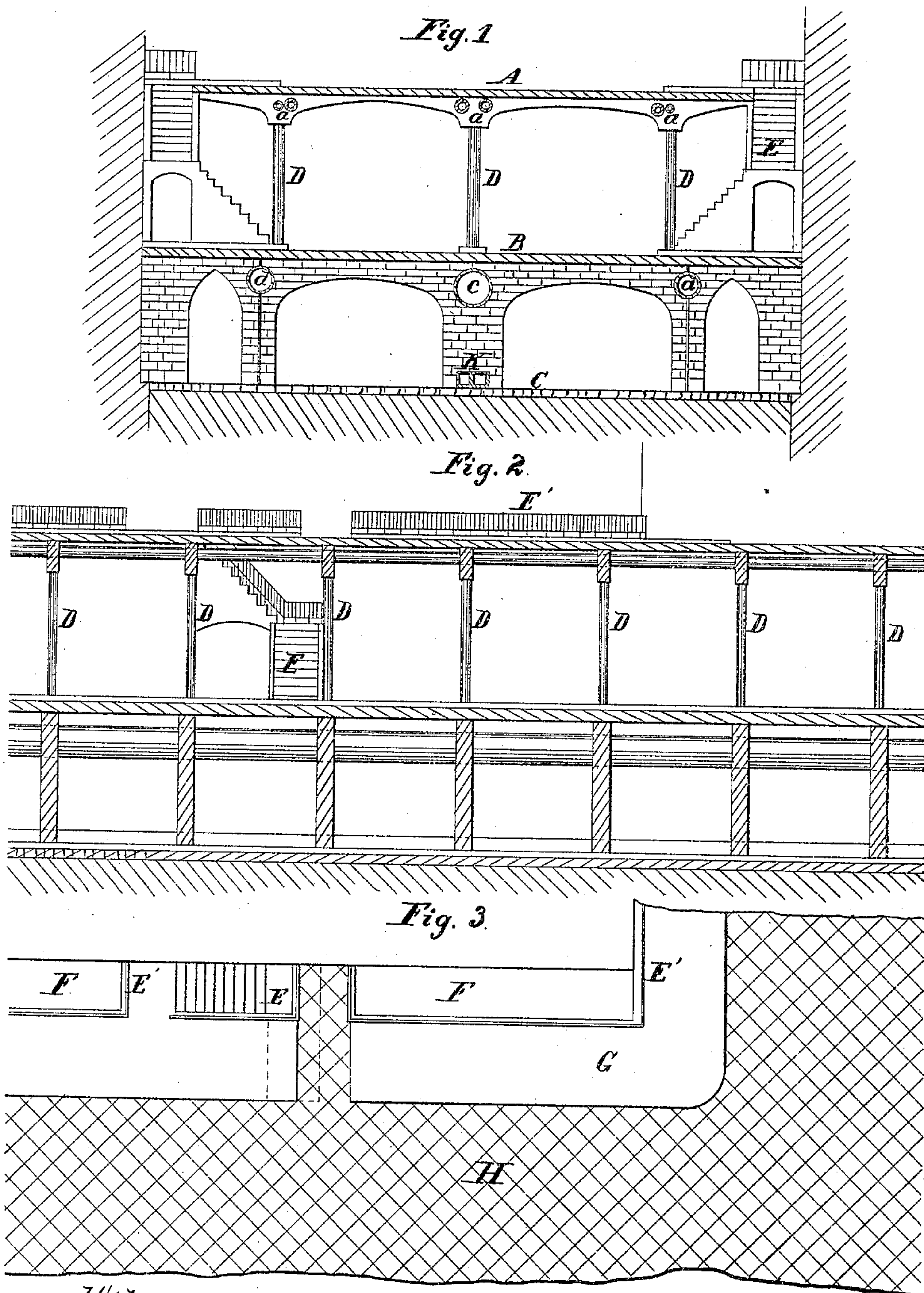


S. B. B. NOWLAN.
ARCADE RAILROAD.

No. 73,635.

Patented Jan. 21, 1868.



Witnesses:
Wm. F. McNamee
Thos. Enosche

Inventor:
Samuel B. B. Nowlan

United States Patent Office.

SAMUEL B. B. NOWLAN, OF NEW YORK, N. Y.

Letters Patent No. 73,635, dated January 21, 1868.

IMPROVED ARCADE RAILROAD.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, SAMUEL B. B. NOWLAN, of the city, county, and State of New York, have invented a new Improvement in the Construction of Arcade Roads and Railroads; 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.

This invention relates to a new and improved method for the transportation of passengers and freight through cities and towns, and it consists in forming a triple level for roadways, with separate rail-tracks and sidewalks, and with suitable provision for sewers and gas and water-pipes, as will be hereinafter more fully described.

Figure 1 represents a cross-section of the roadways, showing the lines of transit, and the position of the sewer or sewers, and the water and gas-pipes.

Figure 2 represents a side view, and

Figure 3 represents a plan or top view, showing a gangway from the street-pavement.

Similar letters of reference indicate corresponding parts.

A, fig. 1, represents the upper roadway, which occupies the position of the present street-pavement, and which is designed for carriages and common street traffic, as at present, which has two parallel sidewalks running along its entire length, with stairway communicating with the arcade-railway and range of shops below. Telegraph-wires may be conducted through the arcade roadway, under the surface-pavement, supported by insulators in the usual manner. B is the second roadway, designed for foot-passengers, and the transmission of passengers and goods by rail. This level is provided with sidewalks for foot-passengers, which give access to rows of shops on either side, which shops are situated below the level A. This passage or roadway forms an arcade, which is lighted from above through the areas or open spaces in front of the buildings of the street, as seen more plainly in fig. 3. C represents the third level. This level or roadway is also designed for railroad purposes. Through-freight and through-passengers may be transmitted on this level, in connection with other lines of railroad, without transshipment or change of cars. Access to the roadway B is obtained by stairways, marked E, which are placed at suitable distances apart. The upper roadway A is supported by tiers of iron columns, D, and the second level or roadway B is supported by masonry. The open space or area in front of the street buildings affords a full supply of light and air to the arcade sidewalks and roadway, and also to the basement stores, which would extend along the entire front. The open space is enclosed by a railing, as seen at E'. The arcade or level, B, is the principal roadway for foot and other passengers, and by this arrangement they are protected from the inclemency of the weather and from fire at all times, as well as from the rays of the sun in summer.

These distinct lines of transit are always in direct communication with the public, and the plan embraces in its construction a great extension of the business front of the streets which may be thus improved.

The gas-pipes and the Croton-water pipes are properly supported, as represented by *a* in the drawing. They may be located as may be found most convenient or practicable. The main sewer of the street may pass through the centre, as represented, *c*, or there may be a sewer, one on each side, as seen at *d*. F represents the open space in front of the buildings, surrounded by the railings E'. J represents a gangway across the open space F, G is the surface-sidewalk, and H is the surface street-pavement. This pavement may be of iron or wood, or a combination of the two, or of any other suitable material. The roadway B may be paved or covered with any suitable materials, to render it durable and convenient.

The arrangement of the sewer or sewers, as well as that of the gas and water-pipes, allows free access to them at all times, in case it is necessary to repair or clean them, thus vastly diminishing the labor now necessary for that purpose, and rendering those common street obstructions unnecessary. The sewers may have man-holes through them, by which admission may be gained for cleansing or removing obstructions.

Provision is made for lighting the lower level or roadway C by vault-lights or otherwise, and that level may be ventilated by gratings through the pavement above, and receive air through the open space F. The base of this third roadway is solid masonry, as are also the piers which rise from it to support the arcade above.

The outside piers will connect with and support the foundation-walls of the side buildings, or the fronts of the proposed line of stores which are opposite the arcade.

In combination with the lower roadway, provision is made for the location and construction of the proposed "pneumatic dispatch," for the conveyance of the mails or packages of goods. K indicates the location.

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

The arcade road and railroad, constructed and arranged as described, consisting of the roadways A, B, and C, the upper roadway supported by iron columns D, and having gas and water-tubes *a*, and the second by masonry, through which the sewers *c* *d* and pneumatic dispatch K pass, said roads provided with open spaces F, for the admission of light, and having the stairways E, substantially as herein shown and described, for the purpose specified.

SAMUEL B. B. NOWLAN.

Witnesses:

WM. F. McNAMARA,

ALEX. F. ROBERTS.