

(No Model.)

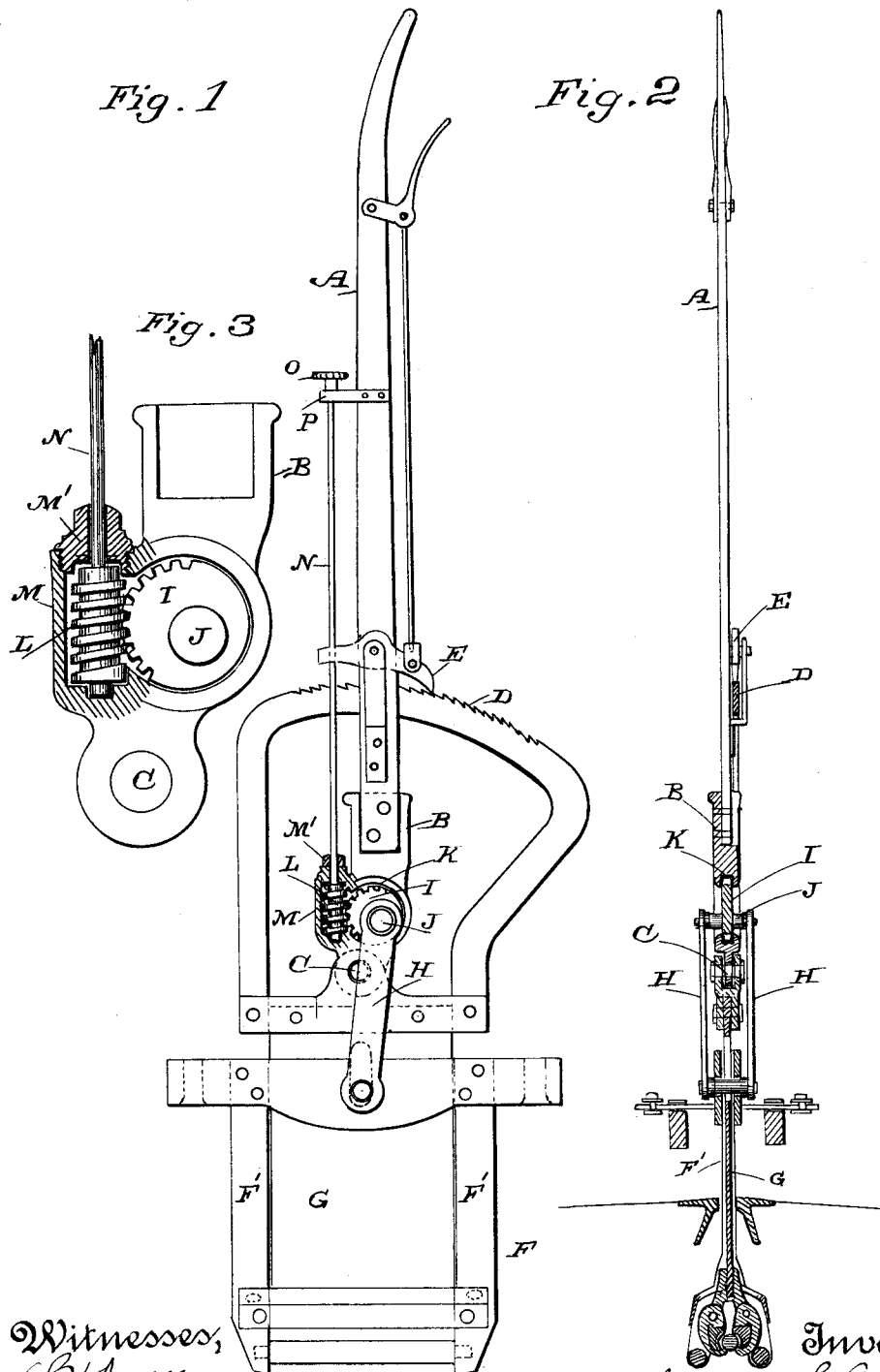
C. L. ANDERSON & G. H. FAIRCHILD.
ADJUSTING DEVICE FOR CABLE GRIPS.

No. 468,555.

Patented Feb. 9, 1892.

Fig. 1

Fig. 2



Witnesses,
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UNITED STATES PATENT OFFICE.

CLARENCE L. ANDERSON AND GEORGE H. FAIRCHILD, OF SAN FRANCISCO,
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ADJUSTING DEVICE FOR CABLE-GRIPS.

SPECIFICATION forming part of Letters Patent No. 468,555, dated February 9, 1892.

Application filed June 11, 1891. Serial No. 395,911. (No model.)

To all whom it may concern:

Be it known that we, CLARENCE L. ANDERSON and GEORGE H. FAIRCHILD, citizens of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Adjustable Devices for Cable-Grips; and we hereby declare the following to be a full, clear, and exact description of the same.

Our invention relates to a novel adjusting device for cable-grips; and it consists of a mechanism whereby the wear of the grip-shoes may be compensated for by a take-up device, so that the shoes will always have the proper grip upon the cable, whether new or nearly worn out or when the grip is used upon cables of different sizes.

Referring to the accompanying drawings for a more complete explanation of our invention, Figure 1 is a side view of our device. Fig. 2 is a vertical section. Fig. 3 is an enlarged view.

In the grip mechanism employed on cable railways removable shoes are usually employed to grasp the cable, and as these shoes become worn it is necessary to employ some means for setting the parts nearer together, so that the grip of the shoes upon the cable will be properly maintained and the throw of the lever by which they are operated will remain essentially the same in all conditions of the shoes. This adjustment is usually made by means of a screw, which is situated below the floor of the car upon which the grip is carried, and it is thus necessary for the gripman to reach down below the floor from time to time to make the necessary adjustments.

The object of our invention is to enable the gripman to make these adjustments from some point above the floor or the quadrant-rack.

In Figs. 1, 2, and 3 we have shown an eccentric gear the shaft of which is journaled in the ends of the links which connect the lower part of the lever with the frame. This eccentric gear is turned by a screw the shaft of which extends up by the side of the operating-lever to a point above the quadrant and within easy reach of the gripman, and by thus turning it the distance between the cross-head shaft and the fulcrum-point of the hand-lever is lengthened or shortened.

A is the hand-lever, the lower end of which is fixed in socket B, and this socket is fulcrumed at C, so that the lever is moved backward and forward about this fulcrum-point.

D is the quadrant-rack, which is engaged by the pawl E to hold the lever when it has been moved so as to actuate the grip.

In the present case we have shown our device adapted to what is called a "side grip;" but it is equally applicable to any other form.

The grip-shoes F are actuated by the sliding plate G, which moves in suitable guides upon the frame F', which is bolted to the car or truck, and the quadrant and other parts are movable by the action of the links and lever. This frame F' is connected with the eccentric I by the links H, and the adjustment for wear of the grip-shoe takes place by moving the eccentric from time to time as the shoes become worn, and thus increasing or decreasing the distance between the fulcrum C and the eccentric-shaft.

In Figs. 1, 2, and 3 we have shown the eccentric in the form of a worm-gear I, having a shaft J projecting from it, the ends of the shaft being journaled in the ends of the links H. The eccentric or gear itself fits in a circular box K just beneath the socket in which the lower end of the lever A is fixed. Within this circular box the gear may be turned around, and it will be manifest that as it is turned the eccentrically-placed shaft J will be moved nearer to or farther from the fulcrum C. In order to turn this gear, we show the screw or worm L fitted into a casing M, which is cast with or formed upon one side of the circular box in which the gear I turns. This screw has a shaft N, which extends up alongside the lever A and has a milled head O or other suitable means for turning it. The shaft turns in a box or support P, fixed to the side of the lever, preferably at some point above the quadrant-rack, so as to bring it into convenient reach of the gripman. The lower end of the screw-shaft turns in a step in the casing M, and a screw-cap M' is fitted into the top of the casing. This cap is removed to admit the screw and serves as a thrust-bearing for the upper end. The screw-shaft N extends out through a hole in the cap M'. It will be manifest that by turning the

milled head O and the shaft to which it is connected the screw will be turned, and through this the eccentric will be rotated within its box, and the eccentric-shaft will be moved to
5 lengthen or shorten the distance between it and the fulcrum C. This will adjust it as fast as the shoes are worn, so that the lever A will always move over the same arc of the quadrant and close the grip sufficiently tight
10 upon the cable. By means of the upper thrust-bearing M' the screw is prevented from moving upward, and it will thus act upon the eccentric when turned in either direction.

Having thus described our invention, what
15 we claim as new, and desire to secure by Letters Patent, is—

In a cable-gripping apparatus, a means for adjusting the mechanism to compensate the

wear of the shoes or dies, consisting of an eccentric having a shaft projecting from its
20 sides and movable with relation to the fulcrum-point of the lever upon which it is supported and moved, and links extending from said shaft to a fixed supporting-frame, in
25 combination with a screw whereby the eccentric may be rotated and the eccentric-shaft adjusted to or from the fulcrum-point of the lever, substantially as herein described.

In witness whereof we have hereunto set our hands.

CLARENCE L. ANDERSON.
GEORGE H. FAIRCHILD.

Witnesses:

S. H. NOURSE,
J. A. BAYLESS.