Aug. 20, 1929. H. CLEMENT 1,725,507

RAILING POST BASE

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Fig. 1.

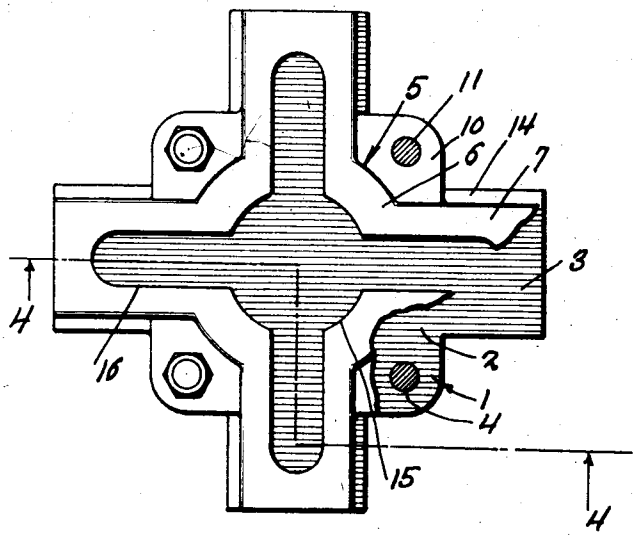
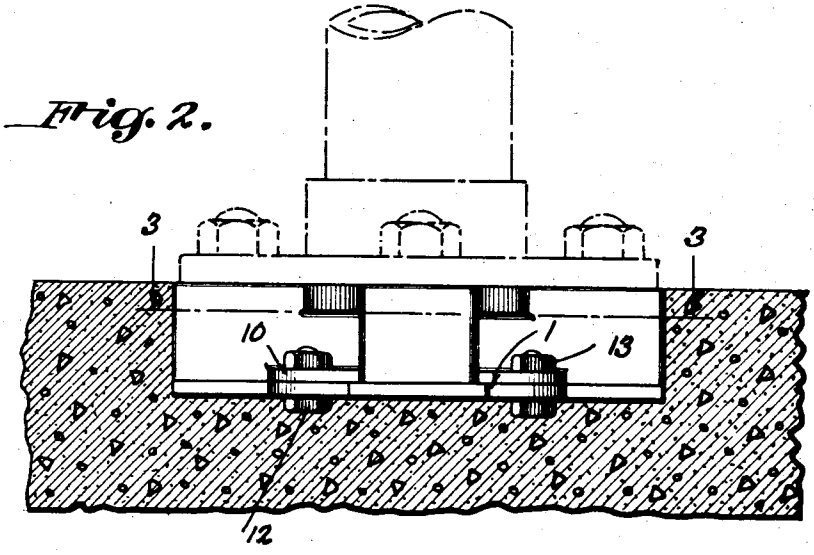


Fig. 2.



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Fig. 3.

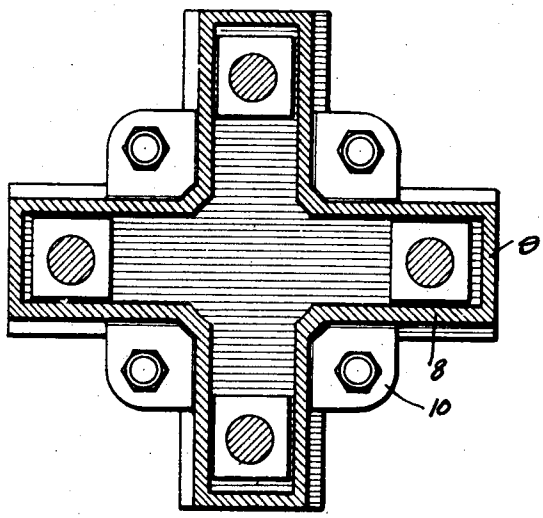
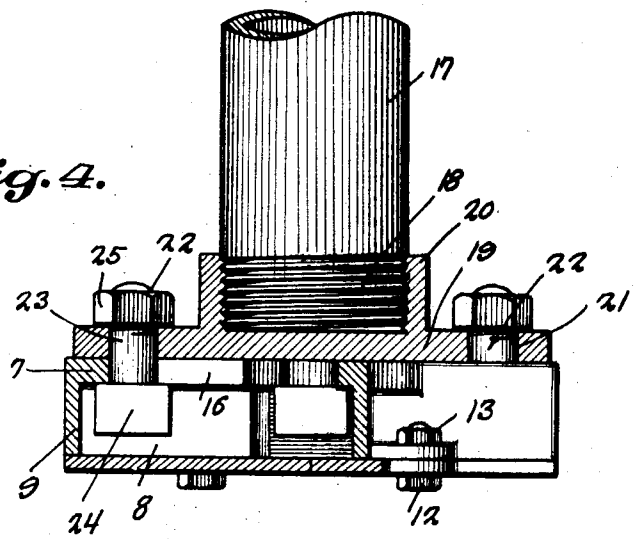


Fig. 4.



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UNITED STATES PATENT OFFICE.

HERMAN CLEMENT, OF PITTSBURGH, PENNSYLVANIA.

RAILING-POST BASE.

Application filed March 13, 1928. Serial No. 261,285.

This invention relates to improvements in bases for railing posts which are of tubular or pipe material.

In mounting tubular posts upon concrete foundations, it is customary to embed, in the concrete, a number of threaded socket members suitably spaced to receive bolts which are fitted through the base flange into which the lower end of the post is threaded. These sockets must of course be exactly properly positioned as otherwise the securing bolts cannot be threaded into the same in a manner to properly anchor the base flange of the post and they present another disadvantage, namely that if a post, already installed, is removed and a post of a different size is substituted therefor, it becomes necessary to either remove the original sockets or embed other sockets in the concrete properly spaced and arranged to accommodate bolts fitted through the base flange of the new post. It is quite evident therefore that, inasmuch as the base flanges of railing posts are ordinarily provided with four bolt openings, considerable time and labor must be spent in embedding the required number of sockets for the securing bolts, in the concrete and properly relatively locating the sockets. Therefore the present invention has as one of its objects to provide a base which may be readily embedded in the concrete upon which the post is to be erected and which will be so constructed that spaced flanges upon posts of various sizes may be readily assembled therewith and securely bolted thereto, the invention therefore contemplating a post base so constructed as to be adapted to be readily and quickly embedded in the concrete without the necessity of any careful adjustment of any of its component parts and with which base there may be connected the base flange of any size supporting the lower end of a post of corresponding size, the invention therefore likewise contemplating the provision of a base for railing posts which will permit of the substitution of base flanges of various sizes, one for another, without the necessity of removing any part of the base from the concrete foundation or in any way altering the construction of the base or changing its position.

Another object of the invention is to provide a post base of such construction that the base flange of the post may be readily and quickly assembled therewith and the securing bolts readily and conveniently adjusted and tightened, so that considerable time is saved in erecting posts after the bases have been embedded in the concrete foundation.

Another object of the invention is to provide a post base which may be more securely anchored in a concrete foundation than post bases as ordinarily constructed and which base will be so constructed that there will be no tendency for the same to become displaced or loosened and no likelihood of it being pulled loose from the foundation in the event any extraordinary strain is imposed upon the post supported thereon.

Another object of the invention is to provide a post base so constructed that it may be embedded in concrete or may be suitably anchored and arranged within brick, stone, or masonry foundations without any difficulty.

While the accompanying drawings and the description which is to follow, constitute a disclosure of the preferred embodiment of the invention, it will be understood that various changes may be made within the scope of what is claimed.

In the accompanying drawings:

Figure 1 is a plan view of the base embodying the invention, a portion of the top section thereof being broken away to better illustrate the form of the bottom plate of the base;

Figure 2 is a view in side elevation of the base embedded in a concrete foundation, the view illustrating in broken lines the lower portion of a rail post and the attaching flange which is fitted thereto;

Figure 3 is a horizontal sectional view taken substantially on the line 3—3 of Figure 2 looking in the direction indicated by the arrows;

Figure 4 is a vertical sectional view taken substantially on the line 4—4 of Figure 1 looking in the direction indicated by the arrows and illustrating the lower portion of the rail post to be supported, in elevation, and the attaching flange for said post in section.

The base comprises a base or foundation plate 1 which may be of cast metal and which comprises a central rectangular body portion 2 and lateral extensions 3 which project from the four margins of the said portion 2 and which are of rectangular marginal contour, the body portion 2 of the plate being formed in each of its corners with a bolt opening indicated by the numeral 4. The

base further comprises a top section which is indicated in general by the numeral 5 and which comprises an approximately circular central portion 6 and hollow rectangular radial extensions 7 each comprising spaced sides 8 and a closed outer end indicated by the numeral 9. In the four corners defined by the radial extensions 7 of the body 6, there are formed webs 10 each of which is formed with a bolt opening indicated by the numeral 11, and by reference to Figures 2 and 4 of the drawings it will be observed that these web portions 10 are located substantially in a plane with the open under side of the base section 5 and that they rest flat upon the corner portions of the base plate 1. Bolts 12 are fitted through the bolt openings 4 and 11 formed in the corner portions of the base plate 1 and the web portions 10 and nuts 13 are applied to the bolts and are tightened to secure the top section 5 of the base to the base plate section 1 thereof. At this point it will be observed that the radial hollow extensions 7 of the upper section 5 of the base are of such length as to terminate at their closed outer ends 9, flush or in registration with the outer ends of the rectangular extensions 3 of the body 2 of the base plate but that the said radial extensions 7 are of a width slightly less than the width of the respective extensions 3 of the base plate, so that there will be provided projecting marginal portions which are indicated by the numeral 14 and which serve to more securely anchor the base member in the concrete or other foundation and thus prevent the base being torn loose. The central portion 6 of the top section of the base is formed centrally with a circular opening which is indicated by the numeral 15 and the closed tops of the radial extensions 7 of this section are formed each with a longitudinal slot indicated by the numeral 16, the inner ends of all of the slots communicating with the opening 15 as clearly shown in Figure 1 of the drawing.

By reference to Figure 2 of the drawings it will be observed that the base structure, embodying the invention, is to be embedded in the concrete or other foundation upon which the post is to be supported and that the upper face of the upper section 5 of the base is flush with this foundation. The tubular post to be anchored to the base and supported in upright position thereon is indicated by the numeral 17 and does not differ from the ordinary post, posts of this character being ordinarily made of pipe material and, in accordance with common practice, the post 17 is threaded at its lower end as at 18 and has fitted thereto a base flange 19, this flange being provided centrally with the usual interiorly threaded socket 20 and being formed at points equi-distantly spaced from its center with bolt openings indicated by the numeral 21 and which are ordinarily four in number. The dimensions of these flanges vary in accordance with the dimensions of the railing posts to be supported thereby and therefore different sizes of the flanges will have their bolt openings 21 differently spaced. It will be observed however that the base of the present invention is designed for the anchoring thereto of flanges 19 of any of the ordinary sizes inasmuch as the bolts which secure these flanges to the bases of the present invention and which bolts are indicated by the numeral 22, are adapted to be fitted through the slots 16 and may occupy different positions within the slots spaced a greater or less distance from the axis of the base depending upon the dimensions of the flange 19 and the location of the bolt openings 21 therein. The bolts 22, as will be observed by reference to Figures 3 and 4 of the drawings, are of the ordinary type employed and each includes the usual shank 23 having the usual squared head 24 and it will be observed by reference to these figures that the shanks of the bolts are adapted to be engaged in the slots 16. the heads of the bolts being first inserted downwardly through the opening 15 in the top of the section 5 of the base and the bolts then adjusted longitudinally in the slots to positions to permit of their engagement through the openings 21 in the flange 19 when the flange is disposed flat upon the upper surface of the section 5 of the base. It will be observed, at this point, that the squared heads of the bolts fit between the side walls 8 of the extensions 7, and therefore the bolts are held against rotation while the respective nuts 26 are being threaded onto the same and tightened to bind against the upper side of the flange 19.

From the foregoing description of the invention it will be evident that there is provided an extremely simple and very substantial base for the flanges of railing posts and by the use of which base flanges of various sizes may be anchored to a foundation surface in a more convenient manner and with less loss of time than is possible by the use of the old forms of anchoring means.

It will furthermore be evident from the foregoing description of the invention that the base, embodying the invention, may be embedded in the concrete or other foundation with much less inconvenience and trouble and with the expenditure of much less time than is required where, as in common practice, four individual sockets are embedded in such foundation to accommodate the anchoring bolts for the post flange. Likewise it will be evident that, in the event it becomes unnecessary or undesirable to employ the base, after it has been in use for a period of time, the flanges of the posts may

be separated from the respective bases and the bases then filled with any suitable plastic mixture such for example as concrete or cement which may be poured into the bases through the openings 15 in the top sections 15 until level with the upper surface of said sections 5, whereupon the filling thus introduced into the bases may be smothed off and the bases will then present a smooth and unobstructed surface occupying a common plane with the upper surface of the foundation.

Having thus described the invention, what I claim is:

1. A post base comprising a hollow body open at its under side and provided in its top with a central opening and with slots extending radially therefrom and communicating therewith to accommodate the shanks of the bolts ordinarily associated with post flanges after engagement of the heads of the bolts through said opening, and a base plate secured to the under side of the body and closing the same, the said plate having marginal portions projecting beyond the sides of the said body to constitute anchoring means when the body is embedded in a foundation.

2. A post base comprising a base plate including a rectangular body portion and extensions of rectangular form projecting from each side of the body portion, an upper hollow section open at its under side and comprising a central body portion and radial portions, the said body being disposed upon the base plate with its radial portions resting upon the extensions of the base plate, the said body being provided with webs between its radial extensions and having bolt openings, the corner portions of the body portion of the base plate having bolt openings positioned opposite the bolt openings in said web portions, securing bolts engaged through said corner portions of the body of the base plate and through the web portions of the said body of the hollow casing section, the hollow casing section being closed on all sides and provided in its top with a central opening and with slots radiating therefrom and communicating at their inner ends therewith and extending longitudinally of the closed tops of the radial extensions of said body to accommodate the usual securing bolts of the usual post flanges.

3. A post base comprising a base plate including a body portion and extensions projecting from each side of the body portion, an upper hollow section open at its under side and comprising a central body portion and radial portions extending from each side of the body portion, the said body being disposed upon the base with its radial portions resting upon the extensions of the base plate, the said radial portions of the hollow sections being formed in their upper sides with slots and the said central body portion of the hollow section being formed centrally with an opening in communication with the inner ends of the slots whereby the heads of the bolts of a post flange may be engaged through said opening and the shanks of the bolts positioned in said slots prior to the introduction of the bolt shanks through the post flange, the said base plate and the upper hollow section being provided in the angles between their extensions with overlapping portions having registering openings, and bolts secured through said openings.

In testimony whereof I affix my signature.

HERMAN CLEMENT.