

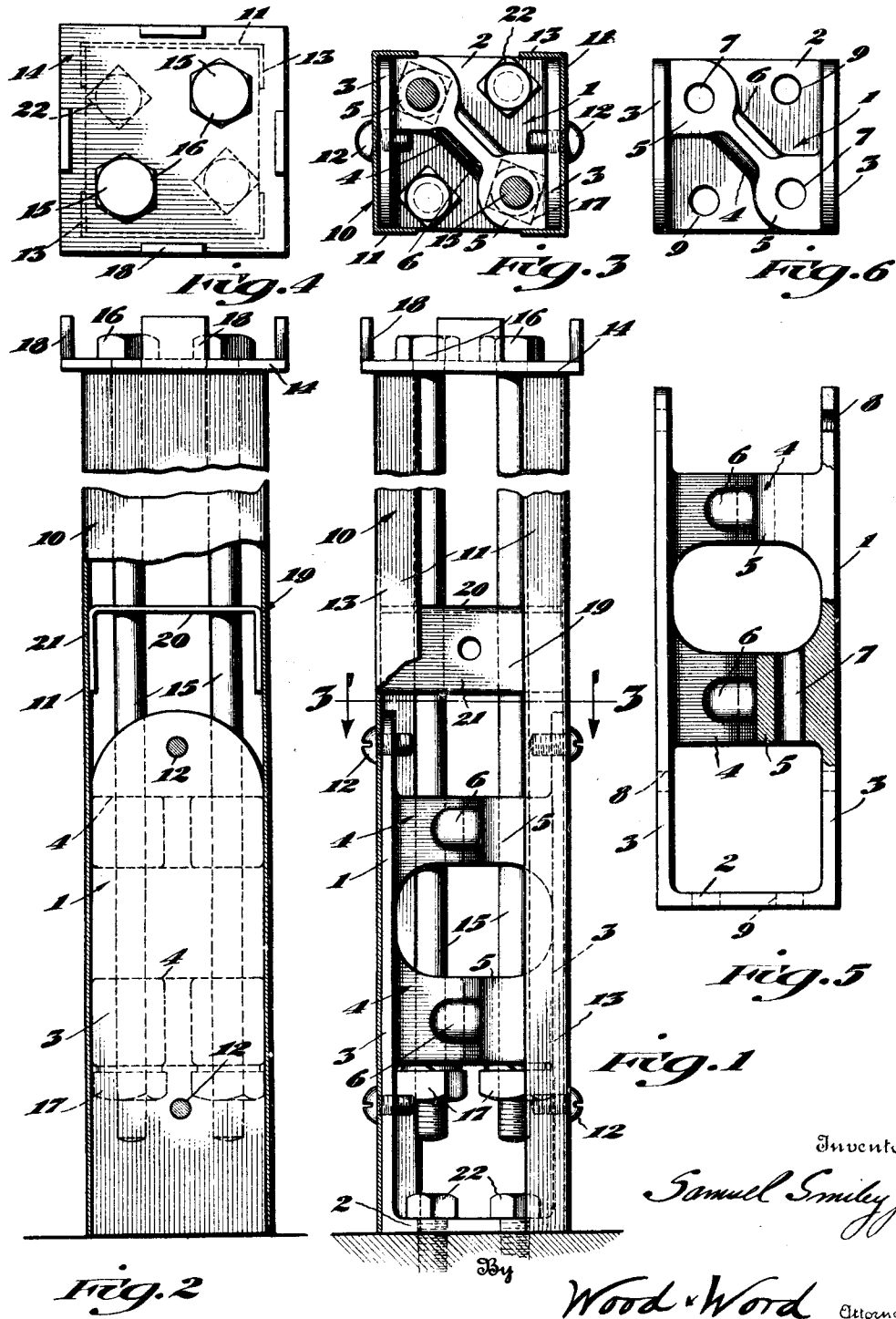
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POST ANCHOR

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POST ANCHOR.

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This invention relates to the mounting of posts of that type incorporated in railings, etc., and is particularly directed to the construction of an improved anchoring device for securing the base of a post to the floor. The anchoring device herein concerned is used in combination with fabricated posts and is designed to overcome certain disadvantages present in devices heretofore used for the same purpose.

The anchoring construction in general use necessitates flanges or toe plates extending from beyond the limits of the post base and interferes greatly with the attachment and continuity of the base mould or mopping strip used in conjunction therewith or the untidy discontinuation and irregular engagement of the base mould or mopping strip short of the post. Any type of anchoring element which would extend outwardly from the base would be very unsatisfactory and would compel special mould strip cutting or notching at the point where brought up to the post.

It is an object of this invention to provide a post anchor which embodies a flat base flange adapted for engagement with the floor and which does not project from beyond the outline of the post, being completely concealed from the vision by the parts making up the post, and thus non-interfering with a continuous mould base strip arranged in relation to the bases of the posts in a railing or wall construction.

Another object is to provide an anchor of this nature of sufficient height, which is so formed as to provide integral attachment lugs at a plurality of elevations and to permit the use of a plurality of tie rods extending between the post top and the anchor in diagonally related corners of the post, each tie rod laterally braced and trussed by engagement within the horizontally spaced lugs so as to staunchly secure the post in upright position.

Another object is to provide an anchor element of the previously described nature which is light in weight and easy to manufacture.

Further objects and advantages will be

more fully set forth in a description of the accompanying drawings, forming a part of this specification, in which:

Figure 1 is a side elevation of a post embodying the improved type of anchorage means.

Figure 2 is a side elevation of the post, the view taken at right angles to Figure 1, certain portions of the post broken away to disclose the anchorage means.

Figure 3 is a sectional view taken on line 3—3, Figure 1, showing the fabricated post in cross section and illustrating the arrangement of the tie rods and the floor bolts at the base of the post anchor.

Figure 4 is a top plan view of the complete post.

Figure 5 is a side elevation of the post anchor removed from the post structure, certain portions being broken away to illustrate the formation thereof.

Figure 6 is a top plan view of the anchor shown in Figure 5.

The views of the drawing serve to disclose a concrete example of one embodiment of the subject matter though not intended as a limitation on the claims unless expressly related thereto.

Referring to Figures 5 and 6 of the drawings, the construction of the post anchor element is as follows:

The element is preferably cast to provide an integral structure. The general cross sectional configuration of this anchor element 1 is rectangular. Regarded in a side elevation, it is made up of a base flange 2 and upwardly extending side flanges 3 which may be referred to as the arms of a U when regarded in combination with the base 2. Regarded from a direction at right angles to the foregoing appearance, the anchor presents merely a flat attachment surface. Between the arms of the U-shaped arrangement of the flanges are horizontally disposed lugs 4. These lugs are of considerable height for bracing and attachment purposes hereinafter described.

Regarding one of these lugs in detail it may be said to consist of bosses 5 extending from diagonally opposing corners of the rec-

tangular structure and connected by a rib 6 extending therebetween diagonally in relation to the rectangle. The boss portions of these lugs are provided with vertical apertures 7 for the introduction of tie rods there-
 5 through, and the lugs are spaced apart in horizontal relation for the purpose of bracing the tie rods extending therethrough. The side arms 3 of the U-shaped arrangement of flanges are each provided with a plurality of
 10 tapped apertures 8 for the securance of the side walls of a post thereto, whereas the post flange is apertured as at 9 for the insertion of floor engaging screws downwardly
 15 through the same.

Regarding the post anchor as utilized in a form of environment and referring to the remaining views of the drawing, the post of fabricated form is indicated generally at 10.
 20 A pair of side channels 11—11 making up the body of the post are secured to the side flanges or arms 3 of the anchor element by means of screws 12 traversing apertures in the channels and threaded into the tapped
 25 holes in the flanges of the anchor element 1. The web flanges 13 of the channel irons 11—11 overhang the edges of the anchor arm flanges 3. The channel irons in suitable lengths extend upwardly from the anchor
 30 the height of the rail or the wall into which they are incorporated.

The post illustrated is of a type used in a railing structure, and is provided with a square cap 14 seated on the top of the chan-
 35 nel irons. This cap is held down against the tops of the channel irons by means of tie bolts 15, having their heads 16 engaging the top surface of the cap and extending downwardly through the bosses 5 formed in the
 40 anchor element.

By the arrangement of bosses provided, a pair of tie bolts 15—15 are used in diagonally opposing corners of the post, these tie bolts
 45 being provided with nuts 17 threaded on their lower ends engaging the under sides of the lowermost bosses.

Due to the direct upward shearing strains being applied to the lower bosses, they are accordingly made of greater height than the
 50 upper bosses, the upper bosses functioning to laterally brace the tie bolts extending therethrough and thereby to render the post attachment to the anchor much more stable as a consequence of this two point engage-
 55 ment. The post cap may be provided with any arrangement of upstanding flanges as indicated at 18, these flanges being provided with apertures for securing rail members thereof. Spacer channels 19 are provided at
 60 intervals along the length of the post above the anchor element. These spacer channels have their body flange 20 horizontally disposed, and the webs 21 thereof secured to the inner sides of the webs of the post main chan-
 65 nels by means of spot welding, etc. The

channel iron elements making up the post extend to the floor line to completely enclose the anchor element.

The anchor element is secured to the floor by means of coach screws 22, passing through
 70 the base flange 2 and screwed into the floor. The sides of the post opposite to the side occupied by the channel irons are open for the purpose of inserting the coach screws and drawing up the tie bolt nuts, these sides, of
 75 course, being later filled out or covered by the remainder of the post construction. The coach screws are disposed in the diagonally opposite corners opposing the corners occu-
 80 pied by the tie bolts. By this anchor construction, the channel iron uprights of the post mark the base configuration thereof, so that the anchorage for the post in no way inter-
 85 ferres with any structure which may be brought up to the base of the post.

Having described my invention, I claim:

1. A device for anchoring the base of a post to a floor, comprising, an element having a base for attachment to the floor, side flanges
 90 extending upwardly from opposite sides of said base, and a plurality of spaced horizontally disposed lugs joining said side flanges, said side flanges adapted to attach and support post uprights, and said lugs providing a
 95 plurality point attachment for bracing the lower ends of vertical tie bolts drawn up between the post top and the anchor element.

2. A device for anchoring the base of a post to a floor, comprising, an element having a base flange of rectangular outline for at-
 100 tachment to the floor, side flanges extending upwardly from opposite sides of said base flange, said element providing uninterrupted outer surfaces for permitting the extension of
 105 post uprights to the floor line, and means for securing the lower ends of post tie bolts, extending longitudinally of the post, to the anchor element.

3. A device for anchoring the base of a post to a floor, comprising, a U-shaped ele-
 110 ment, the arms of the U-shaped elements constituting uprights, said element of rectangular cross sectional general outline, a plurality of horizontally spaced bosses, the
 115 bosses in the same plane formed in diagonally opposite corners of the element and connected by a diagonal rib, a post structure adapted to be attached to and extend to the floor line, surrounding the element, and tie bolts secured
 120 from the top of the post structure and traversing the plurality of vertically aligned horizontally spaced bosses to provide plural-
 125 ity point attachment and engagement of the lower ends of the tie bolts and a lateral bracing thereof.

4. A post construction, comprising, an anchor element having a floor engaging base flange of rectangular outline, a pair of
 130 flanges extending upwardly from opposite sides of said base flange, a plurality of hori-

zontally spaced lugs formed between said upwardly extending flanges, each lug comprising bosses disposed in diagonally opposite corners of the anchor element and connected by a rib, a pair of channel iron post uprights secured to the respective upwardly extending flanges of the anchor element, the webs of said channel iron uprights extending inwardly and the uprights extending to the lowermost edge of the anchor element, and a pair of tie bolts drawn up between the upper ends of the uprights and the lower surface of the lowermost bosses, said tie bolts traversing the plurality of lug bosses for providing a plurality point engagement of the lower ends of the tie bolts, thereby bracing the post.

In witness whereof I hereunto subscribe my name.

SAMUEL SMILEY, JR.