



(22) **Date de dépôt/Filing Date:** 2014/02/03

(41) **Mise à la disp. pub./Open to Public Insp.:** 2014/08/12

(30) **Priorité/Priority:** 2013/02/12 (AU AU 2013900443)

(51) **Cl.Int./Int.Cl.** *F16B 21/00* (2006.01),
E04B 1/38 (2006.01), *F16B 13/00* (2006.01),
F16B 35/00 (2006.01), *F16B 5/00* (2006.01)

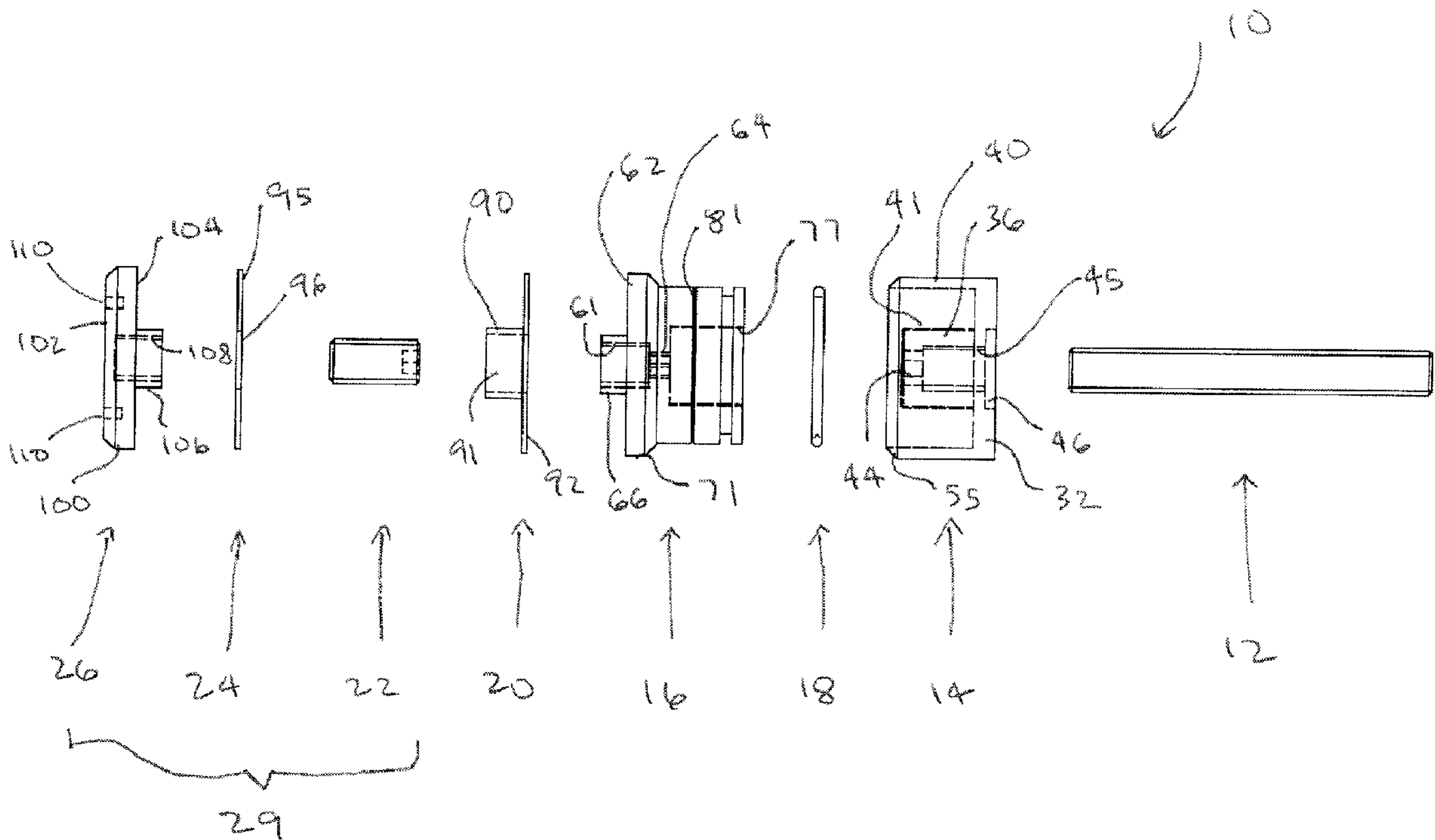
(71) **Demandeur/Applicant:**
METAL FRAMELESS GLASS SYSTEMS PTY LTD, AU

(72) **Inventeur/Inventor:**
PHILLIPS, SCOTT THOMAS ARTHUR, AU

(74) **Agent:** MILTONS IP/P.I.

(54) **Titre : DISPOSITIF D'ANCRAGE REGLABLE POUR PANNEAUX**

(54) **Title: ADJUSTABLE ANCHOR ASSEMBLY FOR PANELS**



(57) **Abrégé/Abstract:**

There is provided with an anchor assembly for mounting a member at an offset distance to a structure, the assembly comprising adjustment means for adjusting the offset distance, the adjustment means being accessible from adjacent an outer surface of the member distal to the structure.

Abstract

There is provided with an anchor assembly for mounting a member at an offset distance to a structure, the assembly comprising adjustment means for adjusting the offset distance, the adjustment means being accessible from adjacent an outer surface of the member distal to the structure.

ADJUSTABLE ANCHOR ASSEMBLY FOR PANELS

Field of the Invention

The present invention relates an adjustable anchor assembly for panels.

5 The invention has been developed primarily for mounting frameless glass cantilevered toughened panels and will be described hereinafter with reference to this application. However, it will be appreciated that the invention is not limited to this particular field of use.

Background of the Invention

10 The anchor assemblies available for mounting frameless glass panels have various disadvantages, such as undesirable appearance where the mounting bolt may be exposed or difficult adjustment where the user must insert a tool between the structure and the glass panel to effect adjustment.

The present invention seeks to overcome or substantially ameliorate at least some of the deficiencies of the prior art, or to at least provide an alternative.

15 It is to be understood that, if any prior art information is referred to herein, such reference does not constitute an admission that the information forms part of the common general knowledge in the art, in Australia or any other country.

Summary of the Invention

20 According to a first aspect, the present invention provides an anchor assembly for mounting a member at an offset distance to a structure, the assembly comprising adjustment means for adjusting the offset distance, the adjustment means being accessible from adjacent an outer surface of the member distal to the structure.

Preferably, the member comprises a mounting aperture and the adjustment means is engageable through the mounting aperture.

25 Preferably, the adjustment means is engageable by a tool inserted through the mounting aperture.

Preferably, the assembly comprises:

- a base body adapted for mounting to the structure; and

- a mount body adjustably attached to the base body, wherein the member can be mounted to the mount body,

30 Preferably, the mount body comprises a mount formation insertable through a mounting aperture of the member which supports the member during installation.

Preferably, the mount body comprises a front portion engaging a rear face of the member facing the structure in use and the base body comprises a rear portion engaging the structure in use.

5 Preferably, the adjustable attachment of the mount body to the base body is via a threaded engagement therebetween.

Preferably, the adjustment means comprises a mount drive opening formed in the mount body.

Preferably, the threaded engagement is covered by a tube of the mount body or the base body.

10 Preferably, the base body comprises a central base formation having an external thread and the mount body comprises a mount tube having an internal thread.

Preferably, the base body comprises a base tube at least partly extending over the mount tube.

15 Preferably, the anchor assembly further comprises an anchor means for mounting the base body to the structure.

Preferably, the anchor means is a bolt or a screw.

Preferably, the anchor means is detachably attachable to the base body.

Preferably, the anchor assembly further comprises a lock means engaging the mount body for locking the member to the anchor assembly.

20 Preferably, the lock means at least partly extends through a mounting aperture of the member.

Preferably, the mount body comprises an internal thread engageable by the lock means.

Preferably, the lock means comprises a front cap having an engagement formation thereon.

25 Preferably, the adjustment means comprises a mount drive opening engageable via an opening in the mount body.

Preferably, the base formation is tubular and comprises an internal thread attachable to an anchor means.

Preferably, the base formation comprises a tool engageable drive opening formed therein.

30 Preferably, the anchor assembly further comprises friction means between the base body and the mount body.

Preferably, the anchor assembly further comprises a recess in the base body disposed adjacent the structure in use.

Preferably, the anchor assembly further comprises a base drive opening in the base body engageable by a tool.

- 5 Preferably, the anchor assembly further comprises a mount drive opening in the mount body engageable by a tool.

Preferably, the base body comprises a rear portion having a central opening and wherein the tubular base formation extends from the rear portion

- 10 Preferably, a peripheral base tube extends from the rear portion, the base tube being generally parallel to the base formation.

Preferably, an annular space is defined between the base formation and the base tube for receiving a section of the mount tube.

Preferably, the mount body comprises a planar mount front portion having a central aperture, wherein a central tubular mount formation extends forwardly from the front portion.

- 15 Preferably, the mount formation comprises an internally threaded central opening.

Preferably, the central aperture comprises a tool engageable drive opening formed therein.

Preferably, the mount tube extends rearwardly from the mount front portion.

Preferably, the mount tube comprises an external annular seal seat which receives a ring seal thereon.

- 20 The present invention in another aspect provides an anchor assembly for mounting a member having a mounting aperture to a structure, the assembly comprising:

a base body adapted for mounting to the structure; and

a mount body adjustably attached to the base body, wherein the member can be mounted to the mount body,

- 25 wherein the mount body and/or the base body comprise an adjustment means engageable by a tool inserted through the mounting aperture for adjusting the distance between the member and the structure in use

- 30 The present invention in another aspect provides a panel comprising spaced mounting apertures and a respective anchor assembly according to any one of the above extending through the mounting apertures for mounting the panel to a structure.

The present invention in another aspect provides an anchor assembly for mounting a member at an offset distance to a structure, the assembly comprising an anchor means for

mounting the assembly to the structure and adjustment means for adjusting the offset distance over an offset distance range, wherein the assembly covers the anchor means throughout the extent of the offset distance range.

Preferably, the adjustment means is accessible from adjacent an outer surface of the member distal to the structure.

Other aspects of the invention are also disclosed.

Brief Description of the Drawings

Notwithstanding any other forms which may fall within the scope of the present invention, preferred embodiments of the present invention will now be described, by way of examples only, with reference to the accompanying drawings in which:

Fig. 1 shows a side view of two anchor assemblies in accordance with a preferred embodiment of the present invention mounting a panel to a structure where (a) shows the fully extended configuration of the anchor assemblies and (b) shows the fully retracted configuration of the anchor assemblies;

Fig. 2 is an exploded side view of the anchor assembly of Figure 1;

Fig. 3 shows a base body for the anchor assembly of Figure 1, where (a) is a front perspective view, (b) is a front view, (c) is a side cross-section view and (d) is a rear view;

Fig. 4 shows a mount body for the anchor assembly of Figure 1, where (a) is a front perspective view, (b) is a front view, (c) is a side cross-section view and (d) is a rear view;

Fig. 5 shows the mount body of Figure 4 attached to the base body of Figure 3, where (a) is a front perspective view, (b) is a front view, (c) is a side cross-section view and (d) is a rear view;

Fig. 6 shows a perspective view of Figure 1 where (a) shows the installed anchor assembly and (b) shows the front cap removed and a tool inserted through the panel mounting aperture for adjusting the anchor assembly.

Description of Embodiments

It should be noted in the following description that like or the same reference numerals in different embodiments denote the same or similar features.

Referring initially to Figure 1 and 2, there is shown therein an anchor assembly 10 according to a preferred embodiment of the present invention for mounting a panel 200 to a structure 300.

The structure 300 can be any structure as desired such as a slab floor, wall, ledge, balcony, timber or metal beam, and the panel 200 is mounted to an end face 302 of the structure 300.

The panel 200 is typically a frameless cantilevered toughened glass panel having spaced mounting apertures 202 extending between a front surface 204 and a rear surface 206 thereof. A respective anchor assembly 10 extends through the mounting apertures 202 for mounting the panel 200 to the structure 300.

- 5 The anchor assembly 10 comprises a base bolt 12, a base body 14, a mount body 16, a ring seal 18, a washer bush 20, mount bolt 22, a front washer 24 and a front cap 26.

The base bolt 12 is a 10 mm or 12 mm diameter steel externally threaded bolt which is 100 mm long. As described below, the base bolt 12 is used as an anchor means for mounting the base body 12 to the structure 300.

- 10 The base body 14 as further shown in Figure 3 comprises a generally cylindrical base body 30 having a rear end 31 and a front end 37. The rear end 31 comprises a planar annular base rear portion 32 which defines a central opening 33 and a peripheral edge 34. A central tubular base formation 36 extends from the central opening 33 of the rear portion 32, and a peripheral base tube 40 extends from the peripheral edge 34 of the rear portion 32. The
15 base formation 36 and base tube 40 are generally parallel to each other, with the base tube 40 extending further from the rear portion 32 than the base formation 36. An annular space 49 is defined between the base formation 36 and the base tube 40, the space 49 extending from the front end 37. The base tube 40 comprises an internal wall 53 and a distal end 55.

- The base formation 36 comprises an external thread 41 accessible via the annular space 49,
20 an internal thread 45 accessible via the central opening 33, and a front portion 42 facing the front end 37 having a tool engageable screw drive opening 44 formed therein. The screw drive opening 44 in the embodiment is a hex key (Allen key) engageable base drive opening 44 accessible from the front end 37. The rear portion 32 comprises an annular recess 46 formed therein adjacent its junction with the base formation 36.

- 25 The mount body 16 as further shown in Figure 4 also comprises a generally cylindrical mount body 60 having a rear end 61 and a front end 67. The front end 67 comprises a planar mount front portion 62 having a central aperture 63. A central tubular mount formation 66 extends forwardly from the front portion 62, the mount formation 66 having a central opening 65. The mount formation 66 comprises an internal thread 69. The central aperture
30 63 comprises a tool engageable screw drive opening 64 formed therein, being a hex key engageable mount drive opening 64 accessible through the central opening 65. The mount drive opening 64 is smaller in dimensions than the base drive opening 44.

- A peripheral mount tube 70 extends rearwardly from the mount front portion 62. The mount front portion 62 extends further laterally than the mount tube 70 thus forming a peripheral
35 flange 71. The mount tube 70 comprises a central opening 79, an internal thread 77 and an

external annular seal seat 76 formed at an external wall 73 thereof, the seat 76 being spaced from the rear end 61. The external wall 73 further comprises a mark indicator 81 therein formed between the seal seat 76 and the flange 71. The use of the indicator 81 is described below.

- 5 As shown in Figure 5, the mount tube 70 is dimensioned to be received within the annular space 49 of the base body 14, with the internal thread 77 of the mount tube 70 engaging the external thread 41 of the base formation 36. In this position, the external wall 73 of the mount tube 70 is adjacent the internal wall 53 of the base tube 40. The ring seal 18, typically made from rubber and disposed within the seal seat 76, engages the internal wall 53 to form
10 a friction fit between the mount tube 70 and the base tube 40. The peripheral flange 71 is aligned with the base tube 40.

Rotation of the mount body 16 relative to the base body 14 thus adjusts the distance between the base rear portion 32 and the mount front portion 62 via the engaging threads 77 and 41. Rotation of the mount body 16 in use can be performed by hand or via a hex key
15 engaging the mount drive opening 64 inserted through the central opening 65 of the mount formation 66.

Referring back to Figure 2, the washer bush 20 comprises a tubular portion 90 having a central aperture 91, and a planar annular disc portion 92 extending from an end of the tubular portion 90 and perpendicularly thereto. The disc portion 92 is dimensioned to cover
20 the mount front portion 62 with the tubular portion 90 extending around the mount formation 66. The washer bush 20 is made from plastics material.

The mount bolt 22 is a 10 mm or 12 mm diameter stainless steel threaded bolt which is 25 mm long.

The front washer 24 comprises an annular disc body 95 having a central aperture 96. The
25 front cap 26 comprises a disc body 100 having a front face 102 and a rear face 104. An attachment tube 106 extends rearwardly from the rear face 104, the attachment tube 106 comprising an internal thread 108. The front face 102 comprises an engagement formation 110 which in the embodiment are spanner head ('snake eye') apertures.

The base bolt 12 is dimensioned to threadably engage the internal thread 45 of the base
30 formation 36. The mount bolt 22 is dimensioned to threadably engage the internal thread 69 of the mount formation 66. The attachment tube 106 can be inserted through the aperture 96 of the front washer 24, and the attachment tube 106 is dimensioned to threadably engage the mount bolt 22.

Mounting and use of the anchor assembly 10 will now be described with reference to Figures 1 and 2. The base bolt 12 is initially anchored into the structure 300 by drilling an elongated hole into the slab 300 and then a chemical anchoring agent such as epoxy is injected into the hole. The base bolt 12 is then inserted into the hole with a 10 to 15 mm section of the
 5 base bolt 12 extending outwardly from the front face 302 of the structure 300. After the epoxy sets, the base bolt 12 is held securely in the structure 300.

The base body 14 is threadably attached over the extending section of the base bolt 12 via the internal thread 45 of the base formation 36. The annular recess 46 in the rear portion 32 receives any excess anchoring agent that may seep out around the base bolt 12 to ensure
 10 the rear portion 32 is mounted flush to the structure front face 302.

If the structure 300 is timber, a lag screw is used instead of the base bolt 12. In such an application, a pilot hole is drilled into the timber structure and the lag screw is threadably attached to the base body 14 via the internal thread 45 of the base formation 36. A hex key bit mounted to a power drill then engages the base drive opening 44 to screw the lag screw
 15 into the timber structure until the rear portion 32 is mounted flush to the structure front face 302.

The mount body 16 is then attached to the base body 14 as above, by the mount tube 70 being received within the annular space 49 of the base body 14, with the internal thread 77 of the mount tube 70 engaging the external thread 41 of the base formation 36.

20 Rotation of the mount body 16 relative to the base body 14 adjusts the distance between the base rear portion 32 and the mount front portion 62. The mount body 16 can be configured relative to the base body 14 between a fully retracted position as shown in Figure 5 and Figure 1(b), and a fully extended position as shown in Figure 1(a). In the fully retracted position, the distal end 55 of the base tube 40 is adjacent the peripheral flange 71. In the
 25 fully extended position, the mark indicator 81 on the external wall 73 of the mount tube 70 is exposed from the distal end 55. The distance between the base rear portion 32 and the mount front portion 62 is about 40 mm in the fully retracted and about 50 mm in the fully extended position.

The mount body 16 is attached to the base body 14 with the washer bush 20 already
 30 mounted thereto. The tubular portion 90 of the washer bush 20 and the mount formation 66 are then inserted into a mounting aperture 202 of the panel 200, which supports the panel 200 thereon during installation.

A lock sub-assembly 29 is then formed with the mount bolt 22 inserted into the attachment tube 106 of the front cap 26 and the front washer 24 placed onto the rear surface 104 of the
 35 front cap 26 with the attachment tube 106 inserted through the central aperture 96. The

mount bolt 22 is then inserted into the internal thread 69 of the mount formation 66, and tightened thereon via the engagement formation 110 of the front cap 26, to lock the panel 200 to the anchor assembly 10.

5 The panel 200 comprises a number of spaced mounting apertures 202 and a plurality of anchor assemblies 10 are used to mount the panel 200 to the structure 300. The mount front portions 62 of the anchor assemblies 10 are initially aligned using a string line or laser alignment tool prior to mounting the panel 200 to the anchor assemblies 10. Rotation of the mount bodies 16 relative to their base body 14 allows for this alignment. The ring seal 18 provides a friction fit between the mount tube 70 and the base tube 40 to allow finer
10 adjustment and less chance of knocking the anchor assemblies 10 out of adjustment when setting their depth prior to installing the glass panel 200.

As shown in Figure 6(b), if further adjustment is required once the panel 200 is mounted to the tubular portion 90 and the mount formation 66, the lock sub-assembly 29 is removed and rotation of the mount body 16 can be performed by a hex key 400 engaging the mount drive
15 opening 64 inserted through the mount aperture 202 and central opening 65 of the mount formation 66.

The present embodiment thus provides an anchor assembly 10 for mounting a member 200 at an offset distance to a structure 300, the assembly 10 comprising adjustment means (64, 77, 41) for adjusting the offset distance as desired, the adjustment means being accessible
20 from adjacent an outer surface 204 of the member 200 distal to the structure.

The preferred embodiment thus provides an anchor assembly with a number of advantages including:

- a recess 46 in the base body for any excess chemical anchoring agent that may seep out around the base bolt used in a concrete structure to ensure the base
25 body sits flush against the structure .
- the base body includes a drive opening 44 engageable by a hex key to tighten the base body against the structure. This is very handy when a lag screw needs to be screwed into a pilot hole of a timber beam structure.
- the mount body is adjustable to allow a clearance of 40-50 mm from the structure
30 to the rear surface 206 of the glass panel and this can be adjustably done without seeing any exposed thread.
- the adjustable threaded attachment between the mount body and the base body is covered by the mount tube 40 and the base tube 70 which provides a neat attractive appearance.

- a mark indicator 81 on the mount body to indicate you have reached the maximum 50 mm clearance
- an O-Ring seal 18 on the mount body creates friction between it and the base body to allow finer adjustment and less chance of knocking the anchors out of adjustment when setting their depth prior to installing the glass panels. The seal 18 also substantially seals the junction between the bodies 14 and 16 against moisture and other foreign particles.
- the formation 66 in the face of the mount body in conjunction with the washer bush 20 is designed to support the weight of the glass panel while screwing the cap lock sub-assembly 29 in place.
- the mount body includes a drive opening 64 where an Allen Key can be used to adjust the mount body in and out prior to installation of the glass panels and also for alignment and level adjustment of the glass panels from the outside after they have been installed. The installer thus does not have to access the space between the structure and the panel to provide this adjustment, in contrast to the prior art. This Allen Key opening is smaller than that on the base body so that there is no interference.
- the front cap 26 can be provided with a choice of shapes and finishes depending on preference of the installed finish, including a bevelled cap with snake eye holes for tightening, a square edge cap with C spanner hole in the side for tightening, or a square edge cap with M10 or M12 countersunk machine screw to be tightened with an Allen Key.

Whilst preferred embodiments of the present invention have been described, it will be apparent to skilled persons that modifications can be made to the embodiments described. For example, the drive openings can be shaped in other shapes as desired, including Phillips head or slot shaped screwdriver openings. The adjustment between the base body and the mount body can be modified, and can for example comprise a lockable cam arrangement or a telescopic arrangement therebetween.

The mount body in the embodiment is adjustable to allow a clearance of 40 to 50 mm from the structure to the panel, but can be modified to provide any desired clearance range such as between 30 to 60 mm.

The assembly has been described herein as being for mounting a panel, but can also be used for mounting other members to a structure such as a post, beam or railing. The

structure referred to herein can also be movable structure items such as movable frames, furniture or any other base structure as desired.

Interpretation

Embodiments:

- 5 Reference throughout this specification to “one embodiment” or “an embodiment” means that a particular feature, structure or characteristic described in connection with the embodiment is included in at least one embodiment of the present invention. Thus, appearances of the phrases “in one embodiment” or “in an embodiment” in various places throughout this specification are not necessarily all referring to the same embodiment, but may.
- 10 Furthermore, the particular features, structures or characteristics may be combined in any suitable manner, as would be apparent to one of ordinary skill in the art from this disclosure, in one or more embodiments.

- Similarly it should be appreciated that in the above description of example embodiments of the invention, various features of the invention are sometimes grouped together in a single
- 15 embodiment, figure, or description thereof for the purpose of streamlining the disclosure and aiding in the understanding of one or more of the various inventive aspects. This method of disclosure, however, is not to be interpreted as reflecting an intention that the claimed invention requires more features than are expressly recited in each claim. Rather, as the following claims reflect, inventive aspects lie in less than all features of a single foregoing
- 20 disclosed embodiment. Thus, the claims following the Detailed Description of Specific Embodiments are hereby expressly incorporated into this Detailed Description of Specific Embodiments, with each claim standing on its own as a separate embodiment of this invention.

- Furthermore, while some embodiments described herein include some but not other features
- 25 included in other embodiments, combinations of features of different embodiments are meant to be within the scope of the invention, and form different embodiments, as would be understood by those in the art. For example, in the following claims, any of the claimed embodiments can be used in any combination.

Different Instances of Objects

- 30 As used herein, unless otherwise specified the use of the ordinal adjectives “first”, “second”, “third”, etc., to describe a common object, merely indicate that different instances of like objects are being referred to, and are not intended to imply that the objects so described must be in a given sequence, either temporally, spatially, in ranking, or in any other manner.

Specific Details

In the description provided herein, numerous specific details are set forth. However, it is understood that embodiments of the invention may be practiced without these specific details. In other instances, well-known methods, structures and techniques have not been
5 shown in detail in order not to obscure an understanding of this description.

Terminology

In describing the preferred embodiment of the invention illustrated in the drawings, specific terminology will be resorted to for the sake of clarity. However, the invention is not intended to be limited to the specific terms so selected, and it is to be understood that each specific
10 term includes all technical equivalents which operate in a similar manner to accomplish a similar technical purpose. Terms such as "forward", "rearward", "radially", "peripherally", "upwardly", "downwardly", and the like are used as words of convenience to provide reference points and are not to be construed as limiting terms.

Comprising and Including

15 In the claims which follow and in the preceding description of the invention, except where the context requires otherwise due to express language or necessary implication, the word "comprise" or variations such as "comprises" or "comprising" are used in an inclusive sense, i.e. to specify the presence of the stated features but not to preclude the presence or addition of further features in various embodiments of the invention.

20 Any one of the terms: including or which includes or that includes as used herein is also an open term that also means including at least the elements/features that follow the term, but not excluding others. Thus, including is synonymous with and means comprising.

Scope of Invention

Thus, while there has been described what are believed to be the preferred embodiments of
25 the invention, those skilled in the art will recognize that other and further modifications may be made thereto, and it is intended to claim all such changes and modifications as fall within the scope of the invention. For example, any formulas given above are merely representative of procedures that may be used. Functionality may be added or deleted from the block diagrams and operations may be interchanged among functional blocks. Steps
30 may be added or deleted to methods described within the scope of the present invention.

Although the invention has been described with reference to specific examples, it will be appreciated by those skilled in the art that the invention may be embodied in many other forms.

Industrial Applicability

It is apparent from the above, that the arrangements described are applicable to the building industries.

Claims

The claims defining the invention are as follows:

1. An anchor assembly for mounting a member at an offset distance to a structure, the assembly comprising adjustment means for adjusting the offset distance, the adjustment
5 means being accessible from adjacent an outer surface of the member distal to the structure.
2. The anchor assembly of claim 1 wherein the member comprises a mounting aperture and the adjustment means is engageable through the mounting aperture.
3. The anchor assembly of claim 2 wherein the adjustment means is engageable by a
10 tool inserted through the mounting aperture.
4. The anchor assembly of claim 1 wherein the assembly comprises:
a base body adapted for mounting to the structure; and
a mount body adjustably attached to the base body, wherein the member can be mounted to the mount body,
- 15 5. The anchor assembly of claim 4 wherein the mount body comprises a mount formation insertable through a mounting aperture of the member which supports the member during installation.
6. The anchor assembly of claim 4 wherein the mount body comprises a front portion engaging a rear face of the member facing the structure in use and the base body comprises
20 a rear portion engaging the structure in use.
7. The anchor assembly of claim 4 wherein the adjustable attachment of the mount body to the base body is via a threaded engagement therebetween.
8. The anchor assembly of claim 7 wherein the adjustment means comprises a mount drive opening formed in the mount body.
- 25 9. The anchor assembly of claim 7 wherein the threaded engagement is covered by a tube of the mount body or the base body.
10. The anchor assembly of claim 7 wherein the base body comprises a central base formation having an external thread and the mount body comprises a mount tube having an internal thread.
- 30 11. The anchor assembly of claim 10 wherein the base body comprises a base tube at least partly extending over the mount tube.

12. The anchor assembly of claim 4 further comprising an anchor means for mounting the base body to the structure.

13. The anchor assembly of claim 12 wherein the anchor means is a bolt or a screw.

14. The anchor assembly of claim 12 wherein the anchor means is detachably attachable
5 to the base body.

15. The anchor assembly of claim 4 further comprising a lock means engaging the mount body for locking the member to the anchor assembly.

16. The anchor assembly of claim 15 the lock means at least partly extends through a mounting aperture of the member.

10 17. The anchor assembly of claim 15 wherein the mount body comprises an internal thread engageable by the lock means.

18. The anchor assembly of claim 15 wherein the lock means comprises a front cap having an engagement formation thereon.

15 19. The anchor assembly of claim 4 wherein the adjustment means comprises a mount drive opening engageable via an opening in the mount body.

20. The anchor assembly of claim 10 wherein the base formation is tubular and comprises an internal thread attachable to an anchor means.

21. The anchor assembly of claim 10 wherein the base formation comprises a tool engageable drive opening formed therein.

20 22. The anchor assembly of claim 4 further comprising a friction means between the base body and the mount body.

23. The anchor assembly of claim 4 further comprising a recess in the base body disposed adjacent the structure in use.

24. The anchor assembly of claim 4 further comprising a base drive opening in the base
25 body engageable by a tool.

25. The anchor assembly of claim 4 further comprising a mount drive opening in the mount body engageable by a tool.

26. The anchor assembly of claim 10 wherein the base body comprises a rear portion having a central opening and wherein the tubular base formation extends from the rear
30 portion

27. The anchor assembly of claim 26 wherein a peripheral base tube extends from the rear portion, the base tube being generally parallel to the base formation.

28. The anchor assembly of claim 27 wherein an annular space is defined between the base formation and the base tube for receiving a section of the mount tube.

29. The anchor assembly of claim 10 wherein the mount body comprises a planar mount front portion having a central aperture, wherein a central tubular mount formation extends
5 forwardly from the front portion.

30. The anchor assembly of claim 29 wherein the mount formation comprises an internally threaded central opening.

31. The anchor assembly of claim 29 wherein the central aperture comprises a tool engageable drive opening formed therein.

10 32. The anchor assembly of claim 29 wherein the mount tube extends rearwardly from the mount front portion.

33. The anchor assembly of claim 10 wherein the mount tube comprises an external annular seal seat which receives a ring seal thereon.

15 34. An anchor assembly for mounting a member having a mounting aperture to a structure, the assembly comprising:

a base body adapted for mounting to the structure; and

a mount body adjustably attached to the base body, wherein the member can be mounted to the mount body,

20 wherein the mount body and/or the base body comprise an adjustment means engageable by a tool inserted through the mounting aperture for adjusting the distance between the member and the structure in use

35. A panel comprising spaced mounting apertures and a respective anchor assembly according to any one of claims 1 to 34 extending through the mounting apertures for mounting the panel to a structure.

25 36. An anchor assembly for mounting a member at an offset distance to a structure, the assembly comprising an anchor means for mounting the assembly to the structure and adjustment means for adjusting the offset distance over an offset distance range, wherein the assembly covers the anchor means throughout the extent of the offset distance range.

30 37. The anchor assembly of claim 36 wherein the adjustment means is accessible from adjacent an outer surface of the member distal to the structure.

1 / 6

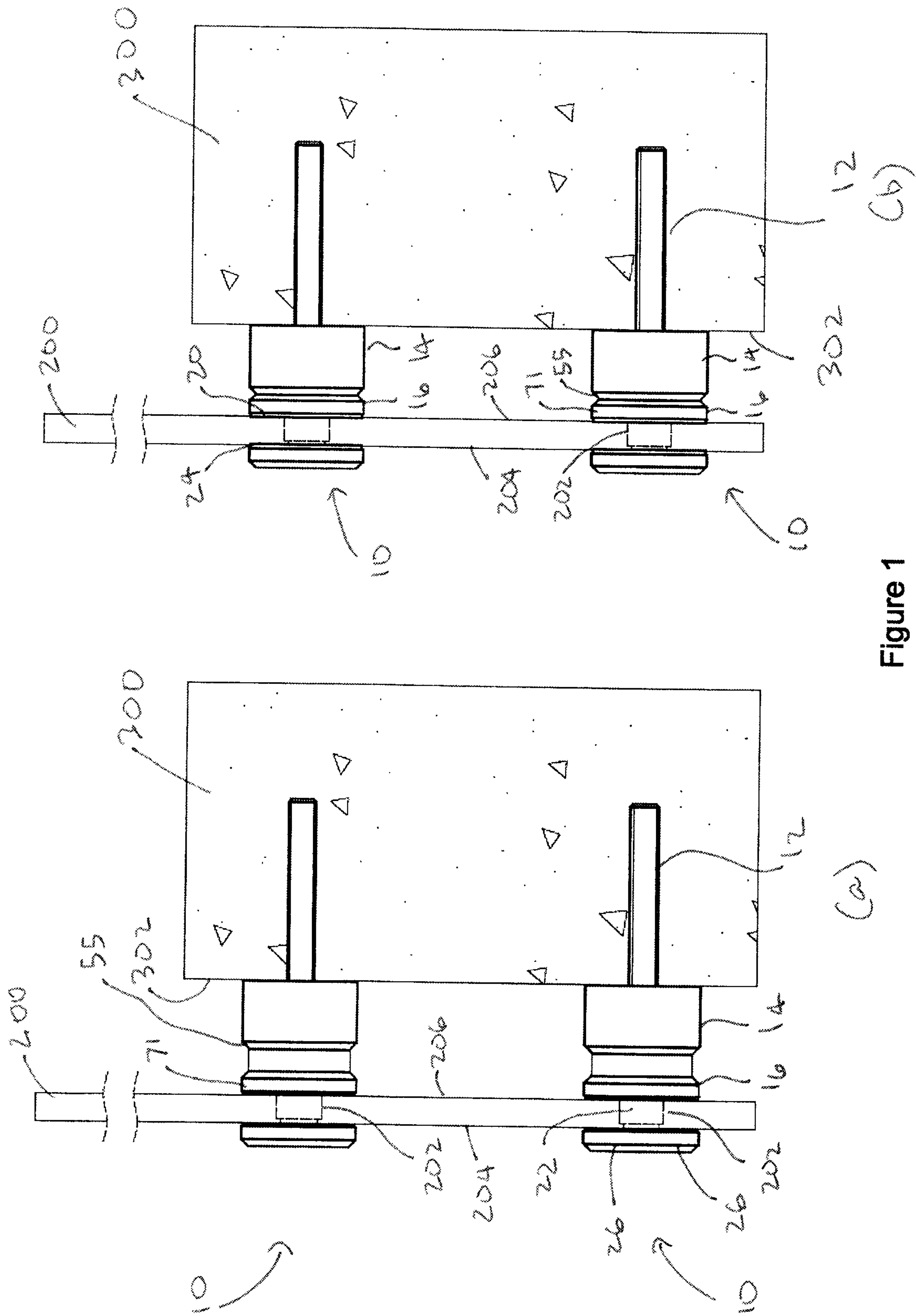


Figure 1

2 / 6

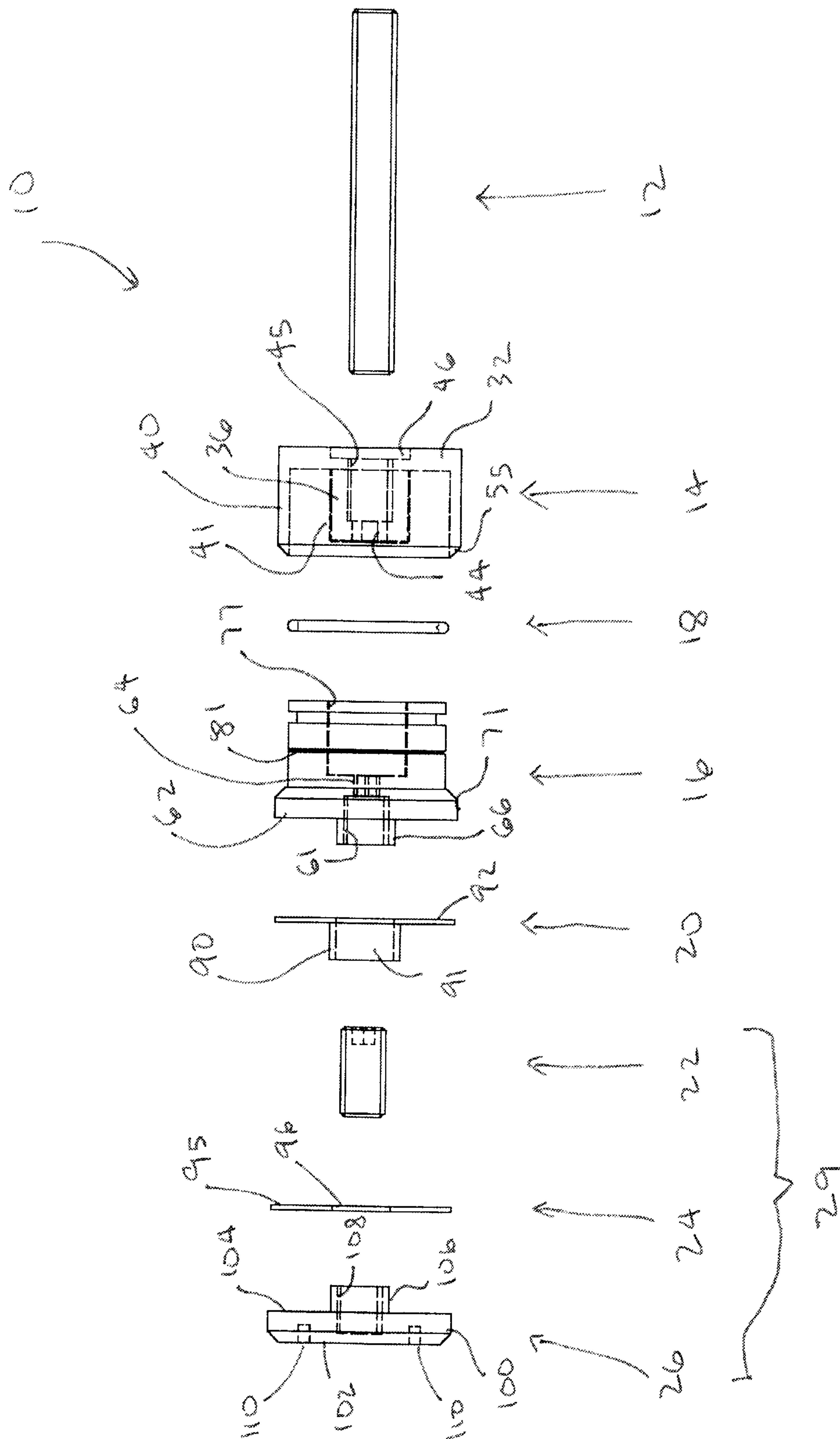


Figure 2

3 / 6

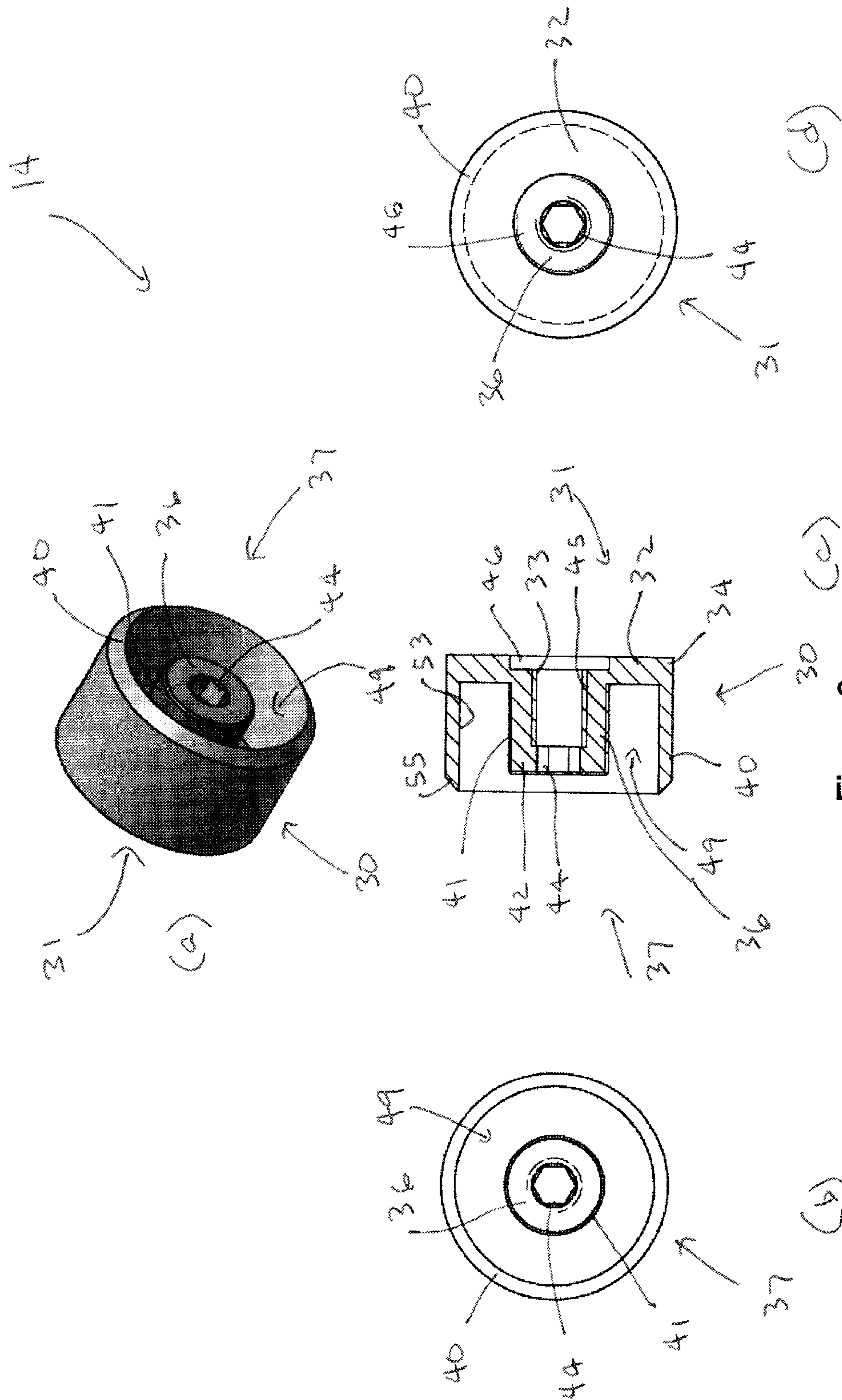
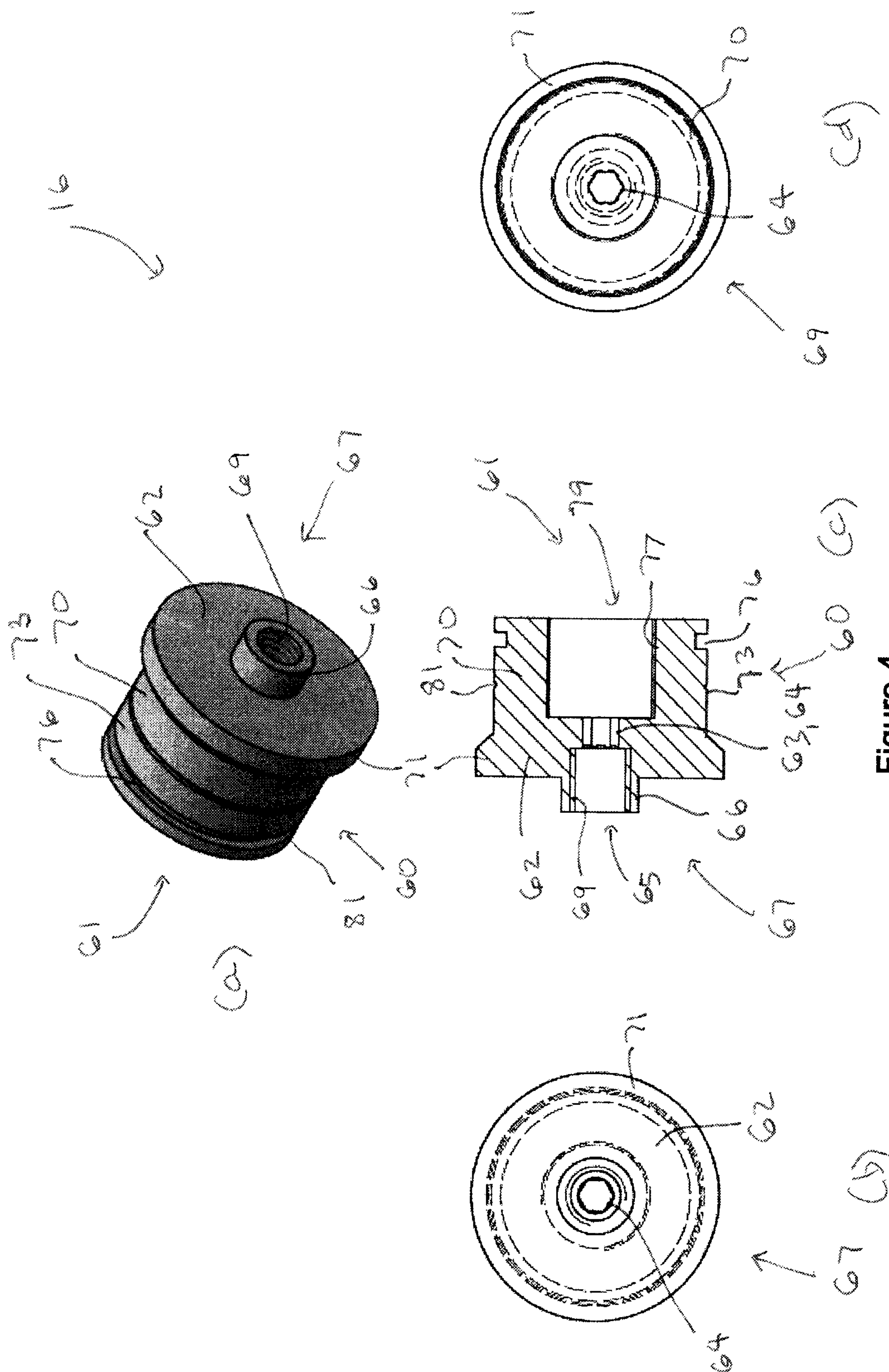


Figure 3

4 / 6



5 / 6

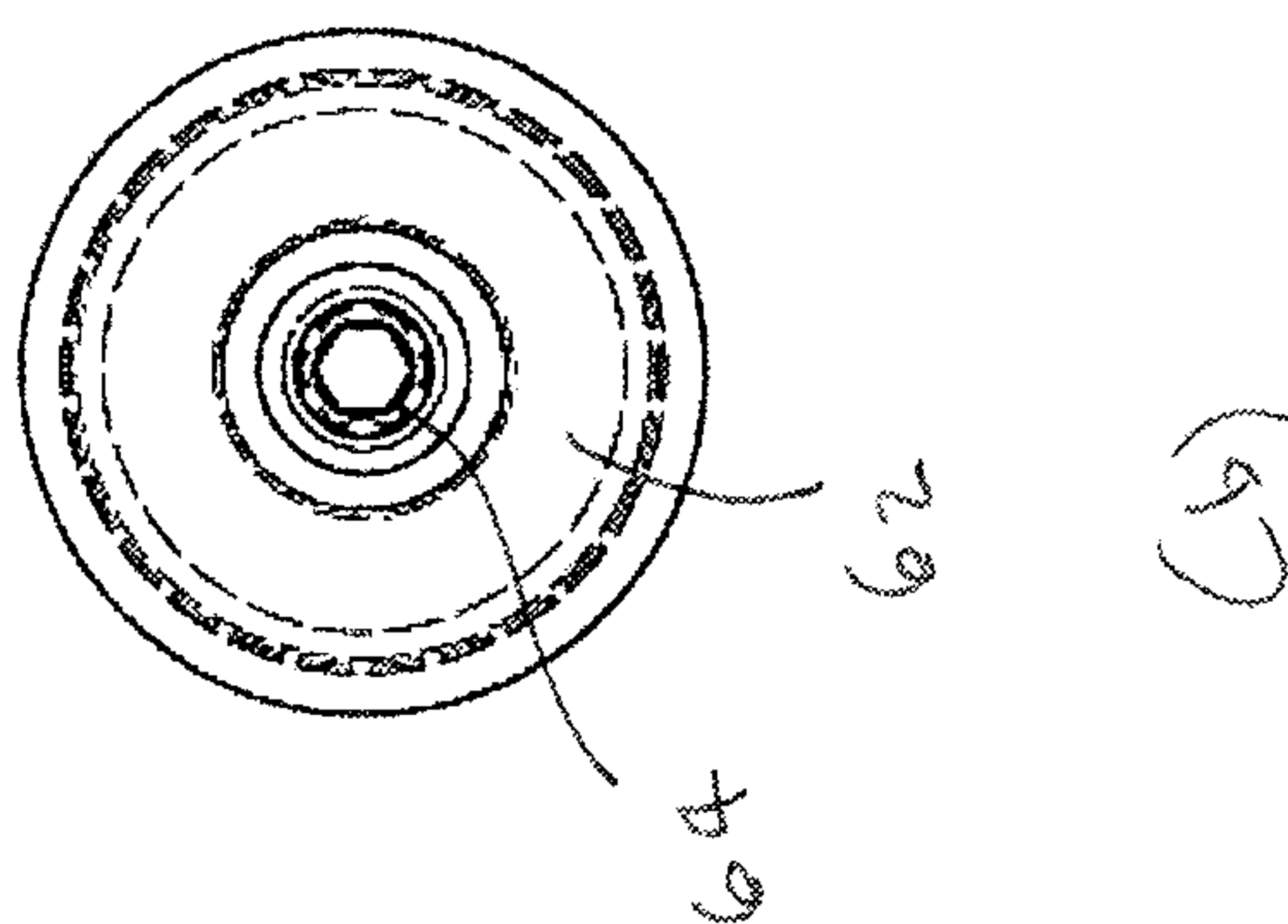
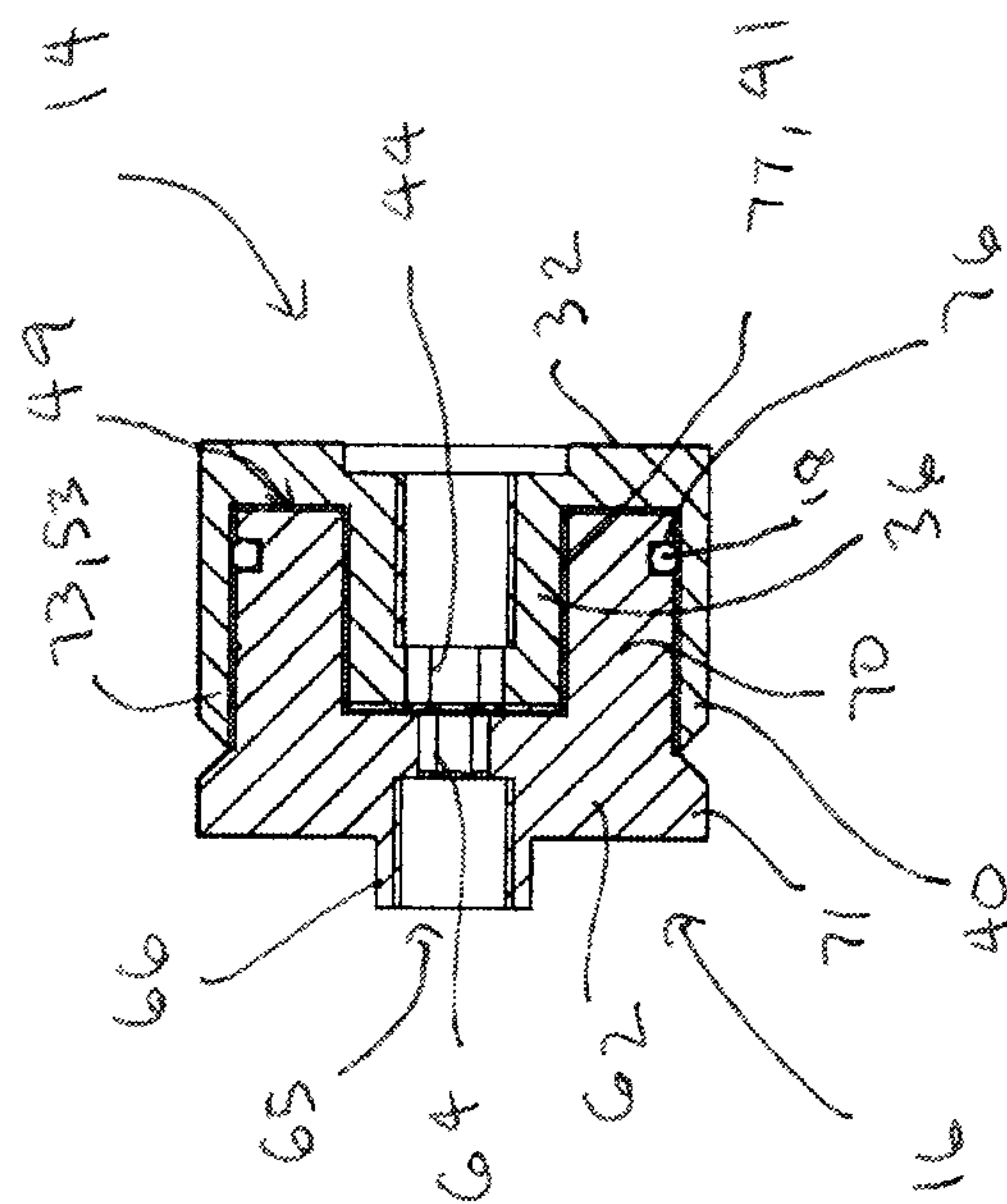
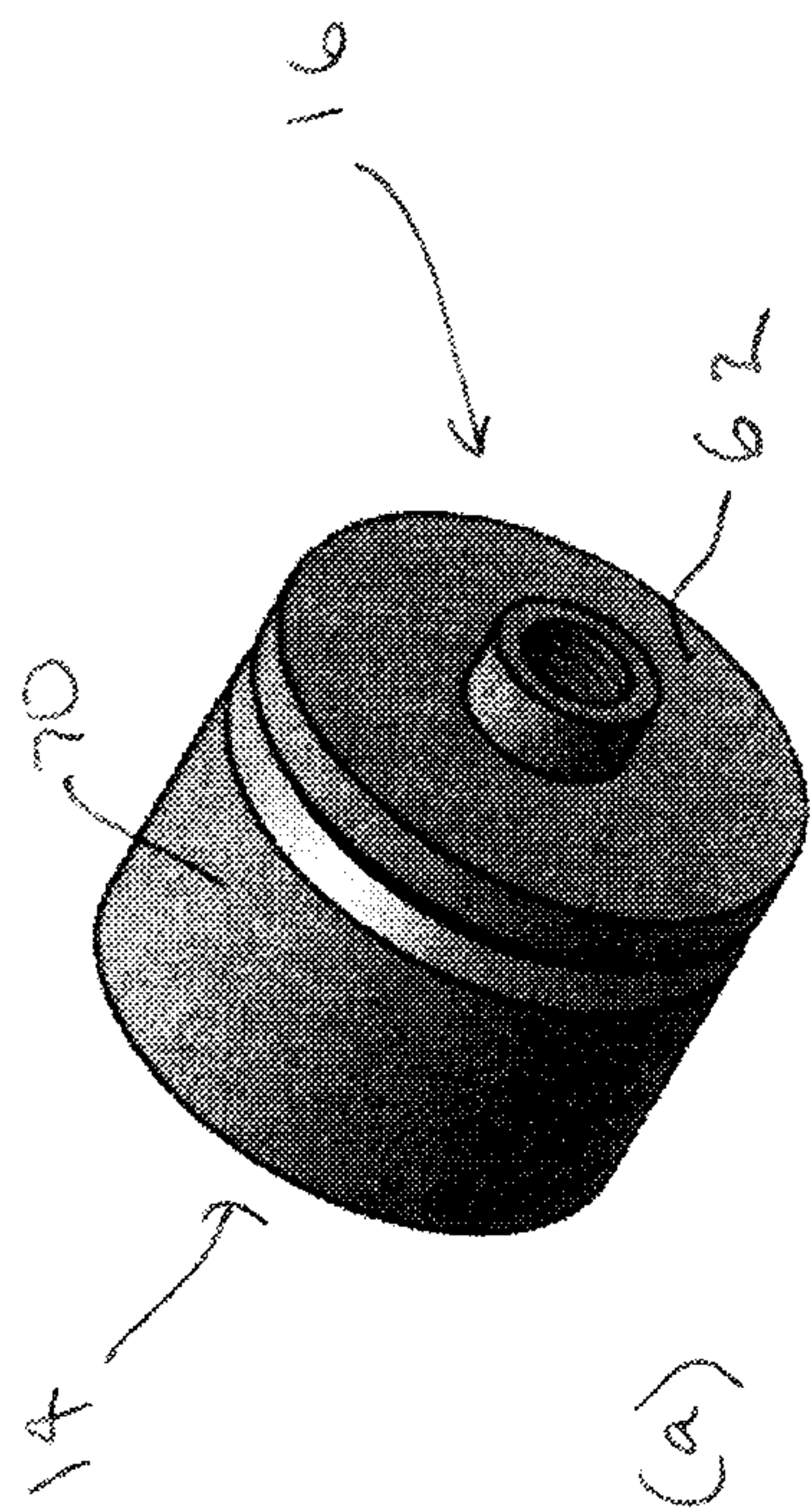


Figure 5 (c)

(b)



6/6

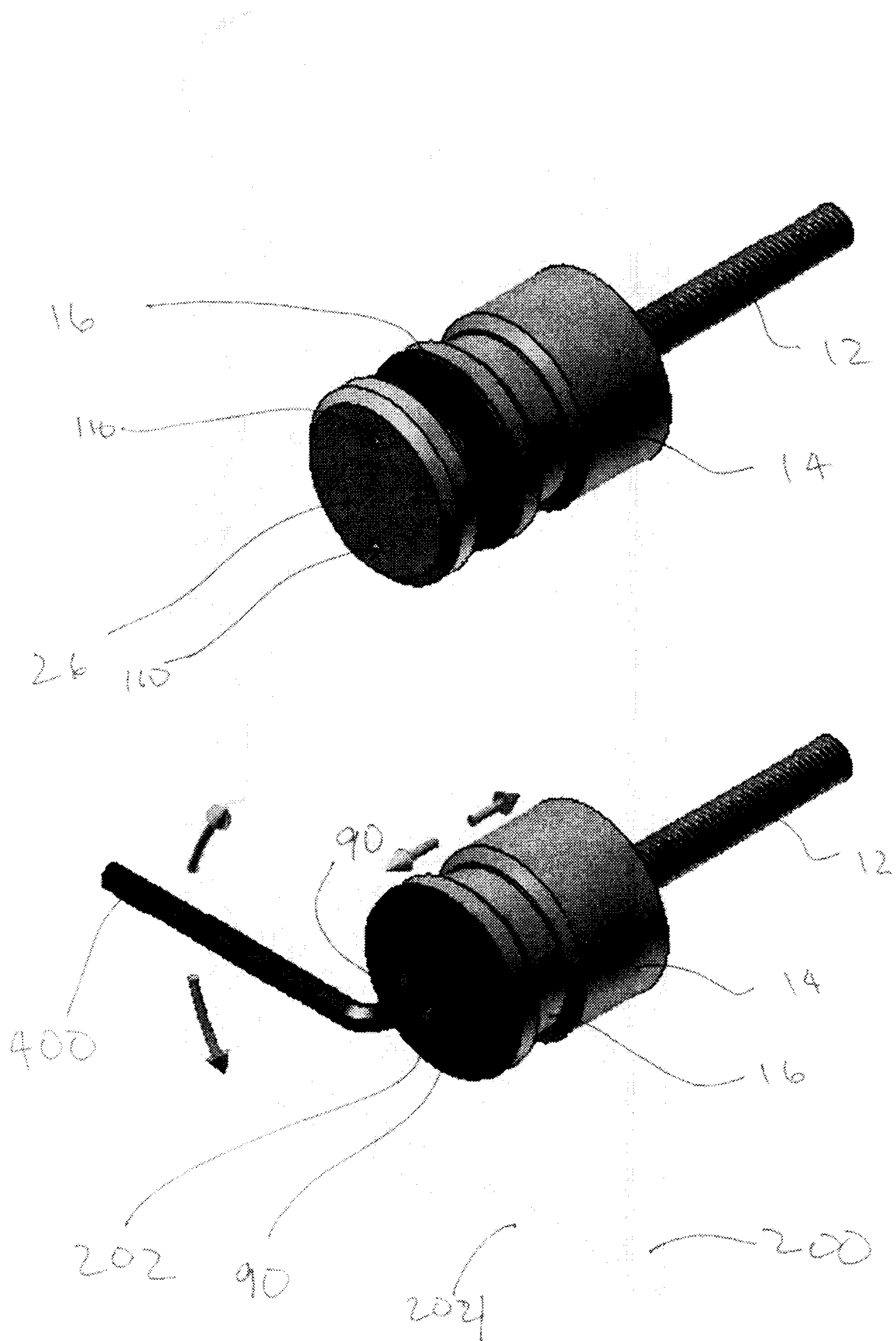


FIGURE 6

