(No Model.)

2 Sheets—Sheet 1.

E. A. HOVEY.

MEANS FOR MOUNTING PULLEYS IN CURVES OF CABLES RAILWAYS.

No. 491,559. Patented Feb. 14, 1893.

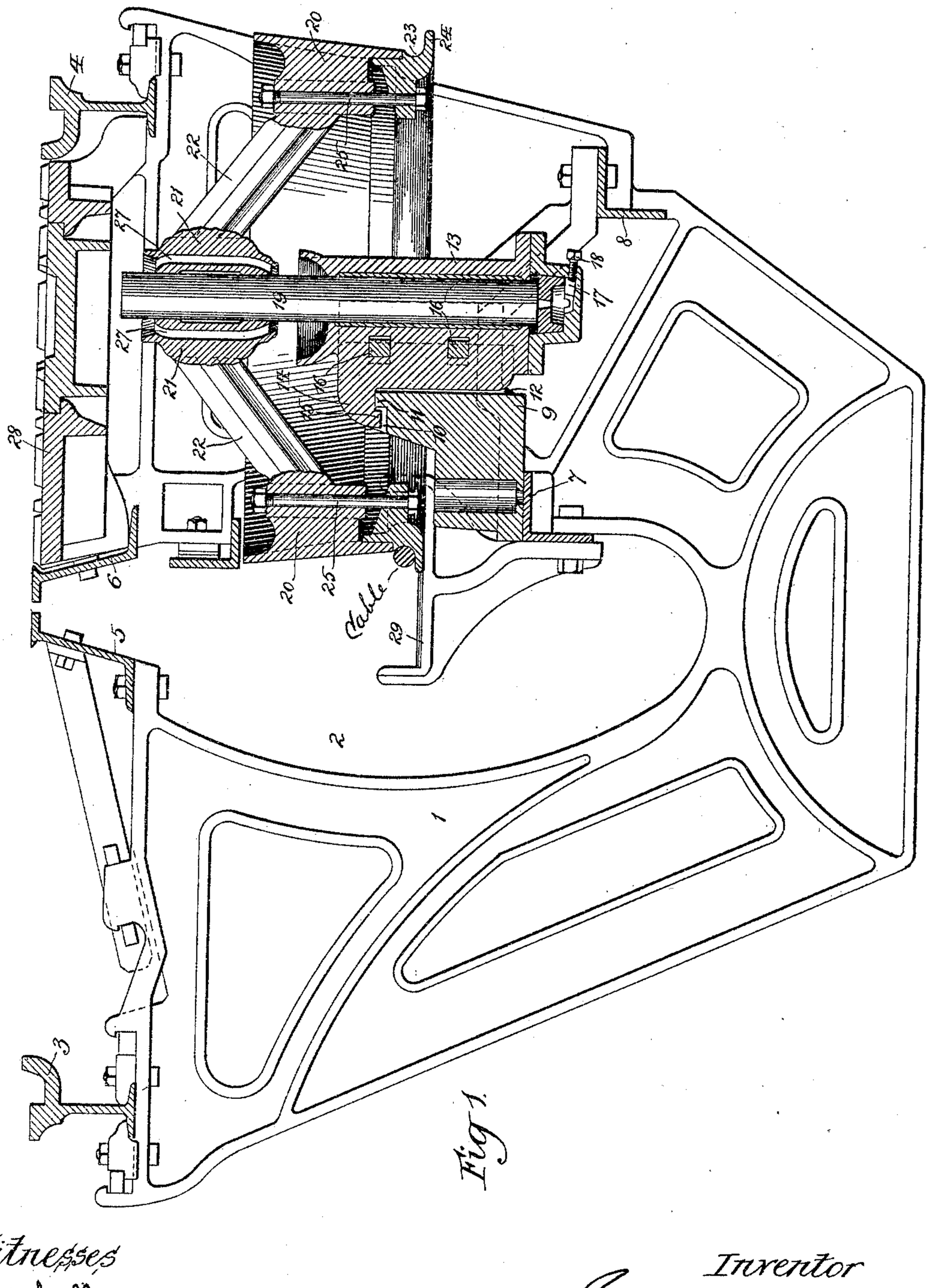

Fig 1.

Witnesses
Wm. F. Fleming
Wm. M. Rheem.

Inventor
Elmer A. Hovey
by Bond, Adams & Pickard
Attorneys.

(No Model.)

2 Sheets—Sheet 2.

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Fig 2.

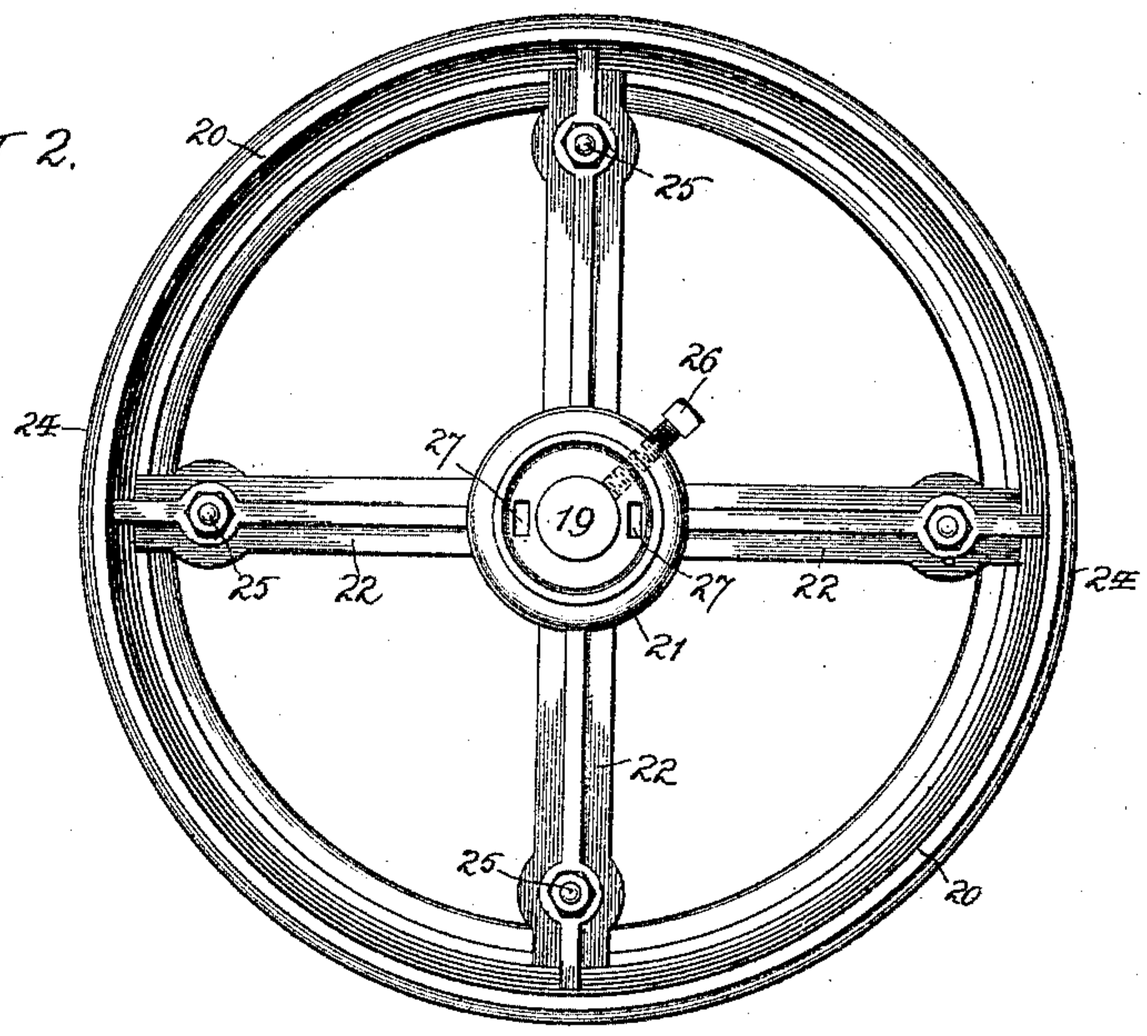
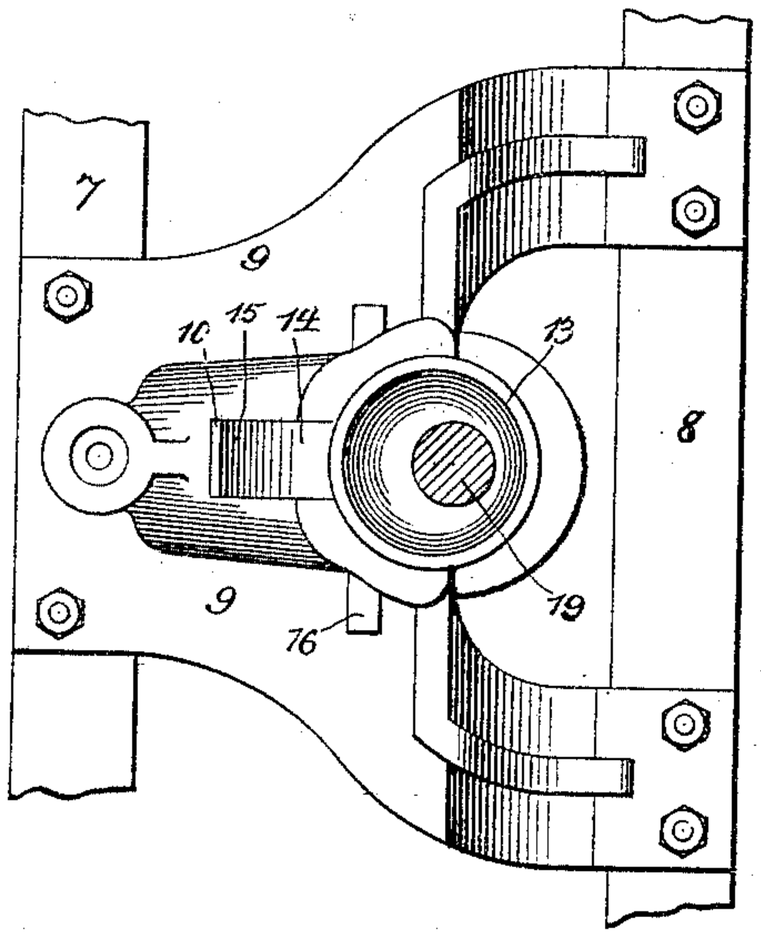


Fig 3.



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Attorneys.

UNITED STATES PATENT OFFICE.

ELMER A. HOVEY, OF CHICAGO, ILLINOIS.

MEANS FOR MOUNTING PULLEYS IN CURVES OF CABLE RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 491,559, dated February 14, 1893.

Application filed June 16, 1892. Serial No. 436,990. (No model.)

To all whom it may concern:

Be it known that I, ELMER A. HOVEY, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Means for Mounting Pulleys in Curves of Cable Railways, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of one of the castings which support the various parts, the pulley and the journal box being in section; Fig. 2 is a top or plan view of the pulley; and Fig. 3 is a top or plan view of the journal box and bracket which supports it.

My invention relates to curves for cable railways, and more particularly to pulleys used on such curves, and means of journaling and mounting such pulleys.

The objects of my invention are to provide a new and improved means of mounting the pulleys in position whereby access may readily be had to them and they may be readily removed when desired. I accomplish these objects as hereinafter specified, and as illustrated in the drawings.

That which I regard as new will be pointed out in the claims.

In constructing cable railways it is customary to mount the rails of the track upon castings which are set into the street, and are of such shape that they will serve as a support to the rails and also provide a conduit for the cable.

My present invention is designed to be used with a cable system in which use is made of castings such as above described, but it may be used with other systems.

In the drawings,—1 indicates a casting such as above described, which is formed with a recess 2 at the center, to receive the cable; mounted at each side of the upper portion of the casting 1 are the usual rails 3, 4, as shown in Fig. 1.

5 and 6 indicate plates which are mounted upon the upper side of the casting 1 at the center, over the recess 2, and thereby forming the usual slot for the passage of the grip.

It will be understood that the castings 1 are set at short distances apart, the plates 5 and 6 extending continuously to the successive castings 1.

7 and 8 indicate angle irons which extend horizontally between two adjacent castings 1 at one side of the recess 2, as shown in Fig. 1, and slightly below the center of the casting; the height at which the irons 7 and 8 are placed, however, will depend upon the height at which it is desired to carry the pulley.

9 indicates a triangular bracket which is provided with two arms, as best shown in Figs. 1 and 3. The bracket 9 rests upon, and is secured to the angle irons 7 and 8, as shown in Figs. 1 and 3; I do not, however, wish to limit myself to mounting the bracket 9 upon the angle irons, as it may be mounted in any other suitable manner. The bracket 9 is provided on its upper side with a recess 10, as best shown in Fig. 1, and a lug or web 11 opposite said recess, also shown in Fig. 1. The object of the recess and web will be hereinafter set forth. The bracket 9 is also provided with a concave recess 12, as indicated by dotted lines in Fig. 1.

13 indicates a journal box which is provided at one side with a tongue 14, from the end of which depends a lug 15 adapted to fit into the recess 10, as shown in Fig. 1, thereby forming a hook. The web 11 prevents the withdrawal of the lug 15 from the recess 10 without lifting the box 13. The shape of the box is such that it will fit into the concavity in the bracket 9, as shown in Fig. 3. Suitable holes are provided in the box 13 and bracket 9 for the insertion of keys 16, which serve to lock the box to the bracket 9. The upper end of the box 13 is enlarged and recessed to form a cup which serves to hold oil for lubricating the journal. The lower end of the box 13 is provided with an outlet 17 in which is a screw plug 18, as shown in Fig. 1.

19 indicates a shaft which is mounted in a vertical position in the box 13, and projects above the upper portion of the box, as shown in Fig. 1.

20 indicates a cable pulley.

21 indicates the hub of the pulley 20, which is out of the plane of the vertical center of the pulley, the spokes 22 being inclined, as shown in Fig. 1. The pulley 20 is provided with a

detachable rim at its lower edge, which rim is provided with a flange 24, as shown in Fig. 1. The rim 23, is secured to the body of the pulley by bolts 25, or in any other suitable manner. This rim serves to receive and carry the cable around the curve, the flange 24 holding the cable upon the rim. Owing to the inclination of the spokes 22, when the hub 21 is mounted upon the shaft 19 the rim 23 of the pulley will be considerably below the hub. The hub is mounted upon the shaft 19 above the box in such position that the rim 23 of the pulley will lie below the upper portion of the box, and preferably about on a line with the vertical center thereof, but it may be slightly lower if desired, by which arrangement a steady bearing is secured, and the necessity of a second box for the upper end of the shaft 19 is avoided. By this construction also the pulley may be much more readily removed than by the use of any construction heretofore known. In order to hold the pulley in its proper position upon the shaft 19 it is keyed thereto by a screw 26, or other equivalent device, as shown in Fig. 2.

27 indicates channels which extend vertically through the hub 21, and are adapted to conduct oil from the upper side of the hub 21 to the cup at the upper side of the box 13, as best shown in Fig. 1.

28 indicates a cover which is fitted into the roadway between the track 4 and the slot, as shown in Fig. 1. To remove the pulley 20 the cover 28 is removed, and the shaft 19 is withdrawn from the hub 21, the pulley is then tilted up on edge and withdrawn through the hole in the road-way, usually covered by the cover 28.

29 indicates a plate which is secured to a casting 1, and projects into the recess 2 nearly on a level with the flange 24, as shown in Fig. 1.

The plate 29 serves to support the cable if it should become displaced from the rim 23, and to cause it to return to the rim.

That which I claim as my invention and desire to secure by Letters Patent, is,—

1. The combination of a bracket 9 having its upper side provided with a recess 10, a journal box 13 having a lateral tongue 14 at its upper end portion which is provided with a lug 15 engaging the recess of the bracket, a shaft 19 located in the journal box, and a pulley 20 on the shaft, substantially as described.

2. The combination of a bracket 9 having a concave recess 12 and provided at its upper side with a recess 10 and a lug or web 11, a journal box 13 fitting the concave recess and having a laterally projecting tongue 14 at its upper end portion which is provided with a lug 15 engaging the recess and the lug or web of the bracket, a shaft 19 arranged in the journal box, and a pulley 20 mounted on the shaft, substantially as described.

3. The combination of a bracket 9 having its upper side provided with a recess 10, a journal box 13 having a laterally projecting tongue 14 at its upper end portion which is provided with a lug 15 engaging the recess of the bracket, a key 16 extending through the bracket and journal box for detachably locking the latter in place, a shaft 19 arranged in the journal box, and a pulley 20 mounted on the shaft, substantially as described.

4. The combination, with a supporting bracket, of a journal box carried by the bracket and having a cup-shaped recess at its upper end, a pulley shaft journaled in and projecting above the journal box, and a pulley having its hub secured to the pulley shaft above the journal box and provided with oil passages which extend from the upper to the lower side of the hub for conducting oil into the cup shaped recess of the journal box for lubricating the latter, substantially as described.

5. In a cable railway having a suitable opening in its roadway, a journal box 13 supported in the cable conduit, an upright pulley shaft 19 solely supported by the journal box at its lower end and removable vertically therefrom, and a cable pulley 20 detachably mounted on the upper end of the pulley shaft at a point above the journal box, said pulley shaft being removable from the pulley so that the latter can subsequently be tilted and removed through the opening in the roadway, substantially as described.

ELMER A. HOVEY.

Witnesses:
A. H. ADAMS,
JOHN L. JACKSON.