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(54) **Device for locking the foot ring to the vertical tube, in particular in seats for office, laboratory or community use**

Vorrichtung zur Verriegelung des Fußrings am vertikalen Rohr, insbesondere an Sitzen zur Verwendung im Büro, Labor oder der Öffentlichkeit

Dispositif pour verrouiller le repose-pied sur le tube vertical, en particulier sur des sièges de bureau, de laboratoire ou à usage public

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Description

[0001] The present invention relates to a seat with a device for locking the foot ring to the vertical tube, in particular for office, laboratory or community use.

[0002] Seats are known, particularly chairs or stools, provided with a foot ring which is adjustable in height along the tube of the gas pump or the vertical support tube, to enable a person to sit comfortably for a long period.

[0003] The foot ring generally consists of a plurality of spokes rigid with a central sleeve which is fixed to the support tube or gas pump tube.

[0004] In a first type of connection, the sleeve is fixed by a screw with a knob, the end of which thrusts against the vertical support tube or the gas pump tube.

[0005] The drawback of this system is a discontinuous adjustment.

[0006] The solution of directly fixing the end of the screw onto the lateral surface of the tube presents the drawback of possible squashing of the sheet metal leading to possible loss of the gas seal.

[0007] Another locking device uses a frusto-conical sleeve which when the foot ring is loaded grips the entire tube.

[0008] A drawback of this device is that the sleeve loses its seal with time and a lengthy and laborious operation is required to adjust the position the foot ring relative to the tube.

[0009] In a third type of connection, the sleeve is fixed by a knob-attached screw, the end of which engages in one of a plurality of superposed holes provided in the gas pump tube.

[0010] A drawback of this system is that this device cannot be used in gas pump tubes.

[0011] The object of the invention is to eliminate these drawbacks by providing a device for connecting the foot ring to the gas pump tube or vertical tube which can be operated easily and comfortably.

[0012] This object is attained according to the invention as described in claim 1.

[0013] A preferred embodiment of the present invention is described hereinafter with reference of the accompanying drawings, in which:

Figure 1 shows a foot ring provided with the device according to the invention,

Figure 2 shows it in the configuration of non-engagement with the column tube,

Figure 3 shows it in cross-section in the configuration illustrated in Figure 1, and

Figure 4 shows it in cross-section in the configuration illustrated in Figure 2.

[0014] As can be seen from the figures, the device according to the invention is applied to a foot ring 2 provided with four spokes 4 connected to a central sleeve 6 through which the gas pump tube 8 or the vertical support

tube for the seat is inserted.

[0015] In particular, one of the spokes 4 is provided with a housing 10 which houses a nylon slide 12, the flanges 14 of which are provided with slotted holes 16 through which a pin 18 is inserted, the ends of which are fixed to the sides of the housing, and on which there is also hinged a lever arm 20 in a hole 22 eccentric to the head 24 of the lever arm.

[0016] In particular, that surface of the slide 12 facing the tube 8 is provided with a housing 26 housing a pad 28 of antifriction material.

[0017] The device according to the invention operates in the following manner.

[0018] The user rotates the lever arm 20 into the configuration illustrated in Figures 2 and 4 such as to bring the slide 12 into the position most distant from the tube 18, by virtue of the eccentric configuration of the head 24.

[0019] The sleeve 6 is then made to slide along the tube 8 until the desired position is found. The lever arm 20 is then rotated (Figures 1 and 3) to cause the slide 12 to travel towards the tube 8 with consequent pressing of the pad 28 against the tube to lock it securely against the inner lateral surface of the sleeve 6.

[0020] From the foregoing it is apparent that the device according to the invention enables the foot ring to be easily and comfortably adjusted relative to the support tube.

Claims

1. A seat comprising a foot ring (2) and a vertical central tube (8), **characterised by** a device for locking said foot ring (2) to said vertical central tube (8), said device consisting of a lever arm (20) housed in a housing (10) provided in one of the spokes (4) which connect the ring to a central sleeve (6), said arm having its hinged end eccentrically engaged by a pin (18) fixed at its ends to the walls of the housing, said pin (18) also being pivoted in horizontal slotted holes (16), a slide (12) supporting a pad (28) of antifriction material which, for a certain position of the lever arm, presses the vertical central tube (8) housed in said sleeve (6) against the inner lateral wall thereof.

2. A seat as claimed in claim 1, **characterised in that** the lever arm (20) is movable between a position housed in the housing (10) in which the pad (28) acts on the tube (8), and a position perpendicular thereto in which the pad does not interfere with the tube.

Patentansprüche

1. Sitz, umfassend einen Fußring (2) und ein vertikales zentrales Rohr (8), **gekennzeichnet durch** eine Vorrichtung zum Verriegeln des Fußrings (2) an dem vertikalen zentralen Rohr (8), wobei die Vorrichtung

aus einem Hebelarm (20) besteht, der in einem Gehäuse (10) aufgenommen ist, das in einer der Speichen (4) angeordnet ist, die den Ring mit einer zentralen Buchse (6) verbinden, wobei das angelenkte Ende des Arms mittels eines Stifts (18) exzentrisch eingerastet ist, der an seinen Enden an den Wänden des Gehäuses befestigt ist, wobei der Stift (18) auch in horizontalen Langlöchern (16) schwenkbar ist, wobei ein Gleiter (12) ein Kissen (28) aus Antifrikionsmaterial trägt, das, bei einer bestimmten Position des Hebelarms, das vertikale zentrale Rohr (8), das in der Buchse (6) aufgenommen ist, gegen die innere Seitenwand davon presst.

2. Sitz nach Anspruch 1, **dadurch gekennzeichnet, dass** der Hebelarm (20) zwischen einer Position, in der er in dem Gehäuse (10) aufgenommen ist, in welcher das Kissen (28) auf das Rohr (8) einwirkt, und einer Position senkrecht dazu, in der das Kissen nicht auf das Rohr einwirkt, bewegbar ist.

Revendications

1. Siège comprenant un repose-pied (2) et un tube central vertical (8), **caractérisé par** un dispositif permettant de verrouiller ledit repose-pied (2) sur ledit tube central vertical (8), ledit dispositif consistant en un bras de levier (20) logeant dans un logement (10) prévu dans l'un des rayons (4) reliant le repose-pied à un manchon central (6), ledit bras présentant une extrémité articulée pénétrée de manière excentrique par une goupille (18) fixée à ses extrémités aux parois du logement, ladite goupille (18) pouvant également pivoter dans des trous oblongs horizontaux (16), un coulisseau (12) supportant une plaquette (28) de matériau antifriction qui, dans une certaine position du bras de levier, pousse le tube central vertical (8) logeant dans ledit manchon (6) contre la paroi latérale intérieure de celui-ci.
2. Siège selon la revendication 1, **caractérisé en ce que** le bras de levier (20) est mobile entre une position logeant dans le logement (10) dans laquelle la plaquette (28) agit sur le tube (8), et une position perpendiculaire à cette dernière, dans laquelle la plaquette n'interfère pas avec le tube.

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