

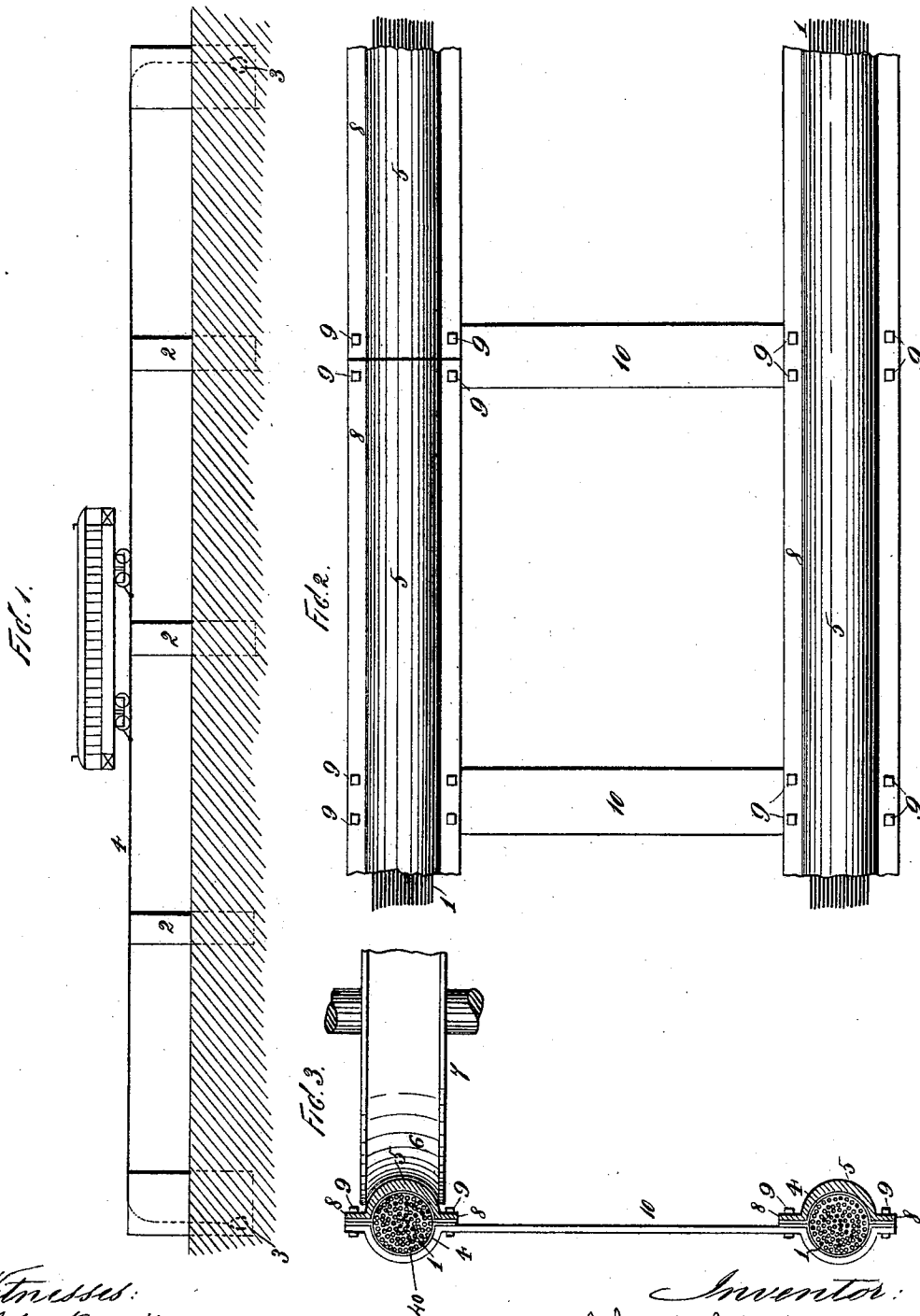
(No Model.)

3 Sheets—Sheet 1.

C. G. HUTCHINSON.
WIRE RAILWAY.

No. 515,338.

Patented Feb. 27, 1894.



Witnesses:
John Buckler,
Isabel Chester.

Inventor:
Charles G. Hutchinson.
By A. M. Pierce
Attorney.

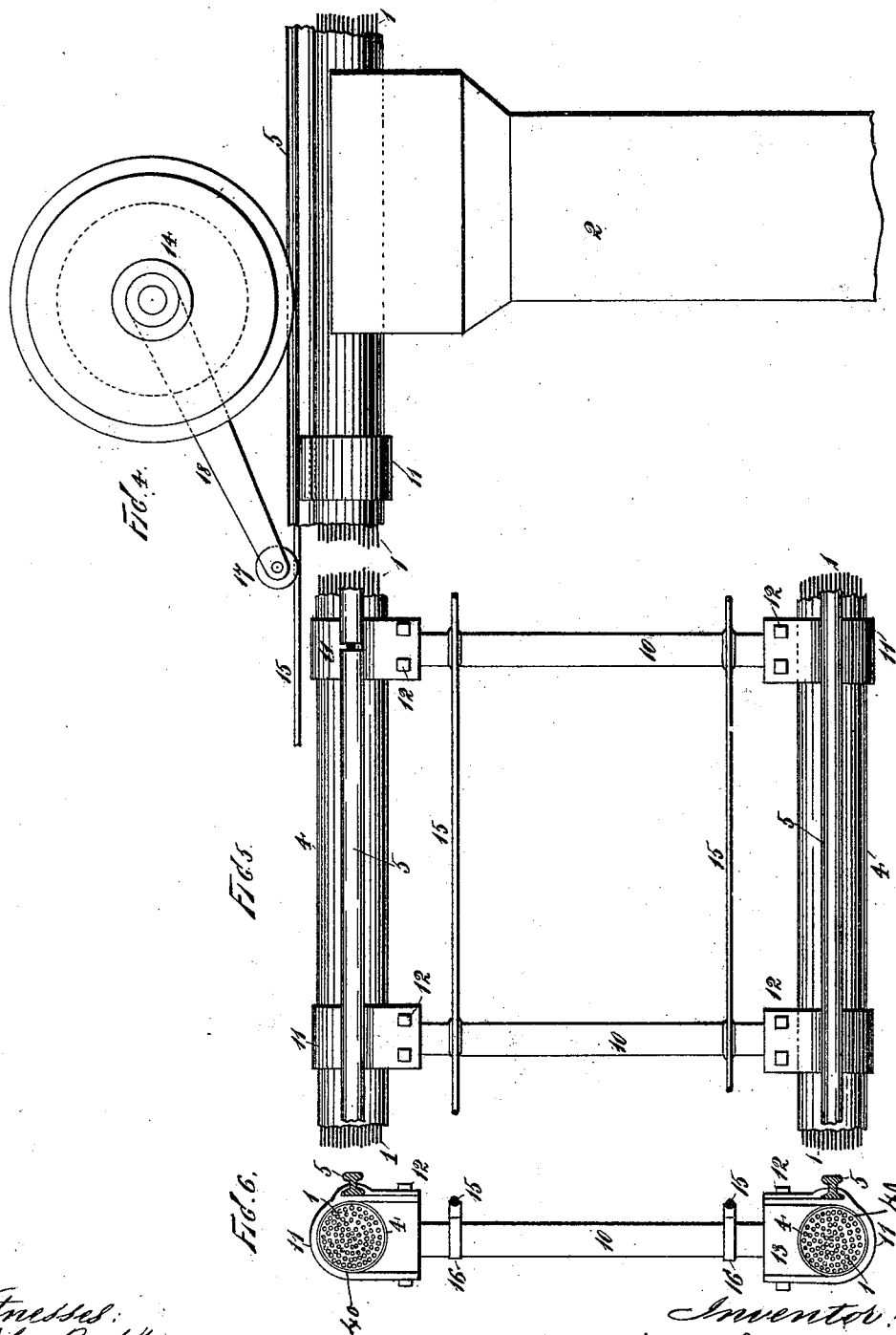
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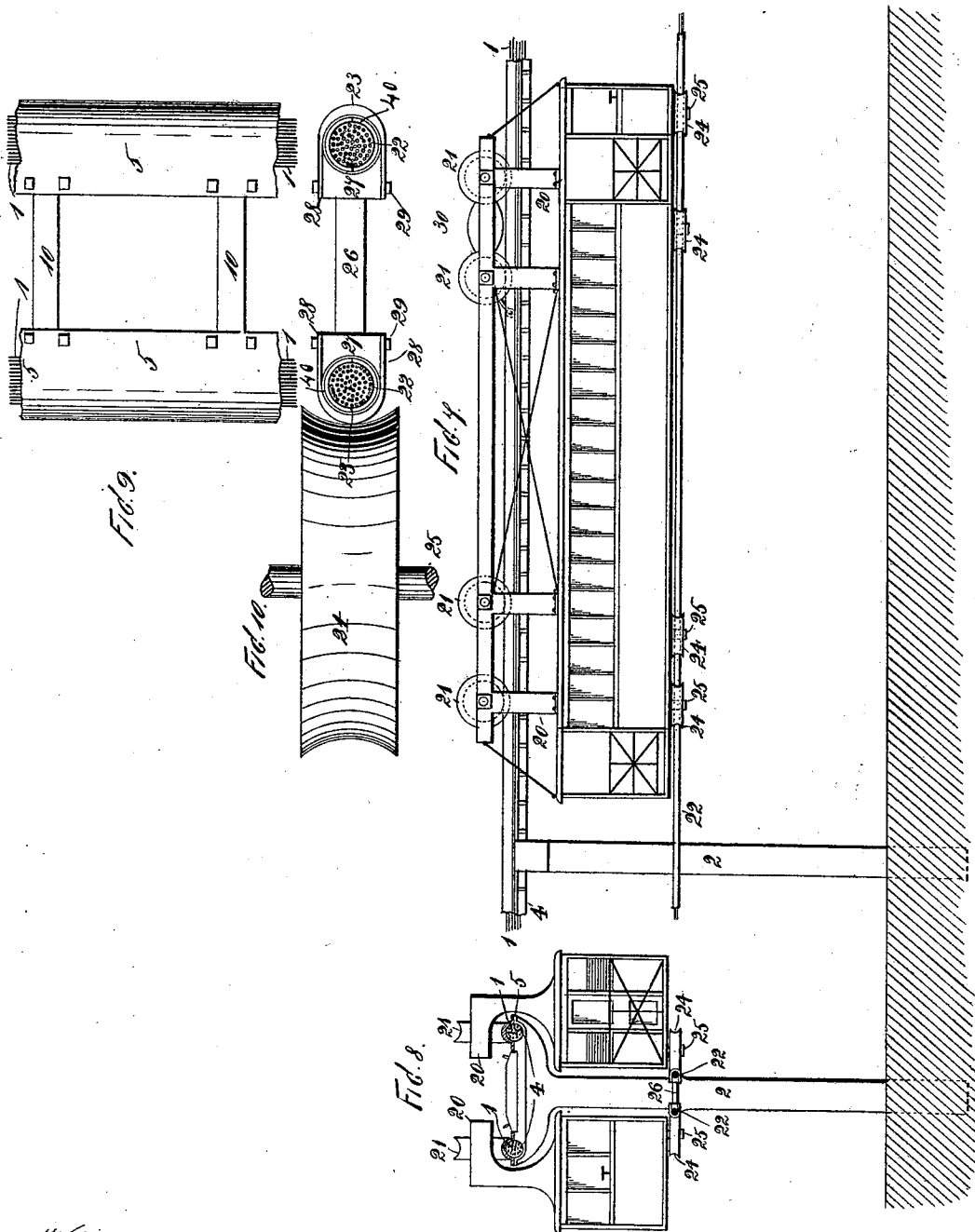
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UNITED STATES PATENT OFFICE.

CHARLES G. HUTCHINSON, OF NEW YORK, N. Y.

WIRE RAILWAY.

SPECIFICATION forming part of Letters Patent No. 515,338, dated February 27, 1894.

Application filed May 9, 1893. Serial No. 473,547. (No model.)

To all whom it may concern:

Be it known that I, CHARLES G. HUTCHINSON, a citizen of the United States, residing in the city, county, and State of New York, have invented a new and useful Improvement in Wire Railways, of which the following is a specification.

My invention relates especially to the construction and arrangement of railways, particularly such as are known as "elevated," and has for its object the carrying into effect of a method of constructing a simple, cheap, strong and effective railway, which may be carried at any desired elevation, over any obstructions, and wherein very long spans may be employed with safety and ease.

To attain the desired end, my invention consists essentially in stretching a series of wires over a series of supports, anchoring said wires at both ends; binding the wires together, and fastening a series of rails to the wire structure, upon which the wheels of vehicles may run; and my invention involves certain novel and useful combinations or arrangements of parts, and peculiarities of construction and operation, all of which will be hereinafter first fully described, and then pointed out in the claims.

In the accompanying drawings, forming a part hereof, Figure 1 is a side elevation or diagram of a wire railway, constructed in accordance with my invention. Fig. 2 is a plan view of a fragment of the way, and Fig. 3 is an end view of such fragment, the cables being shown in section. Fig. 4 is a side view of a portion of the way, and one of the supports, wherein a T rail is employed. Fig. 5 is a plan view of the construction illustrated in Fig. 4, and Fig. 6 is an end view and partial cross-section through the cables. Fig. 7 is a view of my railway, illustrating the construction employed where a suspended car is used. Fig. 8 is an end view thereof. Fig. 9 is a plan view of a portion of the way. Fig. 10 is an enlarged view of the lower guide cables and guide wheel of a car.

Similar numerals of reference, wherever they occur, indicate corresponding parts in all the figures.

1 are wires, made of suitable size, and

stretched singly and uniformly over supports, 2. These supports may be of any desired height, and placed three hundred feet, or more apart. The wires 1 are anchored securely at each end, as at 3, 3, Fig. 1. After the requisite number of wires have been stretched over the supports, and anchored, they are bound together in any desired manner into cables 4 and the cables are covered with a casing or sheathing, 40.

5 are rails secured upon the upper side of the cables. In Figs. 2 and 3 I have shown the rails 5, as having a rounded upper surface, adapted to receive the corresponding tread 6, of a car wheel, 7. These rails are provided with ribs, 8, which are secured by means of bolts, 9, to ties, 10, which pass from rail to rail beneath the cables, acting both as means for securing the rails in place upon the cables, and as lateral braces to prevent any side swaying of the cables.

In Figs. 4, 5 and 6 I have shown an ordinary T rail as fixed upon the cables 4. When such rails are used, a clip, 11, is bolted to the tie 10, said clip passing around the cable, and engaging by means of bolts 12 with a head, 13, secured to a tie 10, or forming a part thereof. On these rails, ordinary flanged car wheels, as 14, will be used, and where it is desired to employ electricity as a motive power, wires 15 may be mounted upon insulators 16 in the tie 10, and the electricity taken up by a contact wheel 17, mounted upon an arm, 18.

In the construction shown in Figs. 7, 8, 9 and 10, the cars 19, are suspended upon brackets 20 provided with supporting wheels, 21, which run upon the rails 5 mounted in the cables 4. 22 are lower cables, stretched between the supports 2, and bearing rails 23. 24 are horizontal guide wheels, secured to shafts 25, projecting from the bottom of the car, said wheels being arranged to run upon the rails 23 on cables 22. These lower cables are connected together by ties 26, heads 27 and ears, 28, which extend from the rails 23 and are bolted to said head at 29. 30 is an electric motor by which the car may be driven.

When constructed and arranged in accordance with the foregoing description, my improved wire railway will be found admirably

adapted to the uses and purposes for which it is intended. The supports may be placed at a great distance apart, and the cables and ties are of a much less cost and weight than is the case with the ordinary elevated structure, and the cars will run very quietly and easily upon the rails borne by the cables, thus preventing any wear of the cables, while said rails may be easily renewed when it becomes necessary to do so.

Having now fully described my invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. A suspended wire railway, consisting of a series of wires, stretched over a series of supports and anchored at both ends, said wires being bound together and covered with a sheathing or casing having a series of rails adapted and arranged to receive the wheels of vehicles, fastened directly into said sheathing or casing and wires, substantially as shown and described.

2. Wires or cables provided with a sheathing or casing to which is directly secured a series of rails adapted to receive the wheels of vehicles, whereby the wires or cables are protected from the friction of said wheels,

moving upon the rails, substantially as shown and described.

3. A suspended wire railway, in which is comprised two cables each composed of wires bound together, covered by a casing, and having rails secured directly on the top thereof for the reception of vehicle wheels, said wires or cables being connected together by means of ties or rods, substantially as shown and described.

4. In a wire railway, a series of wires stretched over supports, anchored at both ends and bound together; a series of vehicle or car wheel supporting rails secured to said wires; ties or rods passing between said wires, and two cables of similar construction, bearing a series of rails, stretched beneath the first mentioned cables, and having rails secured thereto forming bearings for guide wheels of vehicles or cars, the whole combined and arranged to operate, substantially as shown and described.

CHARLES G. HUTCHINSON.

Witnesses:

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