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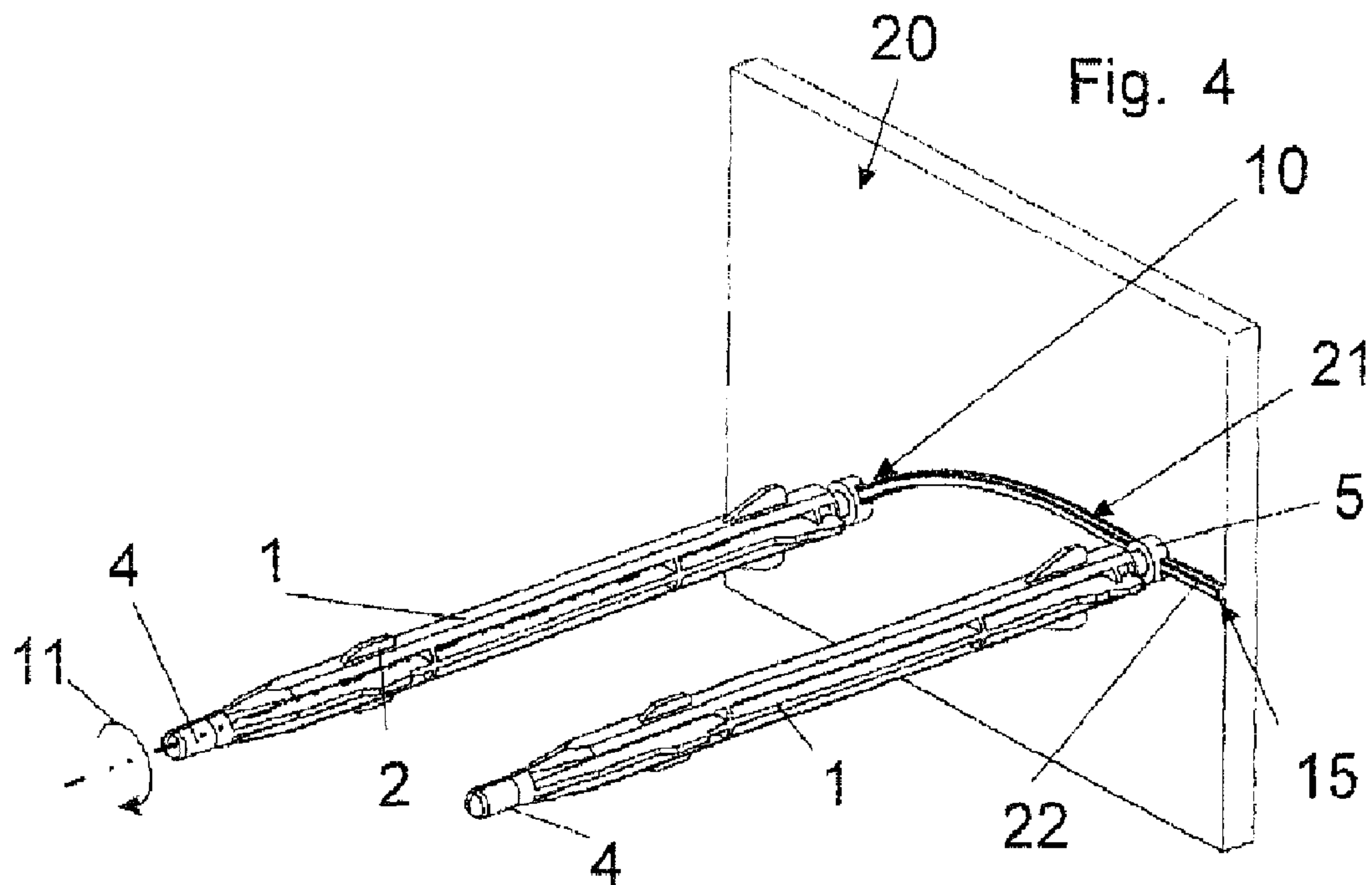
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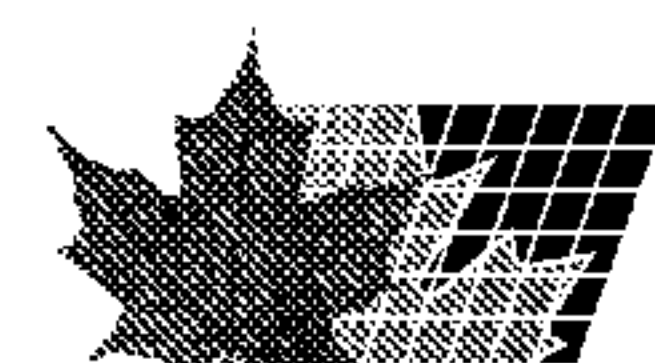
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(57) Abrégé/Abstract:

The invention relates to a support bar for a material web (12) wound onto a roller (3). Said support bar comprises, on each end, a bearing journal (4, 5) which is arranged on the longitudinal axis thereof. At least one of the two bearing journals (5) is provided with



(57) **Abrégé(suite)/Abstract(continued):**

a fitting surface (9) which is not designed as a rotational surface and is rotatably arranged on the support bar (1). Said bearing journal (5) can be inserted into a guide (21) of a dispenser (20), said guide being continuous from the insertion position (15) to the dispensing position (10).

Abstract

The invention relates to a support bar for a material web (12) wound onto a roller (3). Said support bar comprises, on each end, a bearing journal (4, 5) which is arranged on the longitudinal axis thereof. At least one of the two bearing journals (5) is provided with a fitting surface (9) which is not designed as a rotational surface and is rotatably arranged on the support bar (1). Said bearing journal (5) can be inserted into a guide (21) of a dispenser (20), said guide being continuous from the insertion position (15) to the dispensing position (10).

Dispensing system

The invention relates to a dispensing system having a dispenser and a material web, wound to form a roll, which is disposed on a support bar having bearing journals projecting on both sides that can be inserted into guides on the dispenser, wherein at least one of the two bearing journals is provided with at least one mating surface which is not configured as a rotation surface.

A surface which is not configured as a rotation surface here is understood to be a surface of which the generatrix varies in distance to the axis of the bearing journal. Surfaces which are not configured as a rotation surface above all are planar, if applicable also curved, lateral surfaces of webs or grooves which are provided on end sides on the bearing journals, stepped surfaces and/or a prismatic skin surface on the end of the bearing journal, or similar.

The rolls comprise various material webs which are wound onto cores and/or also wound in a coreless manner and are subsequently equipped with the support bars extending therethrough in order to be able to unroll the material web in a dispenser. This is particularly valid when the rolls are cut from a roll strand, as is the case in general with domestic roll paper, sanitary roll paper, toilet roll paper, etc. Receptacles or guides for rolls of this type in dispensers generally display grooves into which the bearing journals are guided. Since the correct arrangement of the rolls has to be taken into account in order for the end of the material web to always hang down from the roll on the same side, the bearing journals and associated guides on the two sides are configured so as to be different.

In particular in the case of low-value material webs, such as, for example, in the case of domestic roll papers, toilet roll papers, other sanitary roll papers, continuous rolls of refuse bags, or similar, the materials also used for the bearing journals are rather cost-effective and thus display only sufficient stability or strength in order to enable the application. The bearing journals, despite the unequivocal assignment by way of the different design of the two sides, are thus not safe from damages which may be caused by forcible attempts at placing the roll into the dispenser in an incorrect manner.

A support bar of this type and a dispenser into which rolls having the support bar projecting at both sides are inserted are known from EP 1 927 308. There, a bearing

journal of the support bar displays an end flange which is spaced apart from the central region of the support bar by a circumferential groove and which is, on its end side, provided with a groove, the side walls of which in each case represent a mating surface which is not configured as a rotation surface. The end flange of the bearing journal can
5 be slotted into an undercut guide in the side wall of the dispenser, a web-like protrusion being provided at the commencement of said guide that corresponds to the end-side groove in the bearing journal and the side faces of said protrusion thus forming counter surfaces to the mating surfaces of the groove. During insertion the roll and/or the bearing journal, therefore, have to be rotated such that coincidence of the two surfaces
10 is achieved. Only then may the roll be pushed into the dispenser. Since the support bar, in the central region, displays webs which stick out on which the wound material web is held in a rotationally fixed manner, such that the support bar rotates together with the roll when the material web is drawn off, the web-like protrusion terminates far before the dispensing position of the roll and the bearing journals, in the dispensing
15 position of the roll, are able to rotate in an arbitrary manner.

The invention has thus been set the object of achieving, in a dispensing system of the type mentioned at the outset, simplifications both on the dispenser and on the support bars, without mitigating the given advantages of the dispensing system known from
20 EP 1 927 308.

This is achieved according to the invention in the case of a support bar for a material web wound to form a roll, which on each end displays a bearing journal lying in the longitudinal axis of the support bar, wherein at least one of the two bearing journals is
25 provided with at least one mating surface which is not configured as a rotation surface, in that the at least one bearing journal which is provided with the mating surface is rotatably disposed on the support bar.

Said object is further achieved in the case of a dispenser having a guide which terminates in a dispensing position, on the commencement of which a counter surface to the mating surface of the bearing journal is provided, in that the at least one bearing journal is rotatably disposed on the support bar and in that the counter surface on the guide extends up into the dispensing position. It is preferably provided here that the guide on the dispenser is formed by a projecting ridge onto which the groove can be
30 pushed.
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The invention will now be described in more detail in the following, by means of the figures of the appended drawings, without being limited thereto. In the drawings:

Fig. 1 shows a support bar in the longitudinal section as per the line I-I of fig. 2, having
5 an indicated roll of material,

Fig. 2 shows an end view of the right end of the support bar in fig. 1,

Fig. 3 shows, in an enlarged manner, the right end of the support bar in fig. 1,
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Fig. 4 shows a schematic illustration of a guide for the support bar in a dispenser,

Fig. 5 shows the guide of fig. 4 in a plan view, and

15 Fig. 6 shows a schematic oblique view of a dispenser equipped with a roll.

Since they are cut from a strand, material webs 12, in particular of domestic roll paper or sanitary roll paper, wound to form rolls 3, in general require bearing journals 4, 5
20 projecting from the end sides when, after opening a lid 25, they are inserted into guides 21, 24 of a dispenser 20 (fig. 6) and are rotatably mounted in a dispensing position 10 therein. The bearing journals 4, 5 here are provided on the ends of a support bar 1, wherein in the figures a simple bearing journal 4, having a circular-cylindrical rotation surface, which fits into a groove of a guide 24 of the dispenser 20, is drawn on the left. However, it is in principle also possible for the bearing journal 4 and the guide thereof
25 to be likewise configured as per the possibility described in the following for the bearing journal 5, shown on the right, and the guide 21 thereof.

In order to be able to insert the rolls 3 into the various guides 21, 24 of the dispenser 20 in a positionally correct manner only, such that the material web is always drawn off
30 from the same side of the roll 3 (fig. 5), the guide 21 is configured as a ridge 22 which projects from the wall of the dispenser 20 and onto which the correspondingly configured region of the bearing journal 5, in the insertion position 15, can be pushed. The bearing journal 5, therefore, on the free end side, has a groove 8 which is configured so as to be conversely disposed to the ridge 22 on the wall of the dispenser
35 20. The side walls of the groove 8 are mating surfaces 9 which, in contrast to the circumferential surface of the bearing journal 5, do not represent rotation surfaces but

which are, in particular, planar, their counter surfaces 2 being provided on the ridge 22. Since the ridge 22 extends not only in the insertion position 15 on the commencement of the guide 21 but across the entire length thereof up into the dispensing position 10, the roll 3, which in the central region of the support bar 1 is held in a rotationally fixed manner by the wings 2 sticking out there from the circumference, would rotate along in a manner corresponding to the curvature of the guide 21 and remain in a non-rotatable manner in the dispensing position 10, such that the material web 12 cannot be drawn off. In order to make this nevertheless possible in the direction of the arrows 11, the bearing journal 5 is rotatably mounted on the end of the support bar 1, as can be seen from figs. 1 and 3. The support bar 1 is provided with a tapered axial end part 6 on which a circumferential channel is provided. To this end, the bearing journal 5 displays a sleeve 7 which is adapted thereto and which is provided with an annular bead, such that, when being attached to the end part 6, the bearing journal 5 is latched. In this manner, as can be seen from figs. 4 and 5 the position of the roll 3 and/or of the support bar 1, when being moved from the insertion position 15 (on the right in fig. 5) into the dispensing position 10 (on the left in fig. 5), remains unmodified in relation to the dispenser, despite the bearing journal 5 being forced to follow the curvature of the ridge 22, since the bearing journal, on the end part 6 of the support bar 1, can rotate about the corresponding angle. In the dispensing position 10, the support bar 1, with the roll 3, can rotate in and/or on the bearing journal 5 when the material web 12 is drawn off (arrow 11). The support bar 1 and the bearing journal 5 are preferably composed of a cost-effective plastic, wherein dynamic friction which cannot be defined in more detail arises between said support bar 1 and said bearing journal 5, on account of which an advantageous braking effect on the roll 3 is achieved when the material web is drawn off.

Claims

- 5 1. A support bar for a material web wound to form a roll (3), which on each end has a bearing journal (4, 5) lying in the longitudinal axis of the support bar (1), wherein at least one of the two bearing journals (5) is provided with at least one mating surface (9) which is not configured as a rotation surface, characterized in that the at least one bearing journal (5) which is provided with the mating surface (9) is rotatably disposed on the support bar (1).
- 10 2. The support bar as claimed in claim 1, characterized in that the mating surface (9) is configured on a groove (8) in the end side of the bearing journal (5).
- 15 3. The support bar as claimed in claim 1 or 2, characterized in that the groove (8) is dove-tail shaped.
- 20 4. The support bar as claimed in one of claims 1 to 3, characterized in that a central region of the support bar (1) that is provided between the two bearing journals (4, 5) for receiving the material web displays wings (2) which stick out from the circumference.
- 25 5. A dispensing system having a dispenser (20) for portions of a material web wound to form a roll (3) that have to be severed, and having at least one material web wound to form a roll (3) that is provided in a rotationally fixed manner on the central region of a support bar (1) as claimed in claim 1, which, on each end, has a bearing journal (4, 5) projecting from the roll and a mating surface (9) which is not configured as a rotation surface is provided on at least one of the two bearing journals (5), wherein the dispenser (20) for the at least one bearing journal (5), which is provided with the mating surface, displays a guide (21) which terminates in a dispensing position (10), on the commencement of which a counter surface (23) to the mating surface (9) of the bearing journal (5) is provided, and wherein inserting the roll (3) into the dispenser (20) is possible only in the case of coincidence of the mating surface (9) and the counter surface (23) thereof, characterized in that the at least one bearing journal (5) is rotatably disposed on the support bar (1) and in that the
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- 35

counter surface (23) on the guide (21) extends up into the dispensing position (10).

- 5 6. The dispensing system as claimed in claim 5, wherein the bearing journal (5) displays a groove (8) in the end side, characterized in that the guide (21) on the dispenser (20) is formed by a projecting ridge (22) onto which the groove (8) can be pushed.

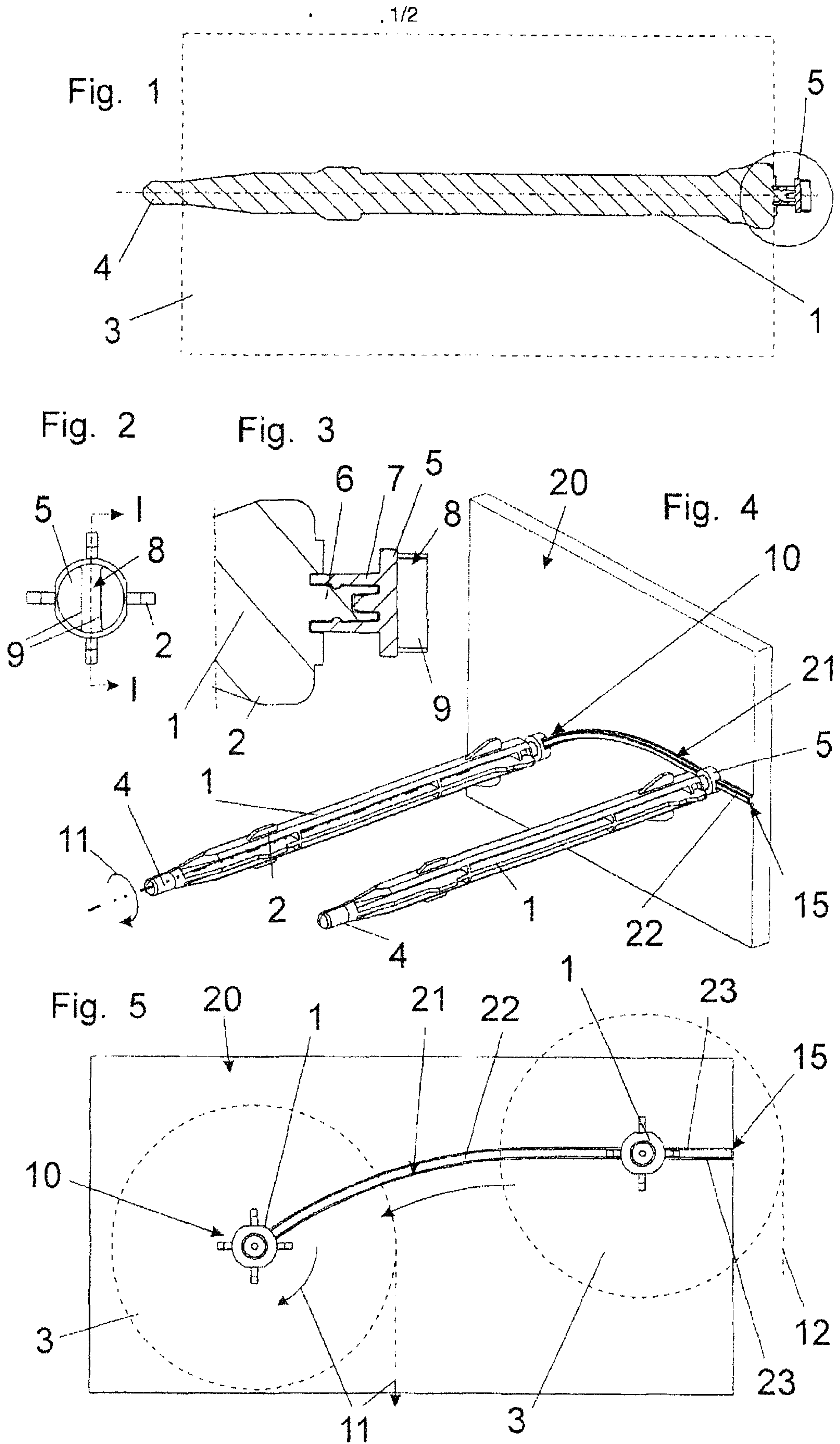


Fig. 6

