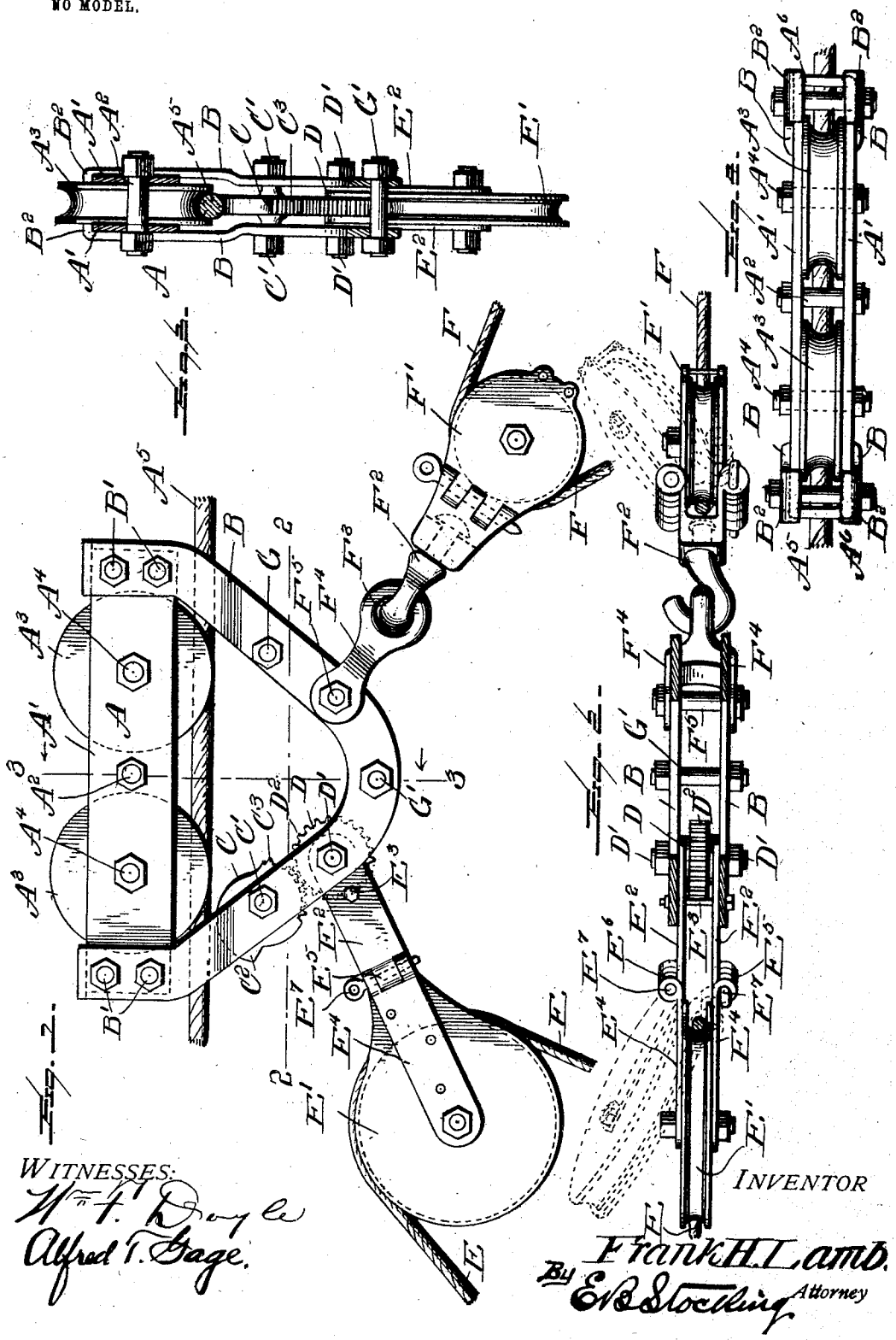
No. 719,477. PATENTED FEB. 3, 1903.

F. H. LAMB.

TRAMWAY CARRIAGE.

APPLICATION FILED MAY 21, 1902.

NO MODEL.



WITNESSES:

W. F. Doyle

Alfred T. Gage.

INVENTOR

Frank H. Lamb.

By E. B. Stocking Attorney

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

FRANK H. LAMB, OF HOQUIAM, WASHINGTON.

TRAMWAY-CARRIAGE.

SPECIFICATION forming part of Letters Patent No. 719,477, dated February 3, 1903.

Application filed May 21, 1902. Serial No. 108,403. (No model.)

To all whom it may concern:

Be it known that I, FRANK H. LAMB, a citizen of the United States, residing at Hoquiam, in the county of Chehalis, State of Washington, have invented certain new and useful Improvements in Tramway-Carriages, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to a tramway carriage or traveler, and particularly to a brake mechanism supported thereon to hold the carriage automatically in any desired position and operated by a haulback-line.

The invention has for an object to provide a novel construction of carrier for use upon any overhead support and particularly applicable to the cableway system shown in my application filed of even date herewith and comprises a brake mechanism operated through the haulback-line from the engine or motor for controlling the carriage.

A further object of the invention is to provide a locking-cam adapted to engage the support and positively geared to a pinion pivoted in the frame and connected to the sheave-support of the haulback-line, so that the oscillation of this support will positively operate the brake-cam.

A further object of the invention is to provide an improved construction of carriage or traveler whereby the weight thereof is materially reduced and the parts carried thereon rendered easily removable.

Other and further objects and advantages of the invention will be hereinafter set forth and the novel features thereof defined by the appended claims.

In the drawings, Figure 1 is a side elevation of the carriage; Fig. 2, a horizontal section upon the line 2 2 of Fig. 1; Fig. 3, a vertical section on the line 3 3 of Fig. 1, and Fig. 4 is a plan view of the carriage.

Like letters of reference refer to like parts in the several figures of the drawings.

The letter A designates a carriage or traveler of any desired construction, but preferably composed of opposite plates A′, connected together by a tie-bolt A^2, and between which the carrier-wheels A^3 are pivotally mounted upon shafts A^4, extended through the opposite plates A′. These wheels are adapted to embrace and travel upon any form of overhead support—for instance, a fixed cable-line A^5, as herein shown. One end of each of the plates A′ is bent at an angle thereto and forms a spanner between the two plates, as shown at A^6 in Fig. 4, thus spacing the plates apart in a fixed relation under all conditions.

Upon the outer face of each of the plates A′ depending hanger-straps B are secured in any desired manner—for instance, by bolting to the plates A′ by means of bolts B′—and are provided at the upper ends with an overlapping flange B^2, extending over the upper edge of the plates A′ to rest thereon and relieve the bolts B′ from the supporting strain of the hangers.

Between the straps B and centrally beneath one of the wheels A^3 and the support A^5 a brake-cam C is pivoted by means of a bolt C′ and provided upon one side of its pivot with a cam-face C^2 and upon the opposite side with gear-teeth C^3, said cam-face when used with a supporting-cable being suitably grooved to grip the lower portion thereof. Below this brake-cam a pinion D is pivotally mounted between the straps by means of a bolt D′ and provided with gear-teeth D^2, engaging the teeth of the brake C^3, so that a rotation of the pinion D positively forces the cam-face into contact with the supporting-cable to grip the same and hold the carrier in any desired position. This action is effected through the medium of a haulback-line E, which engages a sheave or pulley E′, supported by arms E^2, which are pivotally mounted upon the shaft D′, and the arms E^2 are adjustably connected with the pinion D to rotate the same by any desired means—for instance, a bolt E^3, extending between the arms E^2 and engaging the teeth of the pinion D. It will thus be seen that if the haulback-line be slackened the weight of the sheave E′, haulback-line, and its connected parts will cause the same to move down by gravity, thus rotating the pinion and throwing the brake into contact with the cable, while as soon as the sheave is again raised by pressure on the haulback-line the brake will be positively retracted to release the carriage for free movement.

While any desired form of sheave E′ may

be used for the haulback-line, a preferable construction is herein shown, wherein the sheave is mounted between the opposite straps E^4, one of which is pivoted to the arm E^2 by a hinge-joint E^5 and the other connected by a similar joint E^6, having a removable pivot E^7, which when withdrawn permits the lower portion of the block and sheave to be thrown to one side and the haulback-line easily inserted or removed therefrom. A similar construction is embodied in the sheave or pulley F′, which carries the hauling-line F for moving the carriage. This pulley F′ is provided with a swivel connection F^2, engaging a ring or eye F^3, formed in a lug F^4, supported from the plates B by means of a bolt F^5. Additional spanner-bolts G and G′ extend between the plates B for the purpose of bracing the same, and it will be noted that the holes for the bolts F^5 and G are similar in position to those for the bolts D′ and C′, respectively, so that, if desired, the position of the parts can be reversed and the pinion D and the brake-cam C located upon the right instead of the left of the carriage or duplicated upon both sides of the carriage.

The operation of the automatic brake will be apparent from the foregoing description, from which it will be seen that it enables the carrier or traveler to be stopped and held at any point upon the cableway without displacement or the use of hooks or snubbing-lines, so that the carriage may be firmly held while the load is being engaged or disengaged and backward movement prevented until the haul-back line is tightened. This brake is operated by the gravity of the haulback-line, so that when said line is slackened the brake is applied and when tightened the brake is released, while the construction of the eccentric, with the meshing gear-teeth, forms a positive connection to apply and withdraw the brake from gripping contact with the tramway or standing cable. Furthermore, the sectional construction of the carriage reduces the weight thereof, so that it can be handled by one man, and also permits of being quickly taken apart or assembled for removal or placing upon the cableway, and any of the parts can consequently be replaced readily in case of breakage or the position of the brake reversed, as found convenient or desirable in different classes of work.

It will be obvious that changes may be made in the details of construction and configuration without departing from the spirit of the invention as defined by the appended claims.

Having described my invention and set forth its merits, what I claim, and desire to secure by Letters Patent, is—

1. In an overhead carriage, a traveler-wheel, a hanger supported thereby, a haulback-sheave pivotally mounted on said hanger, and a brake connection operated by said haulback-sheave to engage the support for said wheel; substantially as specified.

2. In an overhead carriage, a traveler-wheel, a hanger supported thereby, a haulback-sheave pivotally mounted on said hanger, a pivoted brake-cam having gear-teeth thereon, and a gear engaging said teeth and operated by the oscillation of said sheave; substantially as specified.

3. In an overhead carriage, a traveler-wheel, a hanger supported thereby, a haulback-sheave pivotally mounted on said hanger, a pivoted brake-cam having gear-teeth thereon, a gear engaging said teeth and operated by the oscillation of said sheave, and a hauling-block upon the opposite side of said hanger to said sheave; substantially as specified.

4. In an overhead carriage, a traveler-wheel, a depending hanger supported from said wheel, a brake-cam pivoted in said hanger beneath said wheel and provided upon one side of its pivot with segmental gear-teeth, a pinion mounted in said hanger to engage said teeth, a sheave for a haulback-line, and arms for supporting said sheave connected to said pinion, substantially as specified.

5. In an overhead carriage, a traveler-wheel, a depending hanger supported from said wheel, a brake-cam pivoted in said hanger beneath said wheel and provided upon one side of its pivot with segmental gear-teeth, a pinion mounted in said hanger to engage said teeth, a sheave for a haulback-line, arms for supporting said sheave connected to said pinion, and a connecting-bolt extending between said arms so as to adjustably engage with teeth of said pinion; substantially as specified.

6. An overhead carriage, comprising opposite plates, traveler-wheels pivotally mounted between the same, depending straps bolted to said plates and overlapping the upper ends thereof, a brake-cam pivoted between said straps, an operating-pinion pivoted between said straps beneath said cam, a sheave pivotally mounted upon the shaft of said pinion by arms, and a block for a hauling-line mounted upon the opposite side from said pinion; substantially as specified.

7. An overhead carriage, comprising opposite plates, traveler-wheels pivotally mounted between the same, depending straps bolted to said plates and overlapping the upper ends thereof, a brake-cam pivoted between said straps, an operating-pinion pivoted between said straps beneath said cam, a sheave pivotally mounted upon the shaft of said pinion by arms, a block for a hauling-line mounted upon the opposite side from said pinion, a hinge connection between said sheave and arms, and a removable pin to permit a lateral swinging of said sheave; substantially as specified.

8. In an overhead carriage, a traveler-wheel, a depending strap supported therefrom, a brake-cam having upon one side of its pivot a cam-face and upon the opposite side

a segmental rack, a pinion pivoted in said strap and engaging said rack, an arm connected to said pinion and extending radially therefrom, and a sheave carried by the outer end of said arm whereby the oscillation of the arm rotates the pinion and cam; substantially as specified.

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

FRANK H. LAMB.

Witnesses:
M. LENFESTY,
D. R. JONES.