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(54) **ASSEMBLY OF A FLAG POLE AND AT LEAST ONE FLAG**

ANORDNUNG AUS EINEM FLAGGENMAST UND MINDESTENS EINER FLAGGE

ENSEMBLE D'UN POTEAU PORTE-DRAPEAUX ET D'AU MOINS UN DRAPEAU

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## Description

**[0001]** The invention relates to an assembly of a flagpole and at least one flag. An assembly of this type is known and is used for instance on festive occasions. The flag and the different colours and motifs of the flag are then sufficiently known, and it is then of little importance that the flag is often deformed such that the colours and motifs can hardly any longer be discerned.

**[0002]** A flag can also be used to communicate an advertising message. It is then important that the advertising message is always readily discernible. The present invention has for its object to realize an assembly of a flagpole and at least one flag, the colours and motifs of which can be discerned at all times substantially without hindrance, and has the feature that the assembly is provided with a first bearing placed on or around the flagpole and a second bearing placed around the flagpole and below the first bearing, that the first bearing is provided with at least one support arm, that a first longitudinal side of the flag is attached to the at least one support arm, that the second bearing is provided with at least one tensioning arm and that a second longitudinal side of the flag is attached to the at least one tensioning arm. The flag can now rotate unimpeded around the flagpole and communicate an advertising message in all directions, while the support arms prevent the flag deforming such that the advertising message can no longer be read.

**[0003]** To improve the legibility of the advertising message the assembly is provided with at least one tensioning element placed between the at least one support arm and the at least one tensioning arm, or between the first bearing and the second bearing. This prevents the second bearing sliding upward due to the wind load acting on the flag, which would cause a bulge in the flag. In order to further increase the legibility of the advertising message, the tensioning element is preferably provided with adjusting means, so that the flag can be stretched tightly.

**[0004]** The inventive assembly further has the feature that the first bearing is provided with an upper arm placed at least substantially perpendicularly of the flagpole, that the second bearing is provided with a lower arm placed at least substantially parallel to the upper arm and that the assembly also comprises a shaft mounted rotatably between the upper arm and the lower arm. The shaft is here preferably provided with at least one additional support arm and an additional tensioning arm and with a flag tensioned between the additional support arm and the additional tensioning arm such that the at least one flag can rotate together with the shaft.

**[0005]** An assembly according to the preamble of claim 1 is known from W097121205. The assembly according to the invention distinguishes itself over the prior art in that the tensioning element is attached beside the flagpole.

**[0006]** A further favourable embodiment has the feature that the shaft is provided with two, three or four ad-

ditional support arms to which two, three or four flags are attached which, moved by the wind, will rotate together around the shaft. A flag attached directly to the first bearing and the second bearing can herein hold the whole unit more or less stably in one direction.

**[0007]** A further favourable embodiment which ensures a smooth rotation has the feature that the first bearing comprises a ball-bearing. The ball-bearing preferably comprises two plastic flanges, and balls manufactured from stainless steel placed between the two flanges, so that the bearing can sufficiently absorb the forces which occur and is practically insensitive to weather influences.

**[0008]** A further favourable embodiment has the feature that the second bearing comprises a plastic ring which can rotate and slide freely round the flagpole. The inventive assembly can further be provided with at least one intermediate bearing provided with brackets for supporting tensioning elements.

**[0009]** The invention also relates to a flagpole as part of an assembly as specified in the foregoing paragraphs.

**[0010]** The invention also relates to a flag, provided on a top side and a bottom side with a hem for receiving a tensioning arm, for use in an assembly as specified in the foregoing paragraphs.

**[0011]** The invention will now be further elucidated with reference to the following figures, wherein:

Fig. 1 shows a possible embodiment of an assembly according to the invention;

Fig. 2 shows an alternative embodiment of an assembly according to the invention;

Fig. 4A shows a cross-section of a possible embodiment of an auxiliary bearing;

Fig. 4B shows a top view of a possible embodiment of an intermediate bearing;

Fig. 5A shows a cross-section of an alternative embodiment of a first bearing;

Fig. 5B shows a cross-section of an alternative embodiment of a second bearing.

**[0012]** Fig. 1 shows a possible embodiment of an assembly according to the invention, consisting of a flagpole 1, manufactured for instance from aluminum tubing, on which a first bearing 2 and a second bearing 3 are mounted. Two support arms 4a,4b, manufactured for instance from aluminum tubing, are mounted on first bearing 2, and two tensioning arms 5a,5b, likewise manufactured from aluminum tubing, are mounted on second bearing 3. A flag or banner 6a is attached between support arm 4a and tensioning arm 5a and a flag or banner 6b is tensioned between support arm 4b and tensioning arm 5b using hems arranged on the top side and the bottom side. Second bearing 3 can be arranged fixedly on flagpole 1, although in the embodiment shown here second bearing 3 is annular and can slide over flagpole 1. In order to keep flags or banners 6a,6b tightly stretched two or more tensioning elements 7, manufactured for instance from aluminum tubing, are mounted between first

bearing 2 and second bearing 3. If desired, one or more intermediate bearings 8 can be mounted on flagpole 1 which can rotate freely around flagpole 1 and which prevent tensioning elements 7 bending outward under great load.

**[0013]** Fig. 2 shows an alternative embodiment of an assembly according to the invention, consisting of a flagpole 1, manufactured for instance from aluminum tubing, on which a first bearing 2 and a second bearing 3 are mounted. A support arm 4a, manufactured for instance from aluminum tubing, is mounted on first bearing 2 and a tensioning arm 5a, likewise manufactured from aluminum tubing, is mounted on second bearing 3. A flag or banner 6a is attached between support arm 4a and tensioning arm 5a using hems arranged on the top side and the bottom side. Second bearing 3 can be arranged fixedly on flagpole 1, although in the embodiment shown here second bearing 3 is annular and can slide over flagpole 1. In order to keep flag or banner 6a tightly stretched two or more tensioning elements 7, manufactured for instance from aluminum tubing, are mounted between first bearing 2 and second bearing 3. An upper arm 9 is further mounted on first bearing 2 and a lower arm 10 on second bearing 3. Mounted on the end of upper arm 9 and on the end of lower arm 10 are auxiliary bearings 11a, 11b between which a shaft 12 is rotatably disposed. Support arms 13a, 13b and tensioning arms 14a, 14b are fixedly attached, for instance welded, to shaft 12, between which arms the flags or banners 15a, 15b are tensioned using hems arranged on the top side and the bottom side. It is of course also possible to attach for instance three or four flags or banners in this way to shaft 12.

**[0014]** Fig. 3A shows a cross-section of a possible embodiment of a first bearing 2 consisting of a plastic plug 16 which can be pressed into flagpole 1 and which is provided with a groove 17 in which are placed balls 18, manufactured for instance from stainless steel. A head 19 is fixed to plug 16 with a bolt 20. Arranged in head 19 are holes 21 for support arms 4 and/or upper arms 9 and holes 22 for tensioning elements 7, which are tensioned in a manner which is further self-evident using nuts 23.

**[0015]** Fig. 3B shows a cross-section of a possible embodiment of a second bearing 3 consisting of a plastic ring 24 which can be placed around flagpole 1 and which is provided with holes 25 for tensioning arms 5 and/or lower arms 10 and holes 26 for tensioning elements 7, which are tensioned in a manner which is further self-evident using nuts 23.

**[0016]** Fig. 4A shows a cross-section of a possible embodiment of an auxiliary bearing 11 consisting of a plastic plug 27 which can be pressed into shaft 12 and which is provided with a groove 28 in which are placed balls 29, manufactured for instance from stainless steel. A head 30 is fixed to plug 27 with a bolt 31. Holes 32 for upper arm 9 or lower arm 10 are arranged in head 30.

**[0017]** Fig. 4B shows a top view of a possible embodiment of an intermediate bearing 8, consisting of a plastic ring 33 provided with flattened sides to which brackets

34a, 34b are fixed into which tensioning elements 7 can be snapped so that they cannot bend outward.

**[0018]** Fig. 5A shows a cross-section of an alternative embodiment of a first bearing 2, consisting of a plastic plug 16 which can be pressed into flagpole 1 and which is provided with a groove 17 in which are placed balls 18, manufactured for instance from stainless steel. A head 19 is fixed to plug 16 with a bolt 20. Arranged in head 19 are holes 21 in which can be fixed connecting pieces 35 on which support arms 4 and/or upper arms 9 can be pushed and fixed. Tensioning elements 7, embodied here in square tubular profile, can also be pushed and fixed onto connecting pieces 35.

**[0019]** Fig. 5B shows a cross-section of an alternative embodiment of a second bearing 3, consisting of a plastic ring 24 which can be placed around flagpole 1 and which is provided with holes 25 in which can be fixed connecting pieces 35 onto which tensioning arms 5 and/or lower arms 10 can be pushed and fixed. Tensioning element parts 36, in which is fixed a block 37 which runs on into tensioning element 7, can also be fixed onto connecting pieces 35. The flag can now be placed under tension by sliding tensioning element 7 and tensioning element part 36 apart and screwing a bolt 38 into one of the holes 39 in block 37. Bending and relative torsion of the tensioning arms is effectively counteracted with this embodiment. This makes it possible to fit very heavy fabric between the tensioning arms. It is also possible to fit for instance a sheet-like element with an advertising message thereon between the tensioning arms.

### Claims

1. Assembly of a flagpole (1) and at least one flag (6a, 6b) wherein the assembly is provided with a first bearing (2) placed on or around the flagpole (1) and a second bearing (3) placed around the flagpole (1) and below the first bearing (2), that the first bearing (2) is provided with at least one support arm (4a, 4b), that a first longitudinal side of the flag (6a, 6b) is attached to the at least one support arm (4a, 4b), that the second bearing (3) is provided with at least one tensioning arm (5a, 5b) and that a second longitudinal side of the flag (6a, 6b) is attached to the at least one tensioning arm (5a, 5b), that the assembly is provided with at least one tensioning element (7) placed between the at least one support arm (4a, 4b) and the at least one tensioning arm (5a, 5b), or between the first bearing (2) and the second bearing (3), that the tensioning element (7) is provided with adjusting means, **characterized in that** the tensioning element (7) is attached beside the flagpole (1).
2. Assembly as claimed in claim 1, **characterized in that** the tensioning element (7) has a square tubular profile.

3. Assembly as claimed in any of the foregoing claims, **characterized in that** the first bearing (2) is provided with an upper arm (9) placed at least substantially perpendicularly of the flagpole (1), that the second bearing (3) is provided with a lower arm (10) placed at least substantially parallel to the upper arm (9), and that the assembly also comprises a shaft (12) mounted rotatably between the upper arm (9) and the lower arm (10).
4. Assembly as claimed in claim 3, **characterized in that** the shaft (12) is provided with at least one additional support arm (13a, 13b) and an additional tensioning arm (14a, 14b) and with a flag (15a, 15b) tensioned between the additional support arm (13a, 13b) and the additional tensioning arm (14a, 14b).
5. Assembly as claimed in claim 4, **characterized in that** the shaft (12) is provided with two, three or four additional support arms.
6. Assembly as claimed in any of the foregoing claims, **characterized in that** the first bearing (2) comprises a ball-bearing.
7. Assembly as claimed in claim 6, **characterized in that** the ball-bearing comprises two plastic flanges (16,19; 27,30), and balls (18;29) manufactured from stainless steel placed between the two flanges (16,19; 27,30).
8. Assembly as claimed in any of the foregoing claims, **characterized in that** the second bearing (3) comprises a plastic ring (24;33).

#### Patentansprüche

1. Anordnung aus einem Flaggenmast (1) und mindestens einer Flagge (6a, 6b), wobei die Anordnung ein erstes Lager (2) aufweist, das an oder um den Flaggenmast (1) angeordnet ist, und ein zweites Lager (3) aufweist, das um den Flaggenmast (1) und unterhalb des ersten Lagers (2) angeordnet ist, wobei das erste Lager (2) mindestens einen Tragarm (4a, 4b) aufweist, wobei eine erste Längsseite der Flagge (6a, 6b) an dem mindestens einen Tragarm (4a, 4b) befestigt ist, wobei das zweite Lager (3) mindestens einen Spannarm (5a, 5b) aufweist und wobei die zweite Längsseite der Flagge (6a, 6b) an dem mindestens einen Spannarm (5a, 5b) befestigt ist, wobei die Anordnung mindestens ein Spannelement (7) aufweist, das zwischen dem mindestens einen Tragarm (4a, 4b) und dem mindestens einen Spannarm (5a, 5b) oder zwischen dem ersten Lager (2) und dem zweiten Lager (3) angeordnet ist, wobei das Spannelement (7) Justiermittel aufweist, **dadurch gekennzeichnet, daß** das Spannelement (7)

neben dem Flaggenmast befestigt ist.

2. Anordnung gemäß Anspruch 1, **dadurch gekennzeichnet, daß** das Spannelement (7) ein Quadratrohrprofil aufweist.
3. Anordnung gemäß einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, daß** das erste Lager (2) einen oberen Arm (9) aufweist, der zumindest im Wesentlichen senkrecht zu dem Flaggenmast (1) angeordnet ist, wobei das zweite Lager (3) einen unteren Arm (10) aufweist, der zumindest im Wesentlichen parallel zu dem oberen Arm (9) angeordnet ist und wobei die Anordnung auch einen Schaft (12) umfaßt, der drehbar zwischen dem oberen Arm (9) und dem unteren Arm (10) angeordnet ist.
4. Anordnung gemäß Anspruch 3, **dadurch gekennzeichnet, daß** der Schaft (12) mindestens einen zusätzlichen Stützarm (13a, 13b) und einen zusätzlichen Spannarm (14a, 14b) aufweist und eine Flagge (15a, 15b) zwischen dem zusätzlichen Stützarm (13a, 13b) und dem zusätzlichen Spannarm (14a, 14b) gespannt ist.
5. Anordnung gemäß Anspruch 4, **dadurch gekennzeichnet, daß** der Schaft (12) zwei, drei oder vier zusätzliche Stützarme aufweist.
6. Anordnung gemäß einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, daß** das erste Lager (2) ein Kugellager umfaßt.
7. Anordnung gemäß Anspruch 6, **dadurch gekennzeichnet, daß** das Kugellager zwei Kunststoffflansche (16, 19; 27, 30) und Kugeln (18; 29) umfaßt, die aus Edelstahl hergestellt und zwischen den beiden Flanschen (16, 19; 27, 30) angeordnet sind.
8. Anordnung gemäß einem der vorhergehenden Ansprüche, **dadurch gekennzeichnet, daß** das zweite Lager (3) einen Kunststoffring (24; 33) umfaßt.

#### Revendications

1. Ensemble constitué d'un mât porte-drapeaux (1) et d'au moins un drapeau (6a, 6b), l'ensemble est muni d'un premier support (2) placé sur ou autour du mât porte-drapeaux (1) et un deuxième support (3) placé autour du mât porte-drapeaux (1) et en dessous du premier support (2), le premier support (2) étant muni d'au moins un bras support (4a, 4b), un premier côté longitudinal du drapeau (6a, 6b) étant attaché à l'au moins un bras support (4a, 4b), le deuxième support (3) est muni d'au moins un bras de tension (5a, 5b) et un second côté longitudinal du drapeau (6a, 6b)

- étant attaché à l'au moins un bras de tension (5a, 5b), l'ensemble étant muni d'au moins un élément de tension (7) placé entre le au moins un bras support (4a, 4b) et le au moins un bras de tension (5a, 5b) ou entre le premier support (2) et le second support (3), l'élément de tension étant muni de moyens d'ajustement, **caractérisé en ce que** l'élément de tension (7) est attaché à côté du mât porte-drapeaux. 5
2. Ensemble selon la revendication 1, **caractérisé en ce que** l'élément de tension (7) a un profile tubulaire carré. 10
3. Ensemble selon l'une des revendications précédentes, **caractérisé en ce que** le premier support (2) est muni d'un bras supérieur (9) placé au moins essentiellement perpendiculairement au mât porte-drapeaux (1), **en ce que** le deuxième support (3) est muni d'un bras inférieur (10) placé au moins essentiellement parallèlement au bras supérieur (9), et **en ce que** l'ensemble comprend également une tige (12) montée de façon pivotante entre le bras supérieur (9) et le bras inférieur (10). 15  
20
4. Ensemble selon la revendication 3, **caractérisé en ce que** la tige (12) est munie d'au moins un bras support supplémentaire (13a, 13b) et d'un bras de tension supplémentaire (14a, 14b) et d'un drapeau (15a, 15b) tendu entre le bras support supplémentaire (13a, 13b) et le bras de tension supplémentaire (14a, 14b). 25  
30
5. Ensemble selon la revendication 4, **caractérisé en ce que** la tige (12) est munie de deux, trois ou quatre bras support supplémentaires. 35
6. Ensemble selon l'une des revendications précédentes, **caractérisé en ce que** le premier support (2) comprend un roulement à billes. 40
7. Ensemble selon la revendication 6, **caractérisé en ce que** le roulement à billes comprend deux flasques en plastique (16, 19 ; 27, 30) et des billes (18 ; 29) en acier inoxydable et placées entre les deux flasques (16, 19 ; 27, 30). 45
8. Ensemble selon l'une des revendications précédentes, **caractérisé en ce que** le deuxième support (3) comprend un anneau en plastique (24, 33). 50

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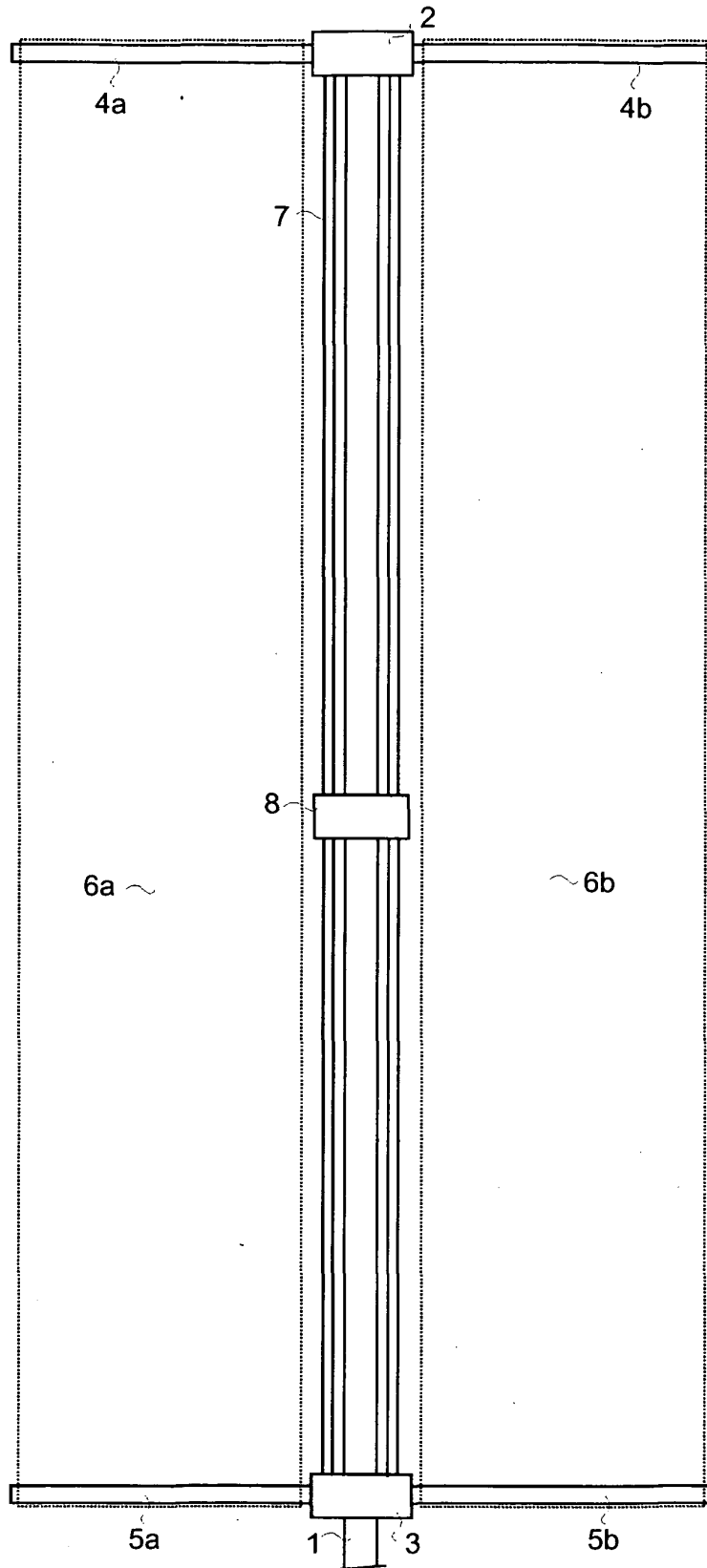


Fig. 1

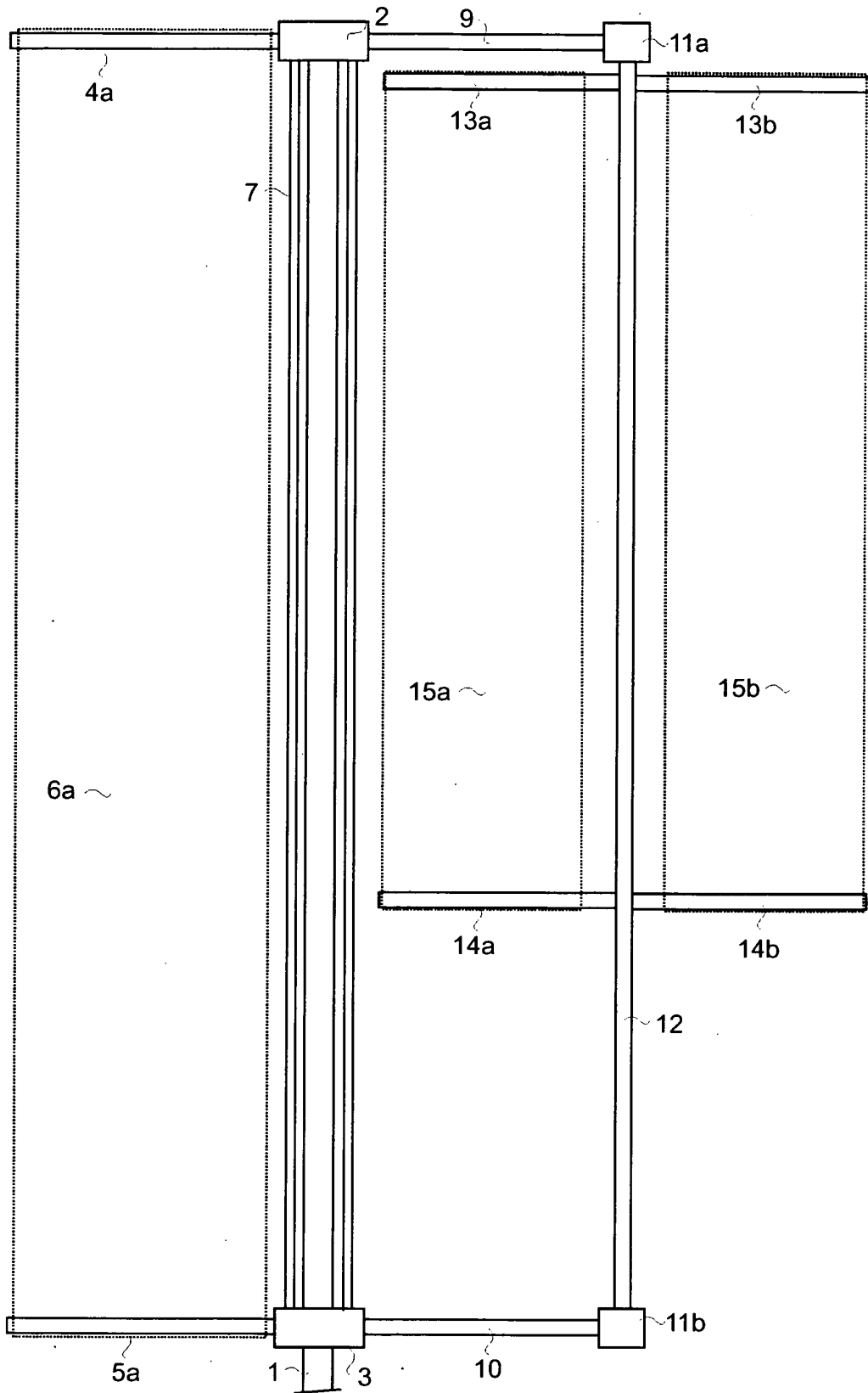


Fig. 2

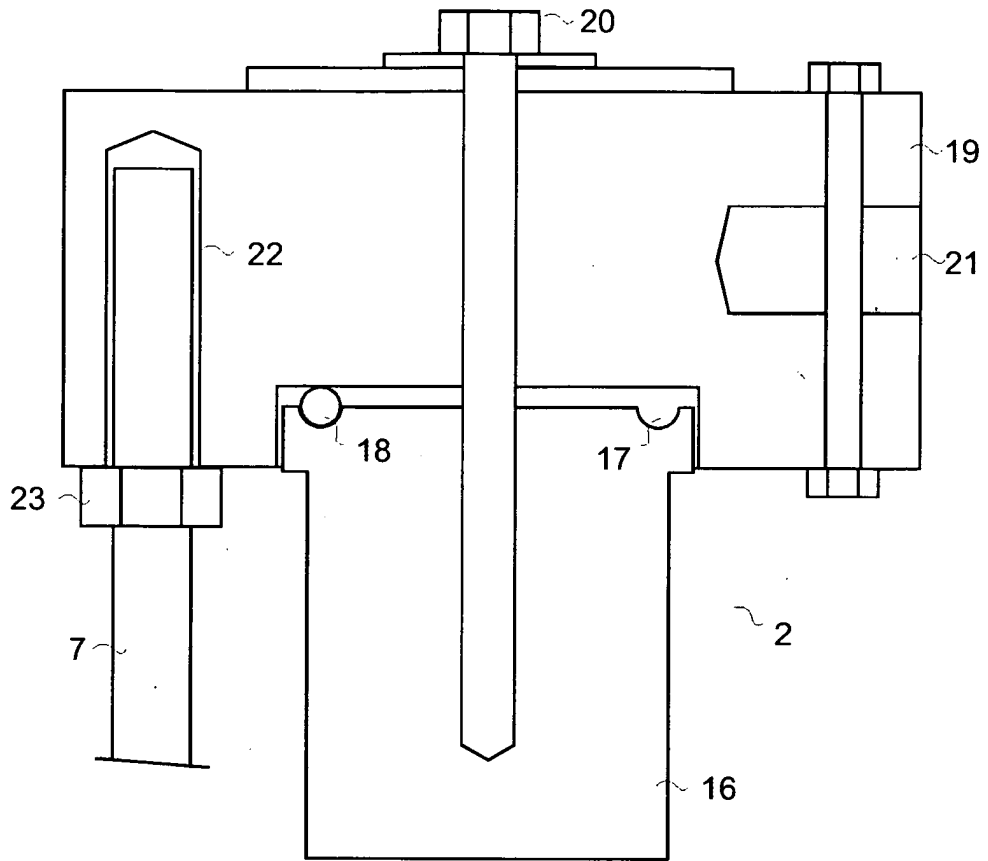


Fig. 3A

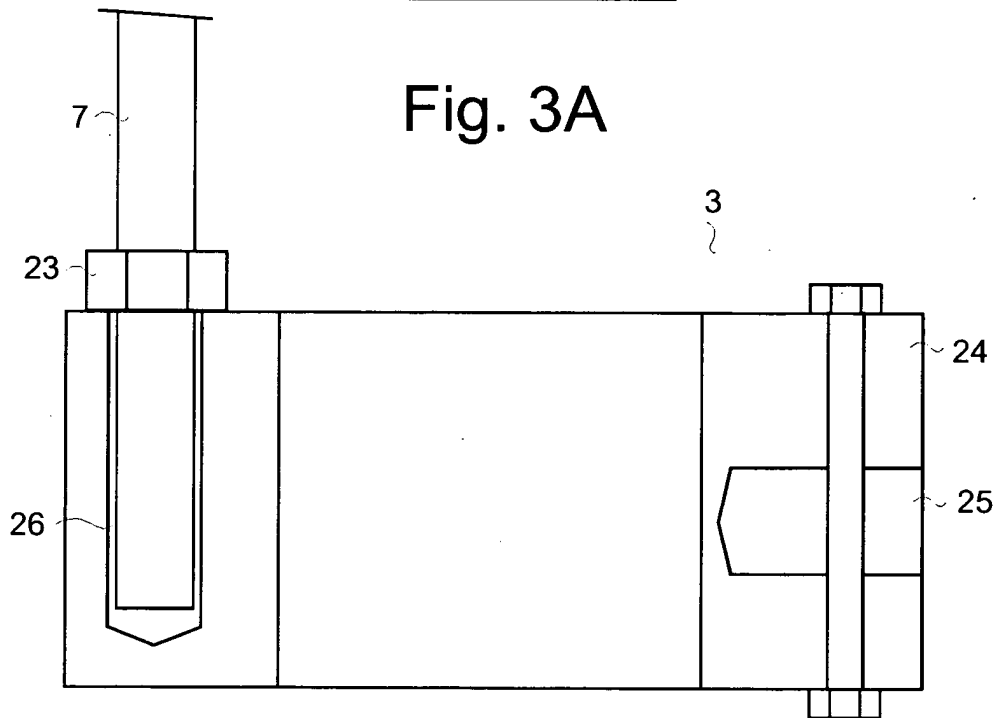


Fig. 3B

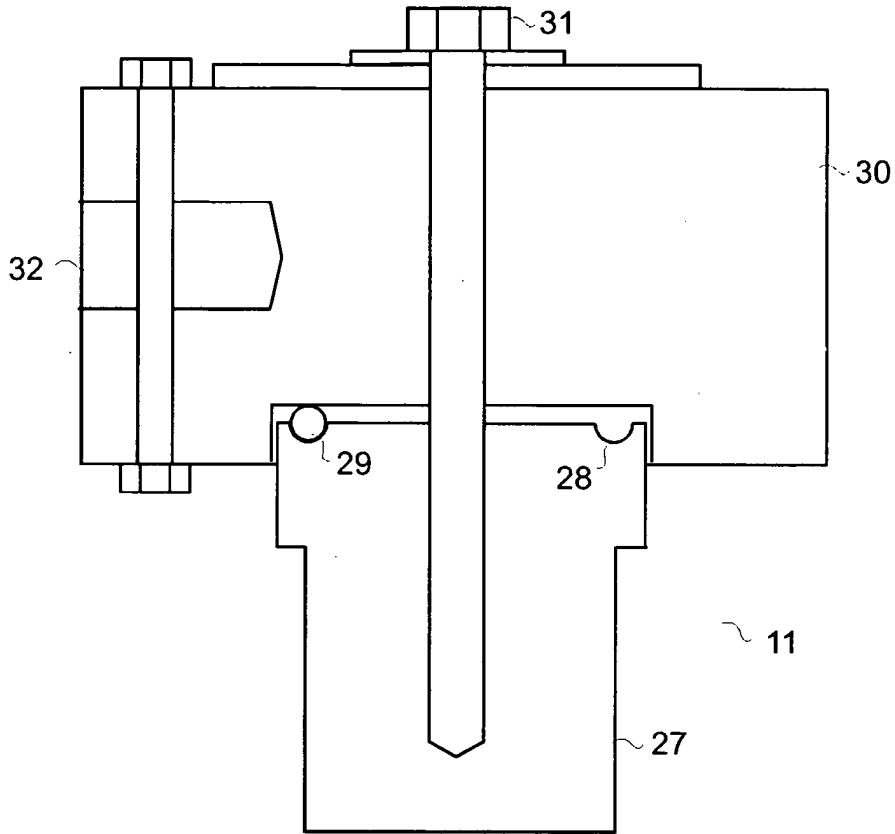


Fig. 4A

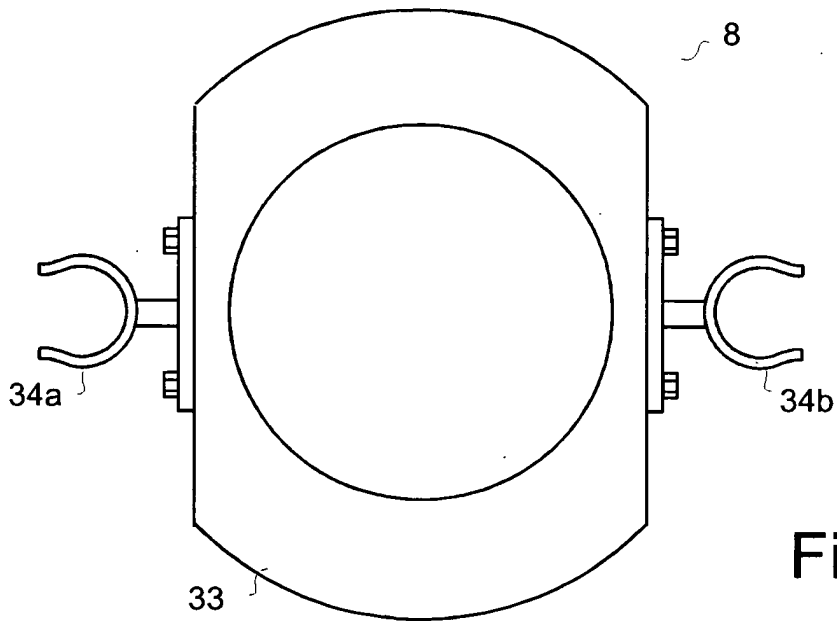


Fig. 4B

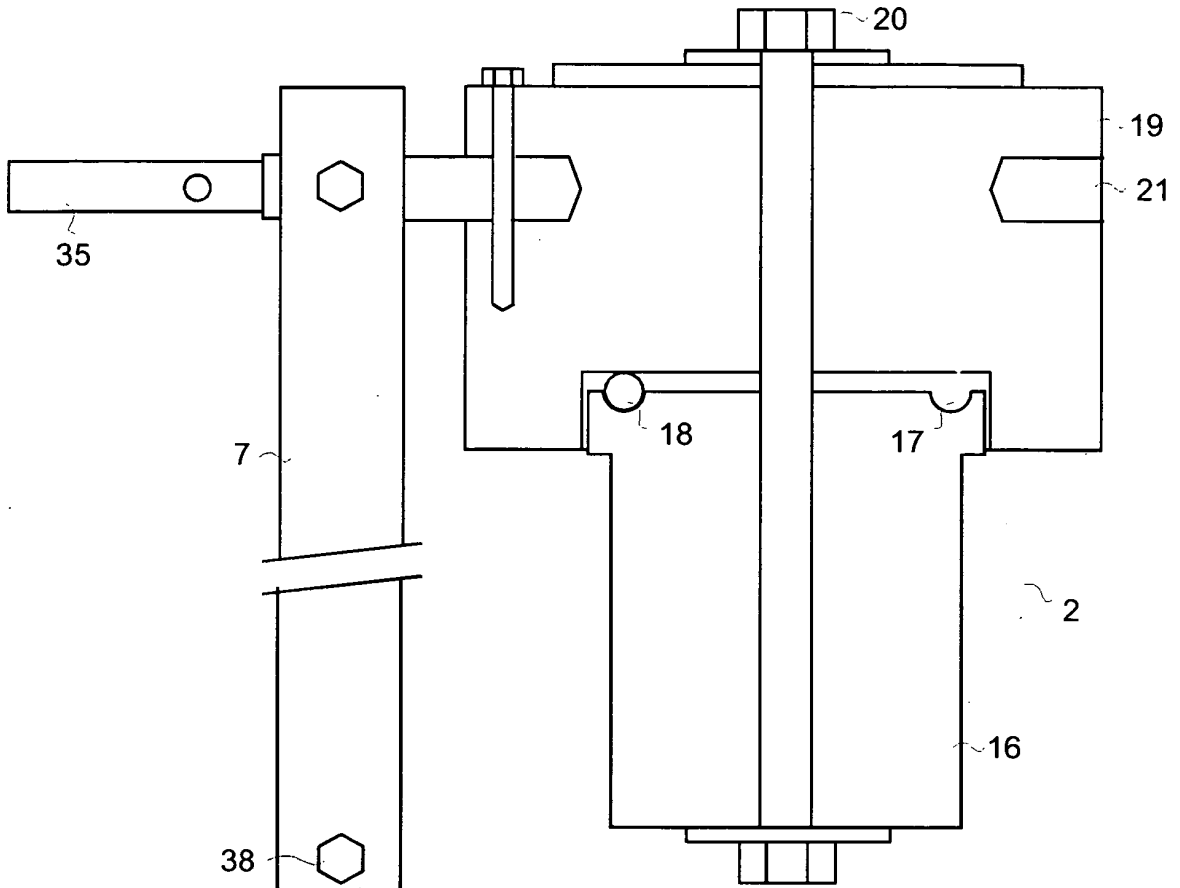


Fig. 5A

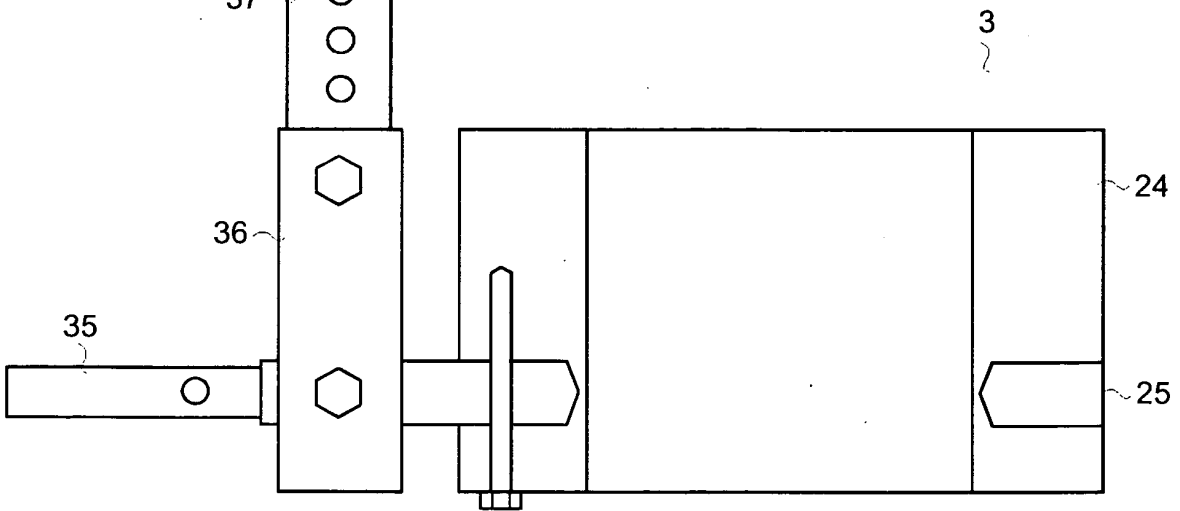


Fig. 5B

**REFERENCES CITED IN THE DESCRIPTION**

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**Patent documents cited in the description**

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