

(No Model.)

2 Sheets—Sheet 1.

W. C. WHITNER.  
RAILWAY CAR.

No. 454,099.

Patented June 16, 1891.

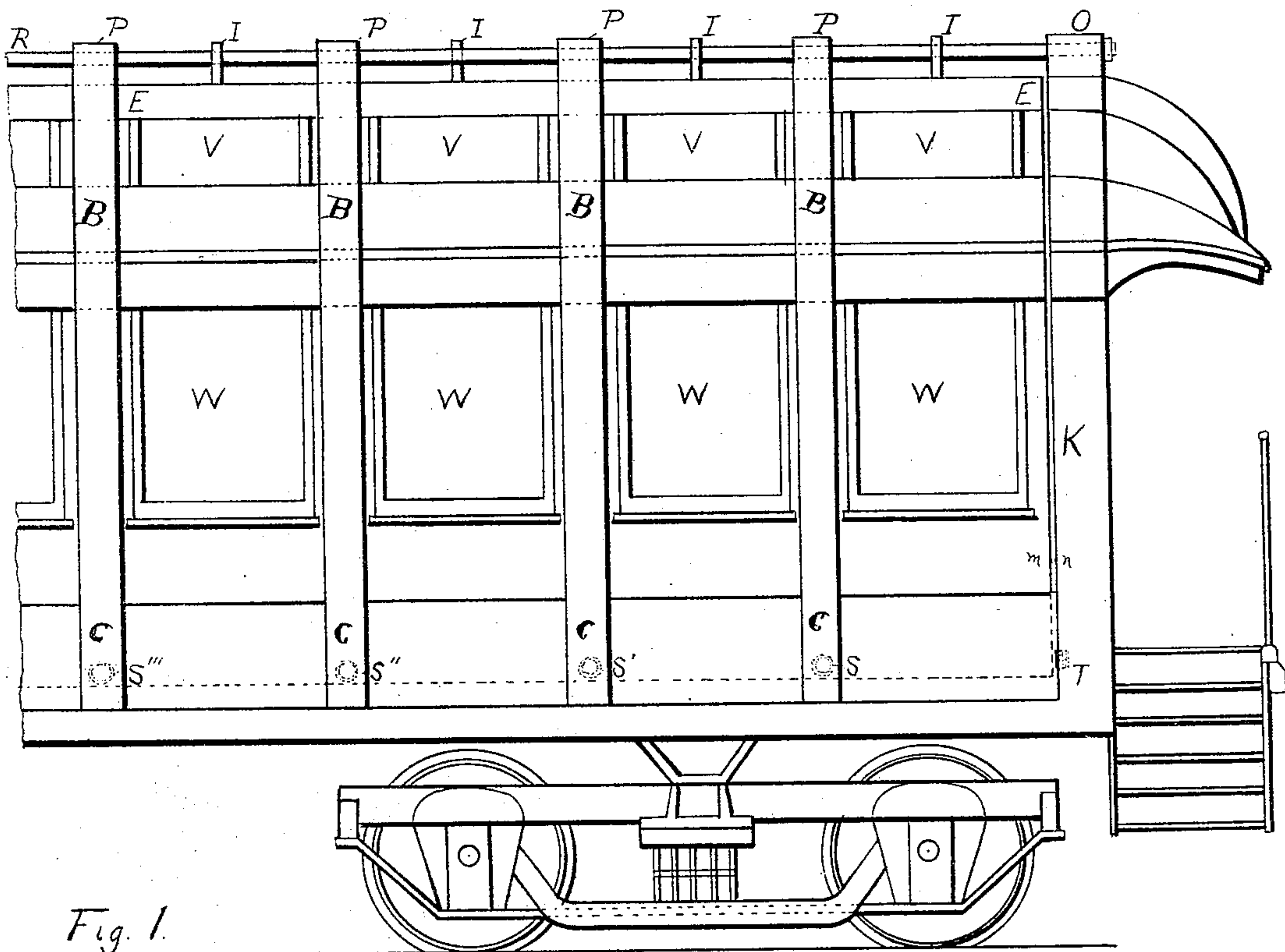


Fig. 1.

WITNESSES  
W. J. Roddey.  
W. L. Roddey

INVENTOR  
W. C. Whitner.

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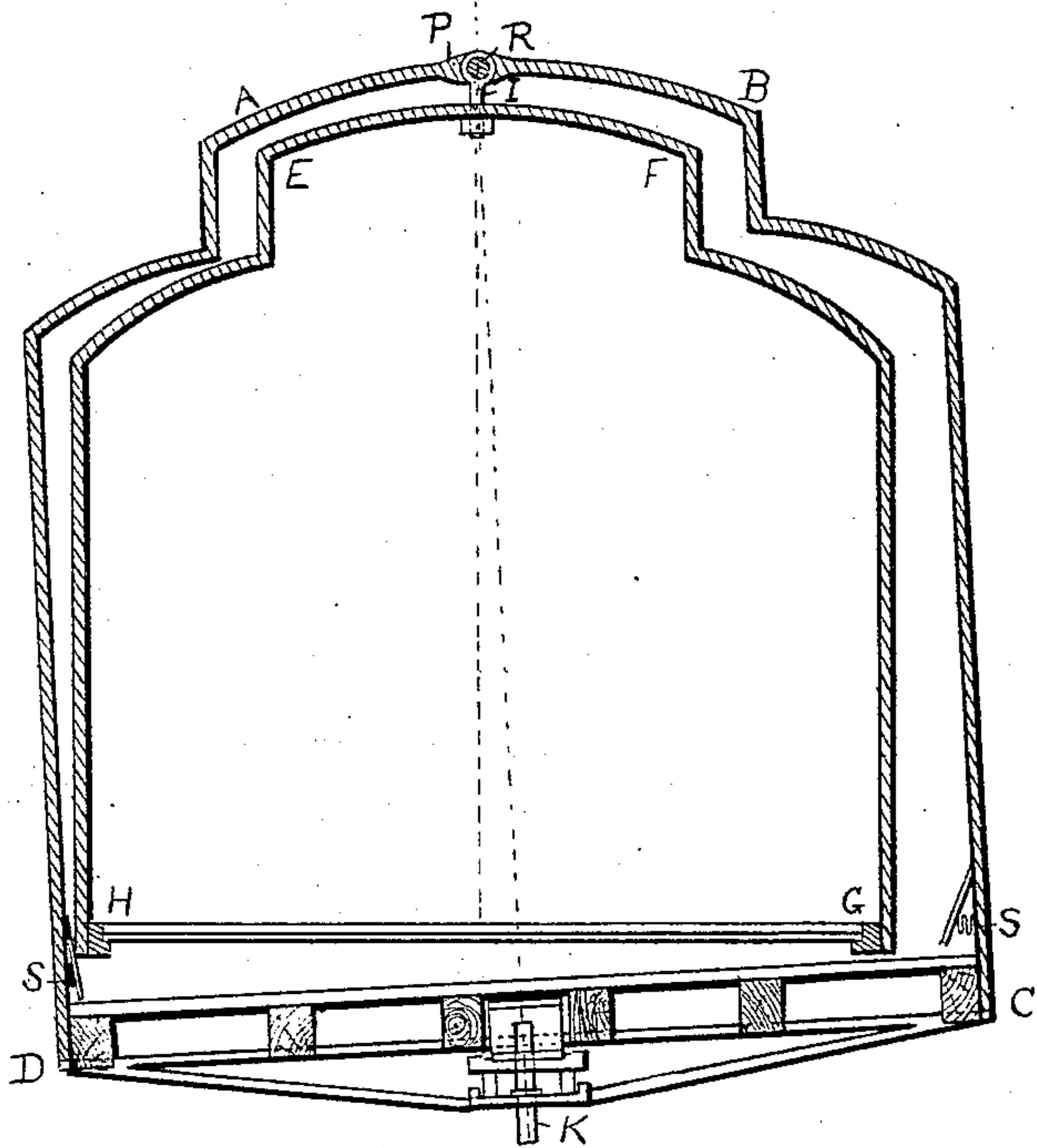


Fig. 3

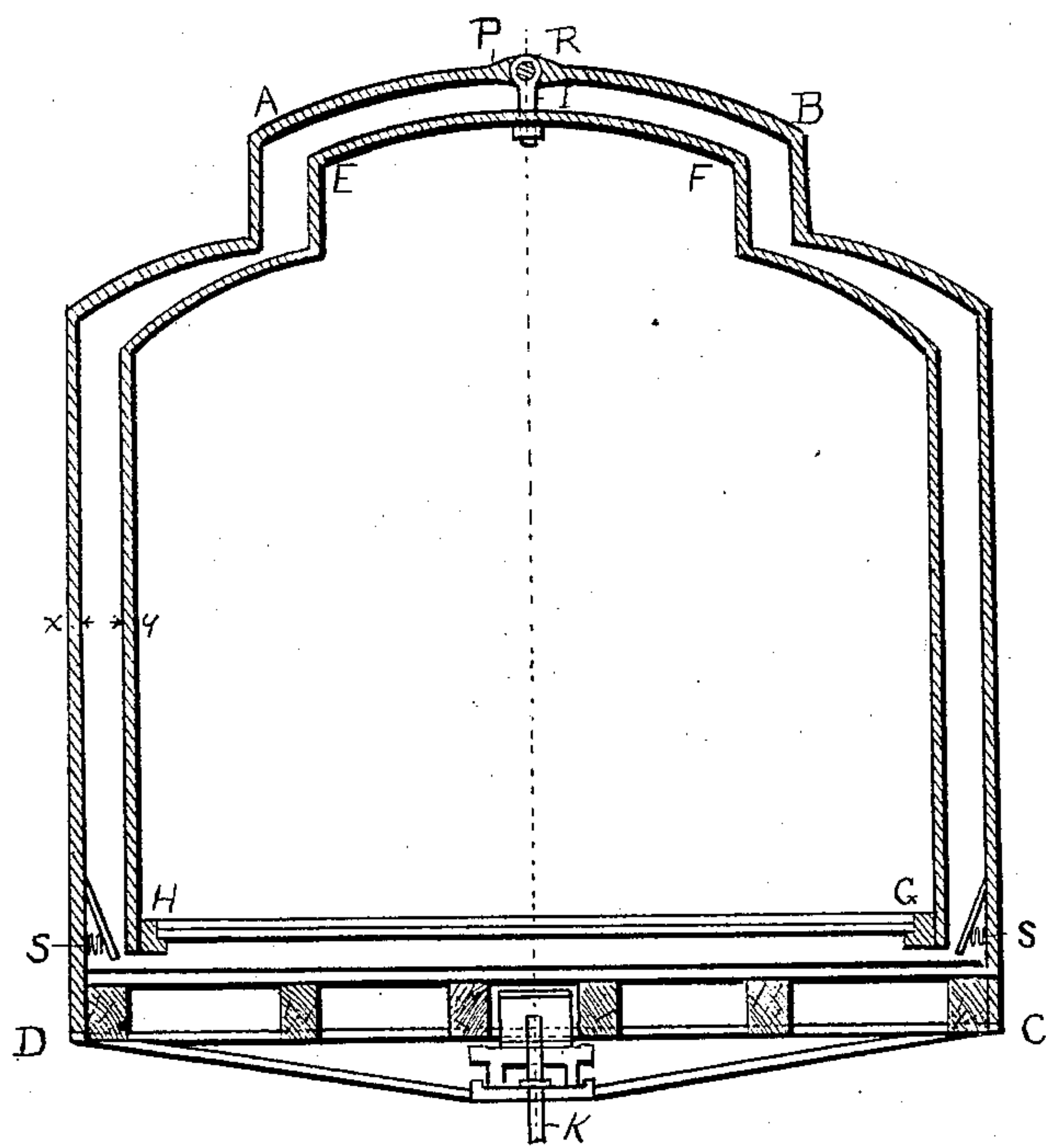


Fig. 2

WITNESSES  
*W. J. Roddey*  
*W. L. Roddey*

INVENTOR  
*W. C. Whitner*



# UNITED STATES PATENT OFFICE.

WILLIAM CHURCH WHITNER, OF ROCK HILL, SOUTH CAROLINA.

## RAILWAY-CAR.

SPECIFICATION forming part of Letters Patent No. 454,099, dated June 16, 1891.

Application filed March 11, 1891. Serial No. 384,692. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM CHURCH WHITNER, a citizen of the United States, residing at Rock Hill, in the county of York and State of South Carolina, have invented a new and useful Improvement in Railway-Cars, of which the following is a specification.

My invention relates to improvements in railway-cars, such as sleeping-cars, parlor-cars, dining-cars, first-class passenger-cars, and all other kinds of cars used for transportation, the object of my invention, as described, being to construct a car in which the floor, berths, seats, tables, or other contents will remain level or in their true positions, irrespective of irregularities in track or other causes producing lateral and jarring motions.

My invention and the improvements claimed are shown by the accompanying drawings.

Figure 1 is a side elevation of a car with my improvements. Fig. 2 is a transverse section of the same when it is on a straight and level track, or in its true position. Fig. 3 shows the same section when the car is on a curved track, or exhibits the position it would assume if it were thrown from a level position from some cause, such as high or low speed on a curved track not properly adjusted or kept up.

Similar letters refer to similar parts in the different figures.

In Figs. 2 and 3, D A B C shows a transverse section of a frame connected with the trucks from underneath its floor by a king-bolt, as cars are connected with trucks at present. The sides of this frame will be built of pieces B C, Fig. 1, extending from the floor between the windows W and the ventilators V, so as not to interfere with them. The shape or form of this frame transversely, as shown in Fig. 2, will have very much the same shape as that of the car suspended within, but may have any other form that will be found to give better results. This frame may be terminated at both ends by a platform and a structure K the shape and form of the car carrying the doorway or entrance to the car, or the doorway may be in the car, as thought desirable. This structure K may be of sufficient size to contain a vestibule, and, if de-

sirable, will be connected with the end of the car by a flexible substance, such as canvas.

R is a beam extending from end to end of the frame and supported by the ends at O, secured by a nut or some other simple mechanical device, and also supported by the uprights D A B C at the points P. If thought desirable, the beam R may be mounted upon suitable springs at the points P and O, so as to allow a very slight up-and-down motion.

H E F G shows a transverse section of the car within the frame, and is connected with it by means of the pieces I, firmly and rigidly fastened to the center of the top of the car, and these pieces are so connected with the beam R that they will move on it transversely with the least possible friction, but will not move forward or backward. Thus the car by virtue of its weight will always seek its center of gravity, hanging plumb and true, though the frame may be tilted or changed from a level position, as shown in Fig. 3.

S S' S'' S''', &c., are springs in the sides of the frame so proportioned and placed as to relieve or break the force of the car in coming against the sides of the frame, should the displacement of the frame be sufficient to cause the two to come in contact. These springs will be placed along the whole length of the car on both sides of the frame. The space  $x y$  between the car and the sides of the frame will be calculated to give the best results. The space or distance  $m n$  between the end of the car and the end of the frame will be just barely sufficient to allow the car to swing freely in the frame. T T', &c., are springs let in the ends of the frame to break the forward motion of the car when the forward motion of the frame has been checked or brought to a halt.

A car so suspended and carried within such a frame will be harder to turn from the track than cars as built at present, for if the frame should start to turn from a level position to an inclined position or from the track the car by virtue of its center of gravity will tend to remain level, and on account of its superior weight will pull the frame back to its true position or over the center of the track.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A railway-car without trucks suspended within a frame mounted on trucks from points in the frame situated in one plane passing longitudinally through the car and  
5 frame and perpendicular to their floors in such a way that the car will have a free lateral motion from its points of suspension and its floor retain a level position.

2. A frame mounted on trucks and carry-  
10 ing platforms, in combination with a railway-car suspended within the frame from points in a beam running longitudinally through the center of the frame at the top, the beam be-

ing supported by other beams on the sides and ends of the frame and mounted on suitable springs at the points P and O, or not, as may be expedient, in such a way that the car will swing readily from side to side, but have no forward or backward motion apart from that of the frame, in combination with springs  
20 between the car and frame at the sides and ends to prevent bumping.

WILLIAM CHURCH WHITNER.

Witnesses:

W. L. RODDEY,

L. C. HARRISON.