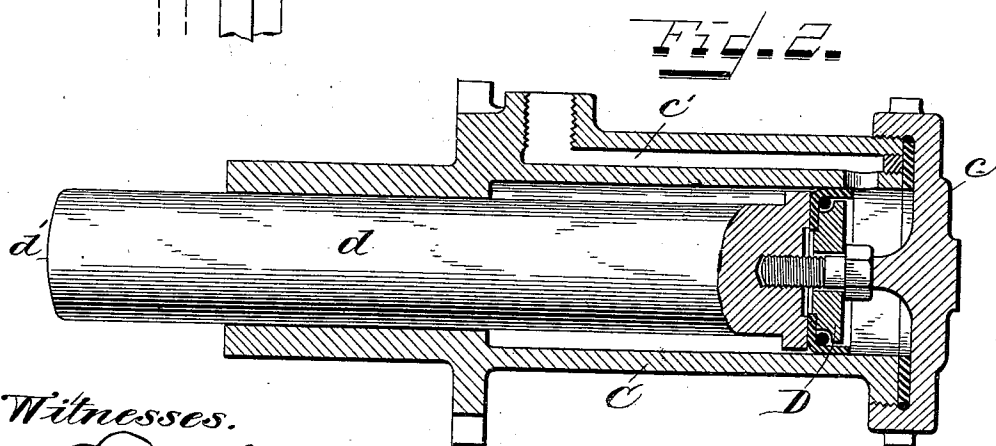
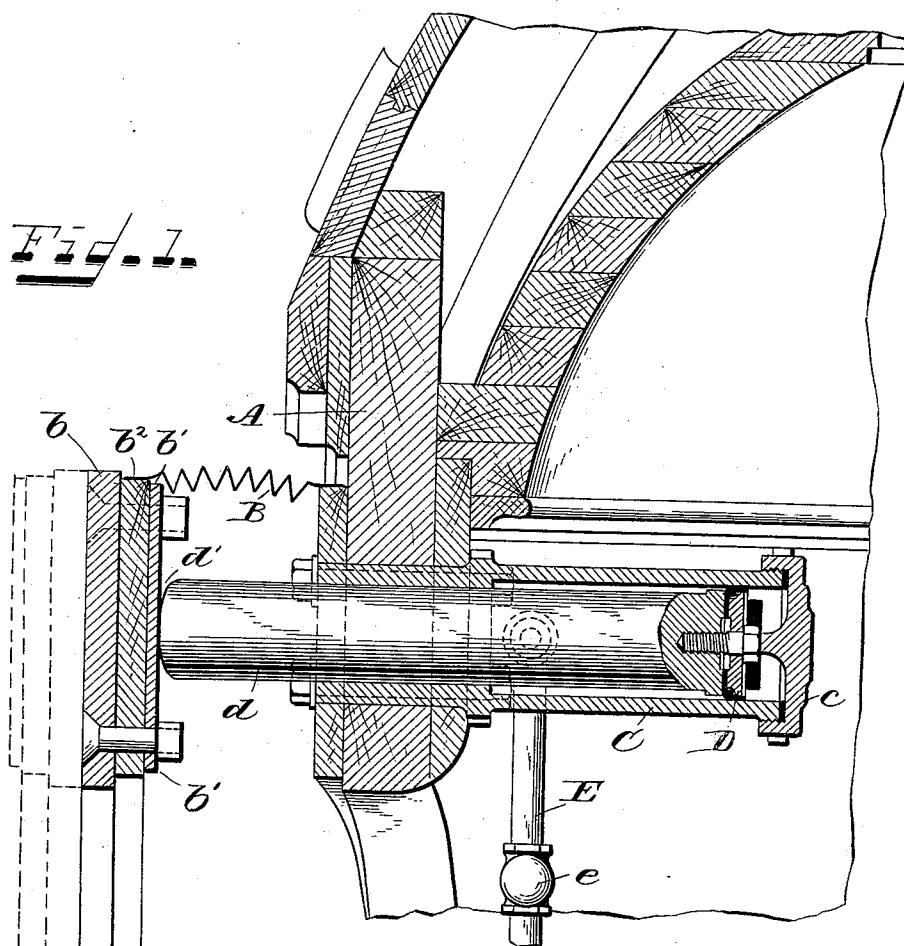


(No Model.)

J. MEEHAN.
VESTIBULE CAR.

No. 512,513.

Patented Jan. 9, 1894.



Witnesses.

Thomson Cross
James A. Hawley

Inventor.
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UNITED STATES PATENT OFFICE.

JAMES MEEHAN, OF COVINGTON, KENTUCKY.

VESTIBULE-CAR.

SPECIFICATION forming part of Letters Patent No. 512,513, dated January 9, 1894.

Application filed April 15, 1893. Serial No. 470,409. (No model.)

To all whom it may concern:

Be it known that I, JAMES MEEHAN, a citizen of the United States of America, residing at Covington, in the county of Kenton and State of Kentucky, have invented certain new and useful Improvements in Vestibule-Cars, of which the following is a specification.

My invention relates more particularly to means for holding the face plates of vestibules of adjacent cars in contact regardless of the changes in alignment incidental to the service.

The object of my invention is to provide means for accomplishing this result which will be of simpler construction, less liable to get out of order, more accessible for repairs, and at the same time more efficient than the contrivances heretofore used, and the invention consists in the parts and the combination and arrangement of parts hereinafter described and claimed.

In the drawings Figure 1. is a vertical longitudinal section through the end portion of a car and vestibule provided with my improved equalizing apparatus. Fig. 2. is an enlarged horizontal section of the pressure cylinder.

A represents the outside carling of the hood of a railway car, and B the usual flexible curtains of the vestibule, secured at their outer edges to the upper end of U-shaped face or chafing plates *b*, and constituting the diaphragm.

C is a cylinder mounted in the outside carling of the hood midway of the width of the car and having its inner end closed by a cap *c*.

D is a piston adapted to reciprocate in the cylinder and having a piston rod *d* adapted to abut against a plate *b'* secured to the face plate *b*. I prefer to separate this plate from the face plate by an intervening non metallic backing *b²* which may be of wood, but the bearing plate may be integral with the face plate. The contacting end of the piston rod is preferably of curvilinear shape as shown at *d'*.

E is a pipe leading directly from the auxiliary reservoir to the piston cylinder and entering the latter through a cored passage *c'*. This leaves the cylinder free at the end and the cap can be taken off and the piston removed for repairs without disturbing the pipe. The supply pipe is provided with a check valve *e* adapted to retain the pressure in the pipe if

the train be cut out. The apparatus is arranged to cause as little pressure upon the faces of the diaphragm as is consistent with maintaining the contact.

By making the contacting end of the piston rod of curvilinear shape I secure all of the freedom of the play which has been sought to be obtained by systems of independently yielding connections with the face plates, universal joints in the bearing rods and other complex arrangements.

I claim as my invention—

1. The combination of a piston cylinder, mounted in the hood of a railway car midway of its width; a pipe connecting the cylinder with a compressed air supply; a piston adapted to reciprocate in the piston cylinder, and a piston rod having an end of curvilinear form adapted to abut against a bearing plate carried by the face plate of the diaphragm substantially as and for the purpose specified.

2. The combination of a piston cylinder, mounted in the hood of a railway car midway of its width; a piston adapted to reciprocate therein; a piston rod adapted to abut against a bearing plate carried by the face plate of the diaphragm; a cored passage in the wall of the piston cylinder and a pipe connecting the cored passage with the auxiliary air reservoir substantially as and for the purpose specified.

3. The combination of a piston cylinder, mounted in the hood of a railway car midway of its width; a piston adapted to reciprocate therein; a piston rod adapted to abut against a bearing plate carried by the face plate of the diaphragm; a pipe leading from the auxiliary air reservoir and entering the side wall of the cylinder, and a removable cap, constituting the closed end of the cylinder, substantially as and for the purpose specified.

4. The combination of a piston cylinder, mounted in the hood of a railway car midway of its width; a piston adapted to reciprocate therein; a piston rod adapted to abut against a bearing carried by the face plate of the diaphragm; a pipe leading from the auxiliary air reservoir to the cylinder and a check valve in the pipe substantially as and for the purpose specified.

5. The combination with the face plate of a

vestibule car of the cylinder C, having cap *c*
and cored passage *c'*; the piston D, adapted
to reciprocate in the cylinder; the piston rod
d, having curved end face *d'* adapted to abut
5 against a bearing plate *b'* carried by the face
plate; the pipe E, connecting the cored pas-
sage *c'* with the auxiliary air reservoir, and

the check valve *e* substantially as and for the
purpose specified.

JAMES MEEHAN.

Witnesses:

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EARNEST W. FRY.