(No Model.) 2 Sheets—Sheet 1.

# J. KILEY.

## STAIRCASE.

No. 475,016. Patented May 17, 1892.

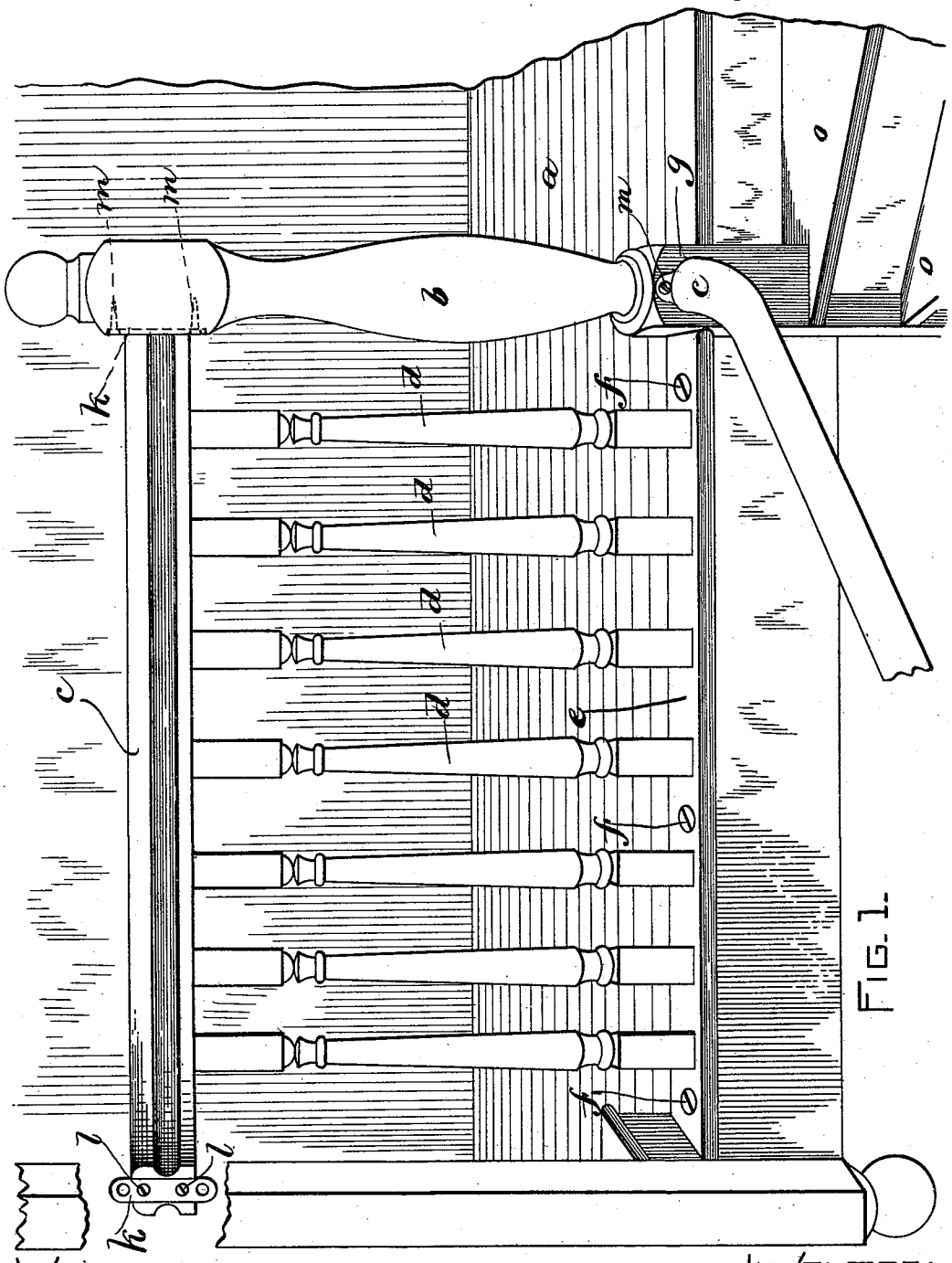


FIG. 1.

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(No Model.) 2 Sheets—Sheet 2.

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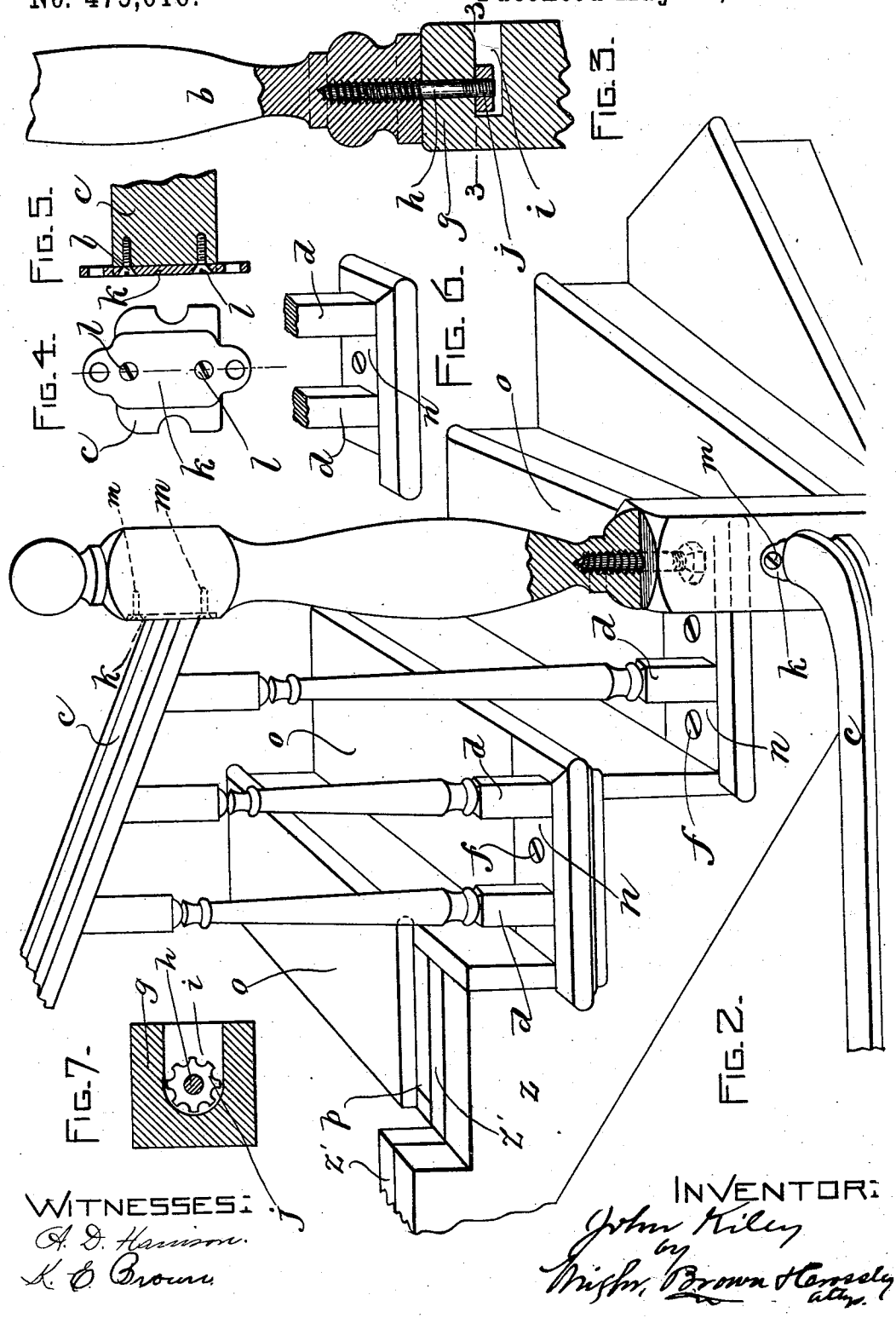


WITNESSES:
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# UNITED STATES PATENT OFFICE.

JOHN KILEY, OF BOSTON, MASSACHUSETTS.

## STAIRCASE.

SPECIFICATION forming part of Letters Patent No. 475,016, dated May 17, 1892.

Application filed July 1, 1891. Serial No. 398,150. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN KILEY, of Boston, (Roxbury,) in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Staircases, of which the following is a specification.

It is the object of my invention to provide such improvements in staircases or stairways as will render the rails and balusters readily removable in order that large or heavy articles of furniture may be carried up the stairway and around the turns at the landings, and as readily replaceable when desired.

The invention consists, in its most comprehensive sense, of a removable stair-rail having balusters secured thereto at their upper ends, combined with a section of removable stair-tread or staircase-floor, to which the lower ends of the balusters are secured.

The invention also consists of other improvements in staircases, as will fully appear from the following detailed description and claims.

Reference is to be had to the annexed drawings and letters marked thereon, forming a part of this specification, the same letters designating the same parts or features, as the case may be, wherever they occur.

In the drawings, Figure 1 is a perspective view of the invention applied to a staircase-landing. Fig. 2 is a similar view showing the invention as applied to the steps of a staircase. Fig. 3 is a detail view, partially in section, illustrating one way of securing a newel-post to its base. Figs. 4 and 5 are detail views showing a plate which may be employed in securing the rail to the newel-post or other support. Fig. 6 is a detail in perspective showing a section of a stair-tread removed, parts of the ballusters connected with the tread being also represented. Fig. 7 is a sectional view on line 3 3, Fig. 3.

It is well known that in many dwelling-houses, and particularly in the kind known as "flats," the staircase is narrow and abrupt turns are made at the landings, so that it is exceedingly difficult and sometimes next to impossible to move large articles of furniture necessary to housekeeping up or down the stairs, and when the moving can be accomplished it often happens that the staircase is damaged by reason of the difficulty in getting household effects up and down.

By my improvements I am enabled to quickly and easily remove and replace the stair-rails, balusters, and newel-posts, and when the same are out of the way to make it safe and convenient to carry articles up and down the steps.

In the drawings, *a* designates the floor of a staircase-landing.

*b* is a newel-post.

*c* designates a stair-rail secured at one or both ends to newel-posts, the said rail having, also, the balusters *d* attached thereto at their upper ends.

*e* is a section of the floor *a* at the edge of the landing and beneath the rail and balusters, which floor-section is removably secured to the framing or rough under floor by means of screws *f* or by other suitable devices. It will be understood that the upper surface of the floor-section *e* when in place is flush with the upper surface of the other parts of the floor-landing.

The newel-post *b* is detachably connected with its base *g* by means of a bolt *h*, secured into the lower end of the newel-post and projecting into a socket formed in the base and into a mortise *i*, extending laterally into the base, preferably from some obscure point, the mortise *i* being provided for the purpose of keying or otherwise fastening the bolt, and consequently the post, to the base. As herein shown, the lower end of the bolt is screw-threaded and a "ragged" or polygonal nut *j*, Fig. 7, is turned thereon, which may be operated by means of a punch or wrench to draw the post firmly down upon its seat or release it therefrom.

In Figs. 4 and 5 I have shown a plate *k*, of brass or other metal, which may be secured to the end of the stair-rail *c* by means of screws *l*, and said plate may in turn be attached to the newel-post *b* by means of screws *m*. Other means may, however, be provided for removably attaching the rail to the newel-posts, and, indeed, so far as my invention goes, the rail may be rigidly and to all intents and purposes irremovably attached to the newel-posts, since said posts may be removed with the rail if convenience should so suggest.

In Fig. 2, *n* designates a portion of a stair, the stair-tread *o* corresponding to the floor *a* and the section *n* of the tread to the section *e* of the floor and bearing the same relationship to the balusters and stair-rail.

Fig. 6 illustrates a section or portion of the tread of the steps removed, which may be supposed to be taken from the step *o* at the point *p*, Fig. 2, thus leaving the place or point *p* at a lower grade than the step *o*.

When the balusters, rail, and newel-post are removed from a staircase to enable large articles of furniture to be carried up or down, it is desirable that there should be some means for indicating to a person handling such articles as to when he is dangerously near the end of the step.

By my invention when the floor-section of the landing or the section of a tread (which, so far as this invention goes, are the same thing) is also removed, and when a porter is engaged in handling large or heavy articles which do not permit him to see clearly how near he is getting to the dangerous side of the stairway he will immediately know such fact by his foot coming upon a portion of a tread or floor which is not as high as it normally would be.

The tread-supporting hanger *z* at the outer side of the stairway may be thickened by pieces nailed to its inner side, so as to fill or nearly fill the spaces under the removable sections, thus preventing a person's foot from falling into an opening.

It is obvious that changes may be made in the form and arrangements of parts comprising my invention without departing from the nature or spirit of the invention.

Having thus explained the nature of the invention and set forth a way of making and using the same, but without attempting to describe all the forms of construction or all of the modes of use, I declare that what I claim is—

1. The combination, with a stair-tread provided at one end with a removable section *n*, of a removable stair-rail and balusters secured to the rail and removable section of the tread, as set forth.

2. The combination, with a stair-tread provided at one end with a removable section *n*, of a removable newel-post, and removable stair-rail connected with the newel-post, and balusters secured to the rail and removable section of the tread, as set forth.

3. The combination of a removable stair-rail and balusters and newel-post with which the stair-rail is connected, its base *g*, provided with a mortise *i*, the bolt *h*, connected with the foot of the post and extending into the base and mortise, and a nut *j* on the lower screw-threaded end of the bolt, as set forth.

4. The combination of a stair-tread provided at one end with a removable section *n*, a removable stair-rail, balusters secured to the rail and removable section of the tread, a newel-post with which the rail is connected, its base *g*, provided with a mortise *i*, the bolt *h*, connected with the foot of the post and extending into the said base and mortise, and a nut *j* on the lower screw-threaded end of said bolt, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 25th day of June, A. D. 1891.

JOHN KILEY.

Witnesses:
ARTHUR W. CROSSLEY,
EWING W. HAMLEN.