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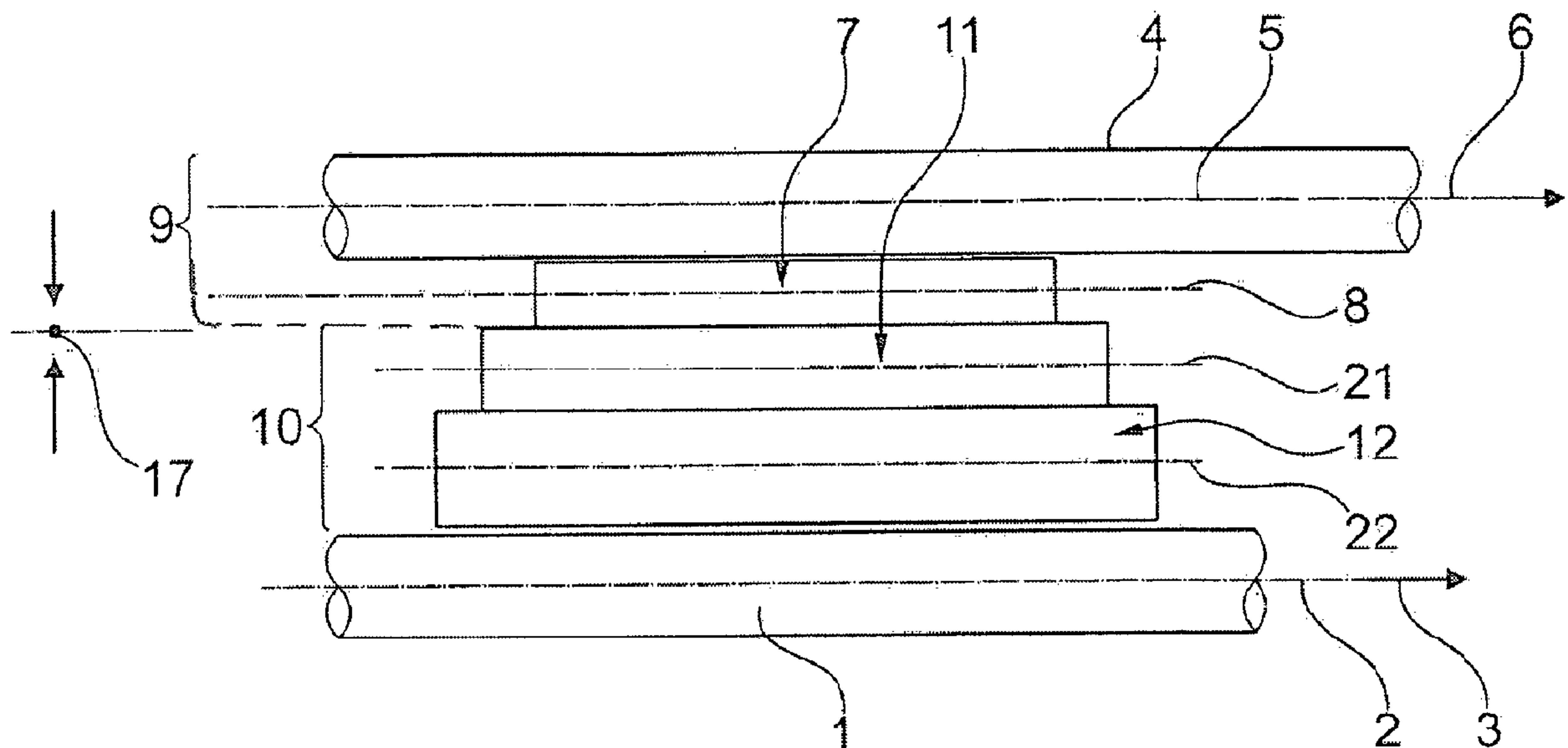
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(54) **Titre : SYSTEME UNIVERSEL DE MONTAGE DE LUNETTES DE VISEE POUR ARMES A FEU DE POING**
(54) **Title: UNIVERSAL RIFLESCOPE MOUNT FOR HAND-HELD WEAPONS**



(57) Abrégé/Abstract:

The invention relates to a riflescope mount for hand-held weapons, comprising at least one base rail which comprises at least a mating plate or mounting elements on weapon side, connected to the weapon, and an adjusting plate adjustable in at least two mutually perpendicular planes and held on mating plate/mounting elements, and whereon riflescope is detachably fixed via a receiving rail or other mounting elements on riflescope side, wherein a separating plane, formed on the adjusting plate, provides an area where the riflescope, together with the receiving rail/other mounting elements on riflescope side, are removable from the weapon and transferable to another weapon, wherein the receiving rail/other mounting elements on riflescope side is/are fixed detachably on the adjusting plate, and association between adjustment of the adjusting plate and the mating plate always firmly connected on weapon side remains the same for said weapon and the other weapon and associated riflescope.

ABSTRACT

The invention relates to a riflescope mount for hand-held weapons, comprising at least one base rail which comprises at least a mating plate or mounting elements on weapon side, connected to the weapon, and an adjusting plate adjustable in at least two mutually perpendicular planes and held on mating plate/mounting elements, and whereon riflescope is detachably fixed via a receiving rail or other mounting elements on riflescope side, wherein a separating plane, formed on the adjusting plate, provides an area where the riflescope, together with the receiving rail/other mounting elements on riflescope side, are removable from the weapon and transferable to another weapon, wherein the receiving rail/other mounting elements on riflescope side is/are fixed detachably on the adjusting plate, and association between adjustment of the adjusting plate and the mating plate always firmly connected on weapon side remains the same for said weapon and the other weapon and associated riflescope.

Universal riflescope mount for hand-held weapons

The invention relates to a universal riflescope mount for hand-held weapons.

Such a riflescope mount is known, for example, as the subject of DE 20 2011 002 180 U1. The known riflescope mount consists of a base rail to be mounted on the profile of the weapon by means of a clamp, said base rail having a longitudinally oriented profiled channel on its upper side which comprises the receiver for the riflescope which is to be inserted and fixed there.

The riflescope can thus be inserted into the receiving channel and singularly fixed there.

The base rail is likewise only connected singularly with the profile of the weapon by means of the clamp. The base rail is therefore in one part and has the disadvantage that a weapon can only be singularly allocated a single riflescope. In the allocation of the riflescope to the one-part base rail according to this prior art, it is necessary to sight-in the weapon together with the riflescope and to correspondingly adjust the riflescope, wherein the adjustment of the riflescope takes place on the adjustment apparatus of the riflescope.

If the user of the weapon now mounts the riflescope on a second weapon, the clamping lever of the one-part base rail is released and the base rail is placed along with the riflescope on the profile of a second weapon. However, this has the disadvantage that the scope is no longer sighted-in and adjusted on the second weapon, whereby a new adjustment of the riflescope is necessary.

This means that the riflescope adjustment with respect to the first weapon is lost, and may only be used on the second weapon. If the user now wishes to reset the riflescope onto the first weapon or to mount it onto a third weapon, according to DE 20 2011 002 180 U1 the adjusting device of the riflescope must be readjusted with respect to the one-part base rail with every transfer of the riflescope.

Adjusting means for adjusting the riflescope are known as the subject of US 2 576 007 A, wherein an adjusting plate is non-adjustably disposed on the weapon. Adjustment takes place via a displacement of the riflescope itself.

US 2,576,007 A relates to a carriage-like structure for mounting a riflescope by means of two half-shells which are fixed on a carriage. The carriage can be adjusted and fixed in longitudinal grooves on a weapon-side bracket, wherein the riflescope rests at its rear end on a height-adjustable bolt and is received at its front end in a prism-shaped receptacle.

It follows herefrom that removal of the riflescope is only possible if the retaining screw is completely removed, in order to remove the entire upper part with the half-shells from the weapon-side base rail. An adjusting plate is not disclosed. An

adjustment in at least two mutually perpendicular planes is not provided.

A riflescope mount is known from US 6 591 538 B2 in which an actuation of the adjusting means is only possible when the riflescope is removed. An transfer of the riflescope to another weapon without re-actuation of the adjusting means is therefore not possible.

It is thus not possible to construct a universal riflescope mount for hand-held weapons of a general type in which it is no longer necessary to readjust a riflescope which has been adjusted to a weapon when the riflescope is transferred to another weapon.

US2011/0099877A shows an accessory holder to which can be allocated a riflescope. The accessory holder is used to hold a light intensifier. The riflescope itself is fitted on the weapon with a fixed, non-adjustable holder.

On the basis of US 6 591 538 B2, one of the objects of the invention is to construct a universal riflescope mount for hand-held weapons of a general type in which it is no longer necessary that a riflescope which has been adjusted to a weapon must be readjusted when the riflescope is transferred to another weapon.

According to an aspect of the invention, there is provided a riflescope mount for hand-held weapons, comprising at least one base rail which is fixed to a weapon and which is detachably connected to at least one fixing means connected to the riflescope, characterized in that the base rail that is mounted on the weapon comprises at least a mating plate mounted on the weapon side or mounting elements on the weapon side, which is/are connected to the weapon, and an adjusting plate which is held on the mating plate or the mounting elements, on which the riflescope is mounted.

According to another aspect of the invention, there can be provided the riflescope mount described herein, characterized in that each of the other weapons is allocated an at least two-part weapon-side base plate, and that in the aligning of the weapon the respective adjusting plate is adjustable to the riflescope.

According to an aspect of the invention, there is provided a riflescope mount for hand-held weapons, comprising at least one base rail which is fixed to a weapon and which is detachably connected to at least one fixing means connected to the riflescope, wherein the base rail that is mounted on the weapon comprises at least a mating plate mounted on the weapon side or mounting elements on the weapon side, which is/are connected to the weapon, and an adjusting plate which is held on the mating plate or the mounting elements such that the adjusting plate can be adjusted in at least two mutually perpendicular planes, and on which the riflescope is detachably fixed via a receiving rail or other mounting elements on the riflescope side, wherein, on the upper side of the adjusting plate there is formed a separating plane, in the area of which the riflescope, together with the receiving rail thereof or other mounting elements on the riflescope side, can be removed from the weapon

and transferred to another weapon, wherein the receiving rail to be mounted on the adjusting plate or other mounting elements on the riflescope side is/are fixed detachably on the adjusting plate by using fixing elements, and the association between the adjustment of the adjusting plate and the mating plate always firmly connected on the weapon side remains the same for said weapon and the other weapon and the associated riflescope.

According to another aspect of the invention, there can be provided the riflescope mount described herein, characterized in that the at least two-part base rail is comprised of a permanently mounted weapon-side mating plate, on which an adjusting plate is disposed which is adjustable in at least two mutually perpendicular spatial axes, on which a receiving rail is disposed, which in turn is fixedly connected with the riflescope.

According to another aspect of the invention, there can be provided the riflescope mount described herein, characterized in that the adjusting plate on the mating plate fixed on the weapon-side is displaceable in the X-Y plane and additionally adjustable in inclination.

According to another aspect of the invention, there can be provided the riflescope mount described herein, characterized in that the receiving rail detachably fixed on the adjusting plate is detachably connected with the riflescope.

According to another aspect of the invention, there can be provided the riflescope mount described herein, characterized in that the riflescope is directly or indirectly fixed on the adjusting plate.

According to another aspect of the invention, there is provided a method for riflescope mounting of a first riflescope on a first weapon having the following steps:

1. The riflescope is placed with its underside mounting, for example a receiving rail or other mounting elements, on an adjusting plate which is adjustable and fixable on the first weapon, and positively connected therewith
2. The first weapon is sighted-in on a target with the first coupled riflescope, whereby the adjusting means between the adjusting plate and a mating plate fixed on the weapon-side is adjusted and then locked
3. The first riflescope is coupled with a second weapon and the adjusting means between the second adjusting plate located there and the weapon-side mating plate is adjusted and then locked
4. The first riflescope is decoupled from the second weapon and coupled with the first weapon, while the adjusting means of the first weapon remains unchanged.

According to another aspect of the invention, there is provided a method for riflescope mounting of a first riflescope on a first weapon having the following steps:

1. The riflescope is placed with its underside mounting, for example a receiving rail or other mounting elements, on an adjusting plate which is adjustable and fixable on the first weapon, and positively connected therewith
2. The first weapon is sighted-in on a target with the first coupled riflescope, whereby the adjusting means between the adjusting plate and a mating plate fixed on the weapon-side is adjusted as desired and then locked or allowed to remain unchanged in its adjustment
3. During step 2, the riflescope-side adjusting means is also actuated
4. The first riflescope is coupled with a second weapon and the adjusting means between the second adjusting plate located there and the weapon-side mating plate is adjusted and then locked or allowed to remain unchanged in its adjustment
5. The first riflescope is decoupled from the second weapon and coupled with the first weapon, while the adjusting means of the first weapon remains unchanged.

According to another aspect of the invention, there can be provided the method described herein, characterized in that the riflescope is mounted only in a central but discretionary position of the adjusting means of the riflescope, and is coupled to the weapon-side adjusting plate in this as yet unadjusted positioning.

According to another aspect of the invention, there is provided a riflescope mount for hand-held weapons, comprising at least one base rail which is fixed to a weapon and which is detachably connected to at least one fixing means connected to the riflescope,

wherein the at least one base rail that is mounted on the weapon comprises at least a mating plate mounted on the weapon side or mounting elements on the weapon side, which is/are connected to the weapon, and an adjusting plate which is held on the at least a mating plate or the mounting elements such that the adjusting plate is adjustable in at least two mutually perpendicular planes, and on which the riflescope is detachably fixed via a receiving rail or other mounting elements on the riflescope side,

wherein, on an upper side of the adjusting plate there is formed a separating plane, in an area of which the riflescope, together with the receiving rail thereof or the other mounting elements on the riflescope side, are removable from the weapon and transferred to another weapon, and

wherein the receiving rail to be mounted on the adjusting plate or other mounting elements on the riflescope side is/are fixed detachably on the adjusting plate by using fixing elements, and the association between adjustment of the adjusting plate and the at least a mating plate always firmly connected on the

weapon side remains the same for said weapon and the other weapon and the associated riflescope.

According to another aspect of the invention, there is provided a method for riflescope mounting of a first riflescope on a first weapon having the following steps:

- placing the riflescope, the riflescope comprising an underside mounting, on an adjusting plate which is adjustable and fixable on the first weapon, and positively connected therewith;

- sighting the first weapon on a target with the first riflescope, whereby adjusting means between the adjusting plate and a mating plate fixed on the weapon-side is adjusted and then locked;

- coupling the first riflescope with a second weapon and a second adjusting means between a second adjusting plate located there and the weapon-side mating plate is adjusted and then locked; and

- decoupling the first riflescope from the second weapon and coupled with the first weapon, while the adjusting means of the first weapon remains unchanged.

According to another aspect of the invention, there is provided a method for riflescope mounting of a first riflescope on a first weapon having the following steps:

- placing the riflescope, the riflescope comprising an underside mounting, on an adjusting plate which is adjustable and fixable on the first weapon, and positively connected therewith;

- sighting the first weapon on a target with the first riflescope, whereby adjusting means between the adjusting plate and a mating plate fixed on the weapon-side is adjusted as desired and then locked or allowed to remain unchanged in its adjustment;

- actuating a riflescope-side adjusting means concurrently with the sighting;

- coupling the first riflescope with a second weapon and a second adjusting means between a second adjusting plate located there and the weapon-side mating plate is adjusted and then locked or allowed to remain unchanged in its adjustment; and

- decoupling the first riflescope from the second weapon and coupled with the first weapon, while the adjusting means of the first weapon remains unchanged.

The invention thus provides a riflescope mount for hand-held weapons, comprising at least one base rail which is fixed to a weapon and which is detachably connected to at least one fixing means connected to the riflescope, wherein the base rail that is mounted on the weapon comprises at least a mating plate mounted on the weapon side or mounting elements on the weapon side, which is/are connected to the weapon, and an adjusting plate which is held on the mating plate or the mounting elements such that the adjusting plate can be adjusted in at least two mutually perpendicular planes, and on which the riflescope is detachably fixed via a receiving rail or other mounting elements on the riflescope side, wherein, on the upper side of the adjusting plate there is formed a separating plane, in the area of which the riflescope, together with the receiving rail thereof or other mounting elements on the riflescope side, can be removed from the weapon and transferred to another weapon, wherein the receiving rail to be mounted on the adjusting plate or other mounting elements on the riflescope side is/are fixed detachably on the adjusting

plate by using fixing elements, and the association between the adjustment of the adjusting plate and the mating plate always firmly connected on the weapon side remains the same for said weapon and the other weapon and the associated riflescope.

A feature of the invention is thus that the base rail mounted on the weapon is constructed in at least two parts and comprises a weapon-side mating plate, which remains mounted on the weapon, and an adjusting plate adjustably mounted on the mating plate, said adjusting plate likewise remaining on the weapon once adjusted and on which adjusting plate the riflescope is detachably and interchangeably fixed.

With this technical teaching, a novel separating plane is defined, which is constructed on the upper side of the at least two-part weapon-side base rail and which provides that the riflescope with its riflescope-side fixing means, which will hereinafter be referred to for simplicity as a receiving rail, can always be removed from the weapon and transferred to another weapon without necessitating the alteration of the adjustment of the riflescope to the weapon-side base rail.

This is achieved according to the invention in that for the at least two-part base rail, the adjusting plate, which is allocated to the weapon-side mating plate and which is disposed above the weapon-side mating plate, is adjustably constructed in at least two mutually perpendicular planes. It is thus only now possible that a plurality of weapons from the same or different manufacturers can be outfitted with a single riflescope without a loss of precision in the transfer to another weapon and without necessitating a change in the adjustment on the riflescope.

This means that any riflescope can be changed onto any desired weapon as often as desired through a one-time only sighting-in, without a loss of precision.

In this way, if a new riflescope is introduced, it need only be sighted-in on one of these weapons, and thus fits on all other weapons without a loss of precision.

Said universal riflescope mount may be used for any desired hand-held weapon, such as hunting and sporting guns, but also for handguns, pistols, revolvers, rifles, carbines and automatic weapons.

It can be used not only for sporting and hunting weapons, but also for all types of hand-held weapons.

An aspect of the invention is thus that the base rail mounted on the weapon consists of at least one weapon-side mating plate or of weapon-side mounting elements which is/are connected with the weapon, and of an adjusting plate adjustably mounted on the mating plate or the mounting elements, said adjusting plate being fixed directly or indirectly on the riflescope.

A two-part base rail is preferably used which comprises a permanently mounted

weapon-side mating plate (or mounting elements equivalent thereto), on which an adjusting plate is disposed which is adjustable in at least two mutually perpendicular spatial axes. A receiving rail is fixed on the adjusting plate, which in turn is fixedly connected with the riflescope.

The use of a receiving rail to mount the riflescope is, however, only to be understood by means of example. Instead of a receiving rail, other types of fastenings may be used, such as two stud bolts which are spaced apart from one another, which are detachably connectable with the adjusting plate or the receiving rail is directly integrated into the body of the riflescope.

The separating plane according to the invention is located on the underside of the riflescope-side receiving rail and on the upper side of the adjusting plate, the adjusting plate being adjustable in at least two spacial axes, so that the riflescope can always be removed from the weapon with the receiving plate fixed on the riflescope and transferred to another weapon.

Each weapon is thus allocated a two-part base rail, wherein according to the invention, during sighting-in of the weapon the adjusting plate is adjusted on the base rail to the riflescope.

The term "two-part base rail" also comprises a one-part base rail, the second part of which - the "weapon-side mating plate" is incorporated directly onto the weapon or comprises only weapon-side fasteners, such as bolts or clamping elements, which take over the function of the weapon-side mating plate. The term "plate" in the weapon-side mating plate is therefore to be understood in its broadest sense. Therefore, this type of weapon-side fixing means is designated generally as a "mounting element."

The allocation of the adjustment of the adjusting plate to the permanently connected weapon-side mating plate remains the same for every weapon and corresponding riflescope.

If thereafter the riflescope is removed from a weapon and transferred to another weapon, the adjustment between the adjusting plate and the mating plate on the second weapon is set up precisely such that the riflescope is aligned and sighted-in on the second weapon with this adjustment.

The invention therefore provides that for the at least two-part, weapon-side base rail, the adjusting plate is designed so as to be adjustable to the mating plate fixed on the weapon by means of any desired adjusting means.

Any desired adjusting means may be used as an adjusting means, such as wedge means, screws, spindle elements, eccentric elements, rotary excenters or clamp excenters and the like.

For the sake of simplicity of description, these adjusting means will no longer be specifically mentioned, as they are left to the discretion of one skilled in the art.

The two-part base plate preferably comprises a metallic material, but can also comprise plastic or a metal-plastic composite. The mating plate fixed on the weapon-side is fixed on the weapon with any desired fixing means, such as a screw, clamp connection, an adhesive connection and the like. It is also possible that this mating plate is prefabricated on the weapon or replaced only by weapon-side fixing elements. After initial mounting, it may remain on the weapon.

The adjusting plate is adjustably designed with respect to the fixedly attached weapon-side mating plate.

The orientation of the adjusting plate is also possible via a rotational motion and not only through laterally parallel displacement, but also by an oblique lateral displacement.

The receiving rail detachably mounted on the adjusting plate is fixed on the adjusting plate with any desired fixing elements. Such detachable fixing elements are, for example, clamping screws, clamping levers, clamp excenters, rotary excenters or wedge elements.

A form-fitting positive fit is achieved between the riflescope-side receiving rail and the weapon-side adjusting plate in the fixed state.

The invention differs in comparison to US 6 591 538 B2 in that the separating plane for the removal of the riflescope is formed above the weapon-side adjustable adjusting plate, such that it is possible for the first time that a plurality of weapons from the same or different manufacturers can be outfitted with a single riflescope without a loss of precision in the transfer to another weapon and without necessitating a change in the adjustment of the riflescope.

This means that any riflescope can be changed onto any desired weapon as often as desired through a one-time only sighting-in, without a loss of precision.

This is because, according to the invention, the mating plate, with the adjusting plate thereover, is fixed to the weapon itself and the adjusting plate is adjusted singularly to a specific riflescope. The adjusting plate, which is adjusted singularly on the weapon to a riflescope associated therewith, always remains on the weapon itself.

If the riflescope with the receiving rail thereunder or other weapon-side mounting elements is now removed from its secured and positive fit from the upper side of the adjusting plate and set on a different weapon, it is provided that the adjusting plate on the other weapon is likewise adjusted to the riflescope.

8a

It is thus possible for the first time that one can use one or more different riflescopes on any desired weapons, as each weapon is allocated a singularly adjusted adjusting plate which remains on the weapon and remains fixedly adjusted.

The further advantage thus also exists that one may place different riflescopes on a respective adjusting plate on the weapon, without a loss of precision.

The invention is hereinafter described in greater detail with reference to drawings showing only one possible embodiment. From the drawings and their description follow further features and advantages of the invention.

Figure 1: shows a schematic side view of a universal riflescope mount according to the invention in an equipped state on a first weapon

Figure 2: shows a top view of the arrangement according to figure 1 in an equipped and adjusted state

Figure 3: shows an end view of the first weapon according to figures 1 and 2

Figure 4: shows a top view of the arrangement of a second weapon when the riflescope of the first weapon is mounted on a second weapon

Figure 5: shows an end view of the riflescope mount on the second weapon

Figure 6: shows a side view of the riflescope mount on the second weapon

Figure 7: shows a perspective view of the universal riflescope mount with representations of different weapons.

In the illustrations, a weapon barrel 1 is schematically represented, the longitudinal axis 2 of which is pointed in a particular arrow direction 3, the shot being released in this arrow direction.

The weapon barrel 1 is allocated a riflescope 4, which is aligned with its optical axis 5 to the target to be hit (for instance at a distance of 100 meters), wherein the optical axis 5 having the arrow direction 6 must correspond in the area of approximately 100 meters with the release of the shot in arrow direction 3. The weapon is thus sighted-in together with the riflescope on a target at a distance of 100 m.

According to the invention, an at least two-part base rail 10 is mounted on the weapon barrel 1, the base rail comprising a lower mating plate 12 directly fixed on the weapon, which forms a longitudinal axis 22.

8b

An adjusting plate 11 adjustable in at least two spatial planes is mounted on the mating plate 12 and designed to be adjustable and fixable by means of adjusting means. In a preferred embodiment, it is displaceable in the X-Y plane and additionally adjustable in inclination. Regarded is therefore an adjusting plate which is adjustable in three spatial directions (X, Y, Z).

According to figure 1, a receiving rail 7 is detachably fixed on the adjustable adjusting plate 11, the receiving rail remaining fixed on the riflescope.

According to the invention, the separating plane 17 is thus formed in the universal riflescope mount on the underside of the riflescope-side receiving rail 7 and the upper side of the weapon-side adjustably designed adjusting plate 11.

The riflescope thus forms the upper part 9 of the riflescope mount. The upper part comprises the riflescope 4 itself and the receiving rail 7 fixed to the riflescope.

The longitudinal axis of the adjusting plate 11 is designated as 21. The longitudinal axis of the receiving rail is designated as 8.

Figures 2 and 3 show the top view and the end view of a riflescope 4 adjusted on the weapon barrel 1.

It can be seen here that the optical axis 5 of the riflescope 4 approximately matches the longitudinal axis 2 of the weapon barrel 1, so that the riflescope sights in the same longitudinal axis as the firing of the shot in arrow direction 3.

This is indicated by the arrow direction 6.

Figure 3 shows an end view in which the allocation of said parts can be seen. An aspect of the invention is that the separating plane 17 is formed between the upper side of the adjusting plate 11 and the underside of the riflescope-side receiving rail 7.

If such an arrangement is transferred to a second weapon, said parts are separated from one another in the separating plane 17, and the upper part 9 (including the riflescope 4) is placed on a second weapon. This is evident in figures 4 to 6.

The second weapon is shown in figures 4 to 6. All parts of the second weapon are designated with the letter "a." It can be seen that the weapon-side adjusting plate 11a and the mating plate 12a mounted on the second weapon may possibly now be displaced with respect to the weapon barrel of the second weapon. This is due to the angle of deviation 13 which is established in the X direction.

The adjusting means 14, 15, 16 are now actuated, wherein for example the adjusting means 14, 15 act in the X-Y plane, while the adjusting means 16 acts in the Z plane perpendicular thereto.

8c

These setting means allow the adjusting plate 11a to be readjusted, so that a correct attachment is obtained for the riflescope 4. By means of the singular adjustment of the adjusting plate 11a to the riflescope 4, the riflescope 4 is thus repeatably and singularly allocated to the singularly adjusted adjusting plate 11a, and this adjustment need not be changed.

The riflescope 4 can thus be placed with its receiving rail 7 on a weapon-side adjusted adjusting plate 11a and the associated mating plate 12a of the second weapon, and is immediately properly adjusted without the need for further adjustment.

Of course, this process can be repeated with additional weapons, whereby it is always necessary that an at least two-part base rail 10 is disposed on each weapon, which is formed from a mating plate 12 which is fixed to the weapon and an adjustable adjusting plate 11a or 11 connected to the mating plate.

Figures 5 and 6 show the adjustments that may be singularly necessary on the second weapon. In figure 5 is illustrated an adjustment path 18 that is here adjusted with the adjusting means 16 in the Z direction.

The letter a always indicates that the part belongs to the second weapon.

Figure 6 shows the resulting angle of deviation 19 in the Z direction, which is adjusted by singular adjustment of the adjusting plate 11a remaining on the second weapon. The longitudinal axis 21 is set accordingly. Of course, the other longitudinal axes also change accordingly, as is shown in figure 6.

This is particularly true for the longitudinal axis 21a of the adjusting plate 11a.

The present invention makes clear that a universal riflescope mount for any desired hand-held weapon is provided in that the riflescope with a receiving rail 7 allocated thereto or another detachable mount is held on an at least two-part base rail, and that the base rail comprises a mating plate which is fixedly connectible to the weapon and an adjusting plate 11a which is displaceable and adjustable as well as fixable hereon.

The riflescope-side receiving rail 7 is thus detachably, form-fittingly and positively as well as securely fixed on the adjusting plate 11.

An aspect of the invention is, therefore, that a separating plane 17 is formed on the upper side of the at least two-part, weapon-side base rail 10, in the region of which the riflescope 4 with its riflescope-side fixing means (for example receiving rail 7) is removable from the weapon 1 and transferable to another weapon, without necessitating a change in the adjustment of the riflescope to the weapon-side base rail 10, and that an adjusting plate 11 disposed above the weapon-side mating plate 12 is formed adjustably in at least two mutually perpendicular planes, on the upper

8d

side of which is formed the separating plane 17.

Figure 7 shows the exchange system according to the invention for a universal riflescope mount, wherein with reference to an example of three different weapons 23a, 23b, 23c will be explained that on each of the individual weapons, a desired riflescope 4a, 4b, 4c can be mounted.

Characteristic of each weapon is the so-called weapon-side base rail 10, which comprises according to the drawing of figure 1 two mutually adjustable plates, namely the mating plate 12 which is directly mounted on the weapon barrel 1 and an adjusting plate 11 disposed thereover, which is designed adjustably to the mating plate 12.

In the illustrated embodiment, the mating plate 12 is not visible, but instead it is only the adjusting plate 11a, 11b, 11c, adjustably mounted on the mating plate 12, which is visible.

The three weapons are respectively denoted by the lowercase letters a, b, c. The same applies to the associated riflescope systems, which are therefore also denoted by the lowercase letters a, b, and c.

Because all weapon components and all riflescope components are identical, the corresponding numbers in the drawings are only partially designated by the lowercase letters a, b, c. For the sake of better clarity, identical parts are designated by the same reference characters, however are indicated on various weapons and parts thereof.

Accordingly, the adjusting plate 11a, 11b, 11c is adjustably mounted on each weapon 1a, 1b, 1c. The operation is performed once in the lateral adjustment direction 13 and secondly in the height adjustment direction 19.

Each riflescope system has on its underside a receiving rail 7a, 7b, 7c, which is firmly fixed on the bottom of the riflescope 4a, 4b, 4c and which is not adjustable.

Only the riflescope itself is adjustable to the receiving rail 7a, 7b, 7c laterally and in height. This is represented on each riflescope 4 by the height adjustment 33 and the lateral adjustment 34.

It is important that the receiving rail 7a, 7b, 7c can be directly coupled with the adjusting plate 11 and that no adjusting means are present in the region of the coupling. A non-displaceable, positive connection between the riflescope-side receiving rail 7 and the weapon-side adjusting plate 11a, 11b, 11c results in that a locking bolt 24a, 24b, 24c is disposed on the underside of the riflescope-side receiving rail 7, the locking bolt engaging in a corresponding clamp receiver 30 on the upper side of the adjusting plate 11a, 11b, 11c and being fixed by means of rotation of the clamping lever 27 in the direction of arrow 28 about the rotational axis 29.

The positive coupling of the respective riflescope-side receiving rail 7 on the weapon-side adjusting plate 11 further results in that two slot nuts 25 are arranged at a distance and parallel to one another on the underside of the riflescope-side receiving rail 7 and positively engage corresponding transverse grooves 26 which are disposed at a distance from one another on the surface of the adjusting plate 11, where said slot nuts are immovably and securely fixed.

According to a first embodiment of the present invention, it is provided that by means of the adjusting means 33, 34 on the riflescope and by means of the unchanged adjusting means on the weapon-side (the lateral adjustment screw 31 and height adjustment screw 32), an alignment of the riflescope with respect to the weapon barrel 1 takes place.

With the receiving rail 7 coupled to the adjusting plate 11, the riflescope is aligned with respect to the weapon barrel 1 by means of actuation of its adjusting means 33, 34 and the weapon 23 is thus sighted-in.

This embodiment thus relates to the first possibility of a universal adjustment such as occurs in an alignment of the riflescope 4 on the weapon-side of weapon barrel 1 with the adjusting means 33, 34 of the riflescope and with the unchanged adjusting means 31, 32.

A second embodiment of the universal adjustability relates to the fact that the riflescope 4 is mounted only in a central but discretionary position of the adjusting means of the riflescope, and is coupled to the weapon-side adjusting plate 11 in this as yet unadjusted positioning.

The riflescope is now aligned and sighted-in with the weapon barrel 1 on the target with an adjusting process and through actuation of the weapon-side adjusting means 31, 32.

Both types of adjustment are equally valid and one or the other type is applied through the choice of the user.

Hereafter will be described the universal riflescope mount.

It is assumed that the riflescope 4a has been aligned and sighted-in on the weapon 23a.

In order to enable a universal transferability of the same riflescope 4a to a second weapon 23b and/or a third weapon 23c, the following steps are taken:

1. The riflescope which has been aligned and sighted-in on the weapon 23a is removed from the weapon 23a and mounted on the weapon 23b. Nothing is changed on the riflescope-side adjusting means 33, 34.
2. Following the coupling of the riflescope 4a on the weapon 23b, the riflescope 4a is sighted-in on the target on the weapon 23b, in that the weapon-side adjusting means 31, 32 are actuated. The riflescope 4a is thus also aligned and sighted-in on the weapon 23b.
3. The same process applies for the further weapon 23c, which is merely shown by way of example, as there are any number of weapons and any number of riflescopes which can be mounted on the weapon.

Here, too, in the next step occurs the decoupling of the riflescope 4a from the weapon 23b, and the riflescope 4a is placed on the weapon 23c and the weapon 23c is sighted-in with the riflescope 4a through actuation of the weapon-side adjusting means 31, 32.

If the riflescope 4a mounted on the weapon 23c is now used again with the weapon 23a, it is sufficient to positively (and thus non-displaceably) couple the riflescope 4a with its riflescope-side receiving rail 7 on the weapon-side adjusting plate 11, without necessitating a change of the riflescope-side adjusting means 33, 34 or the weapon-side adjusting means 31, 32.

One can thus place and couple the riflescope 4a on any desired weapon 23a, 23b, 23c, because all of the weapon-side base rails 10 are aligned with the respective riflescope 4a.

The same process also applies to all other systems.

If another riflescope, for instance the riflescope 4b or 4c, is now mounted on the weapon 23a, 23b, 23c, the following applies:

The second or third riflescope 4b, 4c is now placed and coupled with the non-adjustably formed riflescope-side receiving rail 7b, 7c on the desired weapon-side base rail 10a, 10b, 10c with the fixedly adjusted adjusting plate 11a, 11b, 11c.

It is important here that nothing is changed on the weapon-side adjusting means 31, 32, but rather for the second and third riflescope only the riflescope-side adjusting means 33, 34 is changed when mounting on the weapon 23a is undertaken. The riflescope 4b is adjusted accordingly to the weapon 23a. This second riflescope 4b and logically also the third riflescope 4c thus now fit every weapon 23a, 23b, 23c which has been sighted-in with the riflescope 4a.

Namely, once the riflescope 4b has been zeroed-in on a weapon, for instance the weapon 23a, in that the riflescope-side adjusting means 33, 34 is actuated, a transfer of the second riflescope 4b or the third riflescope 4c to the further weapons 23b and 23c necessitates no new adjustment of the riflescope-side adjusting means 33, 34. Likewise, it is no longer necessary that the weapon-side adjusting means 31, 32 be actuated.

Herefrom arises the importance of the universal riflescope mount, as for every second and third and all further riflescopes, it is only necessary to adjust these second and third riflescopes 4b, 4c one time to a single weapon, for example the weapon 23a, wherein thereby the riflescope-side adjusting means 33, 34 are actuated, and thereafter the riflescope 4b and all further riflescopes can be transferred to any desired further weapons 23b and 23c, without necessitating a change of the weapon-side adjustments 31, 32 or the rifle-side adjusting means 33, 34.

An advantage of the universal riflescope mount is that the user may now possess a number of weapons, for instance the weapons 23a, 23b and 23c and a variety of different riflescopes 4a, 4b, 4c.

He can now mount in any desired manner each individual riflescope on each

individual weapon, without needing to change anything on the riflescope-side adjusting means 33, 34 or the weapon-side adjusting means 31, 32. It is thus avoided that each weapon must be fixedly allocated to a single riflescope, which is sighted-in solely on this weapon and which may no longer for the entire period of use of the weapon be taken down from the weapon and used for another weapon.

This is therefore associated with the advantage that expensive riflescopes can be used and a single expensive riflescope can be used for a variety of weapons, resulting in universal applicability.

The coupling between the riflescope and the weapon-side always occurs without tools through actuation of the lever 27.

With the invention is also achieved a compatibility of weapons to a desired number of riflescopes, which was previously not possible.

If the weapon is used, for example, as a hunting weapon, it is known that the hunter preferably uses three different riflescopes that are adapted to the type of hunting. This could be, for example, a sitting game scope, a drive hunting scope and a reflex sight, respectively of high quality execution with a high degree of light amplification. It is only now possible to use such valuable scopes on a variety of hunting weapons, without the need for labor-intensive transfer and a loss of precision.

Drawings Legend

1	weapon barrel (receiver/bascule/housing, sleeve)
2	longitudinal axis
3	directional arrow
4	riflescope
5	optical axis
6	directional arrow
7	receiving rail (riflescope 4)
8	longitudinal axis (of 7)
9	upper part
10	base rail (weapon-side)
11	adjusting plate 11a
12	mating plate 12a
13	angle of deviation (X-plane)
14	adjusting means
15	adjusting means
16	adjusting means
17	separating plane
18	adjustment path
19	angle of deviation (height)
21	longitudinal axis (of 11)
22	longitudinal axis (of 12)
23	weapon
24	locking bolt
25	slot nuts
26	transverse grooves
27	clamping lever
28	directional arrow
29	rotational axis
30	clamp receiver
31	weapon-side adjusting means (lateral adjustment screw)
32	weapon-side adjusting means (height adjustment screw)
33	riflescope-side adjusting means
34	riflescope-side adjusting means

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A riflescope mount for hand-held weapons, comprising at least one base rail which is fixed to a weapon and which is detachably connected to at least one fixing means connected to the riflescope,

wherein the at least one base rail that is mounted on the weapon comprises at least a mating plate mounted on the weapon side or mounting elements on the weapon side, which is/are connected to the weapon, and an adjusting plate which is held on the at least a mating plate or the mounting elements such that the adjusting plate is adjustable in at least two mutually perpendicular planes, and on which the riflescope is detachably fixed via a receiving rail or other mounting elements on the riflescope side,

wherein, on an upper side of the adjusting plate there is formed a separating plane, in an area of which the riflescope, together with the receiving rail thereof or the other mounting elements on the riflescope side, are removable from the weapon and transferred to another weapon, and

wherein the receiving rail to be mounted on the adjusting plate or other mounting elements on the riflescope side is/are fixed detachably on the adjusting plate by using fixing elements, and the association between adjustment of the adjusting plate and the at least a mating plate always firmly connected on the weapon side remains the same for said weapon and the other weapon and the associated riflescope.

2. The riflescope mount for hand-held weapons according to claim 1, wherein the base rail that is mounted on the weapon comprises at least a mating plate mounted on the weapon side or mounting elements on the weapon side, which is/are connected to the weapon, and an adjusting plate which is held on the mating plate or the mounting elements, on which the riflescope is mounted.

3. The riflescope mount according to claim 1 or 2, wherein each of the other weapons is allocated an at least two-part weapon-side base plate, and that in the

aligning of the weapon the respective adjusting plate is adjustable to the riflescope.

4. The riflescope mount according to any one of claims 1 to 3, wherein the at least one base rail comprises a permanently mounted weapon-side mating plate, on which the adjusting plate is disposed which is adjustable in at least two mutually perpendicular spatial axes, and whereon the receiving rail is disposed, said receiving rail being fixedly connected with the riflescope.

5. The riflescope mount according to any one of claims 1 to 4, wherein the adjusting plate on the at least a mating plate fixed on the weapon-side is displaceable in the X-Y plane and additionally adjustable in inclination.

6. The riflescope mount according to any one of claims 1 to 5, wherein the receiving rail detachably fixed on the adjusting plate is detachably connected with the riflescope.

7. The riflescope mount according to any one of claims 1 to 5, wherein the riflescope is directly or indirectly fixed on the adjusting plate.

8. A method for riflescope mounting of a first riflescope on a first weapon having the following steps:

placing the riflescope, the riflescope comprising an underside mounting, on an adjusting plate which is adjustable and fixable on the first weapon, and positively connected therewith;

sighting the first weapon on a target with the first riflescope, whereby adjusting means between the adjusting plate and a mating plate fixed on the weapon-side is adjusted and then locked;

coupling the first riflescope with a second weapon and a second adjusting means between a second adjusting plate located there and the weapon-side mating plate is adjusted and then locked; and

decoupling the first riflescope from the second weapon and coupled with the first weapon, while the adjusting means of the first weapon remains unchanged.

9. The method according to claim 8, wherein the underside mounting comprises a receiving rail or other mounting elements.

10. A method for riflescope mounting of a first riflescope on a first weapon having the following steps:

placing the riflescope, the riflescope comprising an underside mounting, on an adjusting plate which is adjustable and fixable on the first weapon, and positively connected therewith;

sighting the first weapon on a target with the first riflescope, whereby adjusting means between the adjusting plate and a mating plate fixed on the weapon-side is adjusted as desired and then locked or allowed to remain unchanged in its adjustment;

actuating a riflescope-side adjusting means concurrently with the sighting;

coupling the first riflescope with a second weapon and a second adjusting means between a second adjusting plate located there and the weapon-side mating plate is adjusted and then locked or allowed to remain unchanged in its adjustment; and

decoupling the first riflescope from the second weapon and coupled with the first weapon, while the adjusting means of the first weapon remains unchanged.

11. The method according to claim 10, wherein the underside mounting comprises a receiving rail or other mounting elements.

12. The method according to claim 10 or 11, wherein the first riflescope is mounted only in a central but discretionary position of the adjusting means of the riflescope, and is coupled to the adjusting plate in this as yet unadjusted positioning.

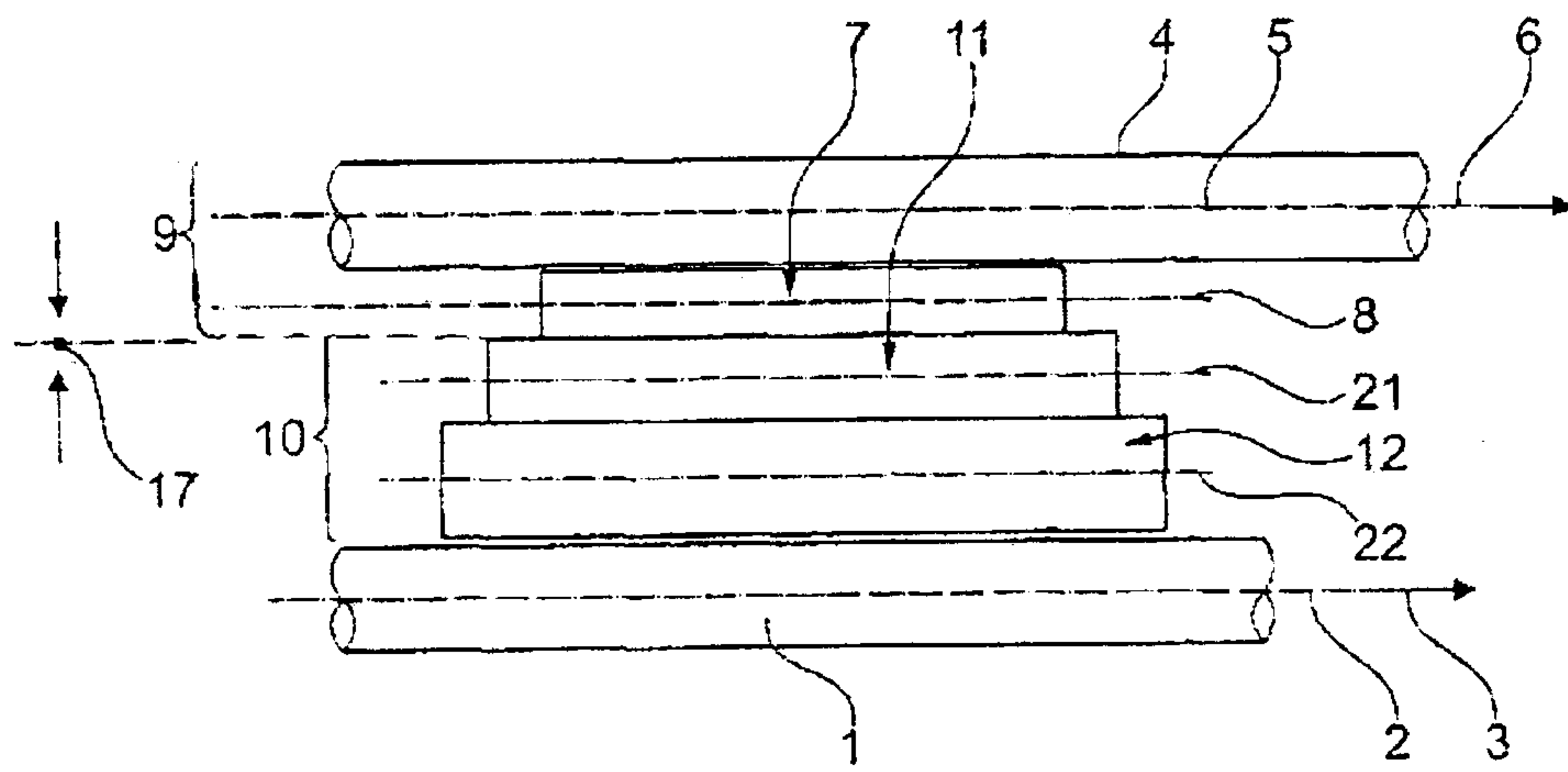


Fig. 1

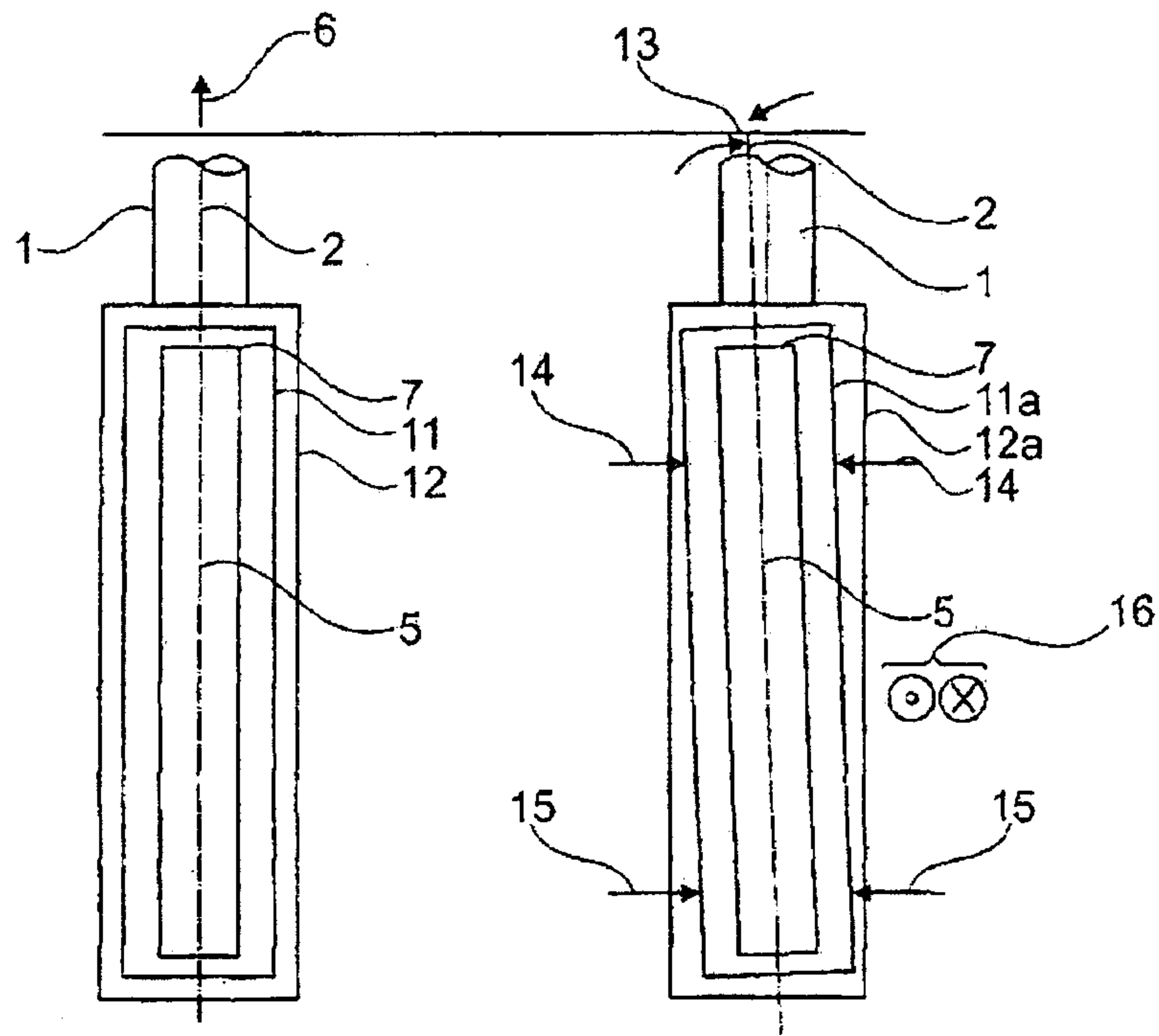


Fig. 2

Fig. 4

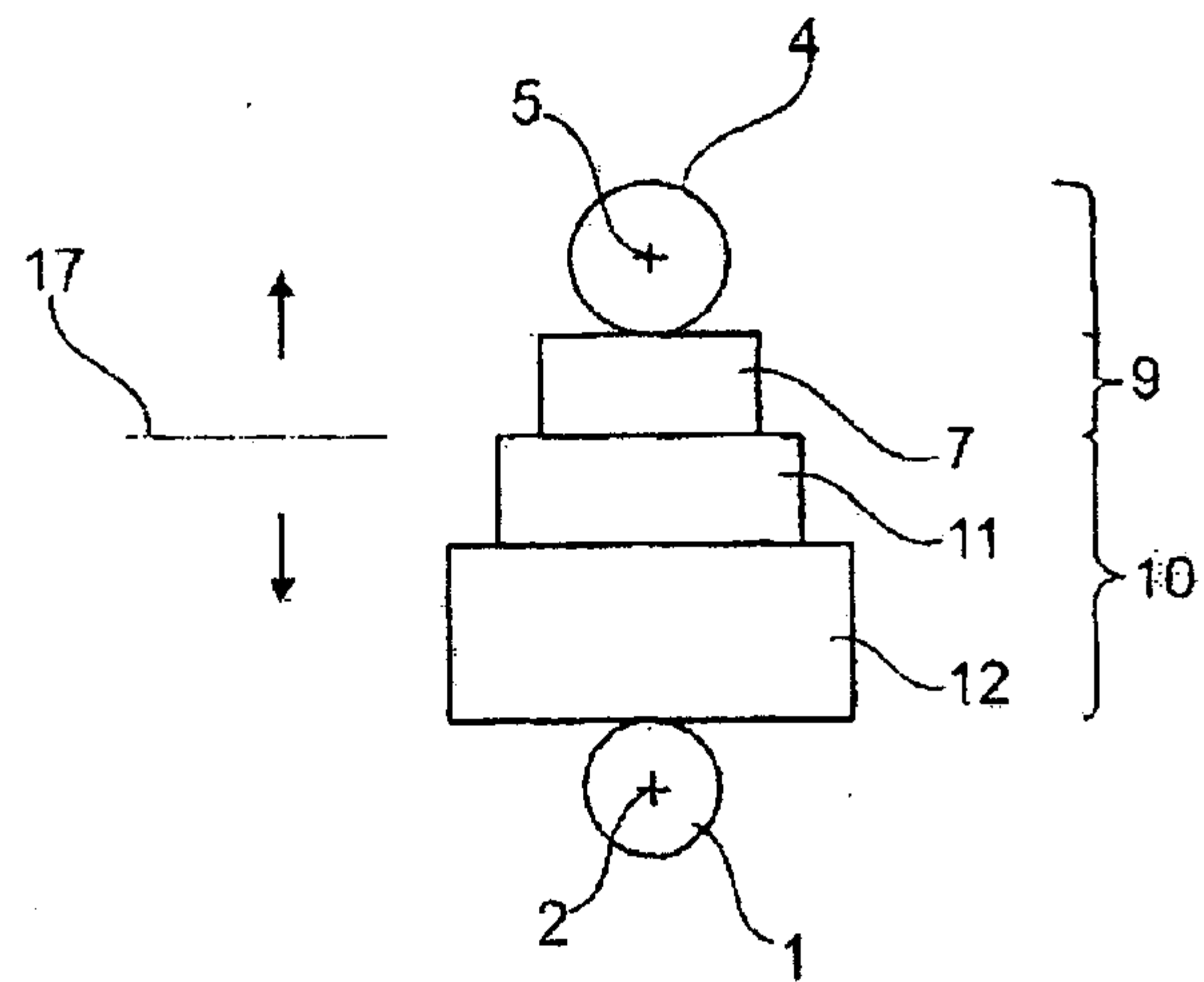


Fig. 3

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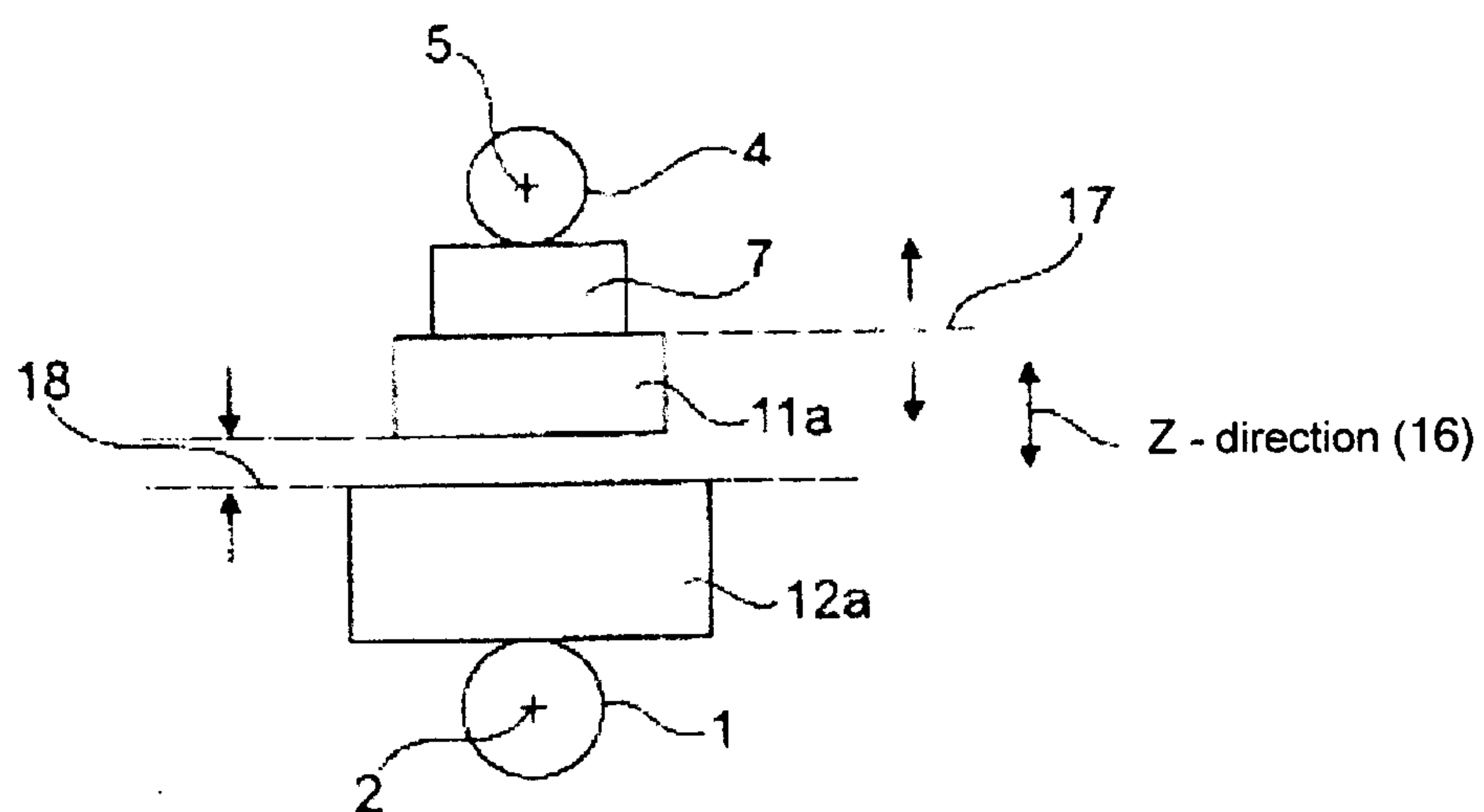


Fig. 5

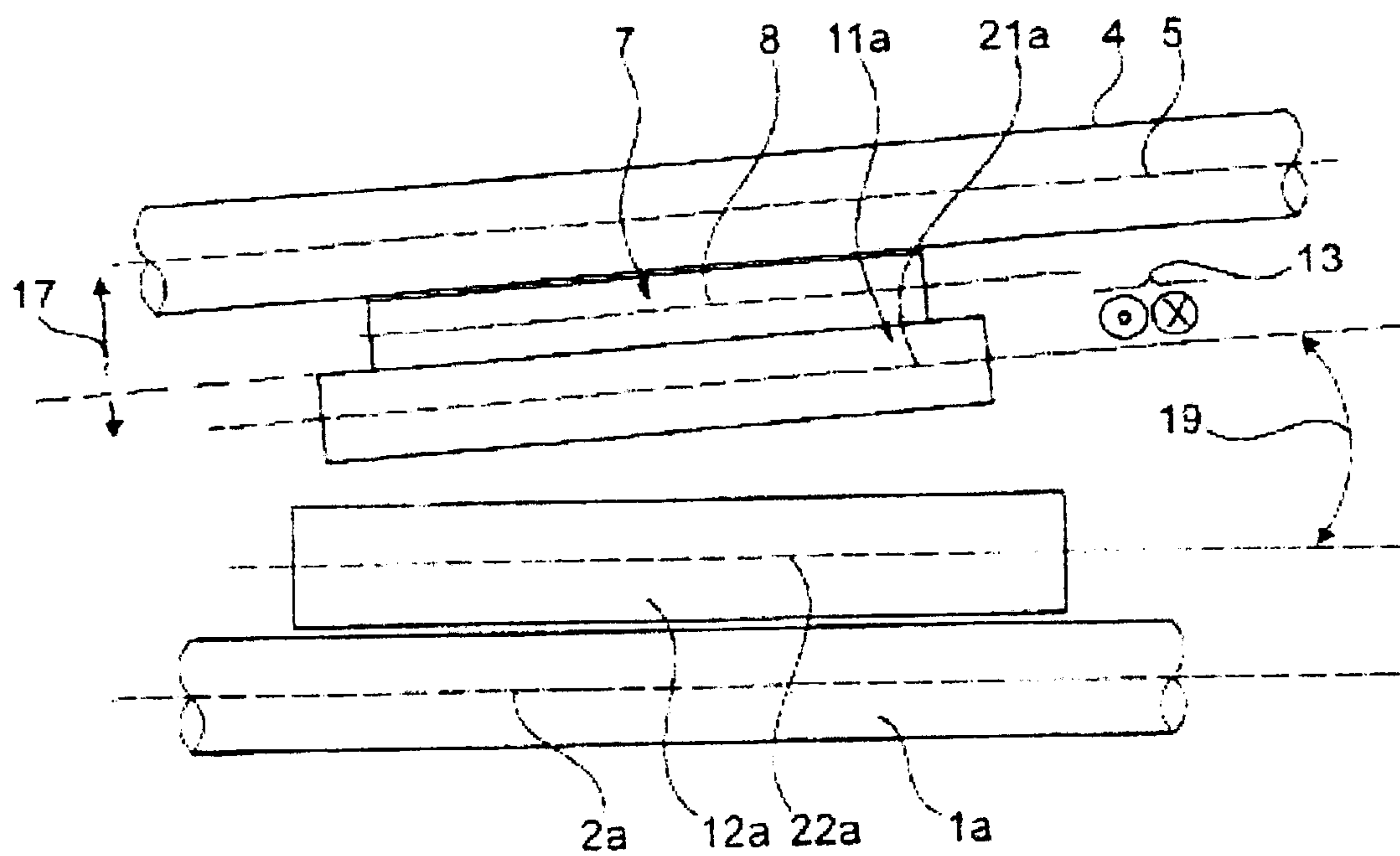


Fig. 6

