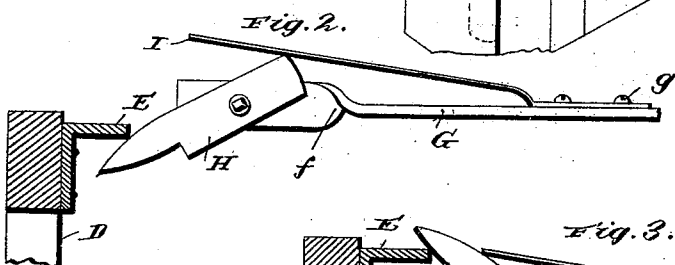
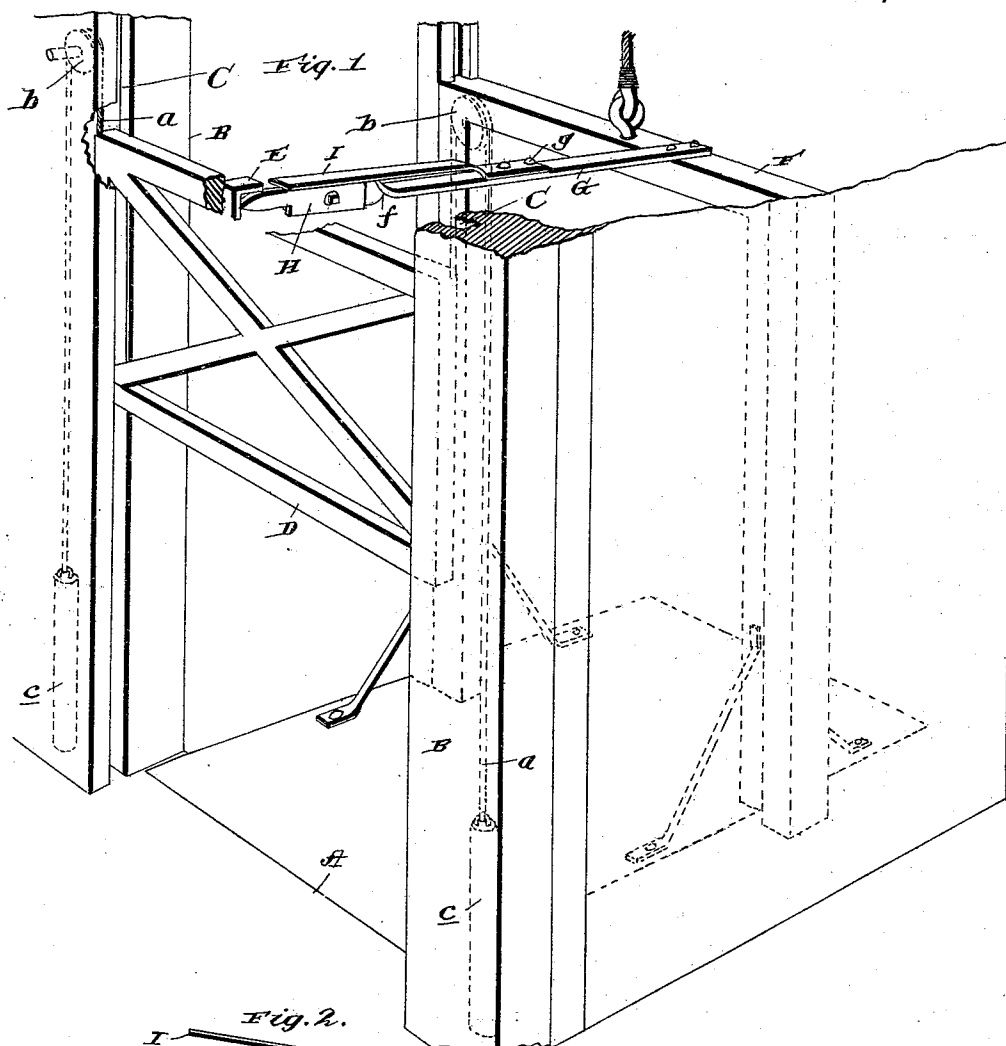


(No Model.)

C. A. GLOEKLER.
GATE OPERATING DEVICE FOR ELEVATORS.

No. 488,605.

Patented Dec. 27, 1892.



Witnesses:
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UNITED STATES PATENT OFFICE.

CHARLES A. GLOEKLER, OF PITTSBURG, PENNSYLVANIA.

GATE-OPERATING DEVICE FOR ELEVATORS.

SPECIFICATION forming part of Letters Patent No. 488,605, dated December 27, 1892.

Application filed October 25, 1892. Serial No. 449,940. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. GLOEKLER, a citizen of the United States, residing at Pittsburg, in the county of Allegheny and State of Pennsylvania, have invented certain new and useful Improvements in Gate-Operating Devices for Elevators; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to an improvement in devices for operating gates or guards to elevator hatchways, and the novelty will be fully understood from the following description and claim when taken in connection with the annexed drawings, in which:

Figure 1, is a perspective view partly broken away and partly in section of an elevator hatchway and guides, illustrating a gate for the hatchway in a raised position, and also a part of the frame of the car provided with my improvements. Fig. 2, is a side view of my improved device when removed from the car, illustrating the same in connection with a part of the guard or gate in section, and in the act of releasing itself from the gate so as to allow the latter to fall or close, and: Fig. 3, is a similar view illustrating the device in the act of passing the gate in its descending movement.

Referring by letter to said drawings: A, indicates the well or shaft of an elevator, which may be of any suitable construction.

B, indicates the vertical guides for the car or elevator and C, indicates ways formed in the adjacent sides of two of the guides B, which form an entrance to the shaft.

D, indicates a vertically movable gate for the hatchway or well. This gate is arranged within the ways C, and is arranged to move therein, and has connected to it one end of ropes *a*, which pass over suitable guide pulleys *b*, journaled in the guides or at other suitable points, and said ropes carry at their opposite ends counterbalance weights *c*. The top rail or cross bar of the gate is provided on its inner side with an angle plate or lug E, which is designed to be engaged by a pivoted and spring backed dog carried by the car or elevator, as will be presently described. The gate is designed to have a limited vertical

movement, and when brought in contact with a shoulder or stop in the ways, will cease to further ascend.

F, indicates the frame of a car or elevator which car may be of any suitable form and construction. This car which is arranged to move in suitable guides in the hatchway or shaft is provided on its top and extending from one side, with an arm G. This arm is preferably composed of a flat bar of iron or other suitable material secured at its inner end to the frame of the car in a horizontal position, and its outer or opposite end is twisted into a vertical position as shown at *f*, where it is provided with a pivoted dog H. This dog which is pivoted at an intermediate point in its length to one side of the vertically disposed branch *f*, of the arm so as to allow its inner and outer ends to swing, has its outer end beveled on both sides longitudinally as shown. The dog which has its beveled end arranged in the path of the angle plate or lug E, secured to the gate, is pivoted to the arm G, at a suitable point from its inner end.

I, indicates a flat spring. This spring is secured at one end to the arm G, by screws or the like as shown at *g*, and its outer end projects over the vertically disposed branch of said arm and also the upper side of the dog to a considerable distance beyond its pivotal point for a purpose presently described. This spring is designed to exert a constant pressure upon the longitudinal upper side of the dog, and when the dog encounters the lug or angle plate on the gate in the ascent of the car or from below upwardly, the spring will hold the dog sufficiently rigid for the latter to lift the gate, but as the car or elevator passes a certain altitude, and the gate contacts with a rigid stop or shoulder in the way the spring will give as better illustrated in Fig. 2 of the drawings so as to permit of an upward movement of the inner end of the dog and allow the gate to fall and close the hatchway. In the reverse or descending movement of the car, the dog will strike the angle plate or lug on the gate and by reason of said dog being beveled on its under side, it will ride over said plate or lug and the spring will give sufficiently to permit of an upward movement of the forward or outer end of the dog and allow the car to pass without in any manner

affecting the gate. Should it be desirable to open the gate on the descent of the car, the attendant or operator should take hold of the gate and raise it up until it catches over the pivoted pawl; the weights assisting the attendant to raise the gate. As the car descends again it is obvious that the gate will automatically fall and close or guard the hatchway.

10 By reason of the dog H, being pivoted at an intermediate point in its length, as before described, it will be seen that its inner end may swing upwardly as shown in Fig. 2, to permit it to disengage from the lug E, when

15 the car is moving upward, and its outer or forward end may swing upwardly as shown in Fig. 3, to permit it to ride past the lug E, when the car is moving downwardly, and by reason of the spring I, extending over the upper

20 side of the dog, a considerable distance beyond its pivotal point, it will be seen that said spring is adapted to engage either end of the dog and return the same to their normal position when they are swung upwardly.

25 From the foregoing description taken in connection with the annexed drawings, it will be seen that I have a very cheap and durable means for operating the gate or guard to an

elevator hatchway. The devices are very simple in construction and there is nothing about them to get out of order, and the improvements can be applied upon elevators such as now in use.

Having described my invention what I claim is:

The combination with a hatchway or elevator shaft, and a vertically movable gate suspended in suitable ways by counterbalance weights and provided with a lug on its upper, inner side; of a car, an arm G, secured to the upper side of the car or elevator, the dog having its free end beveled on its upper and under side respectively and pivoted at an intermediate point in its length to the arm G, so that either of its ends may swing upwardly, and the flat spring secured to the arm and adapted to bear upon the upper side of the dog both in front and rear of its pivotal point, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES A. GLOEKLER.

Witnesses:

GEO. J. SAYER,

BERNARD GLOEKLER.