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(72) Inventor; and

(71) Applicant: **HEELASS, George** [AU/AU]; 4/27 Godwin Street, Bulimba, Queensland 4171 (AU).

(74) Agent: **WYNES PATENT AND TRADE MARK ATTORNEYS**; 4/27 Godwin Street, Bulimba, Queensland 4171 (AU).

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(54) Title: A BRACKET

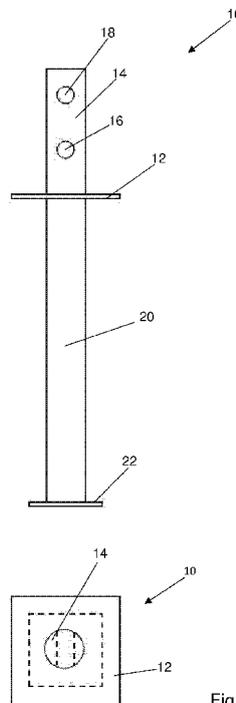


Figure 1

(57) Abstract: A bracket for a post, the bracket having a support platform, and at least one support member extending perpendicular from the support platform, each of the at least one support member adapted to be inserted into a corresponding aperture of the post.



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## A BRACKET

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### FIELD OF INVENTION

The present invention relates to a bracket. The present invention has particular but not exclusive application for a bracket for a post. The patent specification describes this use but it is by way of example only and the invention is not limited to this use.

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### BACKGROUND OF THE INVENTION

Post brackets are used to secure posts such as wooden posts to a horizontal surface. Post brackets may also be referred to as post anchors or post stirrups. A problem with existing post brackets is that part of the post bracket is typically located on an outside surface of a corresponding wooden post. This can detract from the visual aesthetic of an installation.

15

One way to overcome this would be to attach the post directly to the surface. It can be very difficult to attach a vertical post to a horizontal surface and the attachments are typically not that secure. The post could also be concreted into the surface. However, there are numerous problems associated with this, as a wooden post can rot if moisture is present between the concrete and the wood.

20

One prior art solution includes a T-blade or centre fix post bracket. While this solution may be acceptable, it requires a sizable circular saw to cut a slot in the post that is deep enough and wide enough to accept the T-blade. Additionally, the T-blade will be visible from two sides of the post.

25

### OBJECT OF THE INVENTION

It is an object of the present invention to overcome or at least alleviate one or more of the above mentioned problems with post brackets and/or provide the consumer with a useful or commercial choice.

30

### SUMMARY OF THE INVENTION

In one aspect, the present invention broadly resides in a bracket for a post, the bracket having

a support platform; and

5 at least one support member extending perpendicular from the support platform, each of the at least one support member adapted to be inserted into a corresponding aperture of the post.

Preferably, each of the at least one support member includes at least one aperture. Preferably the at least one aperture is adapted to receive a fastener to  
10 secure the bracket to the post. In one embodiment the fastener is a bolt or a screw. In another embodiment, the at least one aperture is adapted to receive a dowel to secure the bracket to the post. Preferably if the at least one support member is two support members, each support member has one aperture. Preferably if the at least one support member is one support member, the support member has two  
15 apertures. Preferably the two apertures are co-planar. In another embodiment, the two apertures are perpendicular to each other. Preferably each of the at least one aperture is perpendicular to the corresponding support member.

Preferably each of the at least one support member is substantially cylindrical in shape. In a less desirable embodiment, each support member may be  
20 substantially square or triangular in cross section. Preferably each support member has a length that is substantially greater than a thickness of the support member. In one embodiment, the at least one support member is two support members.

Preferably the support platform is rectangular in shape. In another embodiment, the support platform is circular in shape. Preferably the support  
25 platform has a width that is substantially greater than a thickness of the support platform. Preferably the support platform is made of a plate material. Preferably the support platform is adapted to abut an end of the post.

In one embodiment, the support platform has one or more apertures. Preferably the one or more apertures are adapted to receive fasteners to secure the  
30 support platform to a surface.

In another embodiment, the bracket includes a column member extending from the support platform. Preferably the column member extends perpendicular to the from the support platform. Preferably the column member extends from an opposed side of the support platform relative to the at least one support member.

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Preferably the column member is substantially cylindrical in shape. In another embodiment the column member is substantially rectangular in cross section.

Preferably the bracket includes an anchor platform. Preferably the anchor platform is located at an end of the column member. Preferably the anchor platform is located distal from the support platform. Preferably the anchor platform has a width that is wider than the width of the column member. Preferably the anchor platform has a width that is substantially greater than a thickness of the anchor platform. Preferably the anchor platform is substantially rectangular in shape. In another embodiment, the anchor platform is substantially circular in shape. Preferably the anchor platform is made of a plate material.

In one embodiment, the anchor platform includes at least one aperture. Preferably each aperture is adapted to receive a fastener to secure the anchor platform to a surface. In one embodiment, the anchor platform and at least part of the column member can be set in concrete to secure the bracket to a resulting surface.

Preferably the bracket is made of metal. In one embodiment, the bracket is made of steel. Preferably the bracket includes a coating. Preferably the coating protects the bracket against corrosion. Preferably the coating inhibits corrosion. In one embodiment, the coating is galvanisation.

Preferably the bracket is adapted to support posts having a width or diameter of 50mm or more. More preferably the bracket is adapted to support posts having a width or diameter of 80mm or more. Preferably the bracket is adapted to support posts having a width or diameter of substantially 100mm.

Preferably the post is a wooden post. Preferably the post has a rectangular periphery in cross section.

In another aspect, the present invention broadly resides in a bracket for a post, the bracket having

a support platform;  
a plurality of apertures located in the support platform, each aperture adapted to receive a fastener to secure the support platform to a surface; and  
at least one support member extending perpendicular from the support platform, each of the at least one support member adapted to be inserted into a corresponding aperture of the post.

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In a further aspect, the present invention broadly resides in a bracket for a post, the bracket having

a support platform;

a support member extending perpendicular from the support platform, each of  
5 the at least one support member adapted to be inserted into a corresponding aperture of the post;

a column member extending from the support platform; and

an anchor located at an end of the column member distal from the support platform.

10 In another aspect, the present invention broadly resides in a bracket for a post, the bracket having

a support platform;

two support members extending perpendicular from the support platform,  
each of the at least one support member adapted to be inserted into a corresponding  
15 aperture of the post;

a column member extending from the support platform; and

an anchor located at an end of the column member distal from the support platform.

20 In a further aspect, the present invention broadly resides in a bracket system including one or more brackets as described in this specification; and

a template assembly releasably attachable to a post, the template assembly including one or more guides adapted to guide a drill bit into the post.

25 Preferably the one or more guides includes one or more guides to form apertures in the post to correspond to the at least one aperture located in each support member, such that one or more fasteners or dowels can be used to secure each support member to the post. Preferably the template assembly includes a clamp portion to releasably attach the template assembly to a post.

30 In another aspect, the present invention broadly resides in a method of attaching a bracket as described in the specification to a post, the method including the steps of:

drilling at least one hole into an end of the post, the hole extending substantially parallel to a longitudinal axis of the post; and

inserting the at least one support member into the at least one hole.

Preferably the bracket is a post bracket.

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Preferably the method further includes the step of drilling at least one hole into the post transverse to the longitudinal axis of the post, such that the at least one hole lines up with a corresponding aperture in a corresponding one of the at least one support member.

5 Preferably the method further includes inserting a fastener or dowel into the transverse hole and the corresponding aperture to secure the bracket to the post.

In another embodiment, the method further includes inserting an adhesive into the at least one longitudinal hole prior to the at least one support member being inserted into the at least one longitudinal hole.

10 The features described with respect to one aspect also apply where applicable to all other aspects of the invention. Furthermore, different combinations of described features are herein described and claimed even when not expressly stated.

#### 15 BRIEF DESCRIPTION OF THE DRAWINGS

In order that the present invention can be more readily understood reference will now be made to the accompanying drawings which illustrate preferred embodiments of the invention and wherein:

20 Figure 1 shows a side view and a top view of a bracket according to an embodiment of the present invention;

Figure 2 shows a side view and a top view of a bracket according to another embodiment of the present invention;

Figure 3 shows a side view and a top view of a bracket according to a further embodiment of the present invention; and

25 Figure 4 shows a top view and a side view of a template assembly according to an embodiment of the present invention.

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

30 With reference to Figure 1, there is shown a bracket 10 according to an embodiment of the present invention. The bracket 10 has a support platform 12. A support member 14 extends from the support platform 12. The support member 14 is cylindrical in shape. The support member 14 has two apertures 16,18.

The bracket 10 has a column member 20 extending from the support platform 12. The column member 20 is cylindrical in shape.

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The bracket 10 has an anchor platform 22 attached to an end of the column member 20.

In use, the support member 14 is inserted into a hole formed in a post (not shown). The support platform 12 is adapted to abut an end of the post. The apertures 16,18 line up with holes formed in the post such that fasteners such as bolts, or dowels (not shown) can be inserted into the holes and apertures 16,18 to secure the post to the bracket 10.

The anchor platform 22 and part of the column member 20 can be set in concrete or the like (not shown) to secure the post relative to a surface.

With reference to Figure 2, there is shown a bracket 110 according to an embodiment of the present invention. The bracket 110 has a support platform 112. A first support member 114 extends from the support platform 112. The first support member 114 is cylindrical in shape. A second support member 115 extends from the support platform 112. The second support member 115 is cylindrical in shape. The first support member 114 has an apertures 116. The second support member 115 has an aperture 118.

The bracket 110 has a column member 120 extending from the support platform 112. The column member 120 is cylindrical in shape.

The bracket 110 has an anchor platform 122 attached to an end of the column member 120.

In use, the first support member 114 and the second support member 115 are inserted into holes formed in a post (not shown). The support platform 112 is adapted to abut an end of the post. The apertures 116,118 line up with holes formed in the post such that fasteners such as bolts, or dowels (not shown) can be inserted into the holes and apertures 116,118 to secure the post to the bracket 110.

The anchor platform 122 and part of the column member 120 can be set in concrete or the like (not shown) to secure the post relative to a surface.

With reference to Figure 3, there is shown a bracket 210 according to an embodiment of the present invention. The bracket 210 has a support platform 212. A support member 214 extends from the support platform 212. The support member 214 is cylindrical in shape. The support member 214 has two apertures 216,218.

The support platform 212 has apertures 220,222,224,226.

In use, the support member 214 is inserted into a hole formed in a post (not shown). The support platform 212 is adapted to abut an end of the post. The

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apertures 216,218 line up with holes formed in the post such that fasteners such as bolts, or dowels (not shown) can be inserted into the holes and apertures 216,218 to secure the post to the bracket 210.

The support platform 212 can be secured to a surface by bolts or the like  
5 inserted through apertures 220,222,224,226.

With reference to Figure 4, there is shown a template assembly 300. The  
template assembly 300 has a guide 310 to guide a drill bit (not shown) into a post  
400 to create holes that will align with apertures of a support member of a bracket  
(such as those shown in Figures 1-3). The template assembly 300 has a clamp  
10 portion 312 to releasably attach the template assembly to the post 400.

#### ADVANTAGES

An advantage of the preferred embodiment of the bracket includes providing a  
minimally visible attachment between the bracket and a post. Another advantage of  
15 the preferred embodiment of the bracket includes that it is easy to manufacture. A  
further advantage of the preferred embodiment of the bracket includes that the  
bracket can be accurately aligned with a post. Another advantage of the preferred  
embodiment of the bracket includes that it reduces installation time compared to  
other post brackets.

20

#### VARIATIONS

While the foregoing has been given by way of illustrative example of this  
invention, all such and other modifications and variations thereto as would be  
apparent to persons skilled in the art are deemed to fall within the broad scope and  
25 ambit of this invention as is herein set forth.

Throughout the description and claims of this specification the word  
"comprise" and variations of that word such as "comprises" and "comprising", are not  
intended to exclude other additives, components, integers or steps.

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CLAIMS

1. A bracket for a post, the bracket having  
a support platform; and  
5 at least one support member extending perpendicular from the support  
platform, each of the at least one support member adapted to be inserted into a  
corresponding aperture of the post.
2. A bracket as claimed in claim 1, wherein each of the at least one support  
10 member includes at least one aperture, each aperture adapted to receive a fastener  
to secure the bracket to the post.
3. A bracket as claimed in claim 1 or claim 2, wherein the at least one support  
member is two support members.  
15
4. A bracket as claimed in claim 2, wherein each of the at least one aperture is  
perpendicular to the corresponding support member.
5. A bracket as claimed in any one of the preceding claims, wherein each of the  
20 at least one support member is substantially cylindrical in shape.
6. A bracket as claimed in any one of the preceding claims, wherein the support  
platform is rectangular in shape.
- 25 7. A bracket as claimed in any one of the preceding claims, wherein the support  
platform has one or more apertures adapted to receive fasteners to secure the  
support platform to a surface.
8. A bracket as claimed in any one of claims 1 to 6, further including a column  
30 member extending perpendicular from the support platform on an opposed side of  
the support platform relative to the at least one support member.
9. A bracket as claimed in claim 8, wherein the column member is substantially  
cylindrical in shape.

10. A bracket as claimed in claim 8 or claim 9, further including an anchor platform located at an end of the column member distal from the support platform, and wherein the anchor platform has a width that is wider than a width of the column member.

11. A bracket as claimed in claim 10, wherein the anchor platform includes at least one aperture adapted to receive a fastener to secure the anchor platform to a surface.

12. A bracket as claimed in any one of the preceding claims, wherein the bracket is made of steel and includes a coating to inhibit corrosion.

13. A bracket for a post, the bracket having a support platform; a plurality of apertures located in the support platform, each aperture adapted to receive a fastener to secure the support platform to a surface; and at least one support member extending perpendicular from the support platform, each of the at least one support member adapted to be inserted into a corresponding aperture of the post.

14. A bracket for a post, the bracket having a support platform; a support member extending perpendicular from the support platform, each of the at least one support member adapted to be inserted into a corresponding aperture of the post; a column member extending from the support platform; and an anchor located at an end of the column member distal from the support platform.

15. A bracket for a post, the bracket having a support platform;

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two support members extending perpendicular from the support platform, each of the at least one support member adapted to be inserted into a corresponding aperture of the post;

a column member extending from the support platform; and

5 an anchor located at an end of the column member distal from the support platform.

16. A bracket system including one or more brackets as claimed in any one of the preceding claims, and

a template assembly, the template assembly releasably attachable to a post, the template assembly including one or more guides adapted to guide a drill bit into the post to drill one or more corresponding aperture into the post to correspond to the at least one aperture located in each support member, such that one or more fasteners or dowels can be used to secure each support member to the post.

15 17. A method of attaching a bracket as claimed in any one of claims 1 to 15 to a post, the method including the steps of:

drilling at least one hole into an end of the post, the hole extending substantially parallel to a longitudinal axis of the post; and

inserting the at least one support member into the at least one hole.

20

18. A method as claimed in claim 17, further includes the step of drilling at least one hole into the post transverse to the longitudinal axis of the post, such that the at least one hole lines up with a corresponding aperture in a corresponding one of the at least one support member.

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19. A method as claimed in claim 18, further including the step of inserting a fastener or dowel into the transverse hole and the corresponding aperture to secure the bracket to the post.

30 20. A method as claimed in any one of claims 17 to 19, further including inserting an adhesive into the at least one longitudinal hole prior to the at least one support member being inserted into the at least one longitudinal hole.

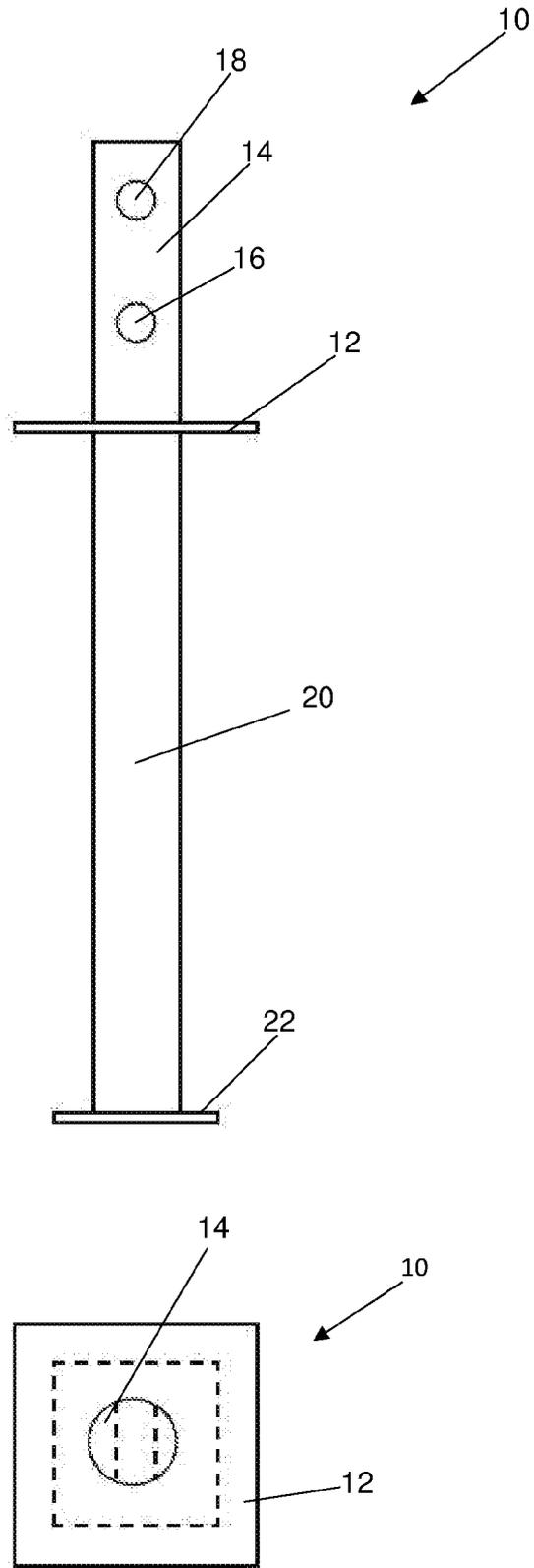


Figure 1

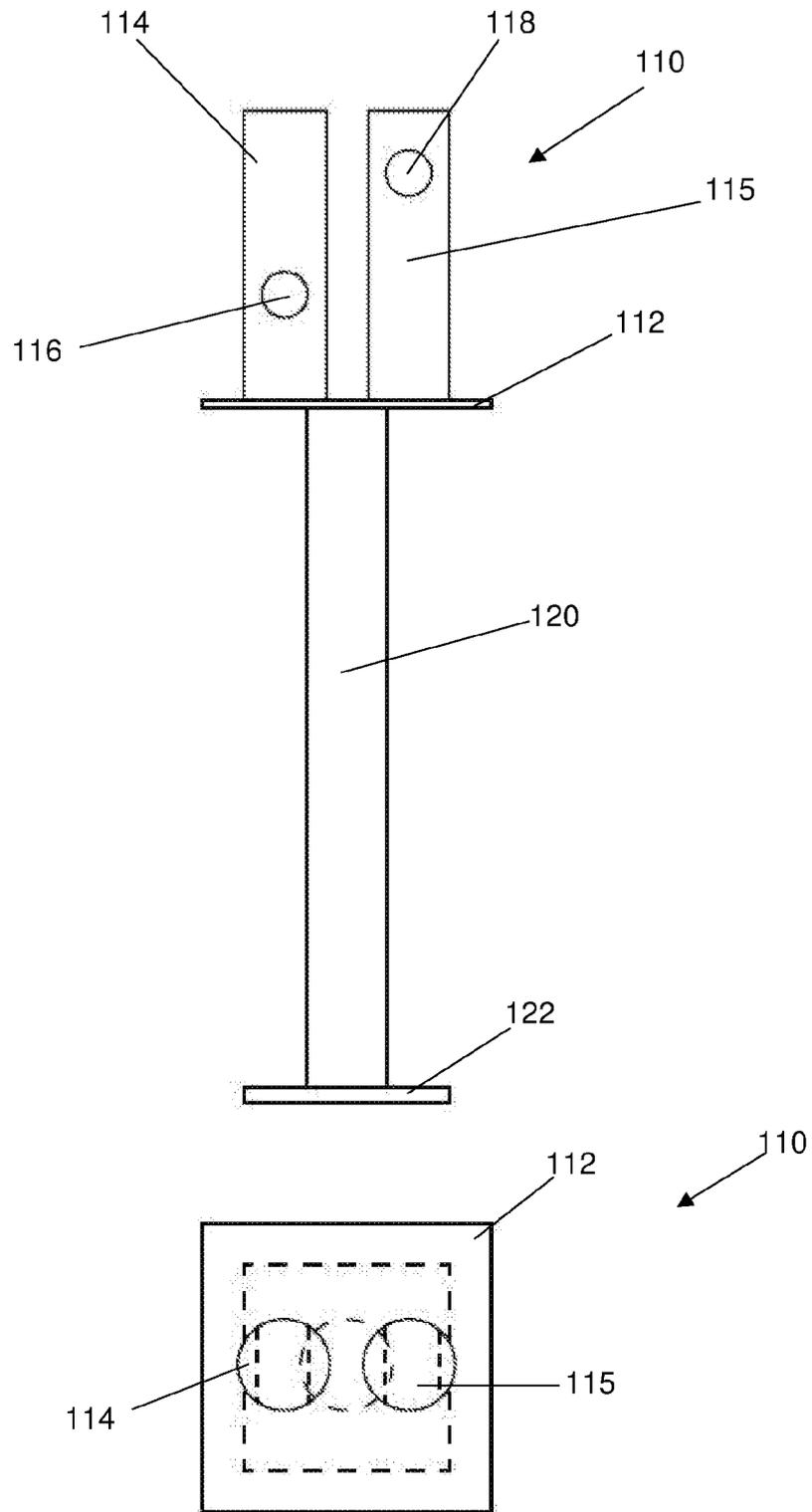


Figure 2

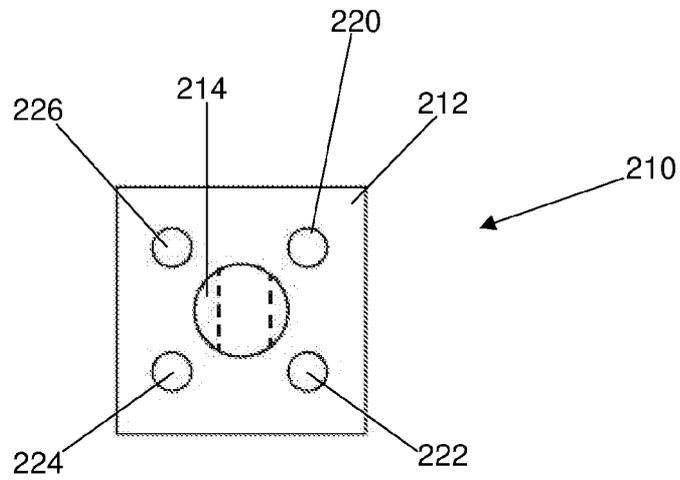
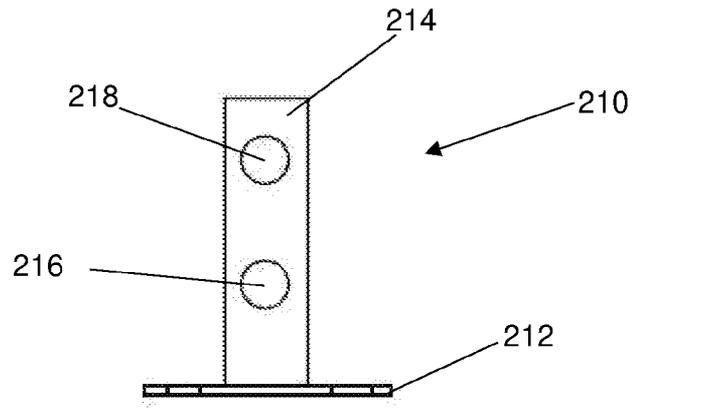


Figure 3

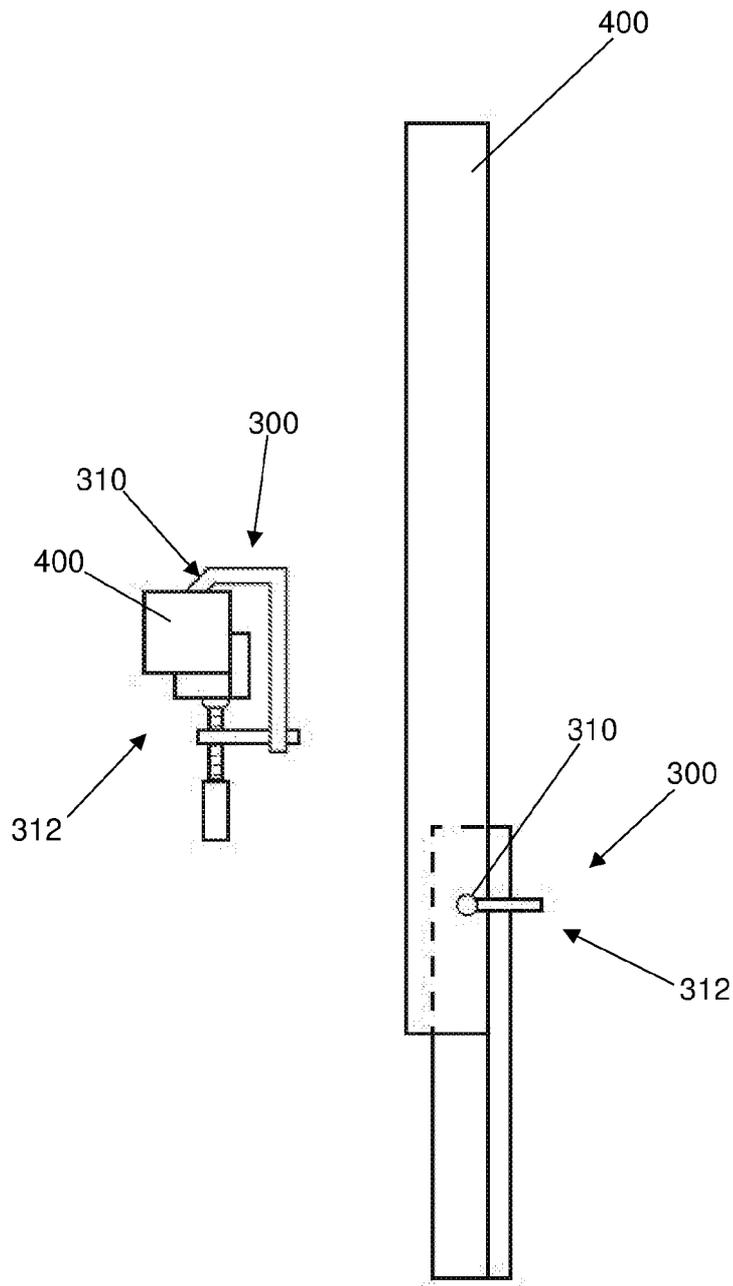


Figure 4

## INTERNATIONAL SEARCH REPORT

International application No.

PCT/AU2022/051436

## A. CLASSIFICATION OF SUBJECT MATTER

**E04B 1/26 (2006.01) E04G 21/18 (2006.01) E04H 12/22 (2006.01) E04H 17/22 (2006.01)**

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

DATABASES: PATENW, GOOGLE PATENTS, ESPACENET

IPC/CPC: E04B2001/2644, E04B1/26, E04B2001/268, E04H12/22, E04H17/22

KEYWORDS: (wood, conceal, center, rod, upright, hole, anchor, bottom, template, drill) and like terms in various combinations.

Applicant/Inventor searched in Espacenet and IP Australia internal databases.

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
	Documents are listed in the continuation of Box C	

 Further documents are listed in the continuation of Box C See patent family annex

* Special categories of cited documents:		
"A" document defining the general state of the art which is not considered to be of particular relevance	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention	
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Date of the actual completion of the international search  
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## Name and mailing address of the ISA/AU

AUSTRALIAN PATENT OFFICE  
PO BOX 200, WODEN ACT 2606, AUSTRALIA  
Email address: pct@ipaustralia.gov.au

## Authorised officer

Parminder Singh  
AUSTRALIAN PATENT OFFICE  
(ISO 9001 Quality Certified Service)  
Telephone No. +61 2 6225 6135

**INTERNATIONAL SEARCH REPORT**

International application No.

C (Continuation).

DOCUMENTS CONSIDERED TO BE RELEVANT

**PCT/AU2022/051436**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y	JP 2020002669 A (DAIWA HOUSE IND) 09 January 2020, English abstract retrieved from EPODOC database See English abstract and figures 5 & 6 See English abstract and figures 5 & 6	1-15 & 17-20 16
X	JP 2020176411 A (STROOG INC) 29 October 2020, English abstract retrieved from EPODOC database See English abstract and figures 4-6 & 10	1 & 13-15
Y	US 10799995 B1 (CHIPMAN) 13 October 2020 See abstract and figures 1-5	16

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

International application No.

**PCT/AU2022/051436**

This Annex lists known patent family members relating to the patent documents cited in the above-mentioned international search report. The Australian Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

<b>Patent Document/s Cited in Search Report</b>		<b>Patent Family Member/s</b>	
<b>Publication Number</b>	<b>Publication Date</b>	<b>Publication Number</b>	<b>Publication Date</b>
JP 2020002669 A	09 January 2020	JP 2020002669 A	09 Jan 2020
		JP 7187188 B2	12 Dec 2022
JP 2020176411 A	29 October 2020	JP 2020176411 A	29 Oct 2020
		JP 7049670 B2	07 Apr 2022
US 10799995 B1	13 October 2020	US 10799995 B1	13 Oct 2020

**End of Annex**