

D. Towse.

Aerial Carriage & Way.

N^o 71923

Patented Dec. 10, 1867

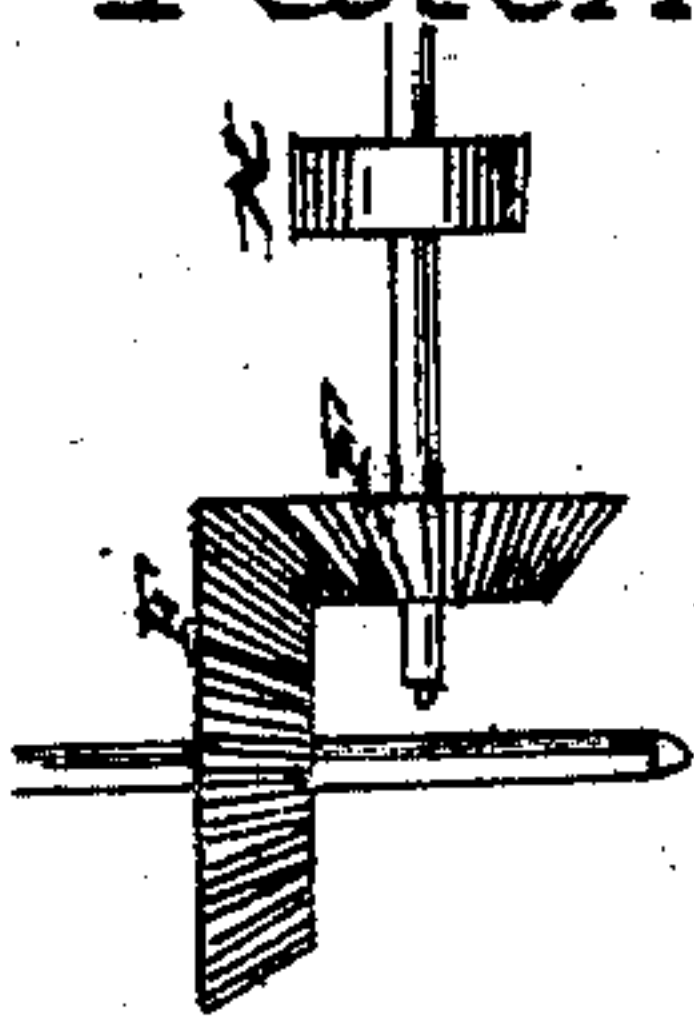
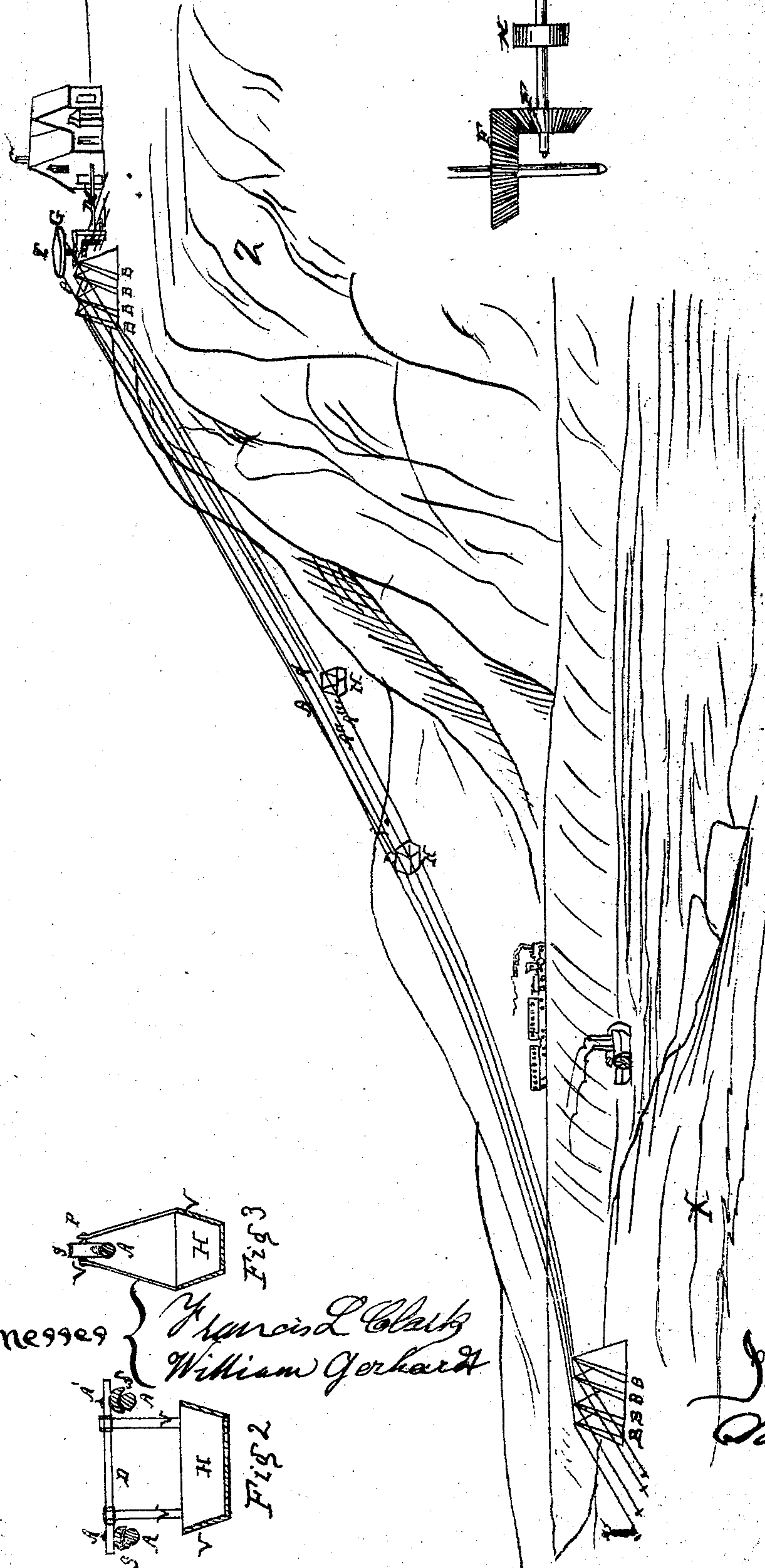


Fig. 1.

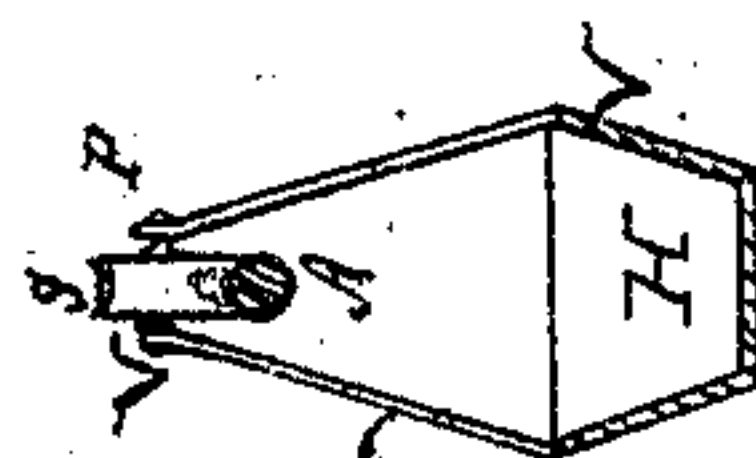


Fig. 3.

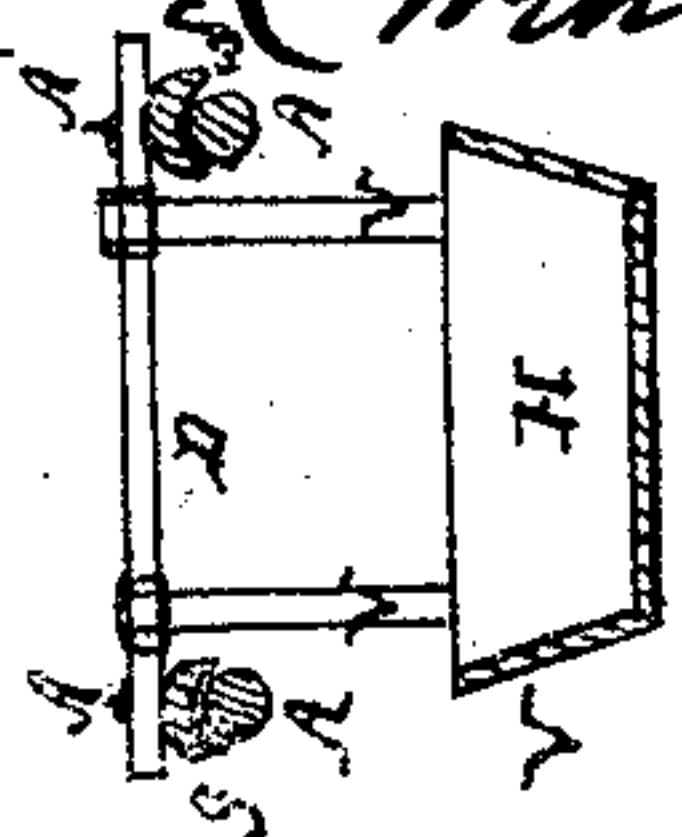


Fig. 2.

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UNITED STATES PATENT OFFICE.

DANIEL TOWSE, OF PITTSBURG, PENNSYLVANIA.

IMPROVED AERIAL CARRIAGE AND WAY.

Specification forming part of Letters Patent No. 71,923, 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 Ways; 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 perspective view of my improved aerial carriage. Fig. 2 is a sectional view of one of the carriages H arranged for a two-rope way, and Fig. 3 is a similar view of a carriage arranged for a single-rope way.

This invention consists in establishing two parallel ways of wire rope, either composed of one, two, or more ropes, each supported on piers, and in having a horizontal grooved pulley or drum fastened between the two ways, at their upper end, upon which wire ropes attached to suspended carriages running on said way are wound in such a manner that when one of the ropes is winding itself the other rope is unwinding itself, so as to obtain a go-and-come movement of the carriages, and hereby a convenient and speedy transit between the two points between which the ways are located is established.

In my drawings, A A' and A'' A''' represent the two ways or aerial-carriage way, which are fastened in a proper manner upon the piers B B B B, &c. H H are the two carriages, suspended to bars D, which rest either on grooved wheels S S, or on runners sliding or rolling upon the wire ropes A'' A''' and A A'. ff are two ropes, attached by one end to the carriages H H, and by the other to the drum or pulley G. The pulley G is part of an axle, T, which runs in suitable frames, to hold it firmly in proper position.

F is a set of gearings, which serve the pur-

pose of communicating the movement from the steam-engine or other motive power M to the axle T and pulley or drum G.

X is the low ground, Y is a river, and Z is the hill or high ground which it is proposed to put in communication with the lower ground X without obstructing the river Y when the steamer L is seen in progress.

A, Fig. 3, represents a single-rope way, and V exhibits the manner in which the carriage is suspended to it.

A'' A''' in Fig. 2, represent the double wire-rope way, and the manner in which the carriage H is suspended between the two ropes by the chains V' V', cross-bar D, and wheels S S.

Operation.

The carriages H and H have ropes f of such length that when the carriage H is at the lower end of the way, at X, the carriage H is at the top of the way, at Z; then the load of each carriage is landed and return loads are put in. The engine M is put in motion, which causes the reel to revolve, and when the carriage H' is going down, the carriage H is pulled up. By reversing the engine the carriage will run the other way, thereby obtaining a go-and-come movement on the two ways.

It is evident that when it is desired to carry loads only downhill from Z to X, no motive power is required, as the loaded carriage will, in running down, pull up the empty carriage.

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

The combination of the two aerial ways, A A' A'' A''', the drum C, with the carriages H H and ropes f f, constructed and operating as specified.

DANIEL TOWSE.

Witnesses:

FRANCIS L. CLARK,
J. DONALDSON.