(No Model.)

D. EVANS.

LOGGING ROADWAY.

No. 487,557. Patented Dec. 6, 1892.

Fig. 1.

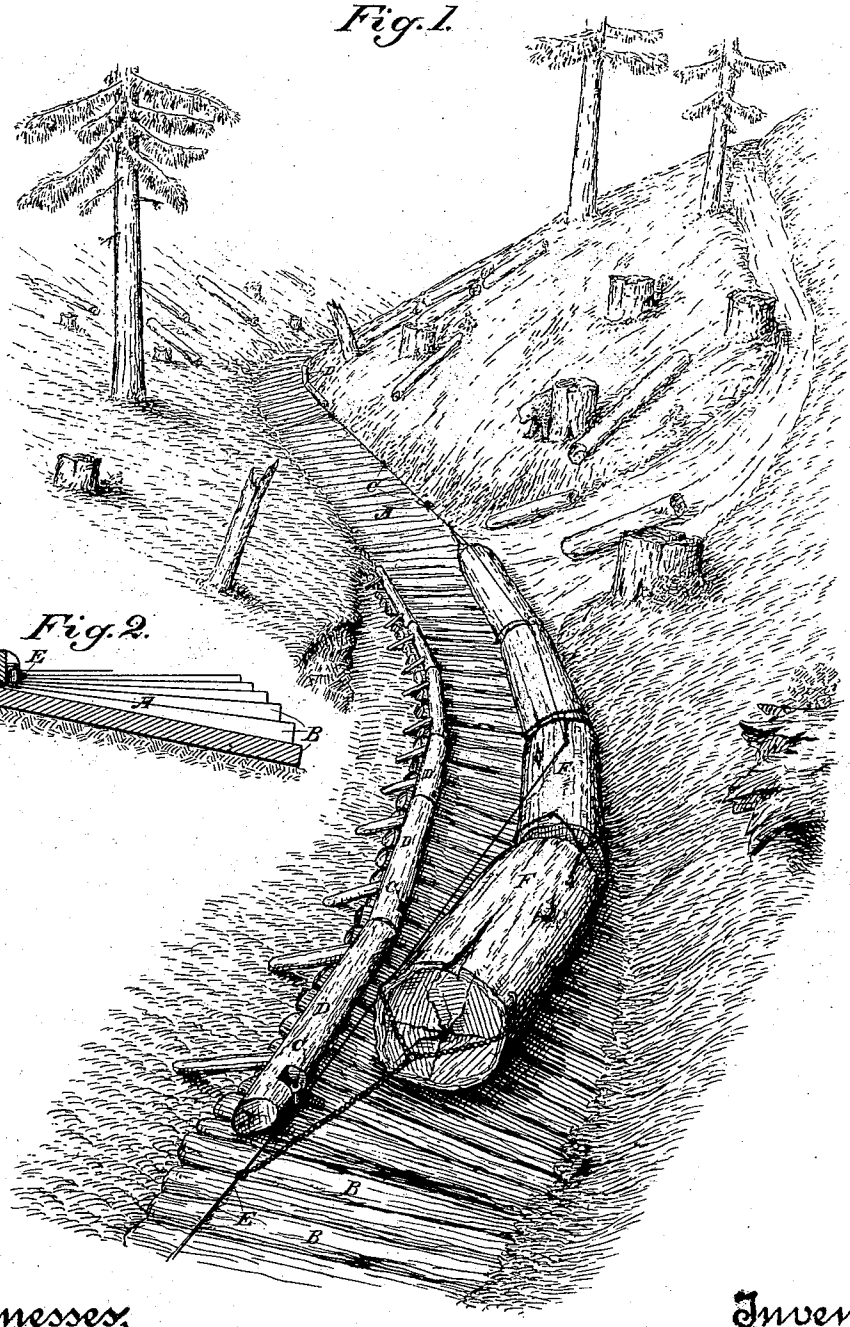

Fig. 2.

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UNITED STATES PATENT OFFICE.

DAVID EVANS, OF EUREKA, CALIFORNIA.

LOGGING-ROADWAY.

SPECIFICATION forming part of Letters Patent No. 487,557, dated December 6, 1892.

Application filed September 1, 1892. Serial No. 444,836. (No model.)

To all whom it may concern:

Be it known that I, DAVID EVANS, a citizen of the United States, residing at Eureka, Humboldt county, State of California, have invented an Improvement in Logging-Roadways; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to a roadway for effecting the transportation of logs from the woods to the mill or log-landings or to other suitable points. It contemplates the employment of a traveling cable driven by suitable winding-drums, said cable being directed through any suitable course required beside a similarly-directed foundation or road-bed upon which the logs rest and over which they are dragged by connections with the traveling cable. In the lumber regions, especially those of California, the courses over which it is practicable to lay the road are devious, having many and sharp curves.

The object of my invention is to provide such a construction of a logging-roadway employing a traveling cable as will provide for the proper and effective turning of the log or any train of logs about the curves.

To this end my invention consists in a road-bed or foundation either plane-surfaced of ordinary dirt or formed of skids, said road-bed or foundation at the curves having a lateral slope away and downwardly from the inner arc of the curve and toward the outer arc thereof, and in connection with said road-bed a moving or traveling cable properly connected with the log or with the log-train and fixed receiving and guide sheaves in the line of the inner arc of the curve in position to receive the cable after the log or log-train has passed, as I shall hereinafter fully describe, and specifically point out in the claims.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a perspective view of my logging-roadway. Fig. 2 is a cross-section.

A represents the road-bed, shown in the devious course of a mountainous defile. The road-bed may be an ordinary dirt bed, or it may be one specially prepared, as here shown, by the laying down of the skids B. In any case the roadway has a lateral slope away from the inner arc of the curve and downwardly toward the outer arc of said curve.

C are fixed sheaves set in series of any suitable number and in the line of the upper or inner arc of the curve. These are fixed in place in any suitable manner. Where skids B are employed, as here shown, said sheaves are fixed to the upper ends of said skids. The upper side of the road-bed at the curve may be guarded by logs, such as D, and said logs may be cut out and laid over the sheaves to protect them.

E is the cable. This may be a single cable drawn back and forth from each end, or it may be an endless cable, which is supposed to lead off to suitable winding-drums. The cable is conducted and travels alongside of the road-bed, following its course. When it is an endless cable, it may lead back into the woods in any suitable direction or course. Where the cable turns the curves of the road, it normally lies against the fixed sheaves C on the inside curve of the road. To this moving or traveling cable the log or train of logs is to be attached. I have here shown a train of logs F, represented as coming down the road-bed and about to turn the curve in the foreground. The log-train has connections of suitable character at both ends with the traveling cable, and the cable itself is attached to the train throughout the length of said train. Now it will be seen that though normally the traveling cable in turning the curves rests against the sheaves on the inside arc, it is necessary that it shall be relieved and drawn outwardly from said sheaves at the point where the log-train is passing, so as not to drag the log-train up against the sheaves, but to allow it to pass around the curve without contact therewith. The cable, being secured to both ends of the log-train, is drawn outwardly from its sheaves by the action of the train itself, and for this purpose the road-bed is made with the slope from the inside curve to the outside curve, whereby through gravitation as the log-train reaches this slope it tends to and will slide downwardly over the slope, keeping itself clear thereby of the sheaves and also removing the cable fully from the sheaves at this point, and the whole train thereby passes

freely and without impediment around the curve. The slope of the road at the curve dispenses with any other guides to hold the train off from the sheaves, as the train will of its own weight swing around toward the outer curve, and will thereby have a clear passage over the road-bed. The cable, being connected with both ends of the log-train, will be held away from the sheaves during the passage of the entire train, and when said train has passed the curve the cable will return to its normal position against the guide-sheaves, leading in directly from and guided by the rear end of the train.

I am aware that in cable roads for propelling street-railway cars it is customary to use a series of sheaves on the inner arc of the curve; but in such cases the grip which seizes the cable is held away from the sheaves by means of supplemental guide-bars, against which it bears, and the car itself, which may be regarded as the load which is moved by the cable, is upon fixed tracks, which hold it in place independently of any construction of the road itself, and in such cases whatever incline there may be in the road-bed at the curve is for another purpose, and, moreover, is toward the inner side of the curve and not away from it, as is the case in my logging-roadway.

In my roadway I accomplish the free passage of the log-train around the curve, notwithstanding its attachment to the moving cable, by reason of the outward slope of the road-bed, which permits the train to pass around and at the same time provides for the proper guidance and removal of the rope from the sheaves at the time the train is passing and its return to said sheaves after it has passed. The guard-logs D prevent any possible injury to the sheaves which might result from the log-train not falling or sliding away down the slope at the curves. These logs receive the impact and bearing of the train if it be pulled upwardly and protect the sheaves from its contact. By reversing the movement of the cable a sled attached to it may be drawn up the road to carry back the tools, connections, dogs, and other instruments.

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

1. A logging-roadway consisting of a road-bed having at its curves a lateral inclination or slope downwardly away from the inside to the outside arc of the curve and a series of fixed sheaves in the line of the inside arc for receiving and guiding the moving or traveling cable to which the log or log-train is attached, substantially as and for the purpose herein described.

2. A logging-roadway consisting of a road-bed having at its curves a lateral inclination or slope downwardly away from the inside to the outside arc thereof, a series of fixed guide-sheaves in the line of the inside arc of the curves, and a moving or traveling cable following the road-bed, lying normally in the guide-sheaves and connected with the log or log-train, whereby at the curves said log or train slips by gravity down the slope of the curve and removes the cable from its sheaves while passing, substantially as herein described.

3. A logging-roadway consisting of a road-bed having at its curves a lateral inclination or slope downwardly away from the inside to the outside arc thereof, a series of fixed guide-sheaves in the line of the inside arc of the curves, a moving or traveling cable following the road-bed and lying normally in the guide-sheaves, and suitable connections for attaching said cable to both ends of the log or log-train to be propelled thereby, substantially as herein described.

4. A logging-roadway consisting of a road-bed having at its curves a lateral inclination or slope downwardly away from the inside to the outside arc thereof, a series of fixed guide-sheaves in the line of the inside arc of the curves, guard-logs in said line for protecting the sheaves, and a moving or traveling cable following the road-bed and lying normally in the guide-sheaves, said cable to be connected with the log or log-train to be propelled, substantially as herein described.

5. A logging-roadway consisting of a road-bed made of skids and having a lateral slope or inclination at the curves downwardly away from the inside to the outside arc thereof, a series of fixed sheaves at the upper ends of the skids in the line of the inside arc of the curve, and a moving or traveling cable following the road-bed, guided by the sheaves around the curves and secured to the log or log-train, substantially as herein described.

In witness whereof I have hereunto set my hand.

DAVID EVANS.

Witnesses:
S. H. NOURSE,
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