

(No Model.)

L. F. RUTH.

MEANS FOR UTILIZING AIR CUSHIONS ON RAILWAY CARS.

No. 542,112.

Patented July 2, 1895.

Fig. 1.

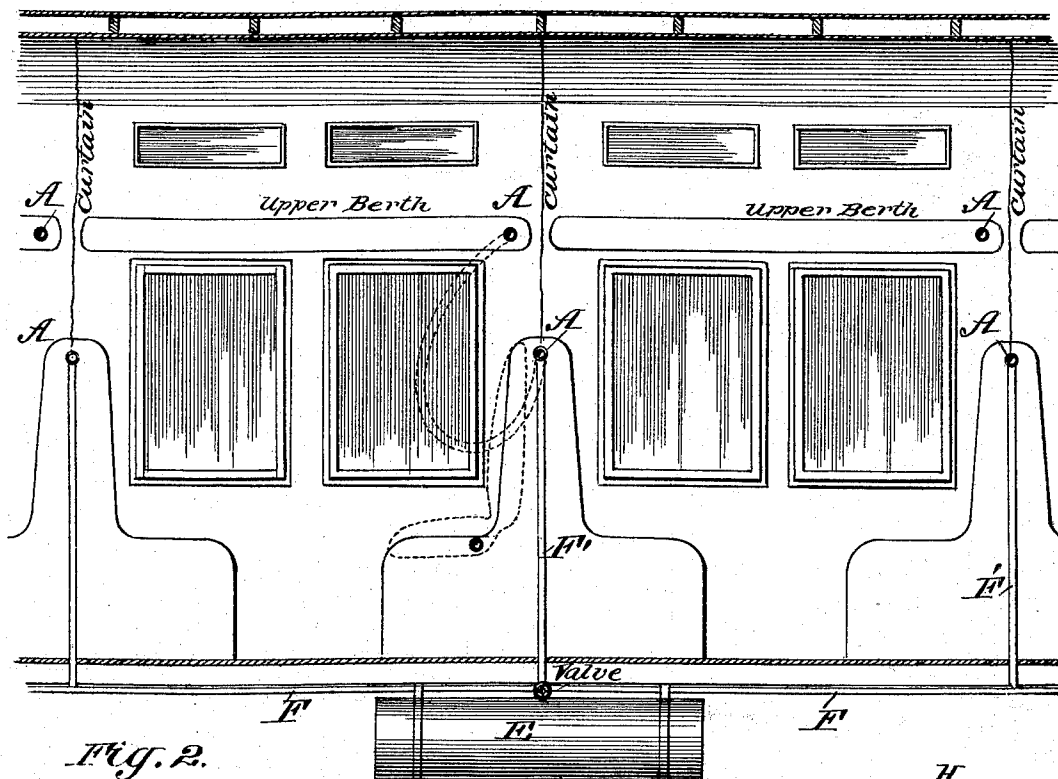


Fig. 2.

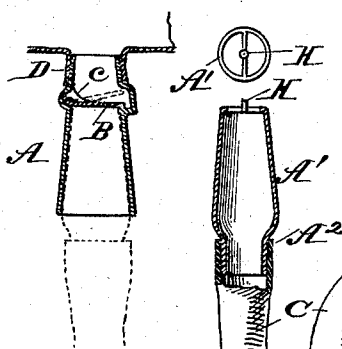
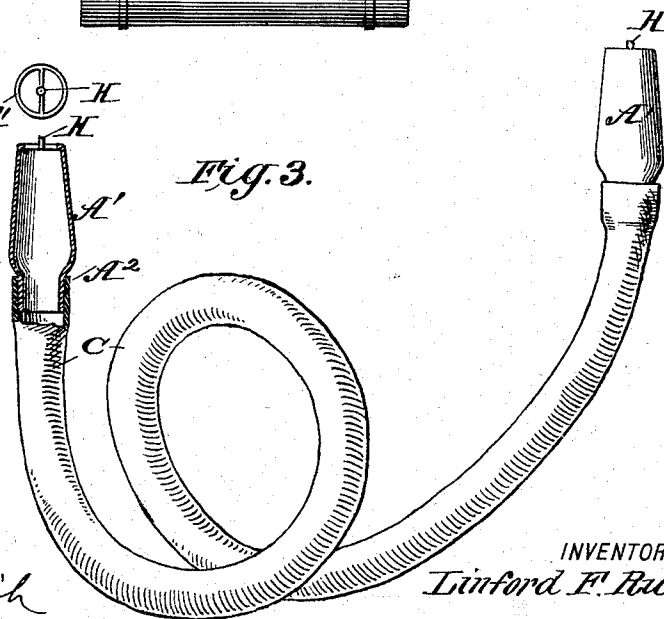


Fig. 3.



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MEANS FOR UTILIZING AIR-CUSHIONS ON RAILWAY-CARS.

SPECIFICATION forming part of Letters Patent No. 542,112, dated July 2, 1895.

Application filed February 23, 1895. Serial No. 539,402. (No model.)

To all whom it may concern:

Be it known that I, LINFORD F. RUTH, of Conneltsville, in the county of Fayette and State of Pennsylvania, have invented a new and useful Improvement in Means for Utilizing Air-Cushions on Railway-Cars, of which the following is a specification.

In the Patent No. 529,961, granted to me November 27, 1894, I have shown and described a system of air-cushions and mattresses arranged in a combined sleeping and parlor car which were permanently organized with and connected to a system of compressed-air pipes controlled by valves, whereby the mattresses or cushions might be conveniently inflated or collapsed, according to the use to which the car was to be put.

My present invention relates to means for filling mattresses or cushions with compressed air without any permanent or organized connection of pipes, and it is applicable to sleeping and parlor cars combined or otherwise or to ordinary railroad-coaches or any kind of passenger-car used on any kind of railroad operated by steam, electricity, or otherwise.

It consists in providing such cars with air-cushions, either detachable or permanent, having conveniently accessible socket-shaped outlets and valves and air-reservoirs which can be cut off from the air-brake pipes, in combination with a detachable hose having a special form of nozzle at each end fitting in the socket-shaped outlets, whereby the cushions may be conveniently inflated and the hose then removed, as will be hereinafter fully described.

Figure 1 is a longitudinal section of a combined sleeping-car and parlor-car as covered in my previous patent, showing an interior view of the same when equipped in accordance with my present invention; and Figs. 2 and 3 are sectional views in detail of the socket and nozzle connections for the hose.

In the drawings, E is an air-reservoir carried beneath the floor of the car, and which reservoir will receive its charge of air from the train service, or otherwise, and which when connected with the air-brake pipes shall have cocks or valves by which it may be entirely cut off from the same. From this reservoir there runs a horizontal line of piping F' throughout the length of the car and from

which there rises branch pipes F' to terminal sockets A, suitably placed near the tops of the backs of the seats, for instance. These sockets A (see Figs. 2 and 3) have tapering mouths ground true on the inside, so as to closely fit a corresponding tapered and exteriorly-ground nozzle A', whose end A² is corrugated or screw-threaded to connect with a flexible hose C. The sockets A have screw-threaded ends D, that connect with both the air-pipe branches F' and the air-bags, mattresses, or cushions of the car, all of which are equipped with these sockets. Just in front of the screw-threaded end D of these sockets there is formed an enlarged chamber in which is hinged a check-valve B, forced outwardly against its seat by a spring c. This valve prevents the air from escaping from the mattress or cushion, and also forms an automatic closure for the branch air-pipes F', which prevents the air from escaping from them except when they are temporarily connected with the nozzle A' on the end of the detachable section of hose C. The hose C has a similar nozzle at each end and these nozzles have open ends with a diametrical cross-bar having a projecting lug or pin H, which, when a nozzle A' is inserted in the tapering socket A of an air-pipe F', forces the valve B back against the pressure of air within and allows the air to pass out through the hose and into the seat cushion or mattress to which the other end of the hose with its nozzle is temporarily connected in a similar manner.

When the air-cushions are properly inflated, the two nozzles A' at opposite ends of the hose are simultaneously withdrawn from the socket A in the supply-pipe F' and the socket A in the cushion or mattress, and the check-valves B of the two sockets instantly close from the action of their springs and the pressure of the air within and remain thus tightly closed as long as they are required to be inflated. When the cushions are to be collapsed and folded, the valves B are simply forced inwardly by any convenient tool and the air allowed to escape. These devices are designed to be applied to air mattresses or cushions of any kind, whether fixed permanently in the car or loose and detachable therefrom, and furnishes a very convenient and expeditious way of inflating them without any expensive

or unsightly appendages, as there are no connections between the sockets A of the air-pipes and the sockets of the cushions except through the short section of hose with its terminal nozzles, which is successively fitted to the different cushions and pipes to effect the inflation and is then detached and stored away out of sight.

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

1. A passenger car having an air reservoir with pipes leading therefrom and terminating in valved outlets, air cushions having valved inlets, and a detachable hose having couplings at each end adapted to connect respectively to the air pipes and the cushions to transfer the air to the cushions substantially as and for the purpose described.

2. A passenger car having an air reservoir with pipes leading therefrom and terminating

in outlets with automatic check valves, air cushions having valved inlets with automatic check valves, and a detachable hose having a nozzle on each end adapted to connect with the pipes and cushions and to force open their check valves substantially as and for the purpose described.

3. A passenger car having an air reservoir with pipes leading therefrom and terminating in ground sockets with automatic check valves, air cushions provided with similar ground sockets and automatic check valves, and a detachable hose having at each end exteriorly ground nozzles with projections adapted to force open the check valves when the nozzles are inserted in the sockets substantially as and for the purpose described.

LINFORD F. RUTH.

Witnesses:

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