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REMOVABLE STANCHION

Filed Jan. 17, 1968

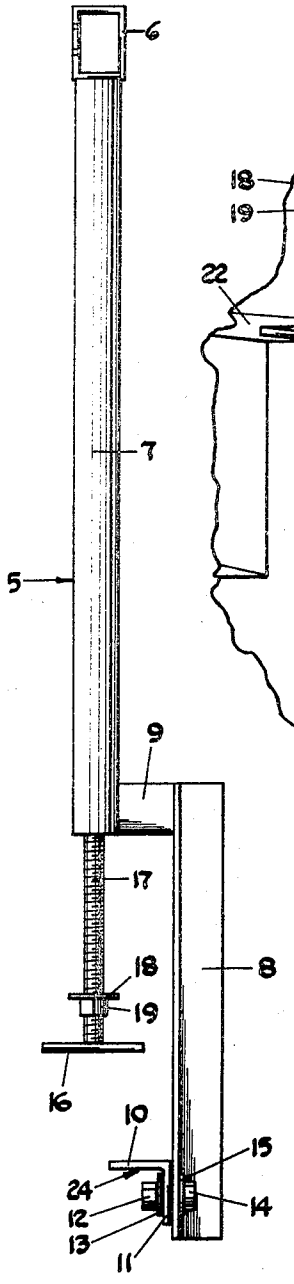


FIG. 1

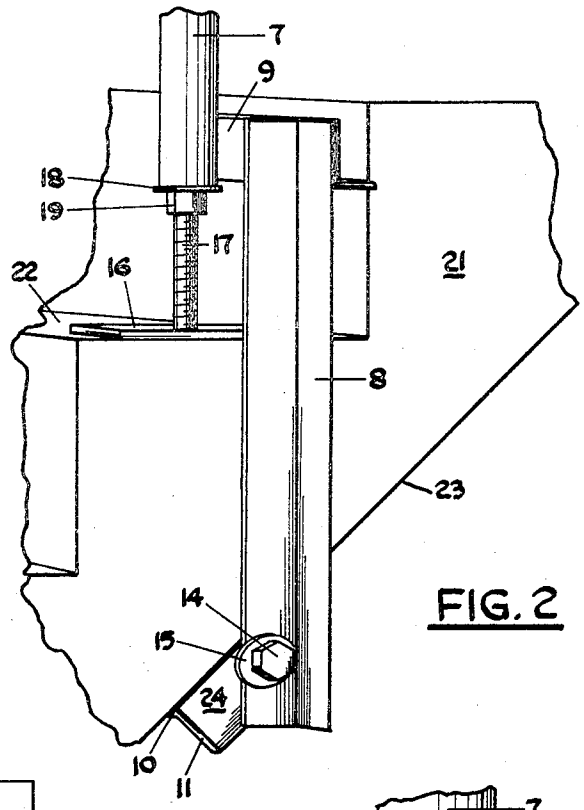


FIG. 2

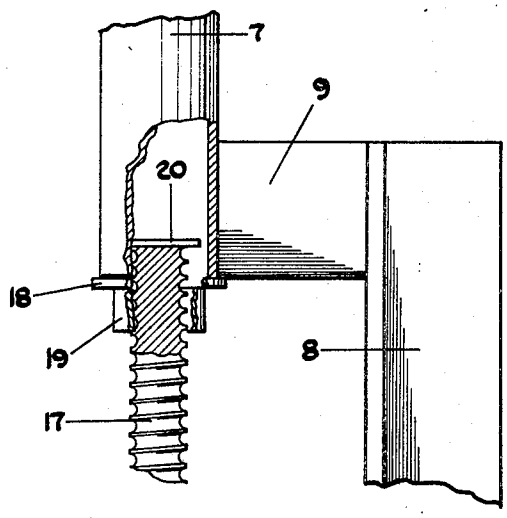


FIG. 3

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REMOVABLE STANCHION

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ABSTRACT OF THE DISCLOSURE

A stanchion for removable attachment to a floor structure for supporting a temporary guard rail. The stanchion has an adjustable clamping means so that it may be attached to slanting surfaces, such as the bottom surface of stairways or to a flat-bottomed surface.

BACKGROUND OF THE INVENTION

Field of the invention

This invention relates in general to a guard rail support and in more particularity to a stanchion type of support for temporary guard rail installations on stairways, the open sides of floor surfaces, etc.

In building construction today it is common to provide a temporary guard rail on a stairway or the like by nailing boards, such as two by fours, into the concrete of the stairway for upright supports and then nailing other boards along the top thereof to serve as guard rails. The same practice is also common at the edge of a floor surface where there is no wall to prevent people and objects from falling off.

A disadvantage of this type of structure is that the rails used to attach the supports to the stairway must be driven into the concrete surface, thus producing unsightly holes when they are removed. Further, the strength of such supports is limited, since they are held in place by two flat surfaces, the support and the edge of the stairway, nailed together. A slight force outwardly on a guard rail attached in this manner will move the support from the stairway thereby causing the entire guard rail to be loosened.

Description of the prior art

As mentioned in the preceding paragraphs, the most common prior art device in this field is the nailed boards for supports with other boards nailed thereto to serve as guard rails.

To my knowledge, there has not been a removable stanchion for supporting a temporary guard rail in which the stanchion grips the upper and lower surfaces of a stairway to hold the stanchion firmly in place. Further, to my knowledge, there has never been a removable stanchion which is adjustable to fit any angle of stairway surface and also a horizontal surface, if so desired.

SUMMARY OF THE INVENTION

It is the primary object of my invention to provide a removable stanchion for supporting a temporary guard rail in which the stanchion firmly grips both the upper and lower surfaces of the floor or stairway.

A still further object of my invention is to provide a removable stanchion for supporting temporary guard rails in which the gripping members are adjustable to fit a variety of thicknesses of stairways and floors.

A still further object of my invention is to provide a removable stanchion for supporting temporary guard rails in which the stanchion is a solid unit thereby making it easier to use and also easier to transport.

Still another object of my invention is to provide a removable stanchion wherein all the component parts may be produced and assembled quite easily by existing mass production methods and which, therefore, may be made readily available to the public at a reasonable cost.

A further object of my invention is to provide a removable stanchion which is sturdy in construction, relatively small in size, light in weight, economical in price, and relatively simple to manufacture.

Further features, objects, and advantages will either be specifically pointed out or become apparent when, for a better understanding of the invention, reference is made to the following written description taken in conjunction with the accompanying drawings.

BRIEF DESCRIPTION OF THE DRAWING

FIGURE 1 is an elevational view of a stanchion according to my invention;

FIGURE 2 is a section of a perspective view of the stanchion attached to a typical stairway;

FIGURE 3 is an elevational view with parts broken away showing the adjustability between the members of the stanchion.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to the drawing, stanchion **5** is comprised of a vertical guard rail support member **7** and a second vertical member **8**, each in separate vertical planes and rigidly joined together by means of horizontal member **9**.

Vertical member **7** has a member **6** at the top thereof through which the guard rail may be inserted. Any type of support or bracket **6** desired may be used and still fall within the purview of this disclosure. For example, when a chain is to be used as a guard rail, a suitable chain support could be substituted for holder **6**.

Attached to vertical member **8** near the bottom thereof and on the inside thereof is gripping member **24** for positioning on the underside **23** of a stairway **21**. Member **24** is shown here as being comprised of a relatively flat member **10** and a fastening member **11** extending at a right angle thereto to be attached to member **8** by means of nut **12** and washer **13** and nut **14** with washer **15**. As grip member **24** is attached to vertical member **8** in this manner, it may be pivoted to any position to adjust to the angle of the bottom surface to which it is to be held. If desired, it may be pivoted so that portion **10** is horizontal to fit against a horizontal bottom surface, such as that provided by an ordinary floor.

Foot **16** is provided to grip the upper surface **22** of stairway **21**. Foot **16** has an upwardly extending screw member **17** which extends up into the inside of member **7** and is prevented from being removed therefrom by means of flange **20**.

An adjustable relationship between vertical member **7** and foot **16** is provided by means of washer **18** and nut **19**. As illustrated in FIGURE 3, washer **18** and nut **19** prevent member **17** from being pushed up into the inside of vertical member **7**.

OPERATION

To attach a stanchion according to my invention to a stairway, the stanchion **5** is moved to the location in the condition shown in FIGURE 1. It will be noted that since members **7**, **8**, and **9** are all rigidly attached to each other, the device is a single unit which makes it easy to transport and easy to install.

The stanchion is placed against the side of the stairway with vertical member **8** parallel to the outer surface. Gripping member **24** is pivoted to correspond to the angle of the bottom **23** of the stairway and the stanchion is moved upwardly so that surface **10** of member **24** contacts the surface **23**.

Foot **16** is then placed on the top surface **22** of the

stairway and nut **19** is threaded upwardly on member **17** until washer **18** contacts the under side of vertical member **7**. As nut **19** is threaded further, foot **16** is forced downwardly and surface **10** is forced upwardly, thereby increasing the force with which stanchion **5** grips the stairway.

To remove the stanchion, nut **19** is turned in the opposite direction, thereby relieving the force of foot **16** and member **24** on the stairway and the stanchion is then free to be moved.

The foregoing disclosure and description of the invention is illustrative and explanatory thereof and various change in the size, shape and material, as well as in the details of the illustrated construction may be made, within the scope of the appended claims.

I claim:

1. A removable stanchion comprising:

(a) a first vertical member,

(b) a second vertical member offset from said first vertical member so that they each lie in separate vertical planes,

(c) a member joining said first and second vertical members,

(d) a foot member carried by said first vertical member,

(e) a clamp member carried by said second vertical member,

(f) means on said first vertical member for supporting a guard rail,

(g) said foot member being located at the lower end of said first vertical member,

(h) said foot member having a threaded member extending upwardly therefrom,

(i) said threaded member extending upwardly into said first vertical member,

(j) means carried by said threaded member to limit the amount of said threaded member which extends into said first vertical member,

(k) said clamp member providing a flat surface for contacting the under surface of a structural element, and

(l) said clamp member being pivotally attached to said second vertical member for movement substantially into or away from a plane defined by said first vertical member, said member joining said first and second vertical members, and said second vertical members.

2. A removable stanchion according to claim **1** with:

(m) said clamp member being pivotally attached to the lower end of said second vertical member.

3. A removable stanchion according to claim **2** with:

(n) said member joining the first and second vertical members being rigidly attached to each of them.

4. In a stanchion capable of attachment between a flat surface and a slanting surface having a first vertical member, a second vertical member laterally offset from said first vertical member, a connecting member rigidly connecting said first member to said second member, a threaded member extending upwardly into said first member, and a foot plate located at the lower end of said threaded member, the improvement comprising:

(a) limiting means outside of said first vertical member to limit the amount of said threaded member which extends into said first vertical member,

(b) gripping means rotatably attached to the lower end of said second member for angular adjustment into or away from the plane defined by said first vertical member, said connecting member, and said second vertical member, so that said gripping means is adaptable to a surface that is slanting with respect to said foot plate.

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