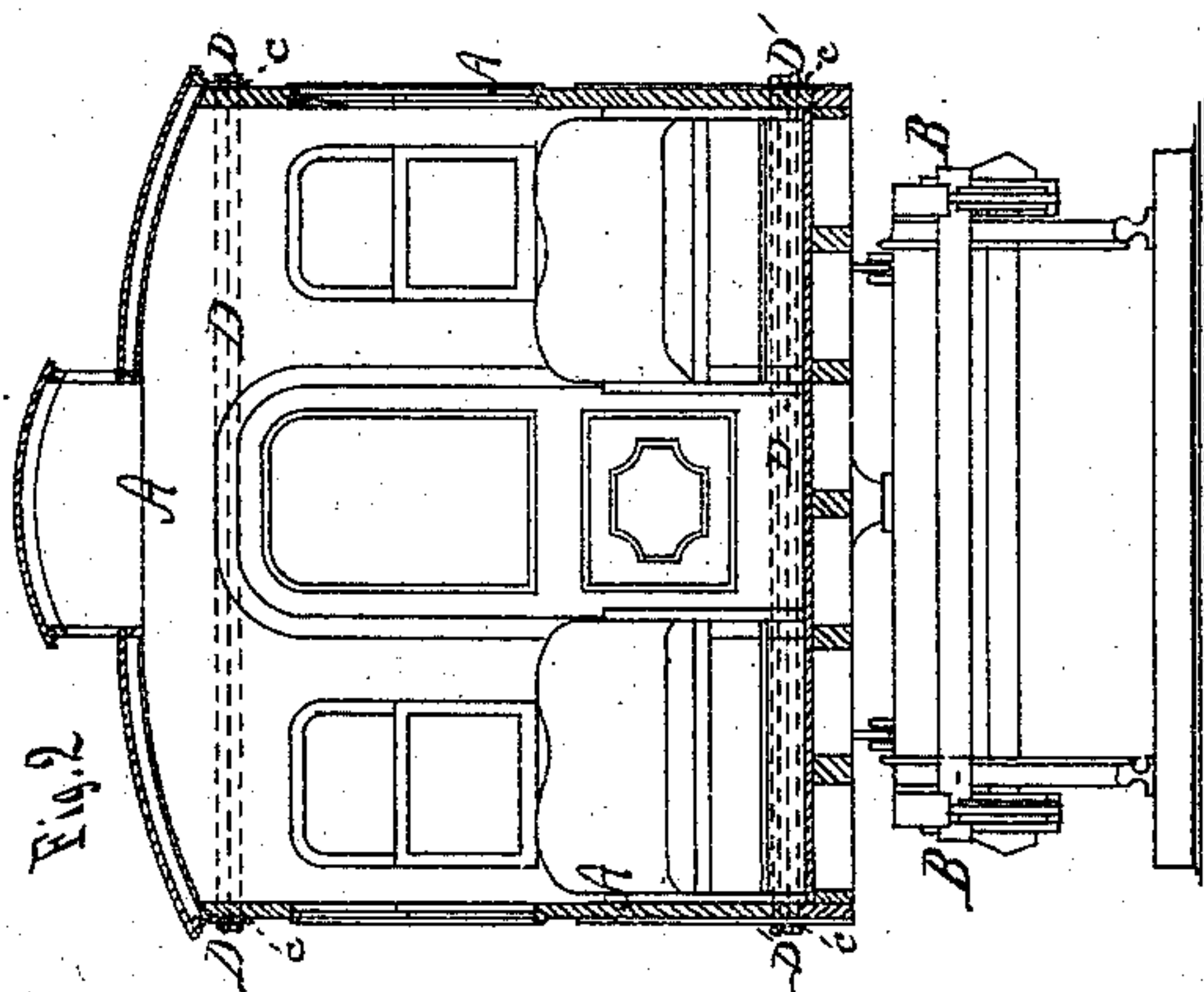
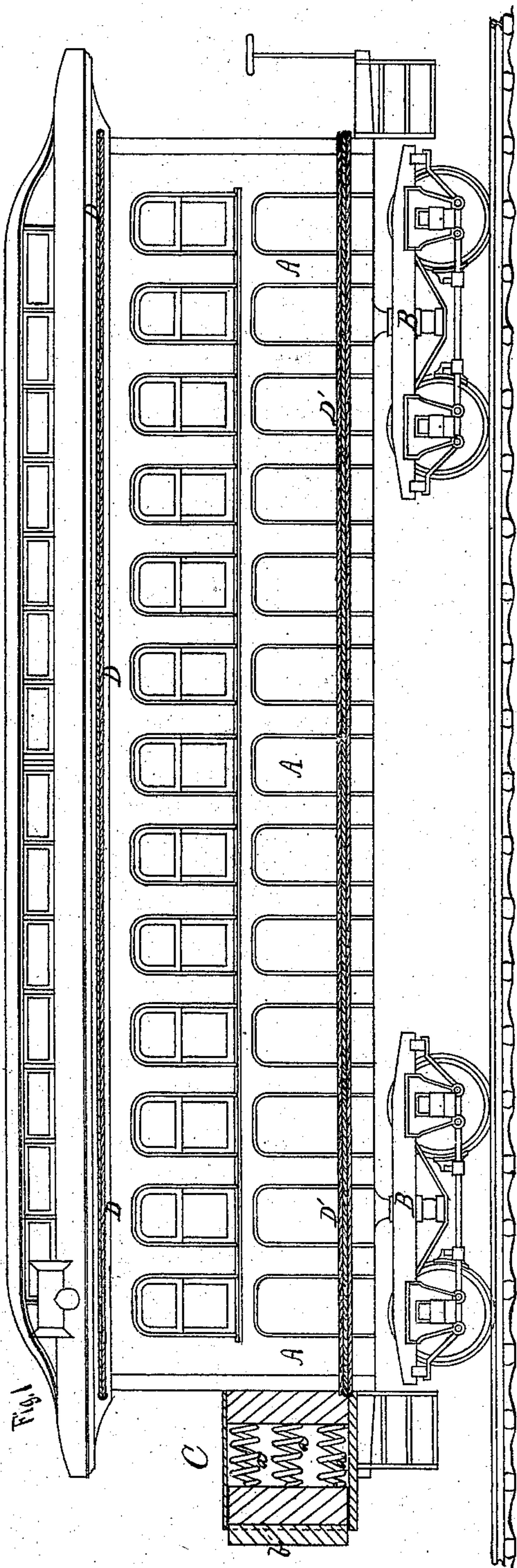


D. PRICE.
Safety-Cars.

No. 154,564.

Patented Sept. 1, 1874.



Daniel Price,
Inventor. By
Burke, Fraser & Co.,
attys.

Witnesses.
C. H. Woodward
J. H. Brown

UNITED STATES PATENT OFFICE.

DANIEL PRICE, OF LOCKPORT, NEW YORK.

IMPROVEMENT IN SAFETY-CARS.

Specification forming part of Letters Patent No. **154,564**, dated September 1, 1874; application filed December 12, 1873.

To all whom it may concern:

Be it known that I, DANIEL PRICE, of Lockport, in the county of Niagara and State of New York, have invented certain Improvements in Railway-Cars, of which the following is a specification:

The object of this invention is to strengthen railroad, passenger, and other cars, to enable them to withstand with safety all strains to which they may be subjected.

To this end, the invention consists in arranging around the outside of the car, at the top and bottom thereof, wire cables or ropes, said wire cables being, preferably, placed in grooves formed in the car, and are suitably fastened in position by any desired means, as will be hereinafter described.

In the drawings, Figure 1 is a side elevation; Fig. 2, end elevation.

Δ represents the body of a car or the usual trucks, B B. C is a resistance-box or spring-buffer, attached to the rear car of a train, as shown, and also in front of a locomotive, and properly fastened thereto. These will have buffer-heads or ends, and the body of the box will be filled with suitable springs *a a*, consisting of a combination of rubber, spiral, elliptic, torsion, or other kinds, either or any of which will be employed, as may be found best adapted to resist, in a measure, the shock or concussion of a collision.

It is not anticipated that these resistance-boxes will be able to withstand the full force of such accidents, but only, in a measure, aid in preserving the lives of passengers by lessening the shock. I estimate having, by the employment of these boxes, a resisting force of about fifty tons each.

These boxes may be made of any size or shape found to be most useful, and the casing of them constructed of boiler-iron or wood, or both. The end *b* will be, preferably, of rubber.

D D' represent a series of wire cables, made of twisted strands of wire, &c., as are in common use for suspension-bridges, &c.

Two or more of these cables of sufficient size and resisting force will be arranged around under the cornice *d* of the car or cars, and

also around the base. They will be set in grooves C c', made, preferably, of wrought-iron, and fastened therein by any device advisable.

The arrangement of these, either in grooves or any other way, is of secondary importance, the application of the cables arranged around the car being the main feature of my invention.

By the use of these cables each car would be able to withstand a breaking strain of at least ninety to one hundred tons of two thousand pounds, only limited by size and number of cables employed; and, by the use of these spring boxes and cables, an enormous resistance would be presented by every train using them.

These cables can be applied to locomotives, tenders, and baggage-cars, as well as passenger-coaches, but the main object is to prevent, as far as possible, the telescoping of cars, now of such frequent occurrence, by which so many valuable lives are sacrificed, and many persons crippled for life.

Bracing, by wood or iron, is, as yet, powerless to prevent this; but I am confident by employing these cables the danger of injury to life and limb will be greatly lessened, and abate the wreck and slaughter now so common; and in many cases I claim that their use will entirely protect a train from ruin. These cables will also add greatly to the solidity and durability of cars.

To aid in preserving life, after a collision has taken place, and to make the car as near fire-proof as may be, I purpose lining said cars with zinc or other sheet metal, placed or set in the sides, top, and bottom, making a nearly complete metal interior, which, with the iron frames of seats now used, would aid greatly in making a fire-proof passenger-coach, and avoid the dangers of fire by the upsetting of the stove and other causes.

By this means many a life might be saved, and others prevented from being burned to death.

Cars so constructed would also be cooler in summer and warmer in winter, and could be kept cleaner, and with less liability of

spreading contagious diseases and holding vermin.

I claim as my invention—

In combination with a railroad-car, the wire cables or ropes D D', around the outside thereof for strengthening the same, in the manner shown and described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

DANIEL PRICE.

Witnesses:

JAMES W. REED,
JOSEPH W. HIGGINS.