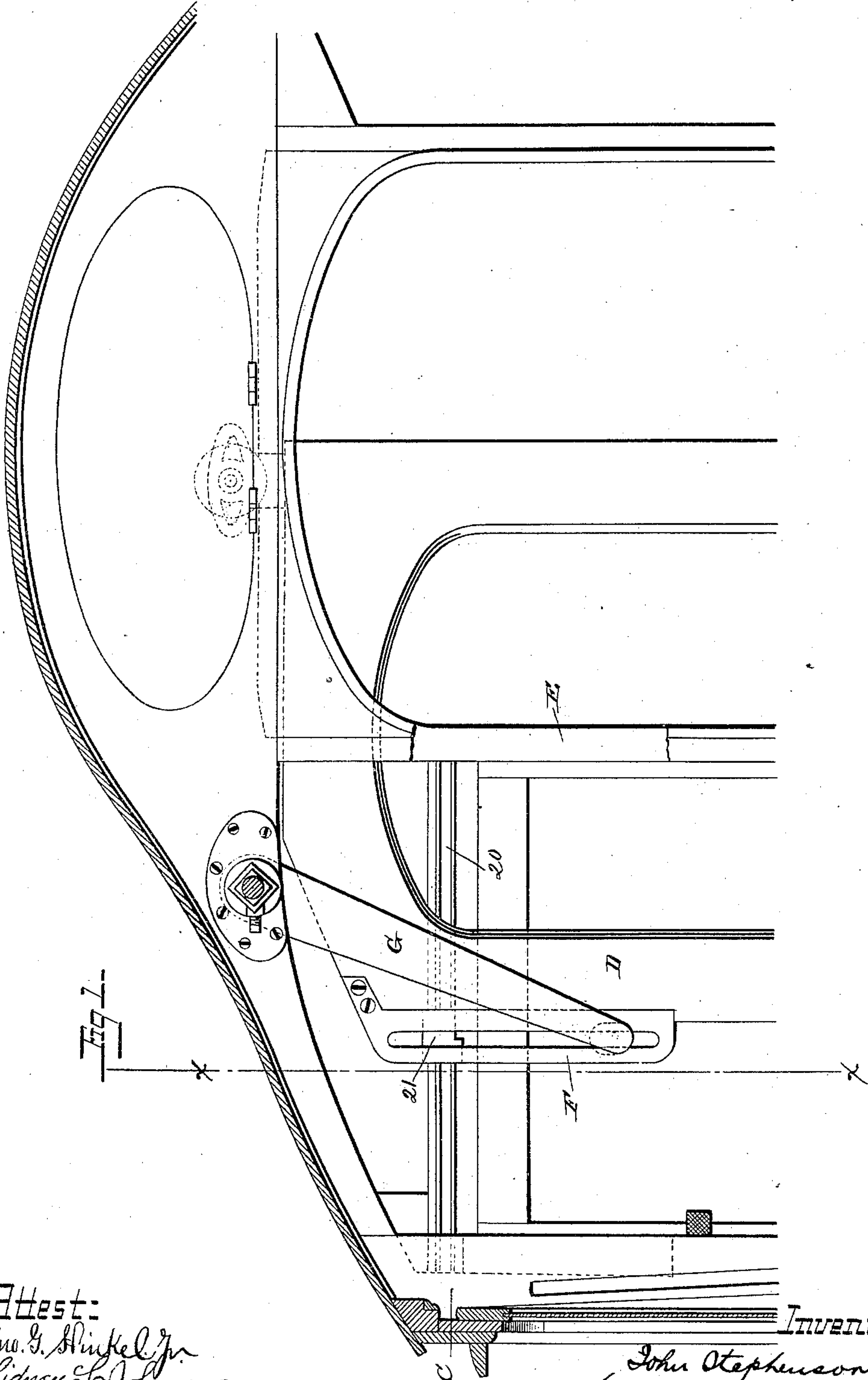
(No Model.)

2 Sheets—Sheet 1.

J. STEPHENSON.  
TRAM CAR DOOR HANGER.

No. 378,474.

Patented Feb. 28, 1888.



Attest:  
Geo. B. Hinkel, Jr.  
Sidney L. Johnson

Inventor:  
John Stephenson.  
by Foster & Freeman,  
attys.

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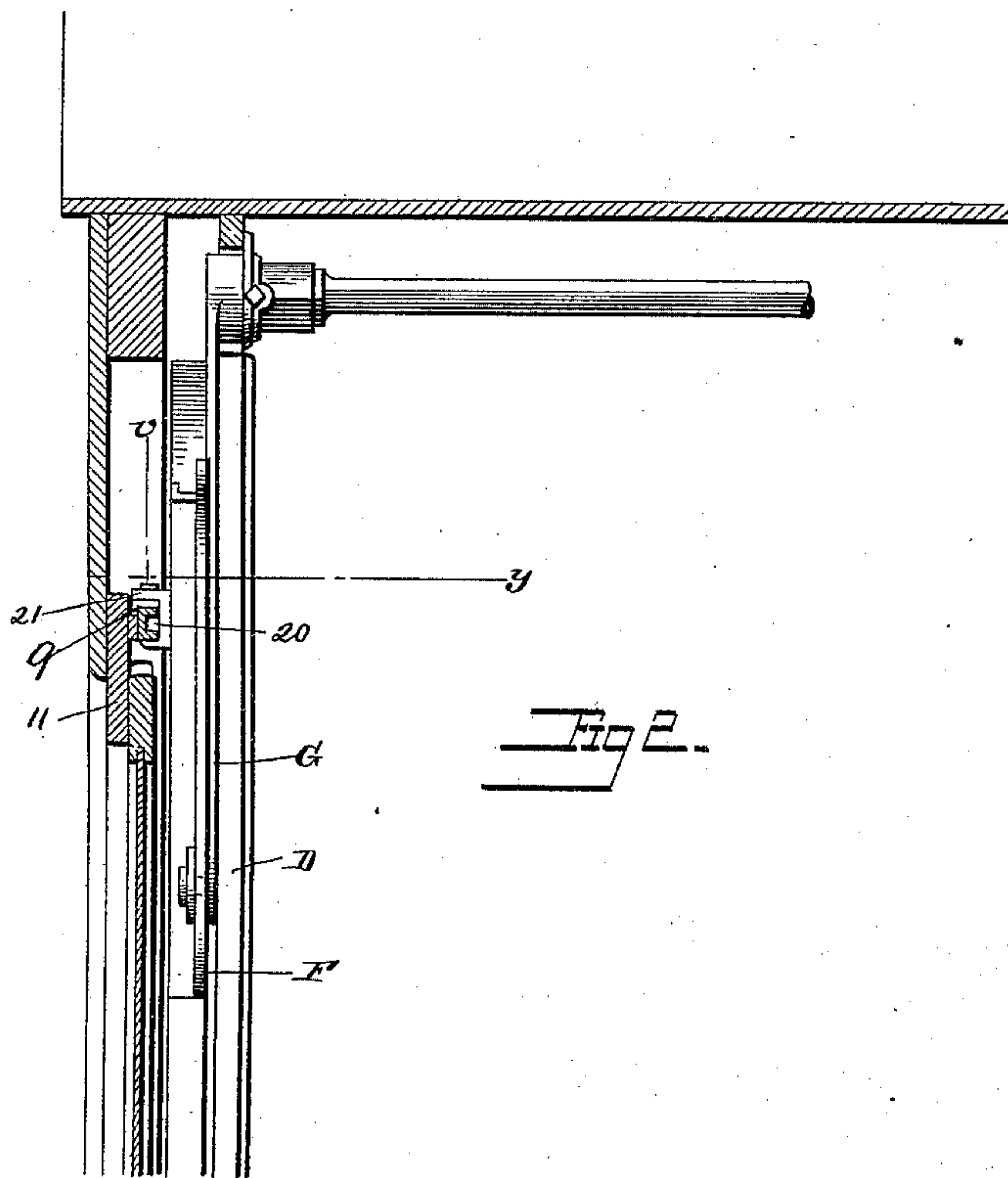


Fig. 2.

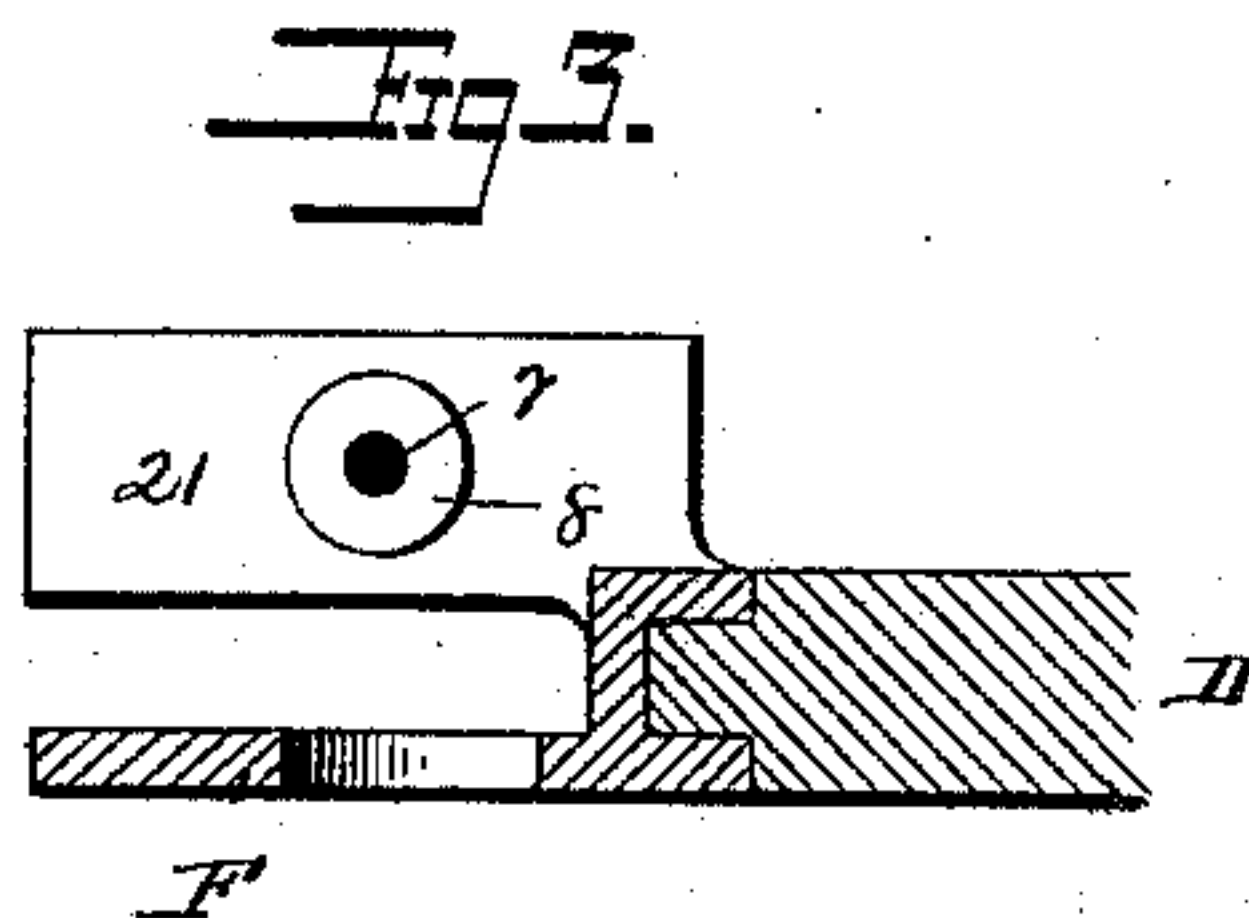


Fig. 3.

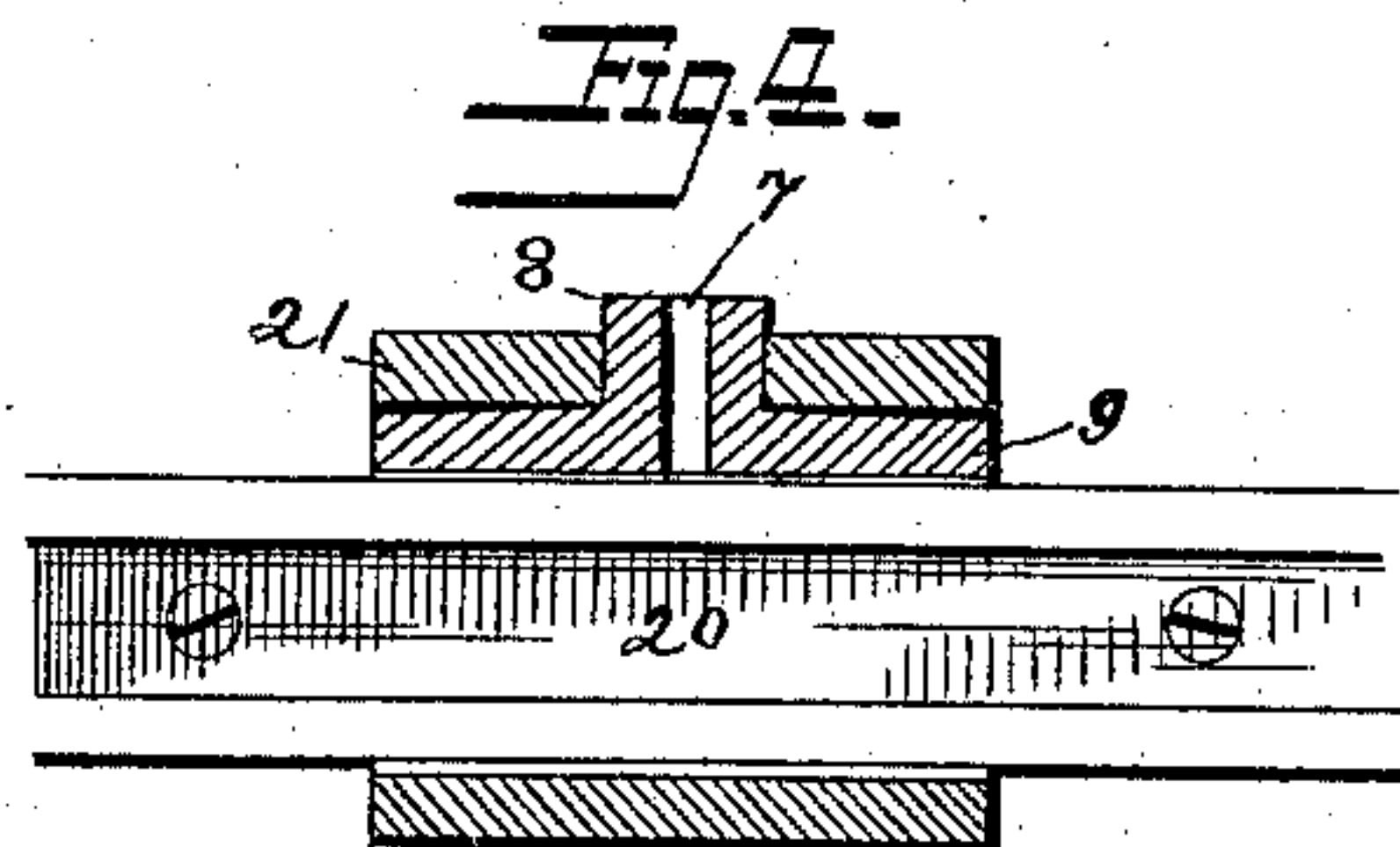


Fig. 4.

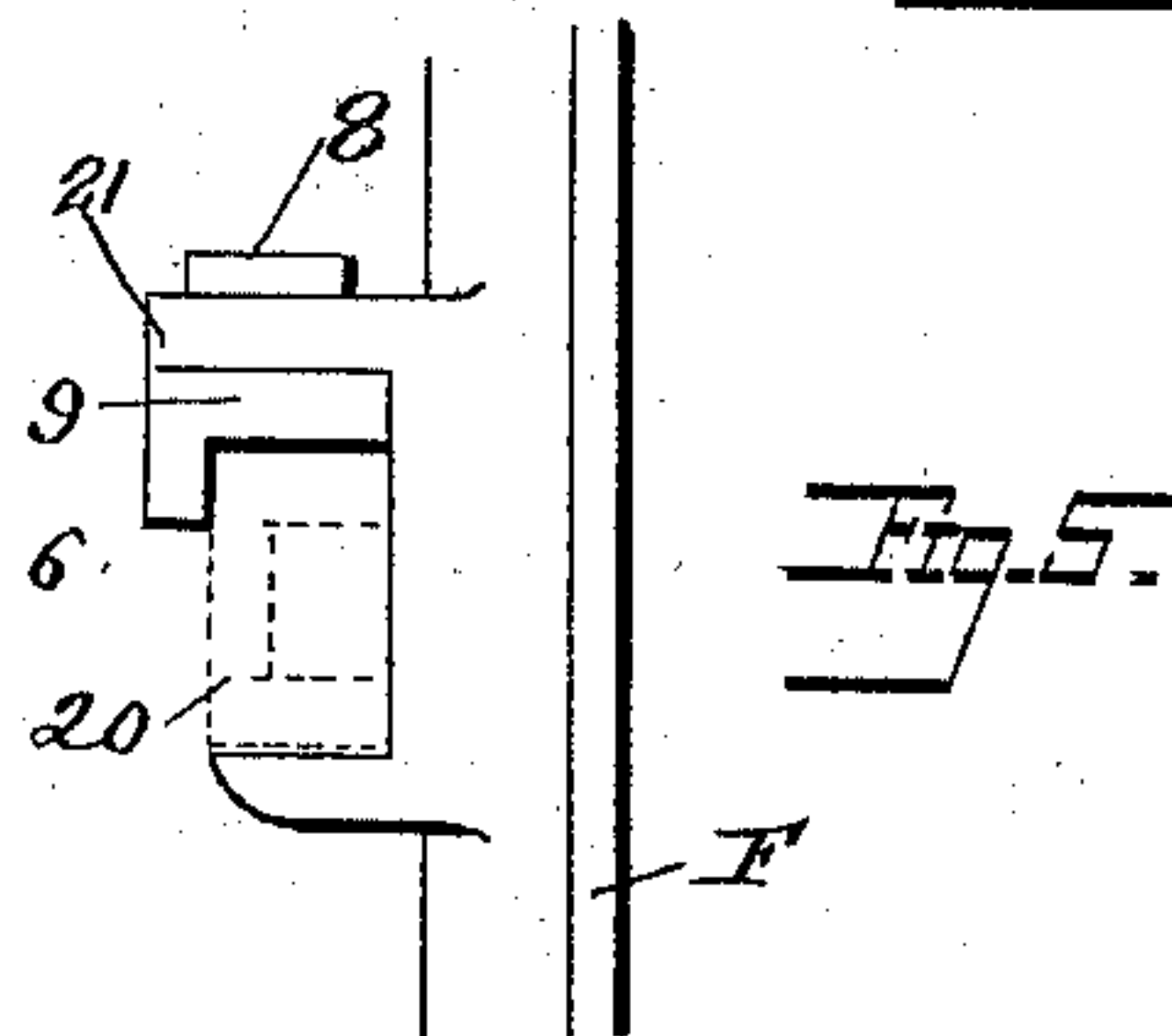


Fig. 5.

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# UNITED STATES PATENT OFFICE.

JOHN STEPHENSON, OF NEW YORK, N. Y.

## TRAM-CAR-DOOR HANGER.

SPECIFICATION forming part of Letters Patent No. 378,474, dated February 28, 1888.

Application filed June 17, 1887. Serial No. 241,636. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN STEPHENSON, a citizen of the United States, residing at New York, in the county and State of New York, have invented certain new and useful Improvements in Tram-Car-Door Hangers, of which the following is a specification.

This invention relates, generally, to the construction of tram-cars, and particularly to an improved means of hanging the doors thereof.

The symmetry of a tram-car requires that the window-glass at the car ends should at the stiles correspond in height, with the sashes at the sides of the car, so that the level line of the upper edge of the glass should be preserved entirely around the car, with exception of the doors; but the best form of door-hanging—*i. e.*, at the top of the door—has not hitherto been found practicable for cars having window-sashes of extreme height, especially when provided with the modern convenience of passengers' telephone. The difficulties are greatest in cars known as "fare-box" or "conductorless" cars—*i. e.*, managed by a driver only.

My invention here described is devised with special reference to these difficulties and provides for the necessities of the case. I choose, therefore, to take a car of the fare-box class constructed for windows and sashes of extreme height and add my improvements for hanging the door and provide connecting mechanism for the driver to operate it, and also to provide room for high sashes at the car ends corresponding with height of the side sashes.

In the drawings, Figure 1 is a cross-sectional elevation of a portion of a tram-car, looking from its interior. Fig. 2 is a vertical transverse section of the same, taken on the line *x*. Fig. 3 is an enlarged horizontal section of a portion of the door, taken on the line *y* of Fig. 2, showing particularly the slotted frame and door-carrying slide. Fig. 4 is an enlarged vertical transverse section of the same, taken on the line *v* of Fig. 2; and Fig. 5 is an enlarged end elevation of a portion of the slotted frame and the slide.

On the inner side, at the top corner of the end sub top rail, 11, I locate between the body corner pillar, C, and the door-standing pillar E a door-carrying rail, 20, preferably of channel form. On this rail rests a slide, 21, se-

cured to the side of the door D, which slide, with its shoe, grasps four sides of the carrying-rail, from which the slide cannot separate.

To secure ease of slide motion, reduce wear, and economize repairs, I make to the slide a shoe-bearing, 9, (see Figs. 3, 4, and 5,) fitted into the slide 21 by a socket-joint with a stem, 8, forming an oil-conduit to the slide. The socket-joint is such as to allow the shoe a slight play independent of the slide, so that said shoe will better conform to the contacting surface of the rail. The shoe has at one side a downward flange, 6, keeping the slide on the rails. The door D is also provided with a slotted frame, F, which I prefer to form in one piece with said slide 21. This slotted frame is engaged by a stud projecting from the end of a lever, G, within the control of the driver, so that by moving the same the door is opened or closed, it being guided in said movements by the rail and its carrying-slide 21.

I claim—

1. A tram-car with its door-edge fastened to a metal bar, a slotted frame forming part of said bar and having as part of itself a slide for carrying its side of the door, as and for the purpose described.

2. A tram-car provided with a door-carrying rail, a sliding device secured to the door, adapted to slide on said rail and flanged to contact with four sides of the rail, as and for the purpose set forth.

3. In a tram-car, a sliding device secured to the door, having in its upper or bearing surface a socket and a shoe-bearing with a stem or projection extending into or through the socket in the upper wall of the slide, as and for the purpose described.

4. A tram-car-door slide device consisting of a carrying-rail and a slotted frame secured to the side of the door, having a slide adapted to the rail formed integral with the slotted frame, as and for the purpose described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN STEPHENSON.

Witnesses:

S. A. STEPHENSON,  
JOS. B. STEPHENSON.