

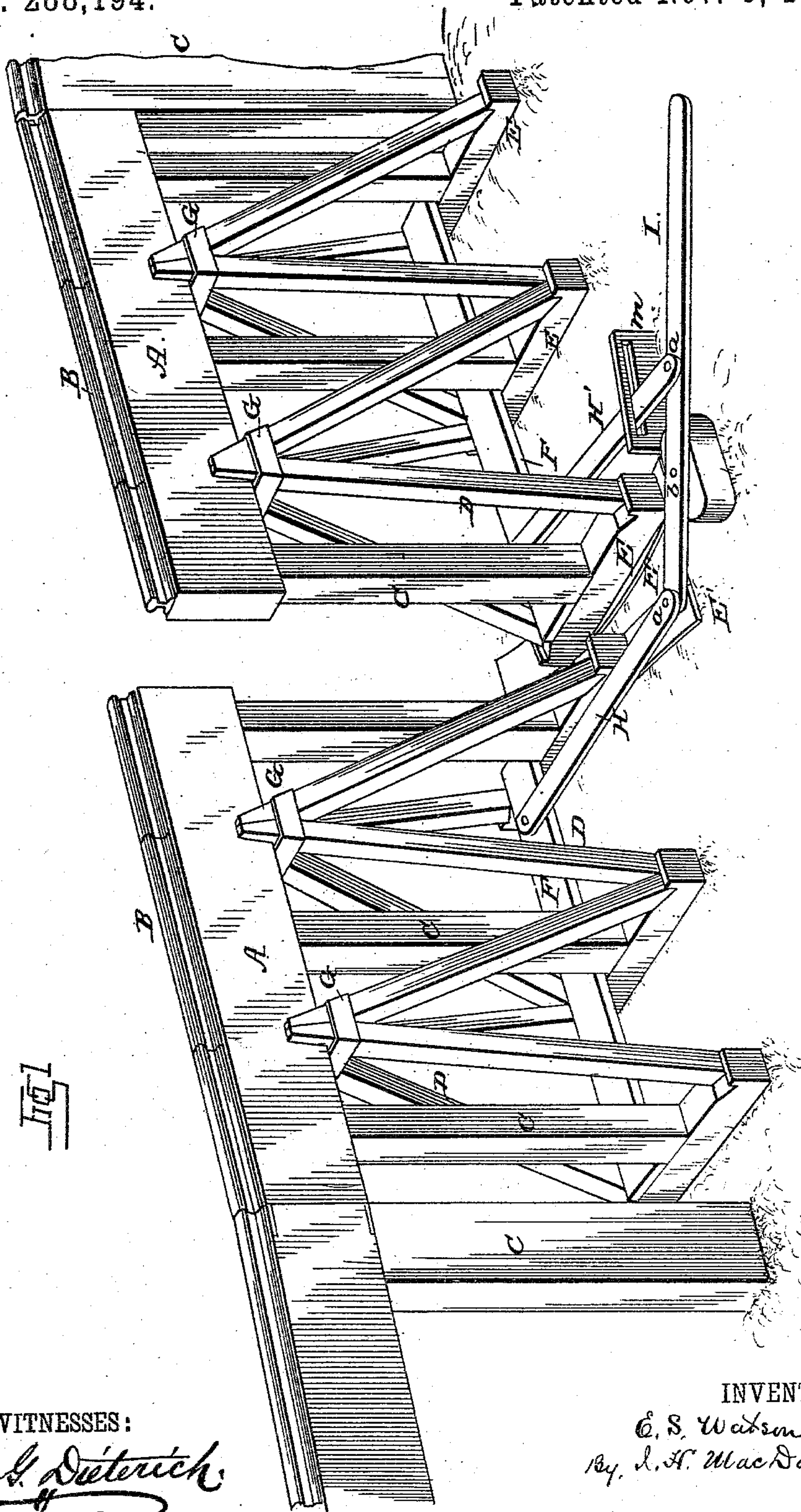
(No Model.)

2 Sheets—Sheet 1.

E. S. WATSON.
ELEVATED RAILWAY.

No. 288,194.

Patented Nov. 6, 1883.



WITNESSES:

Thos. S. Dieterich
Victor J. Evans

INVENTOR.

E. S. Watson
By L. H. MacDonald

ATTORNEY.

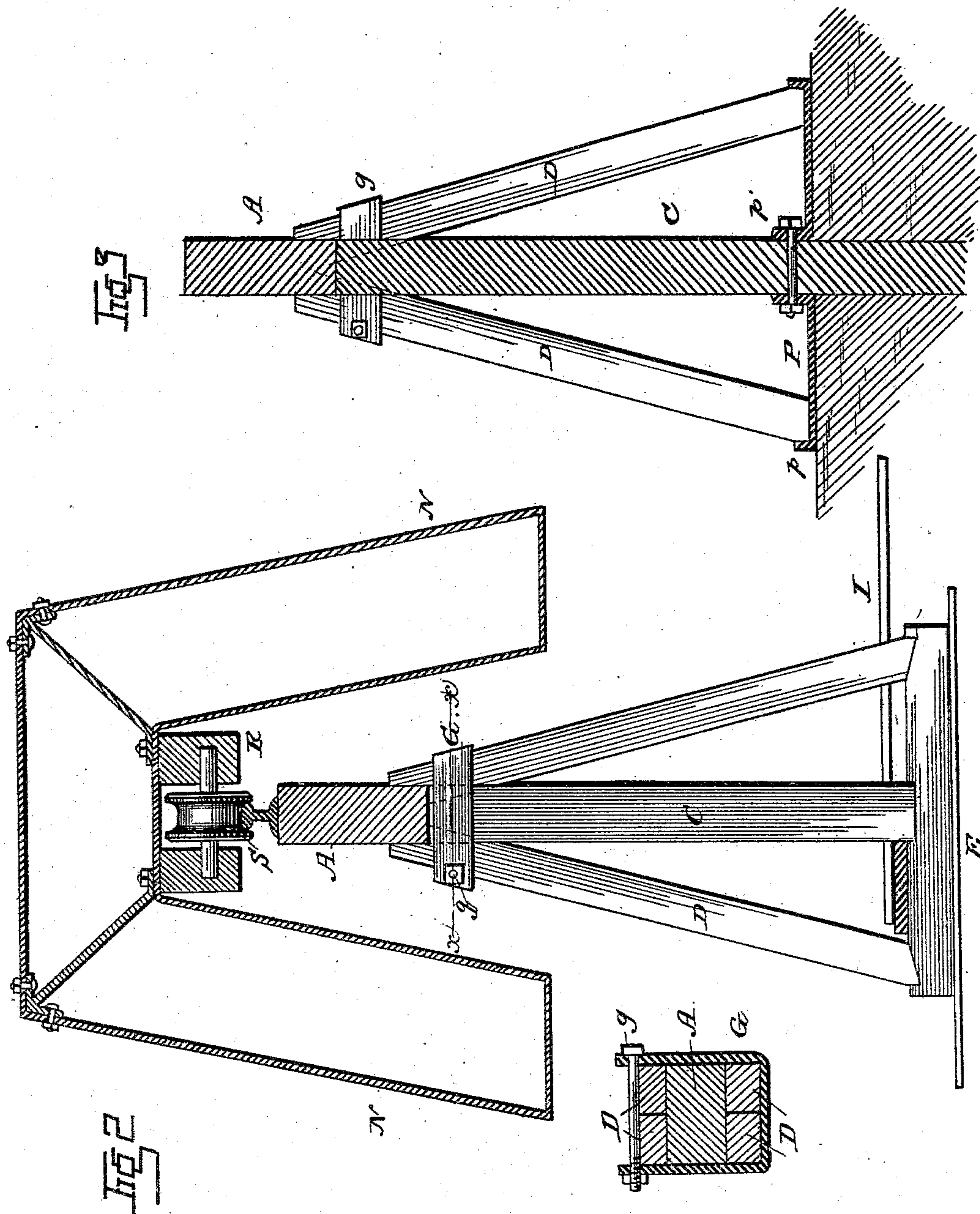
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UNITED STATES PATENT OFFICE.

ELIJAH S. WATSON, OF WATER VALLEY, MISSISSIPPI.

ELEVATED RAILWAY.

SPECIFICATION forming part of Letters Patent No. 288,194, dated November 6, 1883.

Application filed April 25, 1883. (No model.)

To all whom it may concern:

Be it known that I, ELIJAH S. WATSON, a citizen of the United States, residing at Water Valley, in the county of Yalabusha and State of Mississippi, have invented certain new and useful Improvements in Elevated Railways, of which the following is a specification, reference being had therein to the accompanying drawings.

10 My invention relates to improvements in single-rail elevated railways; and it consists in certain details of construction and arrangement of the several parts, as will be hereinafter more fully set forth in the specification and pointed out in the accompanying drawings, in which—

20 Figure 1 is a perspective view of a portion of the track and switch mechanism; Fig. 2, a section of the track and supports and a car adapted to run on a single rail; Fig. 3, a section of the track-support; and Fig. 4, a section on the line *xx*, Fig. 2.

25 The primary object of my invention is to provide a strong and cheap construction of a railway, and one that can be readily built in mountainous and swampy countries, as well as in open or level lands.

Referring more particularly to the drawings, C represents posts or supports placed in the 30 ground at suitable intervals. These supports may be placed on suitable concrete bases, or they may be driven as pile supports. The girders A are secured to the supports in any suitable way, and are further supported by 35 braces D. These braces are placed in groups of four, and are made and secured as follows: The upper ends are cut away, so as to form shoulders and afford a seat for the girder to rest upon, as indicated in Fig. 2. Two braces 40 are brought together at the top and on each side, and are held in place by a band, G, which passes around them, and secured by a bolt, *g*. The lower ends extend diagonally outward and are secured in plates P, attached to the sup- 45 ports C. These braces are placed centrally between the supports C, and prevent any lateral movement of the girder, as well as assisting to resist vertical strain. It is intended that the girders shall break joint over the sup- 50 ports C and the rails break joint over the braces, thus giving greater strength and se-

curity than if the joints of the rails and girders were broken over each other.

Although the rail here shown is a T-rail, I may use a flat rail of iron or wood, depending 55 on the length of the road and usage required, the holes being countersunk for the reception of the spikes or bolts. The portion of the track shown in Fig. 1 is used as a switch, the sections being adapted to move away from each 60 other, so as to avoid moving one section to a great distance from the other, in order that a car can be switched. The supports C and braces D in this instance are placed on sills E. The sills, where the sections come together, 65 are placed on grooved guide-plates E', which are curved sufficiently to allow the inner sills to move back and forth. The sections are secured to the supports about which they move by suitable knuckle-joints or pivots, or in any 70 other suitable way for the purpose. On each section a horizontal bar is secured to the sills, and to which rods H H' are pivoted at their inner ends, the outer ends of said rods, as shown at *a*, being pivoted to a lever, I, which 75 is centrally pivoted at *b* to a block or support, L, the pivotal points *a* being equidistant from *b*. When the sections are in their normal position, the lever I is parallel to the road, and when used for switching the lever is pushed 80 in or drawn out, which operates to draw in one section and push the other out an equal distance, thus causing the sections to move apart and afford room between them for the passage of a car to a branch track. The base- 85 supports P are turned up at their outer edges, forming flanges *p*, against which the supports or lateral braces C are placed and secured. The inner edges have flanges *p'* bolted to the posts C. The bands G are placed around the up- 90 per ends of the braces, and held in place by bolts *g*.

A road constructed as described is adapted to receive a car, N, made in two sections, one on each side of the track, as shown in Fig. 2, 95 the frame-pieces being made of one piece of angle-iron, extending outwardly from the track and secured to longitudinal beams R, the axle of the double-flanged wheel S being preferably journaled in stirrups or bearings secured to 100 the under side of said beams. Where deep ravines are met with on the line of the road I can

run my car across on a wire or cable and meet the track on the opposite side, the car being light and readily moved.

Having thus described my invention, what I claim is—

1. In a single-track elevated railway upon which a car made in two sections is adapted to run, the combination, with the girders provided with rails thereon, of a series of vertical supports and inclined braces, said braces being arranged in groups, two on each side of the girder and midway between the vertical supports, the lower ends resting upon base-pieces P, secured to the vertical supports, substantially in the manner and for the purpose described.

2. A system of supports for single-rail elevated railway, consisting of the girders A, resting upon and breaking joint over the vertical supports C, and diagonal braces D, the lower ends resting on base-pieces P, secured to said posts, the upper ends abutting against each other on each side centrally between the supports C, and having shoulders to form a

seat for the girders, and held in place by bands G, as and for the purpose described.

3. In a single-track elevated railway, as described, a switch mechanism consisting in two sections of the track pivotally secured to the track-supporting posts, the posts, and intermediate braces resting upon sills E, said sections being adapted to move apart from each other, in the manner and for the purpose described.

4. In an elevated railway, as described, and switch mechanism therefor, the combination, with the pivoted sections, supported as described, of the lever I and rods H H', pivoted as described, whereby the sections are adapted to be moved in opposite directions, substantially in the manner and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

ELIJAH S. WATSON.

Witnesses:

I. H. MACDONALD,
JOHN T. ARMS.