

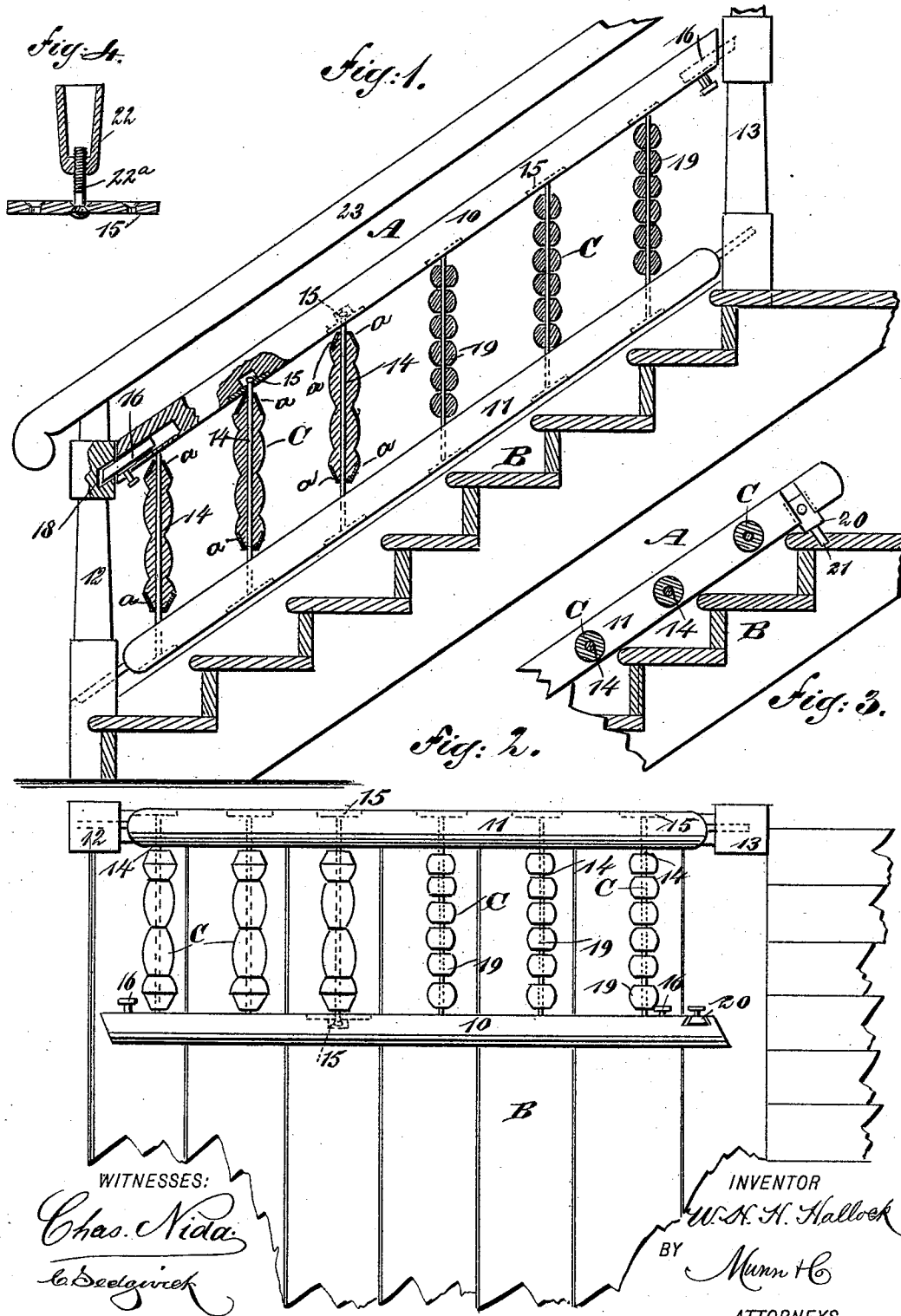
(No Model.)

W. H. H. HALLOCK.

DEVICE FOR FACILITATING MOVING TRUNKS ON STAIRS.

No. 498,649.

Patented May 30, 1893.



UNITED STATES PATENT OFFICE.

WILLIAM H. H. HALLOCK, OF WEST HAMPTON, NEW YORK.

DEVICE FOR FACILITATING MOVING TRUNKS ON STAIRS.

SPECIFICATION forming part of Letters Patent No. 498,649, dated May 30, 1893.

Application filed August 8, 1892. Serial No. 442,464. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. H. HALLOCK, of West Hampton, in the county of Suffolk and State of New York, have invented a new and useful Device for Facilitating the Removal of Trunks, &c., Up and Down Stairs, of which the following is a full, clear, and exact description.

My invention relates to a device to facilitate the removal of trunks or heavy articles of any description up and down stairs, and has for its object to provide a device which when not in use will constitute a portion of the stair railing of the stairway.

A further object of the invention is to construct the device in such a manner that it may be expeditiously and conveniently placed upon the stair steps and locked thereto to form a rolling support for whatever is placed upon it, thereby enabling a person, as the device does not cover the entire width of the stairs, to walk up or down said stairs, and carry with him the trunk or package to be manipulated, the latter resting upon the rolling supports of the device.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth and pointed out in the claims.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar figures and letters of reference indicate corresponding parts in all the views.

Figure 1 is a vertical section through a short flight of stairs, illustrating the stair rail partly in section and partly in side elevation, the stair rail being in its normal position. Fig. 2 illustrates the stair rail as folded down upon the stairway and in position to receive and assist in the transportation of whatever article may be placed upon it. Fig. 3 is a partial vertical section through a stairway and the stair rail in locking position on the stair way; and Fig. 4 is a detail sectional view of a ferrule adapted to be used in connection with one style of baluster.

The stair railing A of the stairway B to which the improvement is to be applied comprises a hand rail 10, a bottom rail 11, and balusters C connecting the two rails, while in connection with the top and bottom rails up-

per and lower newel posts 12 and 13, are employed. The bottom rail 11, is pivoted at its ends in the two newel posts, as shown in Fig. 1, and the connection between the balusters and the hand and bottom rails is a pivotal one, as the balusters, which may be of any approved formation or construction, are mounted to turn upon rods or spindles 14. These rods or spindles do not revolve of themselves, but they are loosely mounted or pivotally attached to the hand rail and to the bottom rail, as the rods or spindles are made to enter sockets 15, in the under sides of said rails, and the connection between the rods and spindles and the sockets is such that the rods may be made to assume a true horizontal or transverse position between the rails; or they may be given a diagonal position between them, as shown in Fig. 1.

The spindles must assume the diagonal position when the stair railing is connected at top and bottom with the newel posts and said stair railing is in position for use as such; but when the stair railing is to be used for moving packages or trunks up or down stairs, it is necessary that the spindles or rods should be given a true transverse position, as shown in Fig. 2, in order that the balusters may turn freely thereon and not direct the article placed upon them to one side as would be the case were the balusters diagonally located at that time.

At each end of the hand rail 10 a bolt 16 of any approved construction is located, and these bolts are preferably of a spring pattern and they enter proper keepers 18 made in the newel posts. The balusters may be, as has heretofore been stated, given any desired shape, and they likewise may be made of any approved material. Two forms of balusters are shown in the drawings; one of these forms consists of a series of rollers or balls 19, loosely mounted upon a spindle. The balls when employed are usually made of metal, as for example brass. The second form of baluster consists in making the body or rolling portion thereof in one piece, either from wood or metal, and it is then given any desired exterior contour, ornamental or plain; and when the balusters are made of wood they may be covered with sheet brass, or other sheet metal, rubber, felt, or the equivalent thereof.

At one side of the upper or hand rail 10, near its upper end, a second bolt 20, is located, and this bolt is adapted to enter a socket or keeper 21, located in one of the upper steps of the stairway, as shown in Fig. 3, when the device is in use in connection with a trunk, for example; and the object of this bolt is to hold the bottom and upper or hand rail in perfectly parallel lines and the balusters in a true horizontal or transverse position between the rails; the bolt 20 also prevents any undue strain being brought upon the connections of the stair railing when it is placed upon the steps and is under strain from the article placed upon the balusters.

In the operation of this device, when it is not needed for use in connection with articles to be carried up or down stairs, the stair railing is held locked in the usual position in engagement with the newel posts, and at that time performs simply the functions of a hand rail. When required for use in facilitating the transportation of heavy articles up or down stairs, the top or hand rail of the stair railing is disengaged from the newel posts; the said hand rail is then carried downward upon its lower pivotal points until it strikes the step at the edges thereof, as shown in Figs. 2 and 3; the bottom and the top or hand rails are then brought to a parallel position so that they will cross the steps transversely, and they are locked in that position by causing the bolt 20 to enter the socket 21 in the upper step. When the stair railing is carried to this engagement with the edges of the steps of the stairway it engages with but a portion of the length of the steps, thus enabling a person to readily walk up or down stairs even when the railing is upon the steps. It is very obvious that if a trunk or other article is placed upon the balusters at the bottom or at the top of the stairs, as may be required, an attendant may grasp the trunk and walk up stairs or down the same with it in a convenient and expeditious manner, the trunk being drawn over the balusters which, revolving, offer but little resistance to its progress, and in fact assist in the manipulation of the trunk.

The device is capable of being applied to any stair-case; it is conveniently manipulated, is not in the way even when in use, and through its medium heavy articles may be moved either up or down stairs without taxing to any great extent the strength of the operator, and without injuring the covering upon the stairs.

When the balusters are made of wood they are provided at top and bottom with a ferrule *a* preferably made of metal, in order that the wood shall not split at its ends.

In Figs. 1 and 2 the rods or spindles 14, extend through the balusters and ferrules, and their ends are swiveled in the sockets 15, but in Fig. 4 a ferrule 22, is shown, adapted to be secured upon the ends of wooden balusters, which ferrule is given a direct rotatable at-

tachment to a socket through the medium of a bolt 22^a secured to the end of the ferrule, the bolt being swiveled in the socket.

The newel posts may be decorated at their tops in any manner that fancy may dictate, and it may be desirable to attach to the upper ends of the newel posts a second and fixed hand rail 23, as shown in Fig. 1, in order that persons passing up or down the steps of the stair case, when the main portion of the stair railing is placed upon the steps, may have something to grasp with their hands in ascending or descending, and at that time the permanent or auxiliary hand rail will act as a guard to prevent people from approaching too closely the outer edges of the steps.

I desire it to be distinctly understood that if in practice it is found desirable a stair railing constructed substantially as shown and described may be placed along the stairway next to the wall, and in that event the outer stair railing may remain stationary and may be constructed in the ordinary manner, the auxiliary stair railing being entirely out of the way when carried upward to an engagement with the wall and fastened to it, or to any other support.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a device of the character described, the combination, with a stairway, of a hand and a bottom rail, the hand rail being pivotally connected with the posts of the staircase, said hand rail having removable connection with said posts, and balusters revolvably supported between the hand and the bottom rail, substantially as shown and described.

2. In a device of the character described, the combination, with a stairway, of a hand rail provided with rotatable balusters, the lower rail of the stair railing being pivoted in two fixed supports and the upper or hand rail having removable connection with said supports, as and for the purpose specified.

3. In a stairway, a pivoted stair railing provided with balusters having rotary movement and also provided with locking devices whereby the stair railing may be held in a perpendicular position or carried to a horizontal position and in engagement with the steps of the stair-case, substantially as shown and described.

4. In a stair case, a stair railing comprising an upper or hand rail and a lower or base rail, spindles pivotally and loosely connected at their ends with the two rails, whereby the rails may be shifted lengthwise, balusters held to turn upon the spindles, and locking devices connected with the rails, as and for the purpose specified.

5. The combination, with a stairway and its newel posts, of a stair railing comprising a bottom and an upper or hand rail, the bottom rail being pivotally attached to the newel posts, and the upper rail being provided with locking devices adapted for engagement with the

newel posts, spindles connecting the two rails and capable of movement with the upper or hand rail in direction of the ends of the latter, and balusters mounted to turn upon the
5 spindles, substantially as shown and described.

6. The combination, with a stair-case and its newel posts, and a permanent hand rail attached to the newel posts, of a movable stair
10 railing comprising an upper or hand rail and a lower or base rail, the lower rail having pivotal connection with the newel posts and the upper or hand rail a locking connection there-

with, spindles connecting the hand rail and the lower or base rail of the stair railing, the
15 spindles being capable of movement with the hand rail in direction of the ends of the latter, balusters mounted to turn upon the spindles, and a locking device adapted to connect the upper or hand rail of the stair railing with
20 the steps, as and for the purpose set forth.

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Witnesses:

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