

(No Model.)

J. N. VALLEY.
ELEVATED RAILROAD.

No. 446,273.

Patented Feb. 10, 1891.

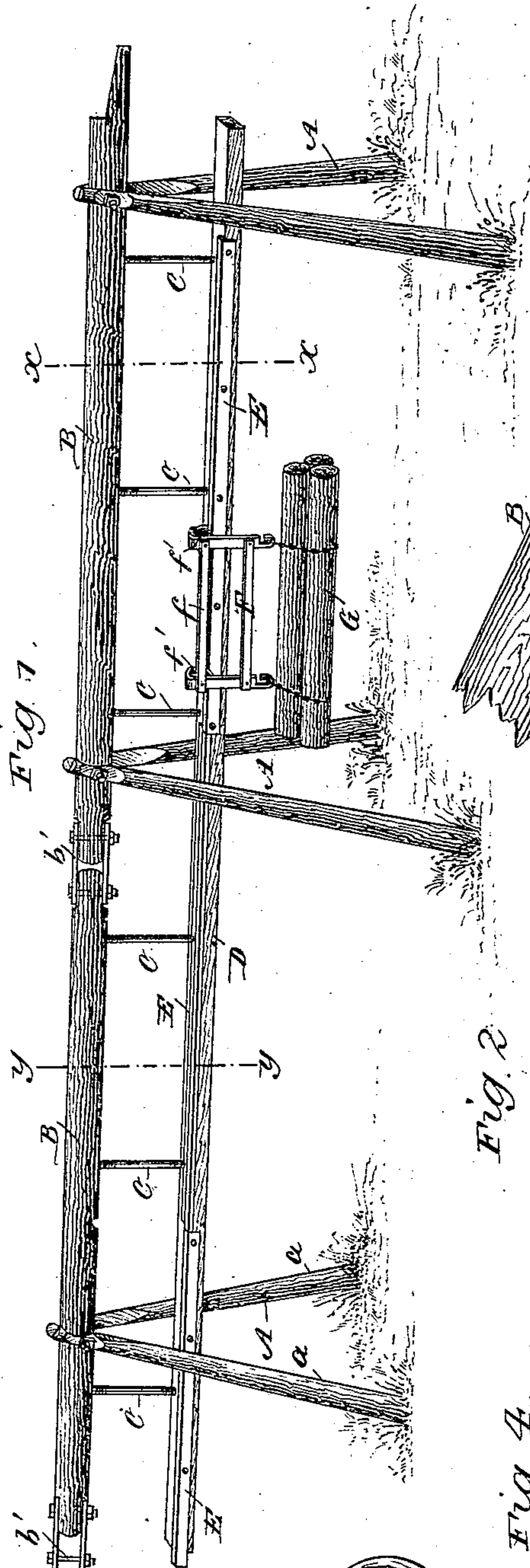


Fig. 1.

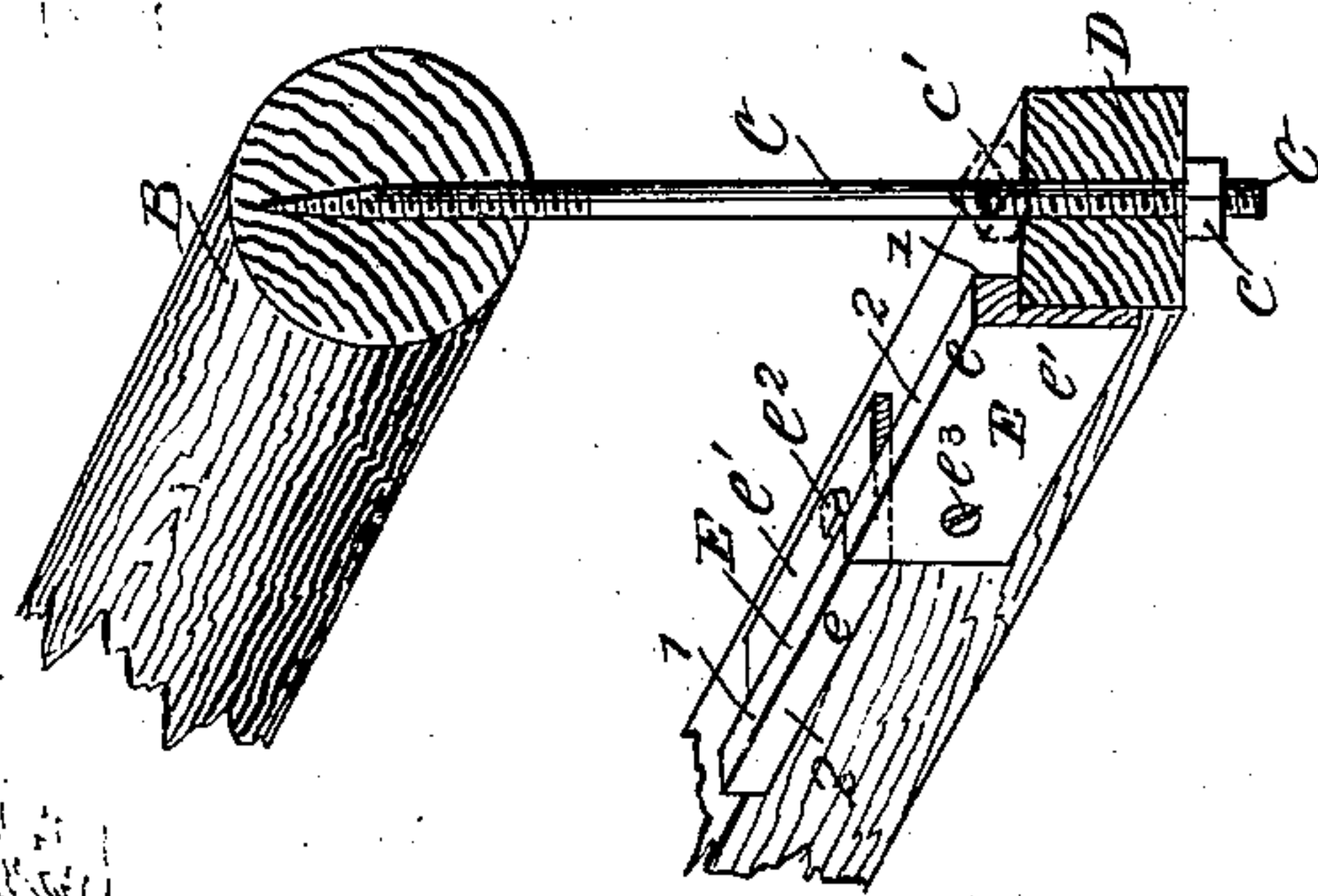


Fig. 2.

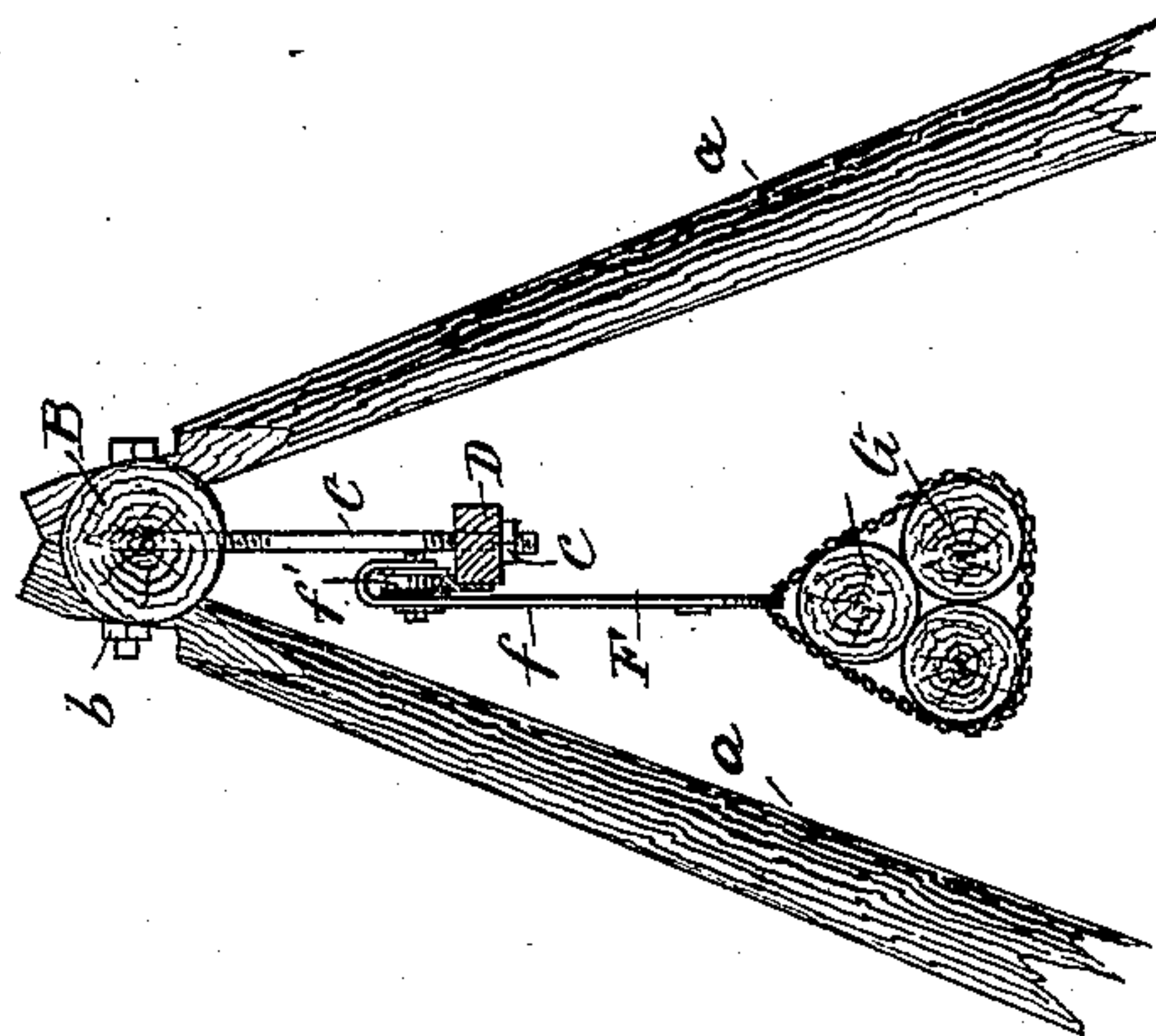


Fig. 3.

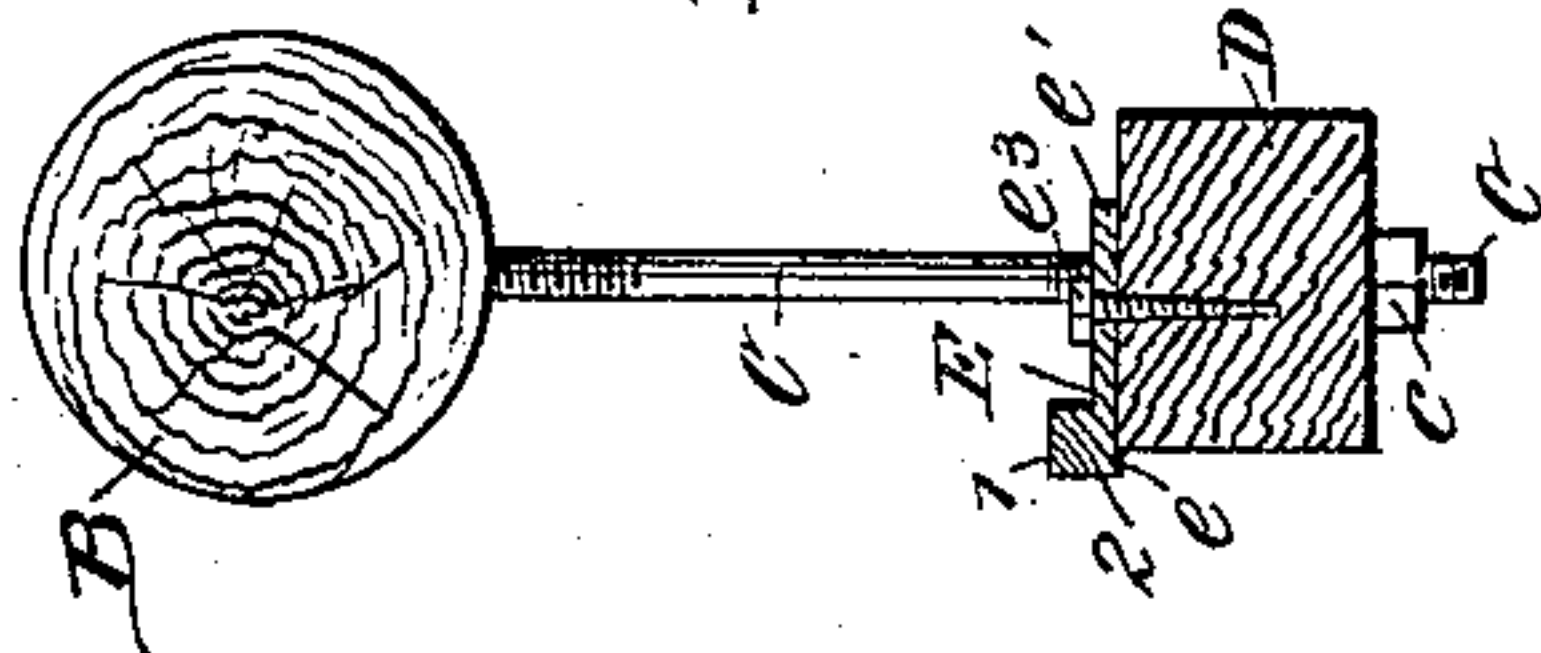


Fig. 4.

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ELEVATED RAILROAD.

SPECIFICATION forming part of Letters Patent No. 446,273, dated February 10, 1891.

Application filed August 7, 1890. Serial No. 361,308. (No model.)

To all whom it may concern:

Be it known that I, JOHN NAPOLEON VALLEY, of Jersey City, in the county of Hudson and State of New Jersey, have invented a new and Improved Elevated Railroad, of which the following is a full, clear, and exact description.

My invention relates to elevated railroads, more especially of that class adapted for use in timber-lands for getting out logs, or at mines for transporting coal, ores, or refuse, or in other situations for various purposes.

My improvements relate more particularly to the mode of adjustably suspending the longitudinal track-rail-sustaining sleeper or timber, and in a method of laying or fastening the track-rail sections on the sleeper to maintain its straightness both ways, for promoting greater ease of travel of a carriage or trolley along the track-rail, and giving increased durability to the entire structure.

The invention will first be described, and then will be particularly pointed out in claims hereinafter set forth.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters and figures of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective view of a short section of elevated railroad embodying the invention and shows a logging carriage or trolley on the track-rail. Fig. 2 is a vertical sectional end view of the railroad, taken on the line xx in Fig. 1. Fig. 3 is a perspective view, partly in vertical section, and illustrates in larger scale how the track-rail sleeper is sustained from the top stringer and how the rail-sections are applied at both the top and side faces of the sleeper; and Fig. 4 is a detail vertical sectional view taken through the stringer, sleeper, and track-rail, on the line yy in Fig. 1, but drawn to a larger scale.

I prefer to use timber struts A to sustain the longitudinal timber stringer B, into which are fastened the upper ends of pendant rods or bolt ends C, which constitute hangers which support a longitudinal timber sleeper D, onto which the sections of track-rail E are fastened. The struts are preferably made of two downwardly-diverging posts a , which are secured by a bolt b or otherwise to the

stringer into which the posts are mortised; but any other approved connection of the struts and stringer may be adopted.

Fig. 3 of the drawings most clearly illustrates that the lower ends of the hangers C are screw-threaded and carry nuts c , onto which the timber sleeper D rests. This construction allows the sleeper to be set higher or lower on any particular hanger or hangers to level the sleeper and the track-rail E, which it supports, by simply screwing the hanger-nuts c up or down, and, if preferred, without disturbing the connection of the hanger with the stringer when once they are connected with each other. I prefer to connect the hangers to the stringer by screwing the threaded upper ends of the hangers into it, which will allow the hangers to be adjusted higher or lower in the stringer to supplement the vertical adjustment of the sleeper and rail by the hanger-nuts c to level or grade the tracks; but the upper ends of the hangers may be connected to the stringer by separate bolts or in any other approved manner. If desired, lock-nuts c' may be used on the threaded hangers above the sleeper D, as indicated in dotted lines in Fig. 3 of the drawings, to prevent curling upward of the sleeper from the lower nut c .

The track-rail sections E are each made with a head portion e , and a connected flange portion e' , which is about one-half the thickness of the head part, which is preferably one inch wide on its two faces 1 2, either of which may be presented uppermost for the carriage or trolley F to run upon, accordingly as the rail-section flanges e' are fastened at the top or at the side of the sleeper. I find in practice that by fastening the flange portion of one rail-section to the top of the longitudinal sleeper by bolts e^2 or otherwise and by fastening the flange portions of the adjacent rail-sections by suitable bolts e^3 to the front side of the sleeper, or that side of it along which the trolley-frame f moves as the trolley-wheels f' travel on the rail, a natural warping of the sleeper may be overcome and any later-discovered tendency of the sleeper to warp either vertically or horizontally may be corrected and the sleeper maintained practically straight both ways to assure smooth operation of the railroad. Figs. 1 and 3 of the

drawings illustrate this method of fastening the rail-sections to the sleeper. When the sleeper is warped vertically, the rail-sections are applied at its top, and where the sleeper is warped laterally the rail-sections are applied to its front face. When the rail-sections are applied to the top of the sleeper, their heads *e* will be set out or will overhang the front edge of the sleeper a distance equaling the thickness of the flanges *e'* of the adjacent sections and the wearing-face 1 of the flat-laid rail-section will align with the head-faces 2 of the adjacent sections, while the head-face 2 of the flat-laid section will lie in the same plane as the outer face of the vertical rail-sections. It is obvious that with this method of laying the rail-sections on the longitudinal sleeper the latter may not only be straightened when originally warped, but any future tendency of the sleeper to warp either vertically or laterally may be corrected and the rail-section heads will always present a smooth regular track for the carriage or trolley to travel on. Furthermore, this interchangeable or reversible mode of laying the rail-sections on the sleeper allows presentation of either face 1 or 2 of the rail-heads for the trolley to run upon, and when one face wears down too far the other face may be set uppermost to receive the wear of the car or trolley wheels.

The drawings represent the trolley or car *F* loaded with a few logs *G* slung to it by chains; but any other approved freight or passenger carrying car or device may be hung from the trolley and will run between the diverging posts of the struts *A* as the trolley travels along the track-rail. The timber-sections of the main stringer *B* will be coupled together by links and pivot-bolts at curves of the railroad, as indicated at *b'* in the drawings, and will be halved or spliced together

where the road is straight, or nearly so, as will readily be understood.

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

1. In an elevated railroad, the combination, with supporting struts or posts and a stringer held thereto, of hangers on the stringers, provided with screw-threaded lower ends, a sleeper on the hangers, and adjustable nuts or collars on the hangers below the sleeper, substantially as described.

2. In an elevated railroad, the combination, with supporting struts or posts and a stringer held thereto, of hangers screwed into the stringer and having screw-threaded lower ends, a sleeper on the hangers, and adjustable nuts or collars on the hangers below the sleeper, substantially as described.

3. In an elevated railroad, the combination, with downwardly-diverging struts *A* and a stringer *B* thereon, of hangers *C* on the stringer, a sleeper *D* on the hangers, nuts or collars *e* on the hangers below the sleeper, and a track-rail on the sleeper, substantially as described.

4. In an elevated railroad, the combination, with a longitudinal sleeper, of track-rail sections having heads which overhang or project at one side of their flange, said rail-sections being laid both at the top and front faces of the sleeper, substantially as described, for the purposes set forth.

5. In an elevated railroad, the combination, with a longitudinal sleeper or support, of track-rail sections laid both at the top and front faces of the sleeper, substantially as set forth.

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Witnesses:

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