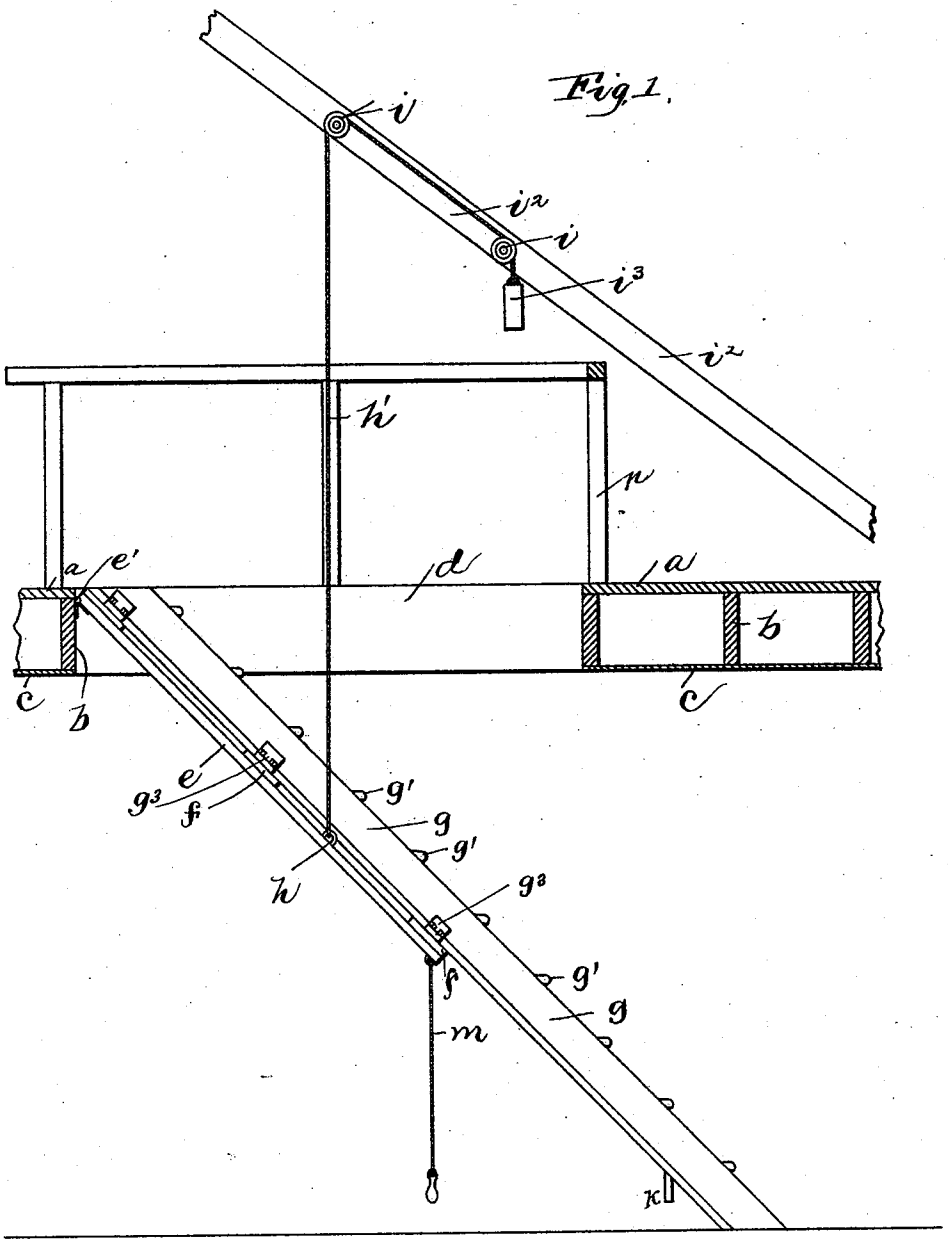
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J. FULLERTON.

STAIRWAY.

No. 525,198. Patented Aug. 28, 1894.

Fig. 1.



WITNESSES:

H. C. Bradshaw

A. L. Phelps

INVENTOR

James Fullerton

BY

Staley and Shepherd

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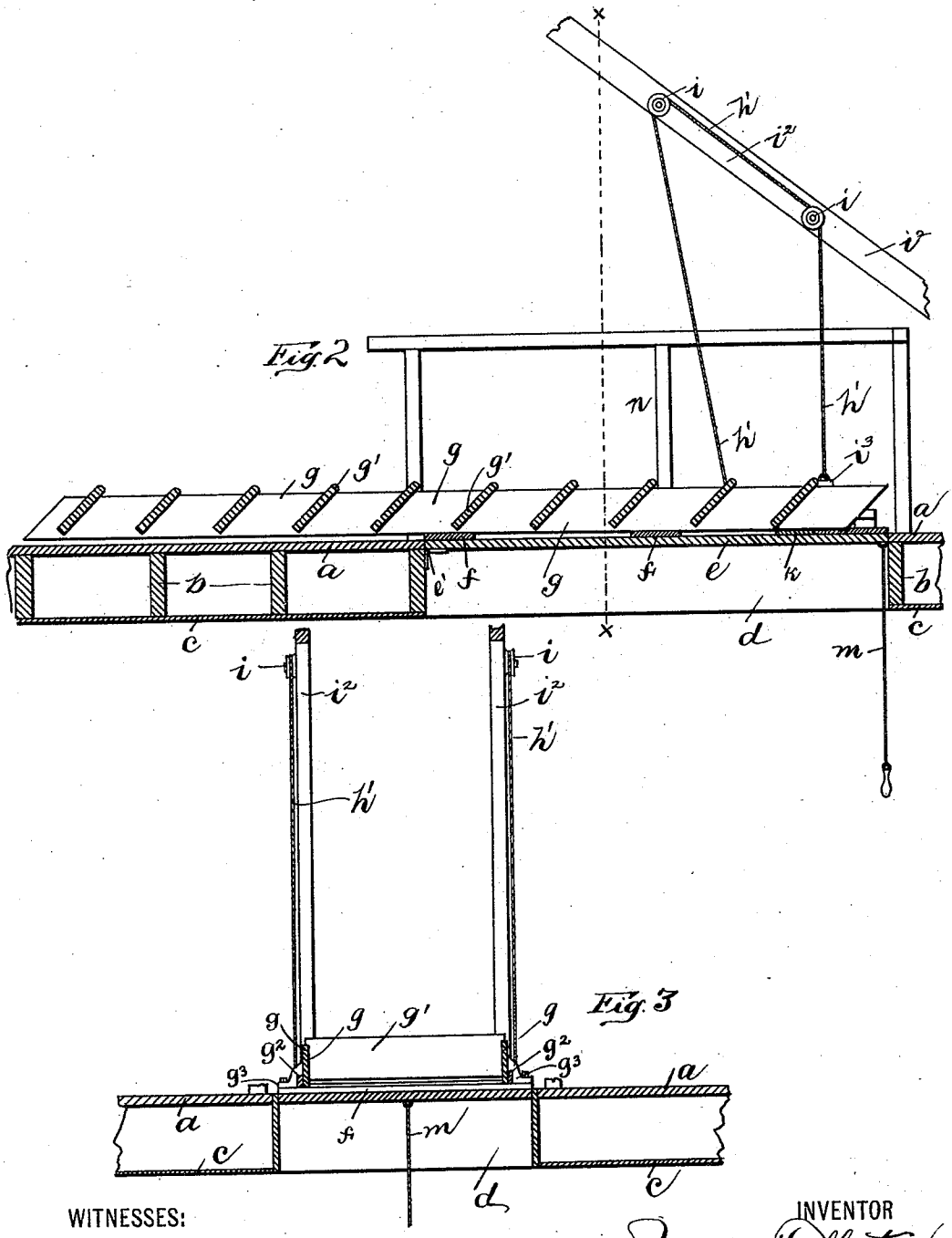
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UNITED STATES PATENT OFFICE.

JAMES FULLERTON, OF COLUMBUS, OHIO.

STAIRWAY.

SPECIFICATION forming part of Letters Patent No. 525,198, dated August 28, 1894.

Application filed February 26, 1894. Serial No. 501,504. (No model.)

To all whom it may concern:

Be it known that I, JAMES FULLERTON, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Stairways, of which the following is a specification.

My invention relates to stair-ways and has particular relation to that class of stair-ways which are combined with and designed to operate in connection with a door.

The objects of my invention are to combine with a door such as is employed to cover ceiling and floor doorways a movable stair-way which may be readily and easily lowered for use or elevated when not in use; to construct the same in a simple, reliable and effective manner and to produce improvements in other details of construction and operation which will be more fully pointed out hereinafter. These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 represents a longitudinal section through a floor and shows in side elevation my improved stair-way and door dropped from a door-way in said floor in position for use. Fig. 2 is a central longitudinal section of the same showing said stair-way and door elevated or folded to the horizontal position which it assumes when not in use and Fig. 3 is a transverse section of the same taken on line x x of Fig. 2.

Similar letters refer to similar parts throughout the several views.

Although my improved stair-way is particularly designed for use in providing a passage from an upper room to an attic or from a cellar to a room above in places where a stationary stair-way would not be desirable for lack of space or other reasons, it is evident that the same may be employed in any building construction wherein a horizontal floor opening is provided as a means of communication between two rooms.

a represents the flooring of a room, b the joist and c the ceiling, while d represents a horizontal door-way formed as shown, in said ceiling and floor structure. e represents a door which, as indicated at e', is hinged in said doorway at one end thereof, said door being designed when supported in a horizontal position to completely close said doorway, as indicated in Fig. 2 of the drawings. The door e which is oblong in form, has arranged on its upper side at desirable intervals transverse cleats or cross pieces f. Upon these cross pieces are designed to rest and slide as hereinafter described the parallel side frame pieces g of the stair-way, said pieces being connected in the usual manner at desirable distances by transverse steps g'. These stair-way sides g are provided on their outer side and adjacent to their lower edges with longitudinal guide strips g^2, which are loosely embraced at intervals on their outer and upper sides by guide blocks or brackets g^3 which rise from the cleats f on the outer sides of the stair frame, said blocks or brackets thus serving to form ways which will retain the stair frame in its position upon the door, and at the same time admit of said frame sliding longitudinally thereon. On the upper side or sides of the door e, I provide adjacent to the lateral edges thereof a staple or other suitable projection h with which may be connected the lower end or ends of cords h' which rise as shown, above the door opening d and pass over one or more pulleys i journaled in the rafters or other building framework i^2, said cord or cords carrying on their lower ends suitable counter-balancing weights i^3. Hinged to and adapted to depend from the rear edge of the lower step of the stair is a catch piece k.

The normal position of my improved stair-way and door is that shown in Fig. 2 of the drawings, wherein the door is closed to its horizontal position and the stair-way frame is supported horizontally thereon. When in this position the upper end portion of the stair-way extends, as shown, over and past the hinged end of the door f, the additional weight thus imparted to said hinged end of the door in conjunction with the weights i^3 being sufficient to retain said door and stair-way in the horizontal positions mentioned. The parts being thus normally supported the door-way d will present to the eye of the observer from below the appearance of an ordinary closed hatch-way. To the under side and outer end portion of the door e I secure a depending cord m, the lower end or handle of the latter being thereby retained in a po-

sition where the same may be readily reached from the floor below. When the stair-way is in the position above described, the latch piece *k* is, as shown, turned forward and made to engage with the forward cleat *f*. In order to open the door and lower the stair-way the operator pulls upon the cord *m*, thus causing the door to spring downward, then by disengaging the latch *k* from the cleat *f*, the stair frame may be allowed to slide downward upon the door until the lower end of said stair frame rests upon the floor below, as shown in Fig. 1 of the drawings. In this manner a temporary stair-way is provided which serves all the purposes of a stationary stair-way. It is evident that said stair frame may be provided with the usual side rail, if desired, and that a railing such as is indicated at *n* may be arranged about the door opening or hatch in the attic floor. In order to elevate the stair-way and the door which supports the same, said stair frame may be made to slide upward on said door until the latch piece *k* drops into engagement with the cleat *f* when as hereinbefore described the weight of the upper end of said stair-way thus added to that of the weights i^3 will be sufficient to cause said door and stair-way to assume the closed position indicated in Fig. 2.

It is obvious that this form of construction of stair-ways will be of great utility in small houses where the room is limited or where convenient space is not provided for a permanent stair-way; that said stair-way may be readily raised and lowered and that the same may be utilized in any construction where a hatch-way or horizontal door-way is provided. It will also be observed that a comparatively short door and door-way may be employed in conjunction with a much longer stair-way, inasmuch as said stair-way has the sliding or adjustable movement herein described.

Having now fully described my invention, what I claim, and desire to secure by Letters Patent, is—

In a stair-way of the class set forth the combination with a floor and ceiling having a door-way therein, a door hinged in said door-way, cross cleats on said door and guide blocks rising from said cross cleats, of a stair-way frame having side projections adapted to fit and slide in ways formed in said guide blocks, a latch piece jointedly connected with said stair frame and adapted when said stair-way is forced upward on said door to engage with one of said cross cleats and a counter-balance suspended at a point above said door-way and connected with said door, substantially as and for the purpose specified.

JAMES FULLERTON.

In presence of—
C. C. SHEPHERD,
F. A. SIEGEL.