

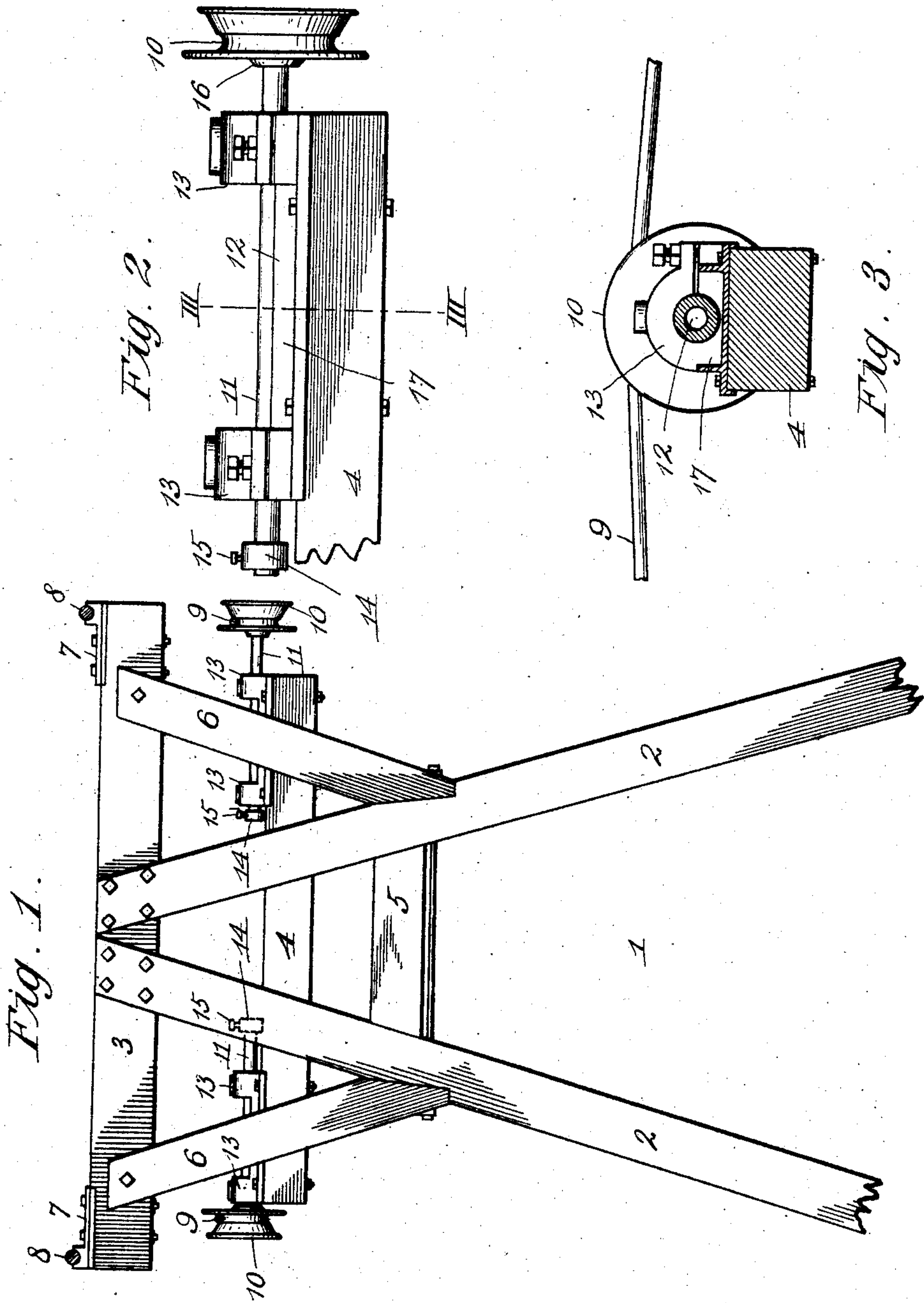
No. 883,529.

PATENTED MAR. 31, 1908.

H. G. FERRIS.

SELF ADJUSTING SHEAVE FOR CABLE TRAMWAYS.

APPLICATION FILED JULY 26, 1907.



Witnesses:
R. Hamilton.
M. Cox.

Inventor,
Hiram G. Ferris
By *F. G. Fischer* atty.

UNITED STATES PATENT OFFICE.

HIRAM G. FERRIS, OF LEAVENWORTH, KANSAS.

SELF-ADJUSTING SHEAVE FOR CABLE-TRAMWAYS.

No. 883,529.

Specification of Letters Patent.

Patented March 31, 1908.

Application filed July 26, 1907. Serial No. 385,609.

To all whom it may concern:

Be it known that I, HIRAM G. FERRIS, a citizen of the United States, residing at Leavenworth, in the county of Leavenworth and State of Kansas, have invented certain new and useful Improvements in Self-Adjusting Sheaves for Cable-Tramways, of which the following is a specification.

My invention relates to a self-adjusting sheave for cable tramways; and my principal object is to prevent the pulling-cable, which draws the buckets over the line, from leaving the sheaves upon which it travels.

One of the most annoying experiences encountered in the operation of cable tramways is caused by the pulling-cable leaving the sheaves which is due to the lateral swaying of the buckets as they are drawn along by the cable. This swaying is greatest when the buckets are dumped near the towers carrying the sheaves, and when passing over said towers, and frequently results in dislodging the cable from the sheave nearest the bucket by reason of the fact that said sheave, as usually mounted, cannot move laterally with the cable.

My invention permits the sheaves to accommodate themselves to the cable with the result that it is almost impossible for the latter to leave the former. Lateral friction and consequent wear on the sheaves and the cable are also practically overcome, so that the life of each is prolonged and less power is required to operate the cable than heretofore.

Referring now to the accompanying drawing which illustrates the invention: Figure 1 represents a broken elevation of a tower provided with my improvements. Fig. 2 is an enlarged elevation of the invention. Fig. 3 is a cross section on line III—III of Fig. 2.

Like reference numerals designate similar parts throughout the several views.

1 designates a tower consisting of supporting beams 2, transverse beams 3 4 5, and braces 6.

7 designates a pair of saddles for supporting the track ropes 8, over which the bucket carrying sheaves travel.

9 designates the pulling-cables which run upon sheaves 10, each of which is mounted upon a shaft 11, slidably and rotatively mounted in a journal box 12. Said box has two bearings 13 located some distance apart so that when the sheave and shaft reach the

end of their outward movement, as shown in Fig. 1, the sheave-end of the shaft will not be permitted to sag beneath the weight of the pulling-cable 9. The outward movement of shaft 11 is limited by a collar 14 held thereon by a set-screw 15. The inward movement of the shaft is limited by a hub 16 on the inner side of sheave 10. Journal-box 12 is provided with a reservoir 17 for the reception of oil whereby the shaft and bearings 13 are lubricated.

In practice when a bucket is drawn along by one of the pulling-cables it will sway laterally and cause said pulling-cable to sway therewith, which swaying movement is increased when the bucket is dumped, or passes over a tower. As the sheave 10, however, is free to sway with the pulling-cable, the latter will have little or no tendency to leave the former.

Having thus described my invention, what I claim and desire to secure by Letters-Patent is:

1. In a cable tramway, the combination with a pulling-cable, of a sheave upon which the cable travels, and a shaft rotatably and slidably mounted upon which said sheave is mounted.

2. In a cable tramway, the combination with a pulling-cable, of a sheave upon which the cable travels, a journal-box, and a shaft rotatably and slidably mounted in said box, the sheave being fixed upon one end of said shaft.

3. In a cable tramway, the combination with a pulling-cable, of a sheave upon which the cable travels, a journal box, a shaft rotatably and slidably mounted in said box, the sheave being fixed upon one end of said shaft, and means for limiting the sliding movement of the shaft.

4. In a cable tramway, the combination with a pulling-cable, of a sheave upon which the cable travels, a journal-box provided with an oil cellar, and a shaft slidably and rotatably mounted in said box and carrying the sheave at one end thereof, substantially as described.

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

HIRAM G. FERRIS.

Witnesses:

H. M. HUGHES,
J. H. WENDORFF.