Sept. 7, 1965 F. VELASQUEZ 3,204,958

YIELDABLE BASEBALL BASE

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Fig. 1

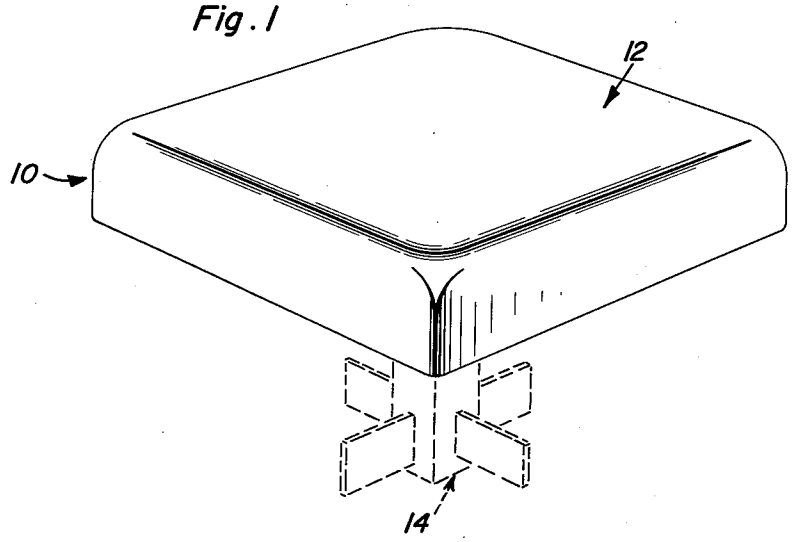



Fig. 6

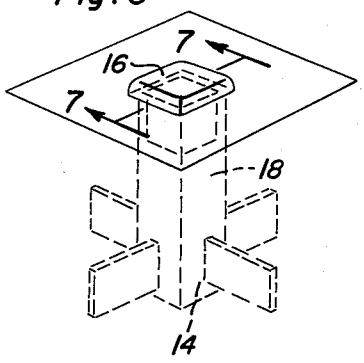
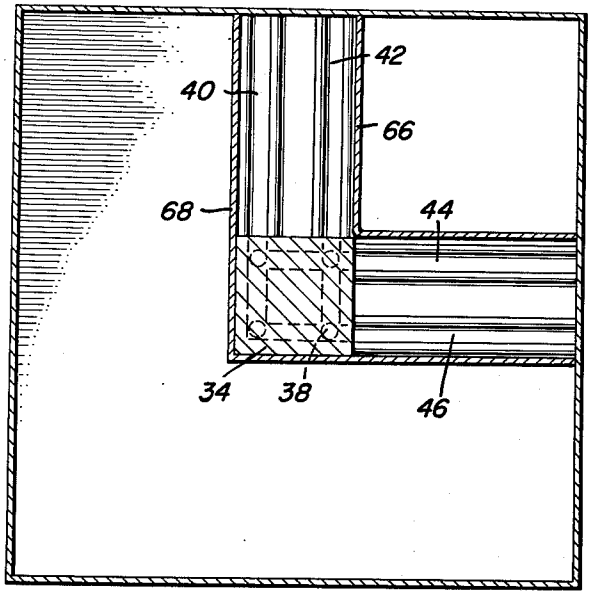



Fig. 5




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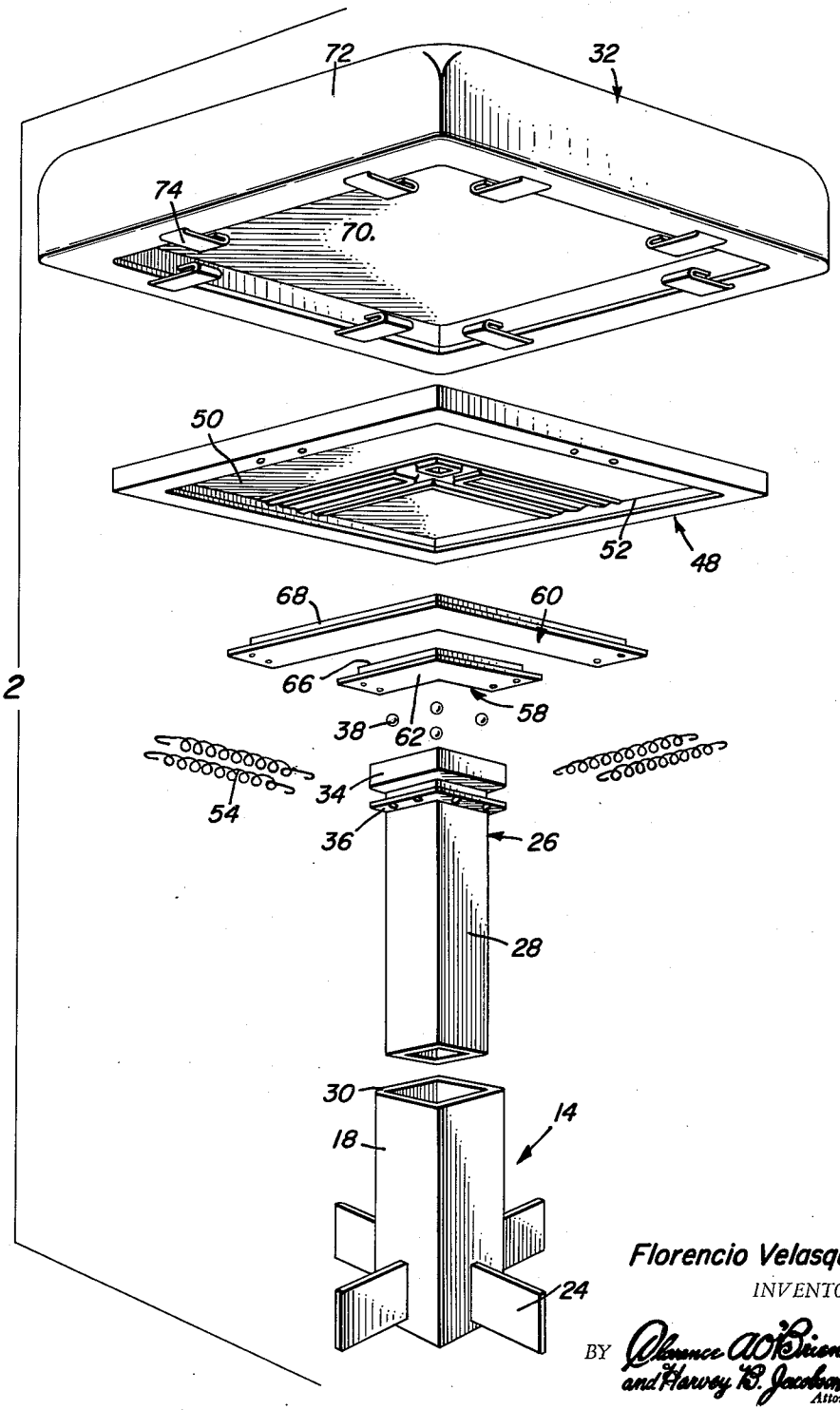
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Fig.2




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Fig. 3

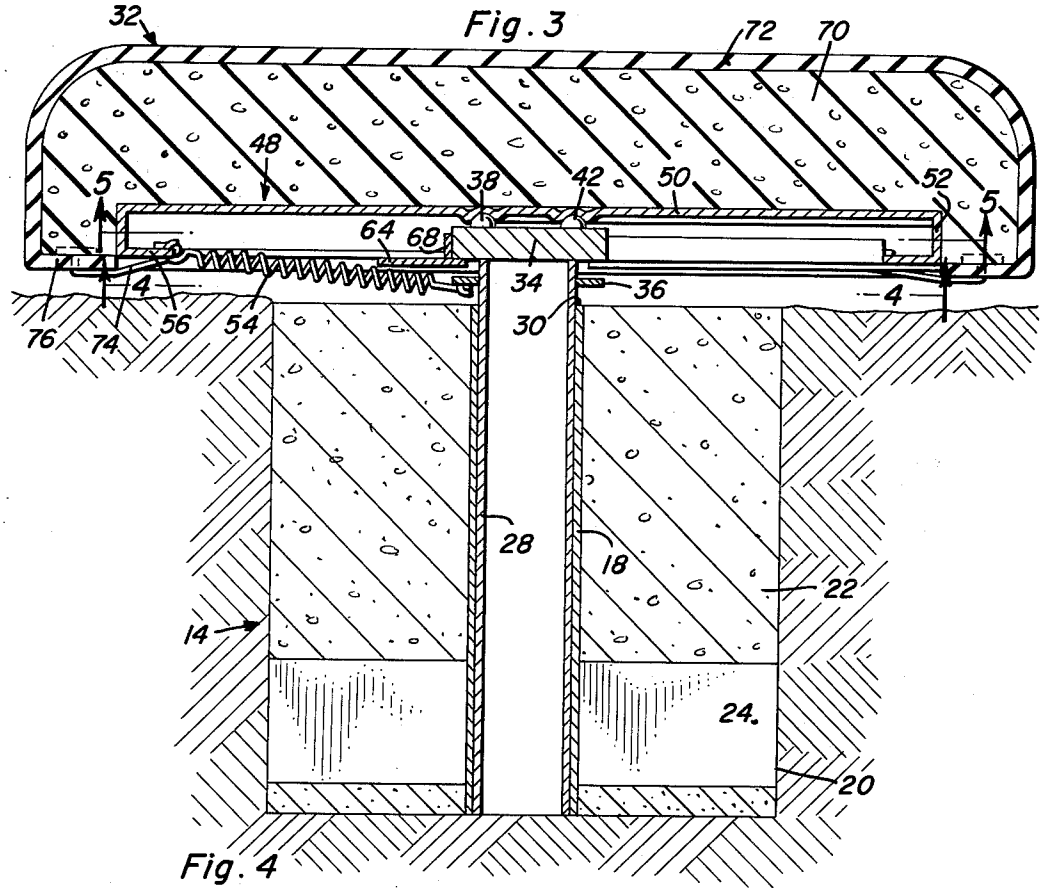



Fig. 4

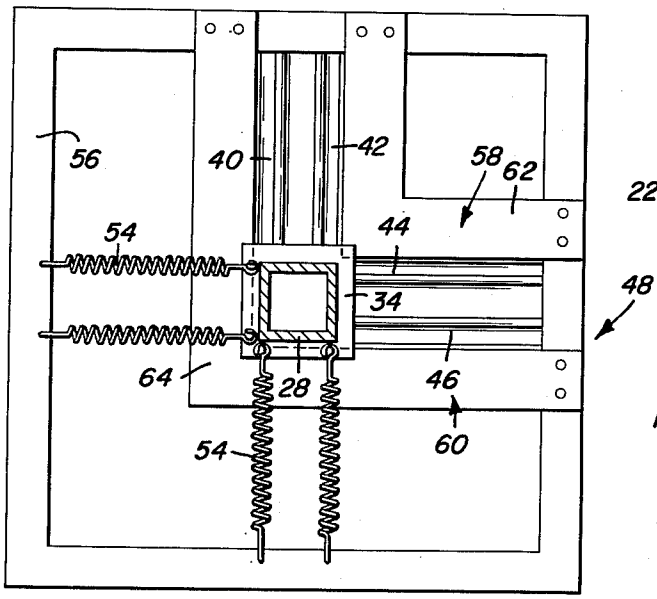
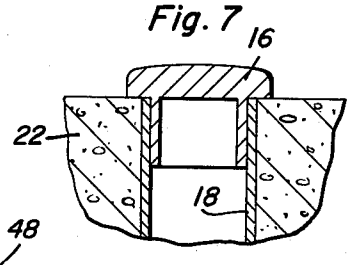



Fig. 7




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United States Patent Office

3,204,958

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3,204,958

# YIELDABLE BASEBALL BASE

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Filed June 17, 1963, Ser. No. 288,322
11 Claims. (Cl. 273—25)

This invention relates to the removable mounting and yieldable anchoring of a baseball base at the three field positions.

It is a primary object of the present invention to provide a construction for the field bases utilized in playing the game of baseball or the like whereby injury to the players when "sliding into the base," may be avoided. It will be appreciated that canvas covered bases or base sacks presently utilized, are firmly anchored in position and may often cause ankle and leg injuries due to impact between the runner and the base. Accordingly, in accordance with the principles of the present invention, a new and useful base construction is provided which will be displaceable in two directions under impact.

Another important object of the present invention is to provide a baseball base construction that will endure a greater amount of wear and punishment than base constructions heretofore utilized inasmuch as the base construction of the present invention is yieldable only in those directions in which impact is applied by the player.

An addition object of the present invention is to provide baseball base constructions, the parts of which may be readily assembled and replaced at a minimum cost.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

FIGURE 1 is a perspective view of the baseball base construction shown installed in the ground.

FIGURE 2 is a perspective view of the disassembled parts of the baseball base construction.

FIGURE 3 is a side sectional view of the assembled base construction in its installation.

FIGURE 4 is a sectional view taken substantially through a plane indicated by section line 4—4 in FIGURE 3.

FIGURE 5 is a sectional view taken substantially through a plane indicated by section line 5—5 in FIGURE 3.

FIGURE 6 is a perspective view of the installed anchor assembly of the base construction with the pad and support assemblies removed.

FIGURE 7 is a partial sectional view taken substantially through a plane indicated by section line 7—7 in FIGURE 6.

Referring now to the drawings in detail, it will be observed from FIGURE 1, that the base construction generally referred to by reference numeral **10**, involves the exposure only of the pad assembly **12** above the ground, with the anchor assembly **14** embedded within the ground. The pad assembly and the parts attached thereto may therefore be removed from the anchor assembly when not in use in which case, a plug member **16** will be inserted into the open upper end of a vertically elongated socket member **18** which is part of the anchor assembly **14** as more clearly seen in FIGURE 6 and 7.

Referring now to FIGURES 2 and 3 in particular, it will be observed that the anchor assembly **14** is disposed within an opening **20** formed in the ground and is also embedded within concrete or cement **22** which fills the opening **20**. The vertically elongated socket **18** is a tubular member and non-circular in cross section. In the exemplary embodiment illustrated, the elongated socket



member **18** is square in cross section and has connected thereto adjacent the lower end, projections **24**. It will therefore be apparent, that the projections **24** will resist any angular displacing forces applied to the socket member **18**. It is for this reason that the socket member **18** is non-circular in cross section and slidably receives therewithin a removable support assembly **26**.

The support assembly **26** is provided with a vertically elongated stem **28** which is tubular in shape and also non-circular in cross section for slidable and non-rotative reception within the socket member **18** of the anchor assembly. While the upper edge **30** of the socket member **18** is disposed flush with the upper surface of the ground, the stem **28** projects thereabove so as to support the pad assembly **32** in spaced adjacency above the surface of the ground. Toward this end, a bearing plate **34** is secured as by welding to the upper end of the stem **28**. Also secured to the stem **28** in close spaced adjacency below the bearing plate, is a spring anchor flange **36** which extends from the sides of the stem. Mounted within hemispherical recesses formed on the top surface of the bearing plate **34**, are four ball bearing elements **38**. As more clearly seen in FIGURE 5, the ball bearing elements are disposed on the bearing plate adjacent the four corners thereof so that these bearing elements will be received within the parallel slide bearing grooves **40** and **42** and also within the parallel slide bearing grooves **44** and **46** which intersect the grooves **40** and **42**.

The slide bearing grooves cooperate with the bearing elements **38**, to form an anti-friction slide bearing between the support assembly **26** and a rigid pad mounting assembly generally referred to by reference numeral **48**. The rigid mounting assembly **48** is pan shaped and includes an enlarged plate portion **50** the lower portion of which is formed with the aforementioned slide bearing grooves that extend from two of the downwardly depending side portions **52** of the mounting assembly. Accordingly, the mounting assembly will be slidably movable relative to the bearing plate **34** in two perpendicular directions defined by the intersecting parallel grooves. The mounting assembly is however biased to a central limit position at which the bearing elements **38** are disposed at the intersection of the grooves as shown in FIGURE 5. Accordingly, two pairs of springs **54** are secured to the spring anchor flange **36** and extend from two sides of the stem **28** in directions parallel to the slide grooves so as to bias the mounting assembly **48** toward the central limit position aforementioned. The springs **54** are therefore also anchored to the mounting assembly **48** by means of an anchoring flange **56** connected to the sides **52** and extending inwardly therefrom.

Also secured to the anchoring flange **56** between those sides of the mounting assembly opposite the sides to which the springs **54** are connected, is a guide track assembly formed by an inner track member **58** and an outer track member **60**. The inner track member is formed by a relatively flat right angle portion **62** the legs of which are secured to the anchoring flange **56** so as to present a right angle guide edge disposed in parallel spaced adjacency to the guide grooves **42** and **44** and in overlapping relation to the bearing plate **34** as more clearly seen in FIGURES 3 and 4. The track member **60** is also provided with a relatively flat and horizontally disposed right angle portion **64** disposed in parallel spaced adjacency to the slide bearing grooves **40** and **46**. The portion **64** of the track member **60** also overlaps the sides of the bearing plate **34**. Accordingly, the stem **28** will be guided between the portions **62** and **64** of the track members during relative movement in either perpendicular direction. The track members are also provided with vertically upstanding portions **66** and **68** in sliding contact with the sides of the bearing plate **34** during rela-

tive movement between the mounting assembly **48** and the support assembly. Thus, the track members **58** and **60** will effectively resist angular displacement between the pad mounting assembly **48** and the supporting assembly so as to confine relative movement to sliding movement in the two perpendicular directions aforementioned.

The pad assembly **32** is mounted on and encloses therebelow, the rigid pad mounting assembly **48**. The pad assembly is therefore formed by a relatively thick resilient portion **70** seated on the top of the mounting assembly **48** and enclosed within an outer covering **72**. The resilient portion **70** may therefore be made of material such as foam rubber while the outer covering may be made of a hard rubber type of material. The outer covering is therefore secured to the anchoring flange portion **56** of the mounting assembly by means of a plurality of clips **74** that are secured to the overlapping under portion **76** of the outer covering and folded under the flange **56**.

From the foregoing description, the construction and utility of the present invention will be apparent. It will therefore be appreciated, that the pad assembly **32** of the base construction will be displaceable in two perpendicular directions from a central position to which it is biased by the springs **54**. Accordingly, a runner approaching the base from either of two directions will cause displacement thereof upon impact against the bias of the springs **54** after which the pad assembly returns to its original position. The two directions in which the pad assembly is displaceable will of course be dependent upon the angular orientation of the supporting assembly **26** when inserted within the anchor assembly **14**. The base constructions may thereby be arranged for displacement in accordance with the field position associated therewith. For example, with respect to first base position on a baseball playing field, the pad assembly will be displaceable away from home plate and away from second base so that a runner may slide into first base when either approaching it from home plate or returning to it after heading toward second base. Appropriate orientation of the base construction in the anchor assembly will be made when the base construction is utilized for second base and third base positions. It will therefore be appreciated, that the base constructions of the present invention will significantly reduce any likelihood of injury to a player's leg and will also be able to better withstand the effects of impact since it is yieldably displaceable in those directions in which impact is applied.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed:

What is claimed as new is as follows:

**1.** A directional impact absorbing base mounted in the ground comprising, an anchor assembly permanently embedded in the ground, a bearing support assembly removably received by the anchor assembly and projecting upwardly therefrom, a resilient pad, rigid mounting means enclosed by the pad and secured thereto above the ground, slide bearing means movably mounting said rigid mounting means on the bearing support assembly for constrained movement along two directions in a horizontal plane from a limit position, and biasing means operatively interconnecting said bearing support assembly with said rigid mounting means for biasing said mounting means to said limit position resisting displacement of the pad along said two directions by impact forces applied to said pad.

**2.** A directional impact absorbing base mounted in the ground comprising, an anchor assembly permanently embedded in the ground having a socket, a bearing support assembly removably received by the socket and projecting upwardly therefrom, a resilient pad having at least two angularly related sides, rigid mounting means enclosed by the pad and secured thereto, slide bearing means movably mounting said rigid mounting means on the bearing support assembly closely spaced above the ground for movement in two directions respectively perpendicular to said two sides of the pad, biasing means operatively interconnecting said bearing support assembly with said rigid mounting means for biasing said mounting means in said two directions to resist displacement of the pad from one position by impact forces applied to said two sides thereof, and guide track means mounted on the rigid mounting means for resisting angular displacement thereof relative to the bearing support assembly during movement in said two directions.

**3.** The combination of claim **2** wherein said slide bearing means comprises, parallel slide grooves mounted in the rigid mounting means and extending from each of said two sides of the pad into intersecting relation with each other, and bearing elements mounted on said support assembly received within said slide grooves for anti-friction movement of the rigid mounting means relative to the support assembly, said biasing means being operative to hold the bearing elements at the intersections of said slide grooves.

**4.** The combination of claim **3** wherein said bearing support assembly comprises, an elongated stem having a non-circular cross section slidably received within said socket, a bearing plate secured to an upper end of said stem and mounting said bearing elements thereon, said biasing means being secured to the stem in spaced adjacency below the bearing plate.

**5.** The combination of claim **4** wherein said rigid mounting means comprises, a pan-shaped member having downwardly depending sides embraced by the pad, said slide bearing means being mounted on the member and extending between two sides thereof, and inwardly projecting flanges connected to the sides of the member for connecting the biasing means and the guide track means thereto.

**6.** A directional impact absorbing base mounted in the ground comprising, an anchor assembly permanently embedded in the ground having a socket, a bearing support assembly removably received by the socket and projecting upwardly therefrom, a resilient pad having at least two angularly related sides, rigid mounting means enclosed by the pad and secured thereto, slide bearing means movably mounting said rigid mounting means on the bearing support assembly closely spaced above the ground for movement in two directions respectively perpendicular to said two sides of the pad, biasing means operatively interconnecting said bearing support assembly with said rigid mounting means for biasing said mounting means in said two directions to resist displacement of the pad from one position by impact forces applied to said two sides thereof, said slide bearing means comprising, parallel slide grooves mounted in the rigid mounting means and extending from each of said two sides of the pad into intersecting relation with each other, and bearing elements mounted on said support assembly received within said slide grooves for anti-friction movement of the rigid mounting means relative to the support assembly, said biasing means being operative to hold the bearing elements at the intersections of said slide grooves.

**7.** The combination of claim **6** wherein said bearing support assembly comprises, an elongated stem having a non-circular cross section slidably received within said socket, a bearing plate secured to an upper end of said stem and mounting said bearing elements thereon, said biasing means being secured to the stem in spaced adjacency below the bearing plate.

**8.** A directional impact absorbing base mounted in the ground comprising, an anchor assembly permanently embedded in the ground having a socket, a bearing support

assembly removably received by the socket and projecting upwardly therefrom, a resilient pad having at least two angularly related sides, rigid mounting means enclosed by the pad and secured thereto, slide bearing means movably mounting said rigid mounting means on the bearing support assembly closely spaced above the ground for movement in two directions respectively perpendicular to said two sides of the pad, biasing means operatively interconnecting said bearing support assembly with said rigid mounting means for biasing said mounting means in said two directions to resist displacement of the pad from one postion by impact forces applied to said two sides thereof, and guide track means mounted on the rigid mounting means for resisting angular displacement thereof relative to the bearing support assembly during movement in said two directions, said rigid mounting means comprising, a pan-shaped member having downwardly depending sides embraced by the pad, said slide bearing means being mounted on the member and extending between two sides thereof, and inwardly projecting flanges connected to the sides of the member for connecting the biasing means and the guide track means thereto.

**9.** The combination of claim **8** wherein said bearing support assembly comprises, an elongated stem having a non-circular cross section slidably received within said socket, a bearing plate secured to an upper end of said stem, said biasing means being secured to the stem in spaced adjacency below the bearing plate.

**10.** A directional impact absorbing base mounted in the ground comprising, an anchor assembly permanently embedded in the ground, a resilient pad, means non-



rotatively mounted in the anchor assembly for supporting the pad above the ground, means for guiding movement of the pad from one limit position along two fixed intersecting directions relative to the supporting means, and separate means for biasing said pad to said one limit position on the supportng means.

**11.** A directional impact absorbing base mounted on the ground comprising ground anchor means, rigid mounting means disposed above the ground, support means non-rotatively connecting the rigid mounting means to the ground anchor means, biasing means operatively interconnecting said support means with the rigid mounting means for yieldably resisting displacement of the rigid mounting means from a limit position in two intersecting directions relative to the support means, a resilient pad enclosing said rigid mounting means, and guide means mounted by the rigid mounting means and engageable with said support means for constraining displacement of said rigid mounting to said two intersecting directions in response to impact applied to the pad from any direction.

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