

(No Model.)

E. C. HEYDENREICH.
ELEVATOR BRAKE.

No. 504,161.

Patented Aug. 29, 1893.

Fig. 2.

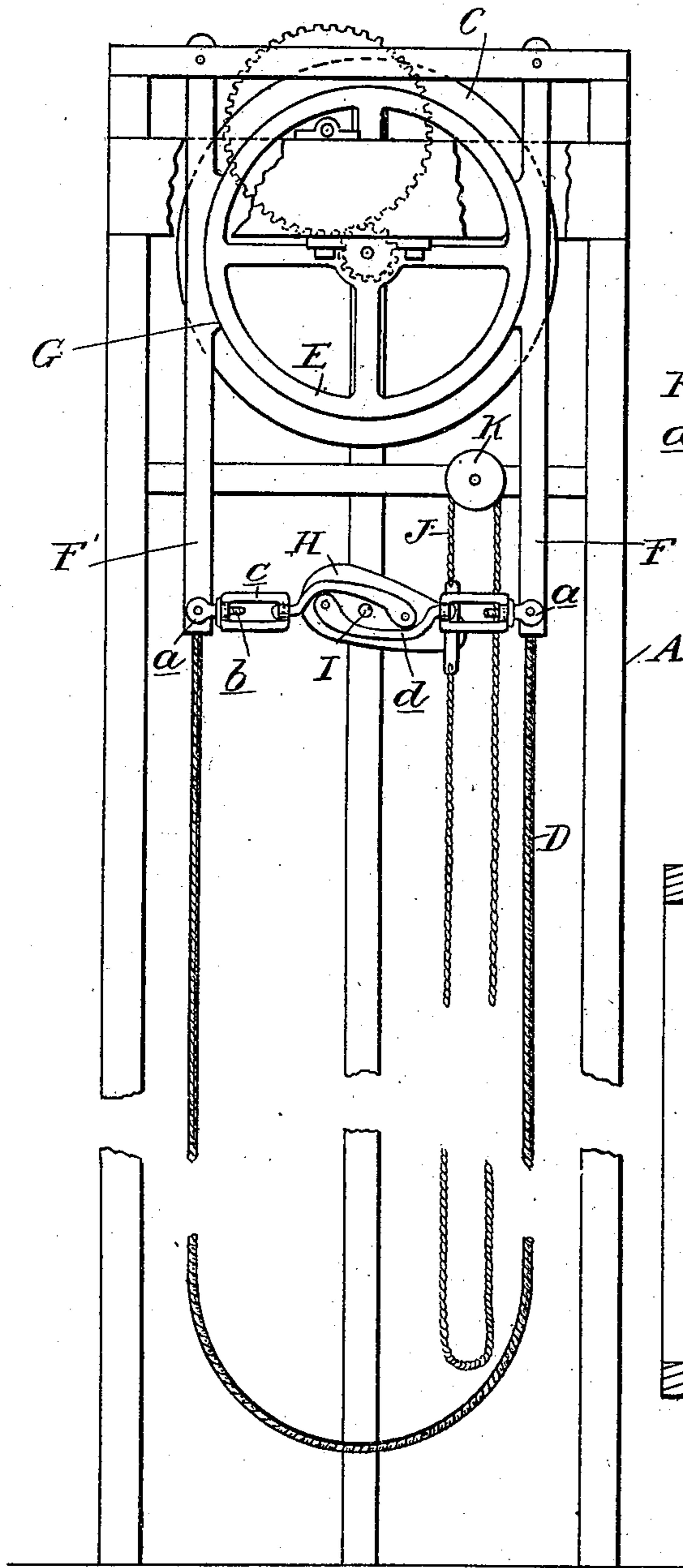


Fig. 3.

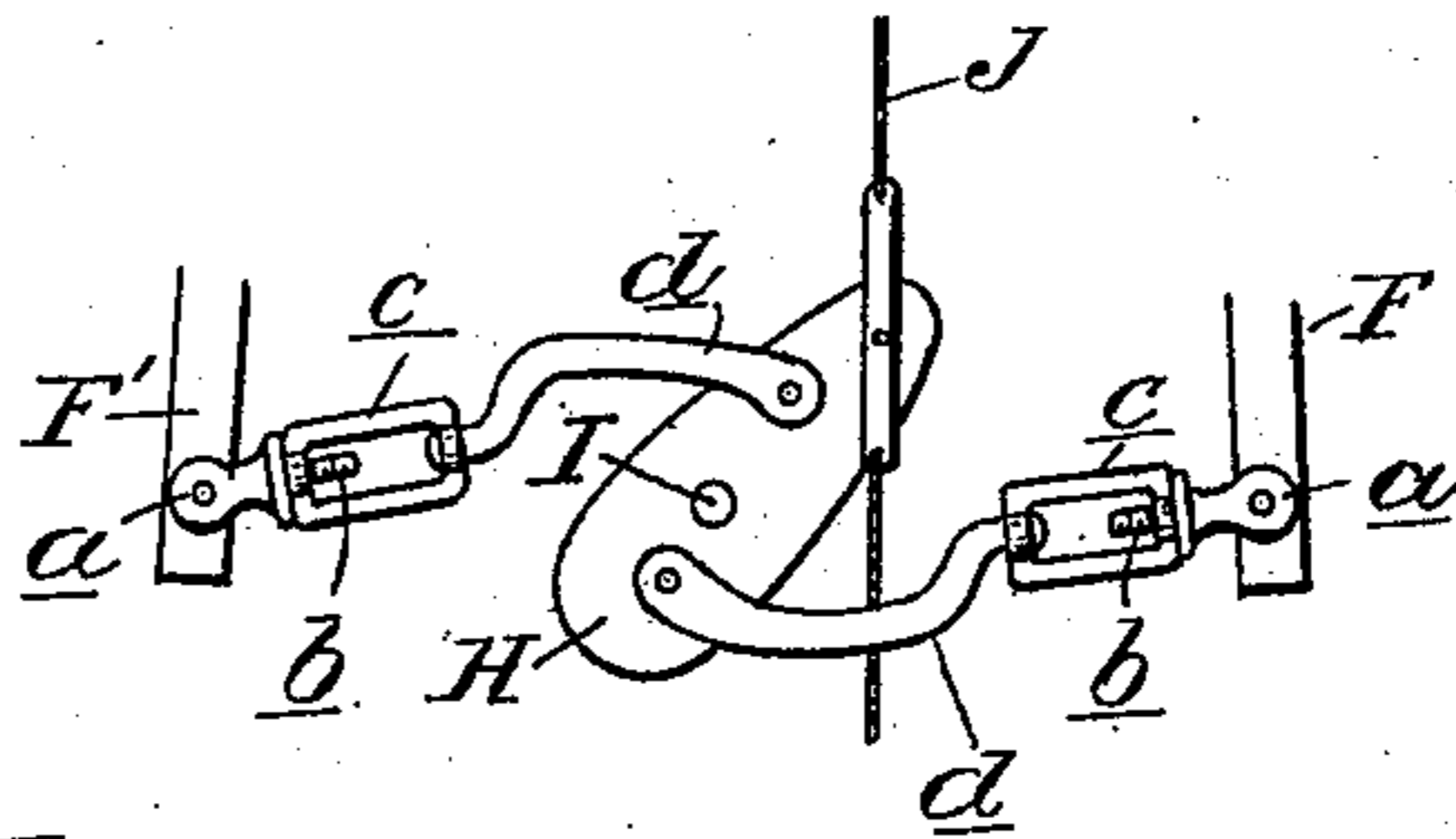
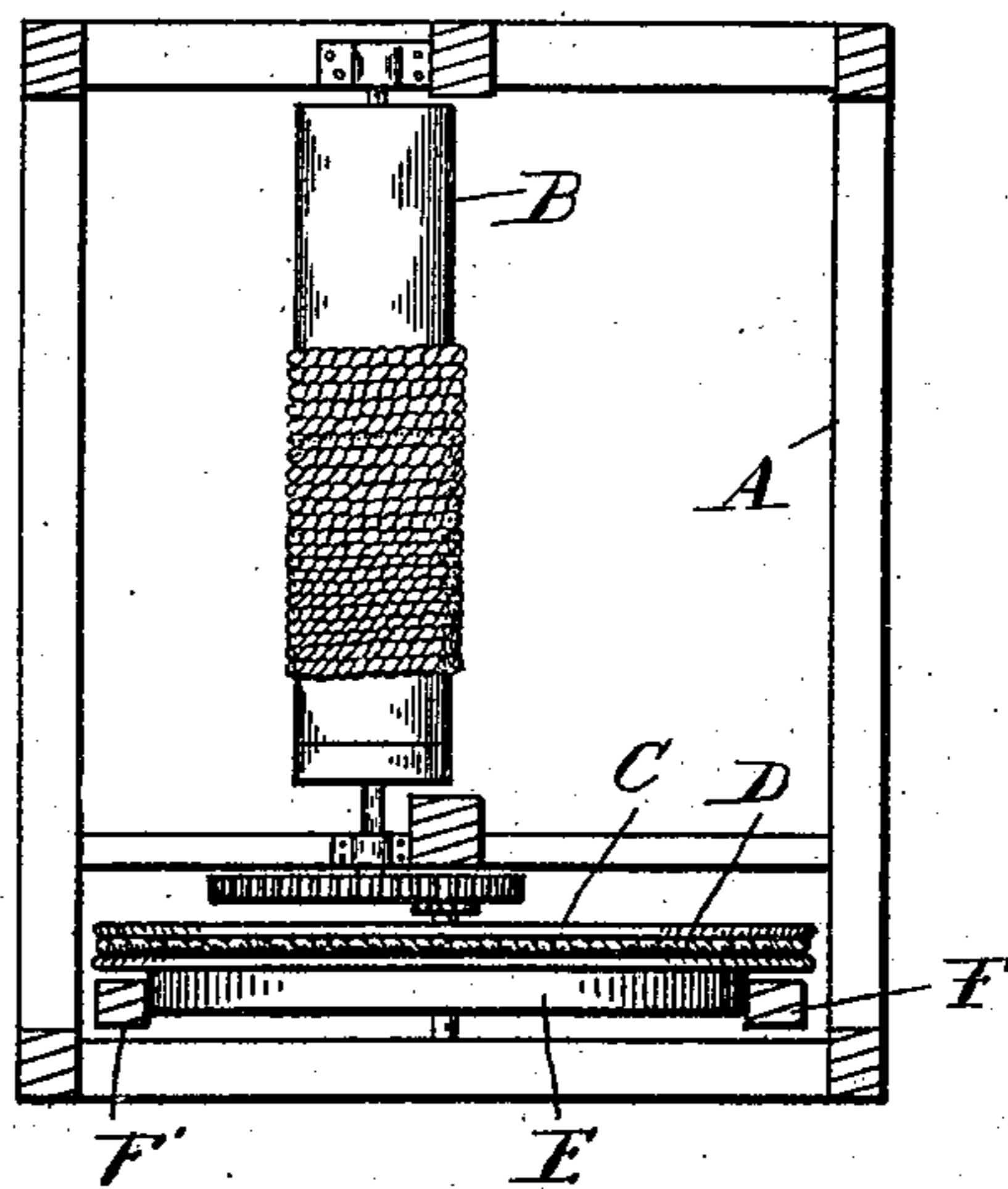


Fig. 1.



Witnesses
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UNITED STATES PATENT OFFICE.

ERNST CHRISTIAN HEYDENREICH, OF MOUNT CLEMENS, MICHIGAN.

ELEVATOR-BRAKE.

SPECIFICATION forming part of Letters Patent No. 504,161, dated August 29, 1893.

Application filed April 24, 1893. Serial No. 471,551. (No model.)

To all whom it may concern:

Be it known that I, ERNST CHRISTIAN HEYDENREICH, a citizen of the United States, residing at Mount Clemens, in the county of Macomb and State of Michigan, have invented certain new and useful Improvements in Elevator-Brakes, of which the following is a specification, reference being had therein to the accompanying drawings.

10 The invention consists in the peculiar construction of the actuating devices for the brake levers, and further in the peculiar construction, arrangement and combination of the various parts, all as more fully hereinafter described.

15 In the drawings, Figure 1 is a top plan view of an elevator frame showing a hand elevator with my invention applied. Fig. 2 is a side elevation showing the actuating devices for the brake. Fig. 3 is an elevation of said actuating devices showing the parts in their normal position.

20 A is the elevator frame of any desired construction, the elevator not being shown. B is the winding drum at the top thereof around which the elevating rope is wound. C is the actuating wheel for said winding drum and D is an endless rope or cable passing over said wheel C and extending down into the well beside the elevator actuating the same.

30 E is the brake wheel upon the shaft of the wheel C, and to which the brake mechanism is applied. While I have shown my device as applied to a hand elevator it is evident that it may be equally well applied to a power elevator.

35 F F' are two brake levers pivoted at the top of the elevator frame extending down beside the brake wheel and having applied to or integral with each lever a brake shoe G. The lower end extends some distance below the wheel and is connected to an actuating lever H by means of links. The lever H is pivoted on the pivot pin I which is secured on the stationary part of the frame. The lever H is adapted to be oscillated about its pivot by means of an endless rope J, passing over the sheave K at the top and connected to opposite sides of the outer end of said lever. The links
50 which connect the brake levers F and F' with

the oscillating lever H consist of the pivot blocks *a*, which at one end are bifurcated to embrace the lower ends of the brake levers F F' and are pivoted thereto and at the other end are provided with suitable screw bolts *b* with which the turn buckle *c* engages. The turn-buckles at the other end are swiveled upon the ends of the curved arms *d* which arms extend from each side past the center and are pivotally secured to the inner ends of the actuating lever H; they are curved or bent sufficiently to enable them to move past the center of said lever to a stop by bearing against each other on opposite sides thereof, as shown in Fig. 2, which will lock the parts in that position. The parts being thus constructed and being in the position shown in Fig. 3, which is their normal position, the brake shoes do not bear against the brake wheel at all or but lightly. Now to stop the elevator, the operator draws down upon one line of the rope J pulling the outer end of the lever H which oscillates it about its pivot and draws the part in the position shown in Fig. 2. The links having been made of the proper length this will draw the brake levers F F' together and tightly clamp the brake shoes upon the wheel, locking them in that position, as described.

To release the brake, the operator simply draws upon the other portion of the rope J, raising the outer end of the lever which moves the links *d* outwardly, releasing the brakes. This construction gives me a device which is exceedingly simple in which the parts may be very light and yet stand a great strain applying the brake most effectually and locking it when applied with perfect security and with a minimum movement of the rope.

What I claim as my invention is—

1. In an elevator brake, the combination of the suspended brake levers carrying the shoes, a brake actuating lever pivoted between the brake levers, the adjustable connecting links and an operating cord connected directly to the actuating lever and adapted to draw said links past the pivotal point of the actuating lever to a stop, in applying the brake, substantially as described.

2. In an elevator brake, the combination of the suspended brake levers carrying the shoes, 100

a brake actuating lever pivoted between the
brake levers, the connecting links each con-
sisting of the head block *a*, the turnbuckle *c*,
and the curved arm *d* extending beyond the
5 pivotal point of the actuating lever, the parts
arranged and adapted to operate substantially
as and for the purpose described.

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

ERNST CHRISTIAN HEYDENREICH.

Witnesses:

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