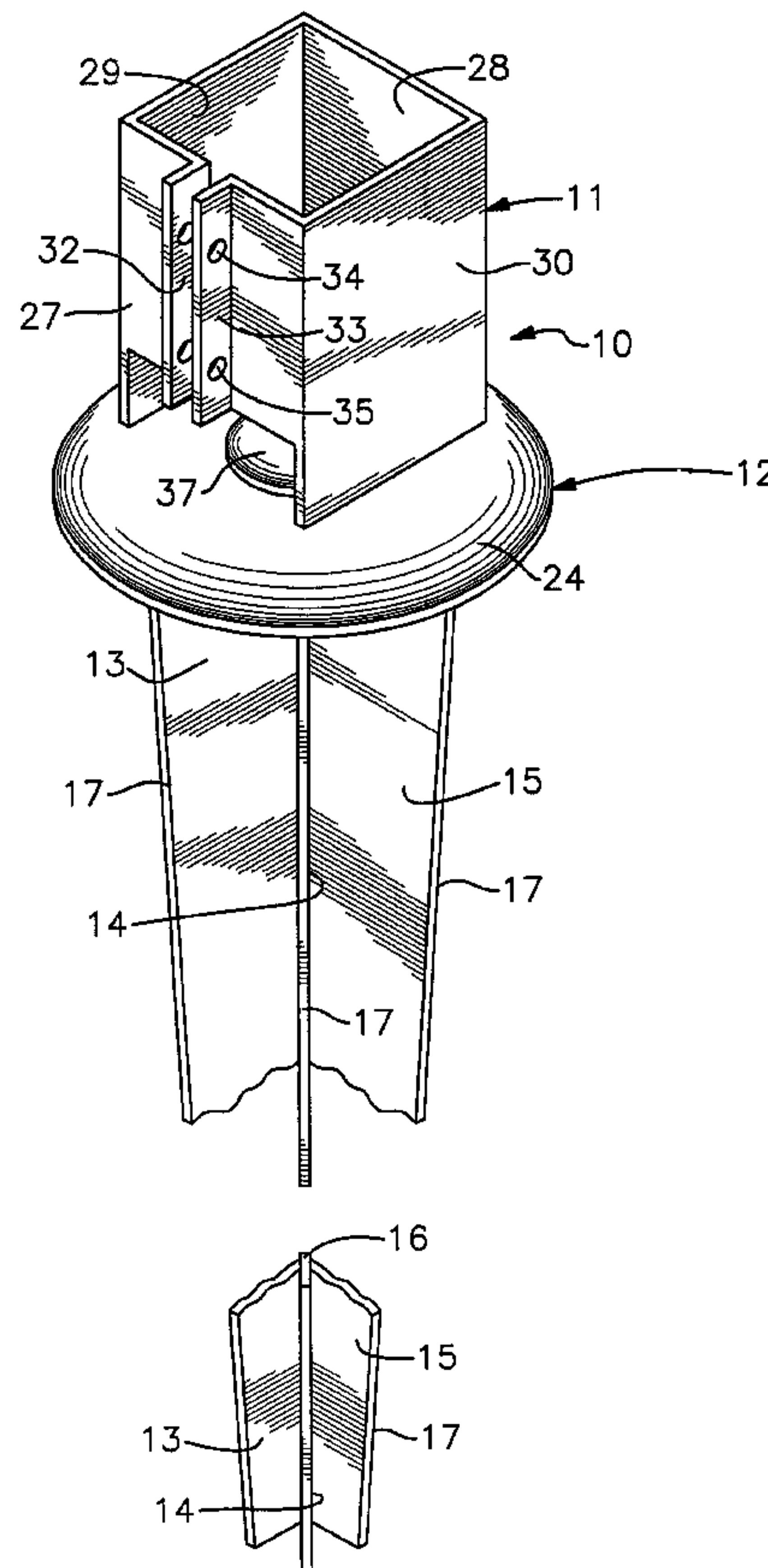




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(54) Titre : SYSTEME D'ANCRAGE DE PIQUETS PIVOTANT  
 (54) Title: SWIVEL POST ANCHOR



(57) **Abrégé/Abstract:**

A fence post anchor that adjusts for vertical post alignment by providing a post engagement support portion that swivels on a ground securing portion. The post engagement portion is defined by a split box sleeve secured to an adjustment dome. A fastener assembly interconnects the adjustment dome to the ground engagement portion that has multiple engagement flights on which the dome can be movably positioned and secured thereto.

## ABSTRACT OF THE DISCLOSURE

A fence post anchor that adjusts for vertical post alignment by providing a post engagement support portion that swivels on a ground securing portion. The post engagement portion is defined by a split box sleeve secured to an adjustment dome. A fastener assembly interconnects the adjustment dome to the ground engagement portion that has multiple engagement flights on which the dome can be movably positioned and secured thereto.

## SWIVEL POST ANCHOR

Background of the Invention5           Technical Field:

This invention relates to post supporting devices that are driven vertically into the ground and to which an upstanding post is then secured. This device eliminates the need to dig fence or post holes in the ground in which posts are typically positioned and buried.

10Description of Prior Art:

Prior art devices of this type have relied on a variety of different designs which use a fixed ground engagement portion in the form of a spike or screw and a post bore ancillary engagement portion secured thereto. See U.S. Patents 4,778,142, 4,588,157, 4,249,715 and 2,706,967.

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In U.S. Patent 2,706,967 an anchoring stake is disclosed having a ground engaging spike with a movable pin extending therefrom. The pin has a pivot ball on one end with a registering fitting secured to the spike. A lead

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ring is formed on the pin opposite end to which a pet lead can be attached.

Patent 4,249,715 discloses a sign supporting apparatus having a ground engaging portion and an integral support post and end cap arm support from which a sign can be hung. The support post is slid up and down on the upstanding ground engagement portion of the device driving same downwardly into the ground. The end cap support arm for the sign is then inserted to the upstanding post portion.

Patent 4,588,157 is directed to a post support having a ground engagement portion and an integral post receiving portion extending therefrom. The post receiving portion has a plurality of locking tabs within that wedgeably secure the post positioned within.

Patent 4,778,142 shows an awning anchor having a ground engagement screw portion and a pivoted awning arm mount extending therefrom.

A prior art adjustable anchor post is also known which discloses a post engagement having a contoured swivel base which \_\_\_\_\_

is registerable on a secondary swivel base secured to a  
ground engagement portion. The two contoured surfaces are  
inter-engaged and held to one another by a pair of  
oppositely disposed fasteners extending through elongated  
5 slots in the respective base portion to allow for the angle  
orientation of the top portion.

#### Summary of the Invention

An adjustable fence post anchor support having a ground  
engagement portion formed by a plurality of right angularly  
10 disposed tapered flights having contoured upper edge  
surfaces. A post support portion having an upstanding post  
engagement sleeve is secured to a contoured portion  
adjustably engageable over the flights. A fastener assembly  
threadably secures the post support portion to the ground  
15 engagement portion allowing full range of angular adjustment  
to be achieved after the ground engagement portion has been  
driven into the ground.

#### Description of the Drawings

Figure 1 is an illustrated perspective view of the

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adjustable anchor post of the invention;

Figure 2 is a partial side elevational view of the invention with portions shown in broken lines;

Figure 3 is a partial side elevational view of the ground engagement portion;

Figure 4 is a top plan view with portions broken away illustrating the range of angular adjustment of the invention;

Figure 5 is a top plan view of the ground engagement portion;

Figure 6 is a side elevated exploded view of the invention;

Figure 7 is a front elevational exploded view of an alternate form of the invention;

Figure 8 is a partial side elevational view of the alternate invention with portions shown in broken lines;

Figure 9 is a top plan view of the alternate form of the invention; and

Figure 10 is a partial side elevational view of the post engagement portion of the alternate form of the

invention.

Description of the Preferred Embodiment

Referring now to figures 1-3 of the drawings, an adjustable post anchor 10 can be seen having a post support portion 11 and a ground engagement portion 12. The ground engagement portion 12 has a plurality of ground engagement flights 13, 14, 15, and 16 that are welded at W together in oppositely disposed effacing pairs. Each of the flights 13-16 are tapered along their respective outer edge portions 17. Each of the flights 13-16 have a curved upper edge at 18 that when in welded relationship as hereinbefore described define a pair of cross arcuate surfaces 19 and 20 therebetween, best seen in figure 3 of the drawings.

A threaded engagement element 21 is positioned in registering relationship within notches at 22 in recessed portions 23 of the respective flights 13-16.

Referring now to figures 2, 4, and 6 of the drawings, the post engagement portion 11 can be seen having a cross-sectionally arcuate adjustment dome member 24 of a transverse dimension greater than that of the assembled

flights 13-16 of the ground engagement portion 12. The dome  
24 has a central opening therein at 24A. An upstanding  
split sleeve 25 is secured, by welding, to the dome 24 about  
the central opening at 24A. The sleeve 25 is  
5 cross-sectionally square having a front wall 27, a back wall  
28 and oppositely disposed sidewalls 29 and 30. The front  
wall 27 has a notched access opening at 31 therein that  
extends from the dome member 24 and is split having a pair  
of horizontally spaced longitudinally extending parallel  
10 compression flanges 32 and 33 extending outwardly therefrom.  
The flanges 32 and 33 have longitudinally spaced apertures  
in aligned pairs at 34 and 35 with fastener assemblies 36  
extending therethrough for compression of same holding a  
post, not shown, within the sleeve 25.

15 A contoured fixation disk 37 has a central aperture 38  
therein through which extends a threaded fixation fastener  
39, best seen in figure 6 of the drawings. The fixation  
disk 37 is positioned over the central opening at 24A in the  
dome 24 and is of a transverse dimension greater than that  
20 of said central opening 24 so as to overlie a portion of the



dome member 24 extending thereabout. The fixation fastener 39 is threadable within the engagement element 21 hereinbefore described within the ground engagement portion 12.

5           In operation, as best seen in figures 2 and 4 of the drawings, the post support portion 10 can be adjusted for vertical inclination relative to the ground engagement portion 12 as illustrated in broken lines in figure 4 of the drawings by sliding the dome 24 over and about the  
10           cross-arcuate surfaces 19 and 20 of the hereinbefore described flights 13-16. The relative amount of angular inclination achievable is limited by the engagement of the fixation fastener 39 within the center opening 24A of the dome 24 and the engagement of fixation disk 37 within the  
15           respective walls 28, 29 and 30 of the sleeve 25.

          Once a desired angle has been achieved, normally a true vertical alignment of the post, not shown, within the post support portion 10, the fixation fastener 39 which is threadably within the engagement element 21 is rotated and  
20           tightened down against the fixation disk 39 securing same

and the post support portion 10 to the ground engagement portion 12.

It will be evident from the above description that the ground engagement portion 12 with the adjustably attached post support portion 11 is driven down into the ground and secured within the post support portion and then the post, not shown, can be positioned vertically as desired by the adjustability of the contoured disk which is movably registerable on the ground engagement portion as hereinbefore described and then locked into place by tightening the fixation fastener 39 through the access opening 31 within the front wall 27 of the post engagement sleeve 25.

Referring now to figures 7-10 of the drawings, an alternate form of the invention can be seen of an adjustable post anchor 39 having a post engagement portion 40 and a ground securing portion 41. The ground securing portion 41 is similar to the hereinbefore described ground engagement portion 12 and accordingly has multiple tapered flights 42 secured together in oppositely disposed effacing pairs. A

pivot plate 43 is secured to the flight's upper surfaces 44. The pivot plate 43 has a central aperture therein at 45 with a threaded nut 46 welded thereabout in a recess portion 47 of the flights 42, as best seen in figure 7 of the drawings. The pivot plate 43 is circular and spaced inwardly from the flight's perimeter longitudinal edges 48.

The post engagement portion 41 has a dome element 49 of a transverse dimension greater than that of the assembled flights 42 and corresponding pivot plate 43 as will be described in greater detail hereinafter. The dome 49 has a central opening at 50 with an upstanding post receiving sleeve 51 secured about the central opening 50 by welding. The post receiving sleeve 51 is characterized by a front wall 52, back wall 53 and oppositely disposed sidewalls 54A and B respectively. The sidewalls 54A and B are tapered inwardly at 55 and have pairs of oppositely disposed transversely aligned fixation openings FO therein as best seen in figures 9 and 10 of the drawings. The front wall 52 has an access opening therein at 56 that extends to a transition point P of the sidewall tapered portions at 55A

and B respectively.

5 A pair of post stop tabs 57 extend from the front wall  
52 at the access opening 56 inwardly, overlying portions of  
the central aperture 50 as best seen in figure 9 of the  
drawings. A pair of horizontally spaced longitudinally  
extending parallel locking flanges 58 and 59 extend from a  
split S in the front wall 52 with longitudinally spaced  
apertures in aligned pairs therein at 60 and 61. Fasteners  
assemblies 30 extend registerably through said aligned pairs  
10 on oppositely disposed locking flanges as best seen in  
figure 7 of the drawings.

15 A contoured locking disk 62 having a central opening at  
63 is positioned over the central opening 50 in the dome 49  
and is of a diameter greater than that of said central  
opening 50 so as to be engageable thereon. A threaded  
fastener F extends through the contoured locking disk 62 and  
is registerable within the threaded nut 46 on the pivot  
plate 43 as hereinbefore described and as best seen in  
figure 8 of the drawings which also illustrates the  
20 operation of same.

5 It will be apparent that by loosening the fastener F,  
the dome 49 and attached upstanding sleeve 51 can be  
adjustably positioned from its vertical axis as illustrated  
in figure 8 with the dome 49 engageable on the pivot disk 43  
giving a full range of angular adjustable inclination to the  
device.

10 The operation of the adjustable post anchor 39 is  
similar to that of the hereinbefore disclosed post anchor 10  
in that the ground securing portion 41 is driven into the  
ground and the post engagement portion is then adjustably  
secured therethrough by the threaded fastener F.

15 It will therefore be evident that the post engagement  
portion 40 can be adjusted on its vertical axis on the  
ground securing portion 41, as noted above, by registration  
of the pivot plate 43 within the dome 49 allowing for a wide  
range of vertical angular adjustment thereto as set forth in  
the preferred form of the invention hereinbefore illustrated  
and described.

20 It will thus be seen that a new and novel adjustable  
fence post anchor has been illustrated and described and it

will be apparent to those skilled in the art that various  
changes and modifications may be made therein without  
departing from the spirit of the invention,

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**THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE  
PROPERTY OR PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:**

1. An adjustable post support for securing post in the ground in a vertical upright position comprises; a post supporting portion, and a ground engagement portion, said post supporting portion comprises an upstanding sleeve, a contoured dome secured to one end of said sleeve, said dome having a central aperture within, means for securing said post within said sleeve, an apertured fixation element registerable on said dome, a fixation fastener engageable on and through said apertured fixation element and said dome, said ground engagement portion comprises; a plurality of upstanding vertically elongated tapered flights secured to one another to be vertically driven into the ground, a pivot plate secured to said flights, means for threadably securing said fixation fastener to said pivot plate, extension elements extending within said sleeve in spaced relation to said fixation fastener.

2. The adjustable post support set forth in claim 1 wherein said means for securing said post within said sleeve comprises; a pair of spaced parallel flanges extending from said sleeve and having a pair of aligned apertures, a split in said sleeve between said flanges, fasteners registerably engaged through said aligned apertures in said flanges for

compression of said sleeve.

3. The adjustable post support set forth in claim 1 wherein said means for threadably securing said fixation fasteners to said pivot plates comprises; a threaded engagement element secured to said pivot plates.

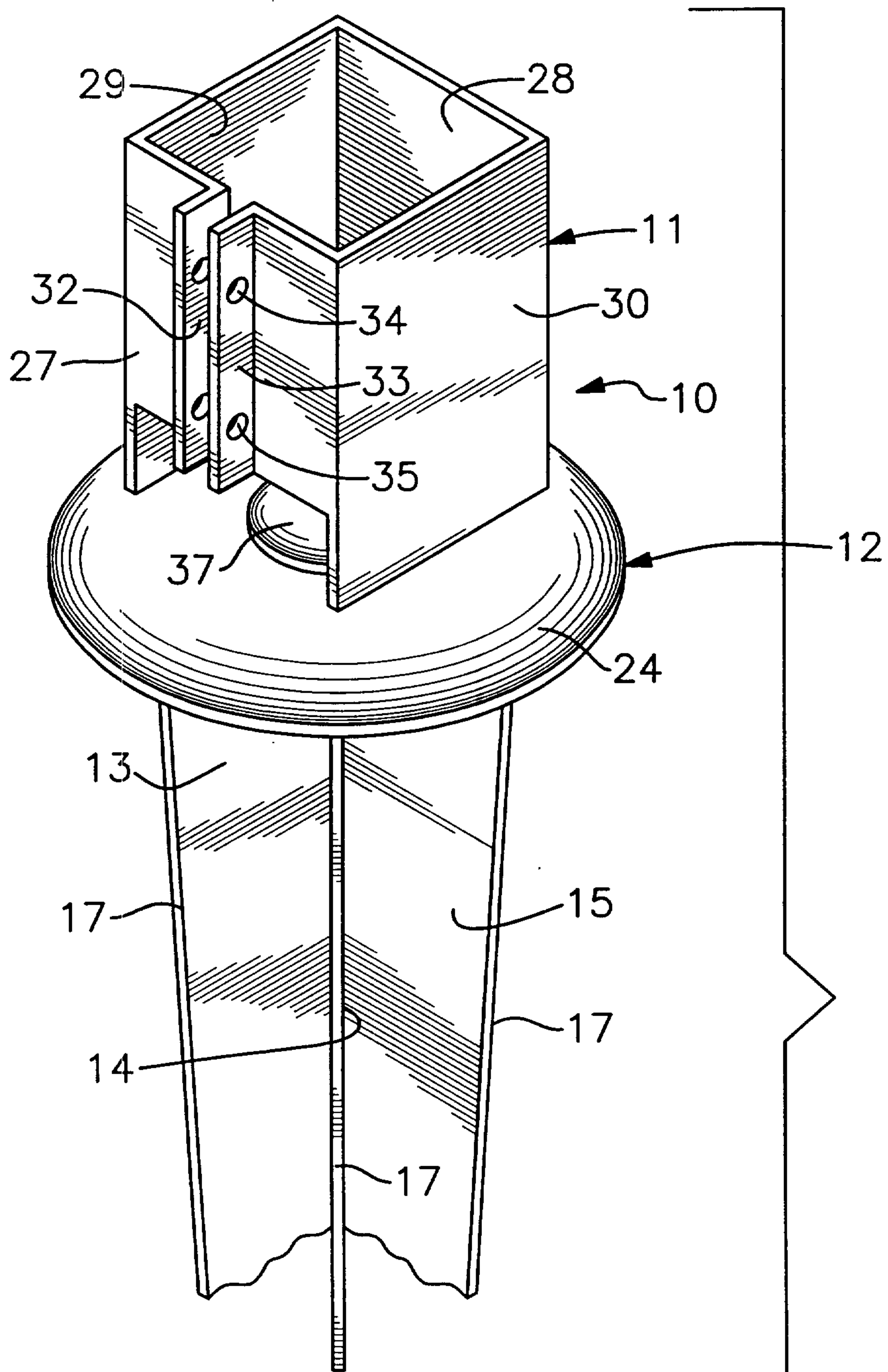
4. The adjustable post support set forth in claim 1 wherein said dome is of a known diameter and said pivot plate is of a diameter less than the diameter of said dome.

5. The adjustable post support set forth in claim 1 wherein said pivot plate is of a known transverse dimension and a pair of cross-arcuate surfaces formed on upper ends of tapered flights define an overall transverse dimension less than that of said pivot plate.

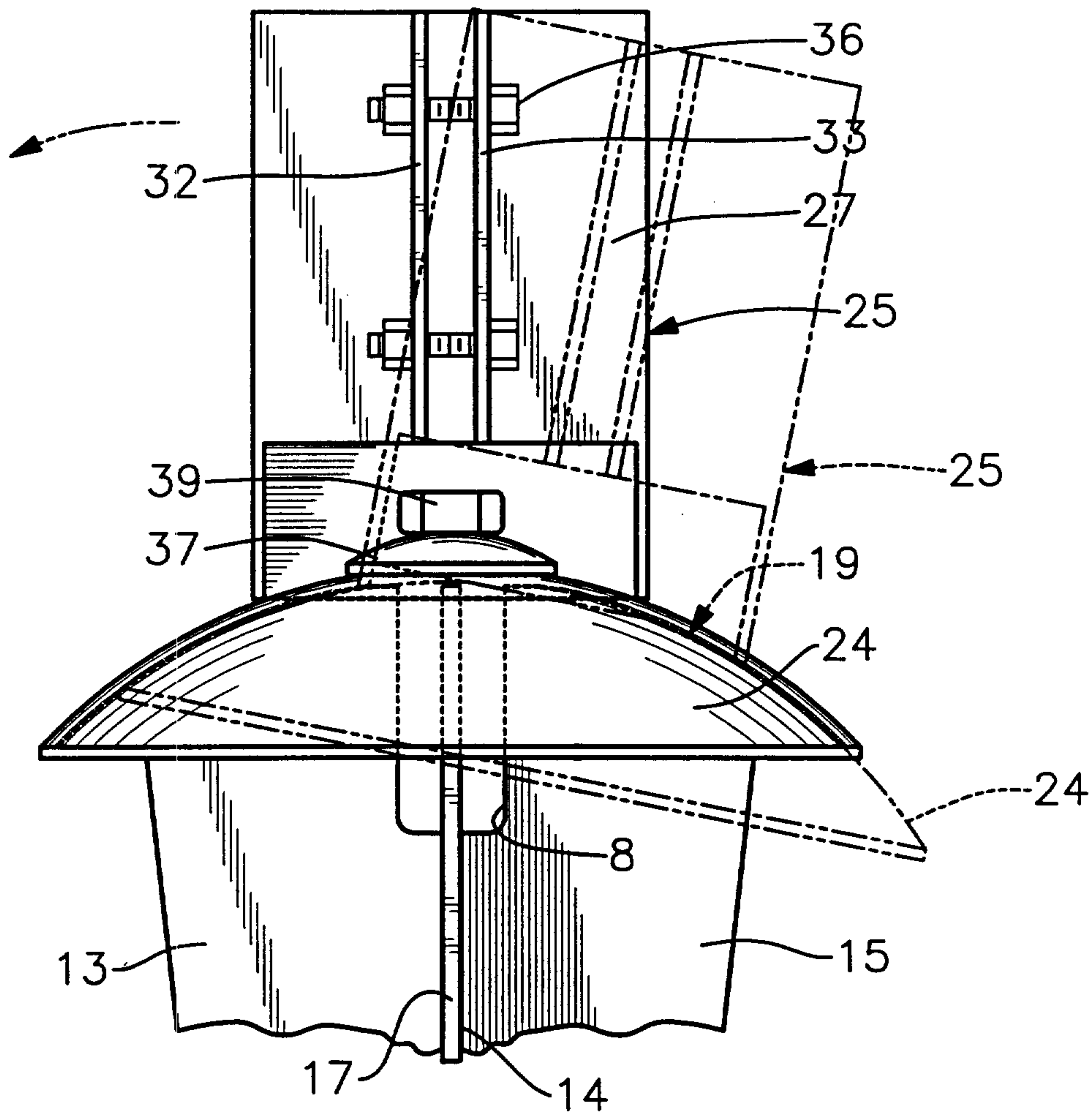
6. The adjustable post support set forth in claim 1 wherein said upstanding sleeve has an access opening therein.

7. The adjustable post set forth in claim 1 wherein said post engagement portion and said ground securing portion are made of metal.

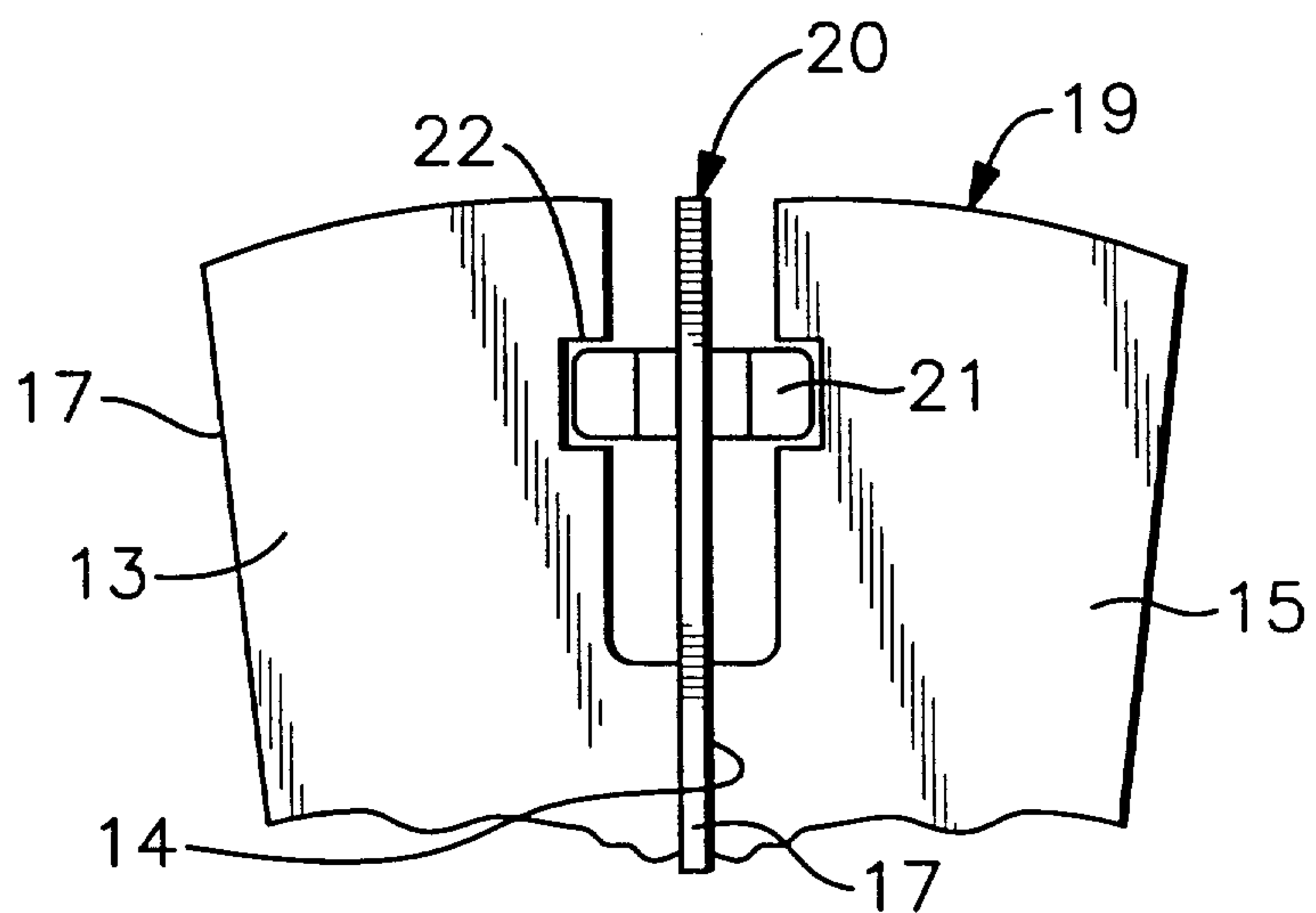




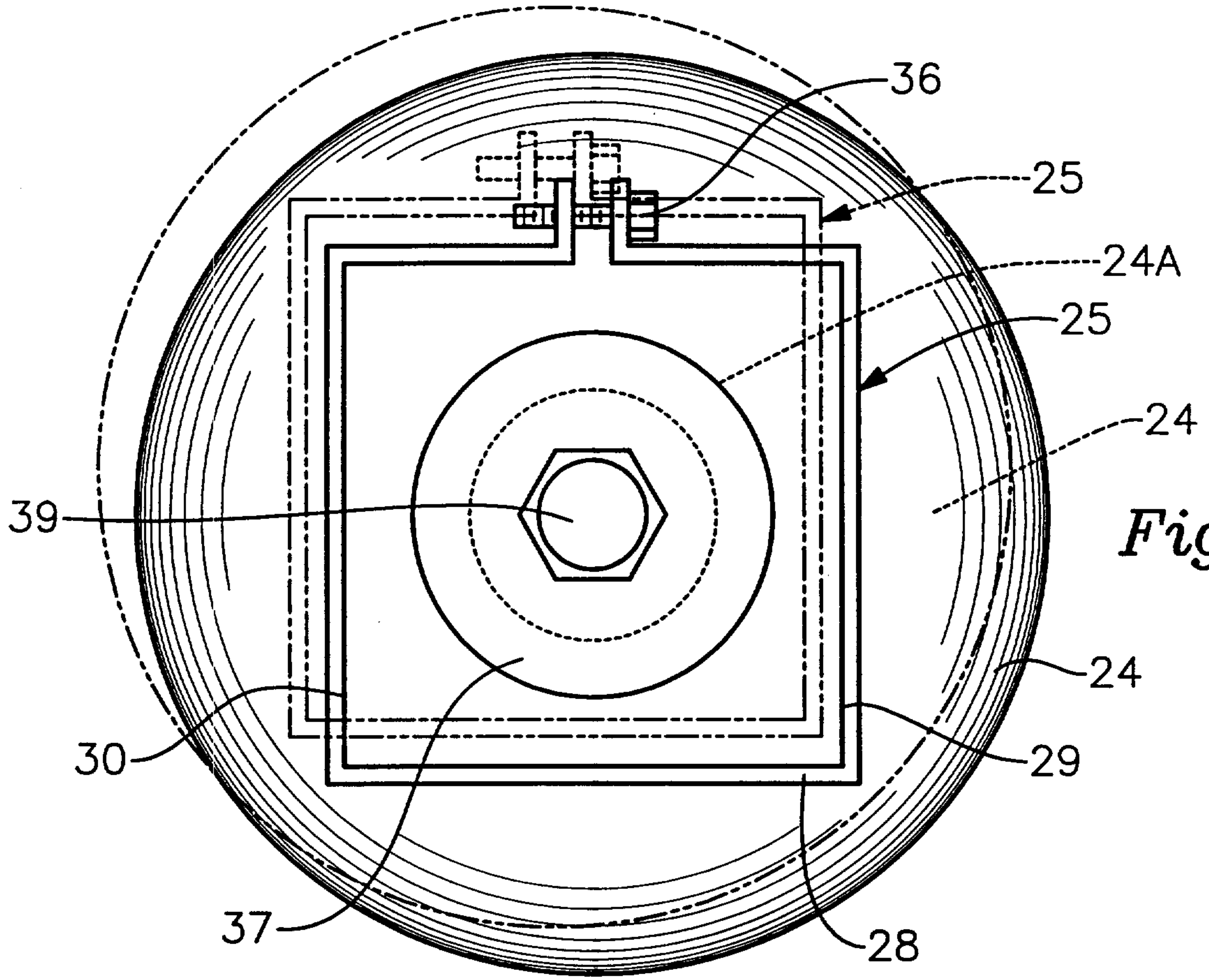
*Fig. 1*



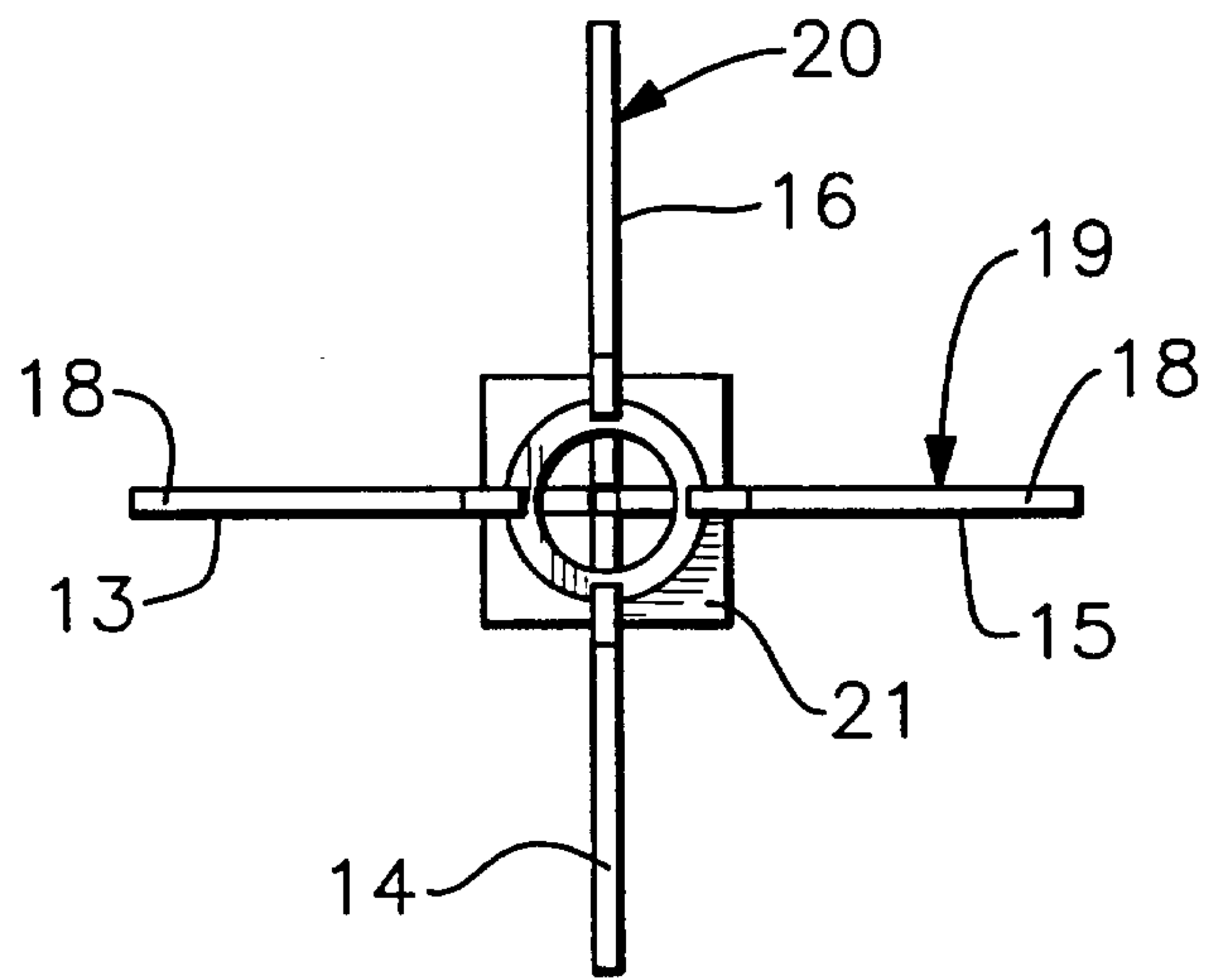
*Fig. 2*



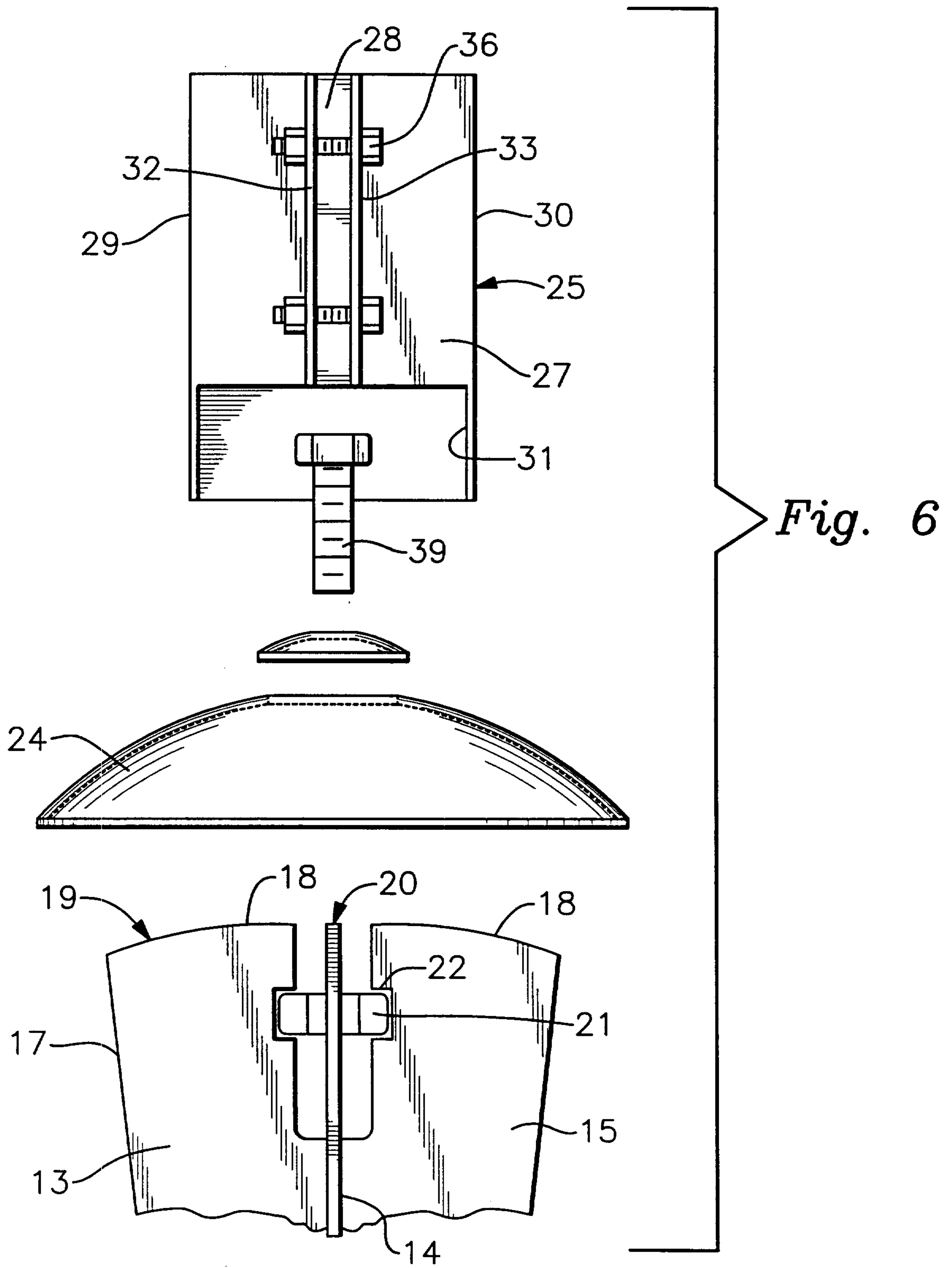
*Fig. 3*

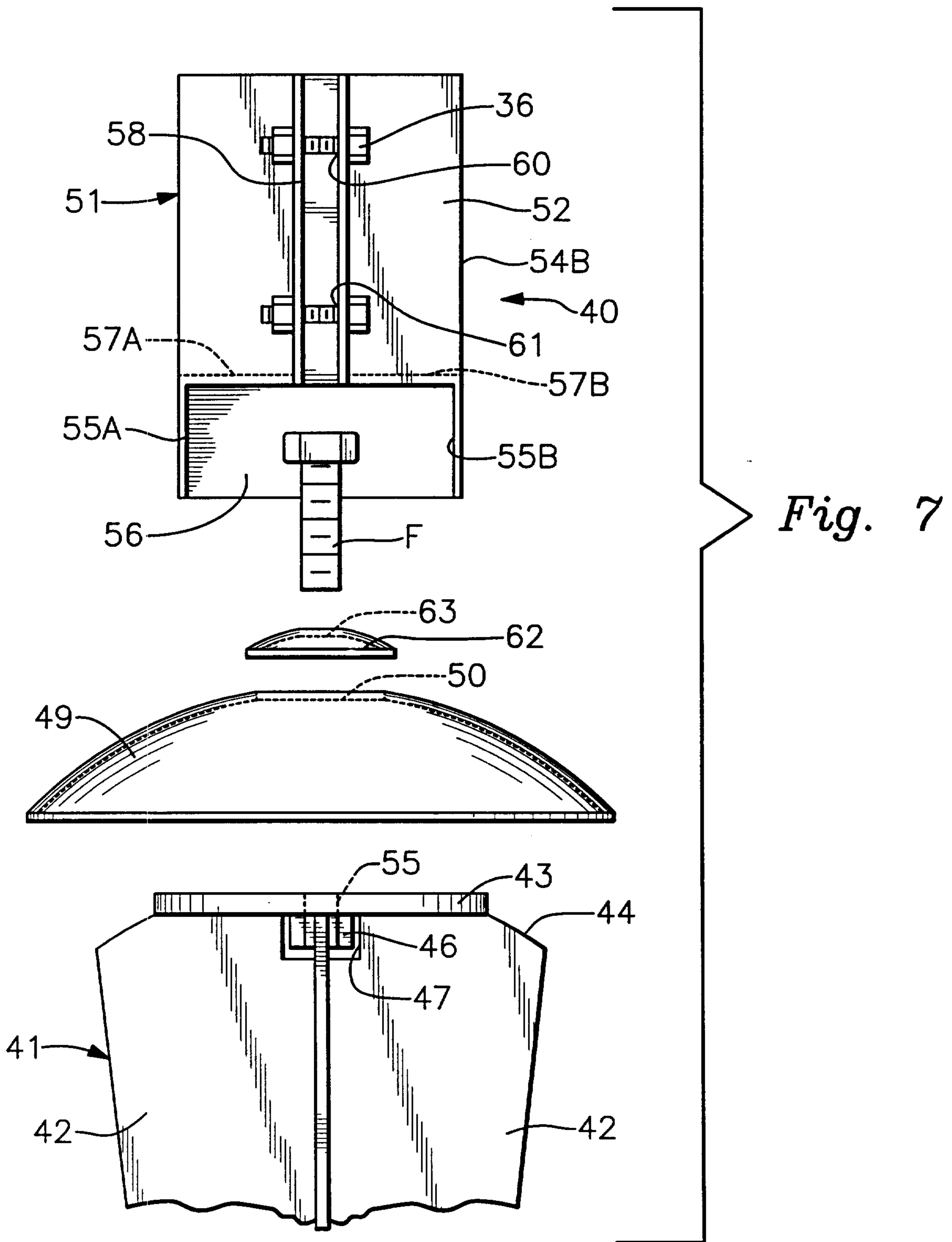


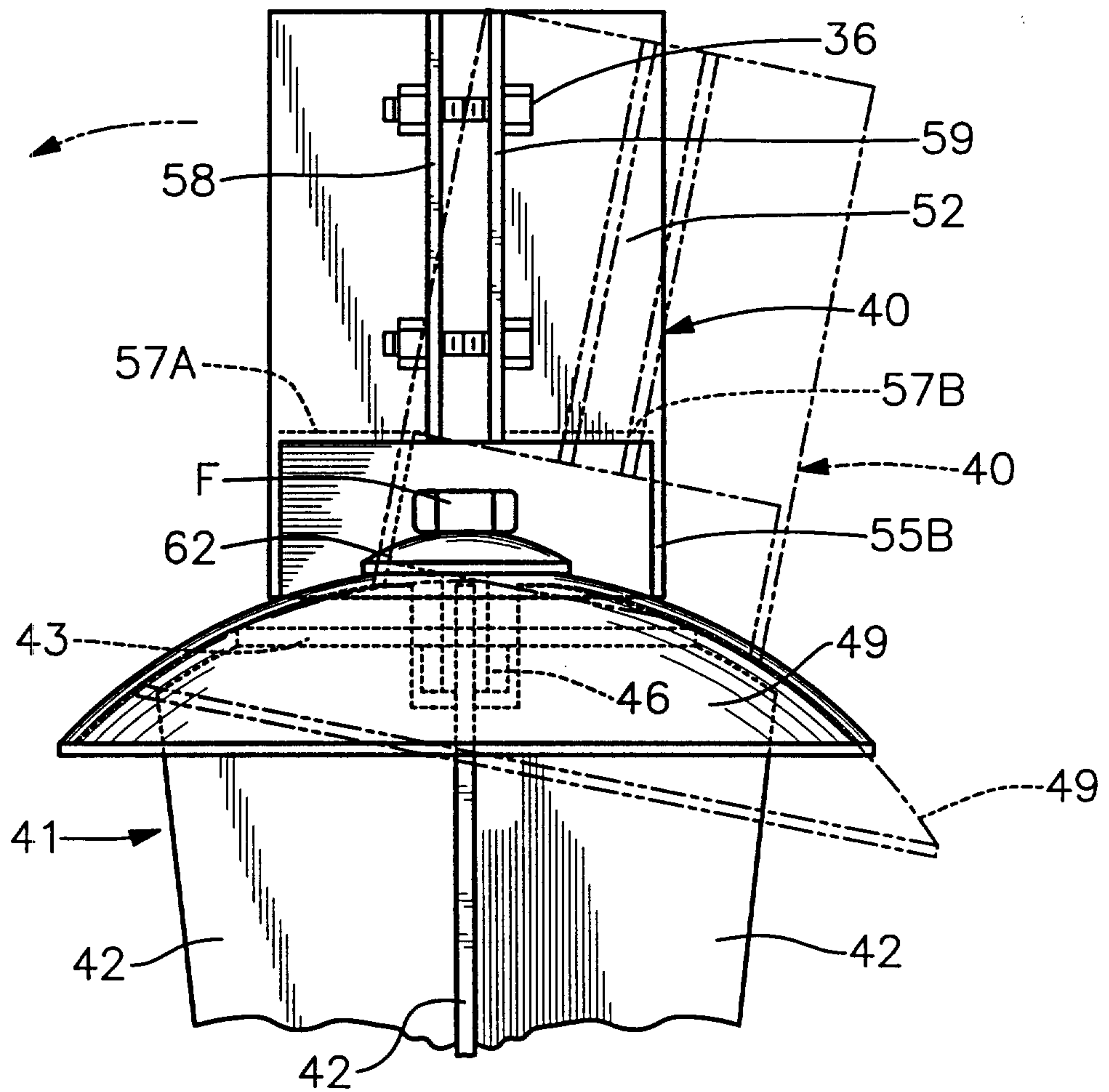
*Fig. 4*



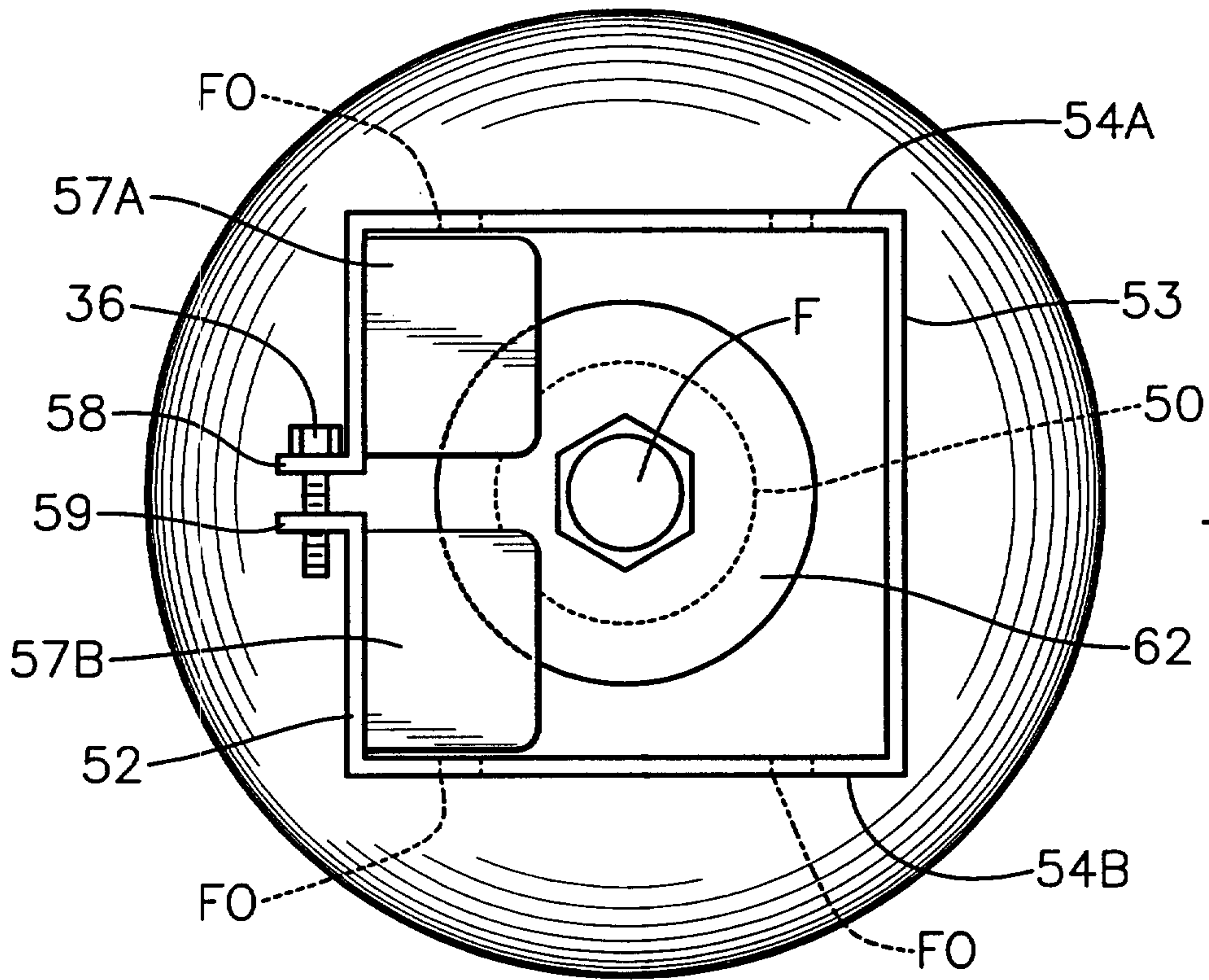
*Fig. 5*



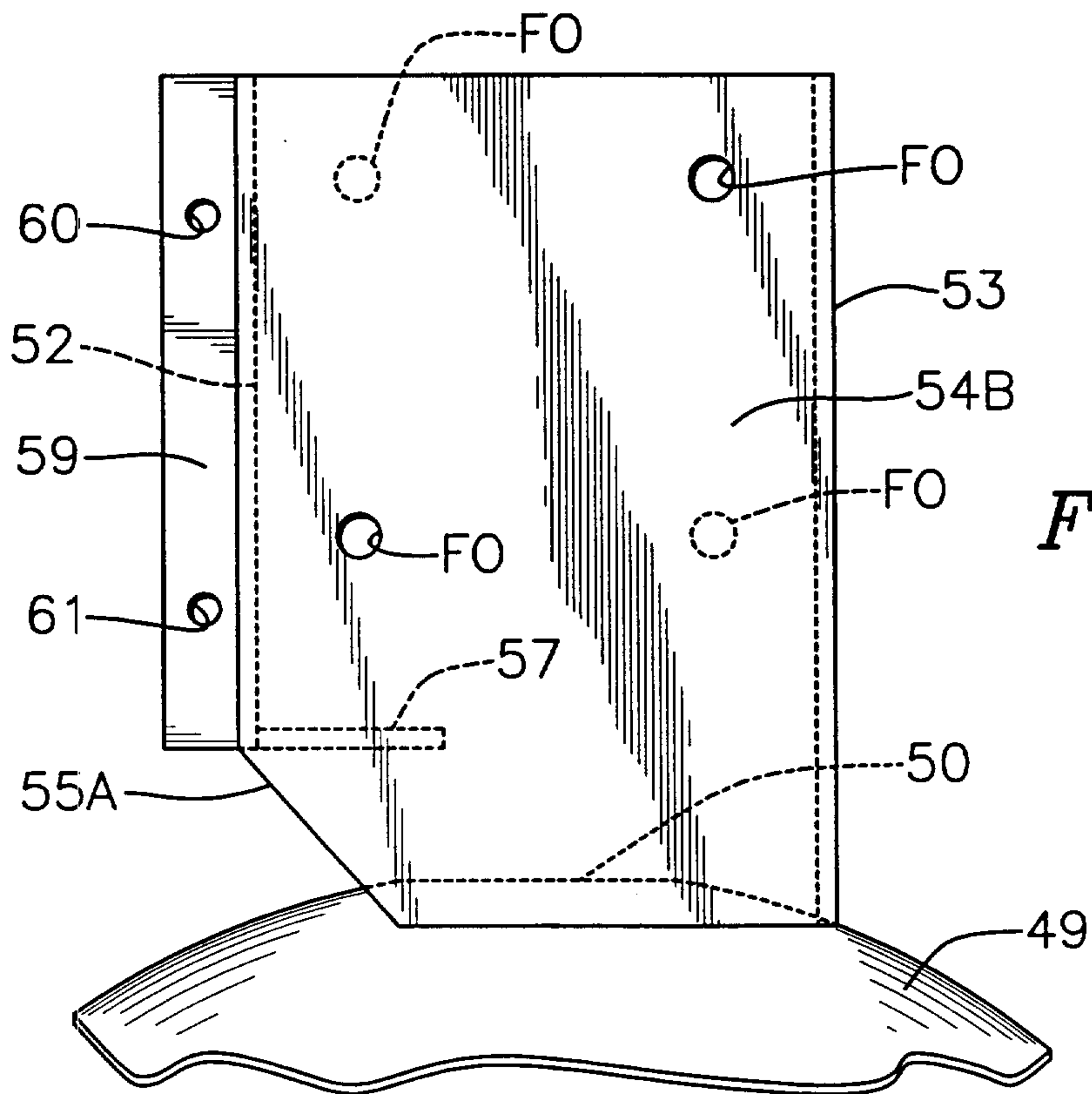




*Fig. 8*



*Fig. 9*



*Fig. 10*

