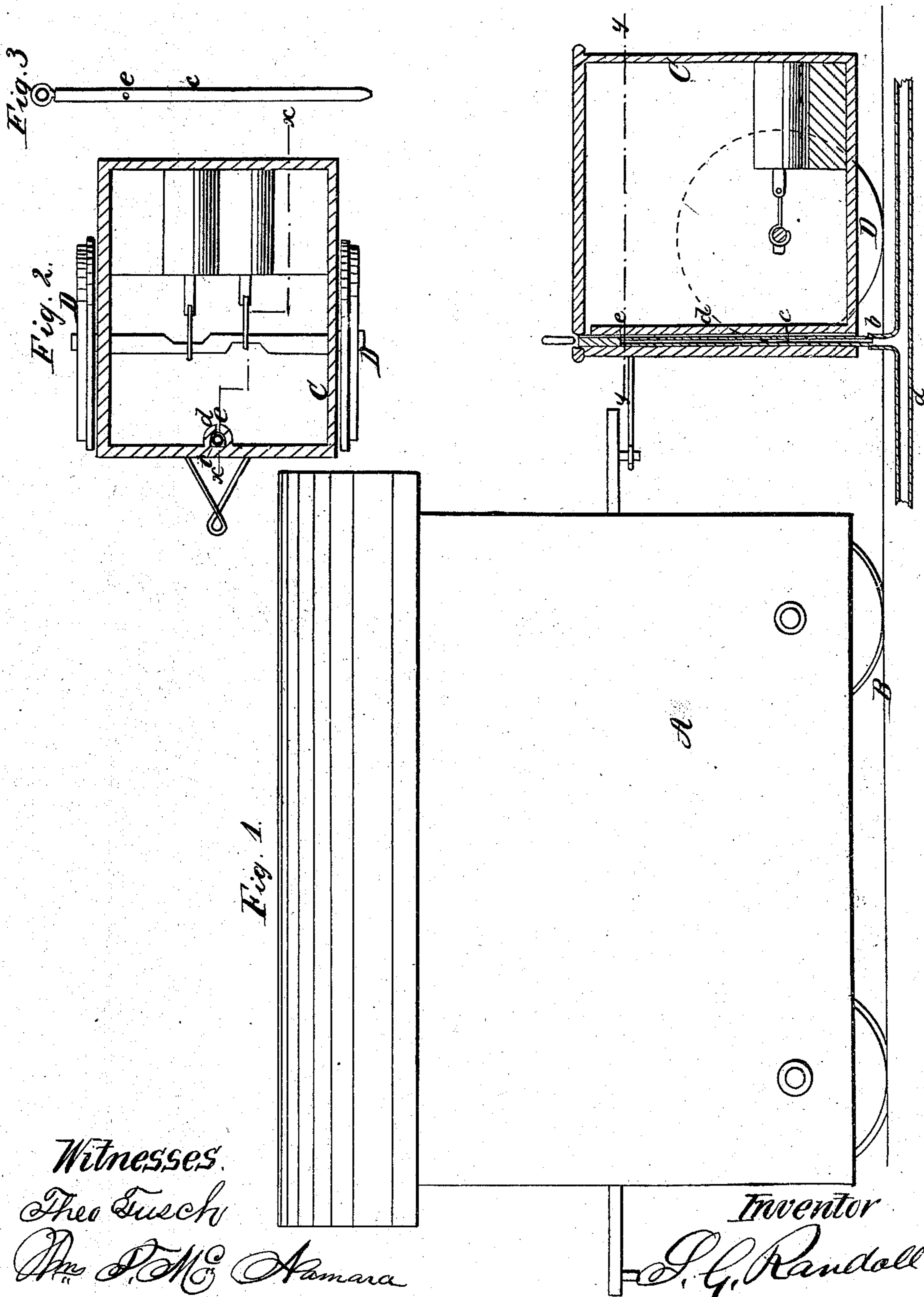


S. G. RANDALL.  
MODE OF PROPELLING RAILROAD CARS.

No. 47,858.

Patented May 23, 1865.



Witnesses.  
Theo Fusch  
Jas D. Mc Namara

Inventor  
S. G. Randall

# UNITED STATES PATENT OFFICE.

S. G. RANDALL, OF NEW YORK, N. Y.

## IMPROVED MODE OF PROPELLING RAILROAD-CARS.

Specification forming part of Letters Patent No. 47,858, dated May 23, 1865.

*To all whom it may concern:*

Be it known that I, S. G. RANDALL, of No. 203 Elm street, in the city, county, and State of New York, have invented a new and useful Improvement in Propelling Railroad-Cars; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a sectional side elevation of this invention, the plane of section being indicated by the line *x x*, Fig. 2. Fig. 2 is a horizontal section of the same, the line *y y*, Fig. 1, indicating the plane of section. Fig. 3 is a detached elevation of the sliding plug.

Similar letters of reference indicate like parts.

This invention consists in the employment or use of a pipe extending under the railroad-track and provided with a number of outlets at suitable intervals along the line, in combination with a moving reservoir attached to or connected with a passenger-car, and furnished with suitable mechanism for propelling itself and the car in such a manner that through the pipe compressed air can be introduced into the reservoir at any point on the road, and the car can be supplied with a cheap and reliable motive power.

A represents a passenger car constructed in any suitable manner and arranged to run on a railroad track, B. A pipe, *a*, extends parallel to said track, either between it or on its side, and either above or below the ground, as may be most convenient, and this pipe connects with a stationary reservoir containing compressed air. It (the pipe) is provided with a number of outlets or spouts, *b*, at suitable intervals along the line, and through these spouts compressed air is introduced into the movable reservoir C. This reservoir—which, of course, must be air-tight—is either made separate, as shown in the drawings, or it may

be arranged in one end or at the bottom of the car, if desired. It is provided with a sliding plug, *c*, which is fitted air tight into a socket, *d*. By pushing this plug down, its lower end can be introduced into one of the spouts *a* of the air pipe, and a passage, *e*, in the plug and socket admit the compressed air to the interior of the movable reservoir C. It is obvious, however, that the connection between the air-pipe *a* and the movable reservoir may be effected in various different ways, and I do not wish to confine myself to the particular means above described, but reserve the right to change the same as circumstances may dictate.

The movable reservoir is furnished with two cylinders, the pistons of which connect with the crank-axle of the driving-wheels D, so that by admitting the compressed air to the cylinders a rotary motion is imparted to said crank-axle and the reservoir and car are propelled. The mechanism for propelling may, however, be changed, and a rotary engine or any other suitable apparatus may be substituted for the pair of cylinders shown in the drawings.

The reservoir C, in moving with the car, can be supplied with compressed air by means of the pipe *a* and the spouts *b* whenever it may be requisite, and a cheap and reliable motive power is thus obtained for propelling railroad cars through the streets of a city or on any other line where it is impracticable to use ordinary locomotive-engines.

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

The air-supply pipe *a*, provided with suitable spouts, *b*, and applied in combination with the movable reservoir C and car A, substantially in the manner and for the purpose set forth.

S. G. RANDALL.

Witnesses:

THEO. TUSCH,  
M. M. LIVINGSTON.