

No. 709,894.

Patented Sept. 30, 1902.

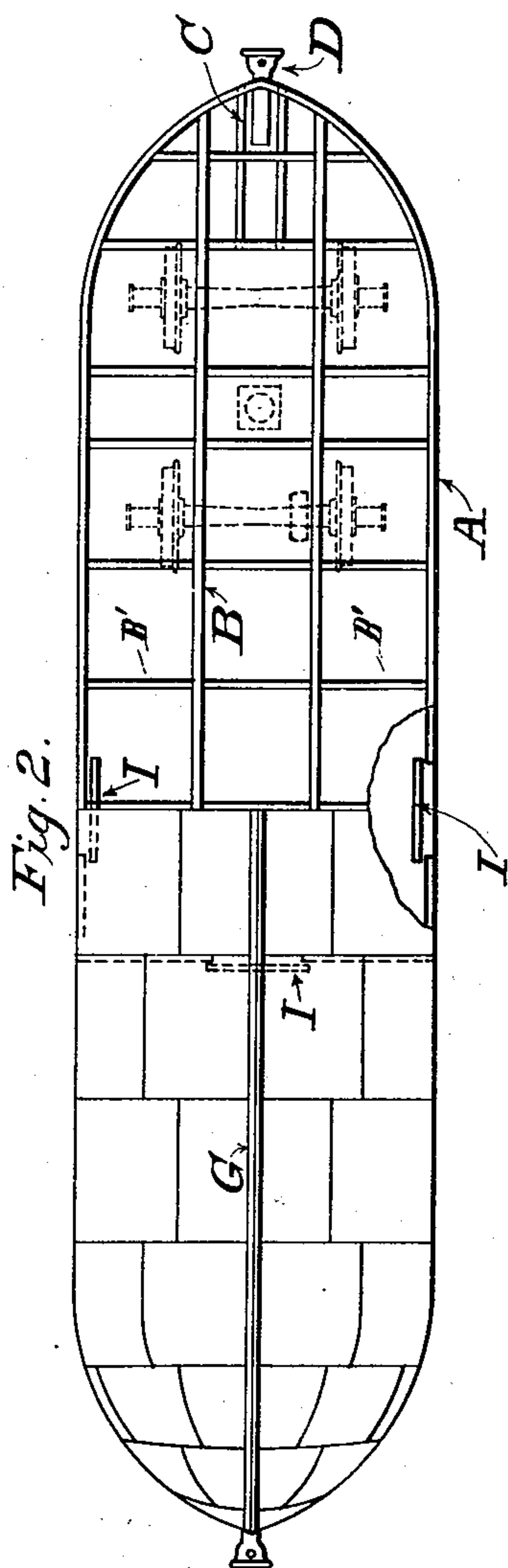
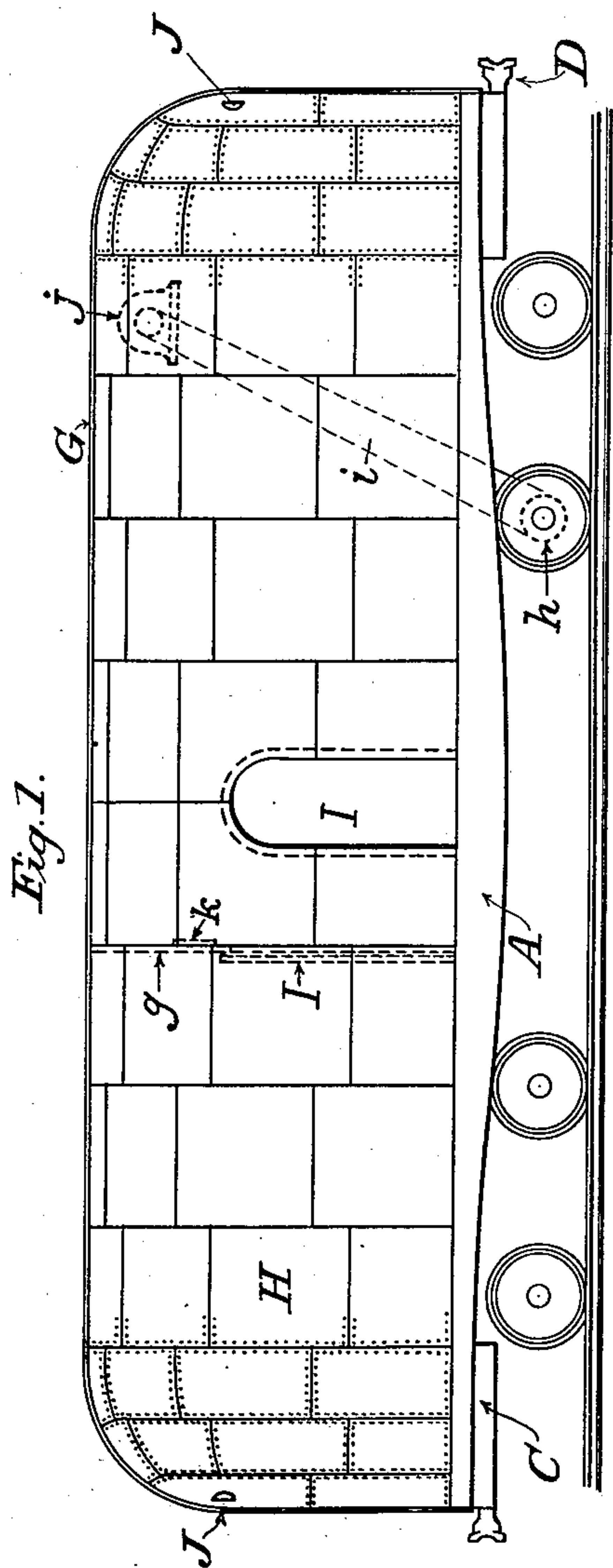
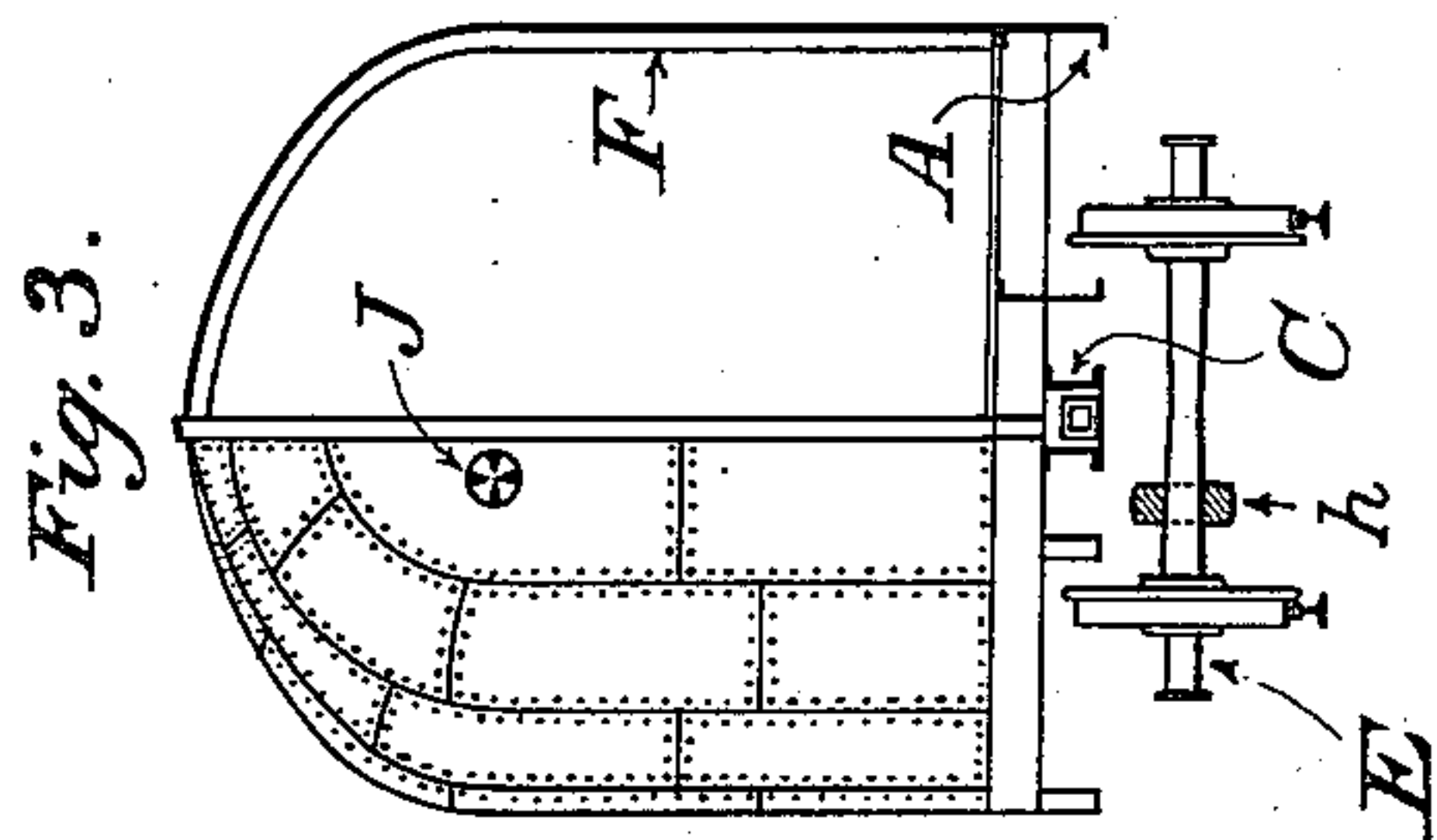
P. J. FARRELL.

MAIL CAR.

(Application filed May 12, 1902.)

(No Model.)

2 Sheets—Sheet 1.



WITNESSES:

Francis H. Hovver.

George N. Blatch

Patrick J. Farrell INVENTOR.

No. 709,894.

Patented Sept. 30, 1902.

P. J. FARRELL.

MAIL CAR.

(Application filed May 12, 1902.)

(No Model.)

2 Sheets—Sheet 2.

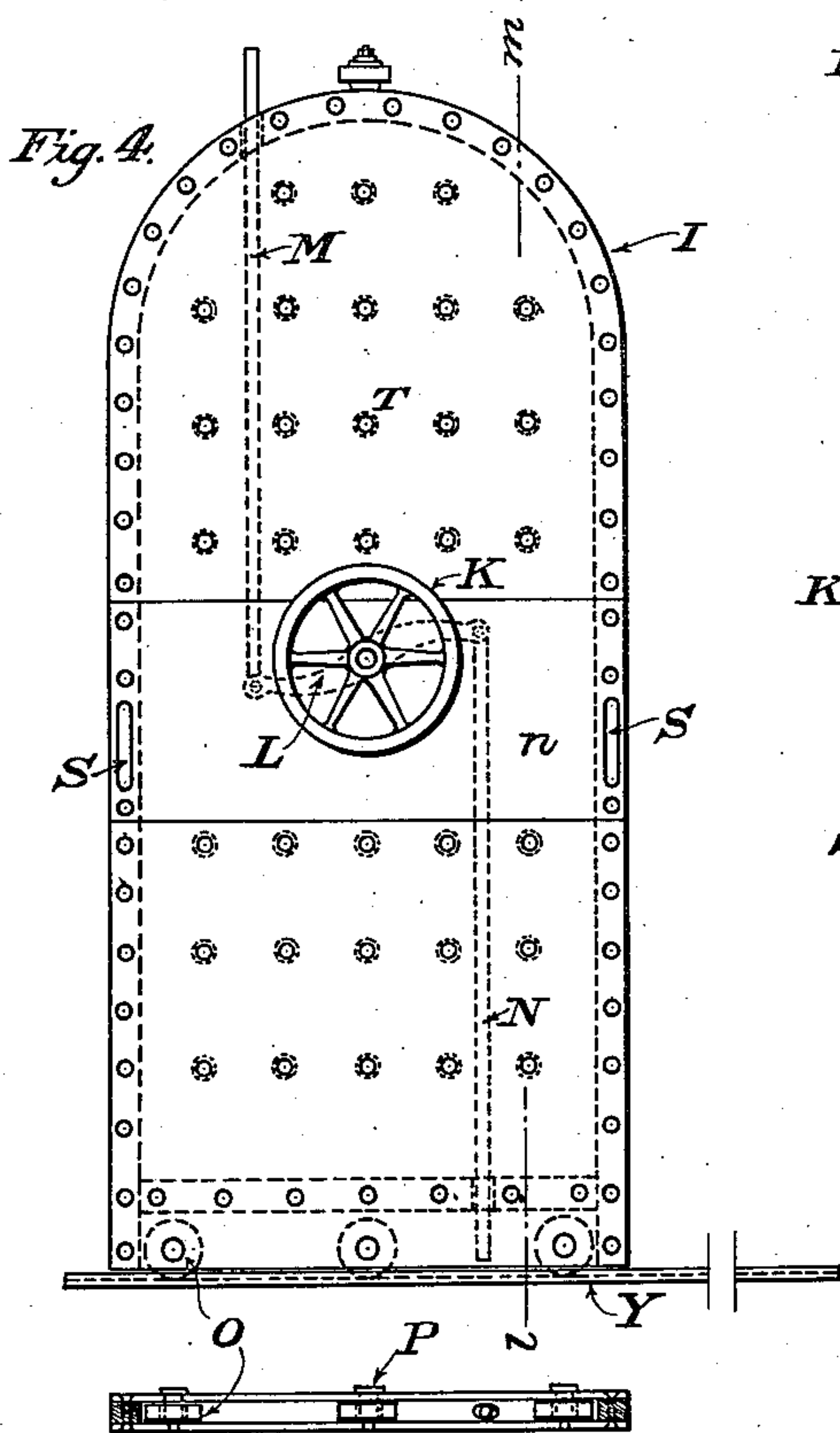


Fig. 6.

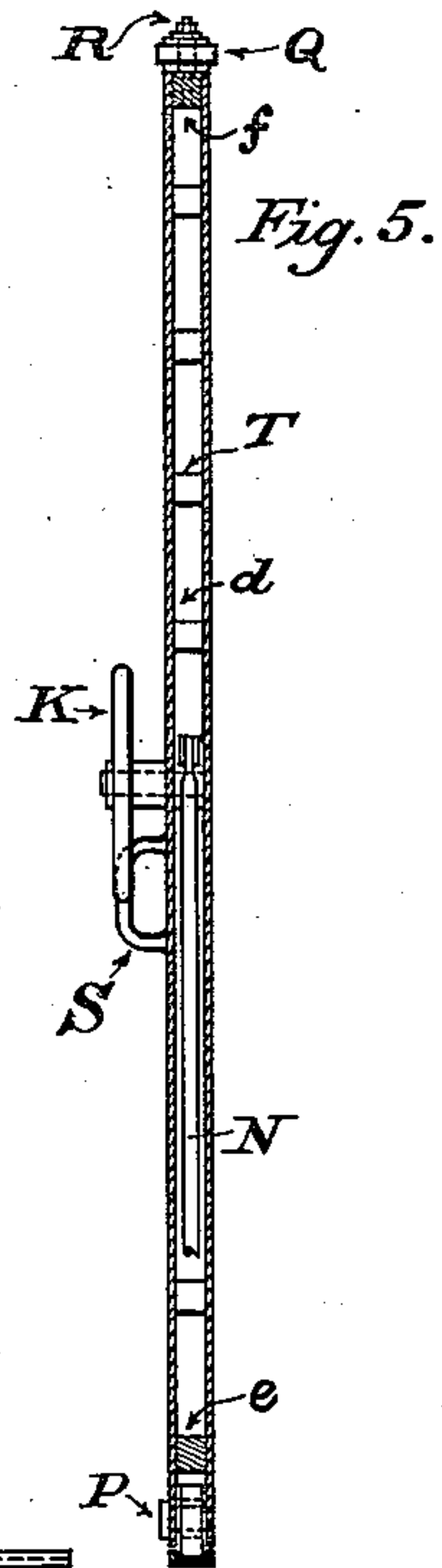


Fig. 9.

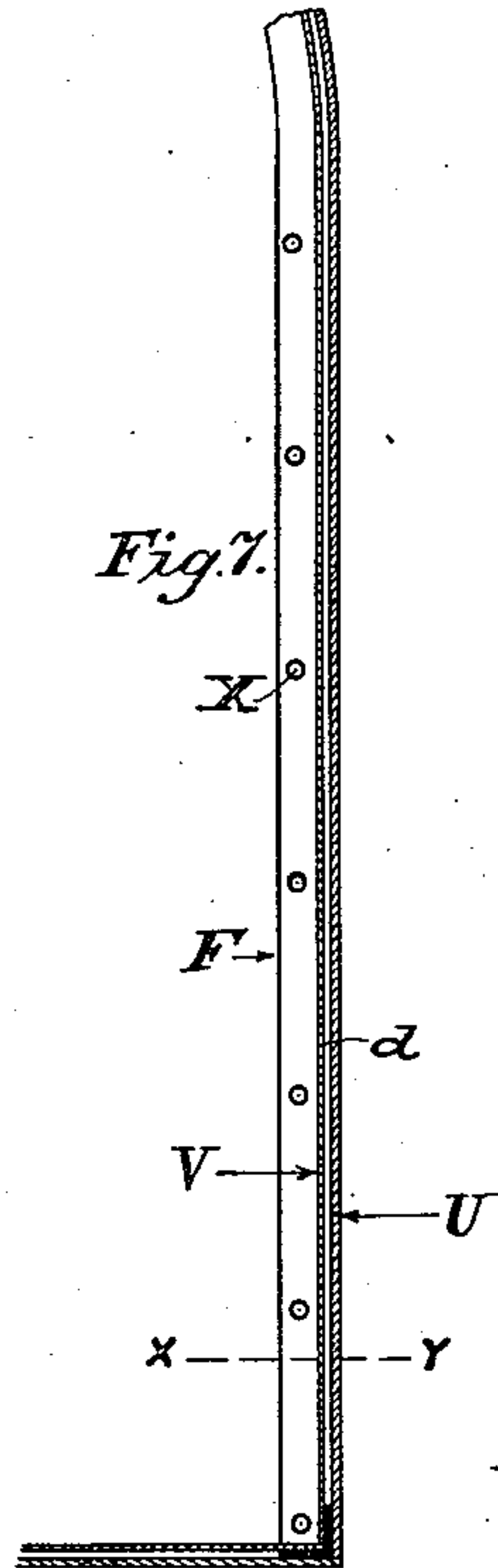


Fig. 8.

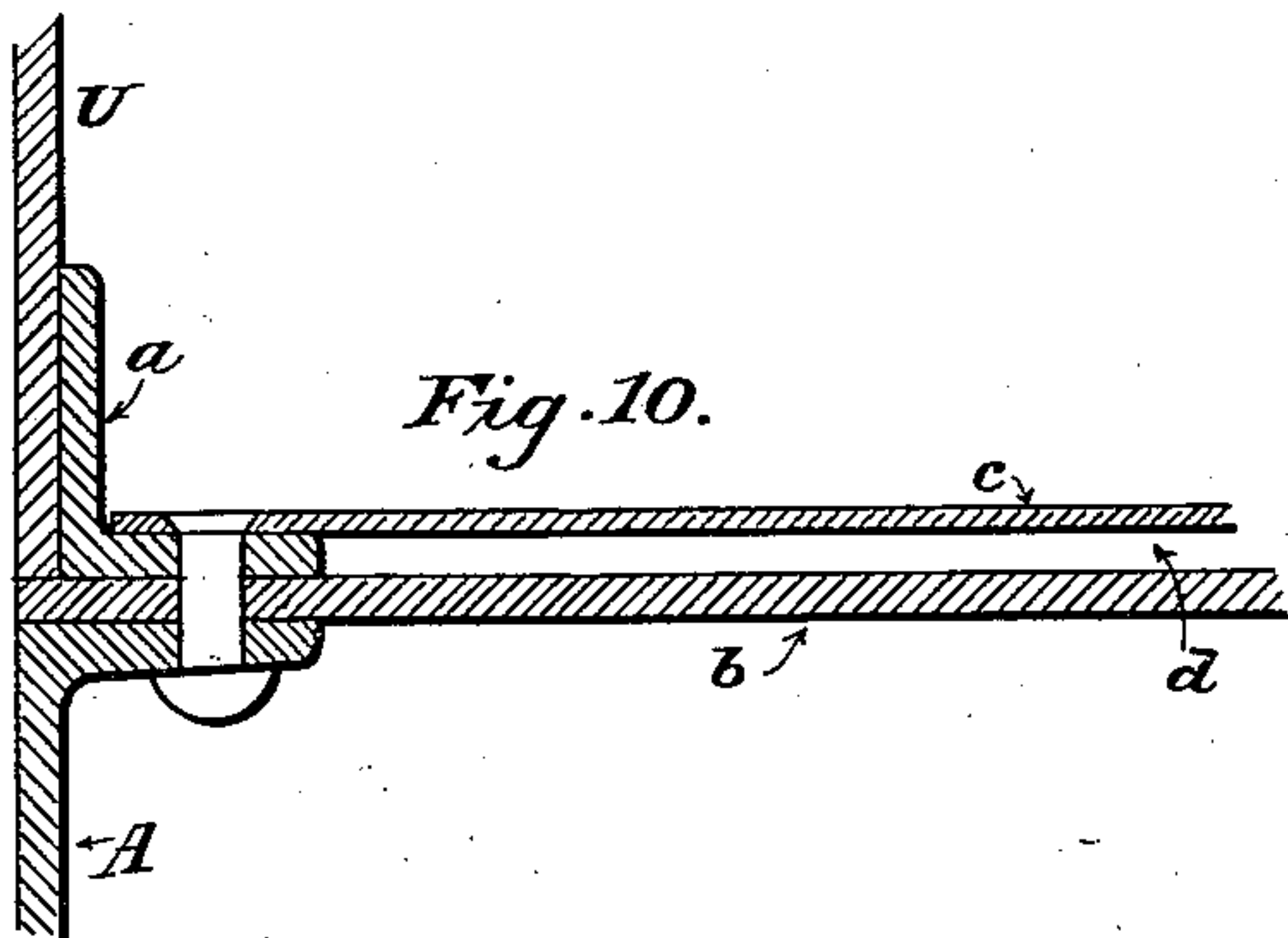
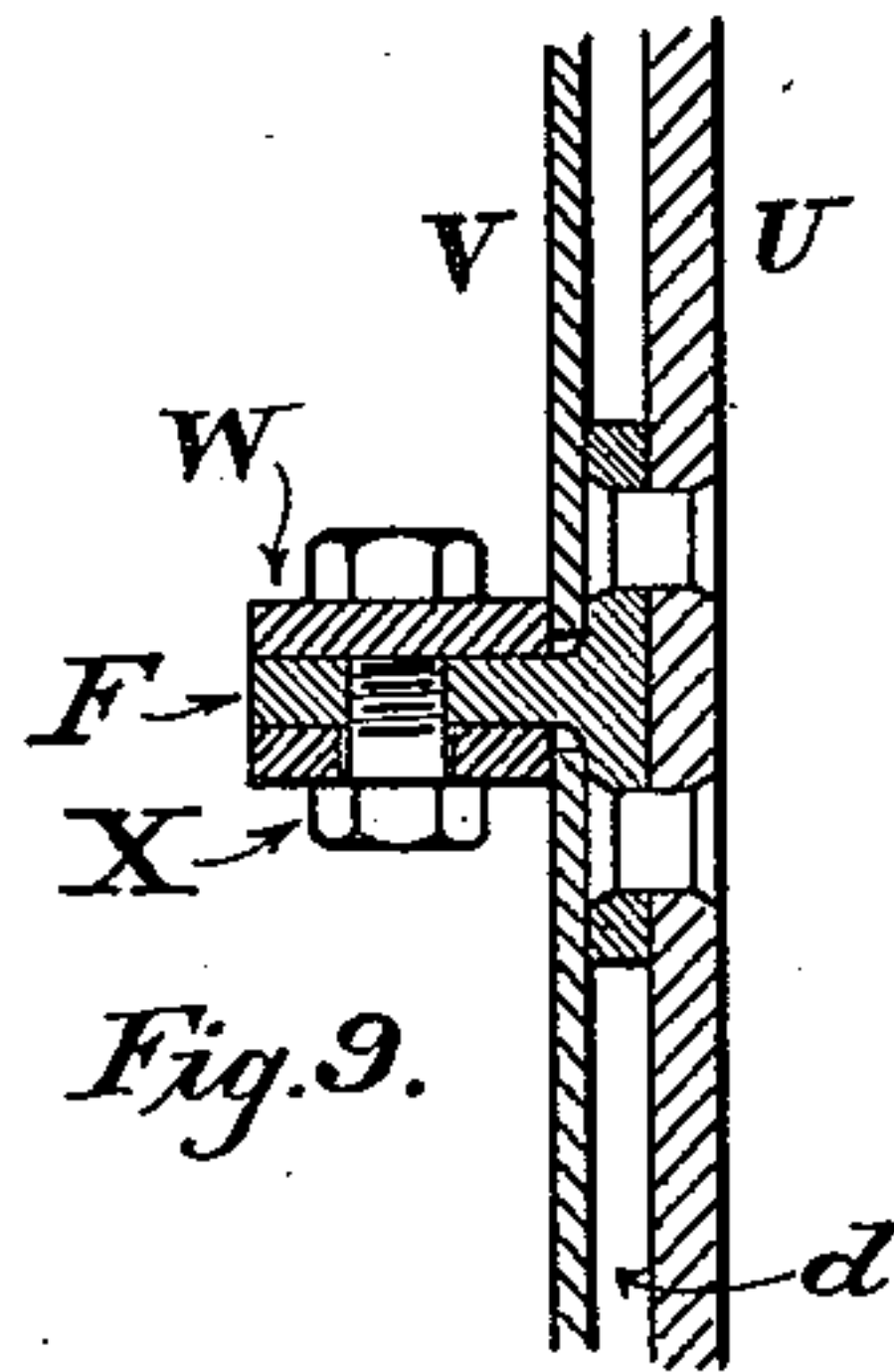


Fig. 10.

WITNESSES:

Francis A. Horner  
George H. Blatt

Patrick J. Farrell  
INVENTOR.



# UNITED STATES PATENT OFFICE.

PATRICK J. FARRELL, OF JOLIET, ILLINOIS.

## MAIL-CAR.

SPECIFICATION forming part of Letters Patent No. 709,894, dated September 30, 1902.

Application filed May 12, 1902. Serial No. 107,051. (No model.)

*To all whom it may concern:*

Be it known that I, PATRICK J. FARRELL, a citizen of the United States, residing at Joliet, in the county of Will and State of Illinois, have invented certain new and useful Improvements in Mail-Cars, of which the following is a specification.

My invention relates particularly to the construction and arrangement of railway-cars specially adapted for carrying and protecting mail-matter, though the principles involved in said invention are equally applicable in a car for carrying express-matter, money, or other valuables.

The special objects of my invention are to provide a car of the class stated which will be fireproof and of such shape and strength as to be proof against demolition from collisions or telescoping; also, to provide a car which cannot be destroyed by the use of explosives in the ordinary manner and in which the lives of the persons in the car will be fully protected.

Having these and other objects of general utility in view, I have invented the railway mail-car shown in the accompanying drawings, which form a part of this application, and in which—

Figure 1 is a side elevation of a car embodying my invention. Fig. 2 is a top plan view of the car with a portion of the roof removed. Fig. 3 is an end elevation with a portion of the end removed. Fig. 4 is a front elevation of the sliding door, which forms an element of my invention. Fig. 5 is a vertical section through the door on the line *l m* of Fig. 4. Fig. 6 is a bottom plan view of the door. Fig. 7 is a section through the side walls and a portion of the car-floor. Fig. 8 is a cross-section on the line *X Y* of Fig. 7. Fig. 9 is an enlarged detail of Fig. 8. Fig. 10 is a detail in section, showing the manner of securing the floor-plates to the car-framing.

Referring to the drawings in detail, *A A* represent the outside main girders, formed of angle-irons, the end portions of which are bent on a curve inwardly and secured together at the draw-bars. Extending transversely between the girders are cross-beams *B'*, and extending longitudinally of the car are intermediate beams *B*, all of said beams being suitably secured to the girders *A*.

Channel-bars *C* are secured at each end of the car-floor frame and furnish suitable bearings and braces for the draw-bars *D*.

*E* represents the car-axles, and *F* one of the frame-ribs, which is formed of T-iron bent rounding at its middle portion and having its ends suitably secured to the girders. To these ribs are secured the sheet-metal plates *H*, which form the sheathing or side and roof walls of the car.

*G* is an angle-bar which extends from end to end of the car and forms a meeting bar for the sheathing-plates at the ends and on the roof. The outer wall or sheathing *U* and the inner wall or lining *V* are made up of a plurality of sheet-metal plates *H*, which are riveted together at their contiguous edges, so as to form tight joints. A space is preferably left between the lining and the sheathing in which may be placed an interlining of asbestos or other suitable fireproofing material.

*I* represents my improved car-door, which forms an important feature of my invention. This door may be placed in both sides of the car and also in the partition *k*, with which I may subdivide the car into two compartments, if desired. This door is constructed of two metal plates secured together with spacers *T* therebetween and riveted to a square metal bar *f*, which extends along the edges of the plates and is bent to conform to the shape of the door. At the center of the door and on its inner side is a hand-wheel *K*, which is mounted on a suitable spindle secured in the door, said spindle also carrying a two-arm lever *L*, which is positioned between the two plates forming the door. To the ends of the lever are secured vertically-moving locking bolts or bars *M N*, respectively, which project and slide in suitable openings in the bar *f* and when in locked position bear against the door-frame at the top and bottom of the doorway. Covering the lever and extending the width of the door is a plate *n*, which is secured in place by bolts and nuts, so that it can be readily removed if access to the lever is desired. Rollers *O*, mounted on pintles *P*, are arranged in the bottom of the door and travel in a grooved track *Y*, which extends across the threshold and serves as a ready means of sliding the door with little friction.



the top of the door on a pin R is mounted roller Q, which bears against the inside of the car and serves as an antifriction-bearing at that point. Handles S, secured to the inside of the door near its side edges, serve as convenient means for moving the car-door. At each end of the car are ventilators J, of any suitable construction, which serve not only to permit the admission and exit of air, but also serve as ports through which a gun revolver may be fired by those within the car.

Within the car may be placed a fan-motor driven by a belt *i*, running on a pulley *h*, mounted on the axle or journal E, thus improving the circulation of the air within the car when the train is in motion.

I preferably divide the car into two compartments by a partition *g*, which may be made of an iron grating or may be provided with a grated opening *k*, thus facilitating the circulation of the air throughout the entire car.

In constructing my improved car I prefer to secure the sheathing U to the flanges of the T-bars by rivets, as shown in Fig. 9, and on opposite sides of the body of the T-bars I secure by bolts X flat metal bars W, the outer edges of which bear against and hold in place the lining V, also as shown in Fig. 9. Around the lower corner of the car I place an angle-iron *a*, between which and the girder A is placed the edges of the floor-plates *b*. On the upper side of the horizontal arm of the angle-iron is placed the floor-plates *c*, and said parts are riveted together, as shown in Fig. 10, thus thoroughly and tightly securing them and providing an air-space *d* between the inner or upper floor *c* and the outer or lower floor *b*, which space may be filled with a non-combustible, if desired.

By forming the walls and floor of my im-

proved car double I get a light and strong construction. By providing a car of the conical-end shape shown I avoid angles and broad surfaces, which would be easily damaged in case of a collision.

Through the use of the bar G, extending from end to end of the car and bent as shown, I am able to secure a water-tight joint between the contiguous edges of the plates which form the side walls and roof of the car.

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

1. In a car, a frame composed of the girders A having their end portions bent as shown, longitudinal beams B arranged between the girders, transverse beams B', ribs F formed of T-bars, and the bar G, extending from end to end of the car and having its ends secured to the girders and bent as shown.

2. In a car, the ribs F composed of T-irons, sheet-metal plates riveted to the flanges of the bars and forming the sheathing of the car, the lining V spaced from the sheathing, and means for securing the lining in place consisting of bars or plates bolted to the ribs and having their outer edges bearing against said lining, substantially in the manner shown.

3. In a car, girders A formed of angle-irons and having their ends bent as shown, an outer car-floor *b* resting on said girders, the sheathing U, angle-irons *a* extending around the corner formed by the junction of the bottom plate *b* and the sheathing U, and the upper floor-plate *c*, said floor-plates angle-iron and girder being riveted together, substantially as shown.

PATRICK J. FARRELL.

Witnesses:

G. N. BLATT,

MAMIE CONNOLLY.