

(No Model.)

T. L. McKEEN.
VESTIBULE CAR.

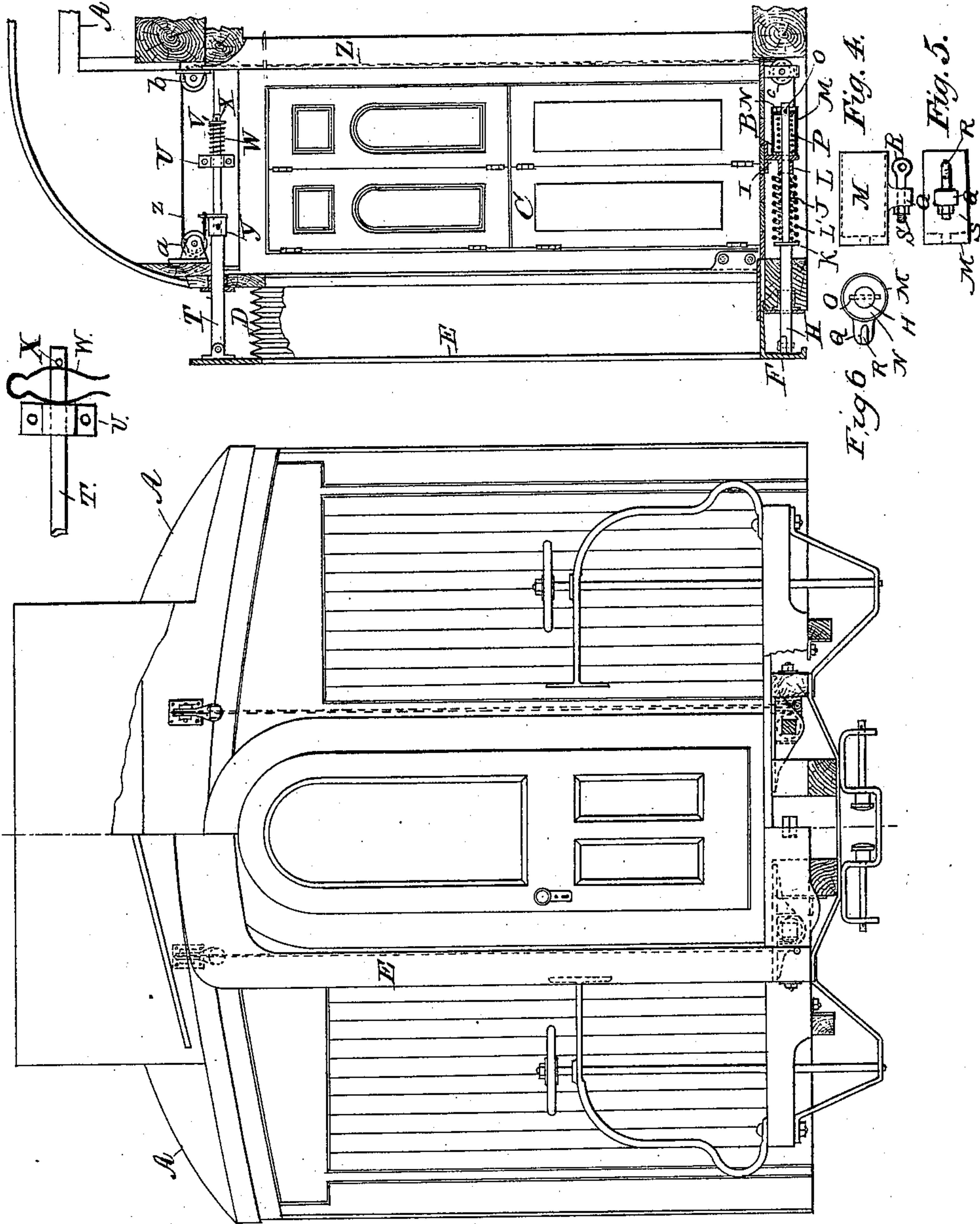
No. 601,899.

Patented Apr. 5, 1898.

Fig. 2.

Fig. 7.

Fig. 1.

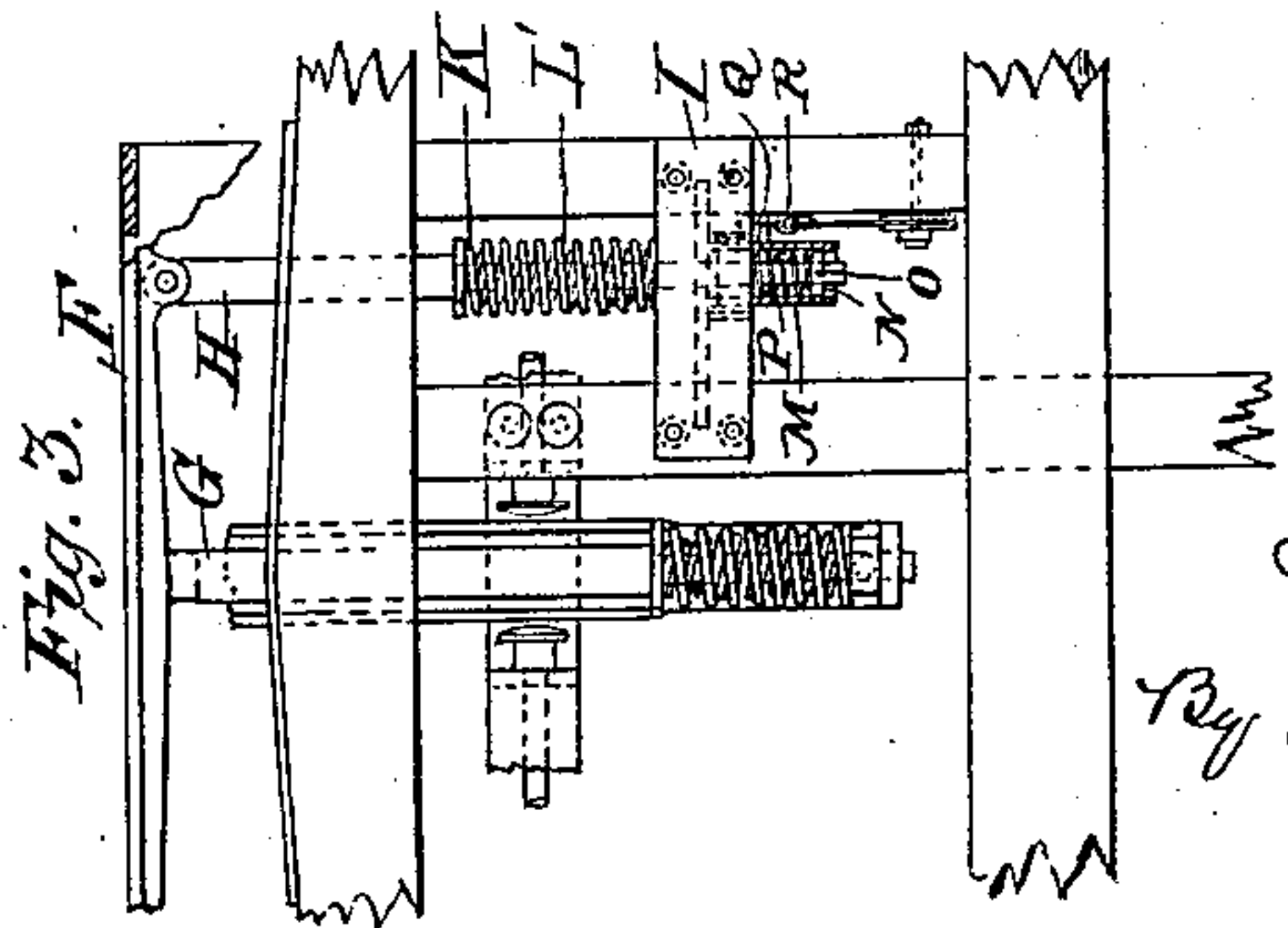


Witnesses:

J. C. Brecht

N. Curtis Hammond

Fig. 3.



Inventor:

T. L. McKee

By J. M. C. W. Intire

Attorney.

UNITED STATES PATENT OFFICE.

THOMAS L. McKEEN, OF NEW YORK, N. Y.

VESTIBULE-CAR.

SPECIFICATION forming part of Letters Patent No. 601,899, dated April 5, 1898.

Application filed November 1, 1897. Serial No. 657,074. (No model.)

To all whom it may concern:

Be it known that I, THOMAS L. McKEEN, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Vestibule-Cars; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in railroad-cars, and particularly to that class known as "vestibule-cars;" and it has for its objects to provide simple and efficient means for controlling the movements of the face-plates and attachments of the vestibules, whereby perfect contact is secured at all times between the face-plates, and at the same time limiting the outward movement of the same when the cars are uncoupled; and with these ends in view my invention consists in the construction and arrangement of parts hereinafter fully described and claimed.

In order that those skilled in the art to which my invention appertains may know how to make and use the same, I will proceed to describe the construction and operation thereof, referring by letters to the accompanying drawings, in which—

Figure 1 is an end view of a car embodying my invention. Fig. 2 is a central vertical section through the vestibule. Fig. 3 is a detail plan view showing a portion of the platform, &c. Fig. 4 is a top view, on reduced scale, of a hood to which the lower end of the operating-cable is attached. Fig. 5 is a side view of the hood. Fig. 6 is an end view of the same, and Fig. 7 is a detail showing modification of spring on upper bar.

Similar letters of reference indicate like parts in the several figures of the drawings.

A represents an ordinary car, with the usual platform B and side doors C, constituting a vestibule.

D is the ordinary accordion extension provided with the abutting face-plate E, and F is what is known as the "buffer-platform," controlled by the central spring buffer-stem G and side spring buffer-stems H, all constructed and arranged in any well-known or desired manner and having in view the nec-

essary movement of the face-plates to produce a comparatively tight joint during the necessary extension and contraction of the accordion portion of the vestibule.

The side buffer-stems H, which contact with the buffer-platform F, extend through and are supported in suitable brackets I and are forced outwardly by springs J, interposed between a hollow cylindrical extension L on the brackets I and collars K on the stems, and L' are auxiliary coil-springs surrounding the springs J to resist any undue or extraordinary strain upon the buffer-platform.

M is a case or hood of substantially the form shown at Figs. 4 and 5, the forward end being closed, with the exception of an orifice sufficiently large to receive and permit the reciprocation of the rear end of the side buffer-stem H. The rear end of this case or hood is open and adapted to receive a follower N, surrounding the stem H and held by a cotter-pin O, the length of which is such that it may move freely with the stem and follower N within the hood or case M against a coil-spring P, interposed between the front end of the hood M and follower N.

The case or hood M has preferably formed upon it and at one side a lug Q, adapted to receive an eyebolt R, which is held in adjustable position by a nut S, as clearly shown in Figs. 4 and 5, and the end of the cable is attached to the eye of said bolt, or, as shown at Fig. 2, the cable may be attached in any suitable manner to the rear end of the hood M.

At the upper end of the face-plate E is arranged a rod or bar T, which passes through the front of the vestibule, and a suitable lug or bracket U, and between the lug or bracket U and a washer V is arranged a coil or other spring W, which is held in position by a cotter-pin X in rear of the washer V, as clearly shown at Figs. 2 and 7. Between the lug U and the frame of the vestibule is permanently or adjustably secured upon the rod T a ring or collar Y, with a radial spoke or arm which is secured to one end of a cable or cord Z, which passes around a pulley a, thence over and around a pulley b, thence downwardly and around a pulley c, and connected to the eyebolt R on the hood M or directly to the rear end of said hood.

In Fig. 2 I have shown the spring W as a

coil-spring, while in Fig. 7 I have shown the spring as of clothes-pin form, it being understood that I may use a spring of any suitable form for the purpose in view.

5 The coil-spring P on the side buffer-stem and the coil-spring V, surrounding the rod T, operate in an obvious manner to partially counteract the action of the buffer-springs J and prevent accordion extension and its ap-
 10 purtenances from traveling too far outward when the cars are uncoupled. The drawings show the buffer-platform and the face-plates in the position they occupy when the cars are uncoupled, and it will be understood that
 15 when two cars are properly coupled the face-plates of the adjacent cars are in contact and the buffer-springs compressed by the inward movement of the buffer-platforms, the rear ends of the buffer-stems traveling freely with
 20 their followers and cotter-pins in the hood or casing M, and that when the excessive pressure against the platforms is relieved the latter, with their stems, move outward, and as the front end of the hoods or cases M are in
 25 contact with the coil-springs P, which are confined by the follower N and cotter-pin O, the outward movement of the buffer-stems compresses the coil-springs P, and they in turn bearing against the front of the hoods cause
 30 the latter to travel outward until they are arrested by contact with the rear faces of the brackets I, and as the cable Z is connected by the eyebolt R with the hood or casing the
 35 obviously pulls upon the rod T and consequently forces the upper portion of the face-plate outward to correspond with its movement at the bottom, thus establishing at all
 40 times while the cars are coupled a close but sensitively-yielding contact between the face-plates of the two cars.

The coil-spring P within the casing or hood M subserves another purpose in addition to that already described with reference to it
 45 and the coil-spring V, surrounding the rod T. When the cars are brought together in the act of coupling, the sudden strain otherwise imposed upon the cable is relieved by the presence of the coil-spring within the hood,
 50 because as a drag is made on the cable by the inward movement of the rod T at the upper portion of the vestibule the cable pulls upon the hood M, which in turn is yielding held by the coil-spring P. Still another important
 55 function is subserved by reason of the coil-spring P being located within the case M—to wit, the upper portion of the face-plates may be held in closer contact by adjusting the

eyebolt in the lug on the case or hood M, which will cause a compression of the spring 60 P and cause it by reaction to pull with greater force and to a greater extent upon the cable.

From the construction shown and described it will be seen that not only do the upper and lower portions of the face-plates travel equally 65 and simultaneously, but the upper portions are prevented from overhanging a perpendicular, and consequently when the lower portion is attached to the buffer-head there is no liability of straining or breaking the connect- 70 ing rivets or bolts, &c.

I am aware that it is not new to provide vestibule-cars with mechanism by means of which the upper and lower portions of the face-plates are caused to move simultaneously 75 and do not wish to be understood as making claim, broadly, to any such construction; but,

Having described the construction and operation of my improvements in vestibule-cars, what I claim as new, and desire to secure by 80 Letters Patent, is—

1. In a vestibule-car, in combination with the buffer-platform, buffer-stems and face-plate E, the rod T, bracket U, spring W, washer V and cotter X, arranged at the top 85 of the car, hood or case M surrounding the rear end of buffer-stem and confining the coil-spring P, cable Z, and eyebolt R and adjusting-nut S, substantially as and for the purpose set forth. 90

2. The rod T in the upper portion of the vestibule adapted to reciprocate as described, in combination with the bracket U, spring W, washer V and cotter-pin X, whereby the out- 95 ward movement of the rod T and face-plate is steadied and limited, substantially as hereinbefore set forth.

3. In combination with means at the upper portion of the vestibule for controlling the movement of the upper portion of the face- 100 plate, a hood or case surrounding the rear end of the buffer-stem, a spring confined between the forward end of the hood or case and a follower on the buffer-stem, and a cable having one end attached to the plate-operat- 105 ing means in the top of the vestibule, and the other end adjustably connected to the hood or case surrounding the buffer-stem, substantially as hereinbefore set forth.

In testimony whereof I affix my signature 110 in presence of two witnesses.

THOMAS L. McKEEN.

Witnesses:

CHAS. W. RIECK,
E. P. RUSSITT.