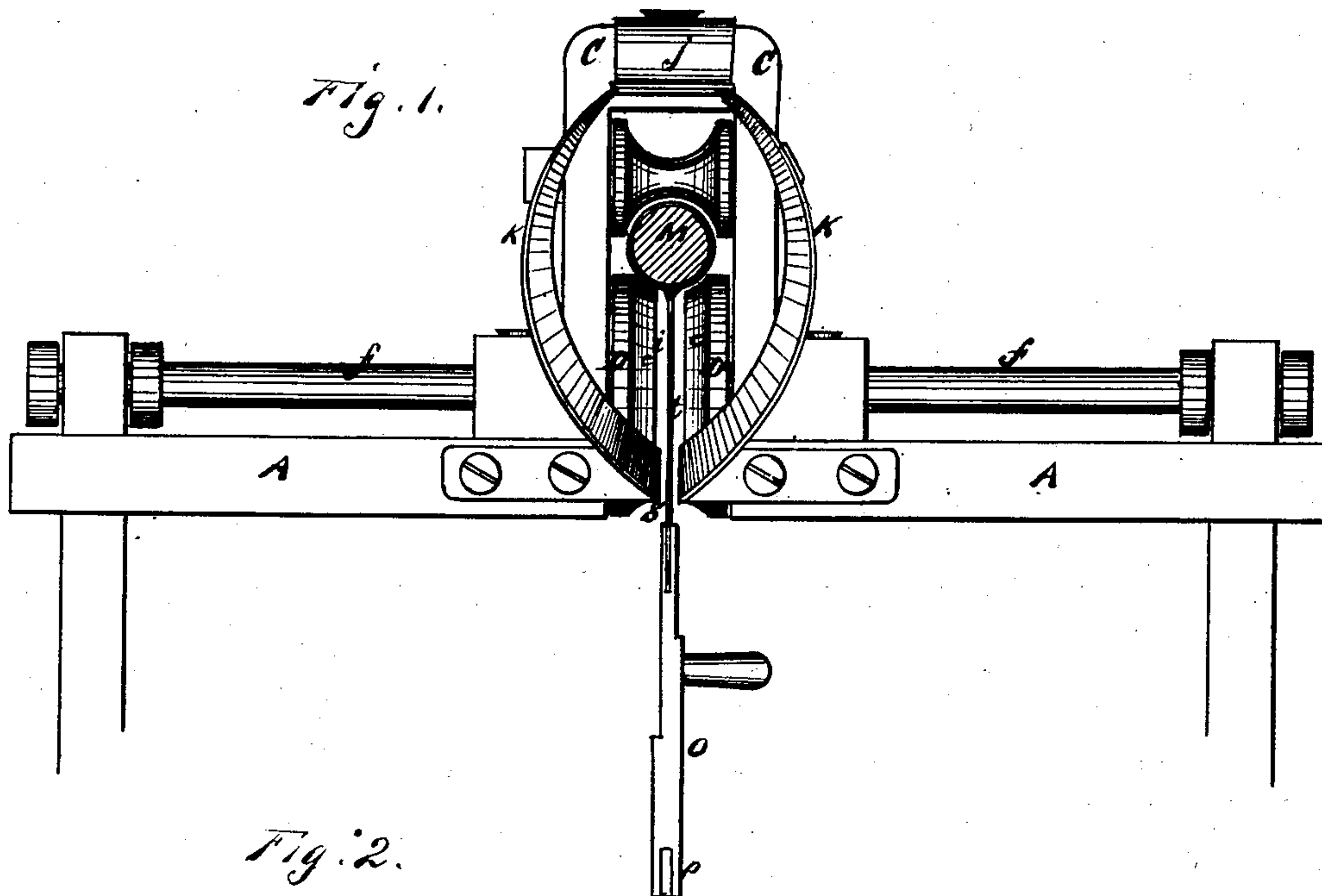


H. T. LANTIS & N. DAVIS.  
Elevated Wire-Ways.

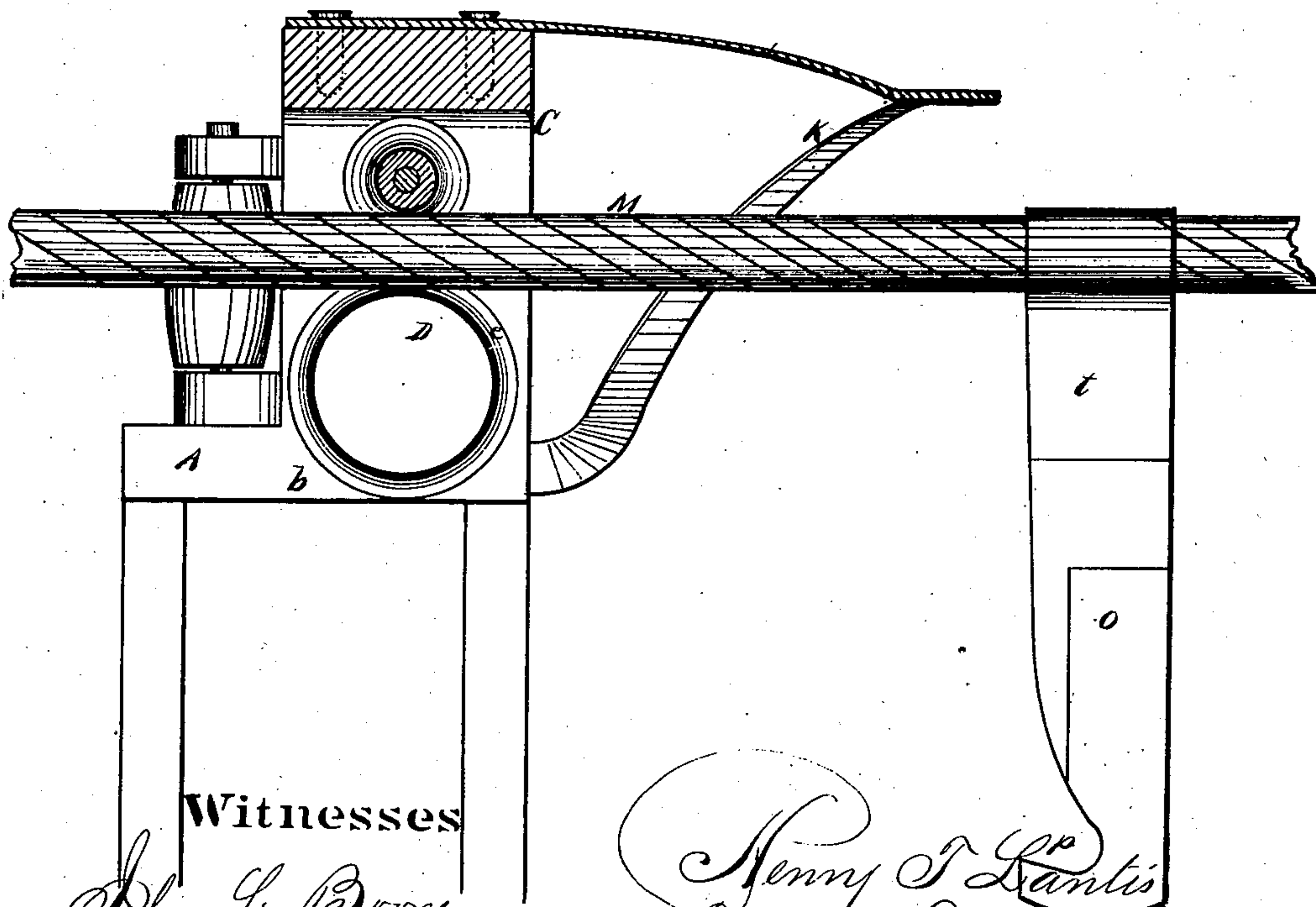
No. 142,857.

Patented September 16, 1873.

*Fig. 1.*



*Fig. 2.*



Witnesses

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# UNITED STATES PATENT OFFICE.

HENRY T. LANTIS AND NELSON DAVIS, OF ATLANTA, IDAHO TERRITORY.

## IMPROVEMENT IN ELEVATED WIRE-WAYS.

Specification forming part of Letters Patent No. 142,857, dated September 16, 1873; application filed June 26, 1873.

*To all whom it may concern:*

Be it known that we, HENRY T. LANTIS and NELSON DAVIS, of Atlanta city, Alturas county, Territory of Idaho, have invented an Improvement in Wire-Rope Ways; and we do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use our said invention or improvement without further invention or experiment.

Our invention relates to improvements in the rope or tram ways in which a traveling endless wire-rope is suspended at intervals upon pulleys or other supporting mechanism for the purpose of providing a medium for transporting freight from one place to another. Our improvements consist of a novel construction and arrangement of the pulleys which support the rope, and a peculiar pendant from the rope for supporting the weight or load to be transported, the two being so arranged that the pendant can pass between the pulleys in a vertical line from the middle of the rope, thus permitting the load to be suspended directly below the rope without the intervention of saddles or angular pendant-rods, such as are in use at the present time.

In order to more fully explain and describe our invention reference is had to the accompanying drawings forming a part of this specification, in which—

Figure 1 is a view of our machine, showing an edge view of the pulley, and a transverse section of the rope. Fig. 2 is a side sectional elevation.

Let A represent the upper cross-timber of the frame-work which supports the wire-rope at any one point. This cross-timber we divide in the middle into two parts by cutting away a transverse section at *b*, Fig. 2, of the required width, or the cross-timber may be made of two separate pieces of timber, whose ends are separated the required distance apart. In order to support these separated ends we employ an inverted U-shaped block or casting, C, the opposite legs or sides of which are secured upon the opposing ends of the timbers, so that it will form a bridge above the slot or space *b* for supporting the two ends of the timber. Proper braces will also be used

for holding the parts of the cross-timber in place. D D are two half-pulleys, each of which has a concave groove, *e*, formed on one edge, so that when the pulleys are placed with their grooved edges together, a complete pulley-groove will be formed. Two horizontal shafts, *f*, are supported in boxes upon each side of the bridge or casting C, and in the same line, one end of each passing through the base of the bridge-piece upon each side of the slot. The half-pulleys D are then fixed one upon the end of each shaft, so that they will be opposite each other, as above described, and far enough apart to leave a space or passage, *i*, between them. A metal plate, *j*, has one end secured upon the top of the bridge C, so that it will extend out at right angles to the timber A directly above the slot *b*. The outer extremity of this plate supports the upper end of an oval metal frame or loop, K, the lower end of which is formed of two parallel plates which are secured to the opposite ends of the timbers A, so as to form a passage, S, Fig. 1, which will be in line with the passage between the half-pulley D. This oval frame will thus stand at an angle to the timber A, and, being contracted at the lower end until the narrow passage is formed, it will serve as a guide for the purpose hereinafter described. M represents the rope which is used in this class of tramway. This rope will pass through the U-shaped casting or bridge, and lie in the groove formed by the two half-pulleys D D. To this rope at intervals we secure a permanent hanger or pendant, O, the lower end of which is provided with a hook, *p*, upon which the load or weight to be transported is placed. This pendant is secured by a thin plate of sheet metal, *t*, which is placed edgewise through the passage between the half-pulleys when the rope is moving. The oval frame K, with its passage S, serves to guide the plate *t* of the pendant into the passage between the half-pulleys.

By this means we provide a strong and substantial bearing for the rope, and one which will permit of the use of a pendant which hangs vertically from the rope, thus avoiding the great cost and inconvenience consequent on using the saddle and bent pendant.

By this arrangement the wire-rope way is

adapted for use in tunnels, and for turning sharp corners, a use to which the ordinary rope-way cannot be applied, on account of the peculiar manner of suspending the load therefrom.

Having thus described our invention, what we claim, and desire to secure by Letters Patent, is—

1. The divided cross-timber A, having its separated ends supported by the bridge or inverted U-shaped casting C, substantially as and for the purpose above described.

2. The half-pulleys D D, having one edge beveled or otherwise cut away, so as to provide a single pulley with a passage in the bottom of the bearing-groove, when applied in the manner and for the purpose described.

3. The oval frame K, with its lower end so contracted as to form a guiding-passage, S, in combination with the two half-pulleys D D and passage i, substantially as and for the purpose above described.

4. The rope M with its permanently-attached pendant O, constructed so as to pass between the half-pulleys D D, substantially as above described.

In witness whereof we hereunto set our hands and seals.

HENRY T. LANTIS. [L. S.]  
NELSON DAVIS. [L. S.]

Witnesses:

A. T. HUFFAKER,  
HENRY D. YOUNG.