

No. 712,504.

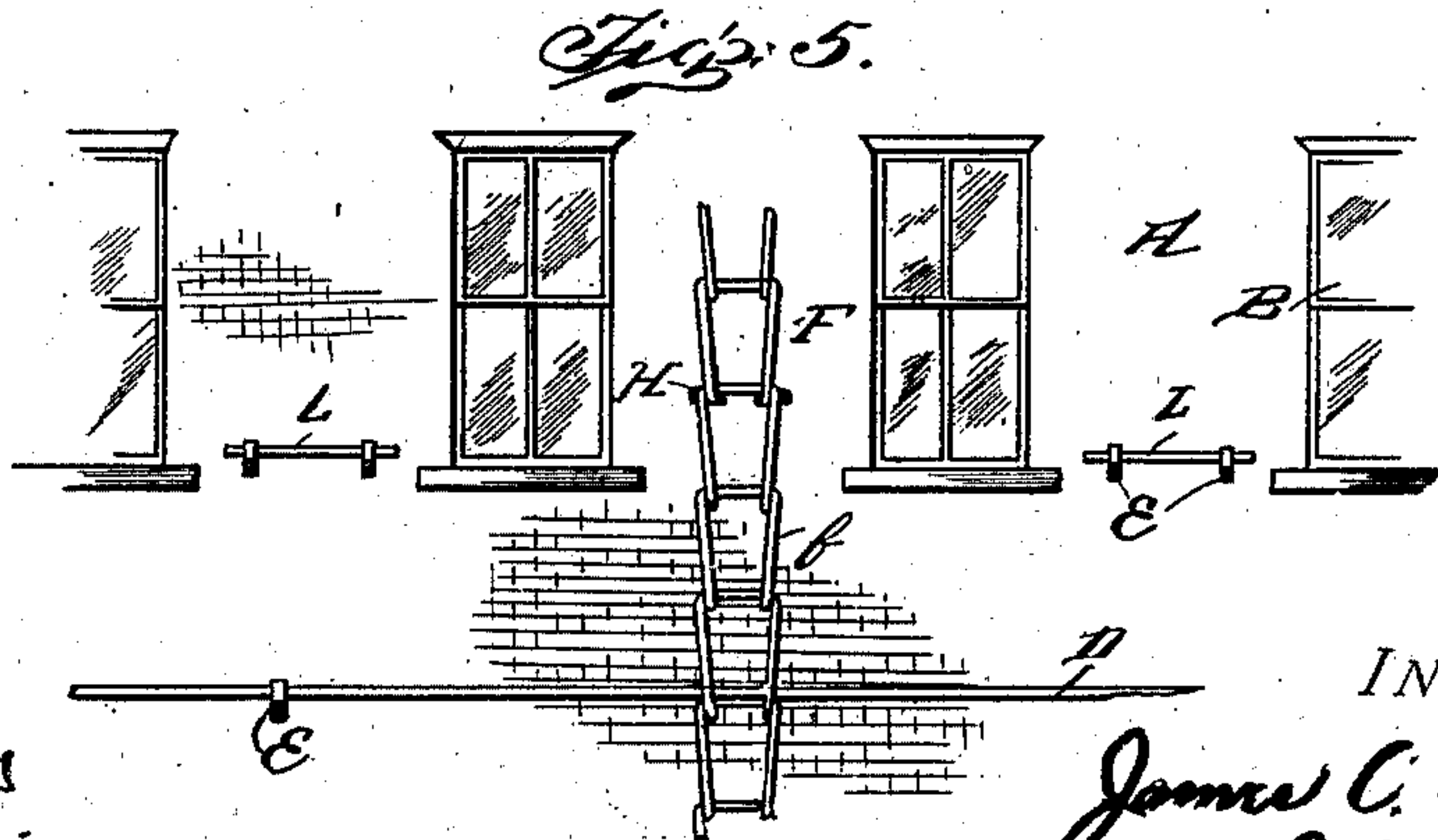
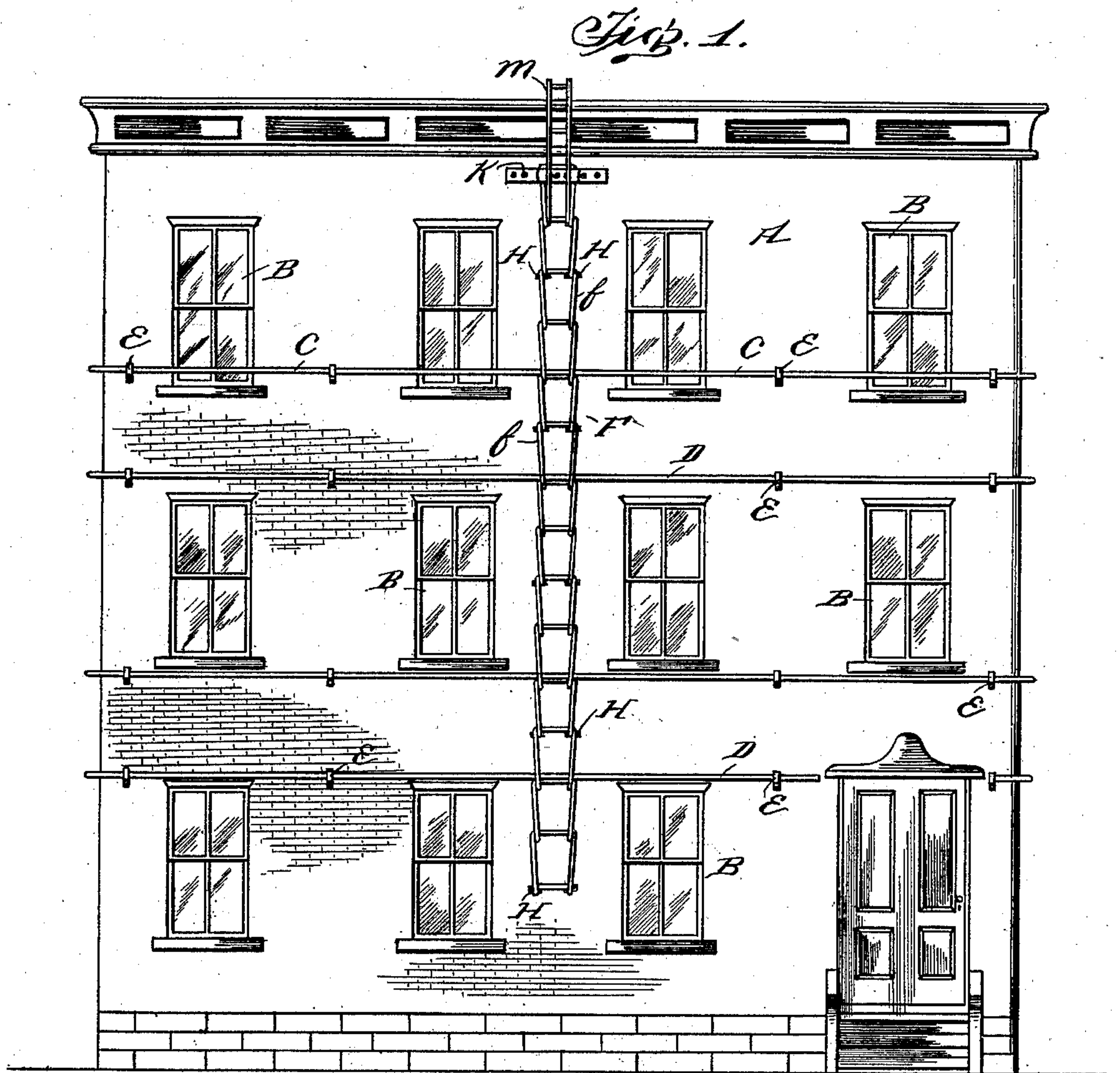
Patented Nov. 4, 1902.

J. C. COVERT.
FIRE ESCAPE.

(Application filed June 5, 1902.)

(No Model.)

2 Sheets—Sheet 1.



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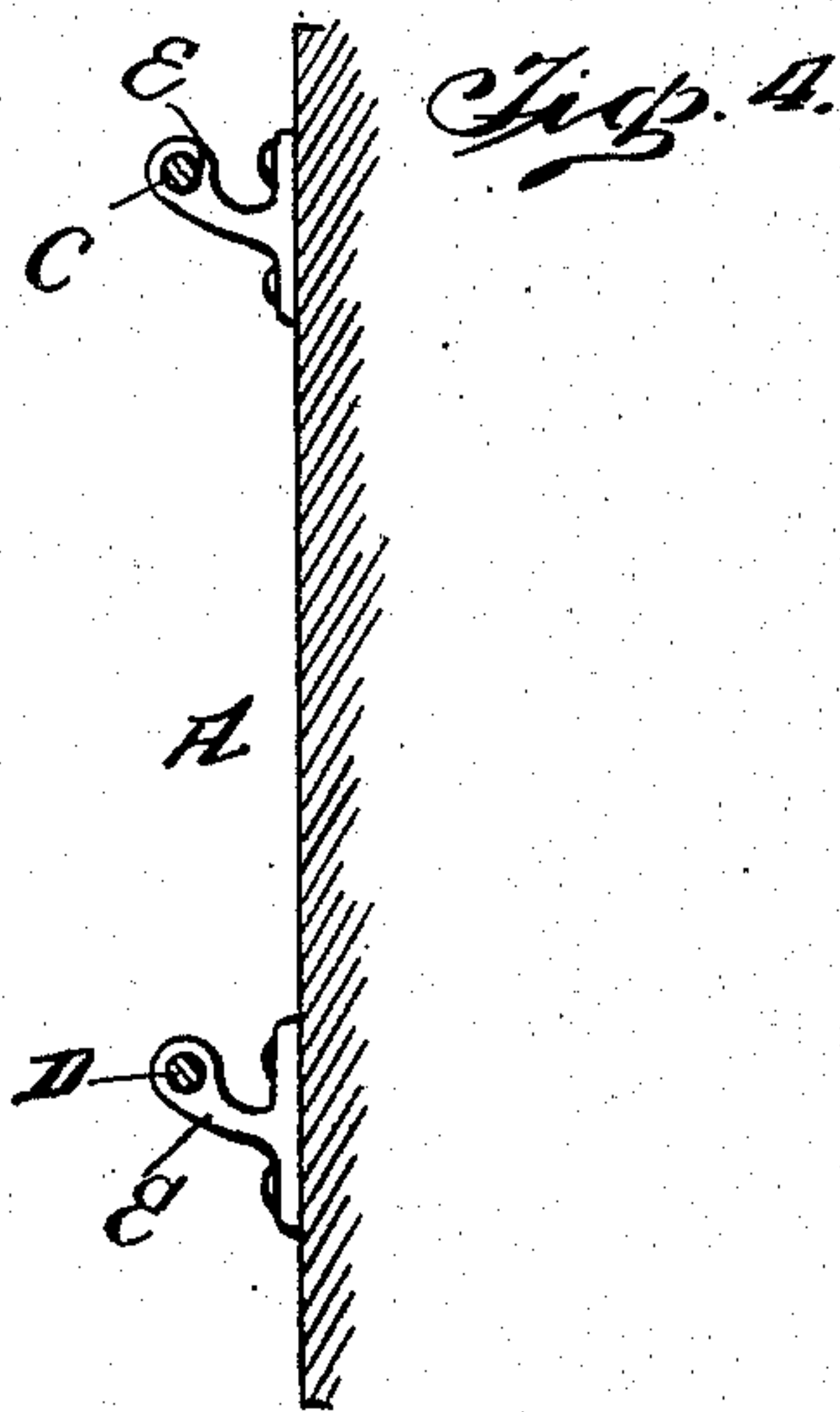
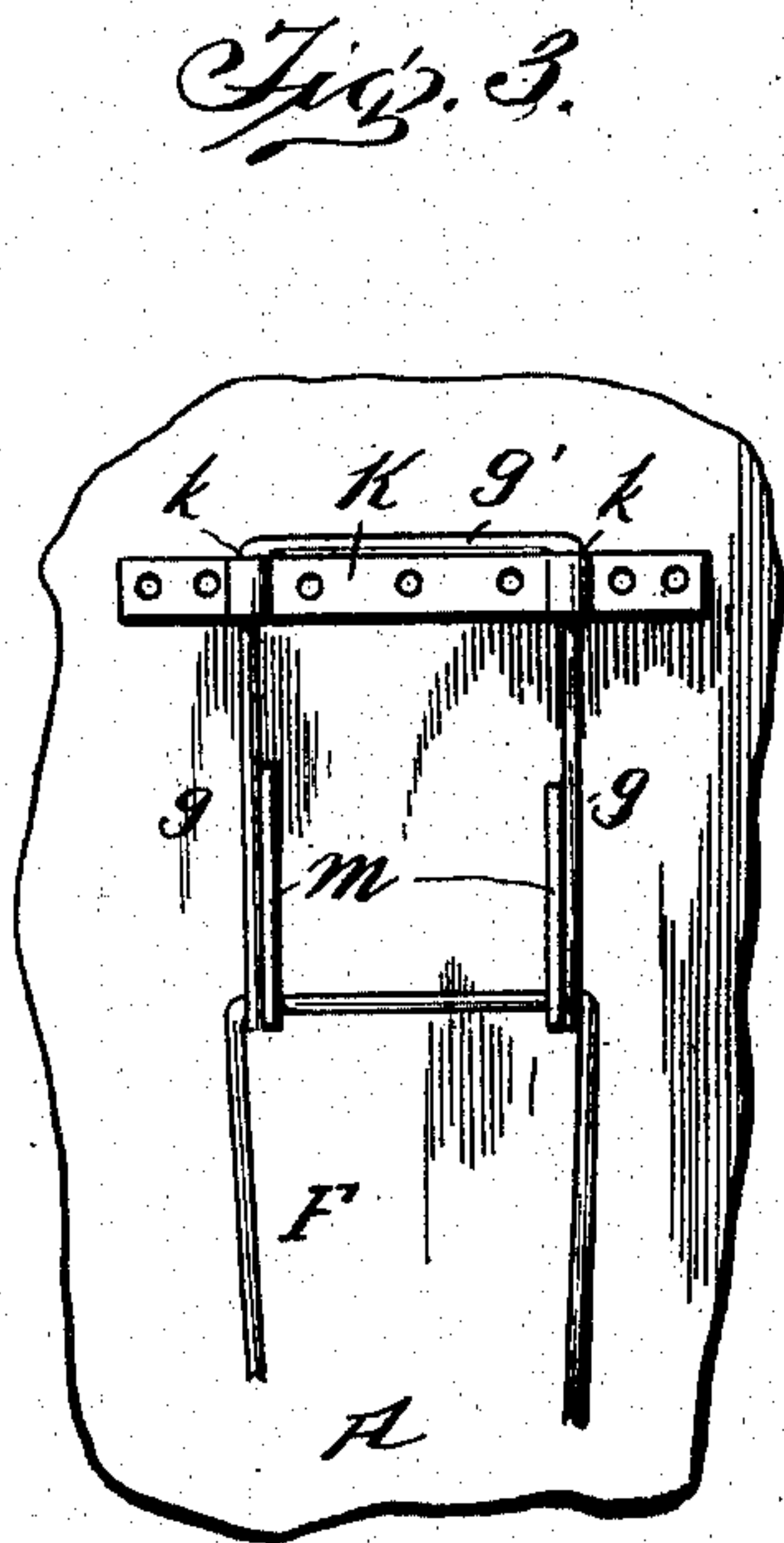
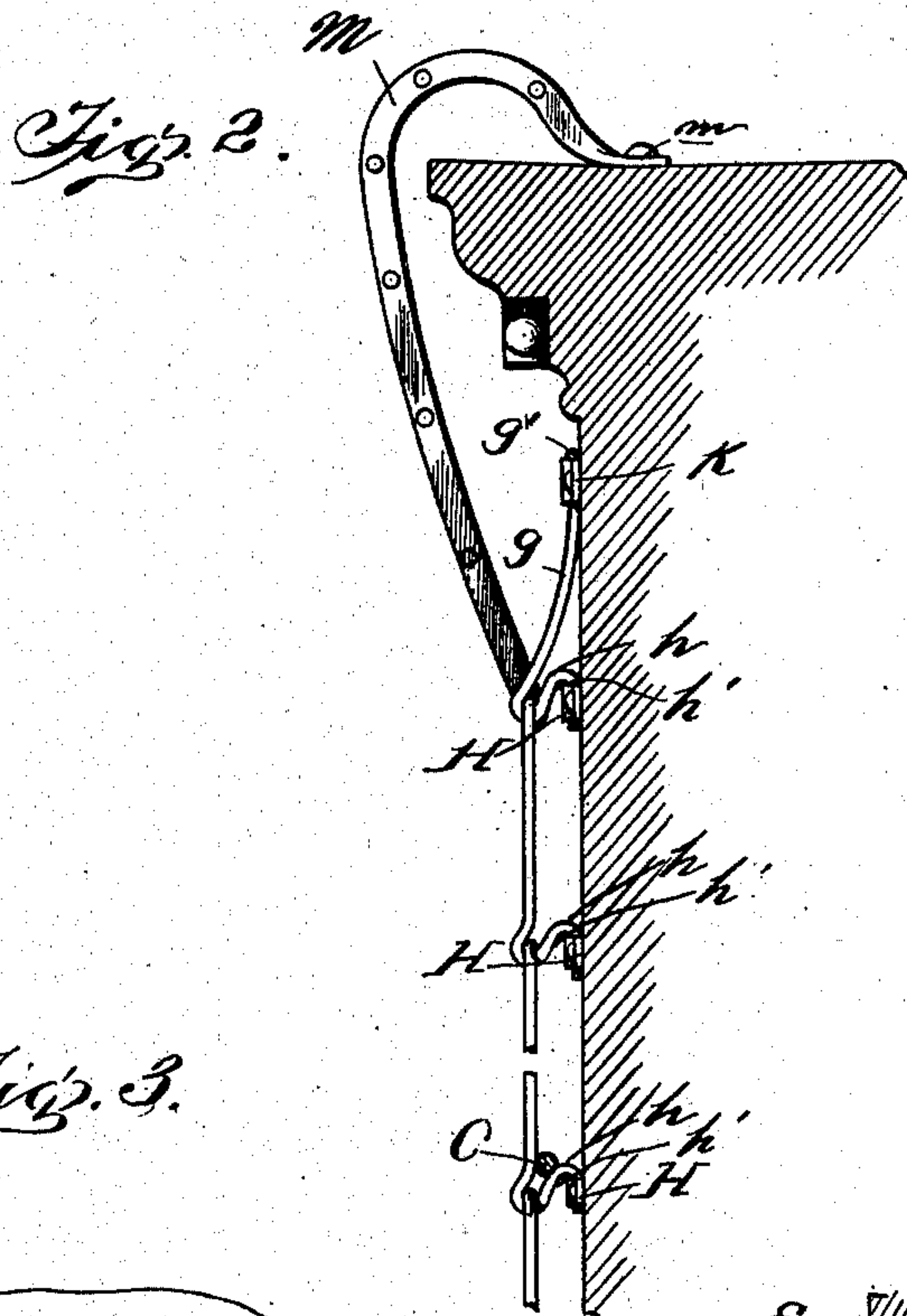
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UNITED STATES PATENT OFFICE.

JAMES C. COVERT, OF WATERVLIET, NEW YORK.

FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 712,504, dated November 4, 1902.

Application filed June 5, 1902. Serial No. 110,297. (No model.)

To all whom it may concern:

Be it known that I, JAMES C. COVERT, a citizen of the United States, residing at Watervliet, in the county of Albany and State of New York, have invented certain new and useful Improvements in Fire-Escapes; and I do hereby 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 fire-escapes; and it is embodied in the construction and arrangement of parts presently to be described, and defined in the claims.

The invention comprises suitable supports, which shall be herein termed "foot-rails" and "hand-rails," the latter located above the former a distance so that it can be readily grasped by a person standing on the foot-rail and conveniently so that persons can pass their arms around the hand-rail. Both rails are secured as a permanent fixture to the building.

An additional feature of the invention resides in a specially-constructed ladder of the sectional type.

In the drawings, Figure 1 is an elevation of the front of a building, showing the improvement applied. Fig. 2 is an enlarged side elevation showing parts in section. Fig. 3 is a front elevation of the upper portion of the ladder. Fig. 4 is a section showing the secured brackets for the rails, and Fig. 5 is a modified form of arrangement of hand-rails.

While special constructions are shown in the drawings, it is to be understood that various modifications can be made and still be within the principle of the invention.

It is highly objectionable in fire-escape structures to equip buildings with what is known as the "balcony" type, and so for the reason that they largely disfigure the building and are very expensive. While the present invention may be classified as the "balcony" type, yet it differs materially therefrom in that but a single rod or bar need be employed in lieu of the extensive form of balcony, and, further, the supports are relatively small, and when applied to a building they as fixtures do not disfigure the same and can be erected at a comparatively small cost.

A building in the drawings is designated by

the letter A and is shown as provided with windows B. Immediately below and in close proximity to the lower end of each row of windows, or, as shown in the upper part of Fig. 1, across the lower part of the window is a hand-rail C, extending conveniently the width or across the sides of the building. Below the hand-rail C, preferably a distance of four feet, or thereabout, is the foot-rail D, parallel with the hand-rail and also extending the length or across the face of the building. These rails are set out from the building approximately six inches and are supported conveniently by brackets E, made fast to the building in any desirable manner. In this connection I would state that the means for securing the rails in place may be widely different from those shown, and in some instances simple eyebolts can be employed.

F designates a ladder, which is made up of a series of U-shaped sections *f*. The upper section is formed with inwardly-extending side bars *g* and a cross-bar *g'*. The lower ends of the side bars are bent back and upward to form hooks *h*, into which the cross-bars of the adjacent section is placed. The hooks are also bent back and downward in a reverse curve, as at *h'*, forming tongues, which lie close to the building. Over these tongues are placed staples or clips H, which in turn are secured to the building. These securing means may be employed throughout the ladder or with a few only of the sections, the purpose being to fixedly secure the ladder as a whole in place. To secure the upper section against movement and so as to act as the primary or main support for the ladder is a factor of considerable importance. To accomplish this, I preferably form an elongated plate K, having crimps *k* therein, in which the ends of the side bars fit. The plate is arranged directly below the cross-bar, so that the latter rests on the upper edge of the plate, which in turn is fixedly secured to the building by screw-bolts or other fastening means. The ends of the plate can be extended any desirable distance beyond the section and secured to the building in any convenient manner.

In the construction of the ladder each section except the upper is a counterpart of the other, and the section across which the rails

pass serves as supporting means for the rails at that point. The rails in that particular section rest in the hook portions of the section above the cross-bar of the section next below, as shown. The ladder by the hooks is kept away from the building, so that a person can readily use the ladder in ascending or descending.

In operation, a fire occurring in the building, the inmate of a room instead of passing down a hall to a fire-escape simply reaches out of the window, grasps the hand-rail, and swings or drops down until the feet rests on the foot-rail. The person can then readily move along the foot-rail to the ladder, or should the rail be hot or the hands become tired the arms can be employed, the person facing either outward or toward the building, both arms being hooked or passed around the hand-rail. This may be necessary if flames should issue from a window between the person and the ladder. The person can thereby hold on until rescued.

It will be seen that all parts are fixed and permanent, so that no objectionable moving element is present.

As is usual in ladder-escapes, some means should be employed to reach and escape from the roof. In that connection I conveniently employ a curved section of ladder M, which projects around the cornice. To properly secure the ladder M in place, the upper ends of the side bars are secured by plates and fasteners *m* to the roof, and their lower ends are perforated and sleeved over the cross-bar of or otherwise secured to the section of ladder F directly connected to the uppermost section, as shown. By this means of securing the ladder or section M the weight will be largely borne by the securing-plate K.

By the construction of fire-escape as described each room and window is provided with a permanent fire-escape, one that can be readily resorted to in emergency and one which is a permanent fixture not materially disfiguring the building.

It is of course to be understood that the rails may be extended continuously across the front and sides and back of the building or where there are windows, as desired.

In Fig. 5 is shown a slightly-modified form, wherein the hand-rails L are short sections be-

tween the windows, the person relying on the window-frame for hand-support during part of the progress toward the ladder. This construction may be desired when rows of windows are shuttered.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is—

1. A fire-escape for buildings comprising in the combination a building, of a supporting-rail for the feet arranged a short distance from the side of the building, a stationary hand-rail arranged above said other rail a distance to permit the direct grasping thereof by a person standing on the first-mentioned rail, means for securing the rails fixedly and independently to the building and a ladder secured to the building and extending vertically across the face of the building.

2. A fire-escape for buildings comprising in the combination a building, a horizontal foot rail or rod fixedly secured to the side of the building and extending across the same, a stationary rigid hand-rail located in direct grasping distance above the foot-rail, and fixedly secured to the side of the building, and escaping means extending from the rails to near the ground.

3. In a fire-escape the combination with a building, of a sectional ladder secured thereto, the upper section having inwardly-bent side bars and a cross-bar, a securing-plate K embracing the side bars and against which the cross-bar rests, and means securing the plate to the building.

4. In a sectional ladder for fire-escapes, the combination with ladder-sections to be secured to a building and each having cross-bars, of a roof-section having securing means at its upper ends and its lower end being bent downward and secured to the cross-bar of one of the upper sections of the ladder, an upper section of the ladder having the side bars bent inward and a securing-plate for the upper end of the upper section.

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

JAMES C. COVERT.

Witnesses:

L. M. GOTWALD,
L. S. BACON.