

DE WITT C. CHAPMAN.

Car-Heater Coupling.

No. 91,824.

Patented June 29, 1869.

Fig. 1.

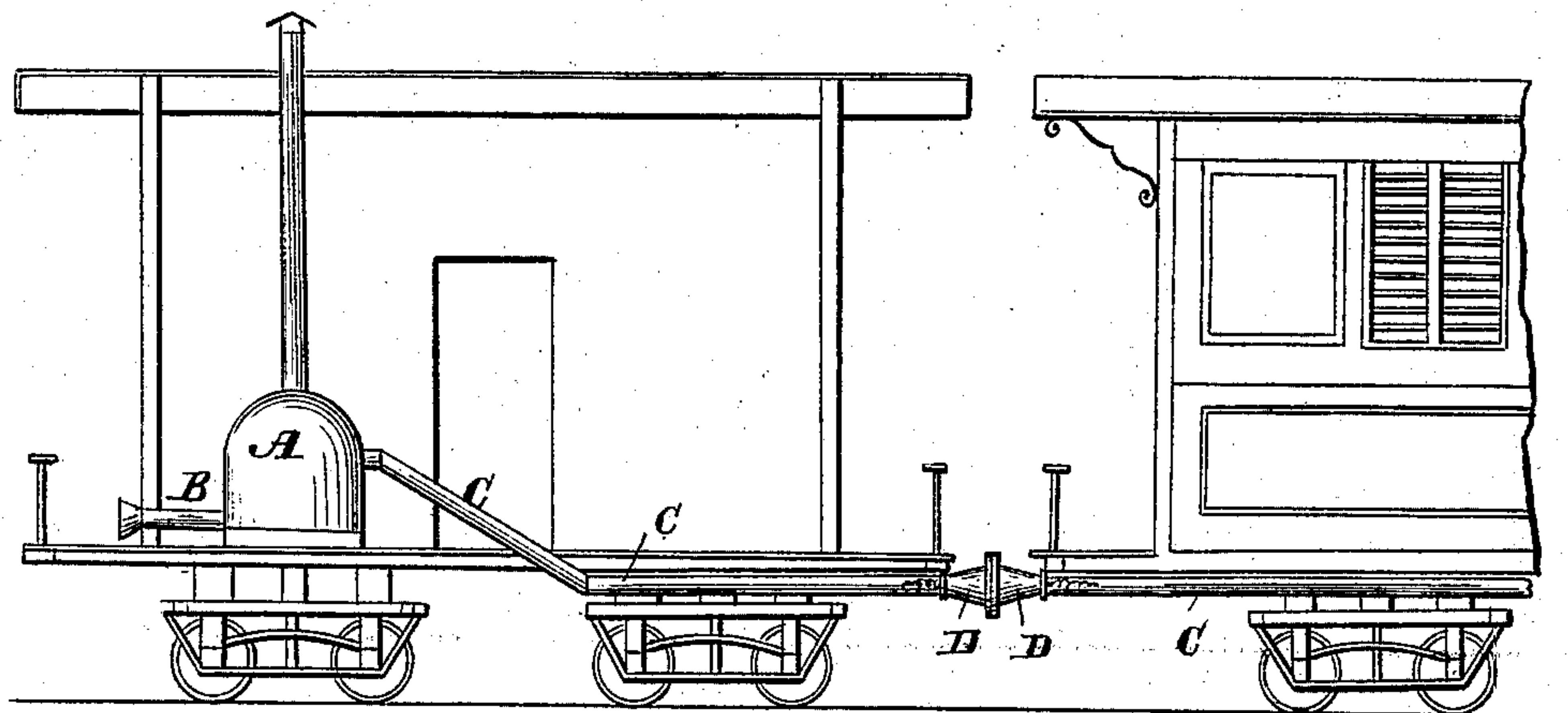


Fig. 2.

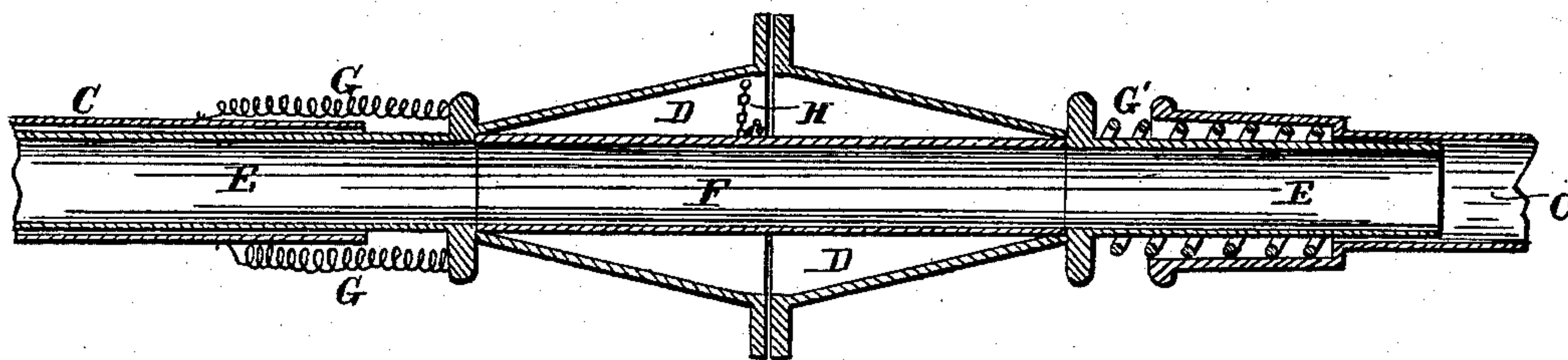
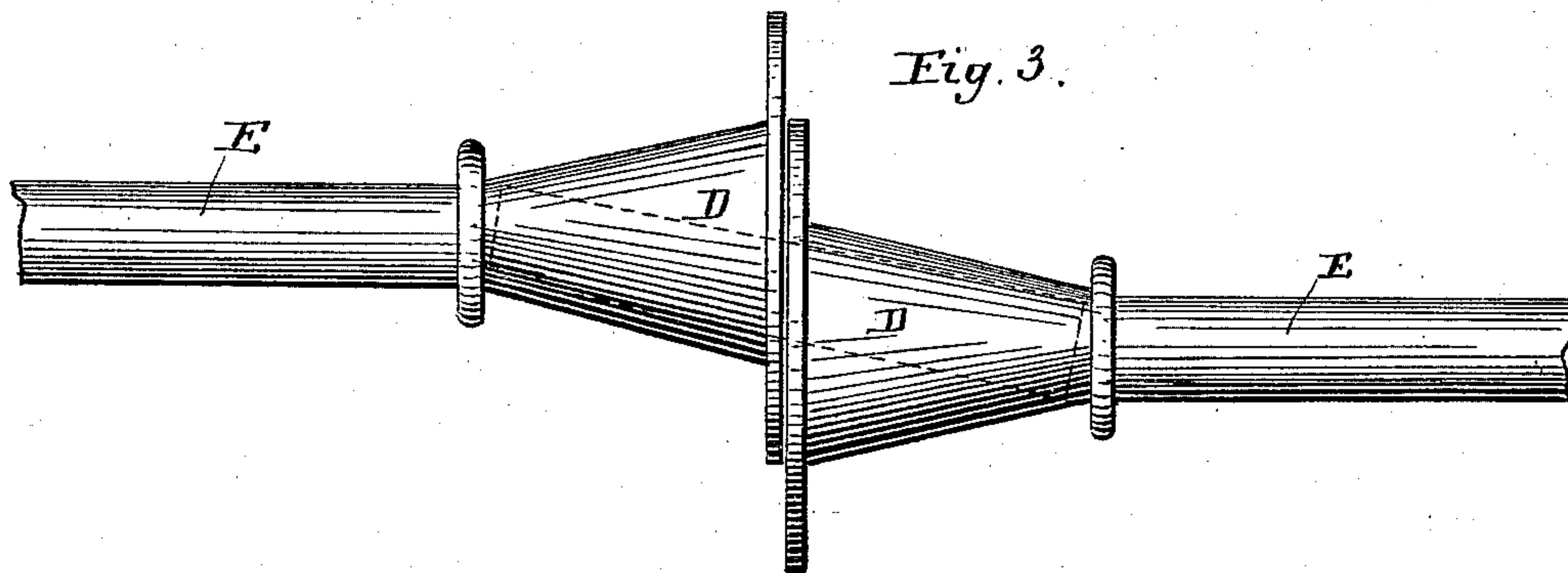


Fig. 3.



Witnesses:
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DE WITT C. CHIPMAN, OF NOBLESVILLE, INDIANA.

Letters Patent No. 91,824, dated June 29, 1869.

RAILROAD-CAR HEATER.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, DE WITT C. CHIPMAN, of Noblesville, in the county of Hamilton, and State of Indiana, have invented a new and improved mode of connecting the warm-air ducts employed for warming railway-cars, consisting in funnel-shaped mouths, combined with a short connecting-tube, so constructed, arranged, and applied to the ends of the ducts of each car as to form with them a continuous conducting-tube throughout a train of cars, where the heating-apparatus is situated in the baggage or forward car; and I do hereby declare that the following is a full, clear, and exact description thereof, that will enable skilled artisans to make and use the same, reference being had to the accompanying drawing, and to the letters of reference marked thereon, making part of this specification.

Figure 1 is a vertical longitudinal section of a baggage-car and side elevation of a passenger-car, in which the heating-apparatus is situated in the baggage-car, from whence the warm air is conveyed, by a suitable duct, to the passenger-car, and showing my improved device for connecting the ducts of the two cars applied thereto.

Figure 2 is a longitudinal section of my improved device for connecting the warm-air ducts.

Figure 3 is an illustration of the operation of the device, as affected by the lateral movement of the cars.

A represents any suitable heating-apparatus, encased, to form a warm-air chamber around it, situated in the baggage or other forward car of a train.

B is a cold-air induction-pipe, furnished with a funnel-mouth open to the external air, and discharging into the warm-air chamber around the stove.

C are the warm-air ducts connected with and leading from the warm-air chamber, and here shown arranged under the bottom of the cars, as being the most convenient place for them.

My device for connecting the warm-air ducts C of the several cars is composed of the funnel-shaped mouths D, attached to a short piece of tube, E, made

to slide freely in the ends of ducts C and the short detached duct F.

In order to make this connecting-device automatically adjustable to the longitudinal motion of the cars, I attach two spiral springs G to the ducts C and to the funnel-mouths D, as shown, so as to thrust the latter forward somewhat beyond the position in which they would be held when the cars are coupled together.

The short tubes E to which the funnel-mouths are attached, being so arranged as to slide freely in the duct C, the springs G keep the mouths D in contact under any longitudinal movement of the cars. The same object may be effected by a spiral spring, arranged as shown in G', fig. 2.

The mouths D are made funnel-shaped, so that they will remain in contact under any ordinary lateral movement of the cars, as illustrated in fig. 3, and so as to allow the connecting-tube F to adjust itself to the same movement, as indicated by the dotted lines in the same figure.

The bell-mouths also serve as shields to protect the pipe F from exposure to the external air.

The short connecting-pipe F is not attached to either of the funnel-mouths D, except merely to prevent its being displaced. This may be done by suspending it by a chain in one of the mouths, as indicated in red lines at H, fig. 2, the pipe being left free to adjust itself to the lateral movement of the cars.

The pipe, suspended in this manner, will also be in position to enter the funnel-mouth of another car in making up a train.

Having thus fully described my invention,

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

The construction of the funnel-mouths D, with wide flanges at their extremities, in combination with the detachable connecting-pipe F, all arranged to operate substantially as and for the purpose set forth.

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