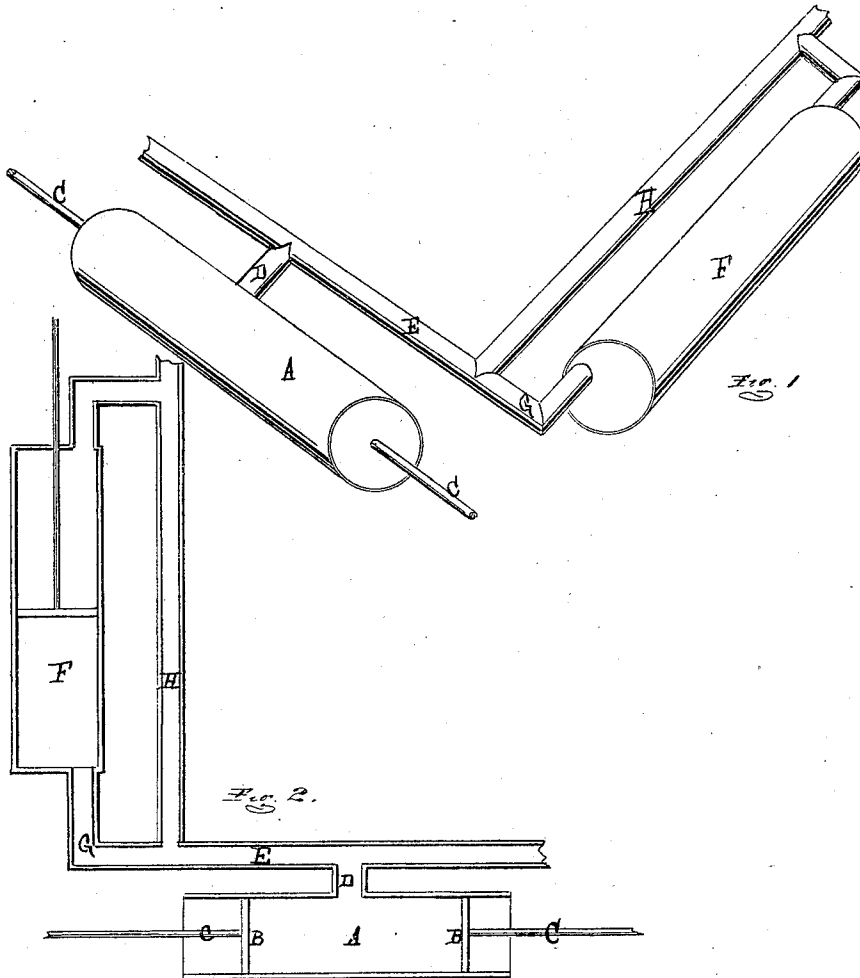


T. LUCE.

Improvement in Air-Brakes.

No. 131,286.

Patented Sep. 10, 1872.



ATTEST:

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INVENTOR:

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By atty
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UNITED STATES PATENT OFFICE.

THEODORE LUCE, OF RICHMONDVILLE, MICHIGAN.

IMPROVEMENT IN AIR-BRAKES.

Specification forming part of Letters Patent No. 1,311,286, dated September 10, 1872.

To whom it may concern:

Be it known that I, THEODORE LUCE, of Richmondville, in the county of Sanilac and State of Michigan, have invented a new and useful Improvement in Atmospheric Air-Brakes; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon and being a part of this specification, in which—

Figure 1 is a perspective view of my improvement, and Fig. 2 a vertical section of the same.

Like letters indicate like parts in each figure.

The nature of this invention relates to the construction of a brake wherein the pressure of the atmosphere is alone employed to operate the brakes, in contradistinction of devices of a similar nomenclature where the compression of the air is relied upon to produce a like result.

In the accompanying drawing, A represents a suitable-sized cylinder with open ends, which may be covered with gauze or any other suitable material which will exclude dust, while not of sufficient density to prevent the free passage of air. This cylinder should be placed underneath the railway-car and near the center, and is provided with two pistons, B, the rods C of which, at their outer ends, are designed to connect with the brakes. A pipe, D, connecting with the interior of said cylinder,

opens into another pipe, E, which, in time, connects with the air-pump F by means of suitable branch-pipes G H, the former leading into the bottom of said pump, while the latter leads into the top of the same.

The pump may be stationed at any convenient point on the train, and as many cylinders A may be used as there are cars, the pipe E being extended for that purpose by means of flexible connections between the cars. The pump exhausts the air from the cylinder A when it is desired to operate the brakes, when the external atmospheric pressure upon the pistons B drives them toward each other and the longitudinal center of the cylinder, the piston-rods drawing the brakes against the wheels.

To release the brakes the pump should be stopped, when, through openings in the heads of the pump, the air is admitted through the connecting-pipes into the cylinder, when the atmospheric pressure is equalized and taken off the brakes.

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

The arrangement of the cylinder A, pistons B, rods C, pipes D E G H, and pump F, when constructed to operate substantially as and for the purposes set forth.

THEODORE LUCE.

Witnesses:

H. F. EBERTS,
H. S. SPRAGUE.