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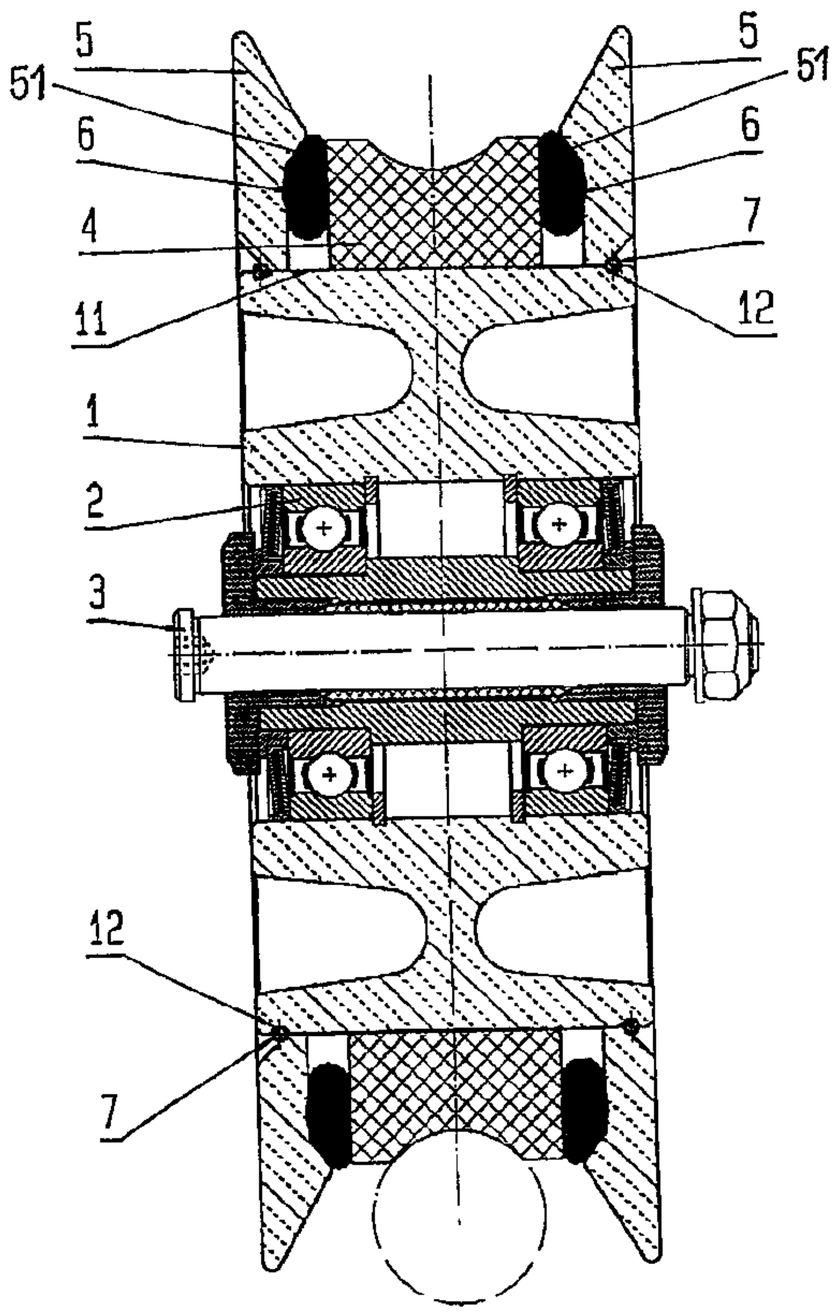
(54) Titre : GALET POUR TRAIN DE ROULEMENT OU POUR BATTERIE DE GALETS
(54) Title: ROLLER FOR A RUNNING-GEAR MECHANISM OR FOR A ROLLER BATTERY



(57) Abrégé/Abstract:
A roller for a running-gear mechanism or for a roller battery in a cableway system, having a roller body (1) which is designed with a central bore in which a bearing (2) is located, the roller being provided with two flanged disks (5) between which a more or less non-elastically deformable, annular support (4) for a cable of the cableway system is located, it being the case that at least one of the flanged disks (5) is fastened releasably on the roller body (1) in that the outer circumferential surface of the roller body (1) is designed, in the region of the abutting end surface of said roller body, with at least one encircling groove (12) for a spring ring (7) or the like. In this case, a resilient insert (6) is arranged between the support (4) and at least one of the flanged disks (5) (Fig. 1).

ABSTRACT

A roller for a running-gear mechanism or for a roller battery in a cableway system, having a roller body (1) which is designed with a central bore in which a bearing (2) is located, the roller being provided with two flanged disks (5) between which a more or less non-elastically deformable, annular support (4) for a cable of the cableway system is located, it being the case that at least one of the flanged disks (5) is fastened releasably on the roller body (1) in that the outer circumferential surface of the roller body (1) is designed, in the region of the abutting end surface of said roller body, with at least one encircling groove (12) for a spring ring (7) or the like. In this case, a resilient insert (6) is arranged between the support (4) and at least one of the flanged disks (5) (Fig. 1).

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The present invention relates to a roller for a running-gear mechanism or for a roller battery in a cableway system, having a roller body which is designed with a central bore in which a bearing is located, the roller being provided with two flanged disks between which a more or less non-elastically deformable, annular support for a cable of the cableway system is located, it being the case that at least one of the flanged disks can be fastened releasably on the roller body in that the outer circumferential surface of the roller body is designed, in the region of its abutting end surface, with at least one encircling groove for a spring ring or the like.

Since it is necessary, in the case of such rollers, for the support to be continuous, the support has to be pushed onto the roller body in the axial direction. For this purpose, however, it is necessary for at least one of the two flanged disks to be fastened releasably on the roller body. For this purpose, it is known for the two flanged disks to be connected releasably to one another by means of a plurality of clamping bolts which pass through the support and the two flanged disks. Such fastening of the flanged disks, however, does not satisfy the requirements since the support is consequently weakened, as a result of which its strength and also its service life are reduced and since, in addition, the installation and removal of the supports involves high outlay.

Furthermore, it is also known for at least one encircling groove to be provided on the roller body, a spring ring being inserted into said groove. If the support here is produced from an elastic material, in particular from hard rubber, the flanged disk is pressed onto the spring ring by means of the support, as a result of which it is retained in its position.

If, however, it is necessary, on account of the very high loading to which the support is subjected, for said support to be produced from a very hard material, the support is not elastically deformable to a sufficient extent for it to press the flanged disk onto the spring ring.

The object of the present invention is thus to take measures which allow the flanged disk to be pressed onto the spring ring to the necessary extent even in the case of a very hard, more or less non-elastically deformable support. This is achieved according to the invention in that a resilient insert is arranged between the support and at least one of the flanged disks.

The support is installed here in that it is pushed onto the roller body in the axial direction, in that, furthermore, the at least one resilient insert is arranged axially outside the support, in that, thereafter, the at least one flanged disk is pushed onto the roller body, likewise in the axial direction and counter to the action of the resilient insert, and in that, finally, a spring ring or the like is inserted into the encircling groove. Since the at least one resilient insert presses the flanged disk against the spring ring, the flanged disk is thus retained on the roller body.

In the case of a possible dismantling operation in order for it to be possible for the annular support to be exchanged, all that is required is for the spring ring or the like to be removed, whereupon the flanged disk can also be removed.

On its inside, at least one of the two flanged disks is preferably designed with a recess, undercut or the like, in which the resilient insert is retained. According to a

preferred embodiment, the resilient insert is formed by a rubber ring. In addition, along their radially inner borders, the flanged disks are preferably designed with recesses through which condensation can flow out.

The subject matter of the invention is explained in more detail hereinbelow with reference to an exemplary embodiment illustrated in the drawing, in which:

Fig. 1 shows a roller according to the invention in axial section;

Fig. 2 shows, on a smaller scale than Fig. 1, a plan view of the flanged disk according to Fig. 1;

Fig. 3 shows, on a smaller scale than Fig. 1, a detail of said roller according to Fig. 1 during the operation of installing one of the two flanged disks, and

Fig. 4 shows the detail according to Fig. 3, at the end of the installation operation.

A roller according to the invention comprises a roller body 1 which is designed with a central bore into which a bearing 2 is inserted, a bearing bolt 3 passing through said bearing. Since these components are known from the prior art, they will not be explained in any more detail.

The roller body 1 is designed with a cylindrical outer surface 11 on which an annular support 4 for a load-bearing cable or a traction cable is located. The support 4 is produced from a very hard and compression-resistant and also more or less non-elastically deformable plastic material. Two flanged disks 5 are located axially outside the support 4. Furthermore,

resilient inserts, e.g. rubber rings 6, are provided between the support 4 and the flanged disks 5. The outer surface 11 of the roller body 1 is designed with in each case one encircling groove 12 in the vicinity of the two end surfaces, a spring ring 7 being inserted into the groove. Furthermore, on their inside, the flanged disks 5 are designed with an undercut 51 or the like, in which the respectively associated rubber ring 6 is retained.

Fig. 1 illustrates the roller in its assembled position. In this case, the flanged disks 5 are pressed axially onto the spring rings 7 by the resilient inserts 6, as a result of which they are retained in their position.

As can be seen from Fig. 2, on their inner borders, the flanged disks 5 are designed with a multiplicity of bores 52, which serve for letting condensation flow out of the region of the support 4.

The assembly operation is explained hereinbelow with reference to Fig. 3 and 4:

One of two flanged disks 5 is located on the roller body 1. A first rubber ring 6, the annular support 4, a second rubber ring 6 and the second flanged disk 5 are then pushed axially onto the roller body 1 with the first-mentioned flanged disk 5. In this case, the second flanged disk 5 is pushed on axially counter to the action of the rubber ring 6 until such time as the spring ring 7 can be inserted into the groove 12. The flanged disks 5 are pressed onto the spring rings 7 under the action of the rubber ring 6, as a result of which they are retained on the roller body 1.

For a removal of one of the flanged disks 5, all that is required is for the latter to be displaced axially counter to the action of the rubber ring 6 until such time that the associated spring ring 7 is released. The support 4 can then be replaced by a new support 4.

This provides a roller for cableway systems which can very straightforwardly be provided with a support made of a very hard and thus more or less non-elastically deformable material and in the case of which a no longer functional support can very straightforwardly be replaced by a new support.

CLAIMS

1. A roller, comprising: a roller body having a central bore formed therein and having a peripheral surface formed with a circumferential groove; a bearing disposed in said central bore; two flanged disks and a substantially non-elastically deformable, annular support disposed between said two flanged disks on said peripheral surface of said roller body; a resilient insert disposed between said annular support and at least one of said flanged disks; and a spring ring disposed in said circumferential groove and releasably retaining one of said flanged disks on said roller body.

2. The roller according to claim 1, wherein at least one of said two flanged disks is formed with an undercut for receiving said resilient insert.

3. The roller according to claim 1, wherein at least one of said two flanged disks is formed with an recess for receiving said resilient insert.

4. The roller according to any one of claims 1 to 3, wherein said resilient insert is a rubber ring.

5. The roller according to any one of claims 1 to 4, wherein said flanged disks are formed with openings along radially inner borders thereof, for an outflow of condensation.

6. The roller according to any one of claims 1 to 5, wherein said circumferential groove is one of two grooves and each of said two flanged disks is removably retained on said roller body by a respective said spring ring held in a respective said groove.

7. The roller according to any one of claims 1 to 6 formed as a roller of a running-gear mechanism.

8. The roller according to any one of claims 1 to 6 formed as a roller of a roller battery in a cableway system.

9. The roller according to any one of claims 1 to 6, wherein said insert is configured to support the roller on a cable of a cableway system.

Fig.1

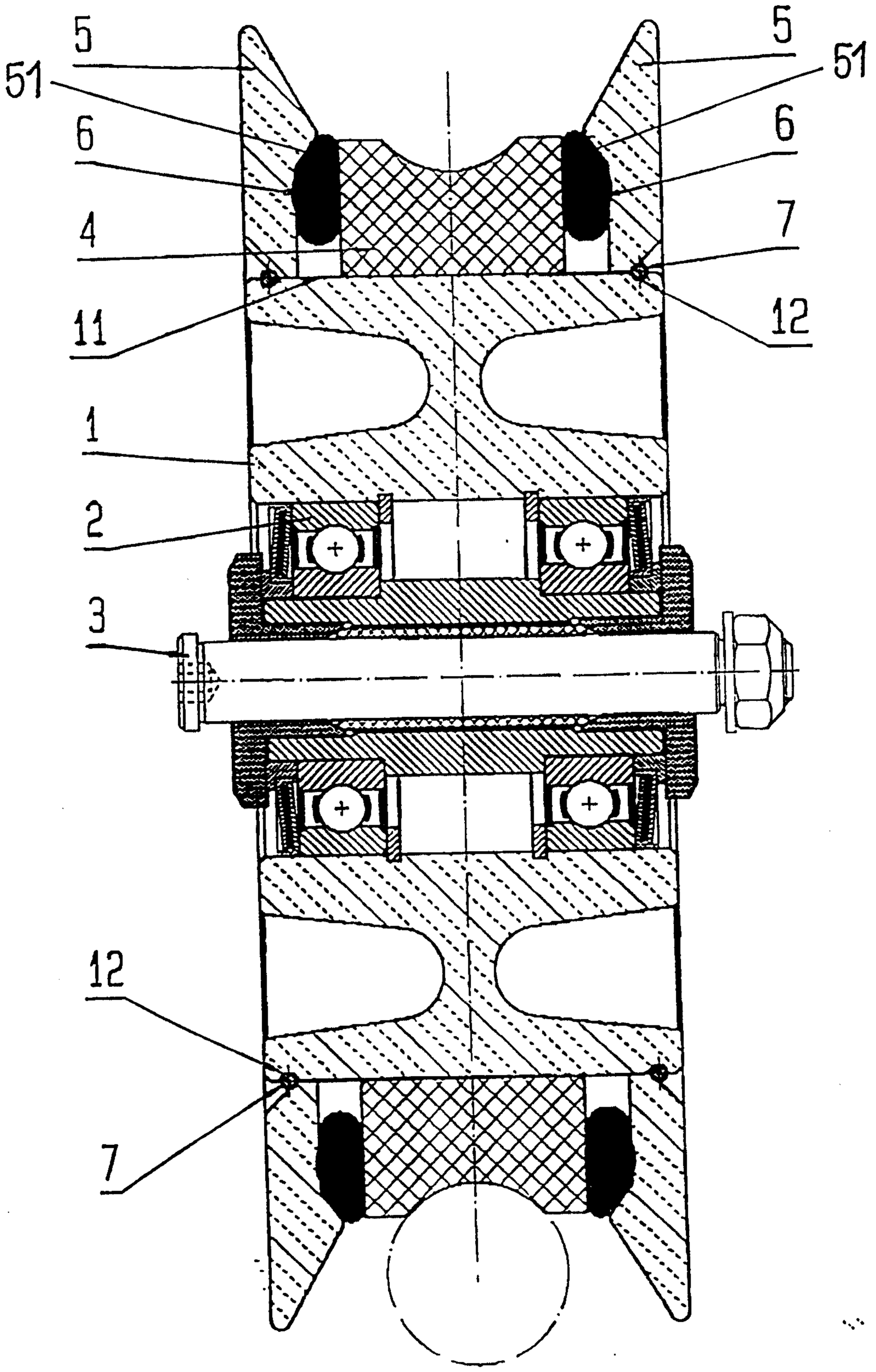


Fig.2

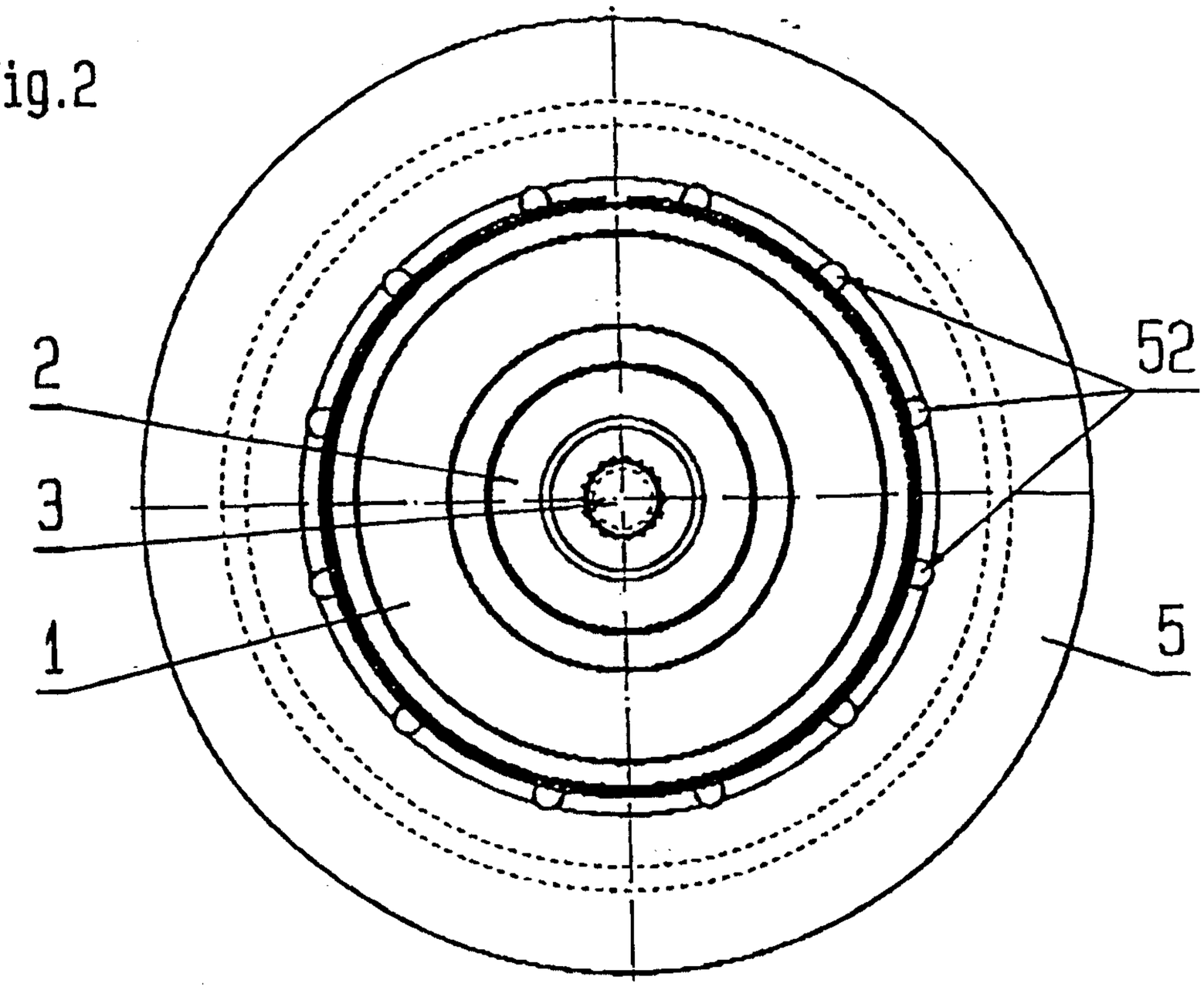


Fig.3

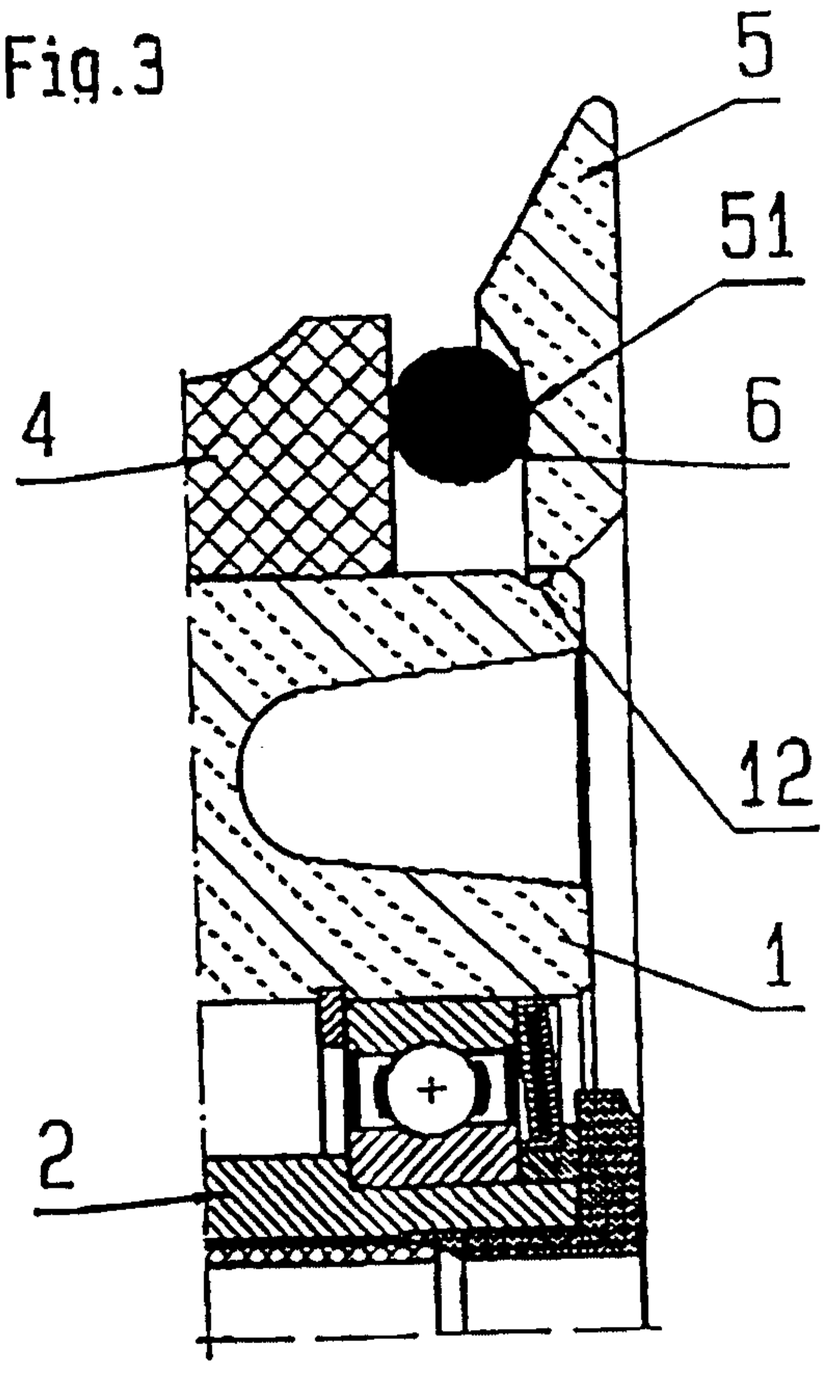
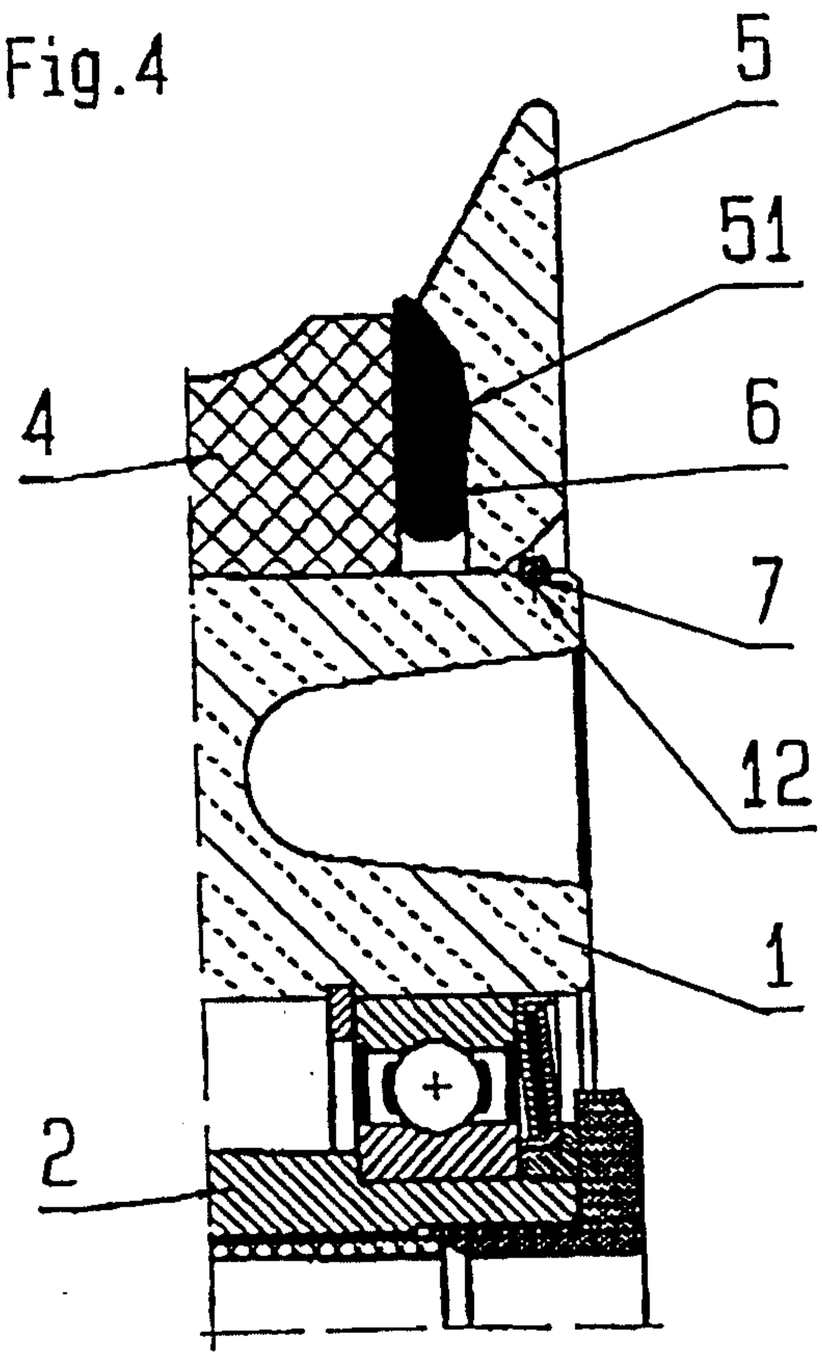
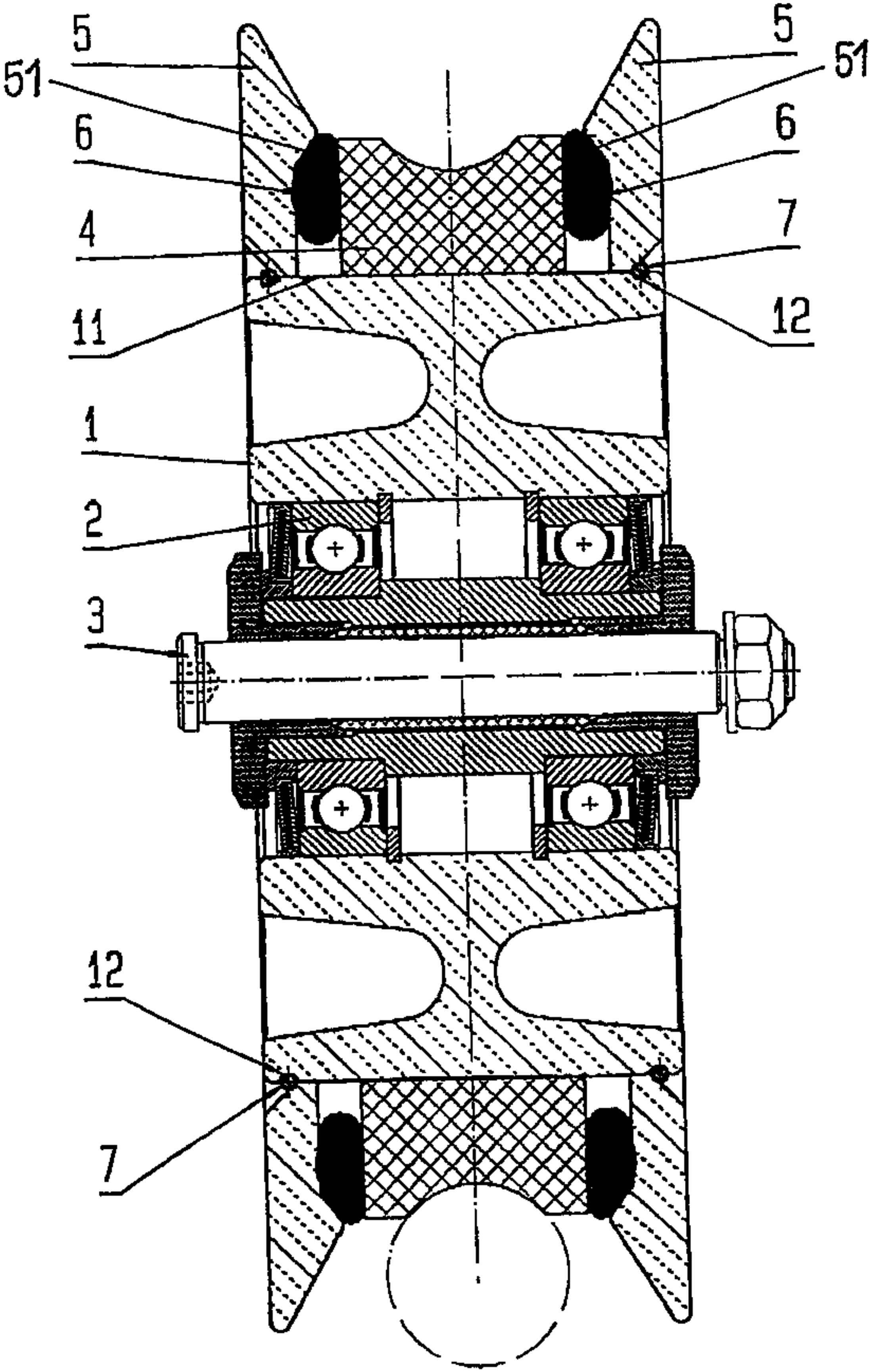


Fig.4

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