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(54) **IMPLANT FOR DENTAL PROSTHESES**

IMPLANTAT FÜR ZAHNPROTHESEN

IMPLANT POUR PROTHÈSES DENTAIRES

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(56) References cited:
US-A- 4 215 986 US-B1- 6 375 464

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Description

[0001] The present patent concerns implants for dental prostheses and in particular it concerns a new implant for dental prostheses with an improved joint between the endosseous portion and the stump.

[0002] Implants for fixing dental prostheses are known, which comprise an endosseous portion provided with an external thread and suited to be screwed into the bone site of the dental arch, as well as a stump suited to be fixed to said endosseous portion and used for anchoring the dental prosthesis.

[0003] In order to allow the coupling to be obtained, said stump comprises a grafting appendage suited to be inserted in a corresponding grafting recess created in the endosseous portion.

[0004] In order to fix the stump to the endosseous portion in a stable manner, stumps are used which are axially hollow in order to allow the insertion of a screw that is screwed into the internally threaded recess provided in said endosseous portion.

[0005] The technique is also known according to which the stump is fixed to the endosseous portion through a cementing process, which however does not avoid the risk of possible infiltrations and furthermore may cause some inconveniences, for example the cement may come off.

[0006] Implants are also known in which the stump comprises a grafting appendage suited to become engaged in a corresponding grafting recess created in the endosseous portion, wherein said grafting appendage, for example, is threaded so that it can be screwed into said correspondingly threaded recess created in the endosseous portion.

[0007] Other improved joining methods are known like, for example, special configurations of the grafting appendages of the stump and of the recess created in the endosseous portion. For example, endosseous portions are known which are provided with an annular cavity on the opening of said recess, said cavity being suitable for the axial insertion of a corresponding annular projection present on said appendage of the stump. Endosseous portions are also known that, vice versa, are provided with an annular projection on the opening of the recess, suited to be inserted in a corresponding annular seat obtained in said appendage of the stump.

[0008] The actual sealing of the joint between the stump and the endosseous portion takes place along the opposed crown margins of the stump and of the endosseous portion, which are tightened to each other by screwing the stump. Said system of cavities and annular projections is useful also to guide the correct positioning of the stump. In addition to the above, said system of cavities and annular projections contributes to limiting the infiltrations between the endosseous portion and the stump.

[0009] However, said infiltrations are not completely avoided, with the risk of infections or damage to the prosthetic implant.

[0010] In order to limit said infiltrations as much as possible, procedures are known for plasma sealing the joint between the endosseous portion and the stump, intended to seal said joint.

[0011] Endosseous implants are also known, in which the crown margins of the stump and/or of the endosseous portion, intended to be opposed and tightened to each other, are curved or shaped in various ways, in such a way that the contact and interference surface between said crown margins is reduced compared to the size of the crown margins themselves.

[0012] Said contact surface, for example, is an annular line or portion. Reducing the overall interference and contact surface between the stump and the endosseous portion means maximizing the tightening force exerted through the screwing operation.

[0013] The creation of said curved or shaped crown margins is very difficult and furthermore it often leads to imprecise results. Such crown margins are exemplified by US 4 215 986 A and US 6 375 464 B1.

[0014] In the case where the crown margins are imprecise, there is the risk of obtaining joints that are not completely and effectively sealed.

[0015] The subject of the present invention is a new type of implant for dental prostheses, with an improved joint between the endosseous portion and the stump.

[0016] It is the main object of the present invention to guarantee optimal sealing of the joint between the endosseous portion and the stump, thus optimising and sizing exactly the contact surface between the stump and the endosseous portion, for the purpose of concentrating and therefore maximizing the tightening force.

[0017] It is another object of the present invention to provide an implant shaped in such a way as to guarantee exact and precise results.

[0018] It is another object of the present invention to improve the efficiency of the plasma sealing operations.

[0019] The new implant for dental prostheses comprises in its main parts:

- at least one endosseous portion intended to be implanted in the bone site of the dental arch, comprising at least one axial recess for grafting at least one stump, and at least one coupling crown margin;
- at least one stump suited to be fixed to said endosseous portion and used for anchoring the dental prosthesis, said stump comprising at least one grafting appendage suited to be coupled with said grafting recess of said endosseous portion, and at least one coupling crown margin suited to be opposed to said crown margin of said endosseous portion,

and wherein each one of said opposed crown margins lies on a straight or conical surface, said surfaces not being parallel to each other, so that the contact and interference surface between said crown margins is reduced compared to the size of the crown margins them-

selves and is near to the external edge of said crown margin of the stump.

[0020] In particular, at least one of said crown margins of said stump or of said endosseous portion is substantially in the shape of an annular truncated cone, while the other crown margin is substantially in the shape of an annular truncated cone with different taper, or planar and straight.

[0021] In this way, the contact and interference surface between said crown margins of said stump and of said endosseous portion is annular and substantially at the level of the external edge of said crown margin of the stump.

[0022] The fact that both of said crown margins lie on planar, conical or straight surfaces guarantees high precision in the production of the crown margins, making the successive sealing of the joint between the stump and the endosseous portion more efficient.

[0023] Moreover, the crown margin of the stump is smaller than the crown margin fo said endosseous portion, so that the external edge of the crown margin of the stump is recessed with respect to the external edge of the crown margin of the endosseous portion.

[0024] In particular, said crown margins of said stump and of said endosseous portion have generically different taper.

[0025] In a possible solution, said crown margin of said stump is in the shape of a truncated cone, that is, it lies on a conical surface that preferably widens downwards. In this solution, the annular surface of interference with the crown margin of the endosseous portion substantially coincides with the external edge of the crown margin of the stump, which is lowered.

[0026] In this case, the crown margin of the endosseous portion can be planar, meaning that it lies on a straight plane, with no taper, or even conical, with different or preferably opposite taper with respect to that of said crown margin of the stump.

[0027] In an alternative solution, said crown margin of said endosseous portion is conical, that it, it lies on a conical surface that widens upwards.

[0028] In this solution, the annular interference surface substantially coincides with the external edge of the crown margin of the stump.

[0029] In this case, the crown margin of the stump can be planar, that is, it can lie on a straight plane, with no taper, or in turn it can be conical, too, with taper that is different or preferably opposite that of said crown margin of the endosseous portion.

[0030] In the preferred solution, the taper of said crown margin of the endosseous portion is opposite with respect to that of the crown margin of the stump, so that the annular interference surface is ideally reduced to a circular line, substantially coinciding with the external edge of said crown margin of the stump. In this way the tightening force is maximized, thus making the successive plasma sealing of the joint more effective.

[0031] The characteristics of the new implant will be highlighted in greater detail in the following description with reference to the attached drawings which are enclosed by way of non-limiting example.

Figures 1a and 1b show the sectional views of two examples of the new implant for dental prostheses (1a, 1b) in two possible embodiments.

Figure 1c shows a sectional view of a further example of the new implant (1c) with a stump (3) that can be directly screwed in the endosseous portion (2).

Figure 2a shows a detail of the sealing area (5) between the stump (3) and the endosseous portion (2) in a first embodiment, while Figure 2b shows a further enlarged detail of the non-parallel conical crown margins (33, 24) that provide the coupling between the stump (3) and the endosseous portion (2).

Figure 3a shows a detail of the sealing area (5) between the stump (3) and the endosseous portion (2) in a second embodiment, while Figure 3b shows a further enlarged detail of the non-parallel conical crown margins (33, 24) that provide the coupling between the stump (3) and the endosseous portion (2).

Figure 4a shows a detail of the sealing area (5) between the stump (3) and the endosseous portion (2) in the embodiment with direct screwing, while Figure 4b shows a further enlarged detail of the conical crown margins (33, 24) that provide the coupling between the stump (3) and the endosseous portion (2).

Figures 5a and 5b show in detail two further possible embodiments of the crown margins (33, 24).

Figure 6 shows in detail how the maximum diameter of the crown margin (33) of the stump is shorter than the maximum diameter of the crown margin (24) of the endosseous portion (2).

[0032] The new dental implant (1a, 1b, 1c) comprises in its main parts an endosseous portion (2) and a stump (3).

[0033] Said endosseous portion (2) is suited to be implanted in the bone site of the gum, and comprises an external thread (21) for screwing into the bone site, and an axial hole (22), preferably at least partially threaded, for grafting and tightening said stump (3).

[0034] Said stump (3) is suited to be fixed to said endosseous portion and in turn is used to fix the dental prosthesis.

[0035] Said stump (3) comprises a grafting appendage (32) suited to be inserted in a corresponding axial recess (23) shaped in said axial hole (22) of the endosseous portion (2).

[0036] In the embodiments illustrated in Figures 1a and 1b, said stump (3) comprises also a through axial hole (31) for the insertion of a tightening means or screw (4) suited to be screwed in said internally threaded axial hole (22) of the endosseous portion (2).

[0037] Said screw (4) comprises a head (41) suited to be used by the operator to screw and tighten said stump (3) on said endosseous portion (2).

[0038] In the embodiment illustrated in Figure 1c, the outside of said grafting appendage (32) of the stump (3) is at least partially threaded (321) so that it can be directly screwed into said correspondingly threaded axial hole (22) of said endosseous portion (2).

[0039] Said endosseous portion (2) comprises a crown margin (24) suited to be opposed to a corresponding crown margin (33) of said stump (3), thus defining a sealing area (5).

[0040] Said crown margin (33) of the stump (3) is conveniently smaller than said crown margin (24) of the endosseous portion (2), that is, the most external edge (35) of the crown margin (33) of the stump (3) is recessed with respect to the most external edge (26) of the crown margin (24) of the endosseous portion, as shown in Figure 6, in which the inclination angles of the crown margins (33, 24) are enlarged for explanation purposes.

[0041] In all of the solutions described below said crown margins (33, 24) of the stump (3) and of the endosseous portion (2) lie on planar surfaces, of which at least one surface is conical, while the other surface is conical or planar and straight.

[0042] Figure 1a shows a first embodiment of the new dental implant (1a).

[0043] In the solution illustrated in Figures 1b and 1c, the new dental implant (1b, 1c) is shaped in a different way, as described here below. Said endosseous portion (2) comprises an annular collar or projection (25) in proximity to the opening of said grafting recess (23) for the appendage (32) of the stump (3).

[0044] In a corresponding position on said appendage (32), said stump (3) comprises an annular seat (34) suitable for the insertion of said annular projection (25) of the endosseous portion (2).

[0045] Said annular projection (25) of the endosseous portion (2) and said annular seat (34) of the stump (3) are externally delimited by said crown margins (24, 33).

[0046] Said crown margin (33) of the stump (3) and said crown margin (24) of the endosseous portion (2) have different taper, meaning that once said stump (3) has been grafted in said endosseous portion (2) the contact and interference surface (51) between said crown margins (33, 24) is a reduced annular surface compared to the size of the crown margins (33, 24) themselves.

[0047] In particular, the two opposed margins (33, 24) are two non-parallel surfaces and the angle defined between them is preferably a 1-5° angle.

[0048] In the solution represented in Figures 2b, 3b and 4b, said crown margin (33) of the stump (3) is conical, meaning that it lies on a conical surface that widens downwards, so that the external edge (35) of the crown margin (33) itself is lowered with respect to the internal edge (36).

[0049] On the contrary, the taper of said crown margin (24) of the endosseous portion (2) is opposite with respect to that of said crown margin (33) of the stump (3), that is, it lies on a conical surface that widens upwards, so that the external edge (26) of the crown margin (24) itself is raised with respect to the internal edge (27).

[0050] When said stump (3) is grafted in said endosseous portion (2), the contact and interference surface (51) of the two opposed crown margins (33, 24) is substantially circular, ideally a circular line near to or coinciding with the external edge (26, 35) of the crown margins (33, 24).

[0051] According to a possible alternative solution schematically shown in Figure 5a, said crown margin (33) of the stump (3) is conical, while said crown margin (24) of the endosseous portion (2) lies on a straight plane. In this case, the contact and interference surface (52) of the two opposed crown margins (33, 24) is substantially circular, ideally a circular line near to or coinciding with the external edge (26, 35) of the crown margins (33, 24).

[0052] According to a possible alternative solution schematically shown in Figure 5b, said crown margin (24) of the endosseous portion (2) is conical, while said crown margin (33) of the stump (3) lies on a straight plane. In this case, the contact and interference surface (53) of the two opposed crown margins (33, 24) is substantially circular, ideally a circular line near to or coinciding with the external edge (26, 35) of the crown margins (33, 24).

[0053] These are the schematic outlines that are sufficient for the expert in the art to implement the invention, therefore, during production variants may be developed that do not affect the substance of the innovative concept disclosed herein.

[0054] Therefore, with reference to the description provided above and the attached drawings, the following claims are expressed.

Claims

1. Implant (1a, 1b, 1c) for dental prostheses, comprising at least one endosseous portion (2) suited to be implanted in the bone site of the dental arch and at least one stump (3) suited to be fixed to said endosseous portion (2) and in turn suited to be used to fix a dental prosthesis, said endosseous portion (2) comprising a crown margin (24) suited to be opposed to a corresponding crown margin (33) of said stump (3), thus defining a sealing area (5), wherein said crown margin (33) of the stump (3) is smaller than said crown margin (24) of the endosseous portion (2), that is, the most external edge (35) of the crown margin (33) of the stump (3) is recessed with respect to the most external edge (26) of the crown margin (24) of the endosseous portion, so that the maximum diameter of the crown margin (33) of the stump is shorter than the maximum diameter of the crown margin (24) of the endosseous portion (2), wherein each one of said crown margins (33, 24) lies on a planar surface, said surfaces not being parallel to each other, wherein at least one crown margin (33, 24) lies on a first conical surface while the other crown margin (24, 33) lies on a second planar and

straight surface, or a conical surface with different taper with respect to said first surface, so that, once said stump (3) has been grafted on said endosseous portion (2), the contact and interference surface (51) between said crown margins (33, 24) is an annular surface that is reduced compared to the size of the crown margins (33, 24) themselves and proximal to the external edge (35) of said crown margin (33) of said stump (3).

2. Implant (1a, 1b, 1c) for dental prostheses according to claim 1, **characterized in that:**

- said crown margin (33) of the stump (3) is conical, that is, lies on a conical surface that widens downwards, so that the external edge (35) of the crown margin (33) is lowered with respect to the internal edge (36);
- said crown margin (24) of the endosseous portion (2) has opposite taper with respect to that of said crown margin (33) of the stump (3), meaning that it lies on a conical surface that widens upwards, so that the external edge (26) of the crown margin (24) is raised with respect to the internal edge (27),

and wherein, when said stump (3) is grafted on said endosseous portion (2), the contact and interference surface (51) of the two opposed crown margins (33, 24) is substantially a circular line or band, near to or coinciding with said external edge (35) of the crown margin (33) of said stump (3).

3. Implant (1a, 1b, 1c) for dental prostheses according to claim 1, **characterized in that:**

- said crown margin (33) of the stump (3) is conical, meaning that it lies on a conical surface that widens downwards, so that the external edge (35) of the crown margin (33) is lowered with respect to the internal edge (36);
- said crown margin (24) of the endosseous portion (2) lies on a straight plane,

and wherein, when said stump (3) is grafted on said endosseous portion (2), the contact and interference surface (52) of the two opposed crown margins (33, 24) is substantially a circular line or band near to or coinciding with said external edge (35) of the crown margin (33) of said stump (3).

4. Implant (1a, 1b, 1c) for dental prostheses according to claim 1, **characterized in that:**

- said crown margin (24) of the endosseous portion (2) is conical, meaning that it lies on a conical surface that widens upwards, so that the external edge (26) of the crown margin (24) is raised with respect to the internal edge (27);
- said crown margin (33) of the stump (3) lies on a straight plane,

and wherein, when said stump (3) is grafted on said endosseous portion (2), the contact and interference surface (53) of the two opposed crown margins (33, 24) is substantially a circular line or band near to or coinciding with said external edge (35) of the crown margin (33) of said stump (3).

5. Implant (1a, 1b, 1c) for dental prostheses according to the preceding claims, **characterized in that** said endosseous portion (2) comprises an axial grafting recess (23) of a corresponding grafting appendage (32) of said stump (3), and wherein said endosseous portion (2) comprises, in proximity to the opening of said grafting recess (23), an annular collar or projection (25) suited to be inserted in a corresponding annular seat (34) present on said grafting appendage (32) of said stump (3), said annular projection (25) and said annular seat (34) being externally delimited by said crown margins (24, 33).

6. Implant (1a, 1b, 1c) for dental prostheses according to the preceding claims, **characterized in that** said opposed margins (33, 24) form a 1-5° angle.

Patentansprüche

1. Implantat (1a, 1b, 1c) für Zahnprothesen, wenigstens einen enossalen Abschnitt (2) umfassend, dazu geeignet, in das Knochenbett des Zahnbogens implantiert zu werden, und wenigstens einen Stumpf (3) umfassend, dazu geeignet, an dem besagten enossalen Abschnitt (2) fixiert zu werden und seinerseits zur Fixierung einer Zahnprothese verwendet zu werden, wobei der besagte enossale Abschnitt (2) einen Kronenrand (24) umfasst, dazu geeignet, einem entsprechenden Kronenrand (33) des besagten Stumpfs (3) entgegengesetzt zu werden und so einen Versiegelungsbereich (5) zu definieren, wobei der besagte Kronenrand (33) des Stumpfs (3) kleiner ist als der besagte Kronenrand (24) des enossalen Abschnitts (2), das heißt, die äußerste Kante (35) des Kronenrands (33) des Stumpfs (3) ist bezüglich der äußersten Kante (26) des Kronenrands (24) des enossalen Abschnitts zurückstehend, so dass der maximale Durchmesser des Kronenrands (33) des Stumpfs kürzer ist als der maximale Durchmesser des Kronenrands (24) des enossalen Abschnitts (2), wobei jeder der besagten Kronenränder (33, 24) auf einer ebenen Fläche liegt, wobei die besagten Flächen nicht parallel zueinander liegen, wobei wenigstens ein Kronenrand (33, 24) auf einer ersten kegelförmigen Fläche liegt, während der andere Kronenrand (24, 33) auf einer zwei-

ten, ebenen und geraden Fläche liegt, oder auf einer kegelförmigen Fläche mit einer gegenüber der besagten ersten Fläche anderen Verjüngung, so dass, nachdem der besagte Stumpf (3) auf den besagten enossalen Abschnitt (2) aufgepfropft wurde, die Kontakt- und Interferenzfläche (51) zwischen den besagten Kronenrändern (33, 24) eine ringförmige Fläche ist, welche im Vergleich zur Größe der Kronenränder (33, 24) selbst kleiner ist und proximal zur Außenkante (35) des besagten Kronenrands (33) des besagten Stumpfs (3).

2. Implantat (1a, 1b, 1c) für Zahnprothesen nach Patentanspruch 1, **dadurch gekennzeichnet, dass:**

- der besagte Kronenrand (33) des Stumpfs (3) kegelförmig ist, das heißt auf einer kegelförmigen Fläche liegt, die nach unten weiter wird, so dass die Außenkante (35) des Kronenrands (33) bezüglich der Innenkante (36) abgesenkt ist;
- die Verjüngung des besagten Kronenrands (24) des enossalen Abschnitts (2) bezüglich jenes des besagten Kronenrands (33) des Stumpfs (3) entgegengesetzt ist, das heißt, dass der besagte Kronenrand (24) auf einer kegelförmigen Fläche liegt, die nach oben weiter wird, so dass die Außenkante (26) des Kronenrands (24) bezüglich der Innenkante (27) erhöht ist;

und wobei, wenn der besagte Stumpf (3) auf den besagten enossalen Abschnitt (2) aufgepfropft wird, die Kontakt- und Interferenzfläche (51) der zwei entgegengesetzten Kronenränder (33, 24) ein im Wesentlichen kreisförmiger Streifen oder ein im Wesentlichen kreisförmiges Band ist, nahe dem oder übereinstimmend mit der besagten Außenkante (35) des Kronenrands (33) des besagten Stumpfs (3).

3. Implantat (1a, 1b, 1c) für Zahnprothesen nach Patentanspruch 1, **dadurch gekennzeichnet, dass**:

- der besagte Kronenrand (33) des Stumpfs (3) kegelförmig ist, das heißt, dass er auf einer kegelstumpfförmigen Fläche liegt, die nach unten weiter wird, so dass die Außenkante (35) des Kronenrands (33) bezüglich der Innenkante (36) abgesenkt ist;
- der besagte Kronenrand (24) des enossalen Abschnitts (2) auf einer geraden Ebene liegt,

und wobei, wenn der besagte Stumpf (3) auf den besagten enossalen Abschnitt (2) aufgepfropft wird, die Kontakt- und Interferenzfläche (52) der zwei entgegengesetzten Kronenränder (33, 24) ein im Wesentlichen kreisförmiger Streifen oder ein im Wesentlichen kreisförmiges Band ist, nahe dem oder übereinstimmend mit der besagten Außenkante (35) des Kronenrands (33) des besagten Stumpfs (3).

4. Implantat (1a, 1b, 1c) für Zahnprothesen nach Patentanspruch 1, **dadurch gekennzeichnet, dass**:

- der besagte Kronenrand (24) des enossalen Abschnitts (2) kegelförmig ist, das heißt, dass er auf einer kegelförmigen Fläche liegt, die nach oben weiter wird, so dass die Außenkante (26) des Kronenrands (24) bezüglich der Innenkante (27) erhöht ist;
- der besagte Kronenrand (33) des Stumpfs (3) auf einer geraden Ebene liegt,

und wobei, wenn der besagte Stumpf (3) auf den besagten enossalen Abschnitt (2) aufgepfropft wird, die Kontakt- und Interferenzfläche (53) der zwei entgegengesetzten Kronenränder (33, 24) ein im Wesentlichen kreisförmiger Streifen oder ein im Wesentlichen kreisförmiges Band ist, nahe dem oder übereinstimmend mit dem besagten Außenrand (35) des Kronenrands (33) des besagten Stumpfs (3).

5. Implantat (1a, 1b, 1c) für Zahnprothesen nach vorstehenden Patentansprüchen, **dadurch gekennzeichnet, dass** der besagte enossale Abschnitt (2) eine axiale Aufpfropf-Aussparung (23) eines entsprechenden Aufpfropf-Ansatzes (32) des besagten Stumpfs (3) umfasst, und wobei der besagte enossale Abschnitt (2) in der Nähe der Öffnung der besagten Aufpfropf-Aussparung (23) einen ringförmigen Bund oder eine ringförmige Auskragung (25) umfasst, dazu geeignet, in eine entsprechende ringförmige Aufnahme (34) an dem besagten Aufpfropf-Ansatz (32) des besagten Stumpfs (3) eingesetzt zu werden, wobei die besagte ringförmigen Auskragung (25) und die besagte ringförmige Aufnahme (34) extern durch die besagten Kronenränder (24, 33) begrenzt sind.

6. Implantat (1a, 1b, 1c) für Zahnprothesen nach vorstehenden Patentansprüchen, **dadurch gekennzeichnet, dass** die besagten entgegengesetzten Ränder (33, 24) einen Winkel von 1°-5° bilden.

Revendications

1. Implant (1a, 1b, 1c) pour prothèses dentaires comprenant une portion endo-osseuse (2), apte à être implantée dans le site osseux de l'arcade dentaire et au moins un faux-moignon (3) apte à être fixé à ladite portion endo-osseuse (2) et à son tour apte à être utilisé pour fixer une prothèse dentaire, ladite portion endo-osseuse (2) comprenant un bord de couronne (24), apte à être opposé à un bord de couronne correspondant (33) dudit faux-moignon (3), définissant ainsi une zone d'étanchéité (5), où ledit bord de couronne (33) du faux-moignon (3) a des dimensions inférieures par rapport audit bord de cou-

ronne (24) de la portion endo-osseuse (2), c'est-à-dire, le bord plus extérieur (35) du bord de couronne (33) du faux-moignon (3) est enfoncé par rapport au bord plus extérieur (26) du bord de couronne (24) de la portion endo-osseuse, de manière à ce que le diamètre maximal du bord de couronne (33) du faux-moignon est plus court par rapport au diamètre maximal du bord de couronne (24) de la portion endo-osseuse (2), où chacun desdits bords de couronne (33, 24) repose sur une surface plane, lesdites surfaces n'étant pas parallèles entre elles, où au moins un bord de couronne (33, 24) repose sur une première surface conique alors que l'autre bord de couronne (24, 33) repose sur une deuxième surface plane et linéaire ou une surface conique avec une conicité différente par rapport à ladite première surface, de manière à ce que, une fois que ledit faux-moignon (3) a été greffé sur ladite portion endo-osseuse (2), la surface de contact et d'interférence (51) entre lesdits bords de couronnes (33, 24) est une surface annulaire qui est réduite par rapport à la dimension des mêmes bords de couronnes (33, 24) et proximale par rapport au bord extérieur (35) dudit bord de couronne (33) dudit faux- moignon (3).

2. Implant (1a, 1b, 1c) pour prothèses dentaires selon la revendication 1, **caractérisé en ce que** :

• ledit bord de couronne (33) du faux-moignon (3) est conique, c'est-à-dire, repose sur une surface conique qui s'accroît vers le bas, de manière à ce que le bord extérieur (35) du bord de couronne (33) résulte abaissé par rapport au bord intérieur (36) ;
• ledit bord de couronne (24) de la portion endo-osseuse (2) présente une conicité opposée par rapport à celle dudit bord de couronne (33) du faux-moignon (3), c'est-à-dire, repose sur une surface conique qui s'accroît vers le haut, de manière à ce que le bord extérieur (26) du bord de couronne (24) est soulevé par rapport au bord intérieur (27),

et où, quand ledit faux-moignon (3) est greffé sur ladite portion endo-osseuse (2), la surface de contact et d'interférence (51) des deux bords de couronnes opposés (33, 24) est essentiellement une ligne ou bande circulaire près de ou coïncidant avec ledit bord extérieur (35) du bord de couronne (33) dudit faux-moignon (3).

3. Implant (1a, 1b, 1c) pour prothèses dentaires selon la revendication 1, **caractérisé en ce que** :

- ledit bord de couronne (33) du faux-moignon (3) est conique, c'est-à-dire, repose sur une surface conique qui s'accroît vers le bas, de manière à ce que le bord extérieur (35) du bord de couronne (33) résulte abaissé par rapport au bord intérieur (36) ;
- ledit bord de couronne (24) de la portion endo-osseuse (2) repose sur un plan droit ;

et où, quand ledit faux-moignon (3) est greffé sur ladite portion endo-osseuse (2), la surface de contact et d'interférence (52) des deux bords de couronnes opposés (33, 24) est essentiellement une ligne ou une bande circulaire proximale ou coïncidant avec ledit bord extérieur (35) du bord de couronne (33) dudit faux-moignon (3).

4. Implant (1a, 1b, 1c) pour prothèses dentaires selon la revendication 1, **caractérisé en ce que** :

- ledit bord de couronne (24) de la portion endo-osseuse (2) est conique, c'est-à-dire, repose sur une surface conique qui s'accroît vers le haut, de manière à ce que le bord extérieur (26) du bord de couronne (24) est soulevé par rapport au bord intérieur (27) ;
- ledit bord de couronne (33) du faux-moignon (3) repose sur un plan droit, et où, quand ledit faux-moignon (3) est greffé sur ladite portion endo-osseuse (2), la surface de contact et d'interférence (53) des deux bords de couronnes opposés (33, 24) est essentiellement une ligne ou bande circulaire proximale ou coïncidant avec ledit bord extérieur (35) du bord de couronne (33) dudit faux-moignon (3).

5. Implant (1a, 1b, 1c) pour prothèses dentaires selon les revendications précédentes, **caractérisé en ce que** ladite portion endo-osseuse (2) comprend une cavité axiale de greffage (23) d'un appendice de greffage correspondant (32) dudit faux-moignon (3), et où ladite portion endo-osseuse (2) comprend, à proximité de l'ouverture de ladite cavité d greffage (23), un collier ou saillie annulaire (25) apte à être inséré dans un siège annulaire correspondant (34) présent sur ledit appendice de greffage (32) dudit faux-moignon (3), ladite saillie annulaire (25) et ledit siège annulaire (34) étant délimités extérieurement par lesdits bords de couronnes (24, 33).

6. Implant (1a, 1b, 1c) pour prothèses dentaires selon les revendications précédentes, **caractérisé en ce que** lesdits bords opposés (33, 24) forment un angle de 1-5°.

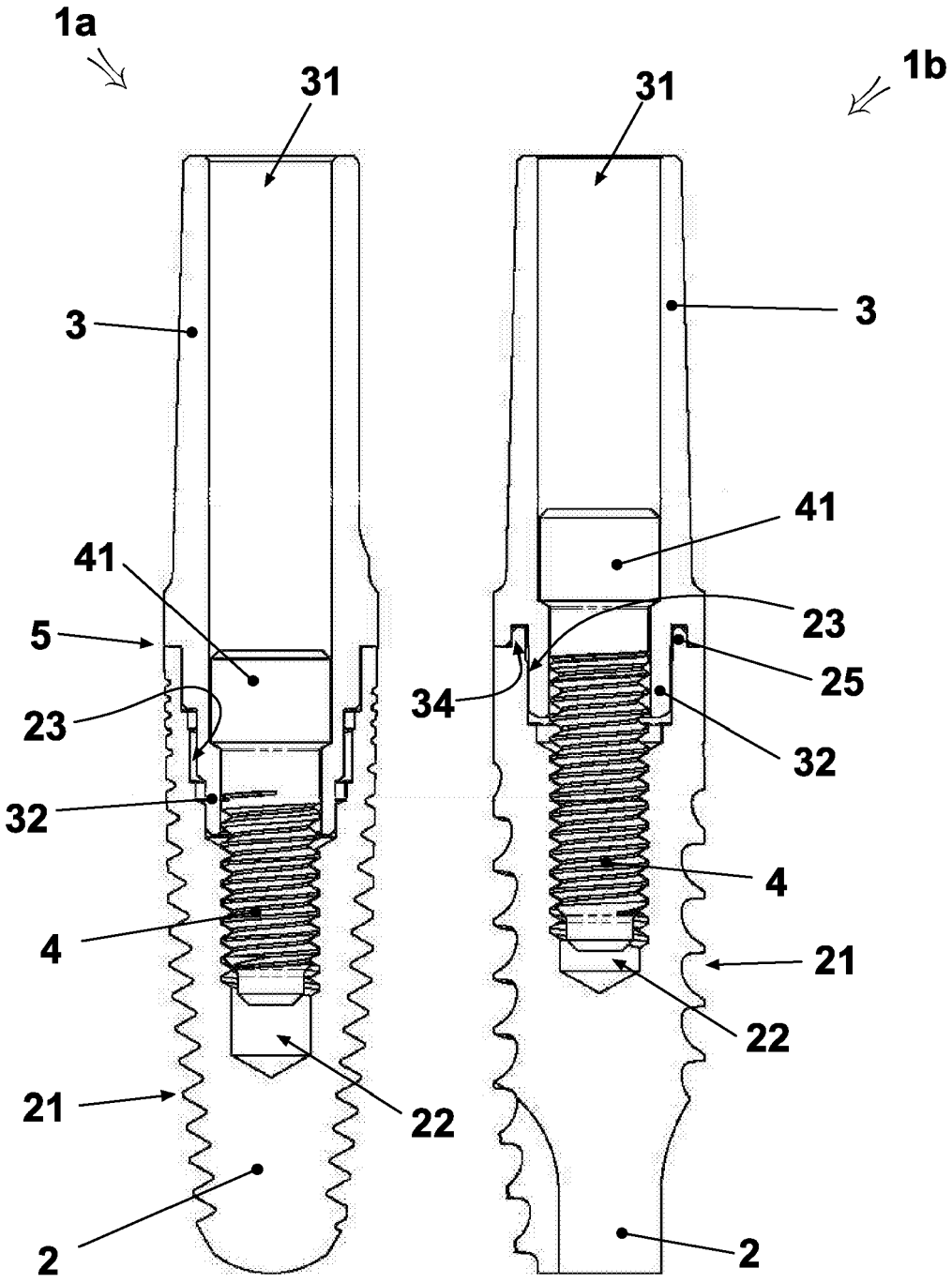

Fig. 1a

Fig. 1b

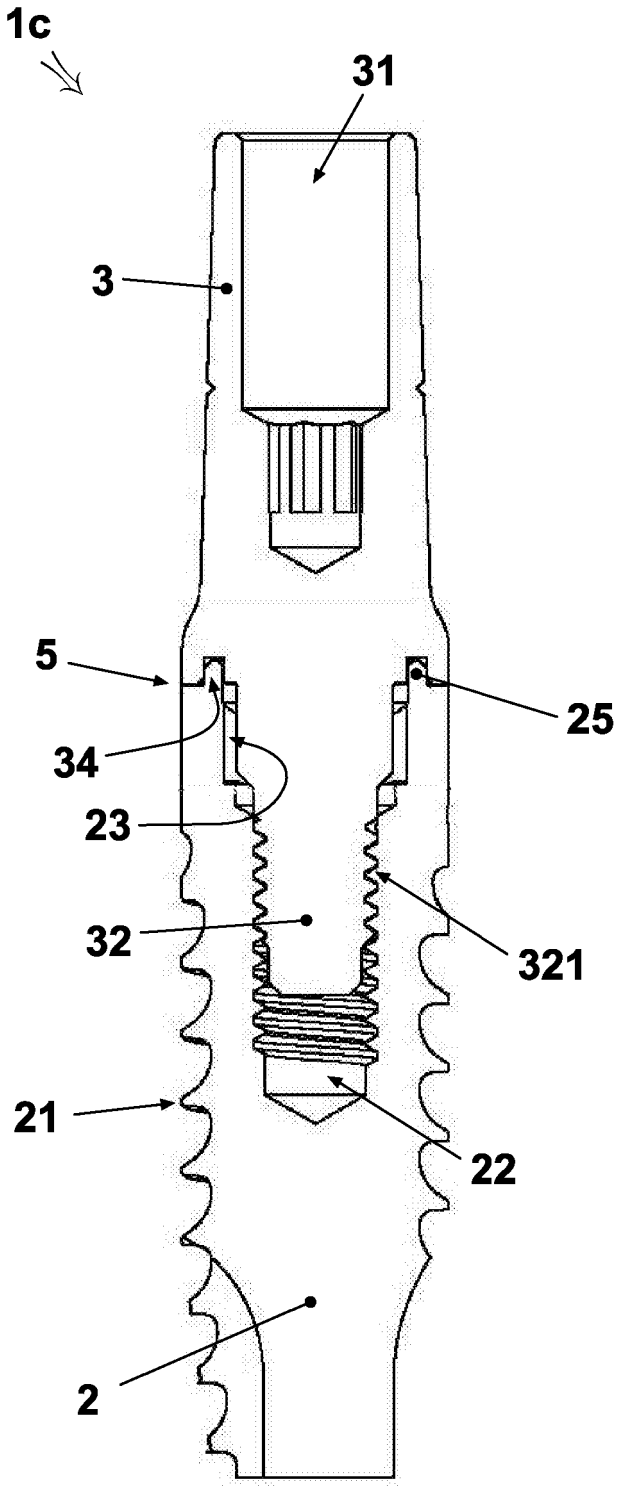

Fig. 1c

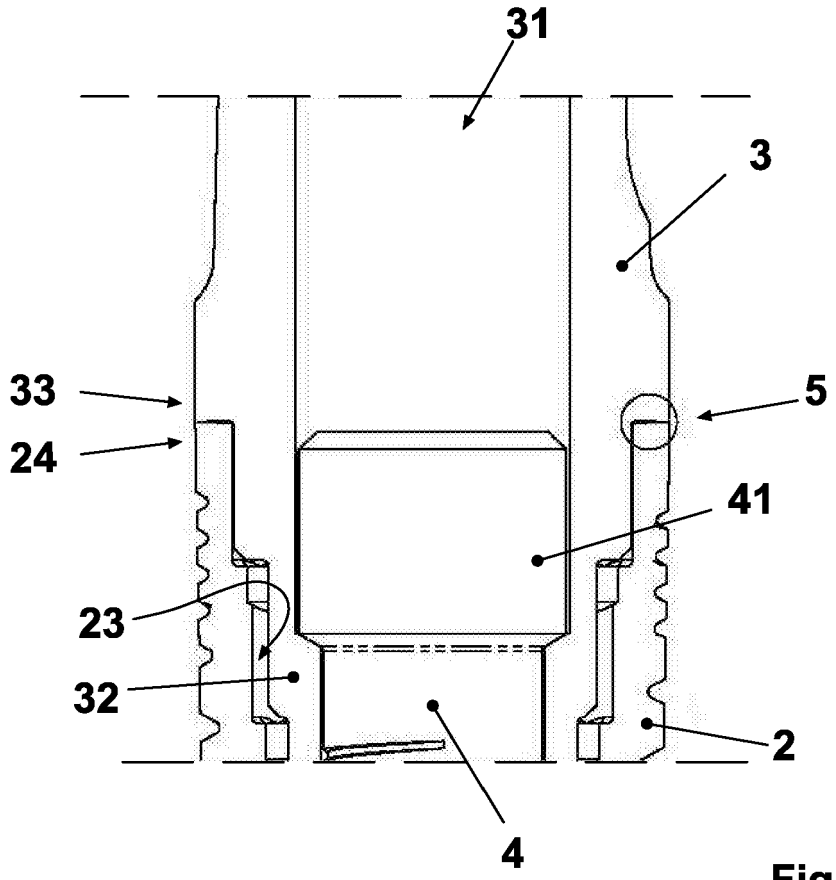

Fig. 2a

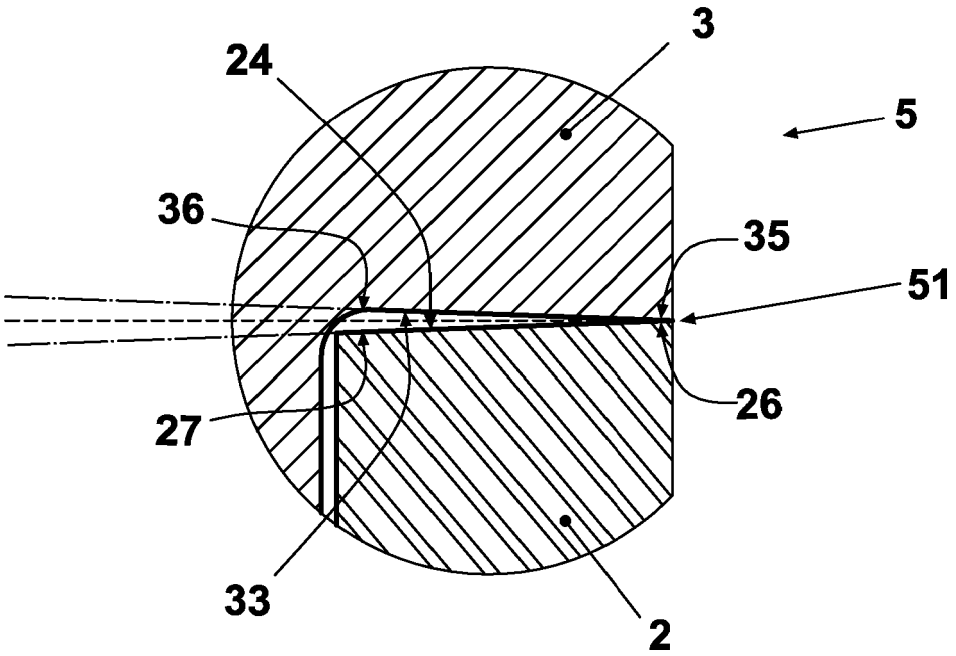

Fig. 2b

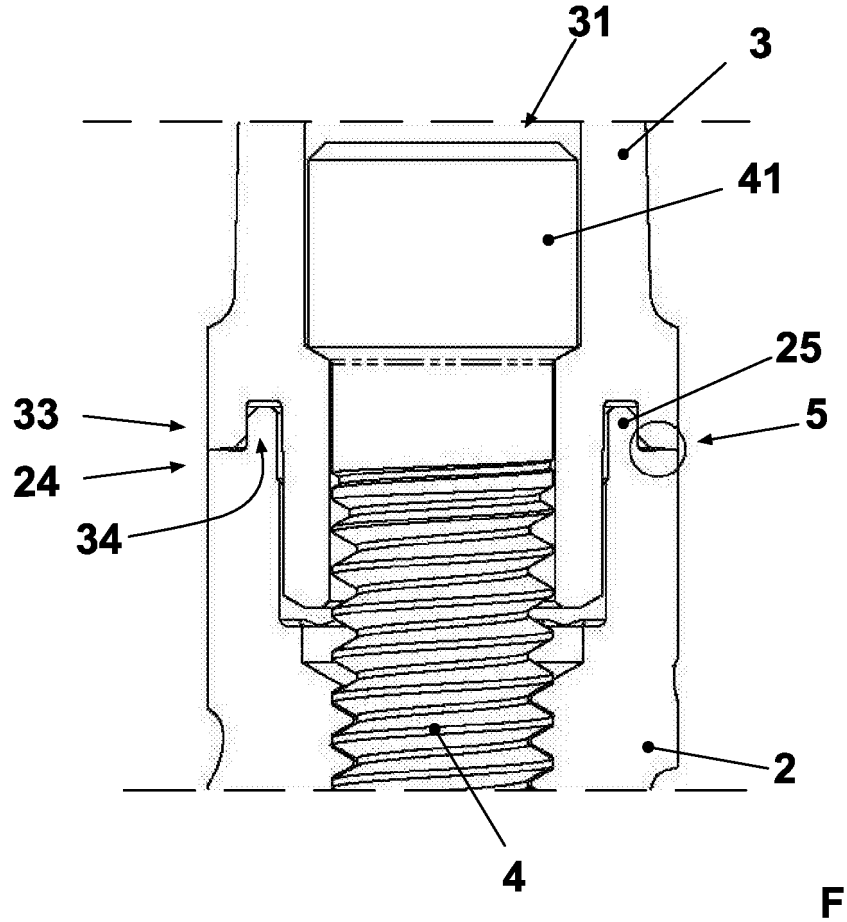

Fig. 3a

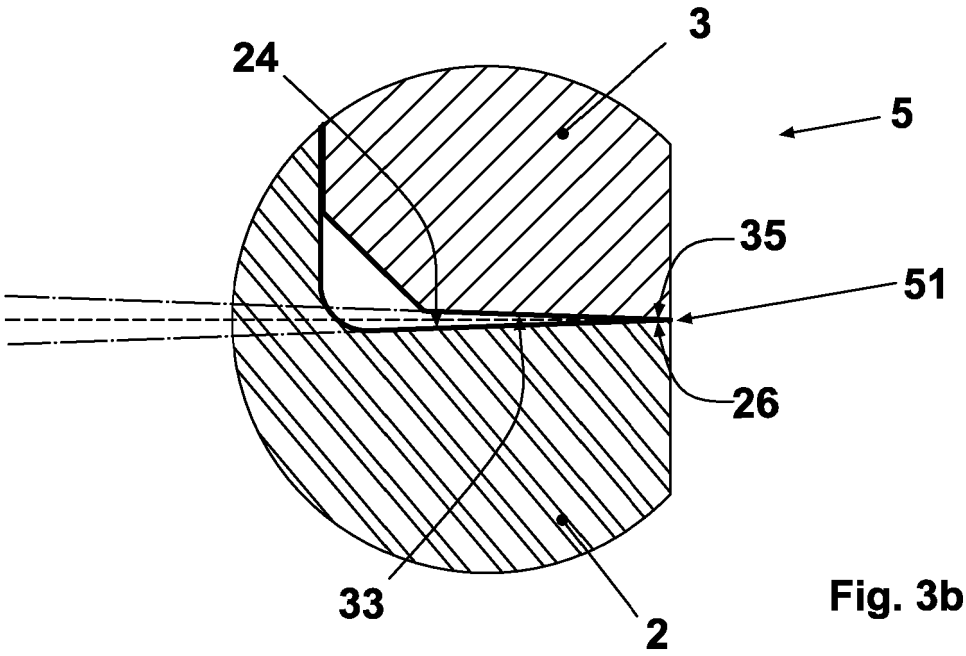

Fig. 3b

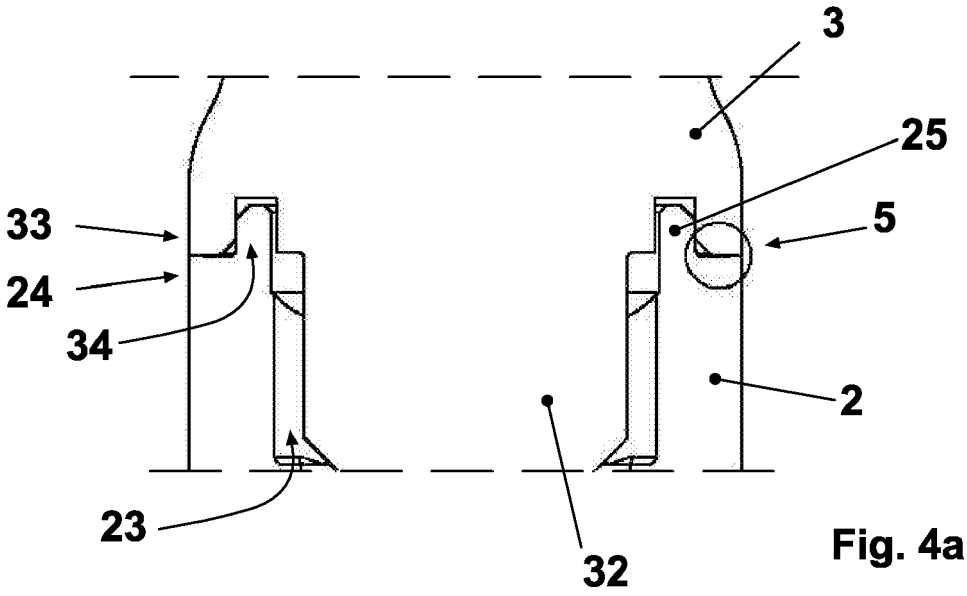

Fig. 4a

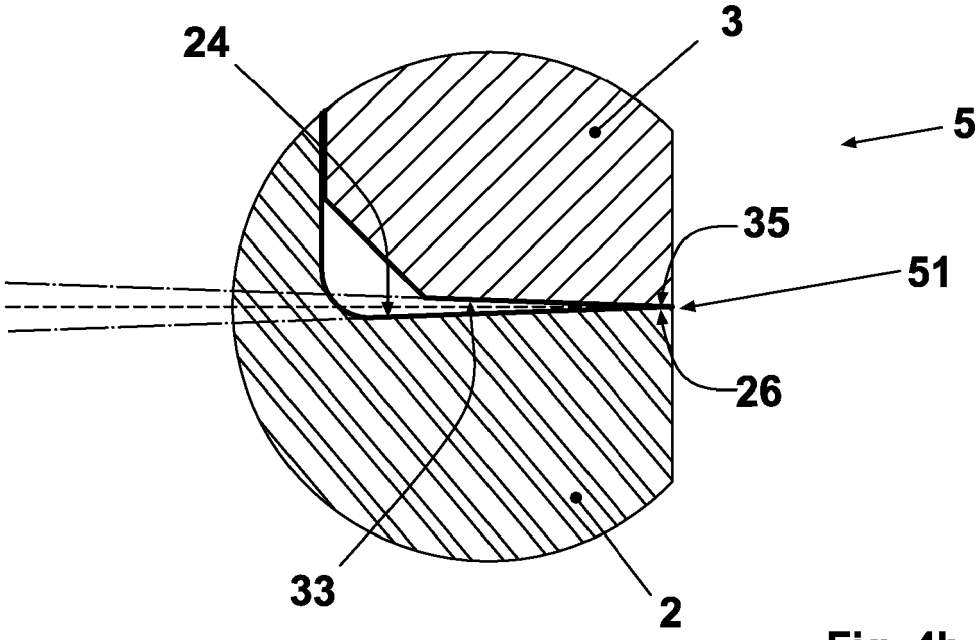

Fig. 4b

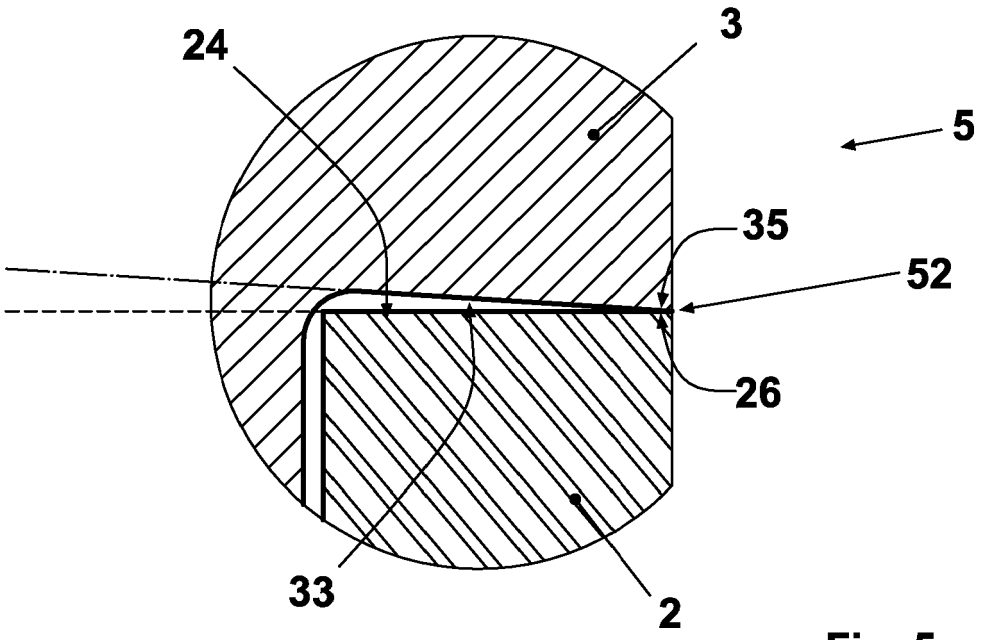

Fig. 5a

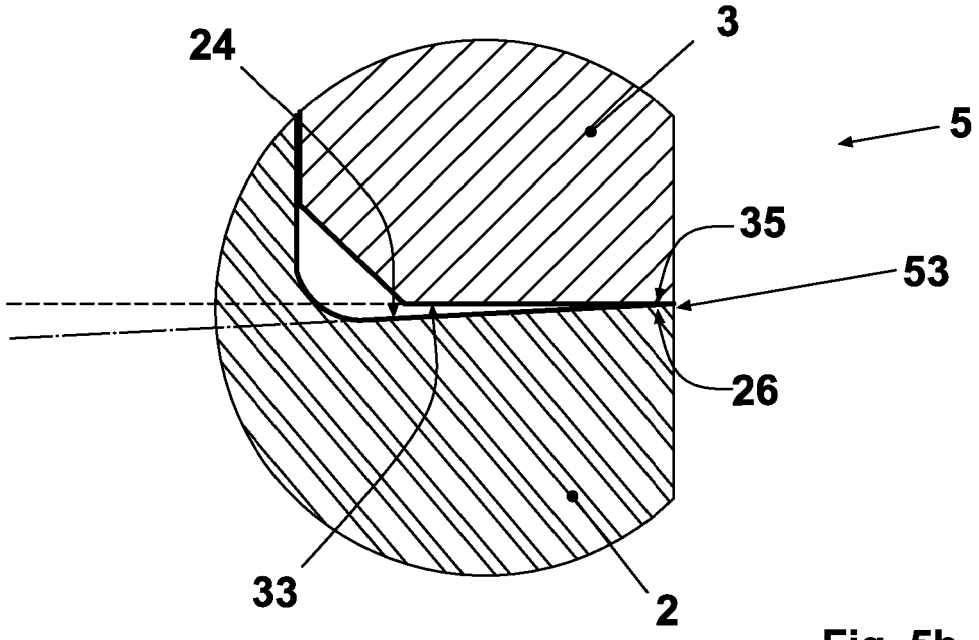

Fig. 5b

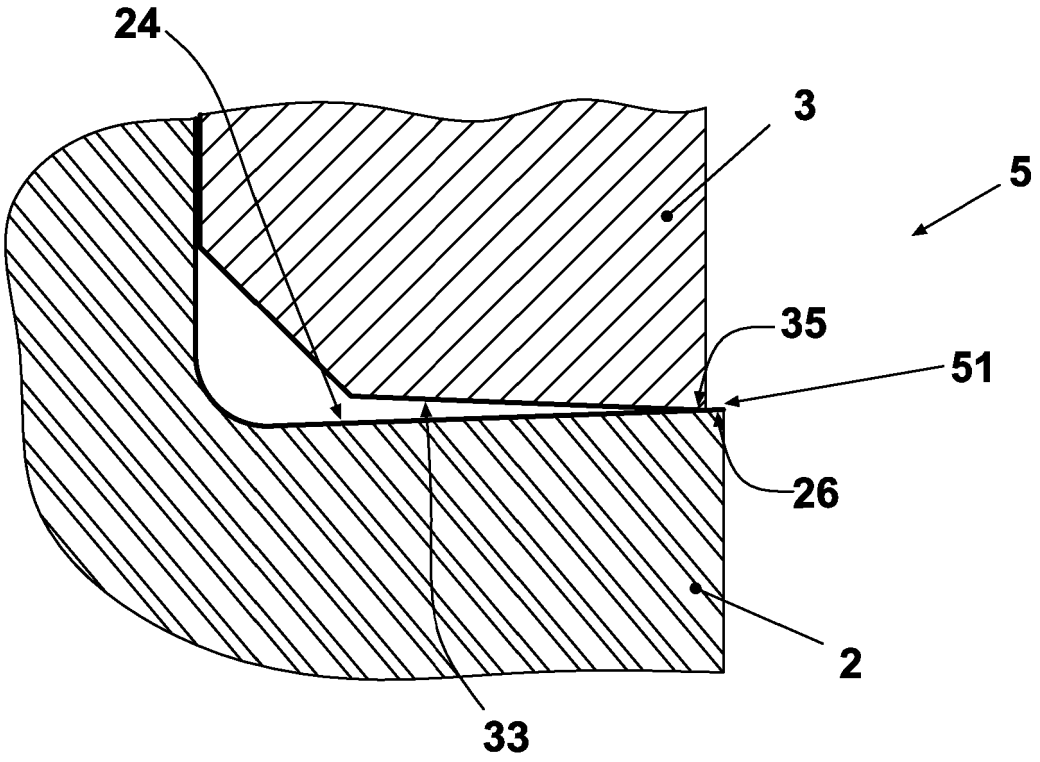

Fig. 6

REFERENCES CITED IN THE DESCRIPTION

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Patent documents cited in the description

- US 4215986 A **[0013]**
- US 6375464 B1 **[0013]**