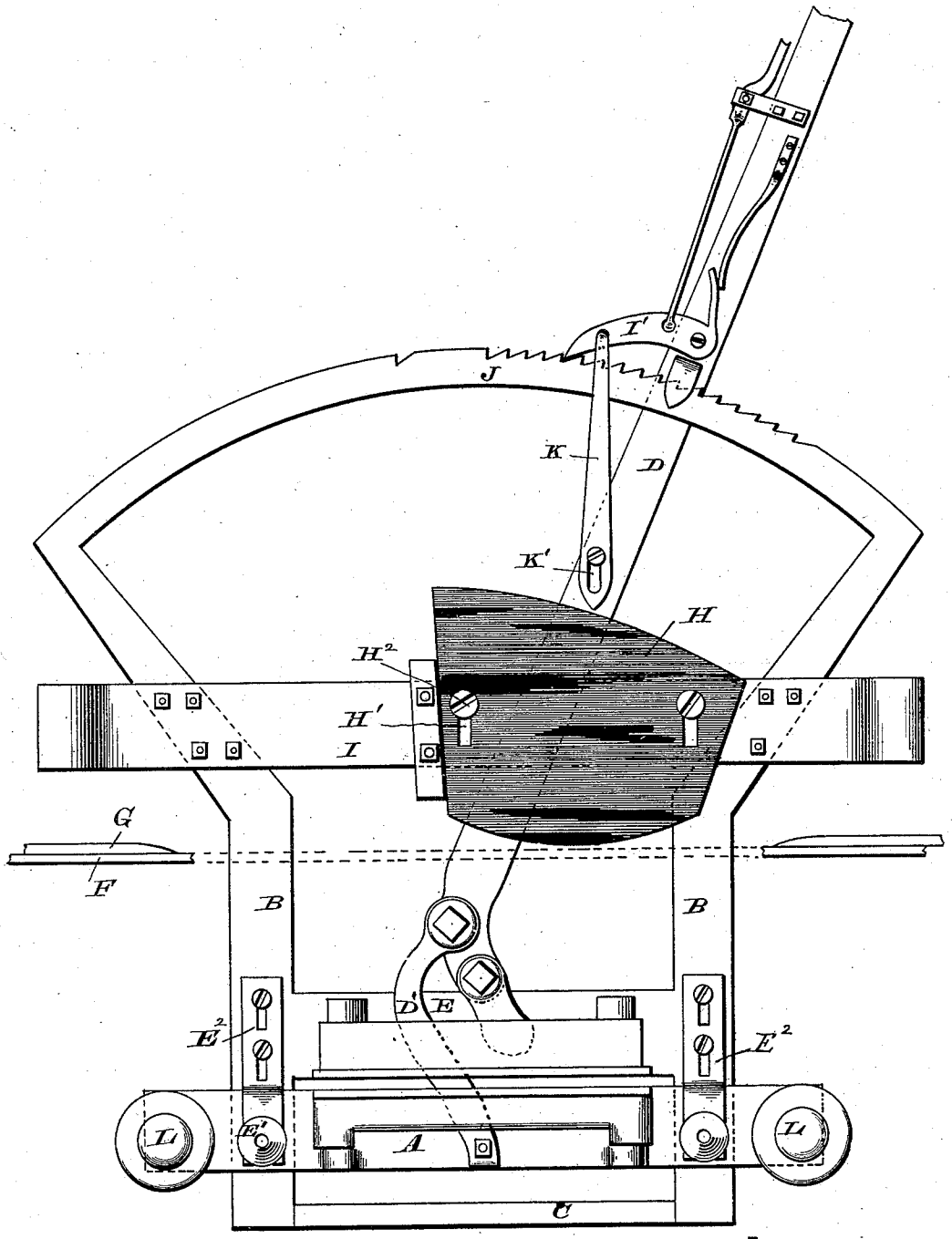
(No Model.)

W. W. KENDALL.

GRIPPER FOR ENDLESS CABLE RAILWAYS.

No. 305,081. Patented Sept. 16, 1884.



WITNESSES.

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WINFIELD W. KENDALL, OF SAN FRANCISCO, CALIFORNIA.

GRIPPER FOR ENDLESS-CABLE RAILWAYS.

SPECIFICATION forming part of Letters Patent No. 305,081, dated September 16, 1884.

Application filed March 22, 1884. (No model.)

To all whom it may concern:

Be it known that I, WINFIELD WEBB KENDALL, a citizen of the United States, residing in the city and county of San Francisco, and State of California, have invented a new and useful Improvement in Grippers for Endless-Cable Railways, of which the following is a specification.

The object of my present invention is to provide a means whereby the propelling cable or rope is automatically released at a point or points along the line of the road, such as at switches, turn-outs, street-crossings, and other places where it becomes necessary to quickly release the cable from the gripper to avoid abrasion and damage. I accomplish this object by the means illustrated in the accompanying drawing, forming a part of this specification, and in which is represented in front elevation a view of my improved grip for cable railways.

In carrying out my invention I construct the lower half, or that portion of my gripper, A, carrying the lower rope, die, and the friction pulleys and rollers, so that it will fall or drop downward away from the upper die moving on the upright ways B. A square guard or bar, C, connected to the lower ends of the uprights, limits the fall or drop of this movable die-frame in case of accident or disconnection with the operating-lever D, although this frame and die is more immediately controlled by the arms D′, connecting with the crank at the end of the aforesaid operating-lever, and straddles the cross-head E of the stationary frame, in which position it connects with the lower edge of the movable die-frame. Stationary friction-rollers E′, with rounded conical heads, are secured to a plate, E^2, adjustably attached to the uprights of the rack-frame, the office of which will be hereinafter fully described.

To one of the angle-irons, F, which form the track-slot within which the gripper-frame works, I bolt or otherwise affix an upwardly-projecting flat strap, G, both ends of which are made slightly rounding and smooth, with the inner edge vertical and parallel with the inner edge of the angle-iron.

A cam-plate, H, provided with slots H′, is connected to the bar I, by which the grip-frame is attached to the dummy, which plate or cam moves up or down on set-screws H^2, passing through the slots H′, also entering the fixed or stationary grip-frame.

Near the end of the dog or pawl I′, which holds the operating-lever in position in the toothed rack J, I connect a rod or tripping-arm, K, which is provided with an oblong slot, K′, in its lower end, through which a set-screw passes, and enters the operating-lever in such a manner that this dog will be raised up when the lower end thereof is engaged by the upper edge of the cam-plate and release the dog or pawl J from the teeth of the rack.

The usual grooved guiding-pulleys, L, are placed at each end of the movable die-frame, and descend or are carried downward with it.

In practice the upwardly-projecting lug or plate is placed along the angle-irons composing the slot, and upon either side—such as at switching-points, turn-outs, and where the cable enters the engine-house, at which points quick and rapid action is necessary to release the cable from grippers or dies—and as the tripping or cam plate mounts the projection it moves upward in the slots upon the set-screws, it trips the slotted arm upon the operating-lever, and releases the dog or pawl from the toothed rack automatically and independent of the engineer, which throws the lever forward and carries downward the lower die, and die-frame, bringing the conical friction-roller above the horizontal line of the lower die, and lifts the cable out of the grooved rollers and carries it away from the gripper-frame instantaneously. By this means the action is certain, as the cable slides off the conical roller at once, having first been disengaged from the grooved guiding-pulleys by the fall of the lower half of the die or gripper frame.

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

1. In an endless-cable railway, the combination of an upwardly-projecting plate or lug connected to one of the angle-irons of the track-slot at suitable points—such as switches or turn-outs—a cam or tripping plate supported by the grip-frame, and adapted to ride

over said projecting plate or lug, and a slotted arm connected to the grip-lever, and capable of being raised by said cam, so as to disengage a pawl from its ratchet, and thereby automatically throw down the grip-lever and release the cable, substantially as described.

2. In an endless-cable gripper, the lower die plate or frame, moving downwardly or away from the upper die upon the ratchet-frame, in combination with the conical rollers fixed to the upper die-frame, and adapted to disengage the cable from the lower or movable die and the friction or guiding rollers, in the manner substantially as set forth and specified.

In testimony that I claim the foregoing I have hereunto set my hand and seal.

WINFIELD W. KENDALL. [L. S.]

Witnesses:
C. W. M. SMITH,
CHAS. E. KELLY.