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Golf swing training device

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(56) Related Art
US 4302014
US 4513972
US 4521023

ABSTRACT

The present invention is for a golf swing training device including headgear adapted to be worn by a golfer on their head and a support to which is adapted to be rotatably fixed the headgear when a golfer is in the correct position to take a golf swing. This assists the golfer in minmising any motion of their head with respect to the said support means whilst allowing for rotational motion therebetween. The support may further include a recording means which gives an indication to the golfer as to the extent and the direction that their head has moved in relation to the support means through their golf swing.

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COMPLETE SPECIFICATION

FOR A STANDARD PATENT

ORIGINAL

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Invention Title:

GOLF SWING TRAINING DEVICE

Details of Associated Provisional Applications:

PO6531 dated 1st May 1997

The following statement is a full description of this invention, including the best method of performing it known to us:

GOLF SWING TRAINING DEVICE

The present invention relates to an apparatus to assist a golfer in improving their golf swing. In particular the present invention assists a golfer in learning to maintain a desired head position through the golf swing.

BACKGROUND OF THE INVENTION

There have been a large number of devices that have been developed for use as training guides for golfers to develop proper golf swings. A number of these devices are quite complex and cumbersome and may not easily be useable practically.

Furthermore, most of these devices have provided training guides for arm, hand and body guides.

However, one of the more important features in developing a correct golf swing is to make sure that the relative movement of the head does not move up and down or sideways and should only be allowed to rotate around the longitudinal axis of the head through a golf swing.

Therefore this invention relates to a training device and method to enable a golfer to practice the correct swing for striking a golf ball for any particular golf shot, whether it be drive or iron, by making the golfer aware of the total movement of the head during the golf swing. Once the golfer is aware of any undesirable movements of the head then it becomes easier for them to address the problem.

SUMMARY OF THE INVENTION

The advantages and features of this invention will be apparent from the following description of a preferred embodiment of the invention as illustrated in the accompanying drawings.

Therefore in one form of the invention there is proposed a golf swing training device including:

a headgear adapted to be worn by a golfer on their head said headgear rotatably mountable on a support means when a golfer is in the correct position to take a golf swing;

said headgear including a projection with a longitudinal axis, said support means including a bore with a longitudinal axis, wherein said projection is adapted to engage said bore to cause their longitudinal axis to coincide;

said support means further including a movement indication means to record the non-rotational movement of the golfers head; and

wherein when said headgear is rotatably fixed to said support means it assists the golfer in minimising any motion of their head with respect to the said support means whilst allowing for rotational motion therebetween.

In preference said support means is adapted to be attached to a wall.

In preference said support means is adapted to be attached to a pole.

In preference said support means includes an interface means to which is rotatably attached said headgear means.

In preference interface means includes a base and a cover, said base including a bore within which is slidably movable a disk, said disk adapted to be rotatably attached to said headgear.

In preference said base further includes a plurality of sliding members positioned in slots and adapted to be acted upon by said disk. This allows the golfer to see in what direction their head moved whilst taking their swing.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is a side view of a first embodiment of the invention showing a golfer in the initial position prior to taking a golf swing;

FIG. 2 is a front view of the golfer of FIG. 1;

FIG. 3 is a side view of a second embodiment of the invention showing a golfer in the initial position prior to taking a golf swing;

FIG. 4 is a perspective view of the embodiment as in Fig 3 showing the golfer though their swing;

FIG. 5 is partial perspective view detailing the interface and the headgear as in the second embodiment of the invention;

FIG. 6 is a perspective view detailing the headgear of FIG 5;

FIG. 7 is a detailed cross-sectional and plan view of a the interface as in FIG 5 before a golfer has taken their swing;

FIG. 8 is a detailed cross-sectional and plane view of the interface of FIG 5 when a golfer has taken an incorrect swing;

FIG. 9 is a cross-sectional view of the interface as in FIG 5 detailing an embodiment of attaching the headgear to the interface; and

FIG. 10 is a cross-sectional view of the interface in FIG 5 detailing a second embodiment of attaching the headgear to the interface.

DESCRIPTION OF THE PREFERRED EMBODIMENT

Turning now to the figures in detail it is to be understood that like numerals in the different drawings are used to indicate like elements. Thus there is shown in FIG. 1 a golf swing training device 10 including headgear 12 and support means 14 adapted to be attached to pole 16, the pole attached to a stable support such as wall 18.

When a golfer 20 wants to practice their golf swing using golf club 22 they wear the headgear 12 which is attached to support means 14 via interface 24. The interface 24 is fixedly attached to the support means. The support means may include a pivot 26 as illustrated in Figure 1, or it may be rigidly as shown in Figure 2. If it is pivotable it is envisaged that there would be an adjustment

means that allows the angle of the pivot to be pre-determined although this is not shown in any detail. When the device is attached to the pole 16 it may be vertically adjustable by the use of a clamp 28 that frictionally engages the pole 16 at a desired location. This is particularly useful when one wants to accommodate golfers of varying heights..

It has been found that to provide a correct swing it is desirable not to move the head 30 of the golfer either in the up and down direction 32 or the sideways direction 34 as illustrated in Figure 2. Obviously it is also undesirable to move the head in any combination of those directions. However the head can and should in a golf swing rotate around the longitudinal axis passing through the head of the golfer.

It is only by teaching the golfer to minimise or even eliminate any movement in the directions 32 or 34 once the swing is commenced that the golf club 22 consistently and accurately returns to its initial position to impact on golf ball 36. Thus the headgear 12 which includes support bands 38 passing around a golfers head includes a projection 40 that is adapted to fixedly connect to a correspondingly shaped bore 42 on the interface 24, whilst allowing relative rotation therebetween. FIG. 3 shows in more detail a second embodiment of the invention wherein the headgear 12 is a cap including a projection 40 adapted to be attached to bore 44 of the interface 24.

When a golfer takes a swing, this being illustrated in Figure 4, the headgear being attached to the interface assists a golfer, and even restricts to some degree, from moving their head in an up-down or sideways direction (or combination thereof) and only allows their head to freely rotate, the attachment of the projection to the bore of the interface adapted to allow for relative rotation therebetween.

Figure 5 illustrates in detail one embodiment of the interface 24 and the headgear 12 which not only assists the golfer in keeping their head in the one position, but also gives an indication how much their head has moved sideways or up and down. Thus the interface includes a base 44, said base including slots 46 within which are located eight sliding members 48, the sliding members extending radially from the outer edges of the slots radially inwardly and distributed at equal angels around said base. It is preferred that they are located at angles of 45 degrees to each other, there being sliding

members in the vertical and horizontal directions.

Over the base and thus the sliding members there is positioned a cover 50. The slots do not extend all the way from the edge of the base to the center of the base but extend to a disk 52 that is centrally positioned within a bore in said base 44 and which includes a member 54 that extends though an aperture 56 in the cover 50. The disk is centrally located within a circular detent or bore 62 in the base, although the geometry of that may be varied. The dimension of the aperture 56 is chosen to be smaller than the horizontal extent of the disk 52 and is greater than the width of the member. This allows the disk to move in the horizontal plane of the base and the cover, but is restrained from moving in any other direction and is restrained in the amount of movement, that depending on the relative sizes of the aperture and the member. When the disk is centrally located and the sliding members do not extend beyond the base the disk is kept in that relative position by the sliding members. When the disk has moved it the sliding members then act as a movement recordal means.

The member 54 includes bore 42 to which is attachable projection 40 of headgear 12 as discussed previously. The cover is adapted to be firmly attached to the base by use of screws 58, the sliding members also adapted to be fixed into place by screws 60 that act upon the sliding members to prevent them sliding within the slots 46.

The headgear 12 as shown in Figure 6 includes projection 40 that is adapted to be attached to bore 42, and can itself be attached to the cap by conventional means.

Figure 7 shows the cross-sectional and plan view of the interface before the disk has moved within the bore 62, whilst Figure 8 shows the position of the disk and the sliding members when it has. Thus, when a person is wearing the headgear and it is attached to the interface though bore 42, when a person takes a golf swing and their head does not move, the disk within the bore also remains stationary. However if a person during their golf swing moves their head, this causes the disk to move which then causes movement of the sliding members within the slots, which then are moved radially outwardly as illustrated in Figure 8.

Once a golfer has taken their swing they can then see for themselves in what direction their head was moving when they were taking the shot and therefore allows them to concentrate on correcting that feature of their stroke. As an example Figure 8 illustrated that the person taking the shot moved their head substantially to the right, diagonally across and downwards when taking their shot.

To further assist the golfer in learning what head movement to avoid, the sliding members may be locked in place by the use of screws 60 thus restraining the disk in place and assisting the golfer in keeping their head still. Of course, the disk is adapted to rotated within the base bore, as is required for the golfer to rotate their head when taking a stroke.

It is also to be understood that the above embodiment are used only to illustrate the invention and not to limit it thus, and other means of teaching the golfer not to move their head in and up-down or sideways motion may be employed.

Illustrates in Figures 9 and 10 are two different embodiments to rotatably attach the headgear to the interface. As shown in Figure 9 the headgear may includes a projection adapted to engage a bore on the disk, whilst in Figure 10 the headgear includes a projection that is adapted to engage the member of the disk..

As also illustrated in Figure 4 the device may be attached to a self-standing pole 66 which may assist a golfer in taking their shot in any direction since the device can be rotated around the pole.

A further improvement to the invention may be the use of various electronic devices with a suitable electronic display which would allow the golfer to more accurately measure their stroke performance.

While the invention has been described in the preferred embodiments above it is to be understood that the description is not meant as a limitation and that various changes may be made without affecting and departing from the true scope and spirit of the invention in its broader aspects.

Thus it is not intended to limit this invention to a particular example of a golf

swing training device. What is the intended purpose of the invention is to understand that it is the relative movement both vertical and sideways of a golfer which has an impact on their swing whilst the rotatable relative motion of the golfers head is allowable and provide a device to assist a golfer in reducing this motion.

Many embodiments may be obvious to the person skilled in the art without deviating from this invention.

THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:

1. A golf swing training device including:

a headgear adapted to be worn by a golfer on their head said headgear rotatably mountable on a support means when a golfer is in the correct position to take a golf swing;

said headgear including a projection with a longitudinal axis, said support means including a bore with a longitudinal axis, wherein said projection is adapted to engage said bore to cause their longitudinal axis to coincide;

said support means further including a movement indication means to record the non-rotational movement of the golfers head; and

wherein when said headgear is rotatably fixed to said support means it assists the golfer in minimising any motion of their head with respect to the said support means whilst allowing for rotational motion therebetween.

2. A golf swing training device as in any one of the above claims wherein said support means is adapted to be attached to a wall.

3. A golf swing training device as in any one of claims 1 to 2 wherein said support means is adapted to be attached to a pole.

4. A golf swing training device as in any one of the above claims wherein said support means includes an interface means to which is rotatably attached said headgear means.

5. A golf swing training device as in claim 4 wherein said interface means includes a base and a cover, said base including a cavity within which is slidably movable a disk, said disk adapted to be rotatably attached to said headgear.

6. A golf swing training device as in claim 5 wherein said base further includes a plurality of sliding members positioned in slots and adapted to be acted upon by said disk.

7. A golf swing training device substantially as hereinbefore described and with reference to the accompanying drawings.

Dated this 28th day of July 1999

THOMAS DAVID THOMAS and
MARY MAUREEN THOMAS
By their Patent Attorneys,
COLLISON & CO.

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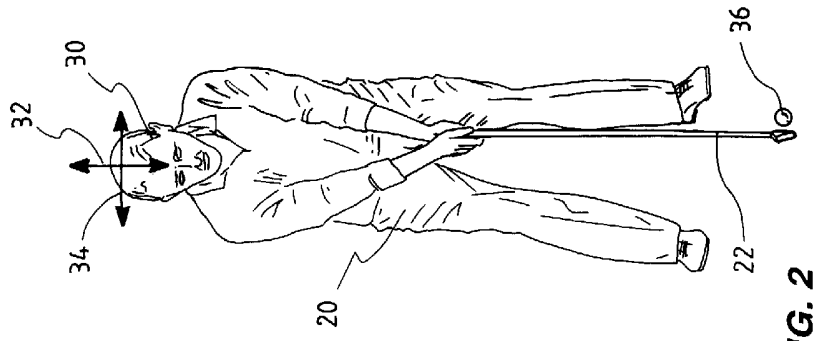

FIG. 2

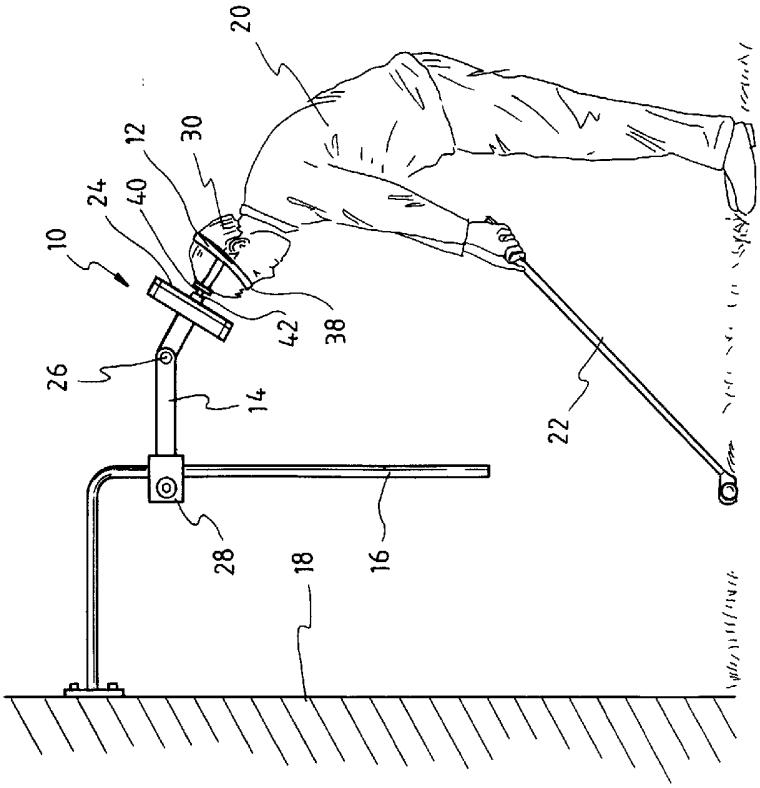

FIG. 1

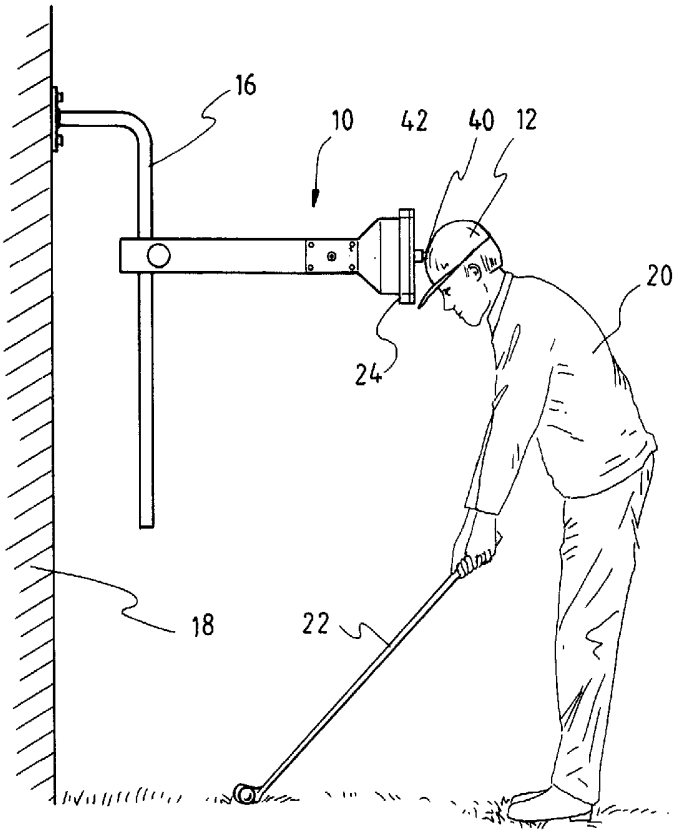

FIG. 3

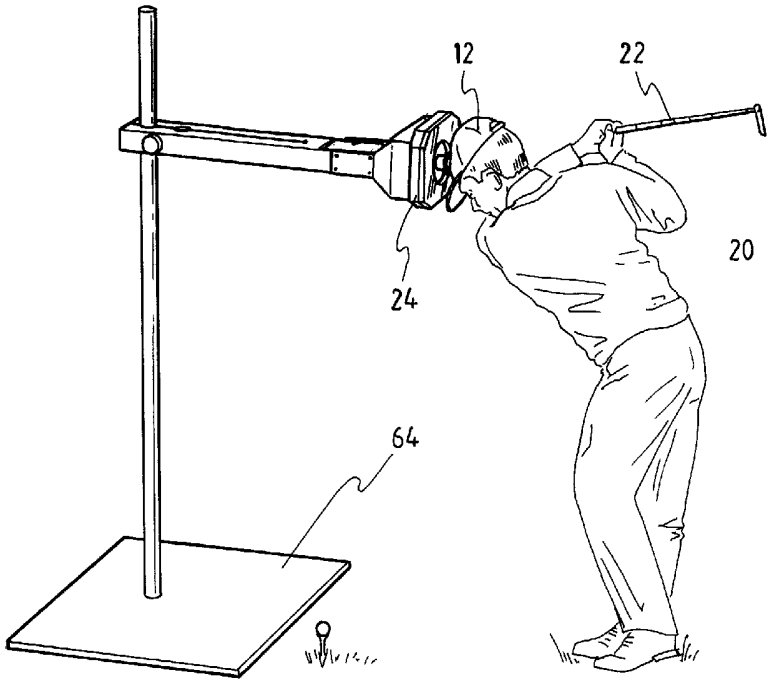

FIG. 4

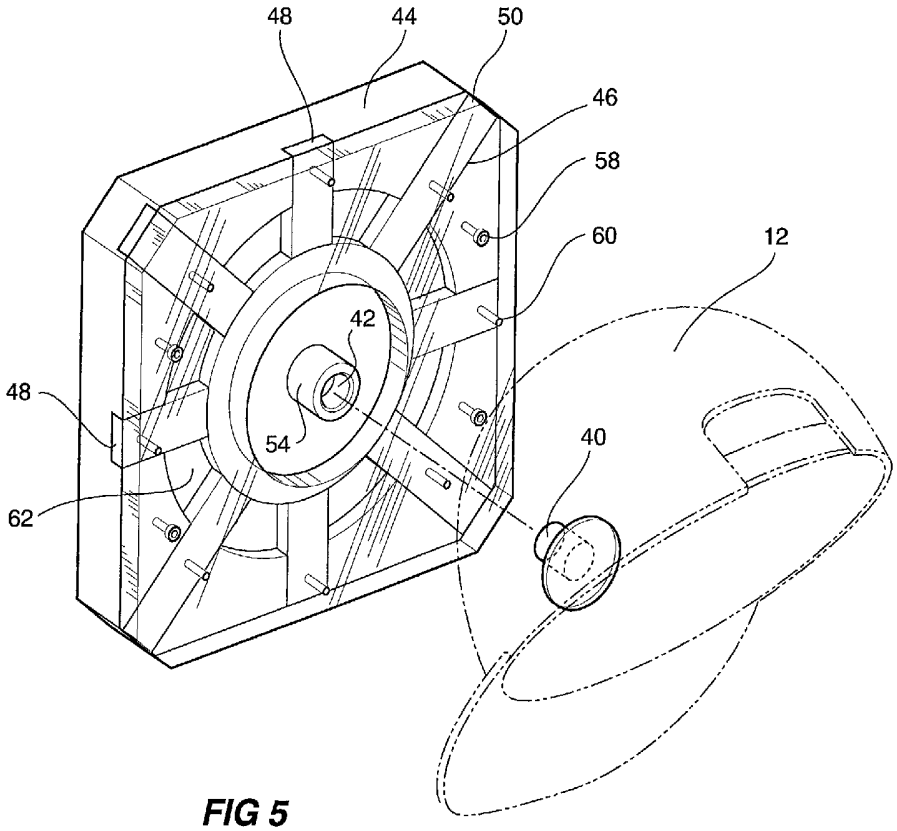

FIG 5

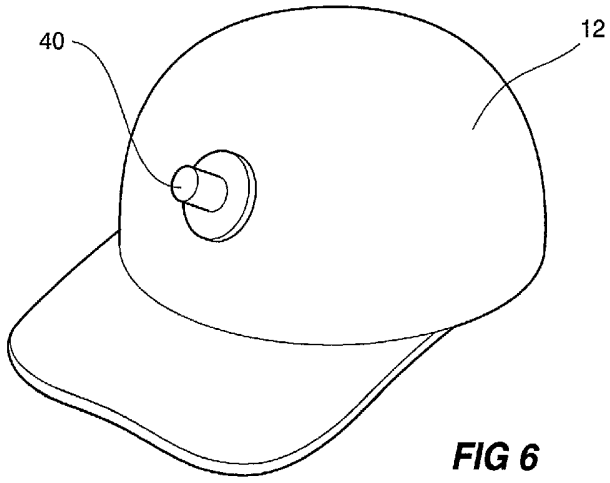

FIG 6

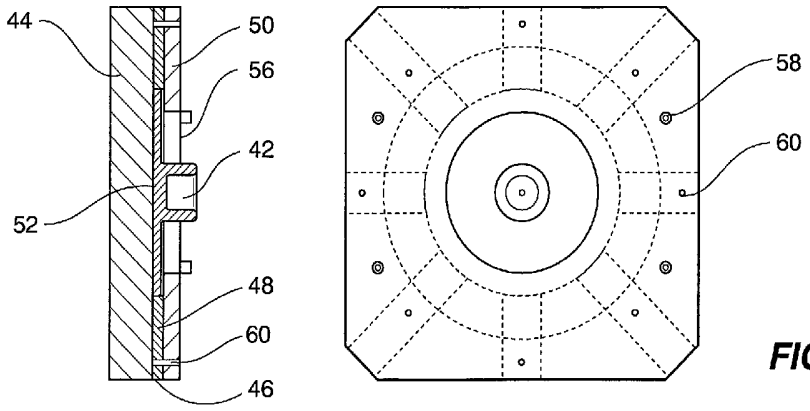

FIG 7

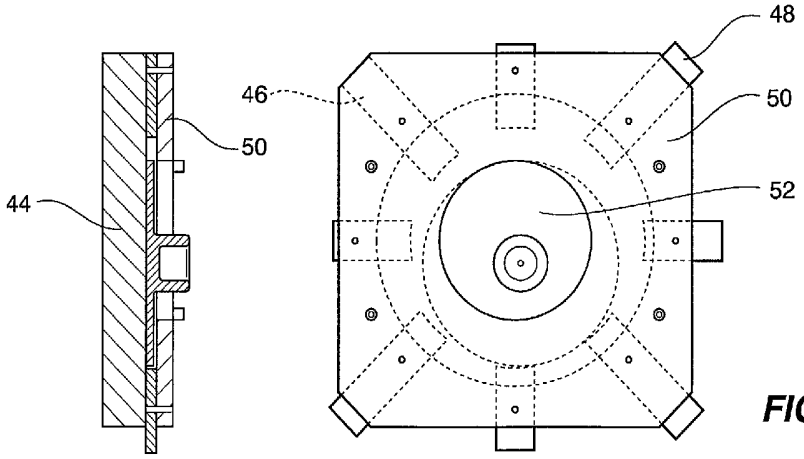

FIG 8

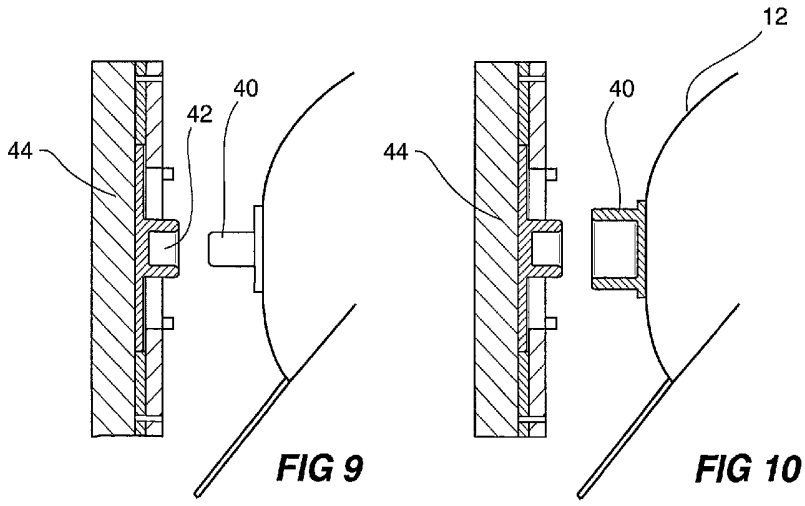

FIG 9

FIG 10