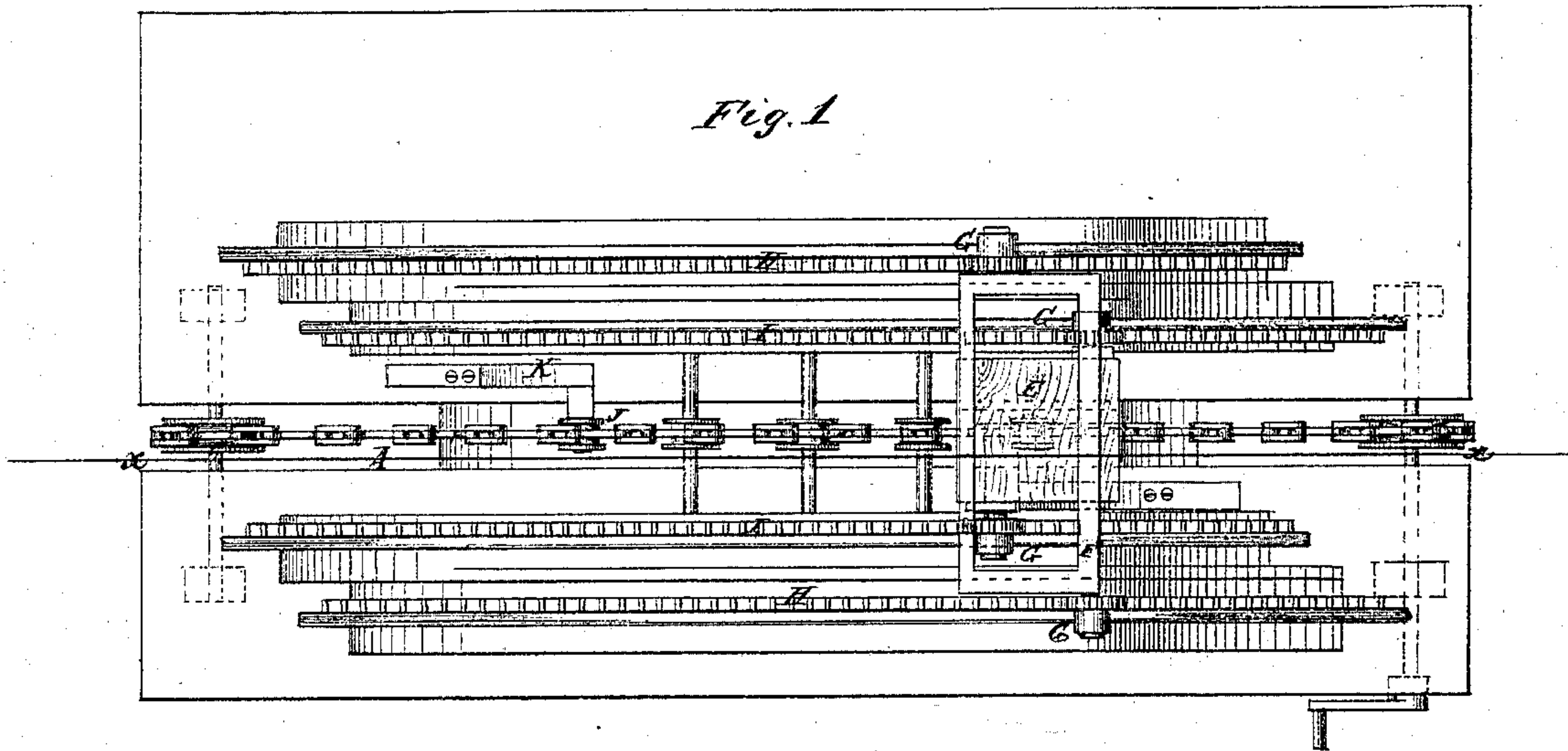


# *J. Schley. Street Crossing.*

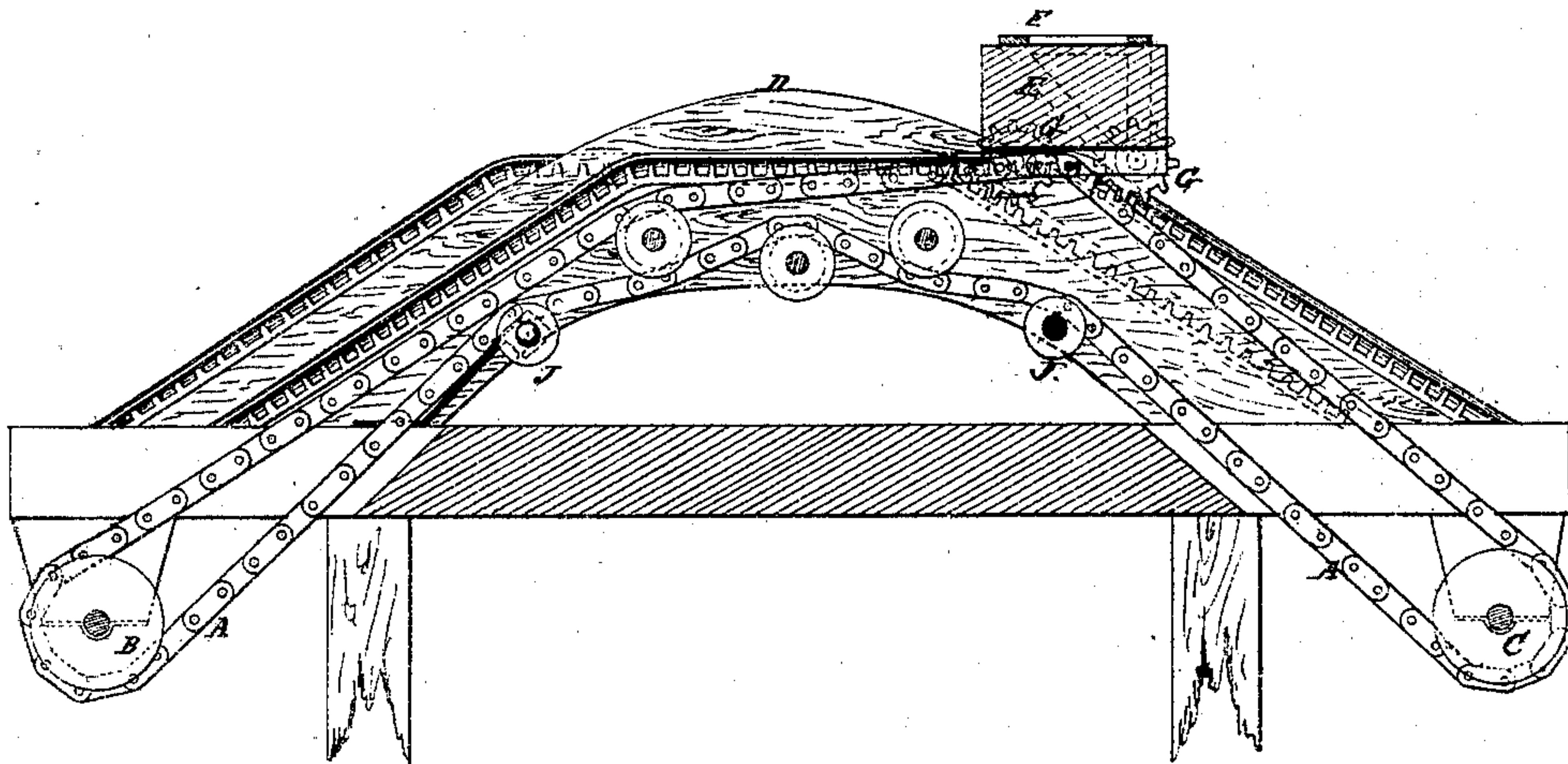
No. 120,332.

Patented Oct. 24, 1871.

*Fig. 1*



*Fig. 2*



**Witnesses:**

*A. W. Almquist*

*Wm. H. C. Smith.*

**Inventor:**

*J. Schley.*

**PER**

*Wm. H. C. Smith.*

**Attorneys.**



# UNITED STATES PATENT OFFICE.

JOHN SCHLEY, OF SAVANNAH, GEORGIA.

## IMPROVEMENT IN STREET CROSSINGS.

Specification forming part of Letters Patent No. 120,332, dated October 24, 1871.

*To all whom it may concern:*

Be it known that I, JOHN SCHLEY, of Savannah, in the county of Chatham and State of Georgia, have invented a new and useful Improvement in Street Crossings; 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 drawing forming part of this specification.

My invention consists in transporting cars or other vehicles over an arch without change from a horizontal position, as hereinafter fully described, and subsequently pointed out in the claim.

Figure 1 is a plan view of an arch with the tracks applied thereto. Fig. 2 is a longitudinal section thereof.

A in the drawing is an endless carrier-chain, arranged on suitable pulleys B C J, in connection with an arch, D. E is a car to which the chain is attached, and F is a rectangular frame over the top of the car. G G G G are four wheels, preferably of exactly the same diameter. On the outside of this frame is journaled one front and one rear wheel, near corners diagonally opposite. On the inside and to the car proper are correspondingly journaled the other front and rear wheel. These wheels are cogged so as to work in suitable racks on the rails. In order to obtain greater bearing-surface and produce perfect steadiness in the car while moving, I also preferably use, in connection with each cog-wheel, a smooth traction-wheel, attached fixedly thereto, and intended to run upon an ordinary smooth rail beside the cogged rail. H and I, respectively, represent the cogged and smooth rails, of which there are four, or one for each wheel. Beginning at the right hand of Fig. 1 of the drawing, and at the top thereof, the outside track is shown with a front wheel thereon, and the nearest track, parallel thereto, with a rear wheel. These tracks are of the same length, but each as much shorter at one end than the other, as is the distance between the axes of the front and rear wheels. The outside track, on which the front wheel has entered, is as much lower than the one on which the

rear wheel runs as is necessary to preserve the axes of the front and rear wheels in a horizontal plane. This continues to the top level of the arch, when the outside track rises to the same plane with the other. Upon the opposite side of the arch the outside track continues upon the top of the arch, while the front-wheel track is as much depressed upon the decline as was the rear-wheel track upon the incline.

I am aware that vehicles have been transported up an incline, while in a horizontal position, by making the rear larger than the front wheels, as described in the Jenks Patent of 1866; also, that the ascent has been accomplished by using two traction-wheels and a pair of pinions attached to the bosses of driving-wheels whose axes are raised above the level of the axes of the traction-wheels, as described in the Aldrick patent of 1837; and I am also aware that an inclined plane has been cut up into short sections, so as to give a series of short but steep acclivities, and a four-wheeled vehicle lifted over them all successively until the top of the hill is reached, and that this has been done by using a higher track for the rear than the front wheels, as may be seen in Hebert's Encyclopedia, of 1836, pages 422-423 of volume 2d. These are the data upon this subject now in possession of the public; but no one has thus far constructed a road where the vehicle moves continuously back and forth over the arch, always in a horizontal position, and without being turned around.

Having thus described all that is necessary to a full understanding of my invention, what I esteem to be new, and desire to protect by Letters Patent, is—

The two pairs of cogged tracks G G G G, continuous over the whole arch D, and each pair equally depressed below the other on opposite sides of the arch, so that a vehicle having four cog-wheels may be moved from one end of the arch to the other without stoppage.

JOHN SCHLEY.

Witnesses:

GEO. W. MABEE,  
ALEX. F. ROBERTS.

(21)