

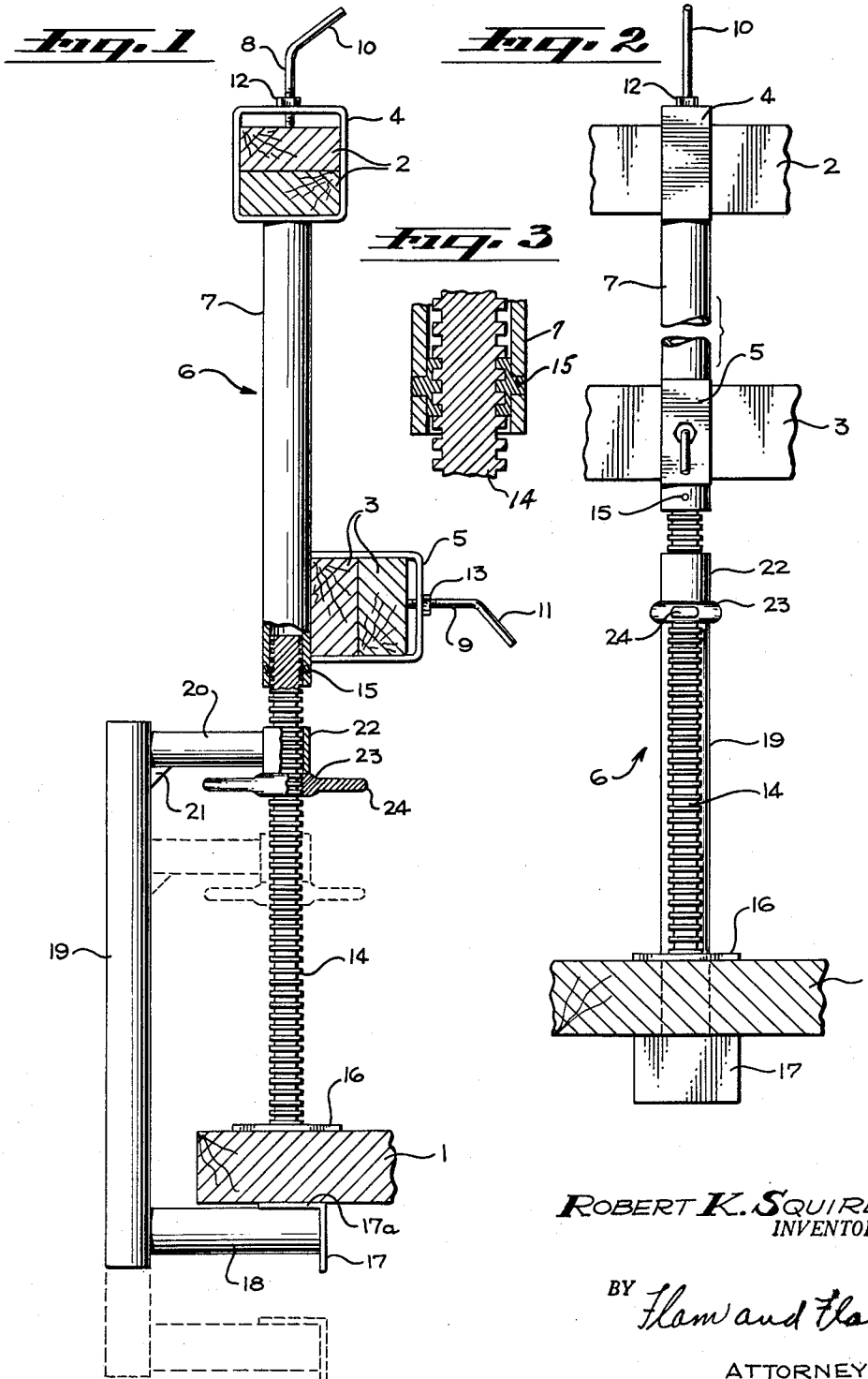
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REMOVABLE GUARD RAIL STANCHION

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REMOVABLE GUARD RAIL STANCHION

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3 Claims. (Cl. 182—113)

This invention relates to supports or stanchions for guard rails adapted to be detachably fastened to floor structures.

It is one of the objects of this invention to provide such detachable stanchions that can support guard rails at a specified height above the platform.

Such rails are often formed by lengths of wood having rectangular cross-section with sides of two inches by four inches, and commonly designated as two-by-fours. The stanchions may receive these two-by-fours at spaced intervals along the structure; it is accordingly important that they provide means for supporting the rails at substantially uniform heights at the stanchions.

It is therefore another object of this invention to provide detachable stanchions of this character that ensure uniform heights for the guard rails above the surface of the structure.

It is still another object of this invention to provide a simple and effective detachable stanchion for temporary use on structures and for supporting the guard rails.

This invention possesses many other advantages, and has other objects which may be made more clearly apparent from a consideration of one embodiment of the invention. For this purpose, there is shown a form in the drawings accompanying and forming part of the present specification. This form will now be described in detail, illustrating the general principles of the invention; but it is to be understood that this detailed description is not to be taken in a limiting sense, since the scope of the invention is best defined by the appended claims.

Referring to the drawings:

FIGURE 1 is a side elevation, partly in section, of a stanchion incorporating the invention;

FIG. 2 is a front elevation thereof, somewhat enlarged, taken from the right-hand side of FIG. 1, a portion of the stanchion being broken away to reduce the size of the figure; and

FIG. 3 is an enlarged fragmentary sectional view showing the joining of the upper and lower portions of the stanchion.

A platform 1 of a structure is illustrated, with which guard rails are to be used. The present invention relates to the supporting of these guard rail structures 2 and 3 above the platform 1. Each of these guard rail structures is made up of a pair of two-by-fours adapted to be clamped in rectangular bands 4 and 5. These rectangular bands or frames 4 and 5 may be made of metal. The bands may be appropriately supported by a stanchion structure 6 having an upper tubular portion 7.

Thus, in the present instance, the frame 4 is mounted on the top of the tubular member 7, as by welding or other means. The band or frame 5 is similarly located adjacent the lower portion of the member 7, as by appropriate welding. If desired, tightening screws 8 and 9 may be provided, extending through one of the sides of the band 4 or 5, and having an angularly offset handle 10 or 11. The inner ends of these screws clamp the rails 2 and 3 respectively against an inner surface of the frame or band 4 and 5. Lock nuts 12 and 13 may be utilized to hold the clamping arrangement in appropriate position.

The stanchion structure 6 is such that the height of

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the guard rails 2 and 3 above the structure 1 remains constant irrespective of the thickness of the platform 1.

For this purpose, an externally square threaded screw member 14 is provided, its upper end being telescoped in the lower end of the tubular member 7. This tubular member 7 has an opening 15 adjacent its lower end, by the aid of which weld metal may be flown around the threads of the upper end of the screw 14, thereby firmly attaching the member 7 to the lower threaded portion 14.

Preferably the threads on the member 14 are square and of relatively large size so as to provide sufficient resistance against shear stress when the apparatus is in use.

The pedestal 6, formed by the elements 7 and 14, is provided with a base or foot 16 which is adapted to rest upon the top surface of the platform 1. The foot member 16 is firmly attached to the lower end of the screw member 14.

An angle iron 17 is raised to have one of its flanges 17a urged against the lower surface of the platform 1. The flange 17a is moved upwardly and tightly against the platform 1 so as to clamp this platform 1 between the foot or base member 16 and the horizontal flange 17a of the angle iron 17.

The angle iron is supported on the end of a horizontal tubular member 18, as by appropriate welding. Similarly, an upright tubular member 19 is fastened to the left-hand end of member 18. It supports, adjacent its upper end, a tubular horizontal member 20. A gusset 21, located in the corner between tubular members 19 and 20, assists in strengthening the tubular structure 18—19—20.

The free end of the horizontal member 20 is provided with a tubular sleeve 22 which encompasses the threaded lower portion 14 of the pedestal structure 6. The lower surface of the sleeve 22 is engaged by the upper surface of a nut 23 threaded on the screw member 14. This nut 23 is provided with one or more spokes 24 to form a handle for the nut.

By appropriate angular movement of the nut 23 by appropriate manual manipulation of spokes 24 in the proper angular direction, the sleeve 22 is moved upwardly. Upon sufficient upward movement, the angle iron 17 contacts the lower surface of the platform 1, and continued turning of the nut 22 causes the clamping action to take place.

Release of the stanchion structure can be accomplished by lowering the nut 22 on the member 14.

The level at which the guard rails 2 and 3 are located above the platform 1 is determined solely by the length of the pedestal, including the base 16.

The inventor claims:

1. In a detachable stanchion structure: a pedestal having a foot member; at least part of the pedestal above the foot member being threaded; a threaded member cooperating with the threaded part of the pedestal; means carried by the pedestal for supporting a guard rail; and a clamp member having a lower portion opposed to the foot member, and having an upper arm provided with a tubular portion in axially slidable telescoped relation over said threaded part and extending over a substantial portion of the axial length of said threaded part for restraining the pedestal against tilting motion relative to said clamp member, whereby upward movement of the threaded member with respect to the pedestal causes said portion of the clamp member to move toward the foot member.

2. In a detachable stanchion for use on structures: a hollow tubular upper member; means carried by said tubular member for supporting one or more guard rails; an externally threaded lower member having its upper

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end telescoping into and firmly attached to the lower end of the hollow tubular upper member; a foot member attached to the lower end of the threaded member; a nut having a handle, said nut being engaged with the threaded member; an upper arm having a tubular portion in axial slidable telescoped relation over the threaded member and extending over a substantial portion of the axial length of the threaded member for restraining the attached upper and lower members against titling motion relative to said arm, said tubular portion resting on the nut for movement upwardly when the nut is rotated in one direction; elements combined with the arm to form a clamp frame, and including a lower arm having a portion opposed to the foot member and cooperating therewith to clamp the stanchion on a structure.

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3. The combination as set forth in claim 1, in which the threaded part of the pedestal joins an upper hollow part of the pedestal by being telescoped therein and attached together at the telescoped portions.

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