(19) Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) EP 0 791 718 A2

(12) EUROPEAN PATENT APPLICATION

(43) Date of publication:
27.08.1997 Bulletin 1997/35

(51) Int. Cl.[6]: **E06B 9/00**, E06B 9/44

(21) Application number: **96500143.1**

(22) Date of filing: **11.11.1996**

(84) Designated Contracting States:
AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE

(30) Priority: **21.02.1996 ES 9600417**

(71) Applicant: **FORJAS DEL VINALOPO, S.L.**
E-03630 Sax (Alicante) (ES)

(72) Inventor: **Guillen Chico, Francisco**
03630 Sax (Alicante) (ES)

(74) Representative: **Perez Bonal, Bernardo**
C/Explanada 8
28040 Madrid (ES)

(54) Telescopic socket for roller-blind shafts

(57) The socket consists of three parts, a graduated external tubular part, another graduated tubular part that slides inside the aforementioned part, passing through both ends and is held inside the latter by means of an intermediate spring, such that the anterior part is left free to facilitate assembly either of the socket or of the socket and of the bearing included alternately to the pin, at the outer end of the innermost part.

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Description

OBJECT OF THE INVENTION

The invention proposed herein consists of a telescopic socket for the shafts of roller-type blinds, although other applications, such as Venetian or roll-up blinds and other window accessories, are not discarded.

The socket consists of three parts, a graduated external tubular part, another part that is also graduated tubular part that slides inside the aforementioned part, passing through both ends and held inside the former by means of an intermediate spring, such that the anterior part is left free to facilitate assembly either of the socket or of the socket and of the bearing included alternately to the pin, at the outer end of the innermost part.

BACKGROUND TO THE INVENTION

Normally the shafts of roller blinds have to be cut to lengths shorter than the lengths of their respective brackets and, since the space occupied by the rolled-up blind is not usually calculated to the nearest millimetre, when the winding case is built, above all in the case of brickwork splays, it is almost essential to have the blind unrolled and dismantled to move or put its shaft in place.

As a result, blind fitters tend to leave the shafts short with regard to their housing to avoid having to use the trial and error method, and so insert it the first time, slightly sloping and forming an angle with the horizontal plane.

In the long run this causes the rolled blind to fall unexpectedly onto the base of its case whenever the shaft moves sideways, however slightly.

The telescopic systems used to extend the blind shaft make it easier to put the aforementioned shaft in place, snug at each end, and yet also make it easy to assemble and dismantle.

Other systems are equipped with two springs housed at the opposite ends of the arm of a symmetric, hollow arm, sealed at one of the ends and inserted at the other inside a similar cross and formed by four orthogonal, triangular cross-section flats, inscribed as blades inside a cylinder, the curved outer face of each triangle coinciding with a sector of the circle in which they are inscribed.

The above notwithstanding, it has been seen that the origin of the problem arises when the blind is first assembled, such that it is when the fitter forcibly inserts the bearing in its housing at the end of the inner part of the socket that the spring deviation problems arise. These problems sometimes make it necessary to completely dismantle the socket and, at any rate, they damage the bearings and/or housings, due to the excessive force that must be used to offset additionally the compression of the shaft in its housing.

DESCRIPTION OF THE INVENTION

The invention described herein is a telescopic socket for blind shafts, in three single parts.

The first part is an outer tubular part, provided with a flange that acts as a stop for the inserted end of the blind shaft and that is of the opposite shape to the inner body of the latter, preferably hexagonally-shaped.

Inside, and at the opposite end to the flange, the part is closed transversally, by way of a graduated riser that drastically reduces its cross-section, albeit maintaining the same geometrical shape, which is connected to a coaxial extension that is much shorter than the body of this outer part and that juts out on both sides of the riser, with a square cross-section and slightly bevelled vertices. Also, two of the opposite faces are provided with two end notches.

The other, innermost part is also tubular and graduated, starting with a circular cross-section in the area with the largest cross-section and changing to a square cross-section at the other end. It slides into the free end of the anterior part, passing through both ends of the former, and is attached on the inside to the aforementioned inner graduated riser of the latter by a spring that is pre-assembled in the second part and that circumscribes the part of the reduced step of the latter.

The end of the inner sliding part that has largest surface area is circular on the outside, and has a tubular cylindrical housing, its inner generatrices having a large number of projections, to a conventionally built stop or transverse base that houses the socket bearing.

This tubular element of the end extends beyond this bearing housing, and is graduated at the end to stop the aforementioned spring.

Inside, the spring is guided and held in place, to prevent any sinusoidal bending when it moves, by the posterior housing of this bearing housing, by way of a graduated projection and much longer, of this inner sliding part, with a square cross-section as described.

This sliding part is also characterized by having a notch at the free ends of its edges, thus generating extreme elastic media of the extension that supports the spring, that fasten the inner part on the outside, formed by diametrically opposite, elastically-retracting catches that fit in the opposite-shaped notches of the outer hexagonal extension.

To insert the bearing in its housing, it is only necessary to place the socket in an upright position, supported on the respective bases of both the outer and sliding part, insert the bearing in its housing and press it until it is fully inserted. The stress is borne by the dual extension of the inner and outer parts, just the opposite to what happens when conventional sockets are assembled.

In addition to this possibility, throughout this period the spring does not have to bear the pressure used to insert the bearing, normally involving blows with a soft mallet, so it does not deform, move out of the lower housing or move sideways, meaning that the socket

must remain incorrectly placed throughout the time that it is used, or forcing the worker to dismantle the parts and recommence the operation.

DESCRIPTION OF THE DRAWINGS

A set of drawings have been enclosed with this descriptive report, of which they form an integral part, in order to supplement this description and make it easier to understand the characteristics of the invention. These drawings, which are provided for the purposes of illustration and are by no means of a limiting nature, show the following:

Figure 1 is a cross-section of the socket described in this invention, showing how the parts fit together and the other improvements described, for the two alternatives, with a pin and for a bearing.

Figure 2 shows a front view and cross-section of the outer part of the socket described in this invention.

Figure 3 shows the opposite front views and a cross-section of the inner part of the socket described in this invention, showing the catches that hold both parts in place, and the other improvements described, for the two alternatives, with a pin and for a bearing.

PREFERABLE EMBODIMENT OF THE INVENTION

In view of the description given above, this invention refers to a telescopic socket for blind shafts, in three single parts, the first being an outer tubular part (1), with a flange (2) that acts as a stop for the end of the blind shaft, preferably hexagonally-shaped and with a sliding mortise (2') which internally closes in a riser (3), which extends into an coaxial extension (4) that crosses the riser (3) and that has a rectangular cross-section with bevelled vertices, while the other tubular, circular cross-sectioned inner passing part (5) changes gradually (6) into a square cross-section and slides into the free end of the anterior and is equipped, alternatively, with a pin (7) that acts as the outer support of the blind, or else a body (7') with projections that houses the socket bearing.

This body (7') extends beyond the base (8) of the bearing support, in a mortise (9) that is graduated (11) to act as the spring stop (10). It also has catches at its notched end (6) that fit in the opposite-facing notches (12) of the tubular section (1).

This doubly self-sliding construction of parts (1) and (5) of the socket also make it possible to move one on top of the other when the blind is being handled, without the weight of the blind causing the warping that normally occurs with conventional blinds.

A fuller description is not given because it is understood that any expert in this field will have enough information to understand the scope of the invention and its derived advantages, and to reproduce it.

It is understood that, as long as the essential nature of the invention is not changed, both the materials and the shape, size and layout of the parts are liable to change within the same characterization.

The terms used in the description and the sense thereof should always be considered to be of a non-limiting nature.

Claims

1. Telescopic socket for blind shafts, with three parts, two, tubular parts plus a spring, with an outer part (1), with a conventional flange (2) acting as a stop and a sliding mortise (2'), essentially characterized in that part (1) ends in a riser (3), which extends into an coaxial extension (4) having a rectangular cross-section, that incorporates inner, inside sliding part (5), that is graduated (6) into a square cross-section and slides into the free end of part (1) in a doubly self-sliding antiwarp construction of parts (1) and (5) of the socket.

2. Telescopic socket for blind shafts, as per the previous claim, characterized in that the body (7') of part (5) extends the bearing support base (8), in a mortise (9) that is graduated (11) to act as the spring stop (10) and that also has catches at its notched end (6) that slot into the opposite notches (12) of the tubular section (1).

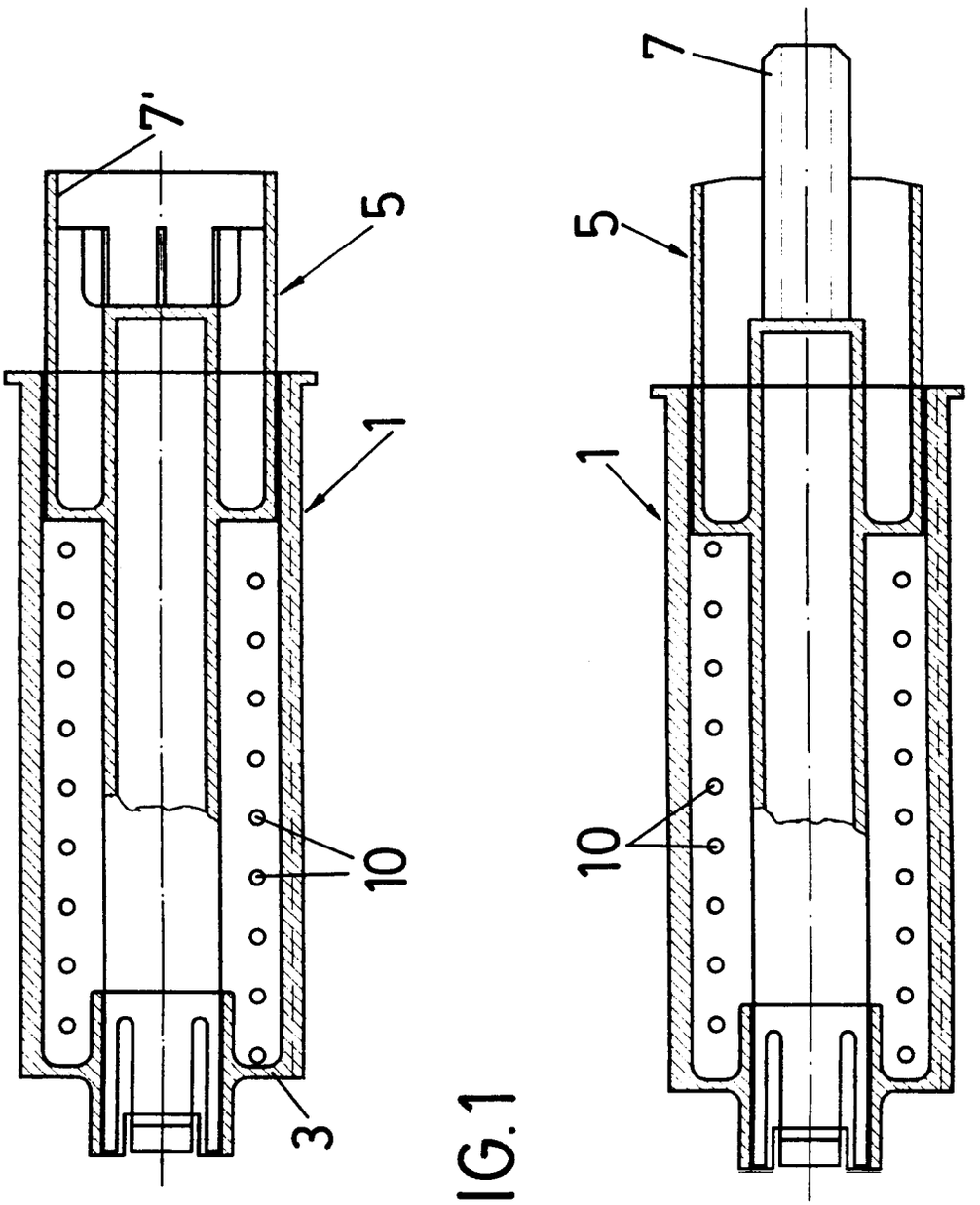

FIG.1

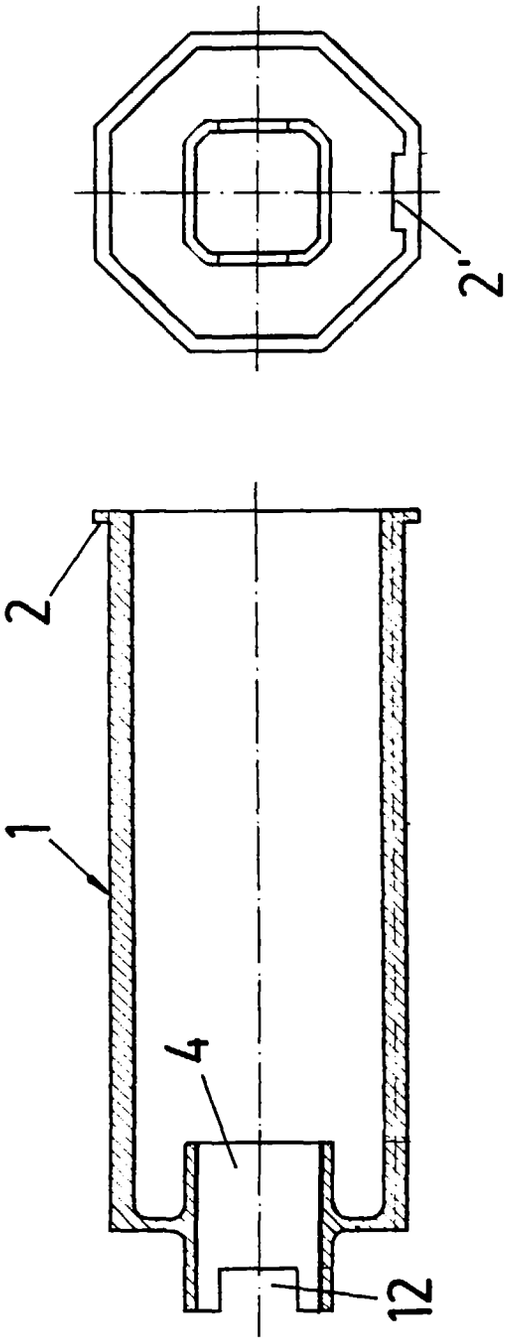

FIG.2

FIG.3