

(No Model.)

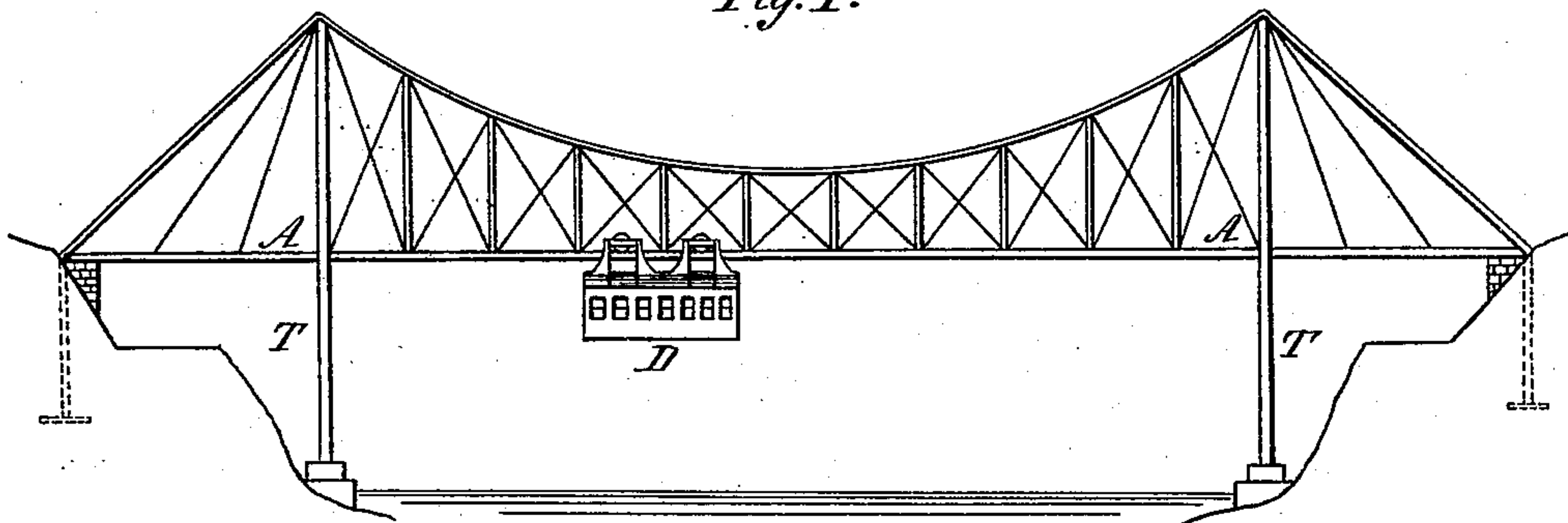
G. LINDENTHAL.

BRIDGE.

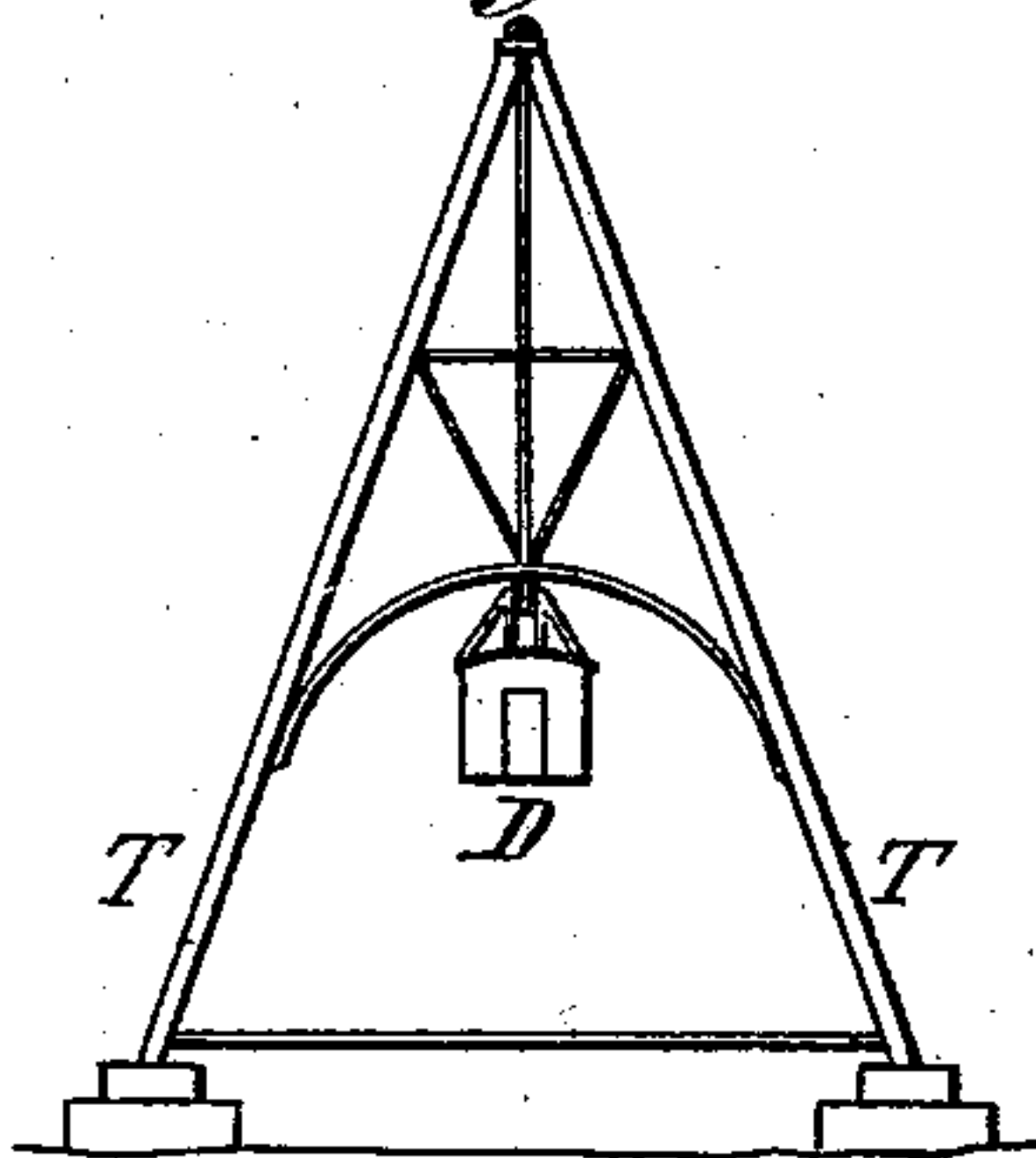
No. 277,039.

Patented May 8, 1883.

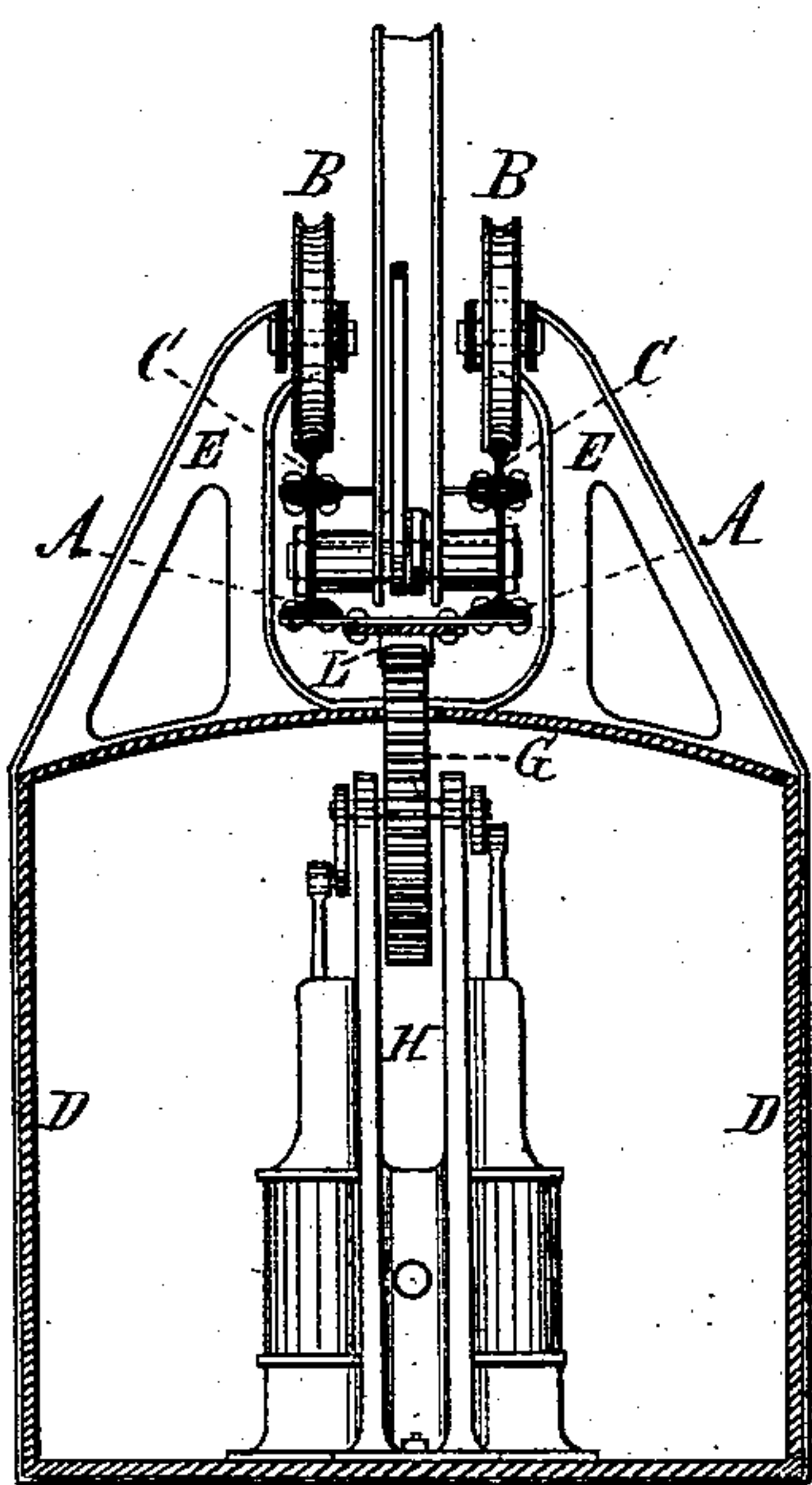
*Fig. 1.*



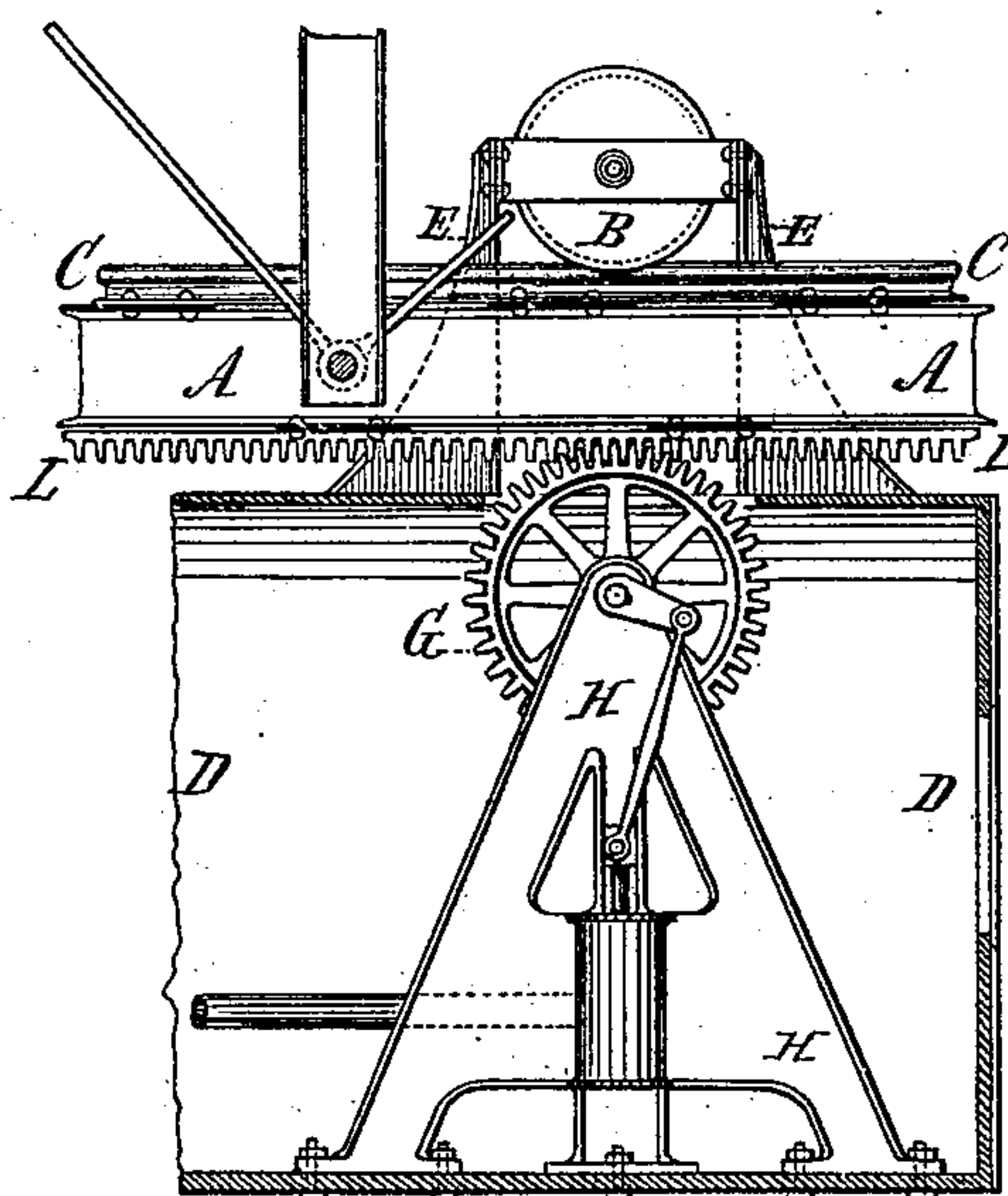
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



Witnesses:  
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# UNITED STATES PATENT OFFICE.

GUSTAV LINDENTHAL, OF PITTSBURG, PENNSYLVANIA.

## BRIDGE.

SPECIFICATION forming part of Letters Patent No. 277,039, dated May 8, 1883.

Application filed March 7, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, GUSTAV LINDENTHAL, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Bridges, of which the following is a full description.

My invention relates to improvements in bridges for transporting persons, vehicles, material, &c., in suspended cars across a chasm or river.

In the drawings accompanying this specification, Figure 1 shows a side elevation of a suspended bridge-truss having a continuous bottom member, A A, with car D suspended thereto. Fig. 2 shows the end elevation of bridge-tower T, supporting the bridge-truss. Fig. 3 represents on a larger scale a cross-section of the two beams A A, the track C C, and the suspended car D. Fig. 4 shows a longitudinal section of the propelling arrangement.

Similar letters refer to similar parts in all figures.

The object of my invention is to use only one bridge-truss for the transfer of loads, instead of two or more trusses needed for an ordinary bridge, and thereby lessen the cost of constructing a bridge in certain localities. This object I attain by building a single suspension-truss with a straight and rigid bottom member formed of two continuous and laterally-connected beams, A A, which are placed sufficiently apart to dispose and connect the other necessary bridge members between them for the purpose of permitting an uninterrupted passage for the grooved wheels B B on the rails C C, which are fastened on the top of said beams A A, Fig. 3. The wheels B B have their journals in rigid iron frames E E, Figs. 3 and 4, above the roof of car D, which is thereby securely supported on the track overhead.

To the under side of the beams A A is fastened a rack, L, Figs. 3 and 4, into which works the cog-wheel G, projecting through the roof

and mounted on a frame, H, in the car. The cog-wheel G is made to revolve by means of an engine or by hand-power on the car, which is thus set into motion. With this arrangement it is impossible for the car to be derailed, the cog-wheel G preventing a lifting of the car and the grooved wheels B B preventing a derailment sidewise.

To give lateral stability to the structure the towers T T, supporting the suspended truss, may spread out at the base, Fig. 2, or the structure may be laterally braced in some other known manner.

I am aware that suspended self-propelling cars or platforms running on tracks supported overhead have been proposed or used previous to my invention. I therefore do not claim, broadly, such a combination; but

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

1. The combination, in a suspension-bridge, of a single truss with a straight and rigid bottom member composed of two continuous beams, A A, connected laterally and clearing all bridge members disposed between and connected to them, a track, C C, on top of said beams, and a suspended car, D, running on said track, substantially as above described.

2. For propelling the suspended car D, a rack-movement, L, fixed to the under side of beams A A, with a cog-wheel, G, attached to the suspended car D, as substantially set forth above.

3. For preventing the suspended car from derailment, the combination of grooved wheels B B, with a cog-wheel, G, on said car, the track C C on top of beams A A, and the rack L at under side of said beams, all as substantially described above.

GUSTAV LINDENTHAL.

Witnesses:

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GUST. HAAS.