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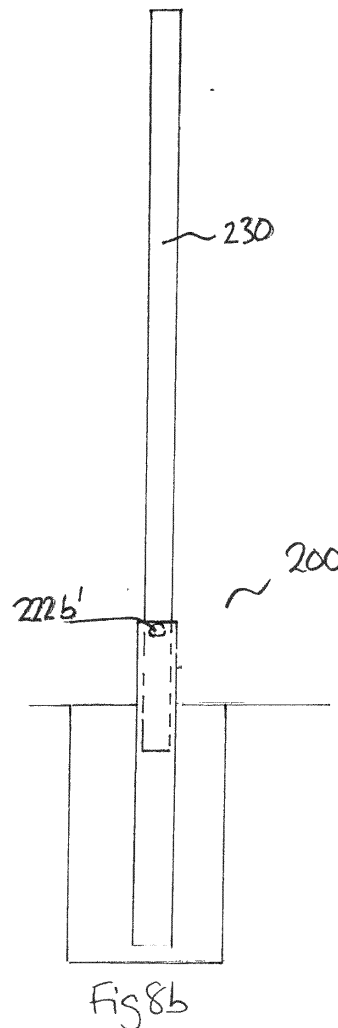
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(54) **HOARDING POST MOUNTING APPARATUS AND METHOD**

(57) A temporary hoarding system includes a mounting socket 200 for a hoarding support post 230, the socket comprising a hollow sleeve portion for receiving an end of a post and an adjustable engagement portion 220 for engaging the post, wherein the depth at which the post extends into the sleeve is adjustable. The adjustment means may be located above ground level for easy access and comprises a nut 222a' and a locking bolt 222b' mounted on the sleeve 210. The bolt 222b' passes through one of a plurality of holes in the sleeve 210 and bears against the surface of the post 230 to make a tight friction fit. The bolt has a locking head to prevent unauthorised tampering.



Description

[0001] The present invention relates to an apparatus used for constructing a hoarding system and a method of erecting a hoarding.

[0002] Temporary hoardings are erected around the perimeter of construction sites to shield them from public view and prevent unauthorised access. They usually comprise a plurality of posts, affixed vertically to the ground, attached to which are a plurality of panels, which constitute the walls of the hoarding. A common method of affixing the posts to the ground includes locating one end of the post into a hole in the ground using a spigot/socket, before filling the hole with concrete, securing the post and spigot.

[0003] Figure 1 shows apparatus for affixing a post in the ground, in accordance with a previously considered hoarding system. A spigot 100 comprises a cylindrical socket 105 to which are welded upper ends of two cross-sectional L shaped channels 110 of angle iron, which are welded at their lower ends to an end plate 120. Directly beneath the socket 105 is a support plate 115 to prevent the post 130 from sliding through the socket 105.

[0004] The spigot lies fully beneath the ground surface G and is permanently secured, together with a base of a hoarding support post 130, within a concrete foundation 140. The upper end of the post and the hoarding panel it supports have been omitted for clarity.

[0005] However, this apparatus only allows the posts to protrude a fixed depth from the ground, resulting in the tops of some posts extending above the hoarding panels, requiring them to be trimmed for aesthetic reasons. This is time consuming and results in posts of different lengths that cannot easily be reused. It is also a waste of material.

[0006] Furthermore, recent safety guidelines require hoardings to withstand increased stress loads. The existing apparatus is considered to be unsuitable for the increased loads. One solution would be to replace the existing posts with posts having greater wall thicknesses. However, this would add to the cost of the hoardings significantly. Also, the weight of the posts would require costly mechanical installation apparatus.

[0007] Embodiments of the present invention aim to provide a hoarding apparatus, system and method that at least partly address the above-mentioned problems.

[0008] The present invention is defined in the attached independent claims, to which reference should now be made. Further, preferred features may be found in the sub-claims appended thereto.

[0009] According to one aspect of the present invention, there is provided a mounting socket for a hoarding support post, the socket comprising a hollow sleeve portion for receiving an end of a post, wherein the sleeve portion is arranged in use to extend upwards from a ground surface to support the post at least partly above the ground surface.

[0010] Preferably the sleeve portion is arranged in use to extend from below the ground surface to a locating

height above the ground surface to support the post.

[0011] According to another aspect of the present invention, there is provided a mounting socket for a hoarding support post, the socket comprising a hollow sleeve portion for receiving an end of a post and an adjustable engagement portion for engaging the post, wherein the depth at which the post extends into the sleeve is adjustable.

[0012] In a preferred arrangement the sleeve is substantially cylindrical, but it may have any cross-sectional shape, and preferably comprises one or more of, but is not limited to, steel, plastic and/or composites.

[0013] Preferably the adjustable engagement portion comprises a plurality of hole pairs in various locations on the body of the sleeve through which a supporting member, such as a pin or bolt, may be placed, so that when the post is inserted into the socket, the support member supports the post, preventing it from extending further into the sleeve.

[0014] To adjust the height of the post, the supporting member may be placed at a hole pair that is located at a different axial position on the sleeve.

[0015] The hole pairs may be arranged an equal distance apart so that the depth at which the post extends into the sleeve can be chosen from a range of pre-set values.

[0016] The adjustment portion is preferably arranged to be below ground in use. However, in some embodiments at least some of the hole pairs are located above ground. In this case the support member may be provided with a locking portion, such as a locking nut, to prevent unauthorised removal of the support member.

[0017] According to another aspect of the present invention, there is provided a hoarding system, comprising one or more hoarding panels, hoarding support posts for supporting the panels and mounting sockets according to any statement herein.

[0018] The post diameter may be chosen so that it fits sufficiently within the sleeve of the socket with little to no space between the post and the inside surface of the sleeve.

[0019] In use, the socket may be fully or preferably partially situated vertically within a ground surface, the adjustment portion thereby determines the height at which the post protrudes perpendicularly from the ground surface.

[0020] According to a further aspect of the present invention, there is provided a method of erecting a hoarding system, the method comprising affixing a plurality of mounting sockets within the ground and inserting hoarding support posts in the sockets so that the sockets extend above a ground level to support the posts.

[0021] Preferably the method includes adjusting the extent to which the posts protrude from the sockets.

[0022] The sockets may be placed within a ground hole after or preferably prior to receiving the posts, to allow a height adjustment to be performed before the sockets are secured within the ground.

[0023] The method of securing the sockets within the ground preferably comprises pouring concrete or other cementitious materials into the ground hole, which then set around the exterior of the socket.

[0024] Hoarding components such as panels and/or rails may then be attached to the posts to complete the hoarding.

[0025] The invention may include any combination of the features or limitations referred to herein, except such a combination of features as are mutually exclusive, or mutually inconsistent.

[0026] A preferred embodiment of the present invention will now be described, by way of example only, with reference to the accompanying diagrammatic drawings, in which:

Figure 1 is a schematic front and side view of a hoarding support post and spigot according to an example of the prior art;

Figure 2 is a schematic side and front view of a hoarding support post and mounting socket according to one embodiment of the present invention;

Figure 3 is a schematic side view of the post and socket of Figure 2;

Figure 4 is a front schematic view of that shown in Figure 3;

Figure 5 is a schematic front view of a hoarding system according to one embodiment of the present invention;

Figure 6 is a schematic front side of post and spigot according to an example of the prior art, and depicts the result of an applied load;

Figure 7 is a schematic side view of a post and socket of Figure 2 and depicts the result of an applied load similar to that of Figure 6;

Figures 8a-8c show an alternative embodiment of post and socket in accordance with the present invention, respectively as side, front and perspective views;

Figure 9 shows a variant of the embodiment of Figures 8a-8c;

Figures 10a and 10b show, respectively an operative installing a post according to a previously considered system and, by way of comparison, an operative installing a post in accordance with an embodiment of the present invention;

Figures 11a and 11b show, respectively an operative installing a post using a post driver according to a

previously considered system and, by way of comparison, an operative installing a post using a post driver in accordance with an embodiment of the present invention; and

Figures 10a and 10b show, respectively the space taken up by a previously considered backstay system and, by way of comparison, the space taken up by a post in accordance with an embodiment of the present invention.

[0027] Figure 2 shows a mounting socket 200, comprising a sleeve 210, located in a hole in the ground, in which a hoarding support post 230 is inserted. At its base, the post 230 rests on adjustment means 220 comprising a plurality of axially spaced holes 221, each hole having a counterpart located on an opposite side of the sleeve, and a support member 222, in this case a nut 222a and bolt 222b. The bolt 222b passes through a pair of the holes 221 and across the sleeve 210 to support the post 230 at its end. The member 222 may be positioned at any of the hole pairs thereby allowing the height of the post 230 with respect to the ground surface G to be set during installation.

[0028] The post 230 is received in the socket 200, sufficiently below the ground surface G, to provide a strong mounting. However, the socket protrudes above ground level to provide a much stronger support for the post than a purely subsurface mounting.

[0029] The socket 200 is secured within the ground hole via a concrete foundation 240. However, contrary to the prior art example of Figure 1, this arrangement does not require the tops of the posts to be trimmed for aesthetic reasons, due to its adjustability.

[0030] Figures 3 and 4 show part of a hoarding 300, comprising the mounting socket 200 of Figure 2, and a panel portion P connected to the post 230 via upper and lower mounting brackets 250. Typically, hoardings comprise a plurality of adjacent hoarding panels P, which together form a continuous enclosure.

[0031] Figure 5 shows schematically a part of a hoarding according to an embodiment of the present invention, comprising a plurality of the hoarding panels P of Figures 3 and 4. The ground surface G at each hoarding panel P varies in height and the height adjustability of the support posts 230 in the mounting sockets 200 allows the top of the posts 230 to stand at equal height, regardless of variations in the height of the ground surface.

[0032] Figure 6 is a schematic side view of a post 130 and spigot 100 according to the prior art example of Figure 1, when subjected to a load L. In practice the load L would be the result of a wind and would act primarily on the hoarding panels (not shown) causing a localised stress on the post 130 at the point at which the post leaves the ground level G. In this arrangement, the load is such that the post breaks at the fail point F.

[0033] Figure 7 is a schematic side view of a post 230 and socket 200 according to Figure 2, showing an em-

bodiment of the present invention, subjected to the same load L.

[0034] Because of the post 230 being located within the sleeve 210, and because the latter protrudes above the surface G of the ground, this arrangement provides sufficient support for the post 230 so that the load L can be withstood, satisfying safety guidelines. Existing posts can be used with the system, meaning that there is no need to acquire expensive new stock. Furthermore, there is less waste of material, in particular of the posts themselves which do not have to be trimmed at their upper ends for aesthetic reasons.

[0035] In an alternative embodiment, shown in Figures 8a, 8b, 8c and 9, the adjustment means may be located above ground level for easy access. In this case, a lock must be provided to prevent unauthorised adjustment of the post. Figures 8a, 8b and 8c show respectively side, front and perspective views of a mounting socket 200 in which the adjustment means 220 comprises a nut 222a' and a locking bolt 222b' mounted on the sleeve 210. The bolt 222b' passes through one of a plurality of holes in the sleeve 210 and bears against the surface of the post 230 to make a tight friction fit. The bolt has a locking head to prevent unauthorised tampering.

[0036] Figure 9 shows a variant in which the locking nut 222a' and bolt 222b' are part of a separate collar that passes around the post (not shown) and engages with it in a tight friction fit. The collar C can be secured to the post at any location along its length and when the post is inserted into the sleeve 210 the collar rests atop the sleeve to limit the extent to which the post can slide down into the sleeve, thus providing an adjustable control of the height of the mounted post.

[0037] In this arrangement, the position of the support member 222 may alternatively be chosen so that the post 230 does not extend beneath the ground surface G within the socket 200. This feature allows the maximum height of the post 230 not to be limited by the height of the ground surface G.

[0038] Figures 10a and 10b show comparatively an operative installing a post 330 in accordance with a previously considered system (Fig 10a) and an operative installing a post 330' in accordance with an embodiment of the present invention (Fig 10b). In the latter example the operative is able to adopt a more ergonomically satisfying position, being able to stand on the ground and work at a comfortable height whilst fixing the post 330/330' in a socket 300/300'. In contrast, the prior art example requires that the fixing be done by crouching or kneeling, which is uncomfortable for installers and can cause health problems.

[0039] However, there are further benefits in having the fixing/adjustment point above ground. In particular, fixings at ground level become rusted as they are exposed to moisture, dirt and dog urine, all of which contribute to accelerated oxidation and degradation of components. Many of these installations are in residential areas where dog walkers will pass the hoarding and allow

their dogs to urinate. This can also pose a health risk when the hoarding is dismantled

[0040] The raised coupling position of this embodiment of the present invention negates these problems whilst providing all the benefits of improved post strength.

[0041] Figures 11a and 11b show comparatively an operative installing an alternative type of post 430 in accordance with a previously considered system (Fig 11a). This type of hoarding system relies upon the posts 430 being driven into the ground using a hand-held driver 440 which comprises a heavy hollow cylinder having a pair of handles 442 on either side. The driver is placed over the end of the post and the post is then driven into the ground by repeatedly striking the end of the post with the driver.

[0042] In contrast, an operative driving a socket/spigot 400 into the ground, in accordance with an embodiment of the present invention (Fig 11b), has an easier task. The operative is able to adopt a more ergonomically satisfying position, being able to work at a comfortable height. The prior art example requires that the fixing be done by reaching up above head height which is uncomfortable for installers and can cause health problems. Furthermore, some types of hoarding post are too long for the prior art method to be practicable.

[0043] Figures 12a and 12b are provided to show a comparison between a backstay approach to supporting a post (Figure 12a) - in which a back stay 500 is concreted to the ground and secured to an upright post 530 and an installation according to an embodiment of the present invention (Figure 12b). Among several advantages of the latter are that less space is taken up, maximising space in the site compound, less excavating is necessary and less equipment is required. The solutions afforded by the present invention offer increased strength to the post in same way as would a back stay, but at less cost.

[0044] Embodiments of the present invention provide a temporary hoarding system that does not require the use of back stays which can be a problem due to limited space on sites. This may be achieved with the use of a sacrificial spigot or socket which offers the post additional support higher up the tube, removing the load where the post goes into the ground. By doing this, the cost of the post can be kept down by reducing the wall thickness whilst still offering enough strength that the post does not fail. Another benefit is that the posts are light enough to fall below manual lifting regulations allowing operatives to install without mechanical plant. This is very desirable when installing fence lines where access, for example with machinery, is difficult.

[0045] As the spigot protrudes above the ground it obviates the need for operatives to bend down to ground level to make adjustment to fixings. The result is that installation can be carried out by a single operative with the height adjustment taking place at a height of e.g. approximately 600 millimetres above ground level.

[0046] Adjustment above ground level means that the fittings do not become contaminated with soil, dirt, water

and the possibility of urination from dogs, thereby avoiding oxidation or rusting of the fittings which could make readjustment or removal of the post impossible at a later date.

[0047] Whilst endeavouring in the foregoing specification to draw attention to those features of the invention believed to be of particular importance, it should be understood that the applicant claims protection in respect of any patentable feature or combination of features referred to herein, and/or shown in the drawings, whether or not particular emphasis has been placed thereon.

Claims

1. A mounting socket for a hoarding support post, the socket comprising a hollow sleeve portion for receiving an end of a post and an adjustable engagement portion for engaging the post, wherein the depth at which the post extends into the sleeve is adjustable.
2. A mounting socket according to Claim 1, wherein the adjustable engagement portion comprises a plurality of hole pairs in various locations on the body of the sleeve through which a supporting member, such as a pin or bolt, may be placed, so that when the post is inserted into the socket, the support member supports the post, preventing it from extending further into the sleeve.
3. A mounting socket according to Claim 1 or 2, wherein the adjustment portion is arranged below ground in use.
4. A mounting socket for a hoarding support post, the socket comprising a hollow sleeve portion for receiving an end of a post, wherein the sleeve portion is arranged in use to extend upwards from a ground surface to support the post at least partly above the ground surface.
5. A mounting socket according to Claim 4, wherein the sleeve portion is arranged in use to extend from below the ground surface to a locating height above the ground surface to support the post.
6. A mounting socket according to any of the preceding claims, wherein the sleeve is substantially cylindrical.
7. A hoarding system, comprising one or more hoarding panels, hoarding support posts for supporting the panels and one or more mounting sockets according to any of Claims 1-6.
8. A method of erecting a hoarding system, the method comprising affixing a plurality of mounting sockets within the ground and inserting hoarding support posts in the sockets so that the sockets extend above a ground level to support the posts.
9. A method according to Claim 8, wherein the method includes adjusting the extent to which the posts protrude from the sockets.

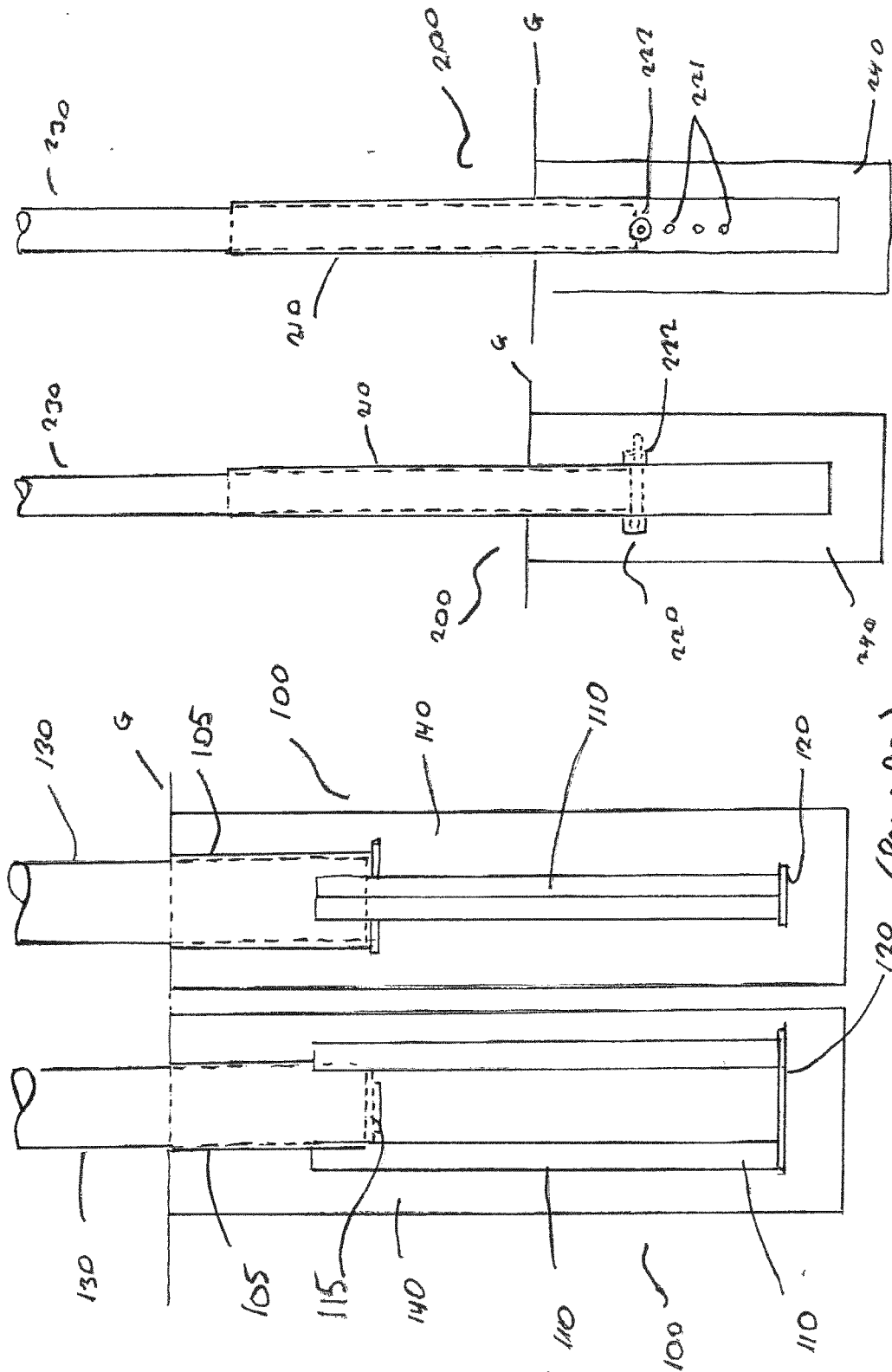
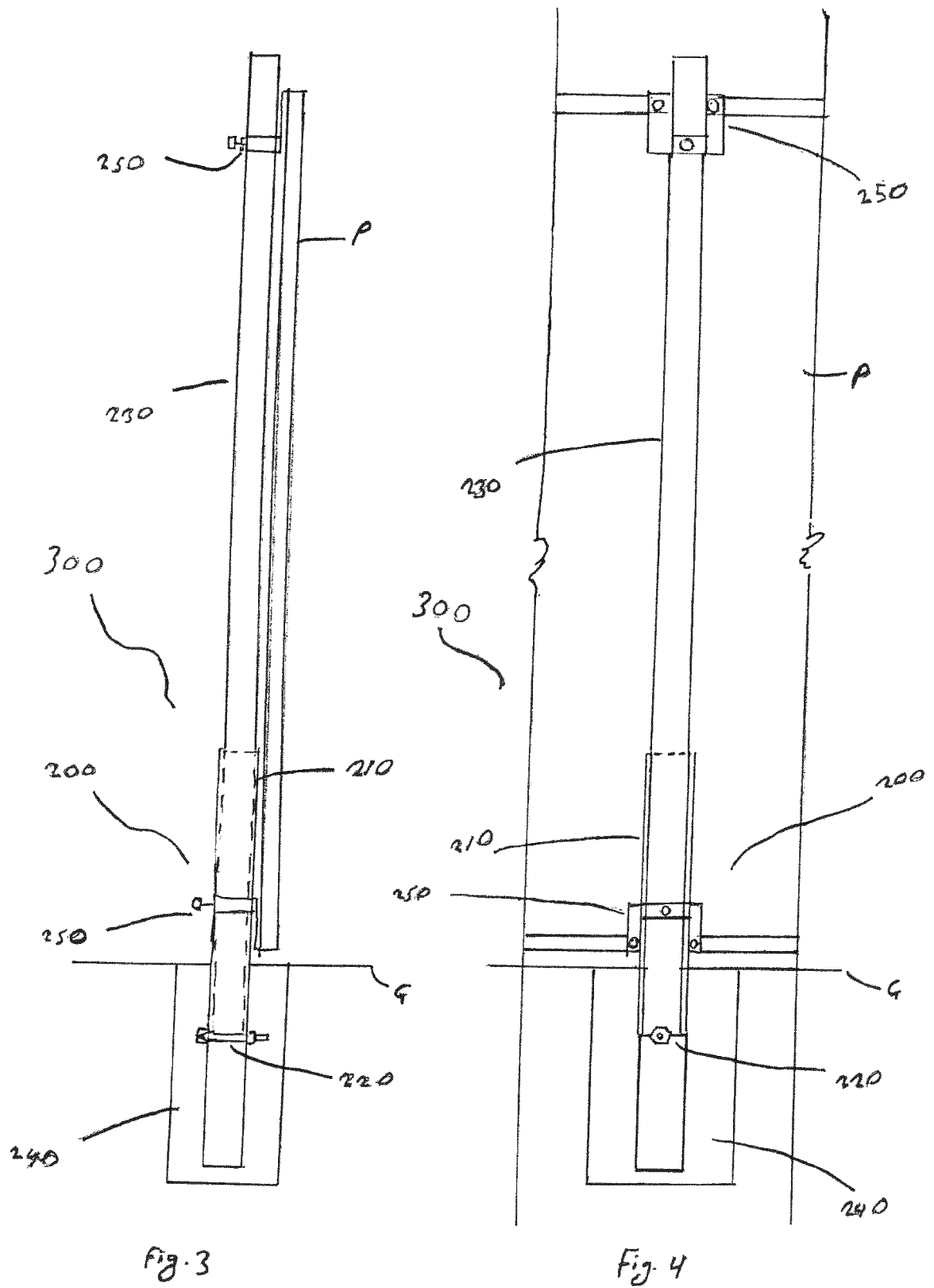


Fig. 2

Fig. 1 (PRIOR ART)



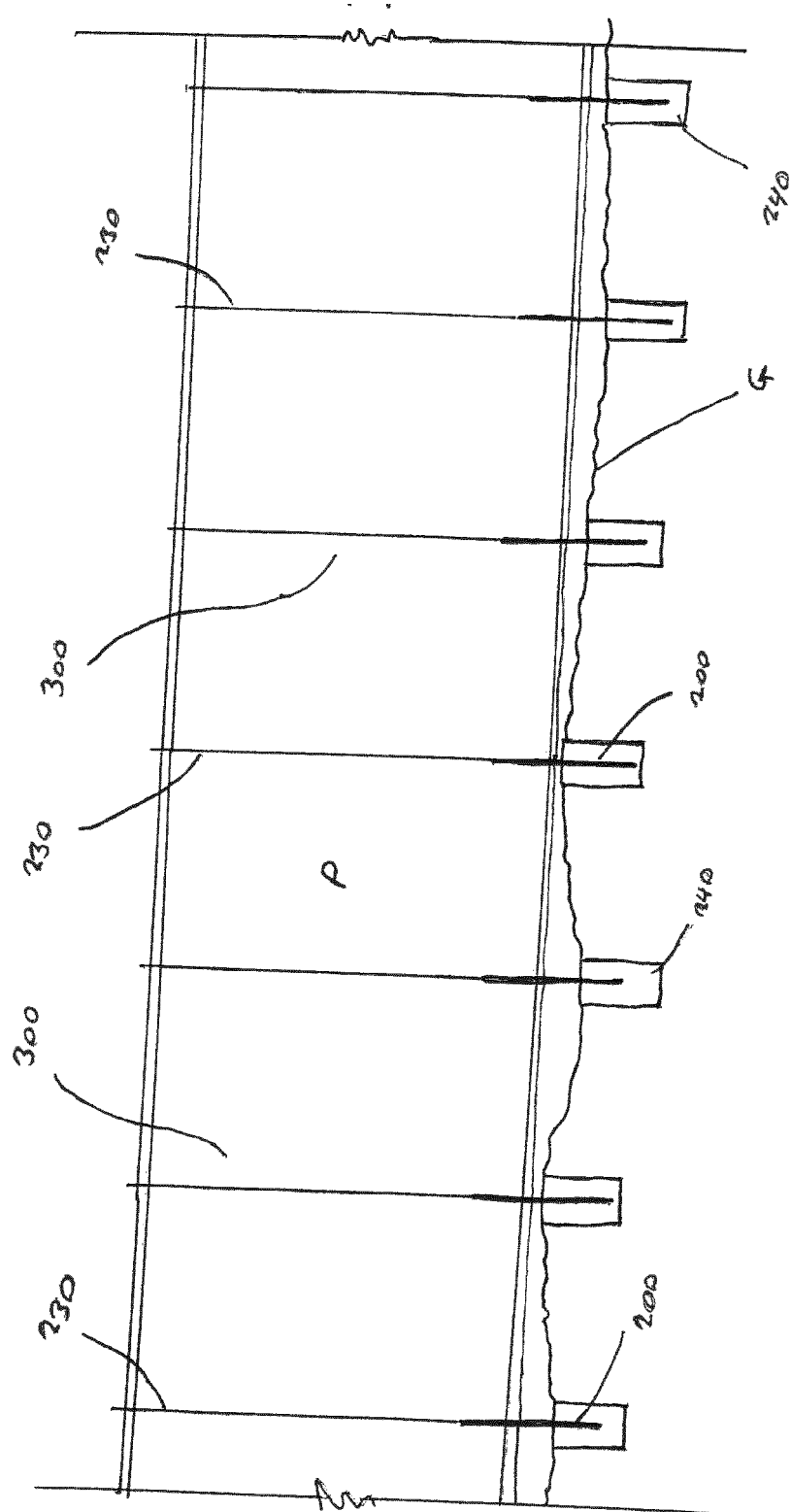
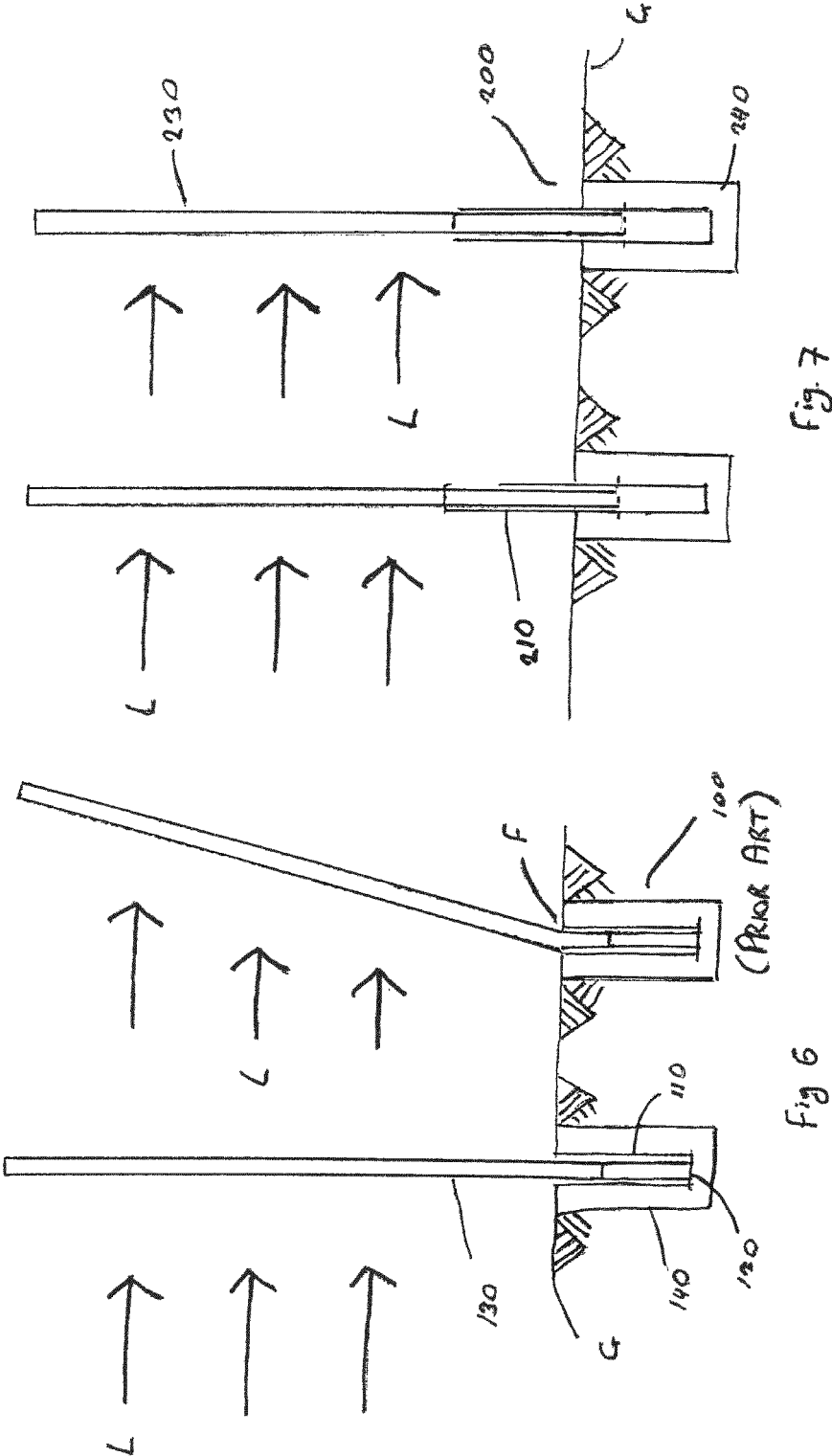
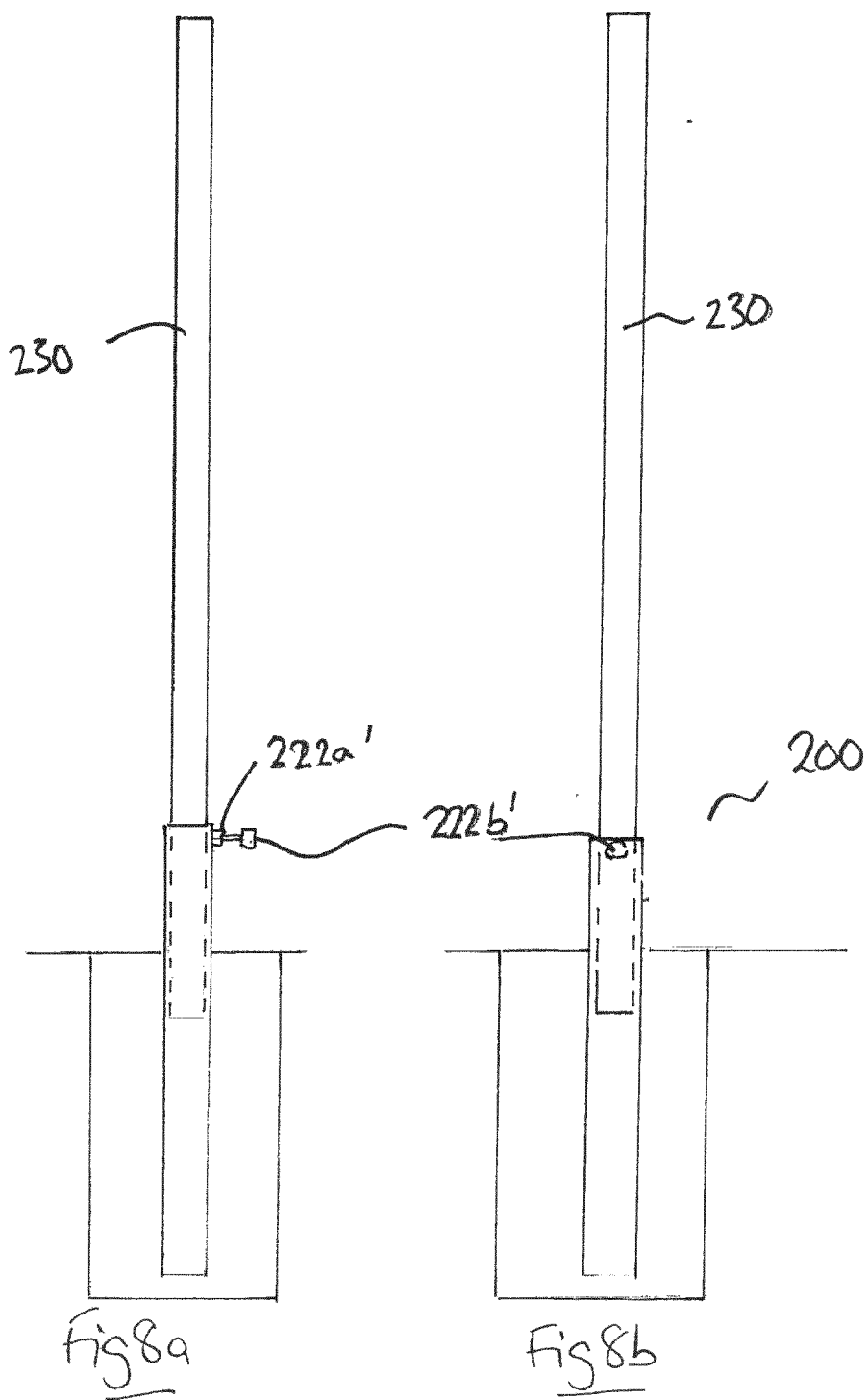
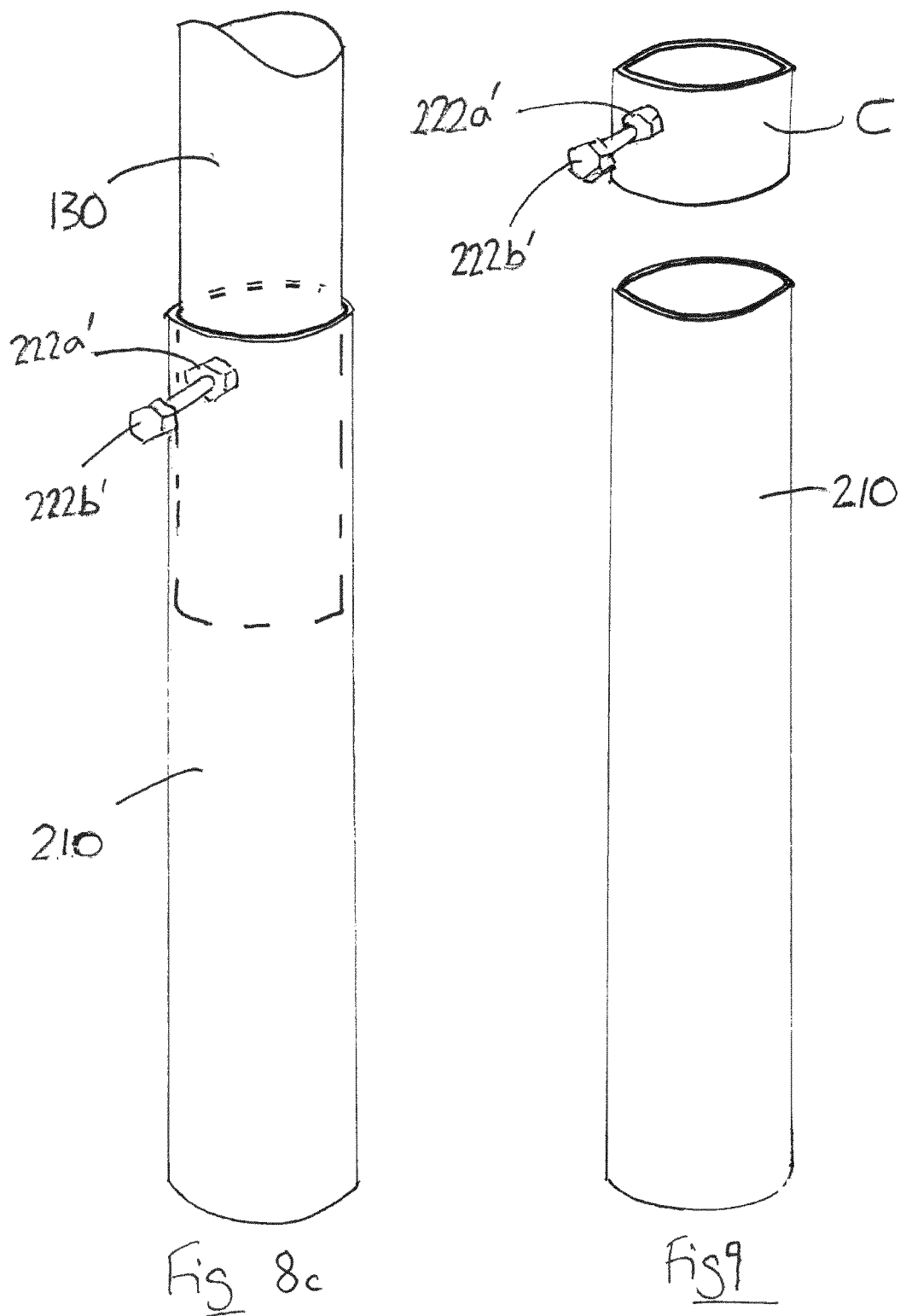


Fig. 5







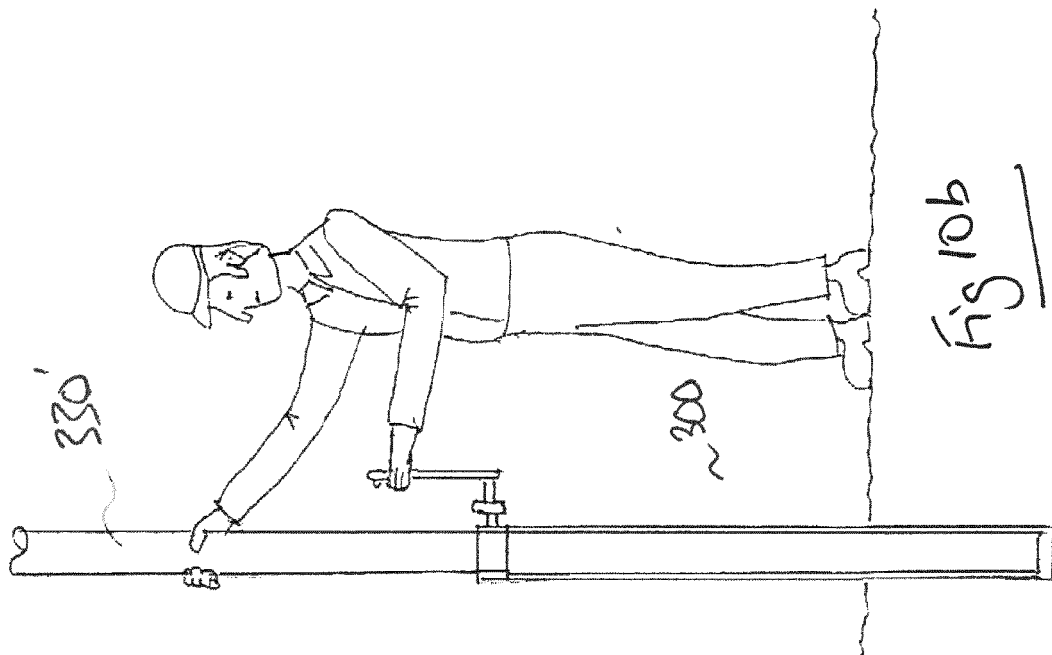


Fig 10b

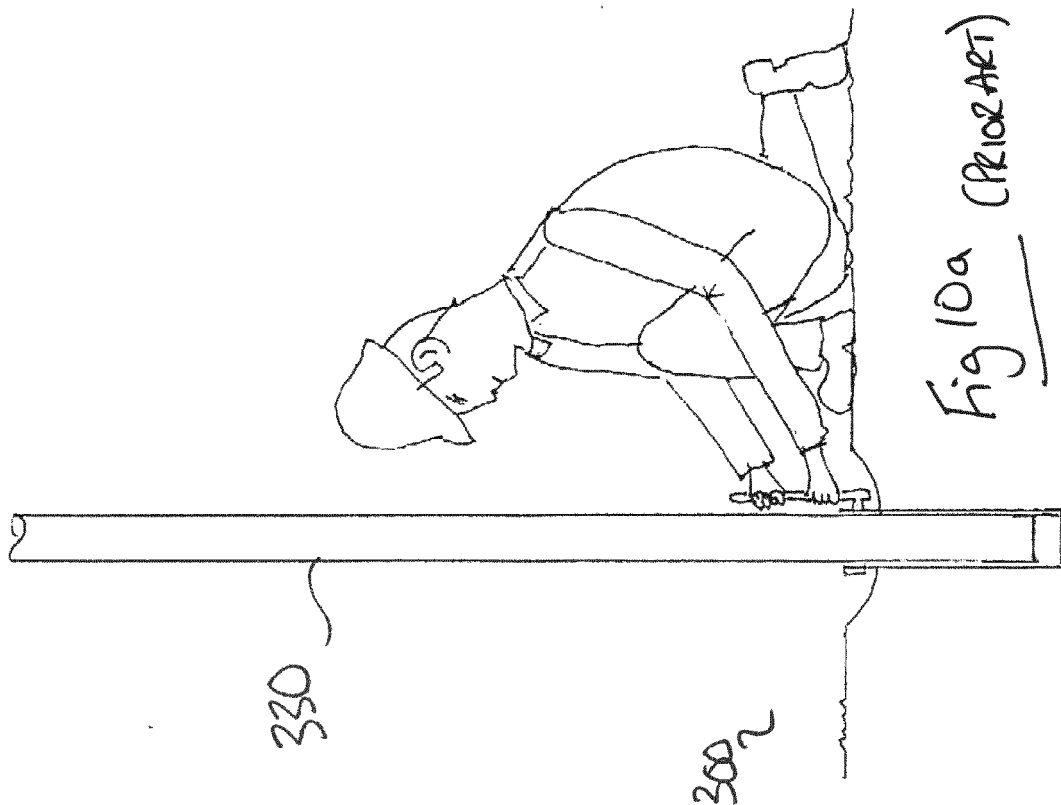


Fig 10a (PRIORITY)

