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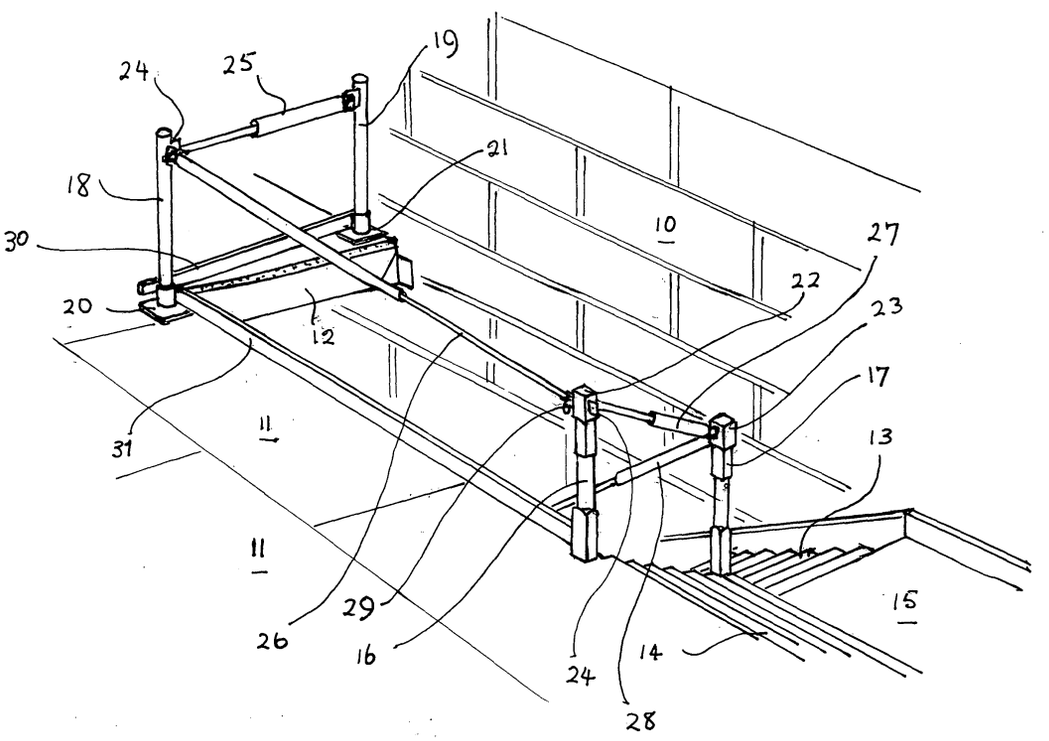
(54) Safety barrier apparatus

(57) Safety barrier apparatus especially for provision of a safety barrier around the edges of a partially-completed stairwell in a building under construction or renovation comprises rail members (25,26,27,28) and means (16,17,18,19) to support the rail members (25,26,27,28) spaced from the floor, the rail members (25,26,27,28) being length-adjustable and pivotably attachable to the support means (16,17,18,19). The support means (16,17,18,19) comprise an optionally height-adjustable leg member attached or attachable to a foot member (20,21) for temporary engagement with the floor or adapted for mounting on or attachment to a newel post or for attachment to a wall.



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Description

[0001] This invention relates to safety barrier apparatus especially for provision of a safety barrier around the edges of a partially-completed stairwell in a building under construction or renovation.

[0002] Health and safety considerations are assuming more importance on building sites as in other industrial premises. One area which is currently vulnerable to the occurrence of accidents is in the construction of stairwells, where it is necessary to provide an aperture in the floor of the first or upper storey before installation of the stairs or handrails. During this time, builders, plasterers, plumbers, electricians and other tradesmen are required to gain access to the upper floor, either via a ladder through the aperture or via the staircase after installation but before erection of the handrail, and such continued usage tends to foster an attitude of complacency which in turn enhances the likelihood of accidents occurring with people falling through the floor aperture or with items of equipment inadvertently being pushed over the edge of the aperture.

[0003] It is an object of the present invention to provide safety barrier apparatus which can easily be erected to reduce the risk of such accidents occurring.

[0004] In one aspect, the present invention provides safety barrier apparatus comprising rail members and means to support the rail members spaced from the floor, the rail members being length-adjustable and pivotably attachable to the support means.

[0005] The support means may comprise an optionally height-adjustable leg member attached or attachable to a foot member for temporary engagement with the floor; the lower end of the leg member may include a lug or bracket to which may be attached a kickboard. Alternatively, the support means may be adapted for mounting on or attachment to a newel post or for attachment to a wall. In one embodiment, the support means comprises a cap or socket member for engagement over the upper end region of a newel post; such a support means has the additional advantage of protecting the upper end region of the newel post from damage arising, for example, from accidental contact with heavy or sharp-edged or - cornered objects.

[0006] The support means includes means for attachment of the rail members. The attachment means may comprise a lug having a slot or aperture to receive a pivot pin for connection to lugs or tongues formed at the ends of the rail members. The pivot pin is preferably capable of quick-engagement and -release action and may for example comprise a latching pin having a pivotable and slidable element at the tail end for retaining the pin in position, of the type typically used for latching engagement of a trailer or truck drop-end or drop-side panel. The attachment means are preferably provided on the support means to extend thereon in different directions, whereby one or more attachment means may be used to support rail members configured to the particular requirements of the building.

[0007] The rail members are length-adjustable for spanning between adjacent support means and may comprise telescopic tubing having outer or distal formations for engagement with support means.

[0008] In use, the house or other building under construction may have reached the stage where the upper flooring material has been applied over the joists to leave an aperture for the staircase. Newel posts may have been erected at the top and bottom of the stairway but handrails not attached, leaving the sides of the stairway (or at least one side, away from the wall) exposed, and also leaving the edge of the aperture exposed from the upper floor, before erection of balustrading which, eventually, will protect the people on the landing from falling down the stairwell. The apparatus according to the invention may in such a situation be used whereby floor-mounted support legs are temporarily attached via feet to the edges of the aperture remote from the upper end of the stairway, socket members are applied inverted over the ends of the newel posts and rail members are supported between the legs and the socket members, both along the edge or edges of the aperture and down the exposed side of the stairway. A kickboard may also be supported between the lower ends of the legs, or by the feet, and the lower end of the upper newel post, to prevent items being accidentally pushed over the edge of the aperture from the upper floor.

[0009] Embodiments of the invention will now be described by way of example with reference to the accompanying drawing, which shows a perspective view of apparatus according to the invention providing a safety barrier to a stairwell.

[0010] Referring to the drawing, the unplastered block wall of a house is shown at 10 and the chipboard floor sheets 11 have been laid on joists 12 to form the first floor. The stairway, consisting of lower and upper flights 13, 14 separated by a half landing 15, has been installed, as also have newel posts 16, 17, respectively at the top of the stairwell and at the half landing.

[0011] To guard the open aperture of the stairwell, posts 18, 19 constituted by leg members inserted in or attached to floor plates 20, 21 are attached to the chipboard sheets and socket or cap members 22, 23 are applied over the upper ends of the newel posts 16, 17. The posts and socket members include lugs 24 disposed on some or all side faces; the lugs have holes formed therein. Spanning between the legs 18 and 19, leg 18 and newel post 16, newel posts 16 and 17 and newel post 17 and a further newel post (not shown) at the bottom of the stairs are respective telescopic tubes 25, 26, 27 and 28. The outer or distal tube ends are flattened to form tongues and spring-loaded quick-release latch bolts 29 are inserted through the holes formed in the lugs 24 and through corresponding holes formed in the tongues. Kickboards 30, 31 are located at floor level at the edge of the stairwell aperture, attached to the posts by suitable screwed means.

Claims

1. Safety barrier apparatus comprising rail members and means to support the rail members spaced from the floor, the rail members being length-adjustable and pivotably attachable to the support means.

2. Apparatus according to claim 1, in which the support means comprise an optionally height-adjustable leg member attached or attachable to a foot member for temporary engagement with the floor.

3. Apparatus according to claim 1, in which the support means is adapted for mounting on or attachment to a newel post.

4. Apparatus according to claim 3, in which the support means comprises a cap or socket member for engagement over the upper end region of a newel post.

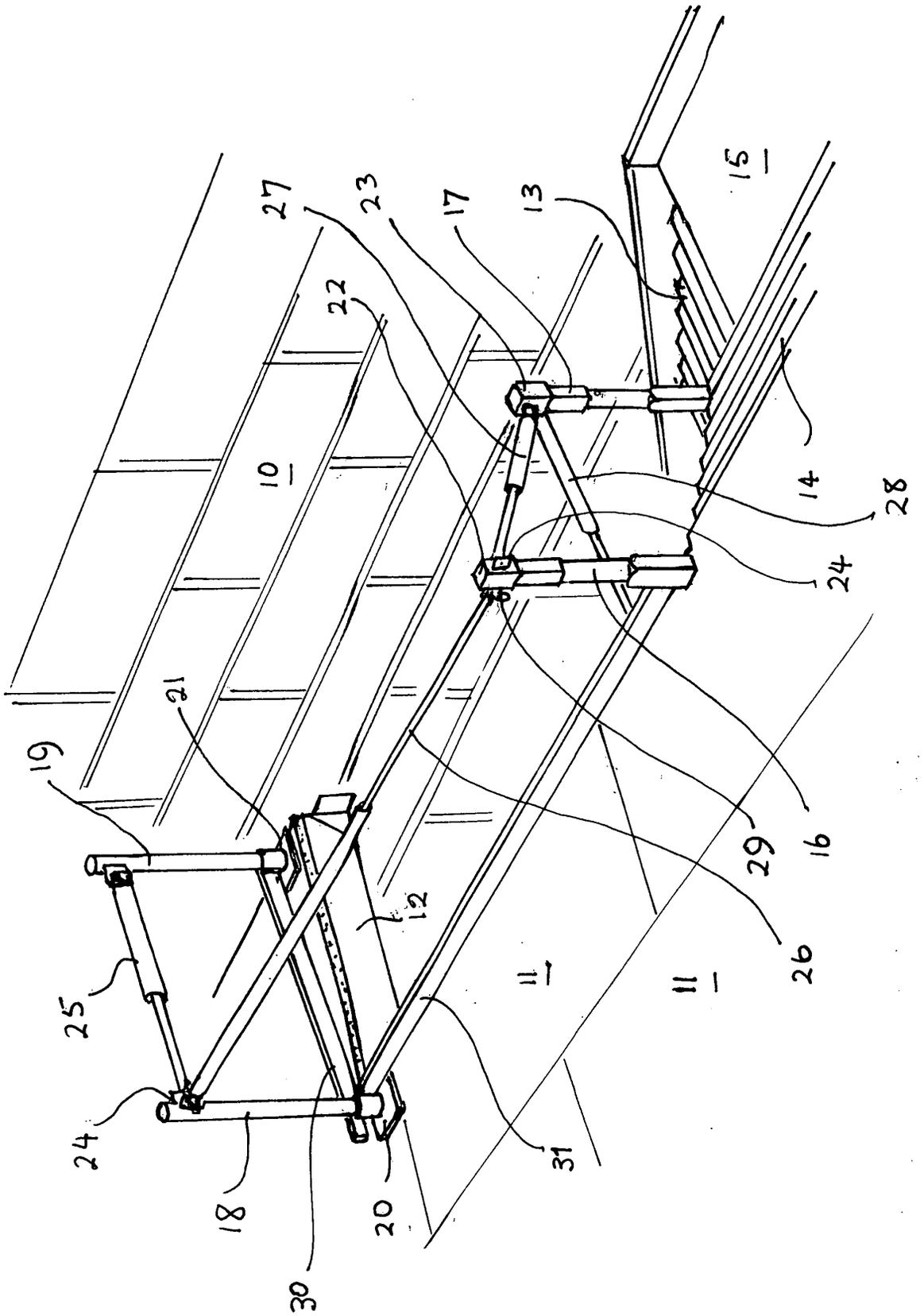
5. Apparatus according to any preceding claim, in which the support means includes means for attachment of the rail members and which comprise a lug having a slot or aperture to receive a pivot pin for connection to lugs or tongues formed at the ends of the rail members.

6. Apparatus according to claim 5, in which the pivot pin is capable of quick-engagement and -release action.

7. Apparatus according to claim 5, in which the attachment means are provided on the support means to extend therefrom in different directions.

8. Apparatus according to any preceding claim, in which the rail members comprise telescopic tubing having outer or distal formations for engagement with support means.

9. A method for providing a barrier around the edge of an unprotected stairwell, the method comprising pivotably attaching length-adjustable rail members to support means spaced from the floor at or near the edge of the stairwell.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