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(54) **INCLINATION MEASUREMENT APPARATUS**

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(57) **ABSTRACT**

Inclination measurement apparatus for measuring the inclination of a surface to the horizontal. The apparatus includes (a) a base plate for mounting the apparatus on the surface; (b) a ball bearing with i) a housing washer rigidly mounted on the base plate, and having a flat upper bearing surface, ii) a ball and cage thrust assembly set on the upper bearing surface, and iii) a shaft washer having a flat lower bearing surface set on the ball and cage thrust assembly, and being rotatable thereon between a first pair of diametrically opposite orientations defining a first measurement axis on the horizontal to the local gravity vector prevailing at the location of the apparatus; and (c) a first clinometer mounted on the shaft washer for obtaining an inclination measurement in each of the first pair of diametrically opposite orientations whereby the true inclination of the surface to the horizontal along the first measurement axis is determinable from the difference between the pair of measurement inclinations.

10 Claims, 2 Drawing Sheets

