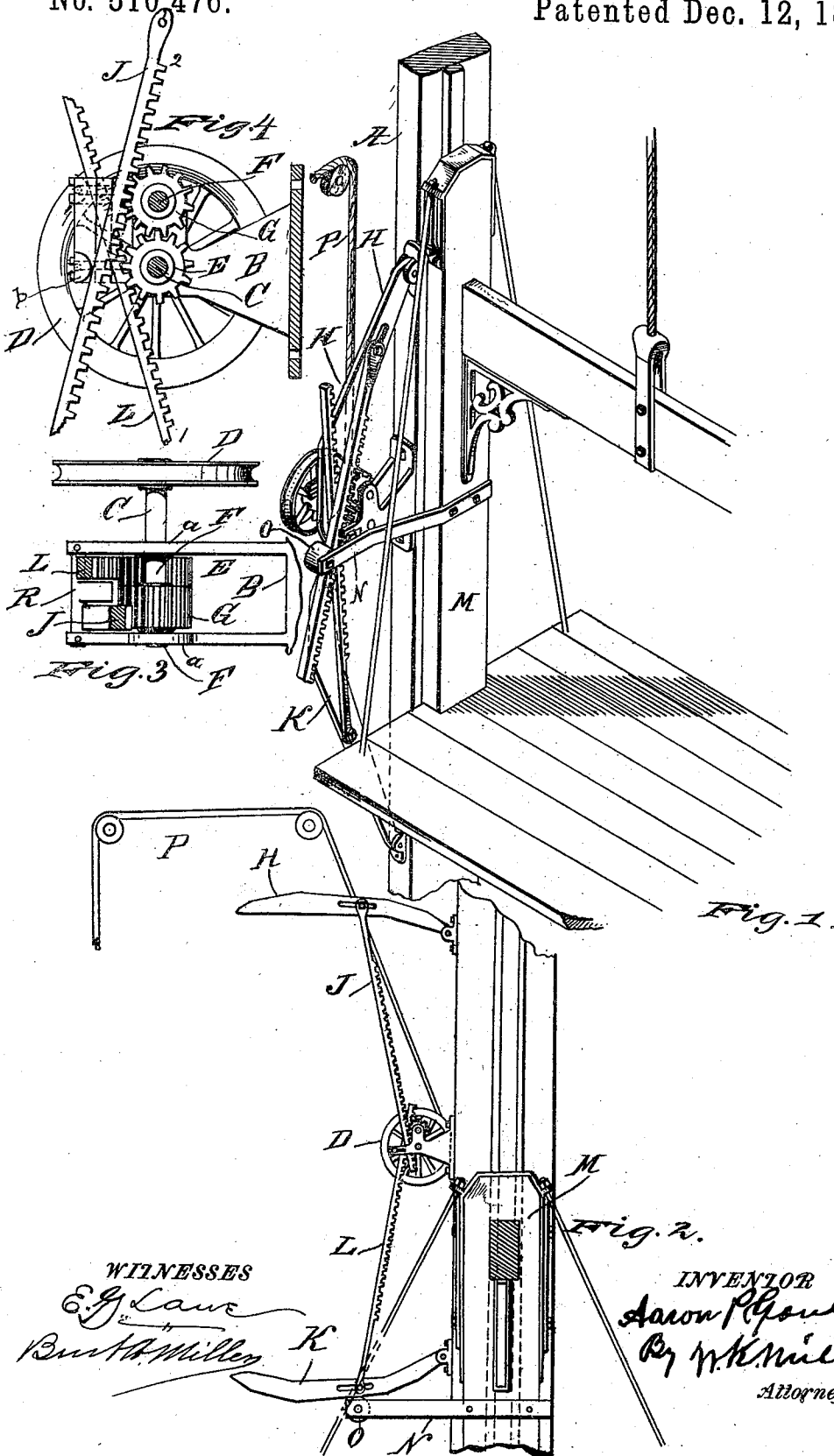


(No Model.)

A. P. GOULD.
DEVICE FOR OPERATING ELEVATOR GATES.

No. 510,476.

Patented Dec. 12, 1893.



WITNESSES

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AARON P. GOULD, OF CANTON, OHIO.

DEVICE FOR OPERATING ELEVATOR-GATES.

SPECIFICATION forming part of Letters Patent No. 510,476, dated December 12, 1893.

Application filed June 19, 1893. Serial No. 478,095. (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 Improvement 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 improvements in attachments for operating elevator gates, and consist of certain features of construction and combination of parts as will be herein-after described and pointed out in the claims.

Figure 1, of the accompanying drawings is a view in perspective illustrating my invention. Fig. 2, is a side elevation; Fig. 3, a plan view of gearing, and Fig. 4, a side view of gearing and a portion of the gear operating rack.

Similar letters of reference designate corresponding parts in all of the figures of the drawing.

A represents the elevator guide to which is secured the gears supporting bracket B, in which is journaled pulley shaft C. On the outer end of the shaft is mounted a pulley D, and on the inner end a pinion E, the sides of the bracket B, have upwardly projected ear portions *a*, in which is supported a short shaft F, on which is mounted a pinion G, to engage one end of the pinion E, the face of which is wider than the face of pinion G, to pass under and engage said pinion. A distance above the bracket B is pivotally secured to the guide a lever H, to which is pivotally secured a rack J, the teeth of which engage the teeth of the pinion G, and a distance below the bracket a similar lever K is pivoted to the guide A, having pivotally secured thereto a rack L, the teeth of which engage the teeth of pinion E as shown in Fig. 4.

M represents the frame of the cage, to which is secured an arm N, provided at its outer end with a roller O. One end of the rope P, may be secured to the gate. The other is secured to the periphery of the pulley D, about which it is wound to raise the gate. The racks J and L may be transposed to rotate the pulley in the opposite direction. The outer end portion R, of the bracket is provided with semi-circular

blocks *b*, by which the racks are held in engagement with the pinions E and G, and when the racks J and L are transposed as before mentioned, the end piece R is turned end for end to adapt it to the transposed racks.

In operation when the cage is started up, the roller O on arm N, comes in contact with the arm K, which is thereby raised and folded to position shown in Fig. 1, which with its engagements with the pinion E, rotates the pulley D to raise the gate as the floor of the cage approaches the floor of the building. The lever H engaged with the pinion G is at the same time folded into the position shown in Fig. 1. When in this position the cage opposite the entrance thereto, the gate will be held above the entrance, and when the cage passes up, the roller O will pass over the lever H, and as it leaves the lever, the weight of the gate will rotate the pulley D, by which movement the levers and rack are restored to the position shown in Fig. 2, at which time or point the gate will close the entrance into the shaft. When descending, the roller O, will come in contact with the lever H, folding the lever down, the rack J will rotate the pinion G, to wind the rope to raise the gate. The attachment described is provided for each floor and as the cage passes up or down is raised and lowered as it goes by each entrance to the shaft or cage and when the cage is stopped the floor of the cage registering with the floor of the building, the gate will be in its raised position to allow access to the cage, and as the cage is passed either up or down the gate will be lowered to close the entrance to the shaft.

The arm may be substituted by placing the roller O, on a pin projected from the platform or floor of the cage.

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

1. In combination with an elevator cage and guide, a shaft supported in a bracket secured to the guide, intermeshing pinions, one fixed to said shaft and the other journaled in the bracket, levers pivoted to the guide above and below the pinions, rack-bars pivoted to said levers, one engaging one pinion and the other rack-bar the other pinion, a pulley rotated by the rotation of one of the pinions, a

cord connecting the gate with the pulley, and means carried by the cage for depressing the said levers, substantially as herein described.

2. In combination with an elevator cage and
5 guide, intermeshing pinions supported by said guide one pinion being of greater length than the other, a lever pivoted below the pinions, a rack-bar pivoted to the lever and engaging the long pinion, a second lever pivoted to the
10 guide above the pinions and a rack-bar pivoted thereto and engaging the other pinion, a pulley rotated by one of said pinions, a gate,

a cable connection between the gate and the pulley and means carried by the cage for depressing the levers in the upward and downward movement of the cage, substantially as herein described. 15

In testimony whereof I have hereunto set my hand this 6th day of June, A. D. 1893.

AARON P. GOULD.

Witnesses:

BURT A. MILLER,
W. K. MILLER.