

(No Model.)

3 Sheets—Sheet 1.

J. WALKER.

DRIVING MECHANISM FOR CABLE RAILWAYS.

No. 460,794.

Patented Oct. 6, 1891.

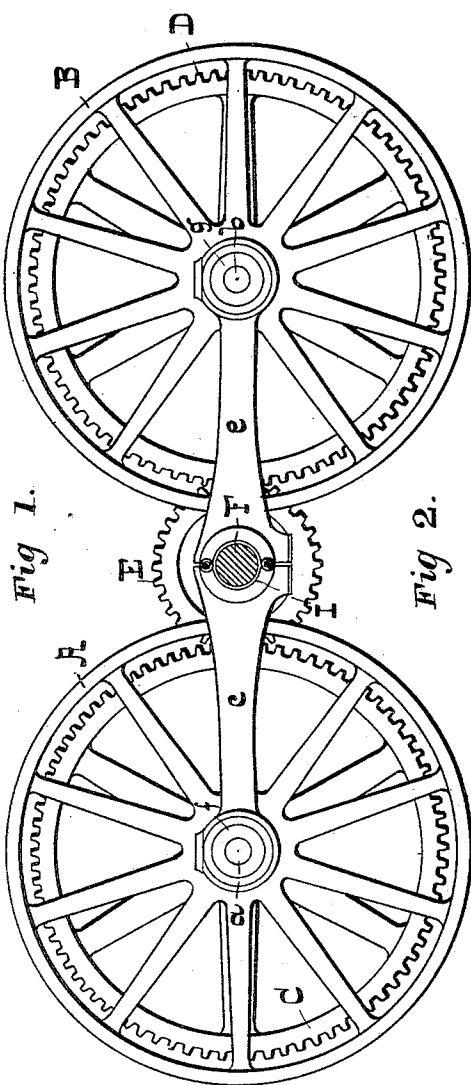


Fig 1.

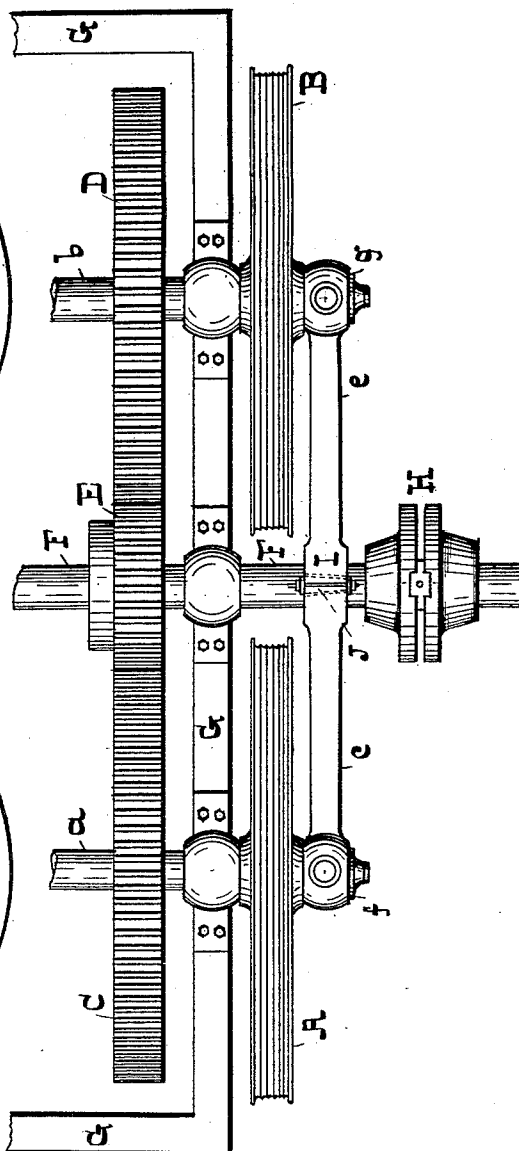


Fig 2.

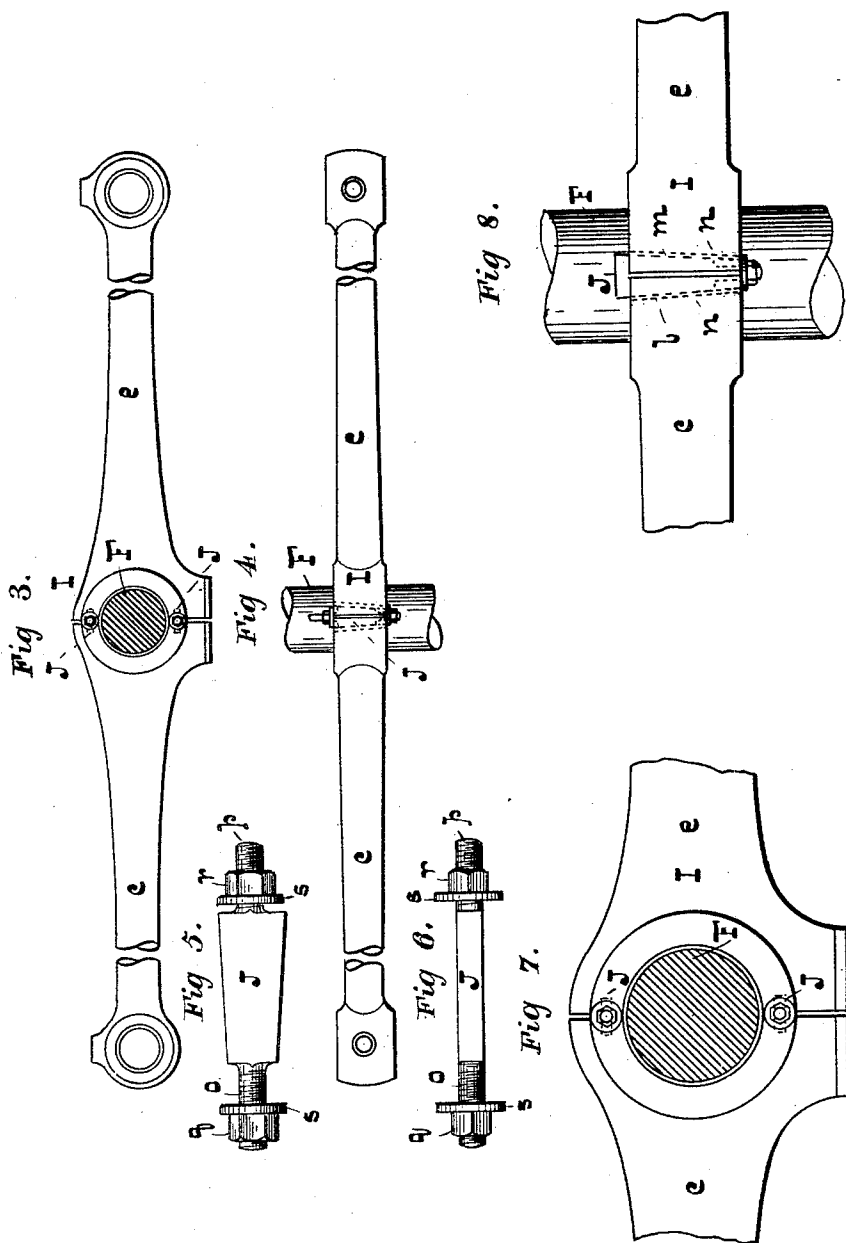
-WITNESSES-

Dan'l Fisher
Geo. E. Taylor.

-INVENTOR-

John Walker
by G. H. N. Howard
att'y.

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Geo. E. Taylor

-INVENTOR-

John Walker,
by Wm. H. Howard,
Atty.

J. WALKER.

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Fig 9.

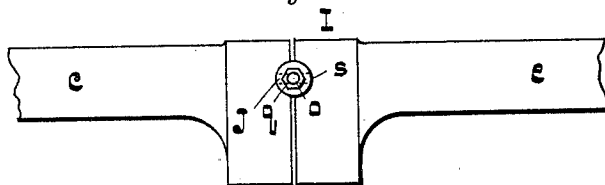
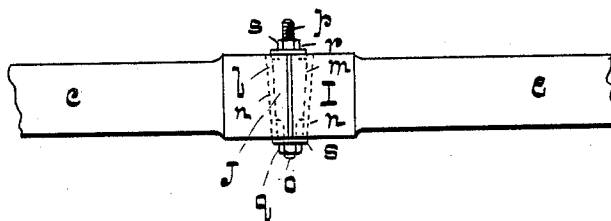


Fig 10.



-WITNESSES-

Dan'l Fisher
Geo. E. Taylor

INVENTOR-

John Walker,
by G. H. T. Howard,
att'y.

UNITED STATES PATENT OFFICE.

JOHN WALKER, OF CLEVELAND, OHIO.

DRIVING MECHANISM FOR CABLE RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 460,794, dated October 6, 1891.

Application filed October 22, 1890. Serial No. 368,952. (No model.)

To all whom it may concern:

Be it known that I, JOHN WALKER, of the city of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain Improvements in Driving Mechanism for Cable Railways, of which the following is a specification:

This invention relates to improved means for regulating the distance between the outer or overhanging ends of the shafts which carry the grooved driving-drums.

The said invention consists, first, in a peculiar construction of the strut which separates the outer ends of the drum-shafts in cases where they are driven by gearing from a central shaft, whereby the said driving-shaft may pass through the said strut and the latter be adjusted independently of and without interfering in any manner with the said driving-shaft.

The said invention consists, secondly, in means for adjusting or regulating the length of the said strut when the same is in two parts and separated centrally of the shaft, as will hereinafter fully appear.

In the further description of the said invention which follows reference is made to the accompanying drawings, forming a part hereof, and in which—

Figures 1 and 2 are respectively a face and a top view of certain parts of the driving mechanism for a cable railway, illustrating the construction of the strut, as adapted to machinery in which the driving-shaft is between the drum-shafts. Fig. 3 is an enlarged face view of a strut; and Fig. 4 a top view of the same. Figs. 5 and 6 are views, as seen from a different point, of an adjusting-key and its attachments still further enlarged. Figs. 7 and 8 are respectively a face and a top view of the central portion of the strut shown in Figs. 3 and 4, illustrating a different construction of the adjusting-key. Figs. 9 and 10 are respectively a face and a top view of a strut to be used when the driving-shaft does not pass beyond the drums; but it is fitted with the adjusting devices before described.

Referring to Figs. 1 and 2 of the drawings, A and B are the grooved cable-drums on their shafts *a* and *b*, C and D are gears on the shafts *a* and *b*, and E is a pinion on the driving-shaft F in engagement with the gears C and D, by means of which the drums are

revolved. The drums A and B overhang the frame G in order that the cable (not shown) may be rove thereon without cutting, and the driving-shaft F extends between the arms, as shown particularly in Fig. 2, and is provided with a coupling H, whereby it is connected to a similar shaft, forming a part of another plant, or to the engine.

I is a strut in two pieces *c* and *e*. These pieces *c* and *e* fit loosely over the shafts *a* and *b*, and have bushings *f* and *g*, which can be easily removed when worn. The inner ends of the sections *c* and *e* of the strut are hollowed out to form a loop or central hole I, somewhat larger than the driving-shaft F, through which the said shaft passes. The sections of the strut are centrally connected by means of adjusting the keys J. The sections stand slightly apart, and are provided with tapered seats *l* and *m*, which are faced with planished steel or iron liners *n* to prevent the keys from abrading the surface of the cast-iron. The keys J are preferably tapered on both edges and provided with screw stems *o* and *p*, having nuts *q* and *r* thereon, and suitable washers *s* for obvious purposes. The length of the strut is adjusted by moving the keys transversely of the strut—as, for instance, if the strut has to be slightly lengthened the nuts *r* are slackened and the ones *q* tightened, which operation draws in the key and increases the space between the two sections. When the proper length of strut is obtained both nuts are set up, and no jar can then loosen them.

In Figs. 7 and 8 the keys have only the drawing-nut *q*, and there is a liability of the nut becoming loose, as it cannot be set up as tightly as it could if drawing against another, and the two nuts are therefore preferred.

The strut shown in Figs. 9 and 10 is not provided with a loop, as the shaft in this case does not pass between the drum-shafts; but the adjusting-key is used, as before described. The weight of the strut may be supported by means of a bracket. (Not shown.)

I claim as my invention—

1. In a driving mechanism for a cable railway, a strut for adjusting the distance between the drum-shafts, having a loop or hole through which the driving-shaft may pass, substantially as and for the purpose specified.

2. In a driving mechanism for a cable railway, a strut in two parts, which parts are provided with key-seats, combined with keys and adjusting-nuts, substantially as specified.

5 3. In combination with the sections *c* and *e* of the strut *I*, which sections are provided with key-seats, the keys *J*, having a threaded stem at either end, and nuts whereby the

position of the said keys with reference to the strut may be changed, substantially as and to for the purpose specified.

JOHN WALKER.

Witnesses:

E. L. THURSTON,

S. A. WACKERMAN.