

(No Model.)

L. D. FEIN.

FIRE ESCAPE.

No. 372,526.

Patented Nov. 1, 1887.

FIG. 1.

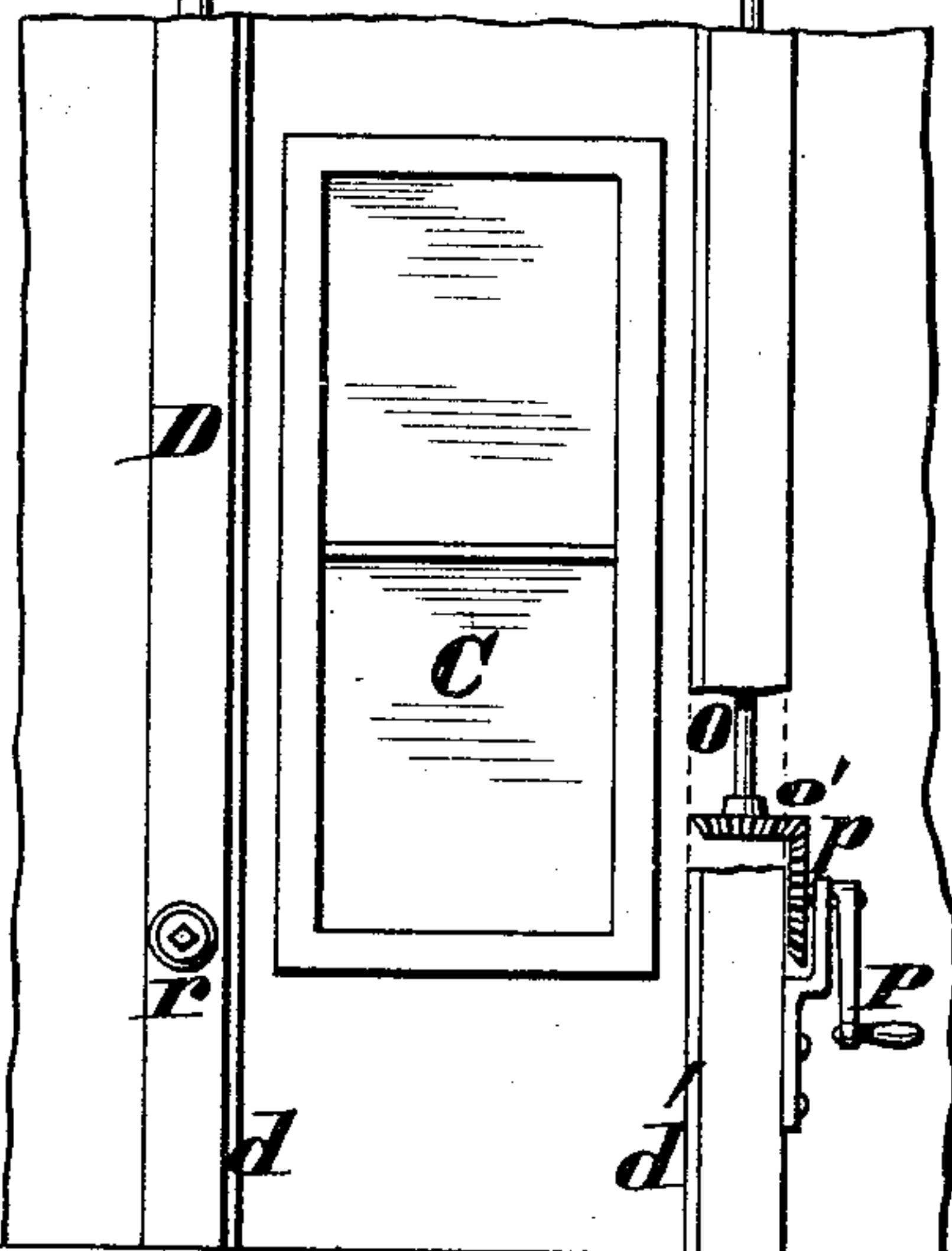
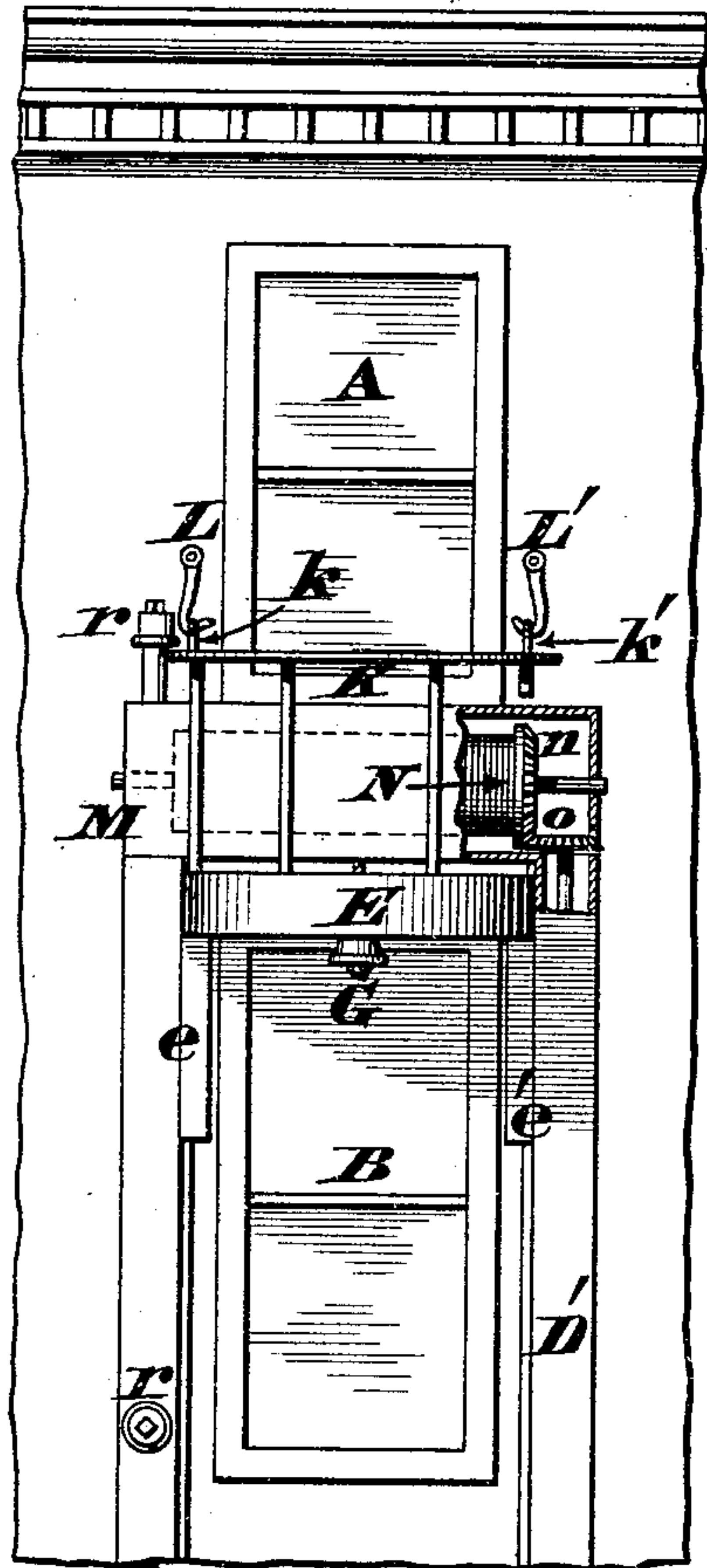


FIG. 2.

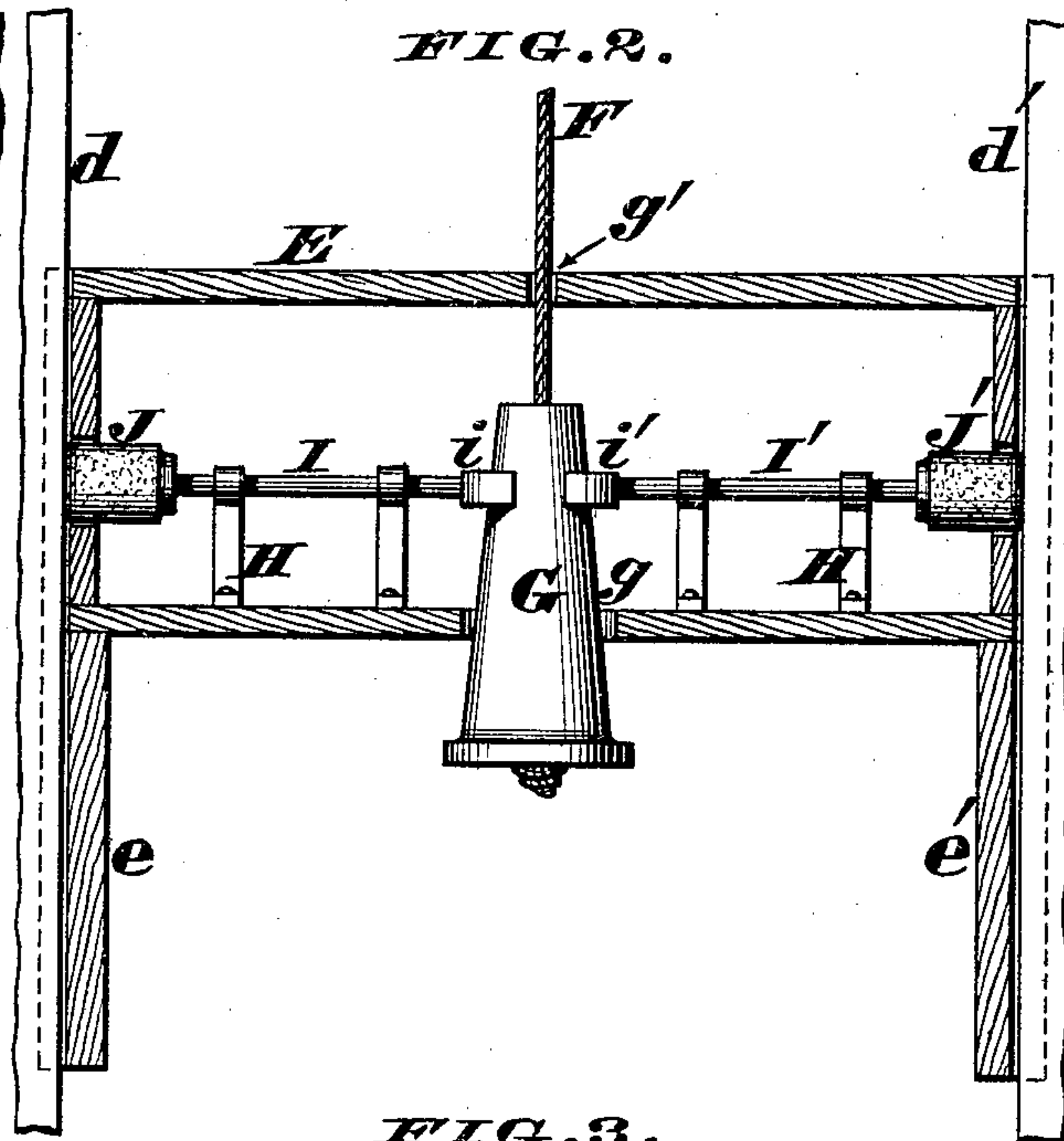


FIG. 3.

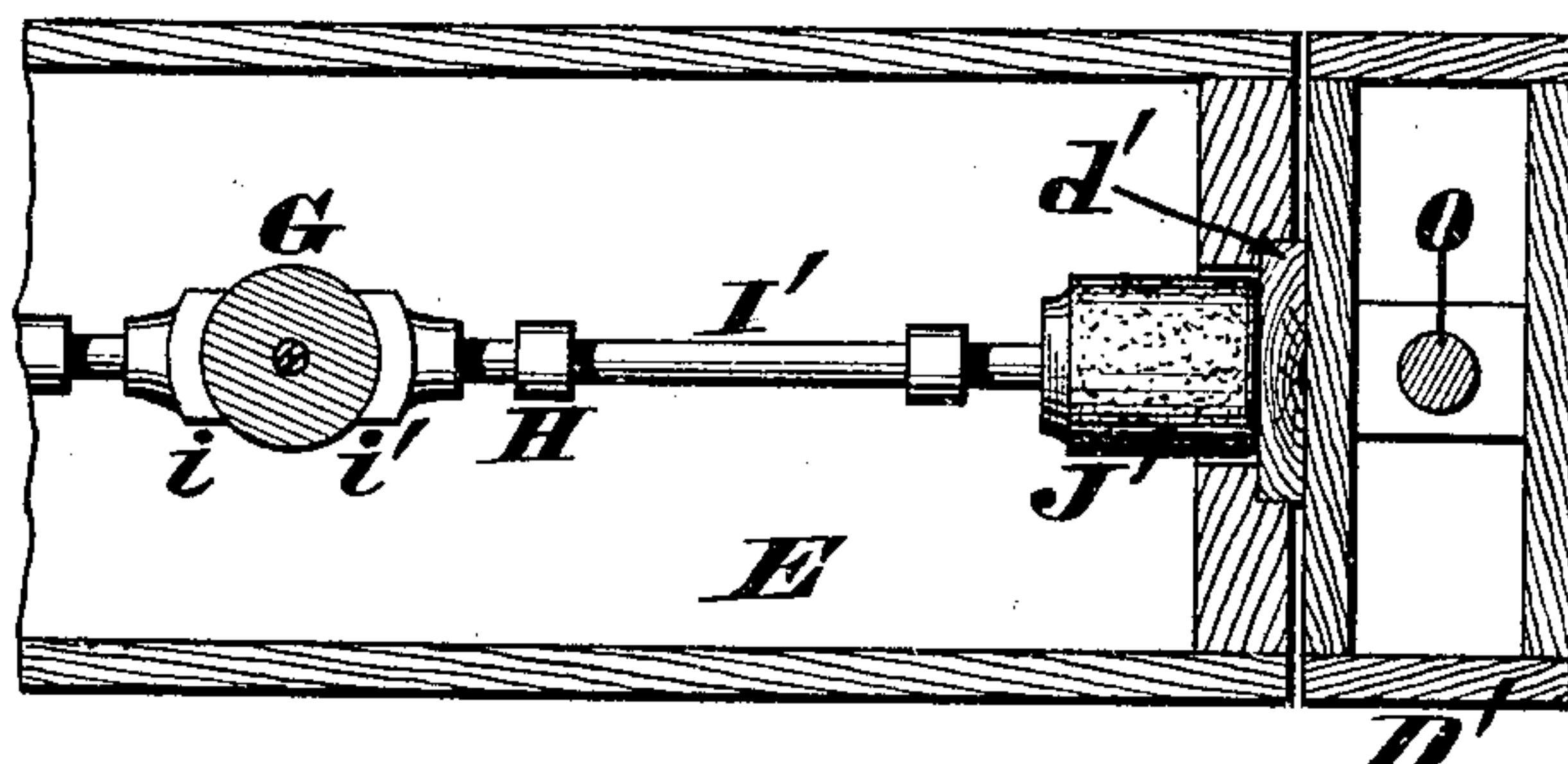
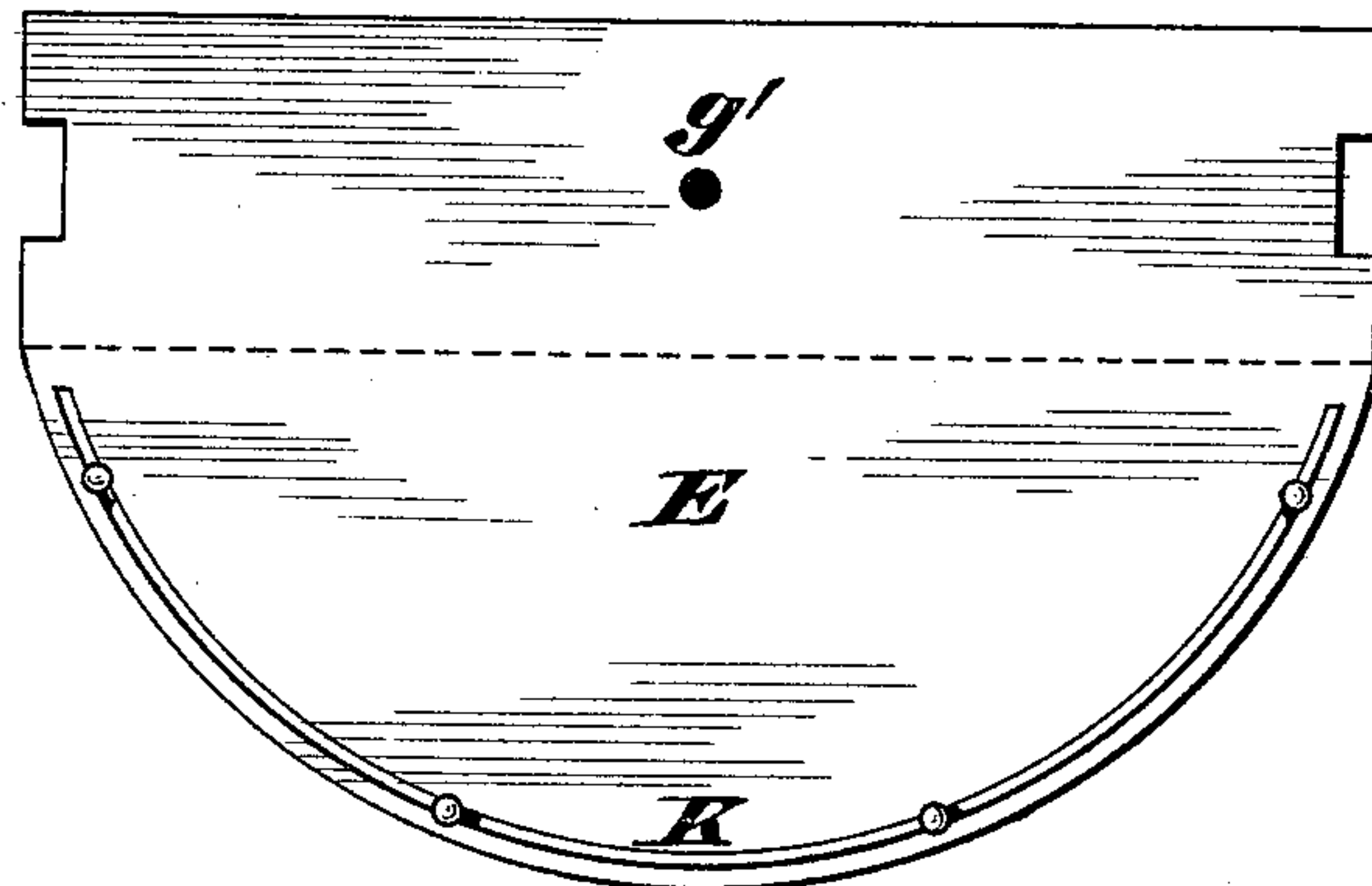


FIG. 4.



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# UNITED STATES PATENT OFFICE.

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## FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 372,526, dated November 1, 1887.

Application filed August 5, 1887. Serial No. 246,224. (No model.)

*To all whom it may concern:*

Be it known that I, LOUISE D. FEIN, a citizen of the United States, residing at Cincinnati, in the county of Hamilton, State of Ohio, have invented certain new and useful Improvements in Fire-Escapes, of which the following is a specification, reference being had therein to the accompanying drawings.

My improved fire-escape consists of a platform or staging suspended from a chain or wire rope and adapted to travel up and down in close proximity to such windows or doors of a building as may be vertically in line with each other, said chain or rope being coiled around a horizontal drum that is located directly under the highest window or door. The platform is arranged to descend automatically as soon as it is unlocked, and is provided with a special form of self-acting brakes which bear against the stanchion guides and thereby prevent a too rapid descent of the staging. After the latter has reached the ground or other place of safety the passengers alight and the platform is again elevated by a system of gear-wheels, the main shaft of which occupies one of the hollow stanchions, while the other stanchion is utilized as a receptacle for a pipe, to which hose can be readily attached, as hereinafter more fully described.

In the annexed drawings, Figure 1 is an elevation of a house provided with my fire-escape, part of the platform-railing being broken away, and a portion of the windlass-housing being sectioned. Fig. 2 is an enlarged vertical section through the platform or staging. Fig. 3 is an enlarged horizontal section of a portion of said platform. Fig. 4 is a plan of the same.

Referring to Fig. 1, A represents a window or door in the upper story of a house, B a window in the story immediately below, and C a window of the ground-floor, said windows or other avenues for escaping from the building being vertically in line with each other. Securely attached to the walls of the building, and located on opposite sides of these openings A B C, are hollow vertical stanchions D D', each of which is provided with a guide, as seen at *d d'*. Adapted to traverse these guides are slides *e e'*, depending rigidly from the platform or staging E, which staging is hol-

low, as seen in Figs. 2 and 3, for the purpose of admitting the self-acting-brake mechanism, the arrangement of the latter being as follows:

F represents the hoisting-chain or wire rope, the depending end of which is secured to a conical head, G, adapted to play freely within an opening, *g*, in the bottom of the platform. *g'* is an opening in the top of the same to permit the passage of the wire rope.

Secured within the hollow platform are standards H, that support a pair of horizontally-sliding rods I I', the outer ends of which are armed with yielding or compressible brakes or cushions J J', of leather, rubber, or other suitable material. The inner ends of these rods have concave bearings *i i'* resting against the opposite sides of the conical head G. Furthermore, the platform or staging E has a railing or other guard, K, which may be provided with staples *k k'*, to admit hooks L L', or other convenient retaining devices, the latter being secured to the building.

Located directly under the upper window, A, is a housing, M, within which is journaled a horizontal drum, N, and this drum has the wire rope F coiled around it. Drum N has at one end a bevel-wheel, *n*, that gears with another wheel, *o*, on top of a shaft, O, journaled within the hollow stanchion D', and having at bottom another bevel-wheel, *o'*. This wheel *o'* gears with another bevel-wheel, *p*, capable of being turned by a crank, P. The other hollow stanchion, D, has a pipe, R, fitted within it, which pipe has screw-caps *r*, the removal of which permit the ready application of hose for extinguishing a fire in any part of the building.

The method of operating my fire-escape is as follows: When the apparatus is in its normal position, the wire rope F is wound around the drum N until the platform E is brought up snugly under the housing M, and is then locked in this position by engaging the hooks L L' with the staples *k k'*, or otherwise. As soon as a fire breaks out in the building, the upper window or door, A, is opened, and the parties desiring to make their escape step from said window directly down onto the platform E and immediately disengage the hooks L L'. The moment this is accomplished the entire weight of the passengers is thrown upon the



platform, which would now descend with frightful velocity unless some provision were made to check its speed. It is apparent, however, that the very instant the platform begins to descend the bearings *i i'* slide down the tapering sides of the conical head *G*, thereby forcing the rods *I I'* outwardly and bringing the brakes *J J'* to bear against the respective guides *d d'*. Consequently sufficient friction is generated by said brakes to insure a safe descent of the platform, and the heavier the load upon the latter the more gradual will be its speed. After the platform has reached the ground and the passengers have alighted, the crank *P* is turned to elevate said platform as speedily as possible, and thus rescue other occupants of the burning building.

It is evident this apparatus is especially adapted for the use of women and children who cannot be induced to descend the ordinary vertical ladders fastened to the wall of a building, and the security of my escape is still fur-

ther enhanced by the railing *K*, which prevents the passengers falling from or being crowded off the platform.

I claim as my invention—

1. The combination, in a fire-escape, of stanchions *D d' D' d'*, platform *E e e'*, suspender *F*, drum *N*, bevel-gears *n o*, shaft *O*, bevel-gears *o' p*, and crank *P*, said shaft *O* being journaled within the hollow stanchion *D'*, for the purpose described.

2. The combination, in a fire-escape, of stanchions *D d' D' d'*, platform *E e e'*, suspender *F*, conical head *G*, and rods *I I'*, which rods have brakes *J J'* secured to their outer ends, for the purpose described.

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

LOUISE D. FEIN.

Witnesses:

JAMES H. LAYMAN,  
SAML. S. CARPENTER.