

(No Model.)

L. A. H. ENGELKE.  
FIRE ESCAPE.

No. 326,961.

Patented Sept. 29, 1885.

FIG. 1.

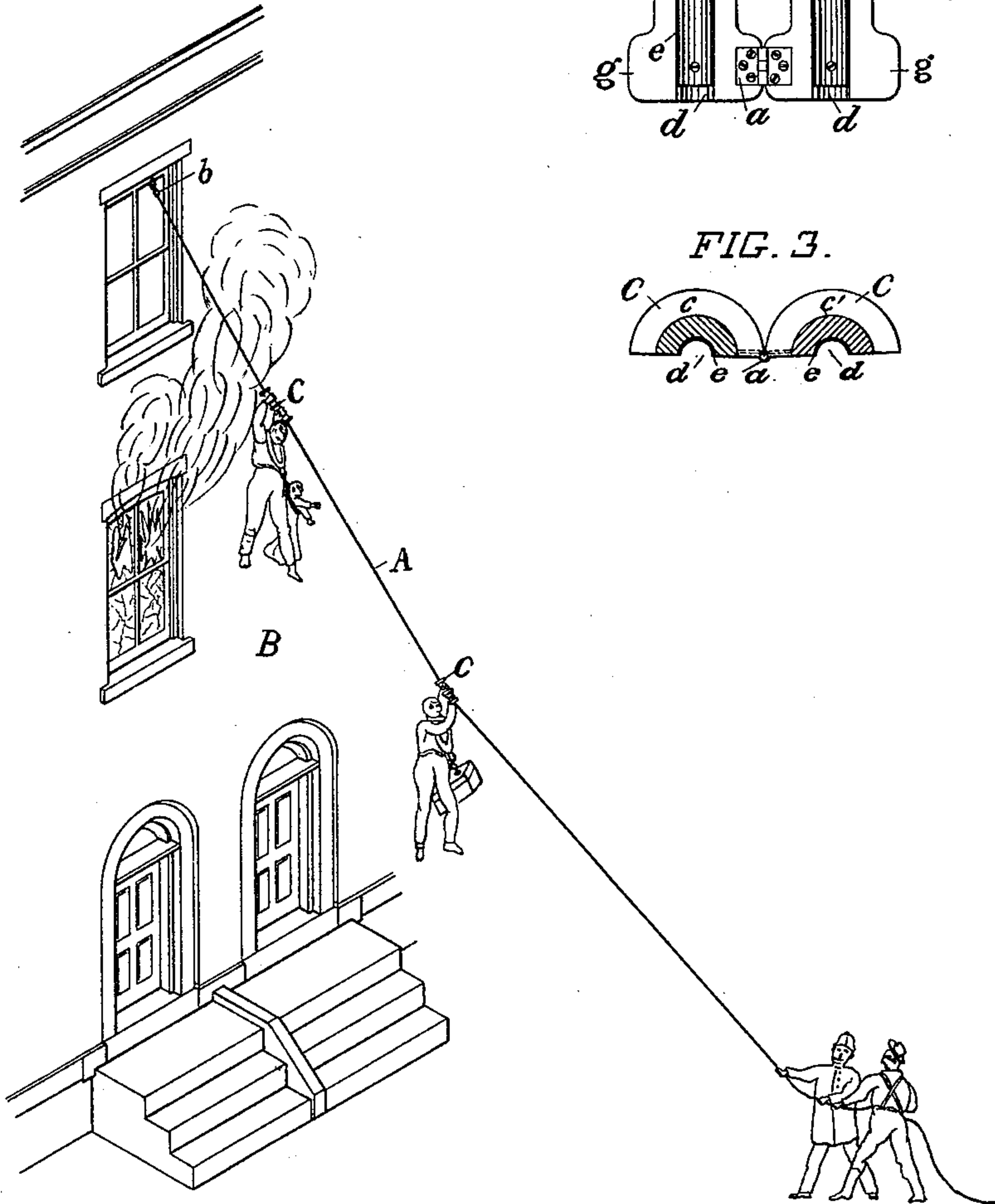


FIG. 2.

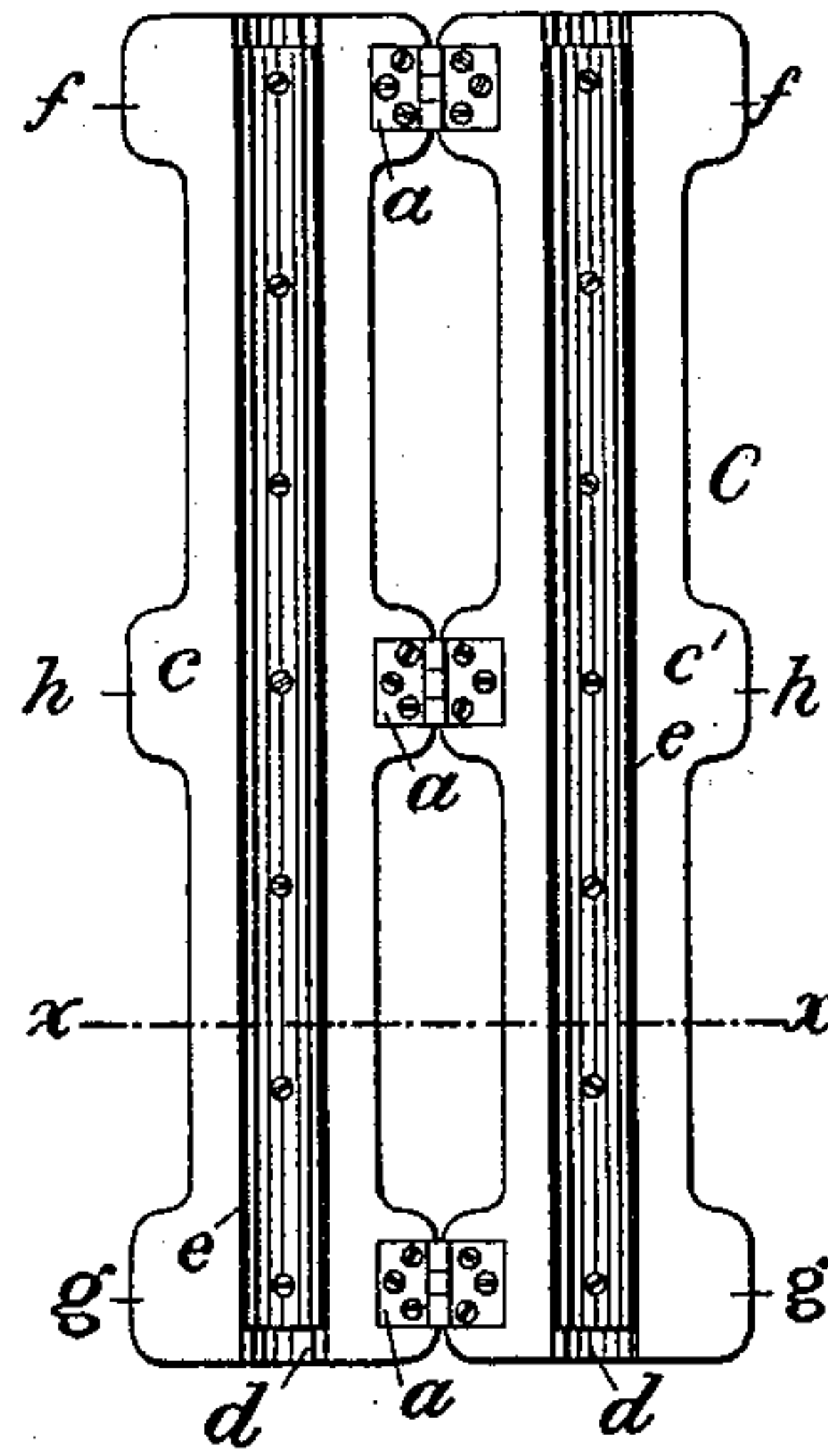


FIG. 4.

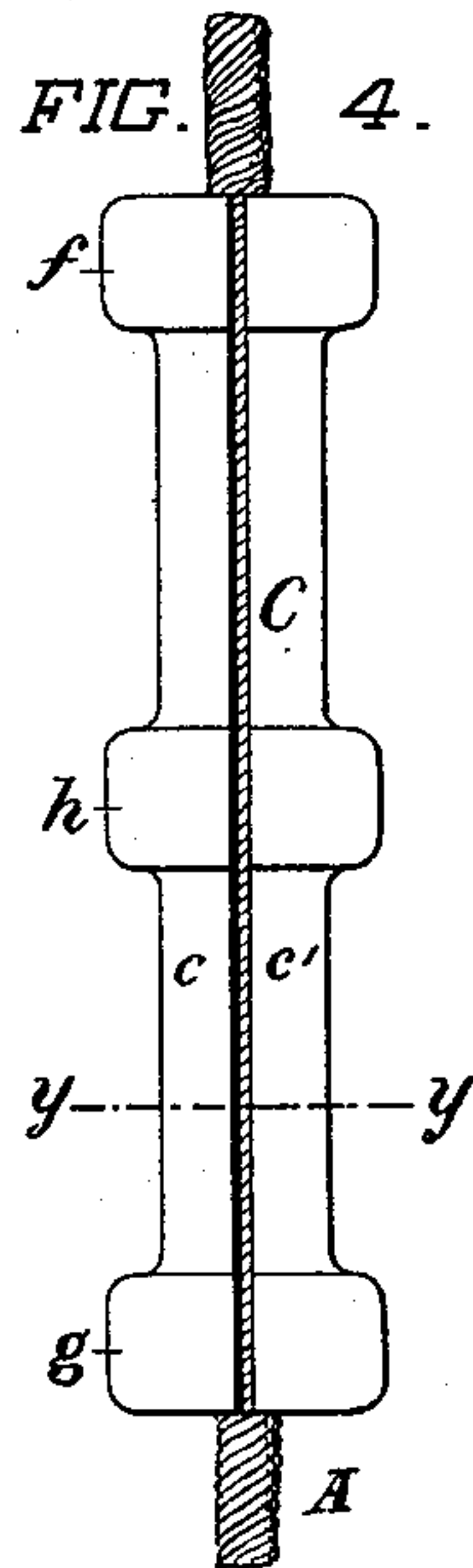


FIG. 3.

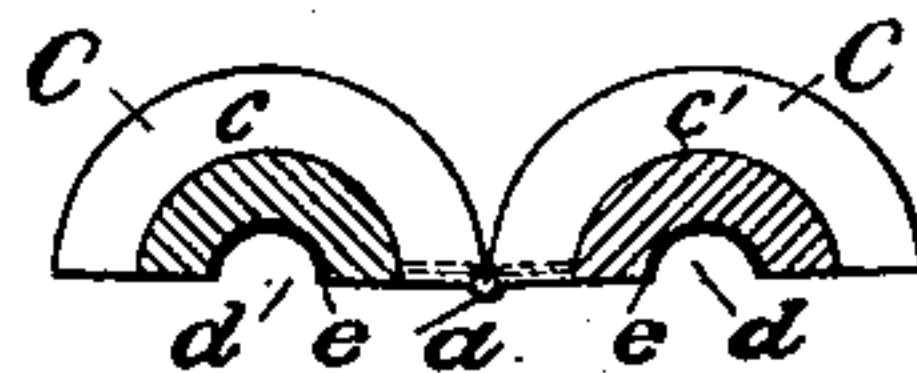
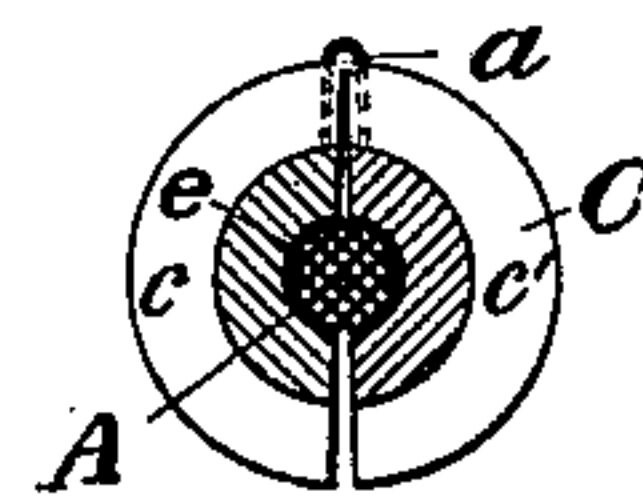


FIG. 5.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

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## FIRE-ESCAPE.

SPECIFICATION forming part of Letters Patent No. 326,961, dated September 29, 1885.

Application filed May 23, 1885. (No model.)

*To all whom it may concern:*

Be it known that I, LEOPOLD A. H. ENGELKE, of the city and county of Philadelphia, in the State of Pennsylvania, have invented certain  
5 new and useful Improvements in Fire-Escapes, of which improvements the following is a specification, reference being had to the accompanying drawings, forming a part hereof, in which—

10 Figure 1 is a perspective view of my improved fire-escape attached, by means of a rope or cable, to a building, showing how the same is operated. Fig. 2 is an interior view of the hand-gripping device. Fig. 3 is a cross-section on the line  $x x$  of Fig. 2. Fig. 4 is an  
15 elevation of my improved hand-gripping device in the position it occupies when it has clasped the cable or rope; and Fig. 5 is a transverse section on the line  $y y$  of Fig. 4.

20 Innumerable devices have heretofore been constructed of a portable nature for the purpose of effecting the escape from buildings and other structures in case of fire or other emergencies, consisting of an endless rope or  
25 band with adjustable hooks, and carrying a sheave for the rope to travel upon, and provided with a short tube, made of rubber or analogous material, for the passage of the rope, and performing the function, by the compression of the tube, of a brake for regulating the  
30 descent. Again, they have been made consisting of a rope depending from a building and having a compressible slider, made of rubber or other similar collapsible material, for  
35 permitting the passage of the rope through it, and also acting as a brake for regulating the velocity of the person's descent. Again, they have been made consisting of a rope having a tubular or cylindrical stem with a friction-  
40 lever fulcrumed thereon, and a strap secured to the lower end of the lever, for the purpose of being slipped around the body of a person, depending from the cylindrical stem or slider, for enabling the person to regulate the action  
45 of the friction-lever, and thereby regulating the speed of descent.

While all of the above-enumerated devices are more or less portable, still a serious objection to their practical utility and use is that  
50 they all lack one essential feature or requisite in such class designated as "portable fire-escapes," and that is a hand-gripping device

for effecting the descent, which is not a permanent fixture of the rope or cable, but one or any number of which may be clasped around  
55 it at any desired point or part of the rope or cable, to enable any number of persons to effect instantaneously and simultaneously a descent from a building or other structure in case of  
60 a fire while using but a single rope or cable for that purpose; and it is with a view of accomplishing this very important object that my invention has been specially designed, by providing for this purpose a device of simple  
65 construction, possessing durability, and at the same time comparatively inexpensive.

My invention consists of a rope or cable depending from a building or other structure, and having my improved hand gripping device, any number of which may be clasped  
70 around the rope or cable at any desired point or part thereon. This hand-gripping device I make of wood or other suitable material in section, the parts or sections of which are hinged together, and the interior has a cylindrical longitudinal bore for the reception of  
75 the rope or cable. This bored-out interior portion of each section has a lining or bushing, of rubber or other analogous material. The exterior of the hand-gripping device, resembling in form a "dumb-bell," has top and  
80 bottom collars for the purpose of properly supporting the hands clasped around it, and a central lateral flange or collar for preventing the hands from coming in contact with one  
85 another, while at the same time giving more perfect freedom of movement and manipulation of the hands to regulate the velocity with which the descent of an object depending from  
90 the hand-gripping device shall be made, according to the pressure exerted thereupon.

I use rope the diameter of which is slightly greater than the longitudinal bore of the interior of the hand-gripping device when it has clasped the cable or rope, so that there  
95 may be always a narrow space between the sections, the object being to have the sections perform the function of a brake to facilitate or retard the descent of the person or other object, as shown clearly in Figs. 1, 4, and 5  
100 of the accompanying drawings.

I also use advantageously in connection with my improved fire-escape, (although not connected with the device,) a sling made of duck



or similar material, which may be passed around the neck of the person suspended from the hand-gripping device, and attached to which, by means of a snaffle-hook and ring, is a body-belt made of similar material to that of which the neck-sling is made. This body-belt may be lengthened or shortened, as desired, for being passed around the body of a child or other object, thereby enabling me to effect the escape of one or more persons with my improved device without in the least affecting the free movement and manipulation of the hands upon the gripping device, as shown in Fig. 1 of the drawings.

In the accompanying drawings, A represents the rope or cable attached to a building, B, or other structure by an ordinary hook, *b*, and depending from the building B.

C represents my improved hand-gripping device, made of wood or other suitable material, the two sections of which are hinged together, as shown in the drawings at *a a a*. This hand-gripping device is made resembling in form a dumb-bell, but in sections *c c'*, as shown in Fig. 2 of the drawings, and is hinged together, the interior of which has a cylindrical longitudinal bore, *d*, for the reception of the rope or cable A. This cylindrical longitudinal bore *d* has a lining or bushing, *e*, of rubber or other analogous material, for offering a frictional resistance to the speed of descent on the rope or cable.

The exterior surfaces of the hand-gripping

device or dumb-bell has collars *f g* at the top and bottom thereof, respectively, and a central collar, *h*, for the reception of the hands of the person between the collars *f h g*, respectively, for the purpose of insuring freedom of movement and manipulation of the hands, and for supporting them upon the hand-gripping device to regulate the velocity of descent.

I prefer to have the rope or cable A somewhat longer than the vertical height of the window to which it may be attached, in order that the person descending it may be kept a sufficient distance from the flame or smoke issuing thereunder, the end of the rope being held substantially in the manner shown in Fig. 1 of the drawings.

The mechanism for accomplishing this object being so simple a further description of the invention is deemed unnecessary.

Having thus described the nature and objects of my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a portable fire-escape, the combination of the hinged hand-gripping device C, having collars or flanges *f h g* thereon, with interior lining or bushing, *e*, for the reception of, and frictional resistance to, the rope or cable, substantially as and for the purposes described.

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Witnesses:

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