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(54) **DEVICE AT A COVERING ELEMENT**
VORRICHTUNG AN EINEM ABDECKELEMENT
DISPOSITIF POUR ELEMENT DE FERMETURE

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Description

[0001] The present invention relates to an arrangement for a door or some other covering element which exhibits an espagnolette with a straight end piston.

[0002] As far as doors and windows are concerned, there have always been two different types of end pistons, namely straight and turning. The straight end piston is the one that has been used most often, for example in a "French" balcony door or a double door. There is now a requirement on the part of the users of covering elements of this kind, however, for the passive door in a pair of doors of this kind to be capable of exhibiting a so-called window brake to enable the door to be locked in a desired set position. Previously disclosed through SE 459676 B, for example, is the combination of a rotating piston and a window brake with one another. However, the problem of being able to provide an espagnolette which exhibits a straight end piston with a so-called window brake has not previously been solved.

[0003] The principal object of the present invention is thus, in the first instance, to solve the above-mentioned problem and to make available an arrangement which makes it possible to combine a straight end position with a so-called window brake by simple and effectively functioning means.

[0004] It is also important for it to have compact dimensions, which means that it must be accommodated within a Euronot and that, in subsequent tests, it must also meet the applicable requirements in respect of strength. It is available in two variants, in which it required to achieve a linear transmission movement of 20.5 mm and 15.8 mm. It is also possible to adapt the free play to permit more movements by varying the slot in the piston.

[0005] The aforementioned object is achieved by means of an arrangement in accordance with the present invention, which is defined in claim 1.

[0006] GB 690796 A relates to a window brake which consists of pairs of guide strips (1, 2) and formed between them a guide slot (4) for a guide pin (5) attached to a pivot arm (6) that is pivotally mounted about a pivot component (7). The aforementioned brake does not include an espagnolette with a straight end piston. The aforementioned brake is also not operatively connected via the displacement movement of the end piston.

[0007] The pin (5) is held in position in the guide slot (4) by means of a catch (3), and the window is held in the open position by causing one guide strip (1) to be moved towards the second guide strip (2) for the purpose of locking the pin (5) securely between the aforementioned pairs of guide strips (1, 2). The function of this arrangement is thus entirely different from that of the previous invention.

[0008] The invention is described below as a preferred illustrative embodiment, in conjunction with which reference is made to the accompanying drawings, in which:

Fig. 1 shows a perspective view of an arrangement

in accordance with the present invention and in the locked position;

Fig. 2 shows the arrangement from different angles; Fig. 3 shows an exploded view of the arrangement; Fig. 4 shows a reinforcement and an attachment for a spindle viewed from different angles;

Fig. 5 shows a brake housing contained in the arrangement and viewed respectively at an angle from below and at an angle from above;

Fig. 6 shows a connection to a piston rod in the arrangement and viewed from two different directions; Fig. 7 shows a piston contained in the brake and viewed from different directions;

Fig. 8 shows a spindle included in the brake and similarly viewed from a number of different directions, and

Fig. 9 shows a part of an edge rail included in the arrangement and viewed from different directions.

[0009] An arrangement 1 for a door, a window or some other suitable covering element 2, which exhibits an espagnolette 3 with a straight end piston 4 attached thereto, has a friction brake 5 which, via a transmission, is connected in such a way as to permit operation through the displacement of the end piston 4. In this case a spindle 6, which exhibits a central bearing 7 and an eccentrically situated movement transmission pin 8, is supported in such a way that it is accommodated in an attachment 9 for a brake transmission housing 10 functioning as a reinforcement component connected to an edge rail 11 for the door 2, etc. The aforementioned eccentrically situated movement transmission pin 8 is accommodated in a curved recess 12 or other guide in the aforementioned brake transmission housing 10. An aforementioned end piston 4 is connected to a coupling rod 13, which in turn is connected to an arrangement in the form of a piston displacement rod 14. The aforementioned end piston 4 exhibits a slot-shaped groove 15 with a transverse opening 16 and which is intended to accommodate a hook-shaped part 17.

[0010] The cut-out in the coupling 13 is intended for a lock housing. It is also possible to make a second cut-out and to install a coupling fitting which functions as a joining coupling and is intended in this case for what is known as a section espagnolette. The central part can be produced with advantage in a single length and subsequently cut into appropriate lengths.

[0011] The end piston 4 is also connected to the movement transmission pin 8 on the spindle 6 by the aforementioned pin 8 being accommodated in a recess 18 in the aforementioned piston 4, and which recess 18 is situated in a position laterally displaced from the central axis 19 of the aforementioned piston 4.

[0012] A rotating rod 20 is connected in a previously disclosed fashion to the spindle 6 by means of a connection 21, which is so arranged as to transmit rotating movement between the brake 5 and the spindle 6. In this case, the cross section of the connecting part for the movement

transmission pin 8 and the recess for the pin in the piston 4 are congruent to one another, for example of circular form with a deviating edge part form, i.e. a removed edge part sector, etc.

[0013] The spindle 6 is rotatably mounted in a profile-shaped part 9, which is provided with a recess 22 for the spindle 6, and which part 9 is so arranged as to be accommodated in an attachable fashion with an L-shaped attachment 10 on one of its legs 23 with a pin and a screw. The aforementioned attachment 10 is in turn attached to a profile rail 11 with the help of tongue-shaped rivet legs 24 and matching holes 25 in a previously disclosed fashion so as to connect edge rails to lock accessories.

[0014] When the reinforcement part 9 is riveted to a brake transmission housing 10 and is screwed into a Euro-not, it forms a strong lateral support with the help of the side heels of the guide block and forms a guide for the aforementioned rod 20 in addition to an attachment for the spindle.

[0015] The aforementioned recess 22 for the spindle 6 in the profile-shaped part 9 is formed preferably by two curved part recesses 23A, 23B of different sizes that are displaced laterally from one another.

[0016] The function of the aforementioned device 1, in which the window brake 5 also comprises a brake arm 26, which can be connected together with a frame or some other fixed object, and which is adapted to a Euro-not, which provides very small space and tolerance for the accommodation of constituent parts in order for the whole to function satisfactorily, is as follows:

[0017] The connecting device 14 for the espagnolette, which exhibits a pushing movement, transfers movement to the link 13 that is connected to the end piston 4 in accordance with the foregoing. The displacement movement of the end piston is actuated by the gripping interaction between the movement transmission pin 8 of the spindle 6 and the recess 18 in the piston 4, at the same time as the aforementioned pin 8 is guided by the curved recess 13 in the aforementioned brake transmission housing 10. The spindle 6, which is clamped in the attachment 9, is thus imparted in accordance with the foregoing with a rotating movement which influences the function of the brake after rotating transmission via the rod 20 to the aforementioned brake 5.

[0018] The invention is not restricted to the embodiments described above and illustrated in the drawings, but may be varied within the scope of the Patent Claims.

Claims

1. Arrangement (1) for a door or some other covering element which exhibits an espagnolette (3) with a straight end piston (4), **characterized in that** a brake (5) is connected in such a way as to permit operation through the displacement effect by the end piston (4) of a piston rod (13) through a connection (21) which imparts rotating movement to a rod (20)

that is capable of rotation in the aforementioned brake (5), namely that a spindle (6), which exhibits a central bearing (7) and an eccentrically situated movement transmission pin (8), is supported in such a way that it is accommodated in an attachment (9) for a brake transmission housing (10) connected to an edge rail (11) for the door (2), etc., and with the aforementioned pin (8) accommodated in a curved recess (12) in the aforementioned brake transmission housing (10).

2. Arrangement in accordance with Patent Claim 1, **characterized in that** the end piston (4) is connected to a piston rod (13), which in turn is connected to a piston displacement rod (14) or other coupling arrangement.

3. Arrangement in accordance with Patent Claim 2, **characterized in that** the end piston (4) exhibits a slot-shaped groove (15) with a transverse opening (16) for accommodating a hook-shaped part (17) of the aforementioned coupling rod (13).

4. Arrangement in accordance with one or other of Patent Claims 2-3, **characterized in that** the end piston (4) is connected to the movement transmission pin (8) on the spindle (6).

5. Arrangement in accordance with Patent Claim 4, **characterized in that** the movement transmission pin (8) of the end piston is accommodated in a recess (18) in the aforementioned piston (4), and which recess (18) is situated in a position laterally displaced from the central axis (19) of the aforementioned piston.

6. Arrangement in accordance with one or other of the foregoing Patent Claims, **characterized in that** the rotating rod (20) is connected to the spindle (6).

7. Arrangement in accordance with Patent Claim 6, **characterized in that** the movement transmission pin and the recess for the pin in the piston (4) are congruent to one another, for example circular with a deviating edge part form.

8. Arrangement in accordance one or other of the foregoing Patent Claims, **characterized in that** the bearing for the spindle (6) is in the form of a profile-shaped part (9) with a recess (22) for the spindle (6), and which is so arranged as to be accommodated in an attachable fashion with an L-shaped attachment (9) on one of its legs (23).

9. Arrangement in accordance with Patent Claim 8, **characterized in that** the recess (22) for the spindle (6) in the profile-shaped part (9) is formed by two curved part recesses (23A, 23B) of different sizes

that are displaced laterally from one another.

Patentansprüche

1. Anordnung (1) für eine Tür oder ein beliebiges anderes Abdeckelement, die eine Espagnolette (3) mit einem geraden Endkolben (4) aufweist, **dadurch gekennzeichnet, dass** eine Bremse (5) auf eine solche Weise verbunden ist, dass ein Betrieb durch den Verschiebungseffekt mittels des Endkolbens (4) einer Kolbenstange (13) durch eine Verbindung (21) zugelassen ist, die einer Stange (20), die zu einer Drehung in der zuvor erwähnten Bremse (5) fähig ist, eine Drehbewegung erteilt, nämlich **dadurch**, dass eine Spindel (6), die ein zentrales Lager (7) und einen exzentrisch angeordneten Bewegungsübertragungsstift (8) aufweist, auf eine solche Weise getragen ist, dass sie in einem Anbauteil (9) für ein Bremsgetriebegehäuse (10) aufgenommen ist, das mit einer Kantenschiene (11) für die Tür (2) usw. verbunden ist, und dass der zuvor erwähnte Stift (8) in einer gekrümmten Aussparung (12) in dem zuvor erwähnten Bremsgetriebegehäuse (10) aufgenommen ist.
2. Anordnung nach Anspruch 1, **dadurch gekennzeichnet, dass** der Endkolben (4) mit einer Kolbenstange (13) verbunden ist, die wiederum mit einer Kolbenverschiebungsstange (14) oder einer anderen Kopplungsanordnung verbunden ist.
3. Anordnung nach Anspruch 2, **dadurch gekennzeichnet, dass** der Endkolben (4) eine schlitzförmige Vertiefung (15) mit einer quer verlaufenden Öffnung (16) aufweist, um einen hakenförmigen Teil (17) der zuvor erwähnten Kopplungsstange (13) aufzunehmen.
4. Anordnung nach Anspruch 2 oder 3, **dadurch gekennzeichnet, dass** der Endkolben (4) mit dem Bewegungsübertragungsstift (8) auf der Spindel (6) verbunden ist.
5. Anordnung nach Anspruch 4, **dadurch gekennzeichnet, dass** der Bewegungsübertragungsstift (8) des Endkolbens in einer Aussparung (18) in dem zuvor erwähnten Kolben (4) aufgenommen ist, und welche Aussparung (18) in einer Position angeordnet ist, die von der zentralen Achse (19) des zuvor erwähnten Kolbens seitlich versetzt ist.
6. Anordnung nach einem der vorstehenden Ansprüche, **dadurch gekennzeichnet, dass** die drehende Stange (20) mit der Spindel (6) ver-

bunden ist.

7. Anordnung nach Anspruch 6, **dadurch gekennzeichnet, dass** der Bewegungsübertragungsstift und die Aussparung für den Stift in dem Kolben (4) einander dekungs-gleich sind, beispielsweise kreisförmig mit einer abweichenden Form eines Kantenabschnitts.
8. Anordnung nach einem der vorstehenden Ansprüche, **dadurch gekennzeichnet, dass** das Lager für die Spindel (6) in der Form eines profilförmigen Teils (9) mit einer Aussparung (22) für die Spindel (6) vorliegt, und welches derart angeordnet ist, dass es in einer befestigbaren Weise mit einem L-förmigen Anbauteil (9) auf einem der Beine (23) der Anordnung aufgenommen ist.
9. Anordnung nach Anspruch 8, **dadurch gekennzeichnet, dass** die Aussparung (22) für die Spindel (6) in dem profilförmigen Teil (9) durch zwei gekrümmte Teilaussparungen (23A, 23B) unterschiedlicher Größe gebildet ist, die seitlich zueinander versetzt sind.

Revendications

1. Dispositif (1) pour porte ou autre élément de fermeture qui présente une espagnolette (3) avec un piston droit d'extrémité (4), **caractérisé en ce qu'un** frein (5) est couplé de manière à pouvoir être mis en fonctionnement par l'effet de déplacement d'une tige de piston (13) engendré par le piston d'extrémité (4) à travers un raccord (21) qui transmet un mouvement de pivotement à une tige (20) pouvant pivoter dans le frein susmentionné (5), à savoir qu'un axe (6), qui présente une portée centrale (7) et un téton excentré de transmission de mouvement (8) situé de manière excentrée, est supporté en étant logé dans une fixation (9) pour un logement (10) de transmission de freinage relié à un rail de bordure (11) d'une porte (2), etc., le téton susmentionné (8) étant logé dans un évidement incurvé (12) dans le logement de transmission de freinage (10) susmentionné.
2. Dispositif selon la revendication 1, **caractérisé en ce que** le piston d'extrémité (4) est relié à une tige de piston (13) qui, à son tour, est reliée à une tige de déplacement de piston (14) ou à tout autre moyen de jonction.
3. Dispositif selon la revendication 2, **caractérisé en ce que** le piston d'extrémité (4) présente une gorge (15) conformée en fente à ouverture transversale (16) pour loger une pièce en crochet (17) de la tige de piston (13) susmentionnée.

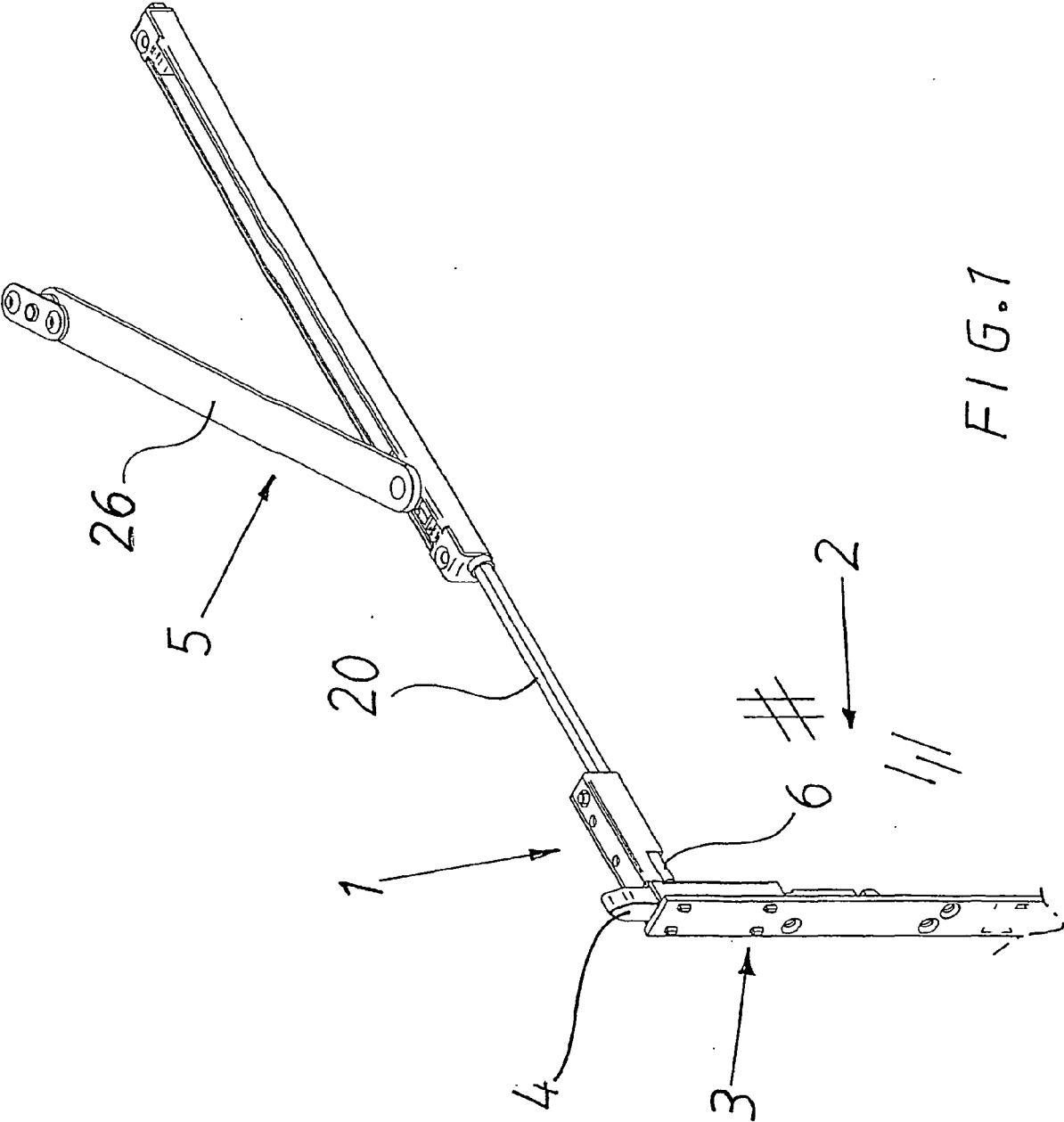
4. Dispositif selon l'une quelconque des revendications 2 ou 3, **caractérisé en ce que** le piston d'extrémité (4) est relié au téton de transmission de mouvement (8) sur l'axe (6). 5
5. Dispositif selon la revendication 4, **caractérisé en ce que** le téton de transmission de mouvement (8) du piston d'extrémité est logé dans un évidement (18) dans le piston (4) susmentionné, lequel évidement (18) est situé dans une position latéralement décalée par rapport à l'axe central (19) du piston susmentionné. 10
6. Dispositif selon l'une quelconque des revendications précédentes, **caractérisé en ce que** la tige pivotante (20) est reliée à l'axe (6). 15
7. Dispositif selon la revendication 6, **caractérisé en ce que** le téton de transmission de mouvement et l'évidement pour le téton dans le piston (4) coïncident l'un avec l'autre, par exemple sont circulaires à bordure de forme divergente. 20
8. Dispositif selon l'une quelconque des revendications précédentes, **caractérisé en ce que** le palier pour l'axe (6) est réalisé sous la forme d'une pièce profilée (9) avec un évidement (22) pour l'axe (6), et qui est prévu pour pouvoir être fixé par une liaison (9) con- 25
formée en L sur un de ses bras (23). 30
9. Dispositif selon la revendication 8, **caractérisé en ce que** l'évidement (22) pour l'axe (6) dans la pièce profilée (9) est formé de deux pièces incurvées d'évi- 35
dement (23A, 23B) de tailles différentes qui sont la-
téralement décalées l'une par rapport à l'autre.

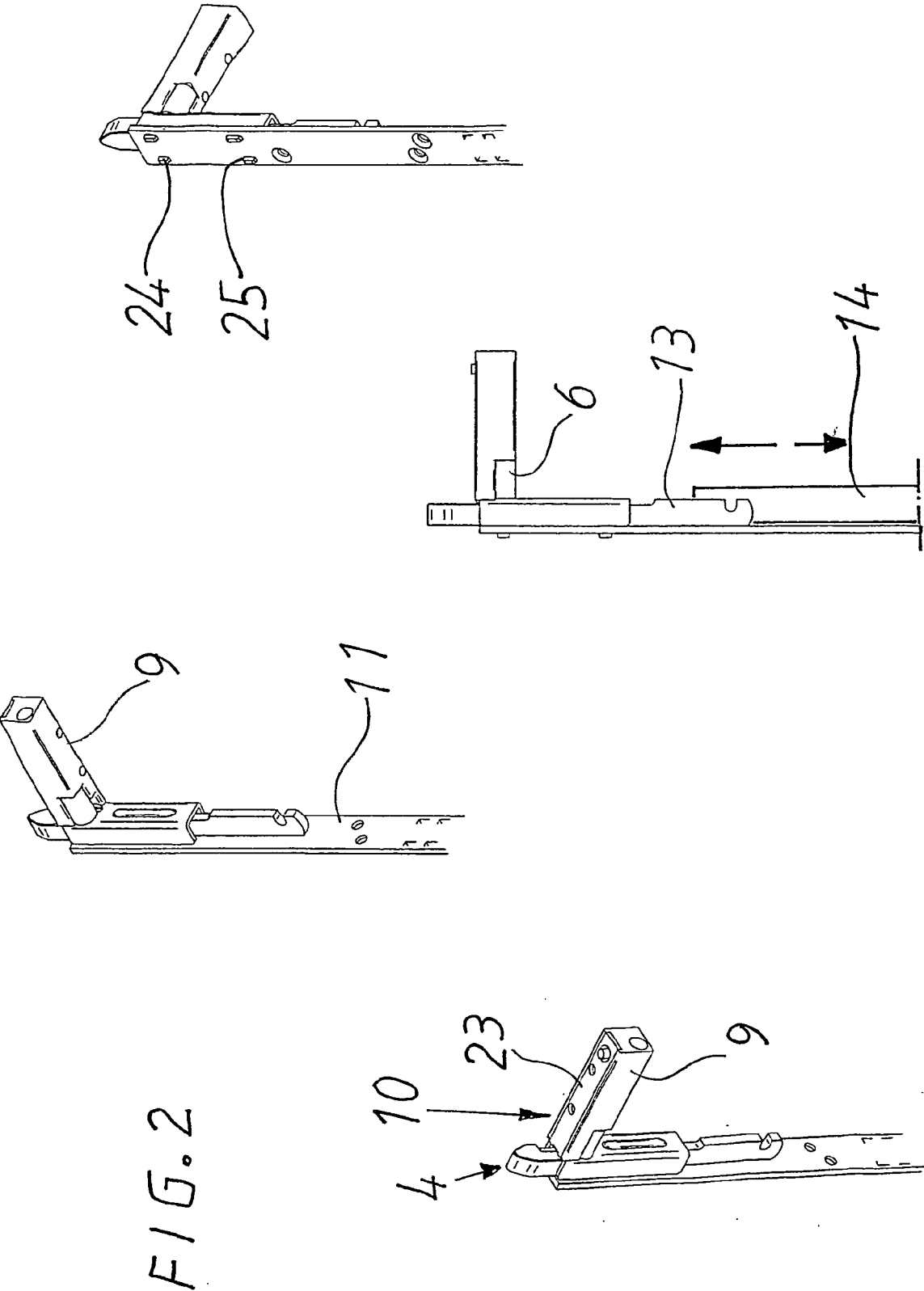
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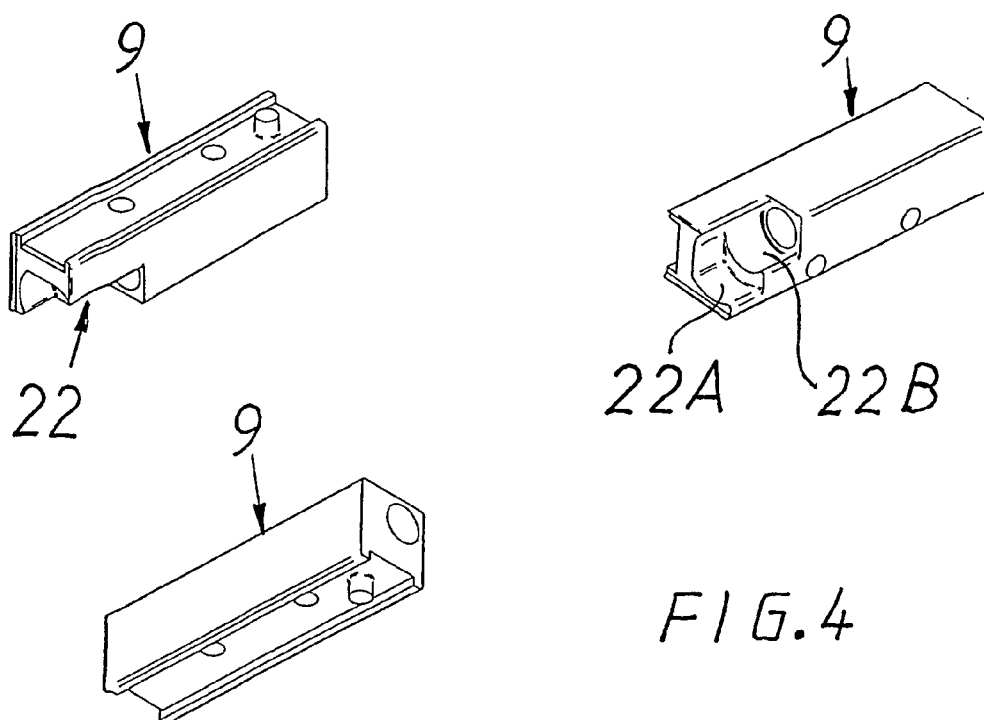
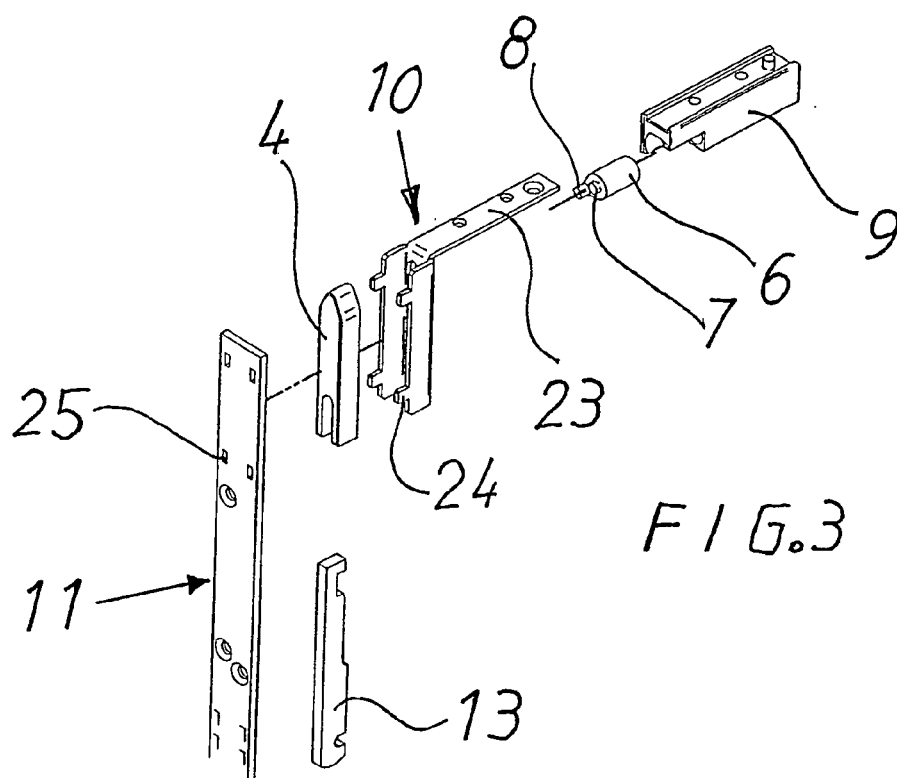
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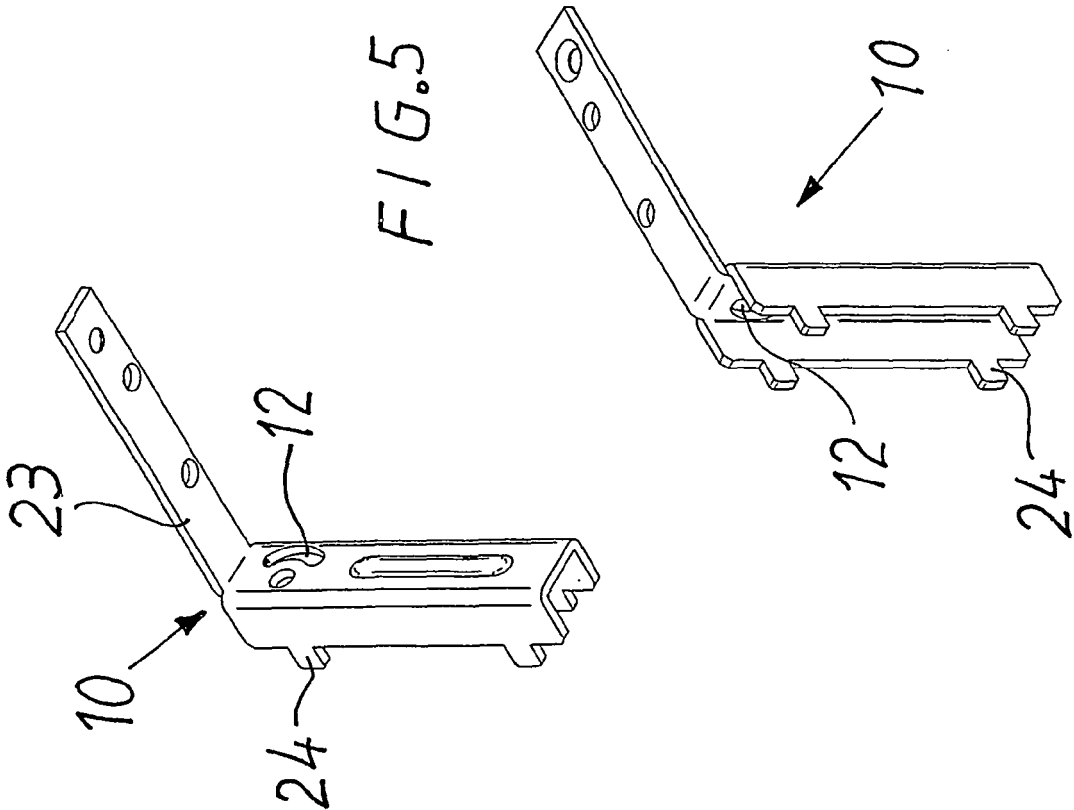
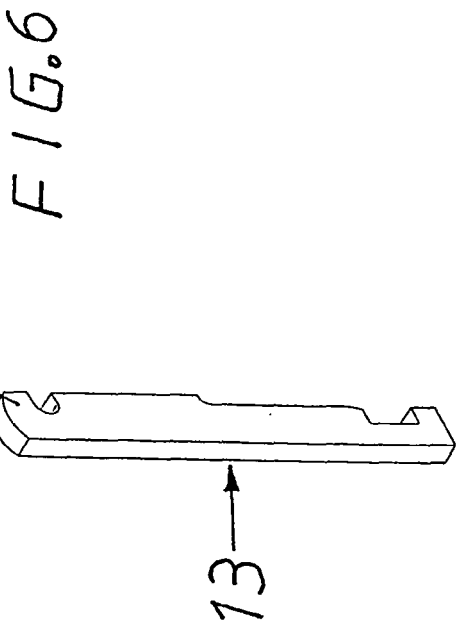
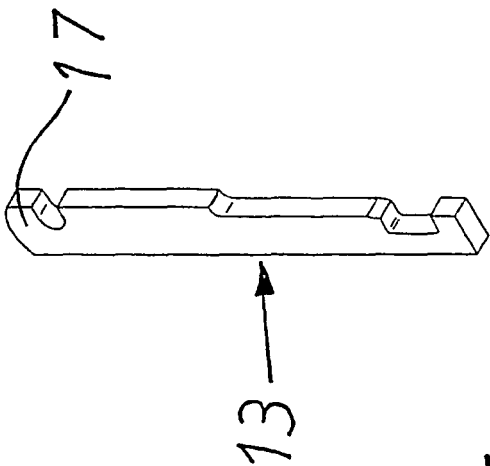
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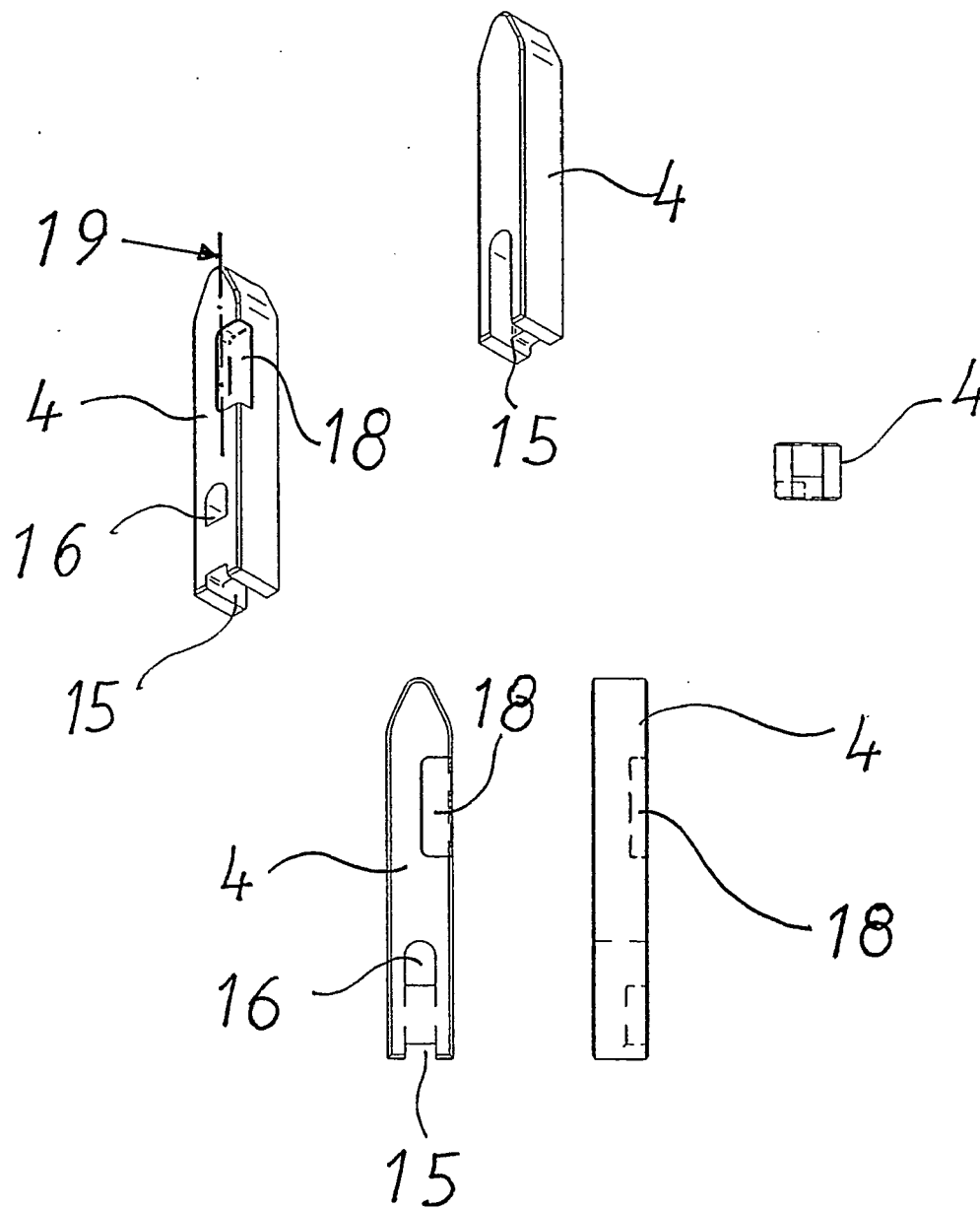


FIG. 7

FIG. 8

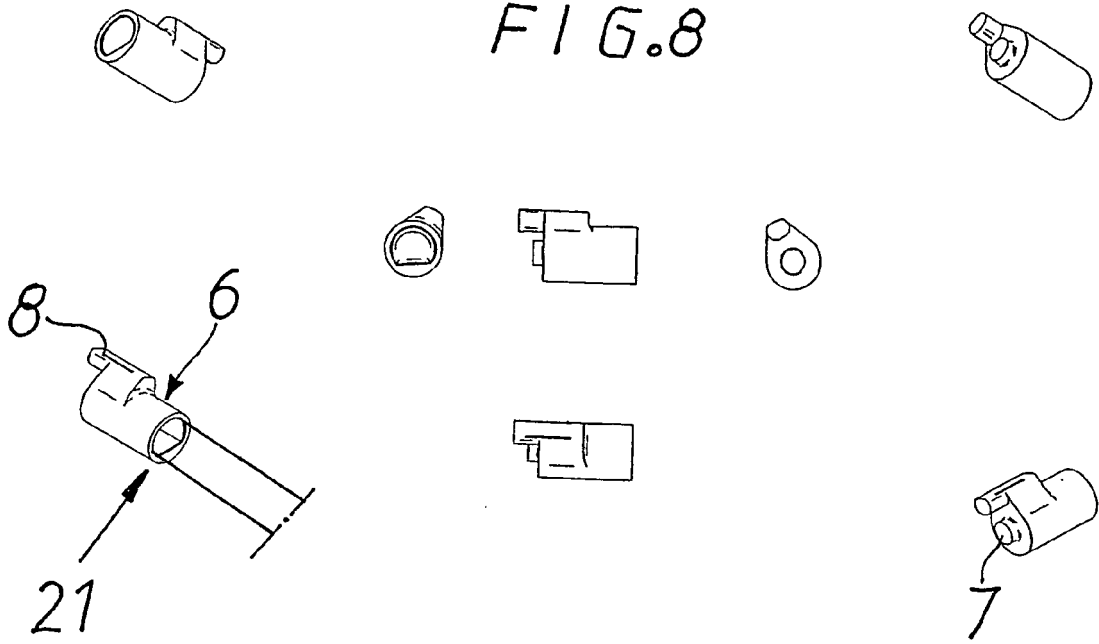
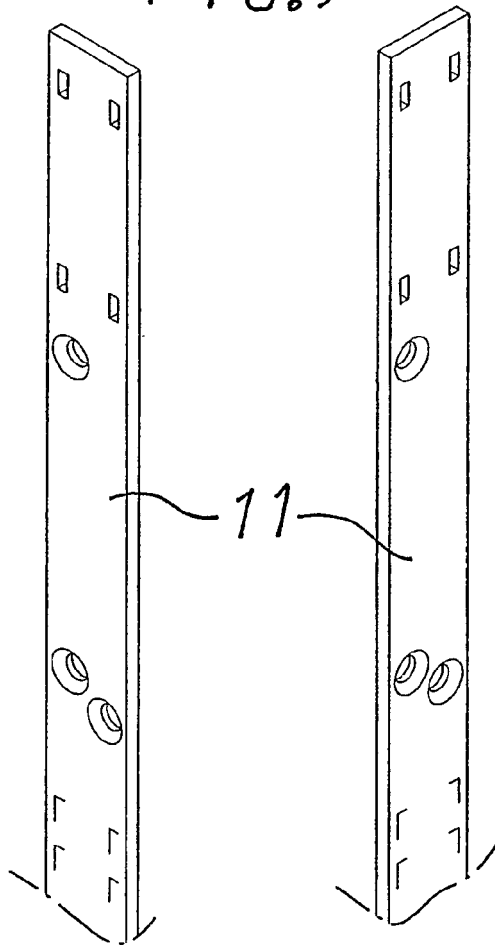


FIG. 9



REFERENCES CITED IN THE DESCRIPTION

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