



# UNITED STATES PATENT OFFICE.

DANIEL TOWSE, OF PITTSBURG, PENNSYLVANIA.

## IMPROVED AERIAL CARRIAGE AND WAY.

Specification forming part of Letters Patent No. 71,922, dated December 10, 1867.

*To all whom it may concern:*

Be it known that I, DANIEL TOWSE, of the city of Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain Improvements in Aerial Carriages and Way; and I do hereby declare that the following is a full and exact description thereof, which will enable others skilled in the art to make and use my invention, reference being had to the accompanying drawings, and to the letters of reference marked thereon, in which—

Figure 1 is a view of my improved carriage in elevation and way in elevation. Fig. 2 is a top view of the same. Fig. 3 is a view of one carriage in section through the line *xx*. Fig. 4 is a similar view of another shape of carriage; and Fig. 5 is a detailed view of a carriage running on a single-wire rope.

This invention consists in an aerial carriage running or sliding on one or more wires or wire ropes stretched from one point to another, whereby a convenient and cheap mode of carrying freight or passengers can be established over rivers, valleys, precipices, &c., in the manner more fully set forth below.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

In my drawing, X represents the bank of a river. Y is the river, and Z is a high hill. A A are two wire ropes stretched across from the piers B B and B B, and anchored at C C. F is a reel mounted on suitable frames, and acted upon by a steam-engine or other motive power, M. H is a carriage, either suspended

or resting on the bars D D, and fastened to a rope, P, which is rolled over the reel F.

Fig. 3 represents one sort of carriage when it is suspended by the chains T T from two wire ropes, A A, on bars D, resting on runners R R. Fig. 4 represents a carriage resting on bars D, mounted on wheels S S; and Fig. 5 represents a carriage, H, running by the chains T T to the axle of a grooved pulley, S, running on a single-wire rope, A. In each case the wire rope or ropes are stationary, and the carriages run on them, either suspended or resting on pulleys or runners.

### *Operation.*

When the reel F is made to revolve so as to unwind the rope P, the carriage H will run down in the direction of the arrow G until the load can be landed at the point X, when a new load is placed in the carriage, and, the engine M being reversed, the reel will turn so as to wind up the rope P and pull up the carriage H in the direction of the arrow L until it is brought to the top of the hill Z, where it can be unloaded and loaded, as before.

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

The combination of the wire ropes A A, piers B B B B, reel F, and rope P with the carriage H, arranged and operating in the manner set forth.

DANIEL TOWSE.

Witnesses:

FRANCIS L. CLARK,  
J. DONALDSON.