

(No Model.)

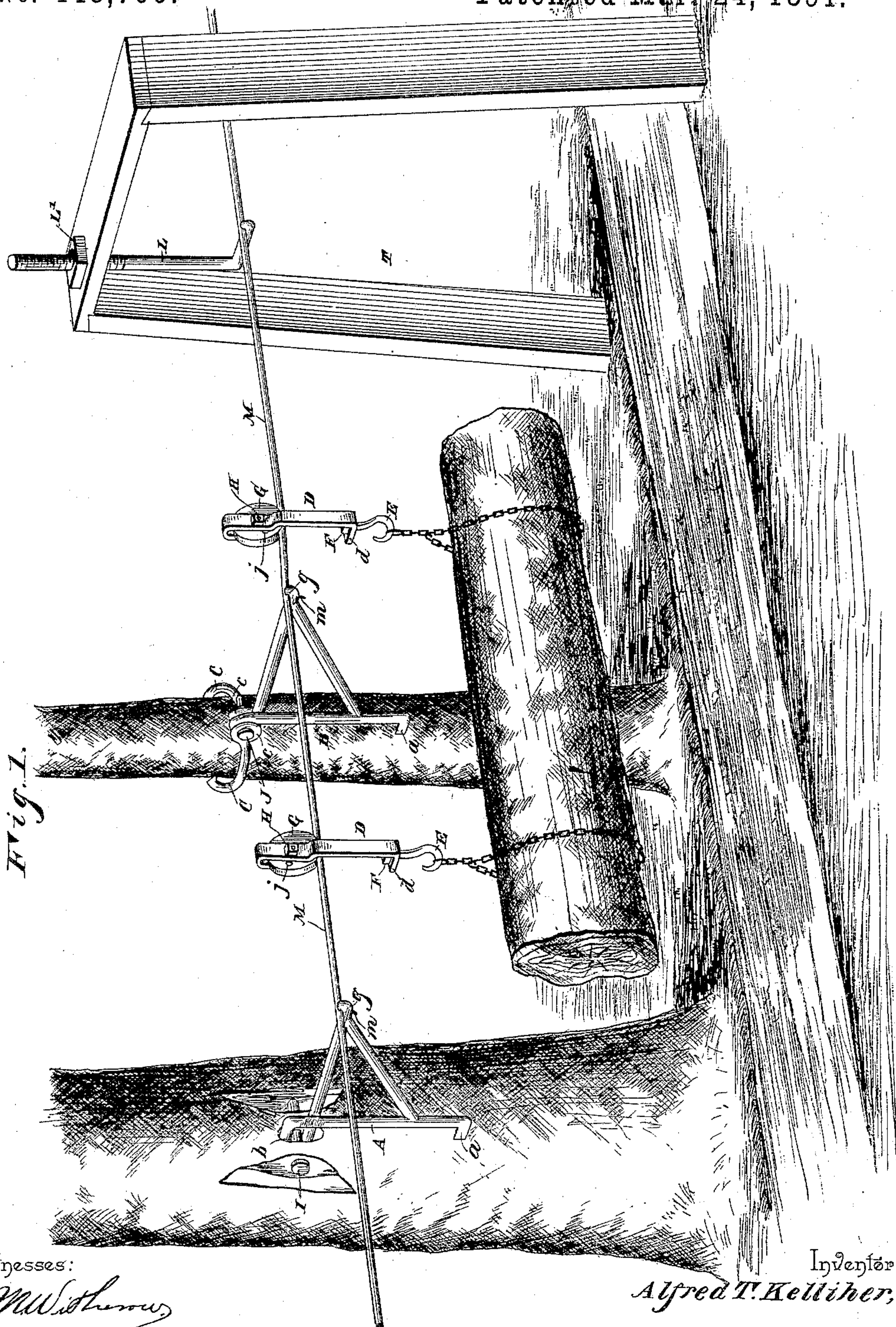
2 Sheets—Sheet 1.

A. T. KELLIHER.

LUMBER CARRIER.

No. 448,766.

Patented Mar. 24, 1891.



Witnesses:

*M. W. L. Henry*

*A. J. Collamer*

Inventor

*Alfred T. Kelliher*

By *his* Attorneys,

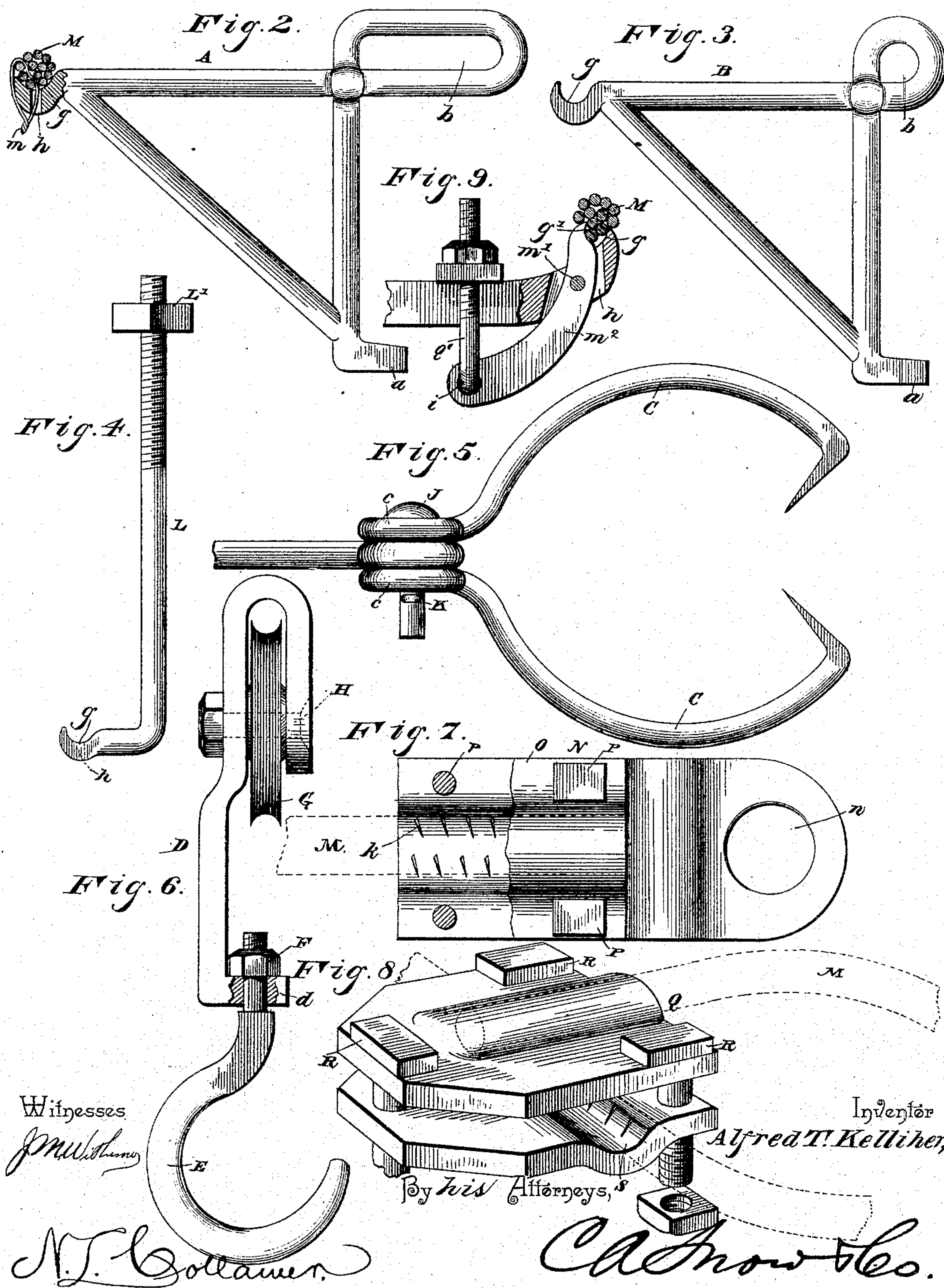
*C. A. Snow & Co.*



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# UNITED STATES PATENT OFFICE

ALFRED T. KELLIHER, OF BETHEL, MAINE.

## LUMBER-CARRIER.

SPECIFICATION forming part of Letters Patent No. 448,766, dated March 24, 1891.

Application filed July 12, 1890. Serial No. 358,566. (No model.)

*To all whom it may concern:*

Be it known that I, ALFRED T. KELLIHER, a citizen of the United States, residing at Bethel, in the county of Oxford and State of Maine, have invented a new and useful Lumber-Carrier, of which the following is a specification.

This invention relates to wood-sawing, and is more especially a saw-mill appliance or log-carrier adapted to convey logs from the points where the trees are felled to the saw-mill or to other suitable points; and the object of the invention is to provide an improved device of this character, all as hereinafter more fully described, and illustrated in the drawings, in which—

Figure 1 is a general elevation of a section of my improved lumber-carrying track, showing in perspective three different forms of hangers by which it may be attached to and supported by trees of different sizes or by a frame-work. Figs. 2, 3, and 4 are side elevations of the hangers for large trees, small trees, and frame-works, respectively. Fig. 5 is a plan view of the hanger shown in Fig. 3 with the grappling-hooks which embrace the trunk of a small tree. Fig. 6 is an end view of one of the trucks of the log-carriage. Figs. 7 and 8 are respective details of the clamps I prefer to use for tightening the track and holding it tight. Fig. 9 is a side elevation of the form of foot which I preferably use where the track is to be carried around a curve.

Referring to the said drawings, M is the track, which is composed, preferably, of wire rope, and is supported by hangers A, B, or L, as shown in Fig. 1. The end of the rope M is secured to the clamp Q, as shown in Fig. 8, passes thence around a tree, and thence through a transverse groove S in the other plate of said clamp, this plate being secured to the first plate by bolts R, thence over the several hangers A or B, secured to and projecting from the trees in a forest, or, if the trees be scarce or very small, over hangers L, supported by a frame-work T, built of rough material, as will be readily understood. To the other end of the rope is attached a clamp N, having an upper member O secured thereto by bolts P, both members having roughened grooves *k*, which bite the rope and prevent its slipping therein. A powerful tension

is then applied to the eye *n* in the clamp N, and the rope M thereby stretched taut, and the clamps Q and N are especially applicable in this connection, as will be obvious.

The hanger A consists of a stout metallic bar bent approximately in the shape shown in Fig. 2—that is to say, with a point *a* at its lower end adapted to enter the trunk of the tree and an eye *b* at its upper end also adapted to enter the trunk of the tree, a large bolt or pin I being passed through the tree and through the eye *b* to hold the hanger in the position shown in Fig. 1.

The hanger B is constructed in substantially the same manner, except that its eye *b* is smaller and does not enter the trunk of the tree. C C are grappling-hooks, having eyes *c* in their butt-ends, through which passes a bolt J, also passing through the eye *b*, and held in place by a pin K. The points of these grappling-hooks take into the tree-trunk on opposite sides, as shown in Fig. 1, and in this manner my improved lumber-carrier can be supported by small trees as well as by large trees on hangers A, as above described. The points *a* are firmly embedded in the tree-trunk, in order to prevent lateral displacement of the hangers.

The hanger L consists of a stout L-shaped bar having a threaded upper end, which passes through the head-block of the frame-work T of any suitable construction, or which may pass through an overhanging limb, if it should be necessary to support the track M in this manner, in order as much as possible to avoid diverting it from a straight line, which is undesirable, and which tracks of this character should follow as nearly as practicable. Upon the threaded end of this bar is passed a nut L', whereby the hanger L is supported, but may be adjusted to take up slack in the rope M.

The foot of each hanger is provided with a groove *g*, in which rests the track-rope M, as shown in Fig. 2. A hole *h* passes vertically through said foot in the bottom of the groove. The strands of the rope M are slightly separated, and a wire fastening *m* is passed through the hole *h* and between the strands and twisted, as shown, whereby the track-rope is prevented from slipping out of the groove *g*.

The carriage which supports the log or other



lumber which is to be conveyed comprises two similar trucks, each consisting of a metallic frame D, bent over and around a grooved sheave G, which is journaled therein on a transverse pin II, and a hook E, swiveled in the bent lower end or foot, has a head F resting on the upper face of said foot *d*. To this hook E is connected a chain passing around the log or bundle of lumber which is to be carried.

My improved lumber-carrier may be of great length and may extend for a long distance through a forest to the mill, where sawing is to be done, or to the river, the road, or the railroad-track, whence the log is to be floated or carried to a distant point. This lumber-carrier may also be employed to carry boards or other lumber from the mill to the track or river. The hangers are preferably so arranged that the rope M will be as nearly straight as possible—that is to say, will make as little diversion as may be necessary laterally, and if grades are to be ascended or descended the hangers can be so arranged that the rise and fall will be very gradual. The log or bundle of lumber is connected to the hooks E of two trucks, a horse or a team hitched to the log, which travels only a foot or two above the ground at points whereby the rope is supported as low as possible, and the team driven in a foot-path, which will soon be worn directly beneath the rope M. Where the ground is uneven or rolling, or where the track crosses streams and the like, the team will be at a considerable distance from the log, and will be connected by a long tow-line, in order that the horses may pass down through the stream, &c., while the log travels along approximately in a horizontal plane. Where the track M descends rather abruptly grades and there is danger that the log-carriage may run down the same, a pin or bolt is passed through a hole *j* in one of the sheaves, which pin strikes the frame D and prevents the rotation of the sheave. The latter will therefore slide upon the track, and the carriage will thus be braked and the team must thus draw the log downhill.

Considerable departure may be made from the specific details of the construction above described without departing from the spirit of my invention.

In Fig. 9 I have illustrated in side elevation the form of foot which I preferably use where the track is to be deflected from a straight line. In this case it will be understood that in addition to the weight of the log and of the wire rope itself there is a lateral strain brought to bear upon the hanger by reason of the tightness of the wire rope, which is greatly increased as a log approaches or recedes therefrom between the hanger in question and the hanger next adjacent. In order to resist this lateral strain and to prevent the track-rope from slipping off the foot of the hanger, I form the feet as shown in Fig. 9. In this construction the groove *g* is

made in the inner face of the foot, which is considerably bent upward, and through the hole *h* in the foot I pass the fastening, which in this case is a curved arm *m*<sup>2</sup>, (taking the place of the fastening *m* of wire, Fig. 2,) which fastening-arm is pivoted on a bolt *m*' within said hole. The lower end of this arm has an eye *i*, through which passes a clip Q', that surrounds the foot of the hanger, and when the nuts of this clip are tightened said eye is elevated, and the upper end of the fastening is thrown outwardly toward the groove *g*. Said upper end of the fastening is preferably grooved, as shown at *g*', and the two grooved ends, with their projecting tongues, take into one or more strands of the rope, as shown in Fig. 9. The track-rope M can thus be deflected without danger of its disengaging the foot of the hanger.

What I claim is—

1. In a lumber-carrier, the combination, with the carriage, of hangers carried by suitable supports and having grooves *g* in the outer ends of their feet and vertical holes through said feet, the wire track-rope M, resting in said grooves, and the fastenings inserted through said holes and engaging the strands of the track-rope, substantially as described.

2. In a lumber-carrier, the combination, with the carriage, of hangers having eyes at their upper ends, connections between said eyes and the hanger-supports, points at the lower ends of said hangers entering said supports, and a track-rope M, carried by the feet of said hangers, as and for the purpose set forth.

3. In a lumber-carrier, the combination, with the carriage, of hangers B, having eyes *b* at their upper ends and points *a* at their lower ends, grappling-hooks C, having eyes *c* in their butt-ends, a bolt J, passing through all said eyes, said hooks embedding the sides and said point, the face of suitable hanger-supports, and a track-rope M, carried by the feet of the hangers, as set forth.

4. In a lumber-carrier, the combination, with the carriage, of hangers carried by suitable supports and having grooves *g* in the inner faces of the outer ends of their feet and holes *h* through said feet, the wire track-rope M, resting in said grooves, the fastening-arms *m*<sup>2</sup>, pivoted on pins *m*' in said holes, having grooved upper ends *g*' embracing certain strands of said rope opposite the grooves in the feet and having eyes *i* in their lower ends, and the clips Q', adjustably connecting said eyes with the feet of the hangers, substantially as hereinbefore set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

ALFRED T. KELLIER.

Witnesses:

ADDISON E. HERRICK,  
ELLERY C. PARK.