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1,516,711

O. S. CHRISTELL

PORCH RAIL SAFETY DEVICE

Filed April 16, 1923

Fig. 1.

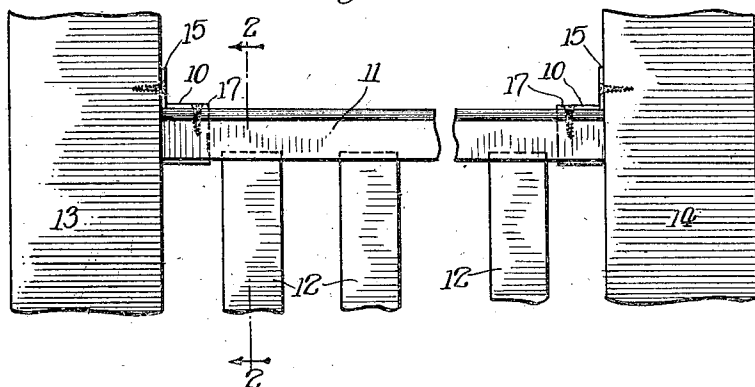


Fig. 4.

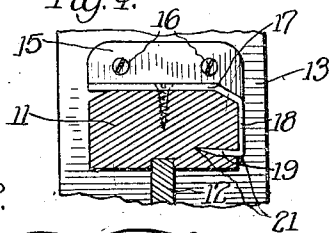


Fig. 2.

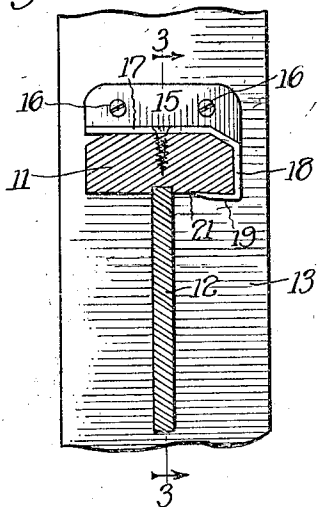


Fig. 5.

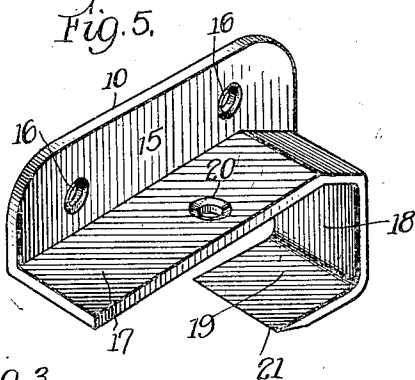
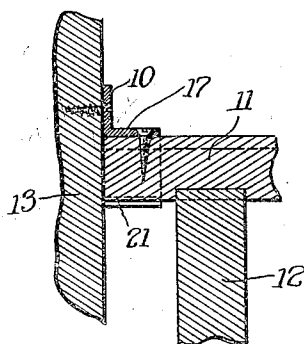


Fig. 3.



Witness:

A. J. Sauer,

Inventor:

Olof S. Christell,

By Harvey L. Hanson
Attorney

UNITED STATES PATENT OFFICE.

OLOF S. CHRISTELL, OF CHICAGO, ILLINOIS, ASSIGNOR OF ONE-HALF TO JOHN P. CHRISTELL, OF CHICAGO, ILLINOIS.

PORCH-RAIL SAFETY DEVICE.

Application filed April 16, 1923. Serial No. 632,196.

To all whom it may concern:

Be it known that I, OLOF S. CHRISTELL, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Porch-Rail Safety Devices, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawings, forming a part of this specification.

The invention relates to a porch rail safety device, and is particularly designed for association with the wood hand-rails and posts of a porch, and is adapted to support the railing and prevent the movement and displacement of the railing and especially to prevent it from being pushed outwardly or downwardly.

The invention has among its various objects the provision of a construction capable of performing the above function, which will also protect the rail structure against the action of water, rain, snow, ice, et cetera at the juncture of the post and rail and thus reduce the possibility of the elements penetrating the porch rails and posts at their junctures and causing decay and decomposition.

Another object of the invention is to maintain the structure in associated relation with the posts and produce a strong and rigid connection between them.

A further object of the invention is the production of a device of the character above referred to which is made from an integral or unitary piece of material formed so that it will readily accommodate rails of various sizes and dimensions.

It is an additional object of the invention to provide a construction which has the advantage just referred to by employing a cutting edge which may be driven into or embedded in the rail to thereby allow the device to accommodate rails of a larger dimension than the average sized rail without necessitating any work upon the rail prior to the application of the device to the rail.

An additional object of the invention is to provide a device of the character described which will not present a sharp edge which might injure a person who grasps the rail at the place of application of the device.

It is a further object of the invention to employ the element which permits the de-

vice to be associated with rails of a large dimension, or larger than the average rail, as a means for limiting the relative movement of the rail and said device, and, in addition, to employ said element to assist in holding the rail in associated relation to the device.

Another object of the invention is to provide a structure which may readily be put into place on a new porch railing and which may as readily be put into place on an old porch railing, because the construction of the device permits it to be passed over the rail transversely of the length of the rail and fastened in place. The device of the invention may be put into position after the post and railing have been put into place. It can be used on any rail without removing the rail and without removing or disturbing the means for fastening and securing the post and rail.

The device of the invention is of a simple and inexpensive construction which may be stamped or cast, or otherwise suitably shaped or formed, in addition to being efficiently and economically produced. The device adds a strengthening and safety factor to the portion of a porch and rail structure where the greatest strain usually is, and where decay and decomposition in the porch structure occurs, thus obviating possible danger to persons because the railing is prevented from giving way.

The invention has these and other objects, all of which will be explained in detail and more readily understood when read in conjunction with the accompanying drawings which illustrate one embodiment of which the invention is susceptible, it being obvious that other arrangements may be made without departing from the spirit of the appended claims forming a part hereof.

In the drawings:

Figure 1 is a side elevation of a rail structure showing the invention applied thereto.

Figure 2 is a section on line 2—2 of Figure 1.

Figure 3 is a section on line 3—3 of Figure 2.

Figure 4 is a section similar to Figure 2, showing the device applied to a rail of a larger dimension than that illustrated in Figure 2.

Figure 5 is a perspective view of the device employed in Figures 1 to 4, inclusive.

The safety device, generally designated 10, is illustrated in the drawings as being associated with a porch railing in which the rail 11, to which the pickets or boards 12 are secured, is arranged between the uprights or posts 13 and 14. The devices of the invention, as shown, are designed to be arranged at the junctures of the rail 11 and the posts 13 and 14 and to be secured to the posts and rail and to support the rail.

The safety device 10 is formed of a single piece of suitable metal of a gauge which will furnish the necessary strength to withstand the various strains which may be applied thereto, and is suitably constructed to permit of its attachment to a post or upright and to permit its association with the rail 11 either before or after the latter has been arranged in place.

To accomplish the various objects and functions mentioned, the device is formed to provide a means for engaging a side face, and the upper and bottom faces of the rail, and, in addition, is provided with an extension or plate which is integral with the other portions of the device and furnishes a means whereby the device may be secured to the upright or post through the medium of screws or other fastening means.

The plate whereby the device is secured to the post is designated 15 and is provided with apertures 16 through which the screws or other fastening members may be passed to attach or mount the device in place. The plate 15 is integral with the portions 17, 18, and 19 which, respectively, engage the top, a side, and the bottom of the rail 11.

The portion 17 is provided with an aperture 20, through which a screw or other holding member may be driven into the upper portion of the rail to assist in holding the rail against displacement from the device 10 or the posts 13 or 14.

The structure described reveals an arrangement which will readily accommodate a rail, the cross section or thickness of which is substantially equal to the dimension or space between the portions 17 and 19 of the device. This structure is susceptible of association with a rail of the same dimension as the space between the portions 17 and 19 of the device and is also capable of association with a rail which is of a greater dimension than the distance or space between said portions 17 and 19. To secure this advantage the portion 19 which projects inwardly relatively to the rail 11, to which it is applied, and which provides a support for the rail, has its extremity provided with a cutting or knife edge 21 which is designed to cut into the side of the rail and become em-

bedded therein. This structure will, in addition to permitting the use of rails of various thicknesses, assist in holding the rail against separation from the device.

The portions of the device are so proportioned that when the device is applied to a rail of what might be termed a standard dimension the knife edge will be substantially flush with the lower face of the rail and, therefore, will not be liable to cause injury to anyone. This is clearly illustrated in Figure 2. In the event that the rail is of a thickness slightly greater than the distance between the portion 17 and the portion 19 of the device, the device may be forced on the rail, and because of the knife edge 21 of the portion 19 will cut into the rail and act as a chisel, and thus permit the device to be properly fitted to the rail. In case, however, the rail should be of a thickness less than the distance between the portions 17 and 19, the portion 19 may be slightly bent inwardly to cause the knife edge 21 to engage the lower face of the rail.

Having thus described the invention, what I claim and desire to secure by Letters Patent is:

1. A rail support adapted to be arranged at the juncture of a rail and a post to which the rail is secured, said support comprising portions arranged to engage the top, a side and the bottom face of said rail, and having means for receiving a securing means, whereby the rail may be secured to said support, and also having a member arranged along an edge of the support and extending from one end of the support to substantially said portion which engages the side of the rail, said last-mentioned member being arranged with respect to the portion from which it projects so as to fit the juncture of said post and rail and having means for receiving a fastening means.

2. A supporting device adapted to be associated with a post and rail while the post and rail are in associated relation with each other, said device consisting of a member having portions which engage the top, side and bottom faces of the rail and a portion projecting from the said top portion of the device, said projecting portion being extended from one end of the device to substantially the portion which engages the side face of the rail so as to fit the juncture of said post and rail, said projecting portion providing means whereby said device may be secured in position relatively to said post and rail.

In witness whereof, I hereunto subscribe my name this 7th day of April, A. D. 1923.

OLOF S. CHRISTELL.