

DESCRIPTION

LAMP HINGE

The invention pertains to a lamp hinge according to the introductory clause of Claim 1.

In a lamp hinge of this type known from DE 86-19, 907 U1, the angle by which the lamp pole and the head of the lamp can pivot around an axis transverse to the direction in which the light is emitted by the head of the lamp is restricted by stops to less than 360 °. This is disadvantageous in certain applications in which a pivot range of 360 ° or more is desired.

According to the invention, therefore, a lamp hinge which allows a pivot range between the lamp pole and the lamp head of at least 360 ° and preferably of more than 360 ° is to be created.

According to the invention, this goal is achieved by the features of Claim 1.

As a result of the co-rotating or co-traveling stop disk between the lamp pole and the lamp head, the stop permanently attached to the lamp head no longer comes to rest directly against the stop screw permanently attached to the pole so as to limit the pivot range; instead, the distance between the two lobes on the stop disk - minus the angular width of the stop itself - results in an additional pivot range, which is added to the pivot range produced by the position of the stop screw permanently attached to the pole and the stop tab on the stop disk. Simply by selecting a suitable angular distance between the two lobes on the stop disk, it

is therefore possible to expand the pivot range of the pivot hinge very easily to nearly any desired angular distances, including those greater than 360 °.

The subclaims are directed toward advantageous embodiments of the invention. Thus, according to Claim 2, it is possible within the scope of the preferred embodiment for the stop screw to be attached nonrotatably to the lamp pole, whereas the stop is free to pivot with the lamp head. Conversely, however, it is also possible in principle in accordance with Claim 3 to fix the position of the lamp head by means of a stop screw and to attach the rotatable stop to the lamp pole, provided that this pole is suitably designed to accept it.

According to Claim 4, it is advisable to adjust the friction between the pivoting parts and the stop disk by the selection of suitable shims.

A preferred exemplary embodiment of the invention is explained in greater detail on the basis of the figures:

- Figure 1 shows a partial view of the lamp hinge with the lamp head, the lamp pole being cut away in the radial direction;
- Figure 2 shows a cross section along line II-II of Figure 1; and
- Figure 3 shows a view corresponding to that of Figure 1, except that, in Figure 1, all the parts are shown pivoted into one extreme position, whereas all the parts in Figure 3 are shown pivoted into the other extreme position.

In the figures, the end of a tubular lamp pole 10 can be seen, into which a section of tubing 12 is inserted, where it is held in place by a stop screw 14. Lamp head 16, only the beginning part of which can be seen, is supported with freedom to rotate on tubing section 12. Between the end of lamp pole 10 and lamp head 16, a ring-shaped stop disk 20 is supported with freedom to rotate on tubing section 12; friction-producing shims 18 are inserted between these various

components. Stop disk 20 carries two radially projecting lobes 22, 24, which, in the illustrated embodiment, are at an angle of approximately 140° to each other. Approximately midway between the two lobes 22, 24 an axially projecting stop tab 26 is bent down from the disk at a right angle; after lamp head 16 has completed its pivoting movement, covering approximately 325° , stop screw 14 can come to rest in the circumferential direction against either side of this tab. In Figure 1, stop screw 14 is shown resting against one circumferential side of stop tab 26, whereas in the cross section of Figure 2 it is shown rotated 180° in comparison with Figure 1. This serves merely to clarify the presentation and plays no role with respect to the nature of the invention, because, in principle, it is also possible for lamp pole 10 to pivot and lamp head 16 to be fixed in contrast to the opposite case in which lamp head 16 pivots and a lamp pole 10 is fixed. What is essential is the maximum angular range around which the parts can pivot, which can also be derived from the diagram of Figure 3, as will be explained further below.

A stop 28, which projects from the end surface of the lamp head toward lamp pole 10, is permanently attached to lamp head 16; traveling in the circumferential direction, lobe 22 can come to rest against one side of this stop, as shown in Figure 3, and lobe 24 can come to rest against the other side of the stop, as shown in Figure 1. The stopping action of lobes 22, 24 acting in cooperation with stop 28 defines a pivot range β of about 100° for stop disk 20. At the same time, stop screw 14 can be adjusted around an angle α of about 300° between the stop position on one side of stop tab 26, shown in solid line in Figure 3, and the stop position on the other side of stop tab 26, shown in broken line in Figure 3. Together, therefore, a pivot range of $\alpha + \beta$ is obtained, which, in the illustrated

embodiment, equals about 380°. By reducing or enlarging the angular distance between lobes 22 and 24 on stop disk 20, the total pivot range can be decreased or increased within wide limits as a function of the needs of the concrete application.

It is self-evident to the expert that, instead of stop screw 14 in the lamp hinge according to the invention as illustrated in the drawing and mentioned in the claims, it is also possible to select any other type and form of stop if it appears advantageous for the purpose of the application. This also applies to the type and form of the other stop devices, namely, of lobes 22 and 24, stop tab 26, and stop 28.

CLAIM(S)

1. Lamp hinge for connecting a lamp pole to a lamp head so that they can pivot with respect to each other, where a stop screw permanently attached to one of the cited pivoting parts and a stop permanently attached to the other pivoting part limit the pivot angle between the lamp pole and the lamp head, characterized in that a stop disk (20), which rotates with the pivoting motion of the parts (10, 16), is inserted between the stop screw (14) and the stop (28), this disk being provided with two radially projecting lobes (22, 24), which are separated from each other by a certain angle, and each of which comes to rest against one side of the stop (28), and in that, approximately midway between the lobes (22, 24), the disk has a stop tab (26), against either side of which the stop screw (14) can come to rest, depending on the position into which the parts (10, 16) have been pivoted.
2. Lamp hinge according to Claim 1, characterized in that the stop screw (14) is permanently attached, without freedom to rotate, to the lamp pole (10), and in that the stop (28) is permanently attached to the pivoting lamp head (16).
3. Lamp hinge according to Claim 1, characterized in that the stop screw (14) is permanently attached, without freedom to rotate, to the pivoting lamp head (16), and in that the stop (28) is permanently attached to the lamp pole (10).
4. Lamp hinge according to one of the preceding claims, characterized in that a friction-adjusting shim (18) is inserted between the lamp pole (10) and the stop disk (20) and/or between the stop disk (20) and the lamp head (16).



ABSTRACT

LAMP HINGE

Lamp hinge for connecting a lamp pole (10) to a lamp head (16) so that they can pivot with respect to each other. A stop screw (14), permanently attached to one of the parts (10, 16) which pivot with respect to each other and a stop (28), permanently attached to the other pivoting part, limit the pivot angle between the lamp pole (10) and the lamp head (16). A stop disk (20), which rotates along with the pivoting motion of the parts (10, 16), is inserted between the stop screw (14) and the stop (28), this disk being provided with two radially projecting lobes (22, 24), a certain angular distance apart, each of which can come to rest against one of the two sides of the stop (28), and also with a stop tab (26), approximately midway between the lobes (22, 24), against either side of which the stop screw (14) can come to rest, depending on the position into which the parts (10, 16) have been pivoted. As a result, the lamp pole (10) and the lamp head (16) can pivot with respect to each other over a range of at least 360° and preferably of more than 360°.

Figure to accompany abstract : Figure 3

DRAWINGS

Fig. 1

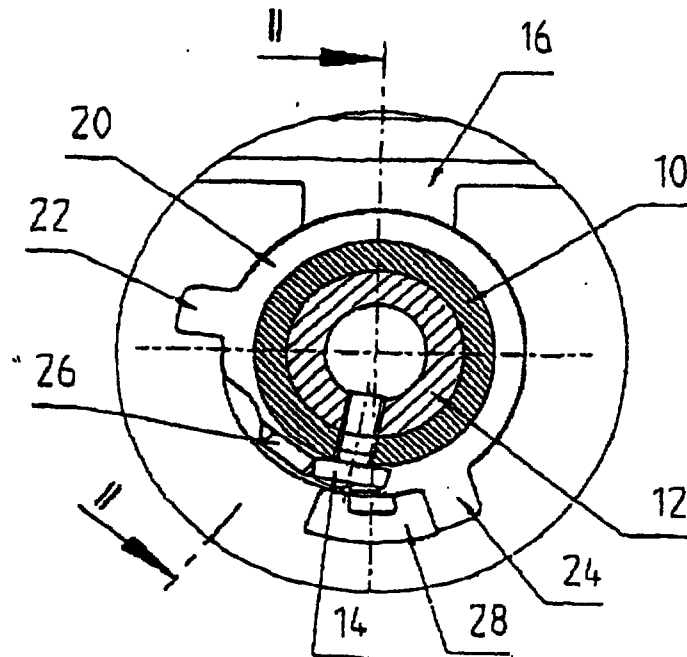
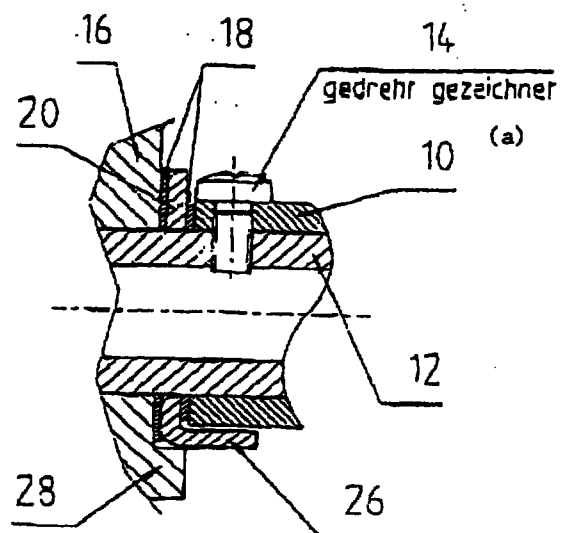


Fig. 2



KEY: (a) shown rotated.

Fig. 3

