

No. 609,687.

Patented Aug. 23, 1898.

A. MARGESIN.
AERIAL CABLE RAILWAY.

(Application filed Dec. 29, 1897.)

(No Model.)

3 Sheets—Sheet 1.

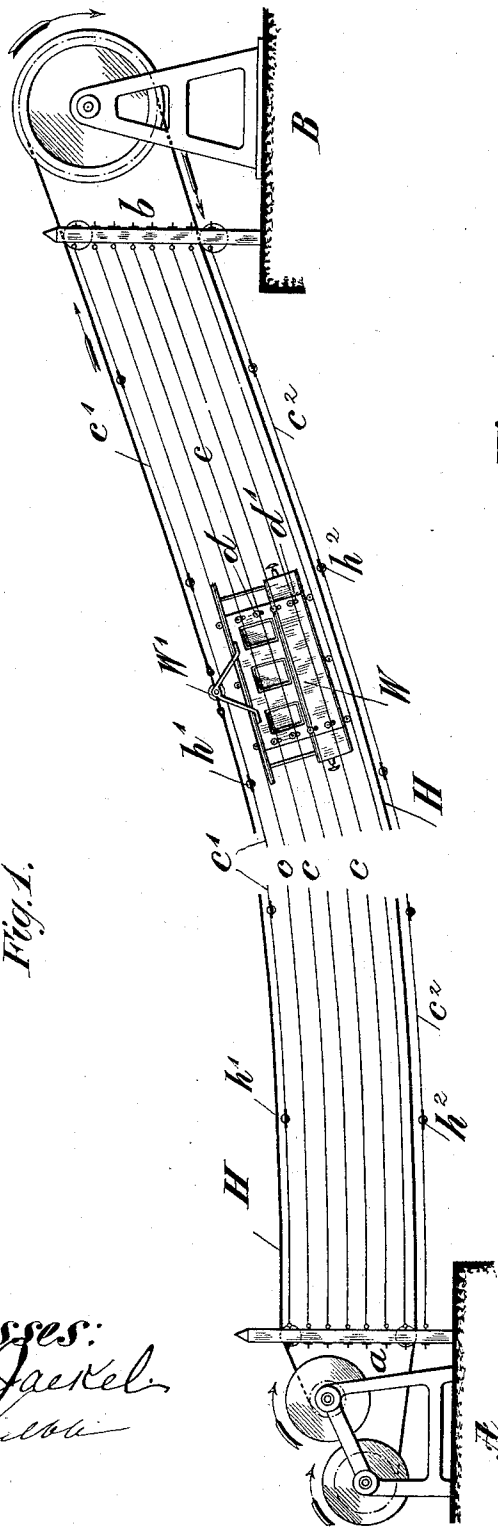


Fig. 1.

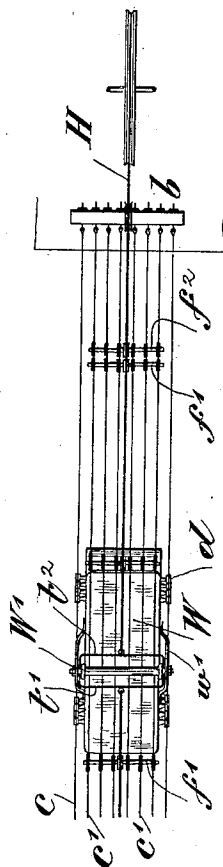


Fig. 2.

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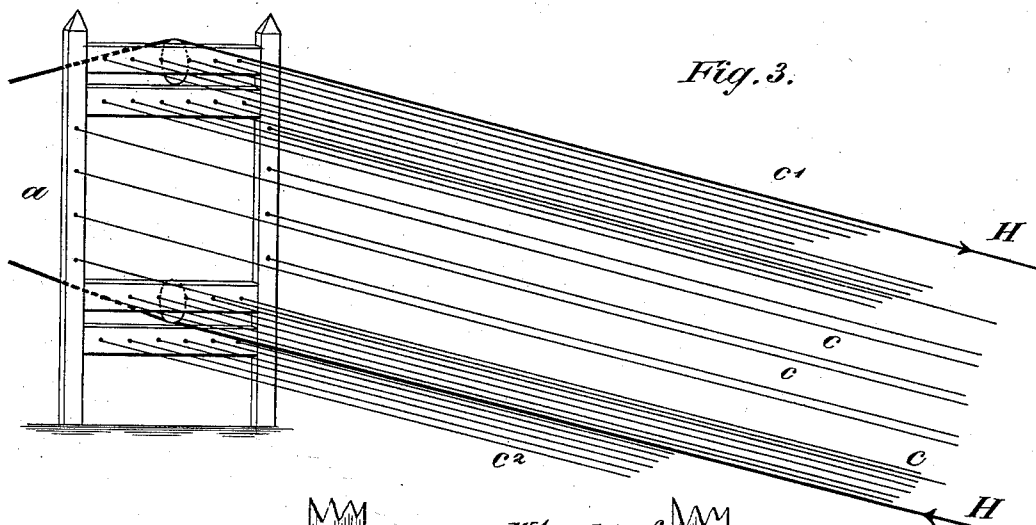
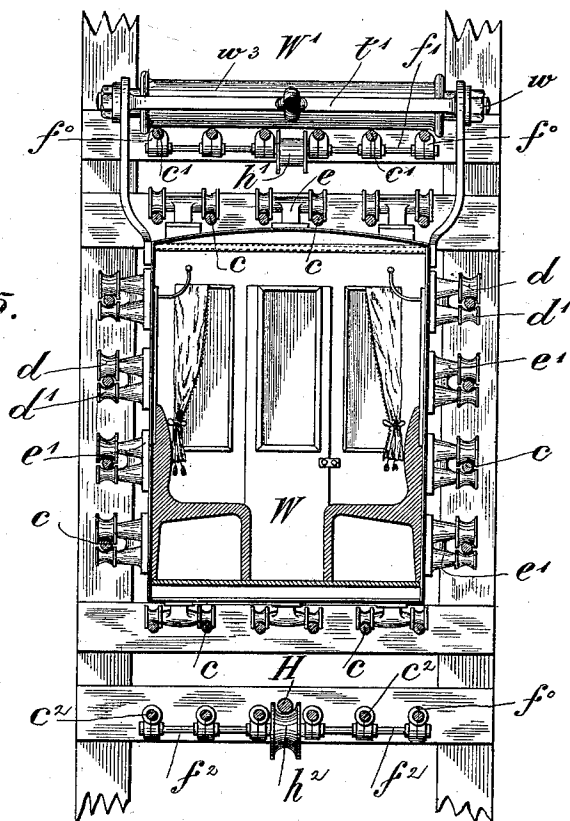


Fig. 5.



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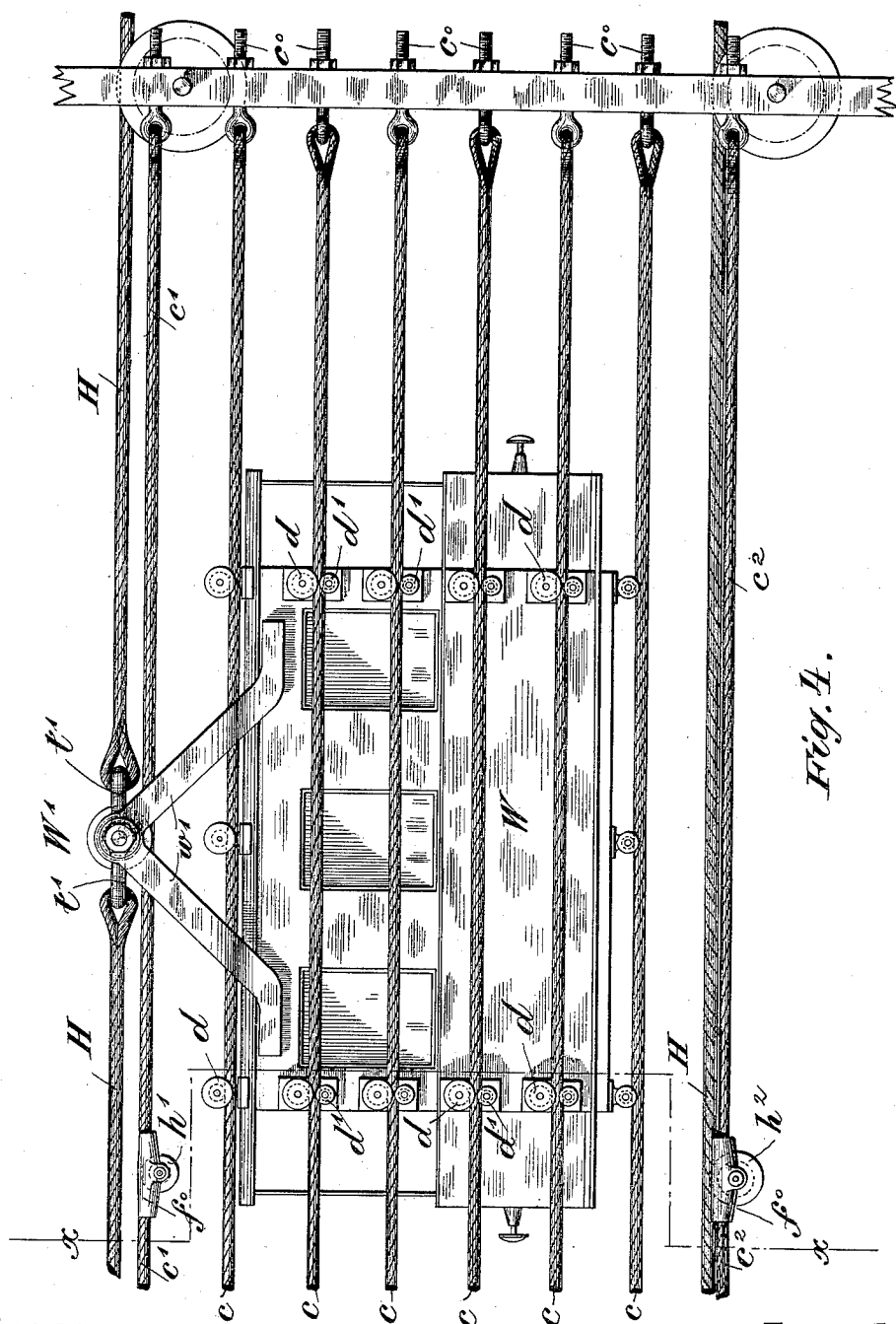
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UNITED STATES PATENT OFFICE.

ANTON MARGESIN, OF ZURICH, SWITZERLAND.

AERIAL CABLE-RAILWAY.

SPECIFICATION forming part of Letters Patent No. 609,687, dated August 23, 1898.

Application filed December 29, 1897. Serial No. 664,383. (No model.) Patented in Switzerland May 14, 1897, No. 13,852.

To all whom it may concern:

Be it known that I, ANTON MARGESIN, a subject of the Emperor of Austria, residing at Zurich, in Switzerland, have invented certain new and useful Improvements in Aerial Cable-Railways, (for which was obtained a patent in Switzerland, numbered 13,852, dated May 14, 1897,) of which the following is a specification.

This invention has for its object a cable air-line or aerial cable-railway which is characterized by its absolute safety as compared with previous forms of construction.

It consists of a system of cables bridging longitudinally without any support the distances to be traveled—that is to say, the spans—such cables forming a track for the carriage, which is guided in this cable-way by means of rollers traveling on the cables.

One form of construction of such an aerial cable-way is shown as an example in the accompanying drawings.

Figure 1 is a side view of the railway or track as a whole; Fig. 2, a plan view of a portion of the same; Fig. 3, a view in perspective of the left-side cable-carrier with its respective cables; Fig. 4, a view of the car and a part of the track with the respective cable-carrier on a somewhat larger scale; Fig. 5, a vertical cross-section on the line xx of Fig. 4.

Cable-carriers in the form of rectangular frames a and b are arranged at the ends A B of the stretches or spans of track. These frames serve as supports for the cables c of the spans A B of the track, which cables are suspended on suitable hooks c^0 , suitably mounted in the frames. The cables are so arranged as to form a tubular or tunnel-like body, within which the car is adapted to run. The carriage or car W is provided with rollers d on both sides and also on the roof and bottom corresponding to the number of cables of the track, by means of which rollers it is guided on the cables. In the present instance the car is provided with two such series of rollers arranged to correspond with the arrangement of cables, one of each series of rollers being arranged near the ends of the car, rollers being also arranged in the center of the car above and below. Counter-rollers d' are arranged diametrically opposite the rollers d and in engagement therewith for the

purpose of keeping the side rollers on the cables and to prevent them slipping off the latter in such a way that the cables pass between both rollers d d' . A pair of such allied rollers d and d' are each preferably arranged on a support e' . In the case of the rollers on the car top and bottom which have no counter-rollers each two adjacent rollers are arranged on a single support e . (See, for instance, Fig. 5.) A further layer of cables c' and c'' , respectively, is arranged above and below the cable c , which form the body of the track, in order to guide a traction-cable H . For this object the cables of each layer are connected with one another by means of cross-bars f' and f'' , arranged at certain distances apart and having in their center rollers h' h'' for supporting and guiding the traction-cable H . The cables c' also serve for guiding a carrying-roller W' , arranged above the car in such a way that it can travel on the cables c' . The rollers h' for the traction-cable and the clamps f^0 on the cross-bars holding the cables c' are so constructed that they do not project over the upper edge of the cables, and thus do not interfere with the travel of the carrying-roller. The carrying-roller is revolvably mounted on a support-frame formed of two pairs of arms w' w'' , attached to the sides of the car and connected with one another by a cross-bar w^3 , forming the axle of the roller. Cross-bars t' t'' , provided with hooks, are also mounted on this cross-bar w^3 , on which bars t' t'' the traction-cable is suspended, which may be operated, as shown in the drawings, by means of a drum or reel mechanism or in other suitable manner. The hooks c^0 , holding the cables, are adjustable in the frames a b in order to allow of the cables being drawn more or less taut, according to the requirements. Instead of arranging the guide-cables for the traction-cable H , as shown in the drawings, above and below the body of the track the traction-cable may be otherwise arranged. For instance, the return traction-cable might be carried by side guide-cables or the upper and under longitudinal support-cables might by a suitable modification be made to serve also as support-cable for the guide-cable.

Having thus described my invention, what I claim is—

1. An aerial cable line or railway in which the track is formed of a tubular or tunnel-like system of longitudinal cables bridging the spans without any intermediate supports, the car being carried on said track by means of rollers while a separate traction-cable is provided parallel to the cable-tunnel, substantially as hereinbefore set forth.

2. In an aerial cable-railway: a track-body formed of a tubular or tunnel-like series of cables bridging the spans without intermediate supports, the car being guided on said track by means of rollers, a traction-cable carried on guide-rollers; and a carrying-roller connected with the car and attached to the traction-cable and guided by a further series of guide-cables c' lying parallel to the tubular track of cables c ; in combination substantially as hereinbefore described.

3. An aerial cable-railway comprising a track formed of a tubular or tunnel-like series

of longitudinal cables bridging over the spans without any intermediate support, the car being guided on said track by means of rollers; a carrying-roller connected with the car and attached to the traction-cable; a further series of guide-cables c' arranged above the tubular track of cables c and parallel thereto to carry or guide said carrying-roller and another layer or series of longitudinal guide-cables c'' arranged below the tubular track of cables c to carry the return traction-cable, in combination, substantially as hereinbefore described.

In testimony whereof I hereunto sign my name, in the presence of two subscribing witnesses, this 10th day of December, 1897.

ANTON MARGESIN.

Witnesses:

MORITZ VEITH,
H. KABBARTY.