

(No Model.)

M. D. MARCUS & N. H. EPSTEYN.

ELECTRIC FIRE ESCAPE.

No. 335,372.

Patented Feb. 2, 1886.

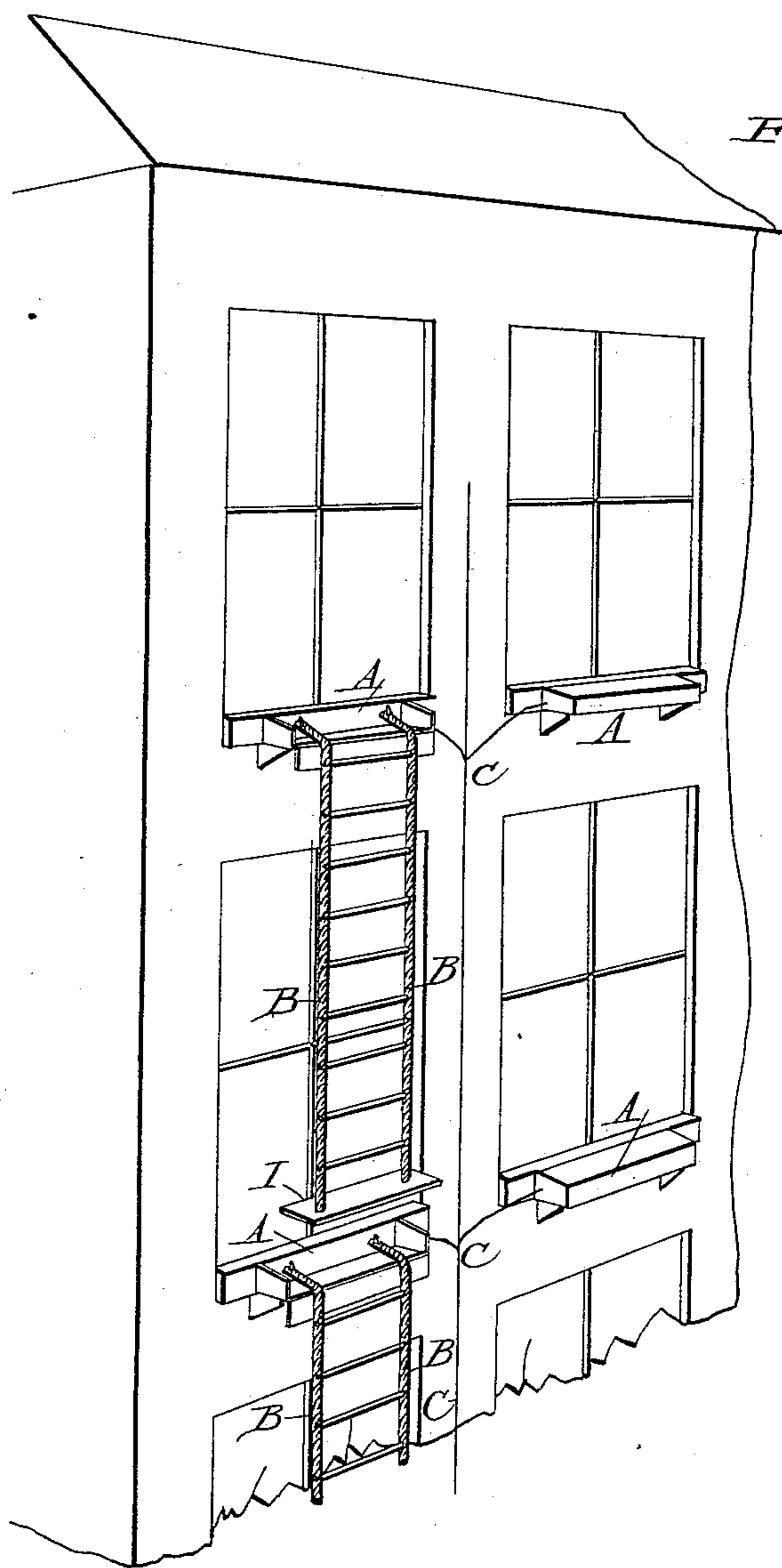


Fig. 1.

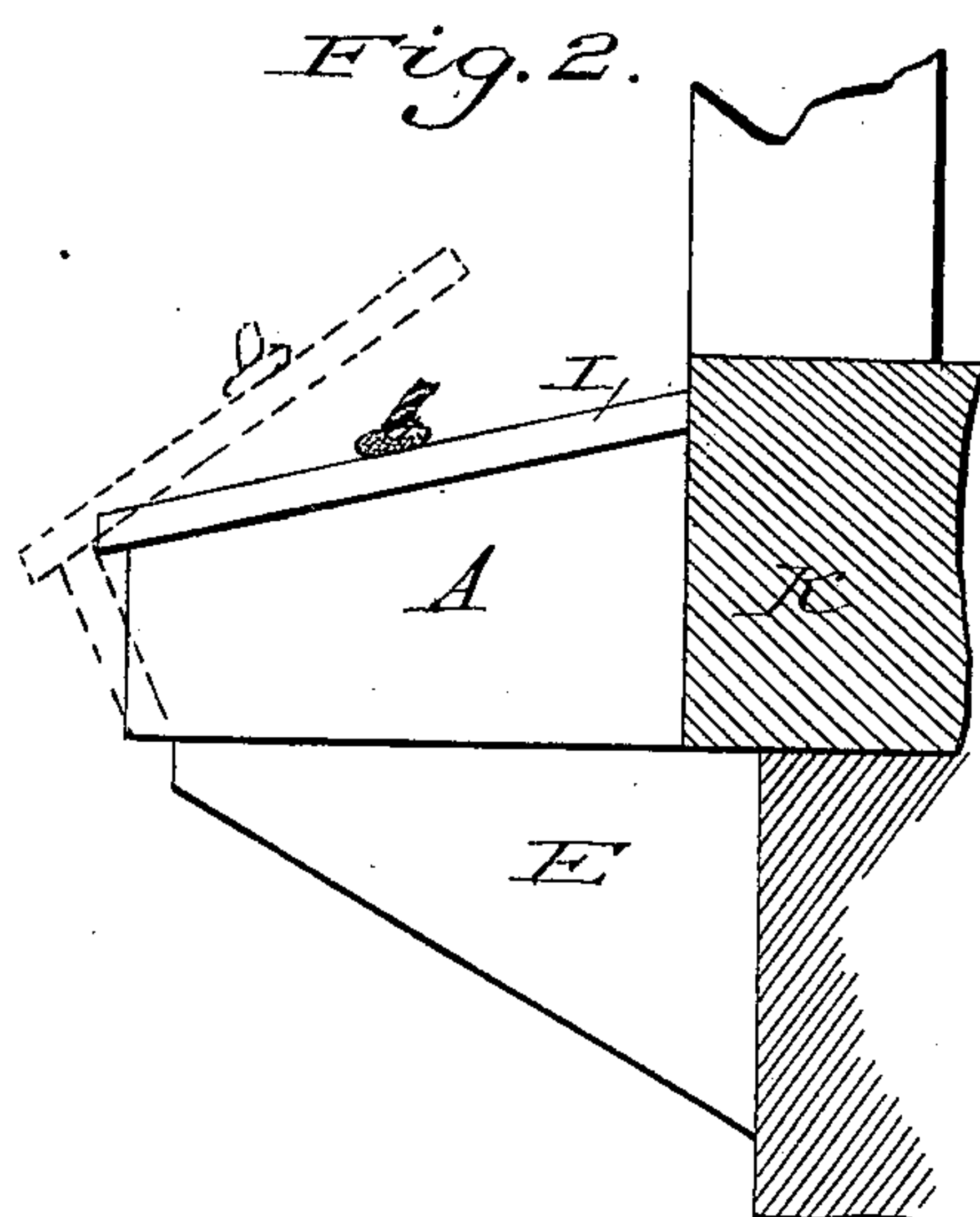


Fig. 2.

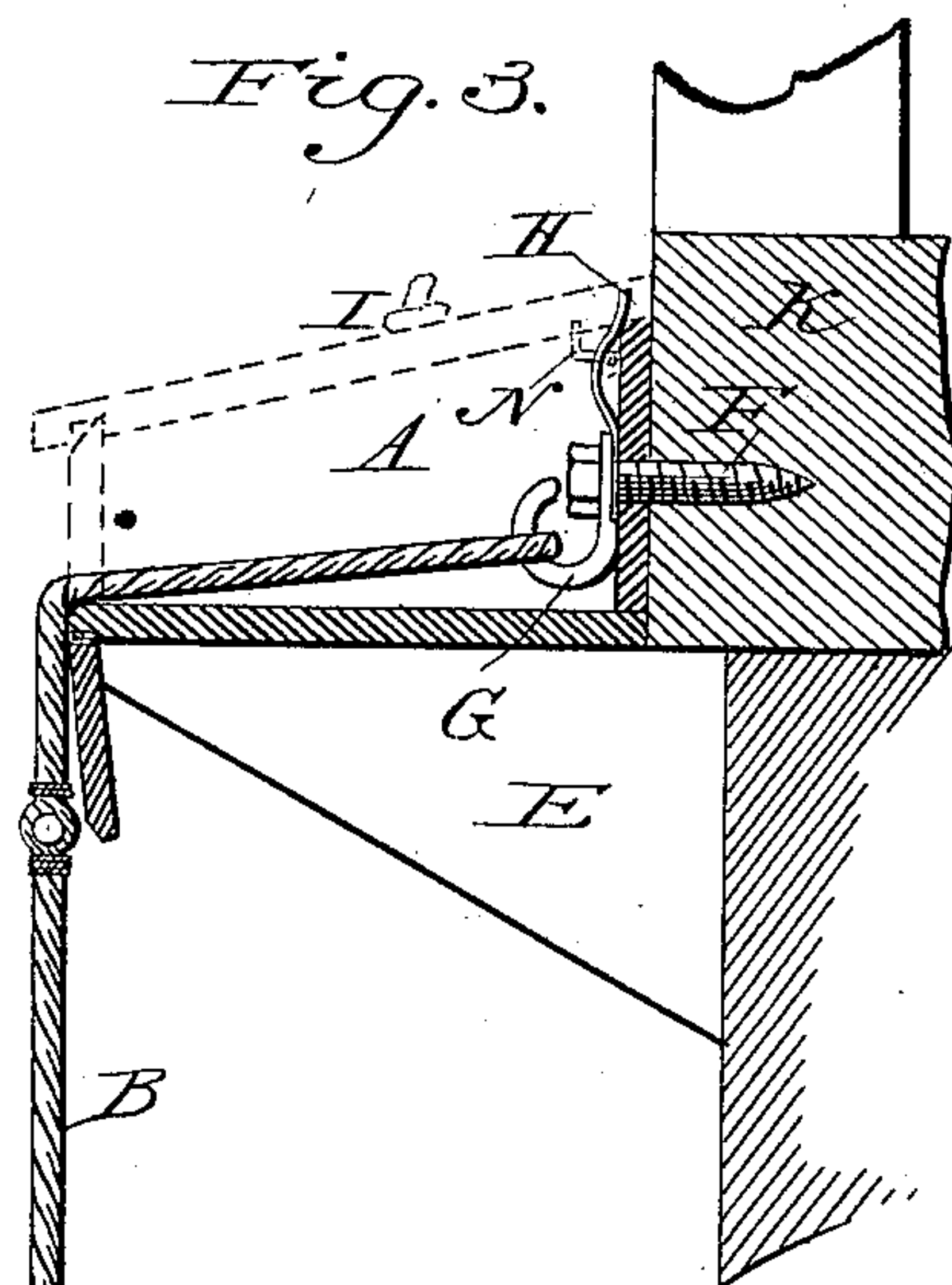


Fig. 3.

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# UNITED STATES PATENT OFFICE.

MICHAELIS DAVID MARCUS AND NATHAN HYMAN EPSTEYN, OF PORTLAND, OREGON, ASSIGNORS OF ONE-FIFTH TO ARTHUR M. PLATO, OF SAME PLACE.

## ELECTRIC FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 335,372, dated February 2, 1886.

Application filed April 10, 1885. Serial No. 161,842. (No model.)

*To all whom it may concern:*

Be it known that we, MICHAELIS DAVID MARCUS and NATHAN HYMAN EPSTEYN, citizens of the United States, and residents of the city of Portland, in the county of Multnomah, of the State of Oregon, have invented a certain new and useful Improvement in the Matter of an Electric Fire-Escape System, of which the following specification is a full and clear description, reference being had to the accompanying drawings and letters of reference marked thereon.

The object of our invention is to save human life and property in case of fire by giving immediate escape from and access to buildings of any height and in any situation instantly upon the first alarm or discovery of fire. This we accomplish by a systematic arrangement of flexible fire-escape ladders attached to and concealed on or under the sill of each and every window in a building, and connected altogether by a continuous electric current or apparatus, culminating at a given place, either on each floor or in halls or office of building, or in offices of fire department or other company, as the system shall be extended and used. By the use of this system, we avoid the delay caused by waiting for fire department or ladder service, and we offer a certain, sure, and speedy escape from danger to guests in hotels, occupants of tenements and other buildings, thus adding greatly to the peace, security, and safety of the general public.

Figure 1 is a general view showing invention ready for use, showing the flexible ladder B suspended from window-sill, showing also electric wires C connecting therewith and operated as hereinafter described. Fig. 1 shows also appearance of building when the invention is not in use, the flexible ladder B being concealed in the case A, attached to window-sill or wall, as described in detail hereinafter. Fig. 2 is a side end view of the case or box A attached to window-sill or wall, as explained in detail hereinafter. Same figure shows, also, brace or support E for case A. Fig. 3 is a section view of invention, showing construction of case A, manner of attaching ladder B,

and mechanism required for operating invention, as explained in detail as follows:

The case or box A is made of iron, metal, or wood, as desired. Said case A has the back, ends, and bottom joined solidly together. The front side is hinged loosely to the bottom of said case or box A. Said case A is firmly attached to window-sill or wall by means of bolts F, being firmly screwed or embedded into the window-sill or wall of building. The bolt F is passed, first, through the eye of iron hook G, thence through metal spring H, then through back of box or case A, and into building or sill. One end of the flexible ladder B is firmly looped or fastened in the hook G. The ladder B is made of a sufficient length to reach from one window to the bottom of the window below. The lower end of ladder B is fastened to the plate or cover I, as seen in Fig. 1. This plate or cover I forms the top or cover of the case A when the ladder is not in use. The said top or cover I is kept in place, as shown in Fig. 3, by having a notch or groove for the reception of the loosely-hinged front side of the case or box A, and also by means of the electric catch or latch N, which is made to catch into a notch in said top or cover I, made to receive same. The catch or latch N is brought into connection with the system of electric wires on a principle similar to those used by electric-bell methods in hotels.

The metal spring H is composed of one or more pieces of spring metal bent to attain a force or power sufficient for the purpose. The upper end, or end of spring H, is brought between the edge of top or cover I and wall or sill K for the purpose of throwing or discharging the said top or cover I over the edge of case A when the latch or catch N is released by the electric shock.

The mode of operating and using the invention or electric fire-escape system is simply as follows: When an alarm of fire is given in a building or hotel, the watchman or any other person, by pressing on a knob or pulling on a hook, (according to style of electric apparatus used,) said hook or knob situated in a place of easy access and connected with an electric



current of sufficient power for the purpose described, sends an electric shock into each and every box or case A, attached to every window in building. The electric shock contracts the catch N, Fig. 3, thereby causing it to drop out of notch and thus releasing metal spring H. Said spring frees itself with sufficient force and energy to throw off the top or cover I, having the lower end of the flexible ladder B attached thereto. Said cover I, being released and pushed, drops down, dragging the ladder B with it, and the top or cover I thus becomes the bottom round or step of said ladder, and said top being heavy serves to prevent ladder from swinging loosely. The front side of case A, being loosely hinged, drops down and back out of the way. The bottom of said case A being solid and braced serves as a safe platform to step out on, also serves as a guard or rail to keep the ladders at a safe distance from the wall or window, thus preventing injury to persons from chafing or striking against wall or glass.

The ladders are made of ample length to make access easy from one window to another, and, in fact, serve as one continuous ladder from top to bottom of building. Where the system is extended to the use or control of fire-department or other company, it thus becomes the power of said department or other company to immediately surround a building with ladders, thus giving immediate easy access to

and from every portion of such building in and at the moment of discovery of such fire. Connecting with and as a part of this system will be an alarm-bell, placed in every room, for the purpose of awaking and warning occupants of danger. The said alarm-bells are connected with same electric current used in operating this system.

Having thus described our invention fully, what we claim as new, and desire to secure by Letters Patent of the United States, is—

1. In combination with an electric fire-escape apparatus, the case or box A, for the purpose of retaining flexible ladder when not in use, and constructed to serve as case-platform and ladder-guard, substantially as described and set forth.

2. In combination with an electric fire-escape apparatus, the mechanism of latch N and spring H, connected with and attached to case A, for purpose of holding, also releasing, cover I of case A, therewith precipitating said ladder attached thereto by force of electric shock and spring force, substantially as set forth and described, making ladder instantly ready for use.

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