

(No Model.)

A. P. GOULD.

ATTACHMENT FOR OPERATING ELEVATOR GATES.

No. 510,475.

Patented Dec. 12, 1893.

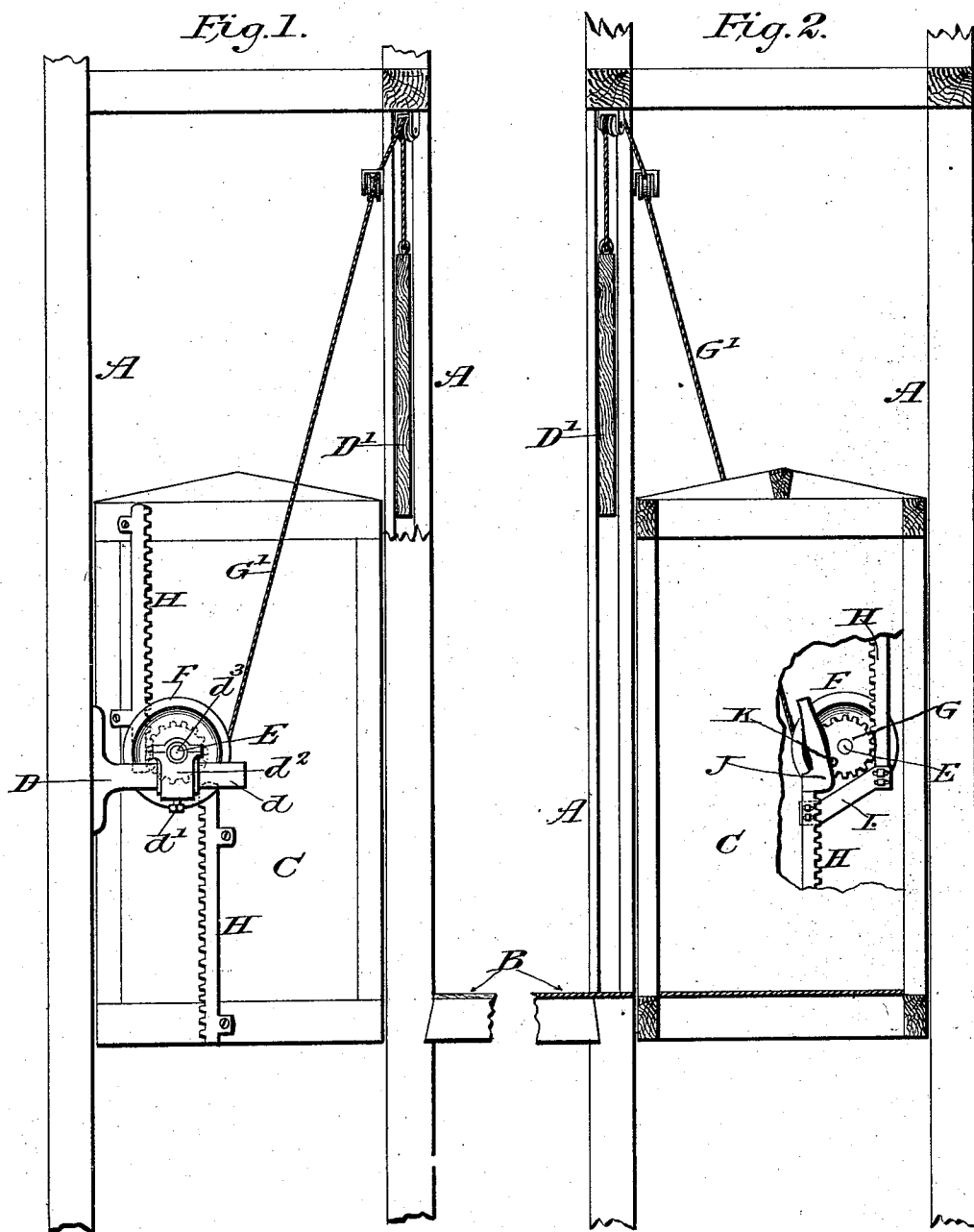
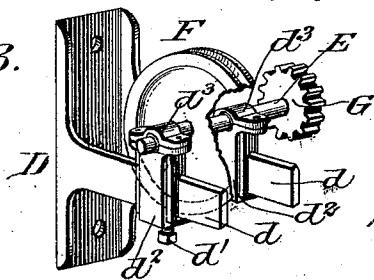


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

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ATTACHMENT FOR OPERATING ELEVATOR-GATES.

SPECIFICATION forming part of Letters Patent No. 510,475, dated December 12, 1893.

Application filed February 6, 1893. Serial No. 461,100. (No model.)

To all whom it may concern:

Be it known that I, AARON P. GOULD, a citizen of the United States, and a resident of Canton, county of Stark, State of Ohio, have invented a new and useful Improvements in Attachments for Operating Elevator-Gates, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification.

My invention relates to elevator gate operating devices.

It has for its object to provide means whereby gates at the entrance to the elevator shaft will be positively raised when the elevator car reaches the landings to allow the passengers to enter the elevator car and will be lowered when the elevator car passes the landings to prevent persons accidentally walking into the shaft.

With these objects in view the invention consists in certain features of construction and combination of parts which will be hereinafter described and claimed.

In the accompanying drawings, Figure 1, is a side view of an elevator shaft showing the elevator at a landing and the gate elevated. Fig. 2, is a view of a portion of the elevator car and shaft looking in a direction opposite to that in Fig. 1, and showing the relation between the rack-bars, pinion and cam-arm when the elevator car and gate are in the position shown in Fig. 1; and Fig. 3, is a detail perspective of the winding drum and the bracket to which it is adjustably secured.

A denotes the uprights forming the elevator shaft, and B denotes one of the upper landings. The elevator car C travels in this shaft and is adapted to raise and lower the gate D' in its upward and downward movement. The means for accomplishing this I will now describe. D, denotes a bracket having two parallel projecting arms *dd* on which are adjustably secured by the set screws *d'* sleeves *d''* of the journal boxes *d'''*. In these boxes *d'''* is journaled a drum shaft E carrying at one end a winding drum F and at the other end a pinion G. Attached to this drum is the gate rope G' which passes around supporting pulleys secured to the shaft beams at a point above the gate. Secured to the elevator car are two rack bars H one above the other and to one side of the other. These bars if desired may be connected by a bridle

I, and one of the bars has a cam-arm J adapted to ride against a pin K projecting from the face of the pinion.

In operation, assuming the gate to be in its closed position and the elevator car at rest, it will be seen that as the elevator car ascends, the upper rack will engage the pinion and rotate it and by the time the elevator car reaches the landing the gate will have been raised to allow passengers to enter or leave the elevator car. At the moment the car reaches the landing the upper rack-bar has passed out of engagement with the pinion and the cam-arm has engaged the pinion to hold it against being rotated in the opposite direction by the weight of the gate. As the elevator continues to move upward the cam-arm passes out of engagement with the pin at the instant the lower rack-bar engages the pinion, which rack-bar rotates it in an opposite direction thereby unwinding the rope from the drum and allowing the gate to descend. When the elevator descends the same operation takes place.

In Fig. 3 I have shown the rack-bars adjustably connected with the bridle thus enabling the parts to be easily and accurately fitted to position when the device is applied to the elevators now in use. The drum shaft is made adjustable on the brackets for the same reason.

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

1. The combination with an elevator cage of the upper and lower racks, the cam-arm intermediate the ends of the racks, the drum shaft having a pinion and a drum fixed thereto, a pin projecting from the pinion, a gate, and a cord connecting the gate with the drum.

2. The combination with an elevator cage, of the upper and lower racks, the cam arm moving with said racks, the bracket having outwardly projecting arms, journal boxes adjustably thereon, a drum shaft carrying a fixed drum and a pinion provided with a pin to be engaged by the cam arm.

In testimony whereof I have hereunto set my hand this 4th day of February, A. D. 1893.

AARON P. GOULD.

Witnesses:

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