2 Sheets—Sheet 1.

A. E. LOZIER.

ELEVATED-RAILWAY.

No. 169,819. Patented Nov. 9, 1875.

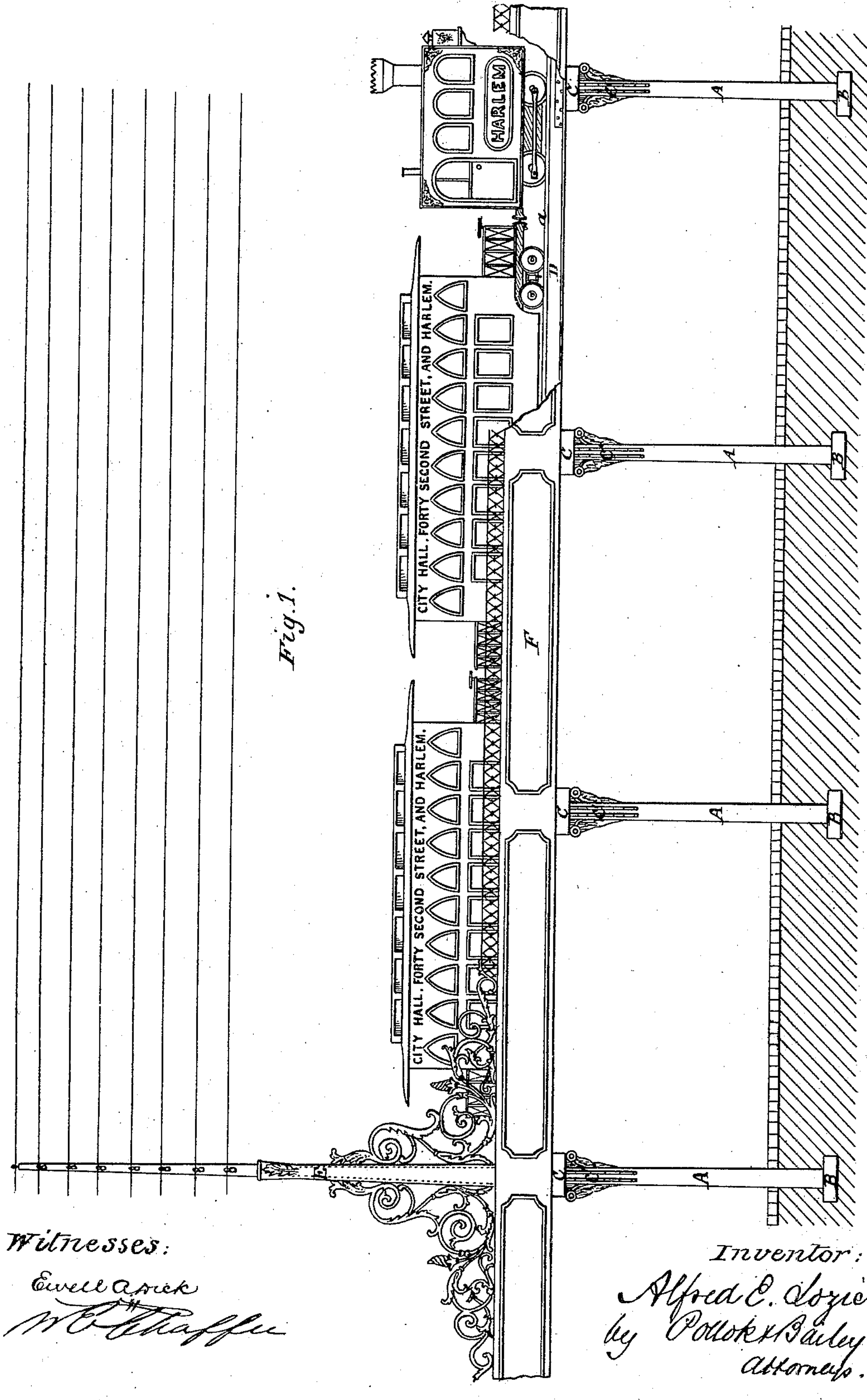

Fig. 1.

Witnesses:

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W. C. Chaffee

Inventor:

Alfred E. Lozier

by Pollok & Bailey his attorneys.

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2 Sheets—Sheet 2.

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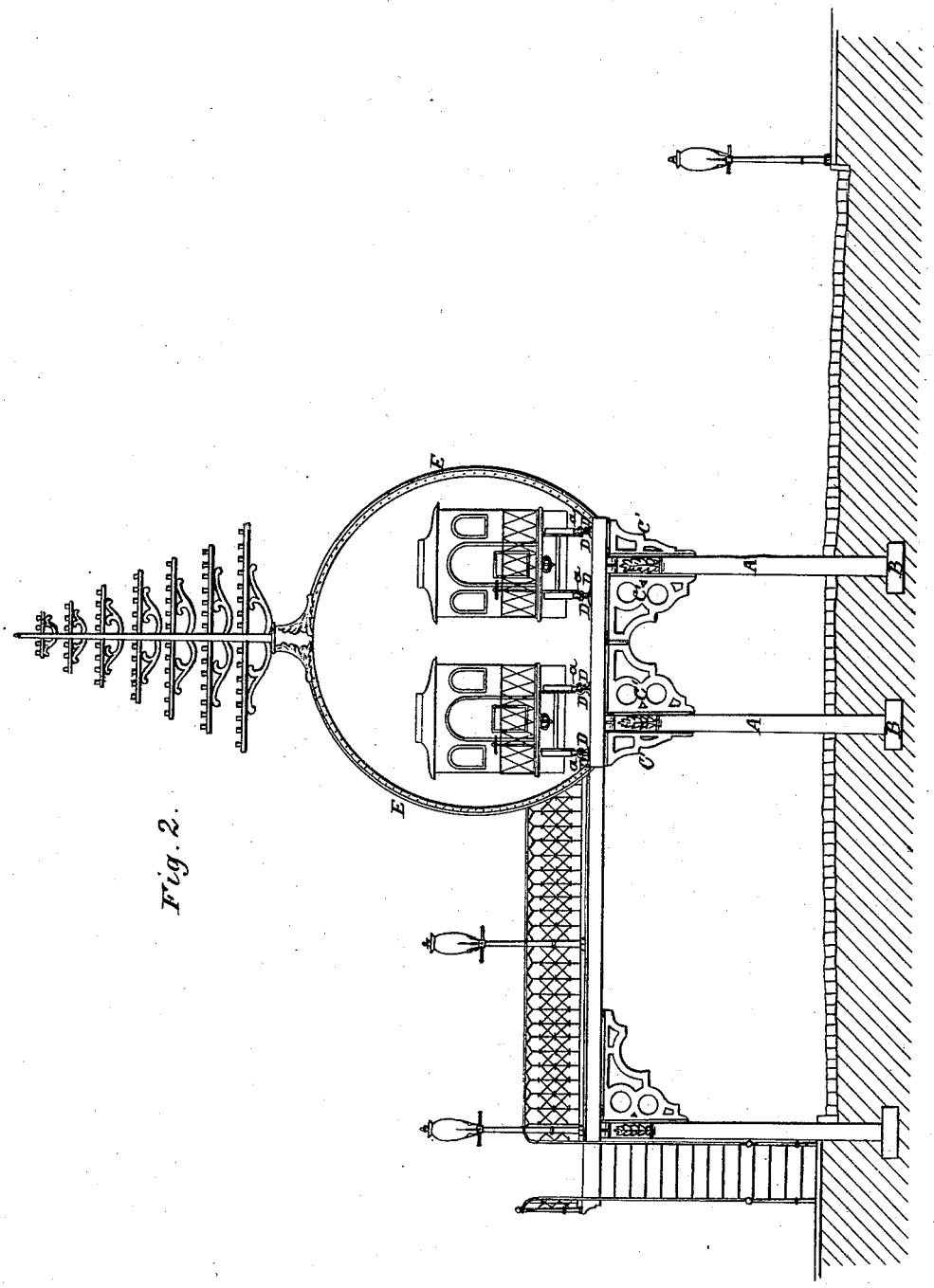

Fig. 2.

Witnesses:

Edmund Rock

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Inventor:

Alfred E. Lozier

by Pollock & Bailey his

Attorneys

UNITED STATES PATENT OFFICE.

ALFRED E. LOZIER, OF NEW YORK, N. Y.

IMPROVEMENT IN ELEVATED RAILWAYS.

Specification forming part of Letters Patent No. **169,819**, dated November 9, 1875; application filed September 20, 1875.

To all whom it may concern:

Be it known that I, ALFRED E. LOZIER, of the city, county, and State of New York, have invented certain new and useful Improvements in Elevated Railways, of which the following is a specification:

The elevated railway, in which my invention is comprised, has been designed with special reference to the needs of large cities. It has been my endeavor to obtain a strong, stable, and comparatively inexpensive structure, which shall occupy but little of the roadway or street, and offer as little impediment as possible to travel.

The plan I propose can best be illustrated by reference to the accompanying drawing, in which Figure 1 is a side elevation, and Fig. 2 is an end elevation of a structure embodying my invention.

I construct a road on cast-iron columns A, fourteen feet high, sunk four feet into the earth, and resting upon granite blocks, pile, or ballast B. These columns are fifteen inches in diameter at their base, eighteen feet in length, including capitals, and are surmounted by a cast or composite iron bed-plate, C, sixteen feet long, three feet wide, and one foot deep, supported at its ends and center by ornamental iron bracket-work C′, and resting on the capitals of the columns. The longitudinal spans from column to column are double iron beams D, with a steel sixteen-pound rail, *a*, clamped in a groove at the top. The spans are not designed to be under twenty-five, nor over thirty, feet in length, except at street-crossings, where they should conform to the width of the streets over which they pass, and their strength be increased by truss-rods.

The gage of the road, which has a double track, as shown, is designed to be not over four feet, and reduced to three feet if found practical for the successful operation of a seven-foot car-body, as the narrowness of the gage will materially contribute to the solidity and durability of the structure.

I erect a wrought-iron arch, E, from the extreme ends of the bed-plate C, for the support of the telegraph-wires. I also have a wrought-iron bulwark, F, as high as the car-windows, as a preventive against accident on the road and frightening of horses on the street, the same to be surmounted by an ornamental cresting ten inches high, to join onto and harmoniously blend into the ornamental work that supports the arch.

The structure is designed to be placed in the center of the roadway. For instance, in an avenue sixty feet in width from curb to curb, as the structure only measures eleven feet two and a half inches from extreme outsides of columns, there will be left on each side of the structure, between column and curb, a driveway twenty-four feet four and three-quarter inches in width, while, at the same time, teams can pass in any direction between the columns.

Having described my improvements, what I claim and desire to secure by Letters Patent, is—

The described elevated-railway structure, consisting of the supporting-columns, surmounted by transverse bed-plates of cast or composite iron resting on the capitals of the columns and supported by bracket-work, in combination with longitudinal spans formed of double wrought-iron beams, between which are clamped the track-rails, and with side bulwarks, and arches, said parts being arranged together as shown and set forth.

In testimony whereof I have hereunto signed my name this 16th day of September, A. D. 1875.

A. E. LOZIER.

Witnesses:
CHAS. H. HATCH,
SAMUEL HOSKIN.