

(No Model.)

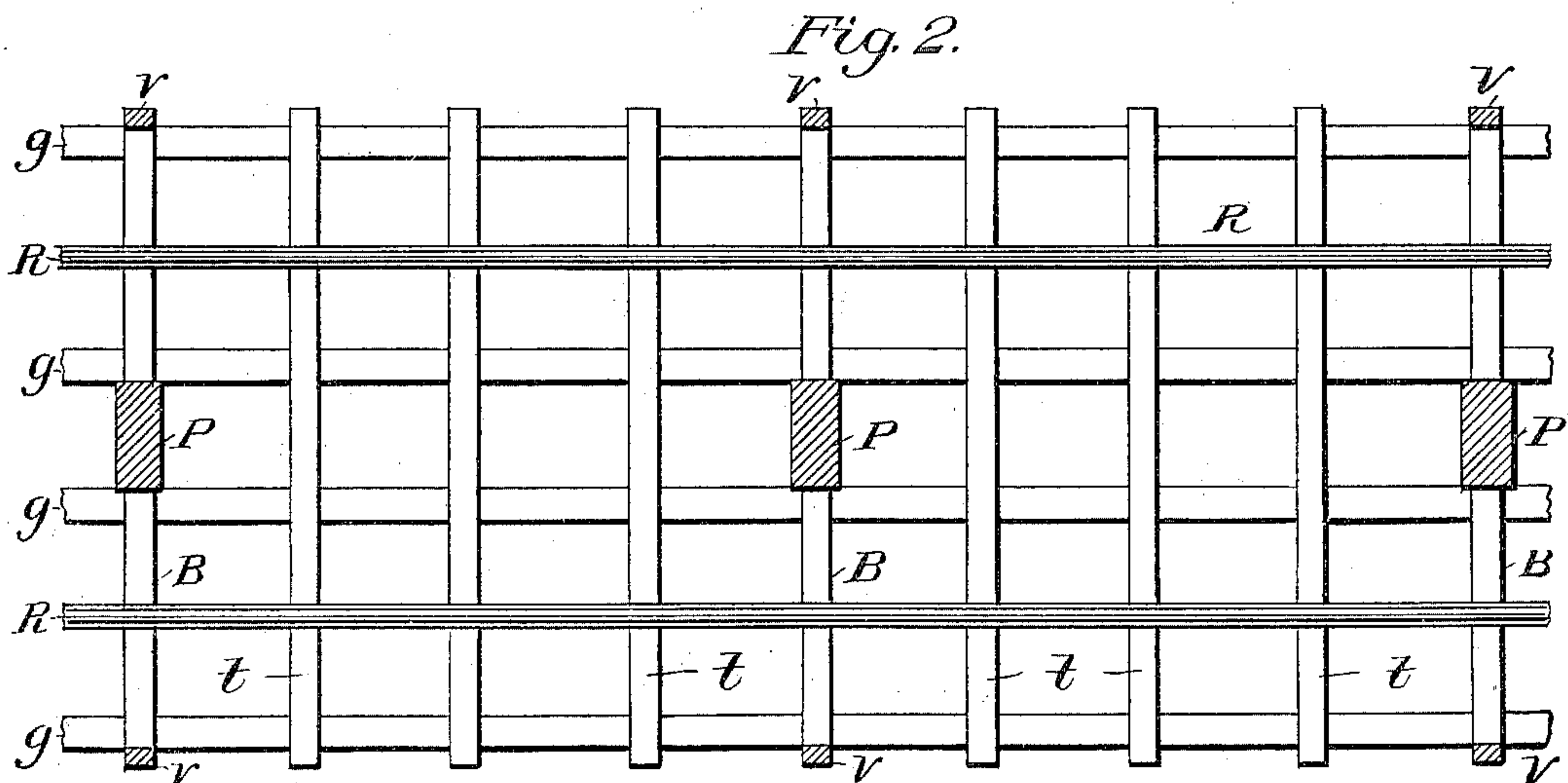
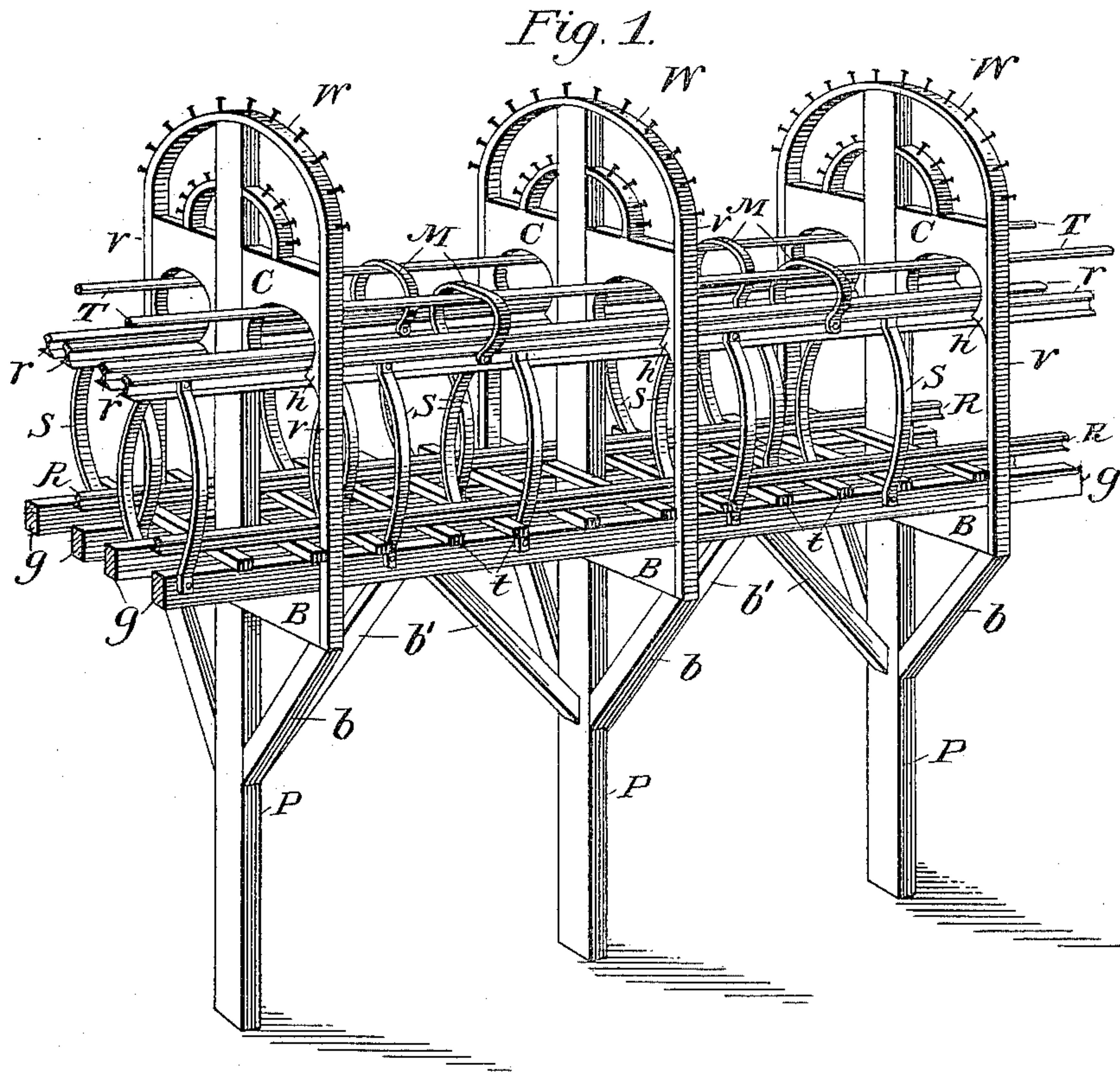
2 Sheets—Sheet 1.

J. H. COOLEY.

ELEVATED ELECTRIC CAR LINE.

No. 604,729.

Patented May 31, 1898.



Witnesses.

D. J. Cooley
R. S. Lemo

Inventor.

Jac. H. Cooley

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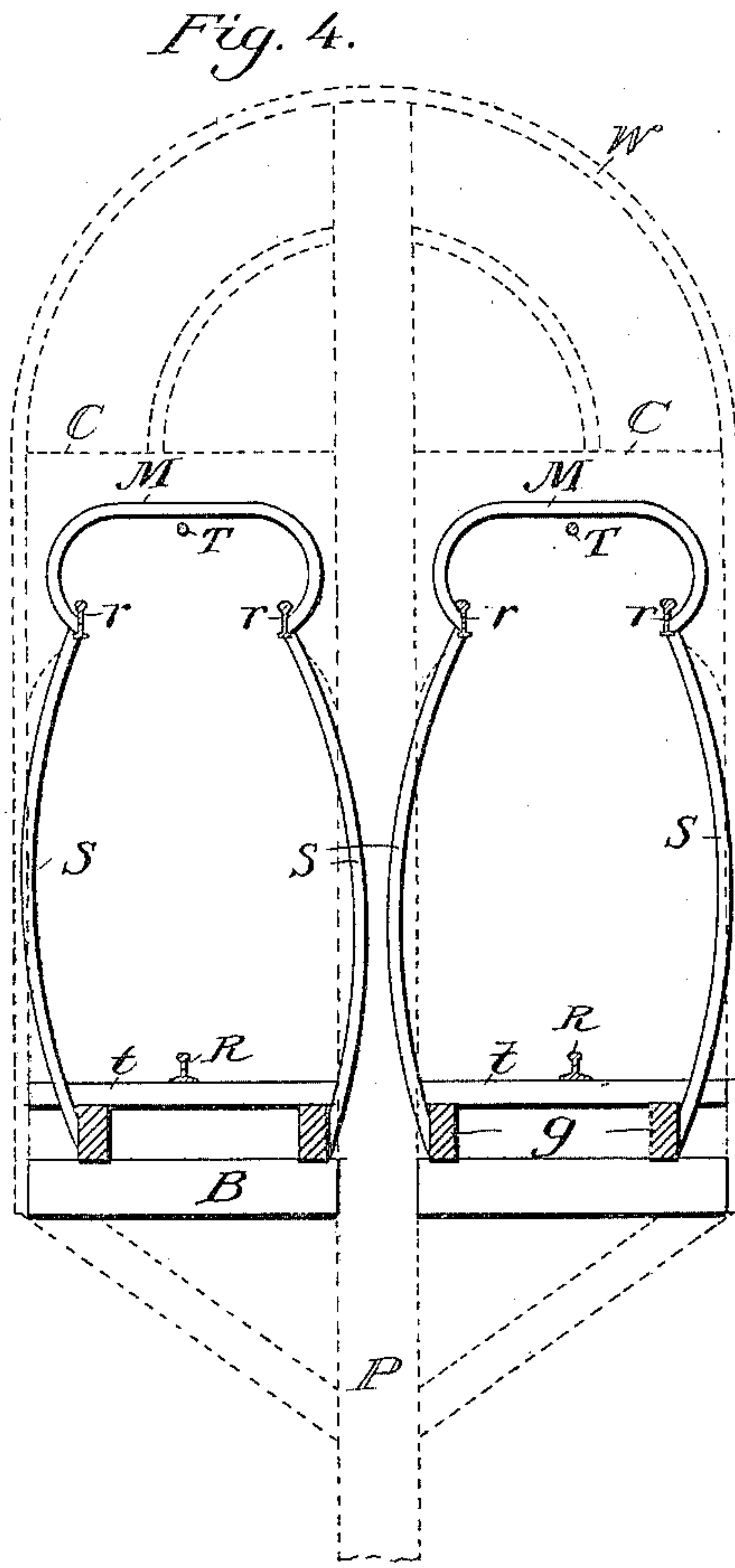
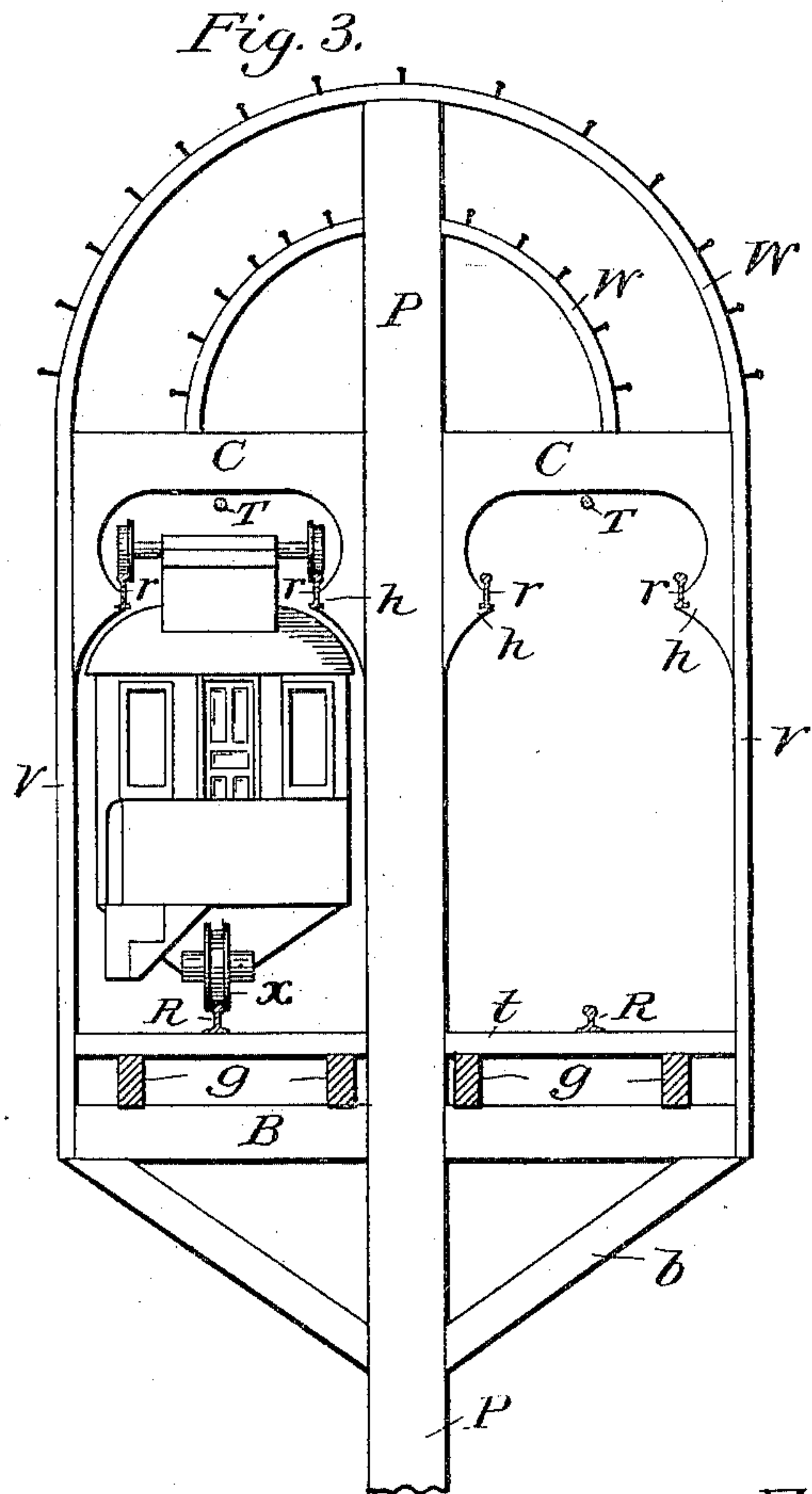
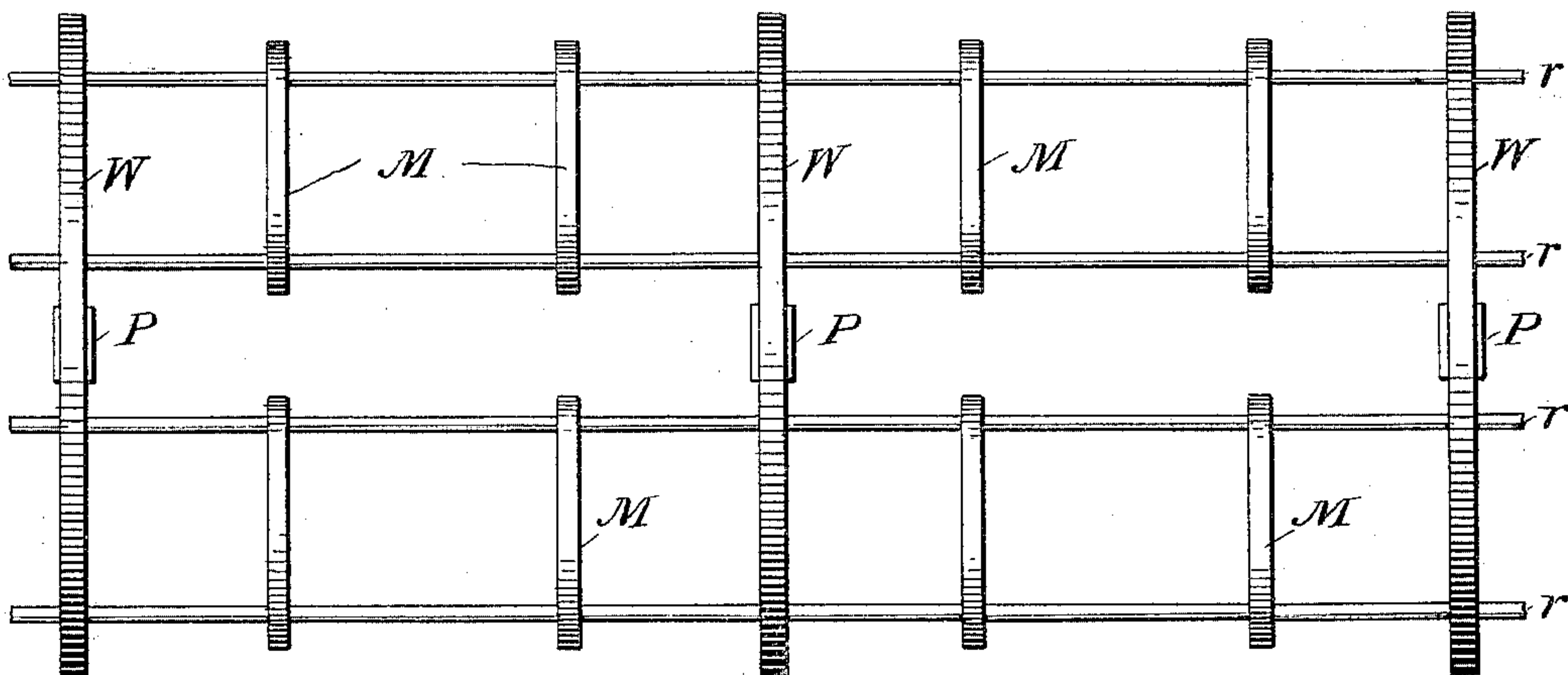


Fig. 5.



Witnesses.

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Inventor.

Joe H. Cooley

UNITED STATES PATENT OFFICE.

JOE H. COOLEY, OF PARIS, TEXAS.

ELEVATED ELECTRIC CAR-LINE.

SPECIFICATION forming part of Letters Patent No. 604,729, dated May 31, 1898.

Application filed August 13, 1897. Serial No. 648,169. (No model.)

To all whom it may concern:

Be it known that I, JOE H. COOLEY, a citizen of the United States, residing at Paris, in the county of Lamar and State of Texas, have
5 invented a new and useful system of elevated double-track electric car-lines and car and electric-wire supports combined, and all supported by a single line of posts with framework of iron or wood, or both, of which the following
15 is a specification.

My invention relates to improvements in elevated double-track electric car-lines and car and electric-wire supports combined, as fully described hereinafter and illustrated in
15 the accompanying drawings, in which—

Figure 1 is a vertical view in perspective of my invention. Fig. 2 is a top view of the lower part of the framework of the two tracks, showing the two rails R R as laid on the cross-ties t t, supported by the girders g g g g, which
20 are supported by cross-beams B B B, secured to the posts P P P, as also shown in Fig. 1. Figs. 3 and 4 are two vertical end views of the construction, showing a car on left track
25 in Fig. 3. Fig. 5 shows the top construction (with the rails) of the braces M M M M, cross-beams C C C, and posts P P P.

Similar letters refer to similar parts throughout the several views.

30 W W W in Fig. 1 show the electric-wire supports, spanning the entire width of and over the two tracks and framework construction, the posts P P P running to the top beneath the wire-supports W W W to strengthen the
35 support of same.

The posts P P P are made of iron or wood and set into the ground deep enough to be substantially secure, and may be braced to
40 iron plates placed in the post-holes or otherwise securely set into the ground, and the track-framework is fastened to them securely and braced both on the sides and bottom, as shown in Figs. 1 and 3, by braces b b and b' b'.

The upper track-rails r r r r are supported
45 by the outward-curving supports S S S S and the vertical supports v v v, which latter are connected to the cross-beams B B B at their lower ends, and their upper ends are connected to the upper cross-beams C C C, supporting same in connection with the posts P
50 P P. The vertical supports v v v v are provided with inwardly-projecting bearings h h

h h for the upper rails r r to rest on and in line with the upper shouldered curved supports S S of the said rails r r. The cross-beams C C
55 C C are secured to the vertical supports v v at their ends and in the middle to the posts P P P, thus holding all firmly together.

The posts P P P are set apart at such distances as may be found necessary—say from
60 fifteen to thirty feet apart—and the track-framework and braces b b b b' b' b' fastened to them at such heights above the ground as may be required to prevent the obstruction of vehicles and street or other cars passing
65 under, as shown in Fig. 1.

Strong semicircular iron braces, or bands M M span the upper tracks r r r r to firmly hold them together at such distances apart as may be found necessary and high enough for
70 the electric trolley motor-wire to pass under them a few feet above the top of the cars and so constructed at their turning ends as to turn over the rails r r to allow the upper car-wheels to pass under them. These electric trolley
75 motor-wires are supported by the upper cross-beams C C C in the usual manner of support attachments.

The important feature of my invention herein described is the novel arrangement of
80 the car-wheels as applied to the single lower and two upper rails R and r r, respectively, constituting a single car-track on which the car runs. On the bottom of each car, near the ends of same, is placed a truck, with
85 springs, provided with only one grooved wheel adapted to the rail R, on which it runs, as shown in Figs. 1, 2, and 3, while at the top there are two spring-mounted wheels on side of car, fore and aft, opposite each other and
90 running on two rails, as shown in Figs. 1, 3, and 4. The springs at both the bottom and top of the car are so constructed and attached that the weight of the car and its load is carried by the lower wheels, the upper wheels
95 on their rails being employed simply to balance the car and not to carry its weight, and therefore the upper rails r r need not be heavy, as the lower rails R R, and the springs to upper wheels must be of sufficient tension
100 to operate conjointly with the lower truck-springs; otherwise there would be too much weight thrown on upper wheels, if their springs had not the proper tension, when the

car was loaded and the lower spring settled down under its weight. The upper springs must conform in their tension or spring and not become rigid, as the lower springs become, as shown in Figs. 1 and 3.

The car is so constructed as to be narrow at the top and bottom, giving ample seating capacity in the expanded portion, and, being in the shape of an omnibus-box, it will be seen that the upper rails *r r* are but a few feet apart because of the narrowness of the car at the top, while the lower part of the car is likewise narrow, resting on a single-trucked wheel fore and aft each. Hence it is obvious that the double car-line track herein described can be placed on a very narrow width and easily carried by a single line of posts, and short turns can be made. The upper car-wheels are made much smaller than the lower ones and are provided with inward flanges within the rails.

The electric-wire supports need not be placed over each post, as shown in Fig. 1, but at such intervals as may be required, and hence only those posts *P P* need be long on which the wire-support *W W* is placed, as not so many wire-supports are required as supporting-posts.

The electric-motor power is applied in the usual manner now employed in electric car-lines through wire *T*, (shown in Figs. 1, 3, and 4;) but the wire is placed near top of car.

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

1. In an elevated double-track electric-car-line system the combination of a single line of posts *P, P, P*, with cross-beams *B, B, B*, attached, braces *b, b, b*, supporting-girders *g, g, g*, and cross-beams, *B, B, B*, in like manner, cross-ties *t, t*, supporting a single rail *R*, for car-wheel groove, a system of vertical and longitudinal framework supporting two upper rails *r, r*, for each track, upper cross-beams *C, C, C*, attached to posts *P, P, P*, supporting electric-wire supports substantially as and for the purposes herein shown, and described.

2. In an elevated double-track electric-car-line system the combination of a single line of posts *P, P, P*, with upper and lower beams *B, B*, and *C, C*, attached, braces *b, b, b'*, *b'*, and vertical supports *v, v, v*, the latter provided with inwardly-projecting bearings *h, h, h*; curved supports *S, S, S*, attached at lower ends to girders *g, g*, and upper ends shouldered to *r, r*, supporting same; semicircular iron braces *M, M*, to prevent rails *r, r* from spreading, substantially as and for the purposes herein shown and described.

JOE H. COOLEY.

Witnesses:

E. A. RUSSELL,
H. M. FRELOTT.