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(73) Jogosult(ak):

Hoppe AG, 39011 Lana (BZ) (IT)

(72) Feltaláló(k):

Karnutsch, Elias, 6543 Nauders (AT)**Schuberth, Oliver Erich Rudolf, 39023 Laas (IT)**

(74) Képviselő:

SBGK Szabadalmi Ügyvivői Iroda, Budapest

(54)

Működtető fogantyú

Az európai szabadalom ellen, megadásának az Európai Szabadalmi Közlönyben való meghirdetésétől számított kilenc hónapon belül, felszólalást lehet benyújtani az Európai Szabadalmi Hivatalnál. (Európai Szabadalmi Egyezmény 99. cikk(1))

A fordítást a szabadalmas az 1995. évi XXXIII. törvény 84/H. §-a szerint nyújtotta be. A fordítás tartalmi helyességét a Szellemi Tulajdon Nemzeti Hivatala nem vizsgálta.

Actuation handle

The invention relates to an actuation handle for a door or a window according to the preamble of claim 1.

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Actuation handles for doors and windows are generally known. They have a stop member, which can be secured to a door leaf or a frame profile, and a handle which is supported in an axially secure/rotatable manner in the stop member and which is operationally connected, in order to open or close the door or the window by means of a carrier, to an actuation element in the door leaf or in the frame profile, for example, by means of a lock nut or a gear nut.

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In order to facilitate the location of operating positions of the actuation handle, there are provided between the handle and the stop member catch means which, when a defined angular position (operating position) of the handle relative to the stop member is reached engage one inside the other in such a manner that the torque required to further turn the handle in such an operating position is greater than the torque required for rotation outside the operating positions. The latter can thereby be clearly perceived by the user. The catch means are in most cases constructed at the peripheral side in or on a handle neck which begins at the handle or in a catch disc which is connected thereto in a rotationally secure manner and correspondingly in the stop member. These are generally catch lugs, catch projections, catch balls or the like which engage in a radial and spring-loaded manner in corresponding catch recesses (see in this regard, for example, DE 297 03 682 U1 or DE 20 2008 005 829 U1).

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DE 42 27 973 C3 in contrast uses axially acting catch means. To this end, a handle is rotatably supported with a neck bearing component in a bearing sleeve, wherein an actuation shaft fitting (square spindle) of the handle engages in a closure actuation element which is rotatably supported in a fitting housing. The neck bearing component comprises a collar sleeve which is supported so as to be able to be axially displaced on the actuation shaft fitting and which is acted on by means of a helical spring which surrounds the actuation shaft fitting and which is supported in the handle neck of the handle. The collar sleeve which is supported on the square spindle in a rotationally

secure manner and the bearing sleeve which is secured in a torsion-resistant manner in the door leaf are constructed as axially acting engagement components, wherein the collar sleeve and the bearing sleeve are provided at the mutually facing end faces thereof with catch means, preferably with radial ribs which engage in corresponding radial grooves.

DE 33 20 192 C2 uses in a door fitting as catch and restoring means axially rising wedge portions which are constructed at the end face on a sleeve which is supported axially but in a rotationally secure manner counter to a spring in the handle neck. The wedge portions engage in complementary wedge portions of a guiding collar which is fixed in a torsion-resistant manner by means of a screw in the stop member. The handle is thereby always acted on in the direction of the closure position with a restoring force independently of the associated lock so that the lock and the handle always return independently to the starting position thereof. The sleeve which is supported in an axially displaceable manner is secured against torsion by means of two lateral projections in the handle neck.

DE 10 2011 008 758 A1 proposes displacing the catch means which are supported in an axially movable manner in the stop member. To this end, a first catch means is constructed at an end face of the handle neck facing the stop member, whilst there is provided inside the stop member concentrically relative to the rotation axis a receiving member in which a sliding member is supported in an axially displaceable manner with a second catch means parallel with the rotation axis. The sliding member is acted on in the direction of the handle neck with a resilient force, wherein the second catch means in the operating positions of the handle moves into engagement with the first catch means. To this end, there is arranged between the sliding member and the base of the receiving member a spring assembly which permanently presses the sliding member against the end face of the handle neck.

The previously known actuation handles or fittings have the disadvantage that there are sometimes required complex special components, which are in most cases complex and expensive to produce and which have to be inserted in special recesses in the door or in the window. Consequently, another significant disadvantage of the known solutions is

that the assembly of the actuation handles on standard doors or standard window profiles is not possible since the drill holes or recesses which are predetermined at defined dimensions cannot be used. Special solutions which deviate from the standard or additional special holes are therefore always required, which impedes widespread and cost-effective use of the actuation handles. Furthermore, specific recesses always have to be introduced into the handle neck, which further has an unfavourable effect on the production costs. Rapid and cost-effective assembly of the actuation handles on a standard door or a standard window is consequently not possible.

It is further problematic that, for the disassembly of the actuation handles, there is sometimes required a special tool which has to be laterally introduced into the engagement opening in the gear mechanism in order to be able to actuate the securing member of the square spindle. Such openings are not provided in standard gear mechanisms and standard window profiles. It is further problematic that the elements which are supported in an axially displaceable manner can become readily tilted or jammed, which can impair the catch function and consequently the function of the actuation handle on the whole.

An object of the invention is to overcome these and other disadvantages of the prior art and to provide an actuation handle which is constructed in a cost-effective manner using simple means and which can be rapidly and comfortably assembled on standard windows or standard doors. The actuation handle is further intended to be able to be produced in an economic manner and during use to have a permanently high level of stability and reliability. Another object of the invention is to develop an actuation handle which has a stop member for a door and/or window handle and which is constructed in a cost-effective manner using simple means and which with a substantially reduced structural height of the stop member ensures a visually uniform and closed appearance. The stop member should also be simple to use and also permanently withstand relatively high loads.

The main features of the invention are set out in the characterising portion of claim 1. Claims 2 to 16 relate to embodiments.

With an actuation handle for a door or a window having a handle which has a handle neck and which is rotatably connected to a stop member, wherein the handle is operationally connected by means of a carrier to an actuation element in the door or in the window, and wherein the stop member can be secured to the door or the window, and having catch means which in at least one operating position of the handle are in engagement with each other in a non-positive and/or positive-locking manner, wherein a first catch means is constructed on a catch ring which is supported so as to be able to be displaced in an axial direction and in a rotationally secure manner in the handle neck, wherein a second catch means which is constructed in a manner corresponding to the first catch means is constructed on a counter-catch ring which is secured to the stop member in a torsion-resistant manner, and wherein there is arranged in the handle neck a pressure spring which presses the catch ring in an axial direction against the counter-catch ring, the invention makes provision

- for there to be constructed in the handle neck a guiding sleeve which receives the carrier centrally relative to the rotation axis of the handle in a rotationally secure manner and which is provided on the inner periphery thereof with guiding elements,
- for the catch ring to have centrally with respect to the rotation axis of the handle an opening which has the same shape as the carrier and which is provided on the outer periphery thereof with guiding elements, and
- for the catch ring to be inserted into the guiding sleeve, wherein the opening thereof receives the carrier and wherein the guiding elements thereof are in engagement in an axially displaceable manner with the guiding elements of the guiding sleeve.

As a result of the arrangement of the catch ring in the handle neck of the handle and as a result of the arrangement of the counter-catch ring on the stop member, there are no longer any movable catch elements in the stop member which can consequently be constructed in a very flat manner. Furthermore, no catch or counter-catch elements are also accommodated in the door leaf or in the profile frame so that the actuation handle according to the invention are assembled at any time on a standard door or a standard window. The guiding sleeve which is inserted in the handle neck ensures an extremely stable and precise axial support and axial guiding of the catch ring in this case, wherein

the guiding elements thereof which are constructed on the outer periphery are in engagement with the guiding elements on the inner periphery of the guiding sleeve, whilst the catch ring surrounds the carrier with the central opening thereof. The actuation handle according to the invention consequently ensures during use a permanently high level of stability and reliability since the catch ring is secured in an optimal manner against torsion and during its axial movement can no longer become tilted or jammed inside the guiding sleeve. The central opening in the catch ring for the carrier ensures that the catch disc cannot be incorrectly inserted into the guiding sleeve. The actuation handle can further be produced in an economic manner, since the guiding sleeve can be produced in a uniform manner and inserted in extremely different handles.

An embodiment of the invention makes provision for the handle neck to be provided at the end face with a recess for receiving the guiding sleeve and for the guiding sleeve to be provided on the outer periphery thereof at least partially with a polygonal, for example, polygon-like outer contour, wherein the recess in the handle neck is provided with an inner contour which has the same shape as the outer contour of the guiding sleeve. The guiding sleeve is thereby always secured in the handle in a torsion-resistant and stable manner, which further has a favourable effect on the stability and reliability of the actuation handle.

In order to be able to secure the guiding sleeve in the handle neck, the outer contour of the guiding sleeve is provided in a state distributed over the periphery in the corner regions with outwardly open recesses. In this region, the guiding sleeve can be caulked in the handle neck. Additionally or alternatively, the guiding sleeve can be fixed in the handle neck by means of pressing or adhesive-bonding.

It is further advantageous for the guiding sleeve to have centrally with respect to the rotation axis of the handle a through-opening which is of the same shape as the carrier. The carrier is thereby always orientated centrally and in a stable manner in the guiding sleeve. The carrier additionally protrudes through the guiding sleeve as far as a location in the handle so that the carrier is always fixed in a stable and secure manner.

So that the catch ring is always pressed in a reliable manner against the counter-catch ring in order to retain the handle in the indicated operating positions, the pressure spring for the catch ring is supported on a base face of the guiding sleeve. This base face may also be constructed as an annular face.

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An important embodiment of the invention makes provision for the handle neck to have an end face facing the stop member and for the guiding sleeve which is inserted in the handle neck to terminate substantially flush with the end face of the handle neck. The end face of the handle neck, when the handle is assembled on the stop member, is used
10 as a bearing and support face, which contributes to the high level of stability and reliability of the actuation handle since the handle is thereby guided in a permanent and stable manner on the stop member.

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The guiding elements for the catch ring which are constructed on the inner periphery of the guiding sleeve are preferably longitudinal ribs which extend in an axial direction and which protrude radially inwards and which are arranged so as to be distributed with equidistant spacing over the inner periphery of the guiding sleeve whilst the guiding elements which are constructed on the outer periphery of the catch ring are longitudinal
20 grooves which extend in an axial direction and which are directed radially inwards.

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Preferably, there are provided four longitudinal ribs and four longitudinal grooves which are arranged so as to be distributed with equidistant spacing over the periphery. In a particularly preferred manner, eight longitudinal ribs and longitudinal grooves are used, which produces a particularly precise and stable support for the catch ring. If necessary, even more guiding elements can also be constructed.

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The axial length of the longitudinal ribs of the guiding sleeve is preferably greater than the axial length of the longitudinal grooves of the catch ring. In this manner, it is ensured that the catch ring can move in an unimpeded manner in an axial direction inside the guiding sleeve.

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So that the indicated operating positions of the handle on the stop member can be clearly identified by the user of the actuation handle, the first catch means is formed by at least two catch recesses which are constructed so as to be distributed with

equidistant spacing over the periphery in an end face of the catch ring facing the stop member, whilst the second catch means are at least two catch projections which correspond to the catch recesses and which are constructed so as to be distributed with equidistant spacing over the periphery in an end face of the counter-catch ring facing the handle. In order to further increase the ability of the operating positions to be identified, there may be provided four or, in a particularly preferred manner, eight catch recesses and catch projections which are always constructed in pairs on the catch ring and on the counter-catch ring.

Another advantageous embodiment of the invention makes provision for the stop member to have a base member which is provided centrally with respect to the rotation axis of the handle with a recess for receiving the counter-catch ring and with at least two through-holes for receiving securing screws, wherein the base member has an upper side and a lower side. Such a base member may, for example, be constructed as a simple and stable plate in an extremely flat manner so that the stop member on the whole only has a very small structural height. It is thereby possible with the actuation handle according to the invention to comply with the highest aesthetic demands even on standard doors and standard windows.

Advantageously, the counter-catch ring is inserted in a positive-locking manner in the recess of the base member and secured against torsion by means of fitting elements. To this end, the counter-catch ring has at the rear side thereof facing away from the end face as a first fitting element, for example, at least two axial projections which engage in a positive-locking manner in the recess of the base member. To this end, it is again advantageous when the axial projections of the counter-catch ring are provided on the outer periphery thereof with a recess in each case. In contrast, the recess in the base member is provided at the outer periphery thereof with at least two radial projections which form the second fitting element. The projections are constructed so as to correspond to the recesses in the axial projections of the counter-catch ring. The counter-catch ring is thereby not only secured against torsion, but also retained in a very stable and reliable manner in the base member of the stop member. It is additionally inserted into the base member in a simple manner. Additional fixing elements or assembly steps are not required.

The invention further makes provision for the recess in the base member to have between the radial projections additional radial projections which, after the counter-catch ring has been inserted into the recess of the base member, are located between the axial projections of the counter-catch ring. The counter-catch ring is consequently always supported in a reliable and stable manner by the base member which on the whole has a favourable effect on the stability of the stop member.

In order to be able to conceal the base member and the securing screws which are inserted therein after assembly of the actuation handle, the stop member has a covering element which is arranged in a rotatable manner at the upper side of the base member and which, in a first rotation position relative to the base member, covers the base member and, in a second rotation position relative to the base member, releases the through-holes. In this instance, the covering element has centrally with respect to the rotation axis of the handle an opening in which a flange ring is inserted. Using this, the covering element is rotatably secured to the base member.

It is important in this instance that the flange ring is in engagement by means of fitting elements with the counter-catch ring so as to be secured against torsion. In this manner, the covering element is prevented from also being unintentionally rotated when the handle is actuated. The flange ring has to this end, for example, a ring portion which protrudes through the opening in the covering element and which is in engagement in a positive-locking manner with the counter-catch ring, wherein the flange ring is provided on the inner periphery thereof as a second fitting element with at least two radial projections which are constructed so as to correspond to the first fitting element, consequently so as to correspond to the recesses in the axial projections of the counter-catch ring. The structural complexity is thereby simplified considerably since for the flange ring no separate fitting or support elements are also required in the base member. It surrounds the counter-catch ring and uses the fitting elements which retain the counter-catch ring in the base member of the stop member in a torsion-resistant manner.

In order to axially secure the covering element, the flange ring has a flange edge which is positioned in the region of the opening in the covering element at the upper side thereof. The covering element is thereby axially secured on the base member. At the same time, the flange edge forms an abutment and a plain bearing for the handle. To this end, it is important that the flange edge of the flange ring has a planar end face, wherein the end face forms a bearing face for the handle or the handle neck. If the handle, in which the carrier is inserted at the end face, is axially fixed to the stop member, the handle neck may be positioned in a flush manner with the end face thereof on the flange edge of the flange ring so that the handle is permanently supported in a stable and precise manner on the stop member. The axial fixing of the handle is carried out, for example, by means of one or two clamping discs which are placed in a non-positive-locking and/or frictionally engaging manner on the carrier and which are supported from below against the lower side of the base member of the stop member. The torsionresistance of the flange ring with respect to the base member is produced by the complementary fitting elements which are correspondingly constructed on the flange ring and on the counter-catch ring.

In an advantageous development of the invention, a covering lower portion is arranged on the lower side of the base member, wherein the covering element and the covering lower portion surround the base member in the first rotation position of the covering element. In this instance, the covering element has an edge which laterally covers the base member and which is interrupted in mutually opposing regions. The covering lower portion also has an edge which laterally covers the base member and which is interrupted in mutually opposing regions, wherein the edge of the covering element and the edge of the covering lower portion complement each other to form a visually closed edge in the first rotation position of the covering element relative to the base member. Consequently, with only a small structural height of the stop member, there is always produced a visually uniform and closed appearance for the actuation handle since the covering element and the covering lower portion enclose the base member with which the handle is secured to the door or the window, in the manner of a housing so that the base member cannot be seen from the outer side. However, in order to assemble or disassemble the base member, the covering element can be rotated at any time into the second rotation position relative to the base member so that the through-holes in the

base member and- as long as they are provided - the securing screws are accessible. In this instance, the covering element does not have to be lifted either with respect to the base member or with respect to the handle since the covering element always moves in a plane, that is to say, in the plane of the covering lower portion which is arranged in a non-movable manner below the base member. Consequently, the spacing between the handle and the covering element can be minimised since between the handle and the base member resilient or catch elements which retain the covering element on the base member are also no longer required. The stop member according to the invention is constructed in a simple and cost-effective manner and can be easily handled.

The edges of the covering element and covering lower portion are constructed in a complementary manner, that is to say, the edge of the covering element is located in a closed position of the covering element in the mutually opposing regions between the edge of the covering lower portion and vice versa. Therefore, both edges complement each other to form a visually enclosed edge as soon as the covering element has assumed its first closed rotation position on the lower portion, wherein the covering element and the covering lower portion are always located at the same height. The height of the edge is dependent on the height of the base member, in particular adapted to the height thereof, so that the base member is always surrounded completely – including laterally - by the covering element which can be pivoted further and the covering lower portion.

Structurally, it is advantageous for the covering lower portion to have a base in which there are constructed centrally with respect to the rotation axis of the handle an opening and, in the region of the through-holes of the base member, through-openings for the securing screws.

The covering element and the covering lower portion are in the first rotation position of the covering element connected to each other in a non-positive, frictionally engaging and/or positive-locking manner. The covering element thereby always remains securely in the first rotation position, that is to say, it cannot unintentionally rotate during the actuation of the handle. The connection can either be provided by catch elements which are constructed, on the one hand, on the covering element and, on the other hand, on

the covering lowerportion or suitable clamping or friction elements which releasably secure the covering element to the covering lower portionare used.

Other features, details and advantages of the invention will be appreciated from the wording of the claims and the following description of embodiments with reference to the drawings, in which:

Figure 1 is a cross-section of an actuation handle according to the invention with a stop member and a handle which is rotatably supported therein;

Figure 2 is a guiding sleeve of the actuation handle;

Figure 3 shows the lower end of the handle or the handle neck of the actuation handle according to the invention with the catch ring thereof;

Figure 4 shows a base member of the stop member of the actuation handle according to the invention with the counter-catch ring thereof;

Figure 5 is an exploded view of the stop member of the actuation handle of Figure 1;

Figure 6 is a plan view and a side view of the actuation handle of Figure 1 with the covering plate pivoted outwards; and

Figure 7 is a plan view and a side view of the actuation handle of Figure 1 with the covering plate pivoted inwards.

The actuation handle which is generally designated 10 in Figure 1 is constructed as a window fitting. It serves to open, close or bring into a tilting position a window which is provided with a tilt/turn fitting (not illustrated). To this end, there is integrated inside the window or inside the window leaf a tilt/turn mechanism (also not illustrated) which can be actuated by means of the actuation handle 10. The latter has a handle 20 having a main handle portion 21 and a handle neck 22 which is rotatably supported about a rotation axis D on a stop member 40 and which is operationally connected by means of a carrier 30, preferably a square spindle, to an actuation element (not shown) of the tilt/turn mechanism which is rotatably supported in the window leaf. The actuation element of the tilt/turn mechanism is preferably a gear nut which is provided centrally with a square recess which receives the free end of the square spindle 30 in a positive-locking manner.

The handle neck 22 has a recess 23 which is orientated centrally with respect to the rotation axis D and which is open in the direction towards the stop member 40 and which receives in an inner region 231 the carrier 30 and in a front region 232 a guiding sleeve 80. The inner region 231 of the recess 23 has a cross-section which corresponds to the cross-section of the carrier 30 so that the carrier 30 can be fixed in the handle neck 20 in a positive-locking manner. The front region 232 of the recess 23 is provided with a polygonal, preferably octagonal inner contour 24.

The guiding sleeve 80 which is illustrated in greater detail in Figure 2 has on the outer periphery 81 thereof an outer contour 82 which is also octagonal and which corresponds to the octagonal inner contour 24 of the recess 23 so that the guiding sleeve 80 is retained in the recess 23 in a rotationally secure manner. The outer contour 82 of the guiding sleeve 80 has in a state distributed over the periphery in the corner regions eight open recesses 83. In these regions, the guiding sleeve 80 after being inserted into the recess 23 is caulked with the handle neck 22, as shown in Figure 3. The guiding sleeve 80 - as further shown in Figure 3 - is inserted into the handle neck 22 in a flush manner, wherein the end face 88 of the guiding sleeve 80 terminates in a substantially flush-mounted manner with the end face 26 of the handle neck 22 which faces the stop member 40. It is important in this instance that the guiding sleeve 80 does not protrude beyond the end face 26 of the handle neck 22 with the end face 88 thereof. In order to introduce the carrier 30, a through-opening 84 which has the same shape as the carrier 30 is formed in the guiding sleeve 80 centrally with respect to the rotation axis D of the handle 20 so that the carrier 30 can be inserted through the guiding sleeve 80 into the inner region 231 of the recess 31.

The inner periphery 86 of the guiding sleeve 80 is constructed in a substantially cylindrical manner, wherein guiding elements 87 are formed on the inner periphery 86. In this instance, these are longitudinal ribs which extend in an axial direction A and which protrude radially inwards so that between the longitudinal ribs 87 longitudinal grooves 89 which extend in an axial direction A are also formed. The longitudinal ribs 87 and the longitudinal grooves 89 which extend parallel therewith are arranged so as to be distributed with equidistant spacing and in a uniform manner over the inner periphery 86 of the guiding sleeve 80. In the embodiment of Figure 2, a total of eight longitudinal

ribs 87 and eight recesses 89 are provided. However, another number may also be selected. All the longitudinal ribs 87 have in an axial direction A a length L. They terminate - as can be seen in Figures 2 and 3 - upstream of the end face 88 of the guiding sleeve 80.

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Between the handle 20 and the stop member 40 there is constructed a catch device which has axially acting catch means 52, 62 which in at least one operating position of the handle 20 are in engagement with each other in a positive and/or non-positive-locking manner. A first catch means 52 is constructed on a catch ring 50 which is supported in the handle neck 22 so as to be able to be displaced in an axial direction A and in a rotationally secure manner in the guiding sleeve 80. A second catch means 62 which is constructed so as to correspond to the first catch means 52 is constructed on a counter-catch ring 60 which is inserted in a torsion-resistant and non-displaceable manner in the stop member 40.

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The catch ring 50 is an annular disc which is arranged in an axially displaceable manner in the guiding sleeve 80 and which has a central opening 54 which has the same shape as the carrier 30. The opening serves to receive the carrier 30, wherein the dimensions of the opening 54 are selected in such a manner that the carrier 30 during the catch movement of the catch ring 80 inside the guiding sleeve 80 can move in the opening 45 without tilting. On the outer periphery 56 thereof, the catch ring 80 carries guiding elements 57 which are constructed so as to correspond to the guiding elements 87, 89 in the guiding sleeve 80. These are, for example, guiding grooves 57 which are introduced radially into the outer periphery 56 and which have in an axial direction A a length l and which are sized in such a manner that the guiding elements 87 of the guiding sleeve 80 can slide therein, that is to say, the guiding elements 57 of the catch ring 50 are in engagement with the guiding elements 87 of the guiding sleeve 80 in an axially displaceable manner. The guiding grooves 57 are arranged so as to be distributed with equidistant spacing over the outer periphery 56 of the catch ring 50, wherein the number of guiding grooves 57 corresponds to the number of longitudinal ribs 87.

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The first catch means 52 involves, for example, catch recesses which are constructed so as to be distributed with equidistant spacing over the periphery in an end face 51 of the

catch ring 50 facing the stop member 40. For example, there are constructed in the catch ring 50 a total of eight catch recesses 52 which are provided in a peripheral direction with side walls 53 which are orientated in a slightly oblique manner.

5 The second catch means 62 preferably involves catch projections which, in a manner corresponding to the catch recesses 52 in the catch ring 80, are constructed so as to be distributed with equidistant spacing over the periphery in an end face 61 of the counter-catch ring 60 facing the handle 20. For example, there are constructed on the counter-catch ring 60 a total of eight catch projections 62 which are provided with side flanks
10 621 which are orientated in a slightly oblique manner in a peripheral direction.

Between the catch ring 50 and the guiding sleeve 80 there is arranged a pressure spring 70 which permanently presses the catch ring 50 in an axial direction A against the counter-catch ring 60. In this case, the pressure ring 70 is supported on a base face 85 in
15 the guiding sleeve 80 and on the rear side 55 of the catch ring 50. Depending on the size of the pressure spring 70 - as shown in Figure 1 - in the guiding sleeve 80 an additional annular recess (not described in greater detail) for receiving the pressure spring 70 may be provided. The base 85 is located in this instance at the inner end of this
20 recess.

So that the catch ring 50 can slide in an unimpeded manner over the entire catch travel of the catch elements 52, 62 in the guiding sleeve 80, the axial length L of the longitudinal ribs 87 of the guiding sleeve 80 is greater than the axial length l of the longitudinal grooves 57 of the catch ring 50, wherein both the axial length L of the
25 longitudinal ribs 87 and the axial length l of the longitudinal grooves 57 are greater than the axial height (not described in greater detail) of the catch elements 52, 62. The height thereof defines the catch travel and consequently the adjustment path of the catch ring 50 inside the guiding sleeve 80.

30 The stop member 40 has - as shown in Figures 4 and 5 - a base member 41 with a recess 42 which is orientated centrally with respect to the rotation axis D of the handle 20 and two through-holes 46 which are arranged symmetrically relative thereto and which are provided to receive securing screws (not illustrated). Using the securing screws which

are preferable flat-head screws, the stop member 40 is fixed to the window leaf. The recess 42 in the base member 41 serves to receive the counter-catch ring 60 in a rotationally secure manner, wherein it is inserted into the recess 42 in a positive-locking manner and secured against torsion by means of fitting elements 44, 64. The base member 41 is preferably constructed as a flat plate which has an upper side 47 and a lower side 48.

The counter-catch ring 60 is constructed as an annular disc which has a central opening 67 for the carrier 30 so that - when the handle 20 is mounted - it can engage through the counter-catch ring 60 into the actuation element of the tilt/turn mechanism in the window leaf. At the end face 61 facing the handle 20 and the catch ring 50 of the catch device, the counter-catch ring 60 carries the catch projections 62 which are arranged diametrically opposed to the catch recesses 52 of the catch ring 50 with equidistant angular spacing.

At the opposing rear side 63 facing away from the handle 20, there are constructed on the counter-catch ring 60 four axial projections 64 which are each provided in the outer periphery 65 thereof with a recess 66. With these axial projections 64, the counter-catch ring 60 engages in the central recess 42 of the base member 41 which is provided on the inner periphery 43 thereof in each case in the region of the axial projections 64 with radial projections 44 which are diametrically opposed to the recesses 66. It can be seen that the axial projections 64 on the counter-catch ring 60 each form a first fitting element and the radial projections 44 on the inner periphery 43 of the recess 42 each form a second fitting element which - as soon as the counter-catch ring 60 is inserted in the recess 42 of the base member 41 - engage one in the other in pairs in a positive-locking manner and in this manner form a torsion prevention means for the counter-catch ring 60.

On the inner periphery 43 of the recess 42, there are constructed additional radial projections 45 which, after the counter-catch ring 60 has been inserted into the base member 41, are located radially between the axial projections 64 of the counter-catch ring 60. In this manner, the counter-catch ring 60 is carried by the radial projections 45, that is to say, the base member 41 forms a solid support for the counter-catch ring 60.

which is retained axially and in a non-movable manner in the peripheral direction in the base member 41 and which is engagement with the catch ring 50 which is guided in the guiding sleeve 80 in an axially movable manner and also in a non-movable manner in the peripheral direction.

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Above the base member 41, there is located a covering element 90 which is arranged in a rotatable manner on the upper side 47 of the base member 41 and which in a first rotation position relative to the base member 41 covers it (see in this regard Figure 7). In a second rotation position relative to the base member 41, the covering element 90 releases the through-holes 46 so that the stop member 40 can be assembled with the securing screws - or the screws can be released in an unimpeded manner for disassembly (see in this regard Figure 6).

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The covering element 90 is located flat on the plate 41 and is provided concentrically with respect to the recess 42 of the base member 41 with a central opening 95. It is rotatably supported with a flange ring 110 on the base member 41. The flange ring 110 preferably has to this end an annular portion 112 which - as shown in Figure 1 - is supported in an axial direction on the base member 41 and which protrudes through the opening 95 in the covering element 90. It surrounds in this instance the counter-catch ring 60 and is connected thereto in a rotationally secure manner by means of additional fitting elements 114. To this end, there are provided on the inner periphery of the flange ring 110 - as shown in greater detail in Figure 5 - radial projections 114 which are constructed to be diametrically opposed to the recesses 66 in the axial projections 64 of the counter-catch ring 60, that is to say, the additional projections 114 of the flange ring 110 and the recesses 66 of the counter-catch ring 60 also form in this instance pairs of fitting elements in order to secure the flange ring 110 against torsion. In this manner, the covering element 90 can always be laterally pivoted in an unimpeded manner and relative to the base member 41.

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In order to axially secure the covering element 90, the flange ring 110 has a flange edge 115 which is positioned in the region of the opening 95 in the covering element 90 on the upper side 91 thereof. The flange edge 115 of the flange ring 110 preferably has in this instance a planar end face 116, wherein the handle neck 22 when the handle 20 is

mounted is positioned in a sliding manner with the end face 26 thereof on the end face 116 of the flange ring 110 and is supported thereby.

5 The axial securing of the handle 20 to the stop member 10 is carried out, for example, using a clamping element K which is securely placed on the carrier 30, preferably pressed. The clamping element K is in this instance in engagement in a non-positive-locking and/or frictionally engaging manner with the side walls of the carrier 30 and is supported on the lower side 48 of the base member 41. In this manner, the handle 20 is pulled with the end face 26 thereof against the end face 116 of the flange ring 110, 10 wherein the handle neck 22 is positioned in a flush and stable manner on the flange edge 115. The handle 20 is thereby supported in a stable and precise manner on the stop member 10. The end face 26 of the handle neck 22 and the end face 116 of the flange ring 110 in this instance form a plain bearing for the handle 20 which can be rotated in a smooth and precise manner about the rotation axis D thereof. It can be seen 15 that only the flange edge 115 of the flange ring 70 is located between the handle neck 22 and the covering element 90 so that the gap between the handle 20 and covering element 90 is minimised and is hardly visible from the outer side. In order to increase the strength of the connection between the handle 20 and the stop member 40 - as shown in Figure 1 - two clamping discs K can be used.

20 A contribution is made to stabilising the rotational support of the handle 20 on the stop member 40 when the counter-catch ring 60 has at the edge side a peripheral edge 68 which - as shown in Figures 1 and 4 - is recessed in a step-like manner from the end face 61 and terminates flush with the end face 116 of the flange ring 110. In this manner, 25 there is produced for the handle neck 22 and the guiding sleeve 80 which is preferably inserted in a flush manner an increased support and bearing face, wherein the end face 26 of the handle neck 22 is positioned on the end face 116 and the peripheral edge 68.

30 At the lower side 48 of the base member 41 there is a covering lower portion 100, wherein the covering element 90 and the covering lower portion 100 in the first rotation position of the covering element 90 together surround the base member 41.

The covering lower portion 100 has a base 105 in which an opening 106 is formed concentrically relative to the recess 42 of the base member 41. The diameter of the opening 106 is preferably greater than the outer diameter of the clamping discs K so that they can be supported in an unimpeded manner on the lower side 48 of the base member 41. In the region of the through-holes 46 of the base member 41, through-holes 107 are formed in the base 105 of the covering lower portion 100 so that the base member 41 can be secured to the window leaf with the securing screws. The base member 41 rests flat on the base 105 of the covering lower portion 100, whereby a stable arrangement is produced.

In order to also laterally enclose, that is to say, to visually cover or conceal, the base member 41, the covering element 90 and the covering lower portion 100 form a common continuous edge 92, 102 which laterally surrounds the base member 41. To this end, the covering element 90 has an edge 92 which laterally covers the base member 41 and which is interrupted in mutually opposing regions 93, 94. In these regions 93, 94, the covering lower portion 100 has an edge 102 which laterally covers the base member 41 and which is also interrupted in mutually opposing regions 103, 104, that is to say, at the location where the edge 92 of the covering element 90 is formed. The edge 92 of the covering element 90 and the edge 102 of the covering lower portion 100 thereby complement each other in the first rotation position of the covering element 90 relative to the base member 41 to form a visually closed edge which conceals the base member 41 in a laterally peripheral manner.

As a result of the division of the edge 92, 102, however, it is possible at any time to laterally twist the covering element 90 relative to the base member 41 and relative to the covering lower portion 100 in a plane in order to release the securing screws or the through-holes 46. Lifting or raising of the covering element 90 is in this instance not required. Additional or separate resilient elements, which press the covering element 90 against the base member 41, are also no longer required since the covering element 90 is always securely and rotatably retained by means of the flange ring 110.

It can be seen that the covering element 90 and the covering lower portion 100 form a type of housing for the base member 41 which in the first rotation position of the

covering element 90 is enclosed and covers the base member 41 from all sides but which at the same time can be opened by means of a simple rotation movement in a plane in order to be able to assemble or disassemble the base member 41. The covering element 90 forms in this instance a type of pivoting cover for the housing, whilst the covering lower portion 100, which is arranged in the mounted position of the stop member 40 between the base member 41 and the window leaf, forms the housing base. The edges 92, 102 complement each other in the closed position to form side walls which laterally cover the base member 41. In the open position, the end edges of the edges 92 of the covering element 90 - as shown in Figure 6 - form stops for the rotation movement so that the covering element 90 can be twisted or opened only as far as a specific angle. The lengths of the respective edges 92, 102 on the covering element 90 and the covering lower portion 100 are adapted to each other in such a manner that, when the covering element 90 is rotated, there is produced an opening angle which is sufficiently large to release the securing screws or the through-holes 46 and the edge 92, 102 in the first rotation position of the covering element 90 at least visually gives the impression of being enclosed.

So that the covering element 90 during use of the handle 20 cannot be unintentionally opened or twisted by the rotation movement thereof, the covering element 90 and the covering lower portion 100 in the first rotation position of the covering element 90 are connected to each other in a non-positive-locking, frictionally engaging and/or positive-locking manner. To this end, there is formed, for example, in the corner regions 101 of the edges 102 of the covering lower element 100 a chicane 108 which fixes the covering element 90 in the first rotation position. Such a chicane 108 is, for example, a protrusion which is provided at the edge side with shallow-rising flanks 109 as inclined introduction members. When the covering element 90 is rotated from the second rotation position into the first rotation position, the covering element 90 is slightly raised at the edge side, wherein the protrusion 108 is either in contact in a frictionally engaging manner with the covering element 90 or the covering element 90 has at the lower side thereof a corresponding recess (not shown) in which the protrusion 108 engages. The covering element 90 itself acts in this instance as a resilient element.

So that the covering lower element 100 is not lost as long as the actuation handle 10 has not struck the door or the window, the base member 41 and the covering lower portion 100 can be engaged with each other. To this end, there are fitted to the covering lower portion 100 two mandrels 120 which are clamped or engaged in two holes 49 of the
5 base member 41.

Furthermore, the covering lower portion 100 may be provided with peripheral edge portions 122 which surround the base member 41 laterally and so as be adapted in terms of shape. The width of the edge portions 122 is narrower than the width of the
10 edges 102 so that the covering element 90 with the edges 92 thereof can continue to completely reach the first rotation position. In this rotation position, the edge portions 122 are located behind the edges 92 of the covering element 90.

So that the securing screws terminate flush with the upper side 47 of the base member 41, each through-opening 46 of the base member 41 forms a recess 461 for receiving a
15 screw head. In order to further provide torsion prevention for the stop member 40 on a door leaf or a window leaf, cam-like projections 126 are formed at the rear side 124 of the covering lower portion 100 facing away from the base member 41. It can be seen that the recesses 461 in the plate 41 and the cam-like projections 126 in the covering
20 lowerportion 100 complement each other.

Preferably, the covering element 90 and the covering lower portion 100 are constructed in a point-symmetrical manner with respect to the centre point of the recess 42 in the
base member 41. This simplifies both the production of the elements 90, 100 and the
25 handling and assembly thereof.

MŰKÖDTETŐ FOGANTYÚ



SZABADALMI IGÉNYPONTOK

1. Működtető fogantyú (10) egy ajtó vagy egy ablak számára,

a) egy markolatnyakát (22) tartalmazó és egy ütközőtesttel (40) együttforgóan összekötött markolattal (20),

b) ahol a markolat (20) egy továbbítón (30) keresztül egy az ajtóban vagy az ablakban működtető elemmel áll működő kapcsolatban, és

c) ahol az ütközőtest (40) az ajtón vagy az ablakon rögzíthető, és

d) reteszelő eszközökkel (52, 62) amelyek a markolat (20) legalább egy működési állásában erő- és/vagy alakzáróan egymásba kapaszkodnak,

e) ahol az első reteszelő eszköz (52) egy tengelyirányban (A) elmozgatható és a markolatnyakkal (22) együttforgóan rögzített reteszgyűrűn (50) van kialakítva,

f) ahol az első reteszelő eszközzel (52) illeszkedően kialakított második reteszelő eszköz (62) egy, az ütközőtesten (40) forgásbiztosan rögzített ellen reteszgyűrűn van kialakítva,

g) ahol a markolatnyakban (22) egy nyomórugó (70) van elrendezve, amely a reteszgyűrűt (50) tengelyirányban (A) az ellen reteszgyűrűnek (60) nyomja,

azzal jellemezve,

h) hogy a markolatnyakban (22) egy vezetőhüvely (80) van kialakítva, amely a markolat (20) forgástengelyére (D) központosan a továbbítót (30) forgásbiztosan fogja meg, és amely a belső kerületén (86) vezetőelemekkel (87) van ellátva,

i) hogy a reteszgyűrű (50) a markolat (20) forgástengelyére (D) központosan egy a továbbítóval (30) alakzáró nyílással (54) van ellátva, és a külső kerületén (56) vezetőelemekkel (57) van ellátva, és

j) hogy a reteszgyűrű (50) a vezetőhüvelybe (80) van behelyezve, amely gyűrű nyílása (54) a továbbítót (30) fogadja be, és ahol a vezetőelemek (57) a vezetőhüvely (80) vezetőelemeivel (87) tengelyirányban elcsúsztható kötést alkot.

2. Az 1. igénypont szerinti működtető fogantyú azzal jellemezve,

a) hogy a markolatnyak (22) homlok oldalán egy mélyedéssel (23) van ellátva a vezetőhüvely (80) befogadására, és

b) hogy a vezetőhüvely (80) a külső kerületén (81) legalább szakaszonként egy sokszögű külső kontúrral (82) rendelkezik,

c) ahol a markolatnyakban (22) lévő mélyedés (23) egy a vezetőhüvely (80) külső kontúrjával (82) forma azonos belső kontúrral (24) rendelkezik.

3. Az 1. vagy a 2. igénypont szerinti működtető fogantyú azzal jellemezve, hogy a vezetőhüvely (80) a markolat (20) forgástengelyére (D) központosan egy, a továbbítóval (30) alakzáró átmenő nyílást (84) tartalmaz.

4. Az 1-3. igénypontok egyike szerinti működtető fogantyú, azzal jellemezve, hogy a markolatnyaknak (22) van egy, az ütközőtesttel (40) határos elülső felülete (26), és hogy a markolatnyakban (22) elhelyezett vezetőhüvely (80) lényegében a markolatnyak (22) elülső felületével (25) egy szintben van.

5. Az 1-4. igénypontok egyike szerinti működtető fogantyú, azzal jellemezve, hogy az első reteszelő eszköznek (52) legalább két reteszmélyedése van, amelyek a kerület mentén egyenlő távolságra elosztva, a reteszgyűrű (50) ütközőtesttel (40) határos homlokfelületén (51) vannak kialakítva.

6. Az 5. igénypont szerinti működtető fogantyú, azzal jellemezve, hogy a második reteszelő eszköz (62) legalább két, a reteszmélyedéssel (52) illeszkedő reteszkittüremkedést tartalmaz, amelyek a kerület mentén egyenlő távolságra elosztva, az ellen reteszgyűrű (60) markolatnyakkal (20) határos homlokfelületén (61) vannak kialakítva.

7. Az 1-6. igénypontok egyike szerinti működtető fogantyú, azzal jellemezve, hogy az ütközőtestnek (40) van egy alapteste (41), amely a markolat (20) forgástengelyére (D) központosan egy mélyedéssel (42) és a rögzítő csavarok befogadására legalább két átmenőfurattal (46) van ellátva, ahol az alaptest (41) egy felső oldallal (47) és egy alsó oldallal (48) van ellátva.

8. A 7. igénypont szerinti működtető fogantyú, azzal jellemezve, hogy az ellen reteszgyűrű (60) alakzáróan az alaptest (40) mélyedésébe (42) van behelyezve, és egy nyomóelemmel (44, 64) elfordulás ellen biztosítva van.

9. A 7. vagy a 8. igénypont szerinti működtető fogantyú, azzal jellemezve, hogy az ütközőtest (40) egy takaróelemet (90) tartalmaz, amely az alaptest (41) felső részén (47) forgathatóan van elrendezve, és egy, az alaptesthez (41) viszonyított első forgáshelyzetben eltakarja, és egy, az alaptesthez (41) viszonyított második forgáshelyzetben szabadon hagyja az átmenő nyílásokat (46).

10. A 9. igénypont szerinti működtető fogantyú, azzal jellemezve, hogy a takaróelem (90) a markolat (20) forgástengelyével (D) központosan egy nyílást (95) tartalmaz.

11. A 9. vagy a 10. igénypont szerinti működtető fogantyú, azzal jellemezve, hogy a takaróelem (90) egy peremgyűrű (110) által az alaptesten (41) forgathatóan van rögzítve.

12. A 11. igénypont szerinti működtető fogantyú, azzal jellemezve, hogy a peremgyűrű (110) alátétek (64, 114) segítségével, az ellen reteszgyűrűvel (60) elfordulásbiztosan van összekötve.

13. A 11. vagy a 12. igénypont szerinti működtető fogantyú, azzal jellemezve, hogy a peremgyűrű (110) egy peremkerülettel (115) van ellátva, amely a nyílás (95) területén, a takaróelemen (90) belül annak felső oldalára (91) fekszik fel.

14. A 13. igénypont szerinti működtető fogantyú, azzal jellemezve, hogy a peremgyűrű (110) peremkerületének (115) egy homlokoldala (116) van, ahol a markolatnyak (22) a homlokoldalával (26), a peremgyűrű (110) homlokoldalára (116) csúsztathatóan fekszik fel.

15. A 9-14. igénypontok egyike szerinti működtető fogantyú, azzal jellemezve, hogy az alaptest (41) alsó oldalán (48) egy takaró alsórész (100) van elrendezve, ahol a takaróelem (90) és a takaró alsórész (100) a takaróelem (90) első forgási helyzetében az alaptesttel (41) zár.

16. A 15. igénypont szerinti működtető fogantyú, azzal jellemezve,

a) hogy a takaróelem (90) egy, az alaptestet (41) oldalról borító peremmel (92) van ellátva, amely az egymással szemben lévő területeken (93, 94) alá van metszve, és

b) a takaró alsórész (100) egy, az alaptestet (41) oldalról borító peremmel (102) van ellátva, amely az egymással szemben lévő területeken (103, 104) meg van szakítva

c) ahol a takaróelem (90) pereme (92) és a takaró alsórész (100) pereme (102) a takaróelem (90) alaptesthez (41) viszonyított első forgóállásában egy optikailag zárt peremet egészít ki.

A meghatalmazott:

PRÉSZTOR KÖZVEZŐ KATALIN
szabadságtörvény
SBBK Szabadságtörvényi Ügyvivői Iroda
H-1052 Budapest, Rákóczi út 113.
Telefon: 461-1861, 461-1862
Email: szabadsag@szabadsag.hu

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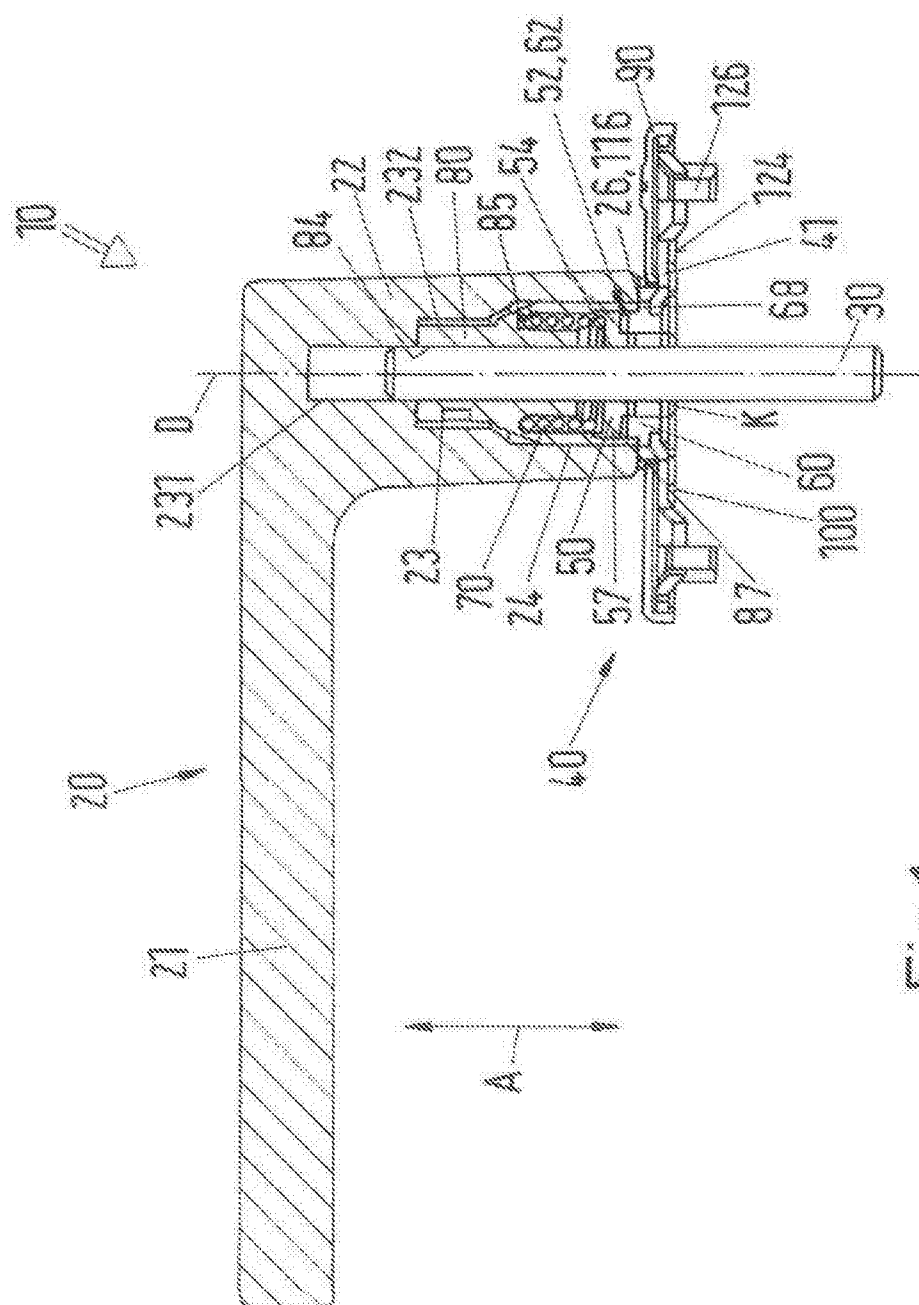
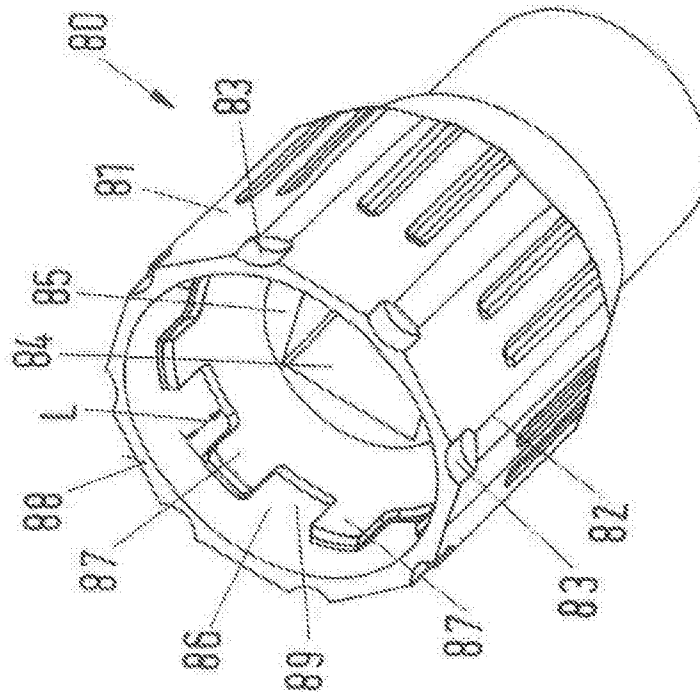


Fig.1

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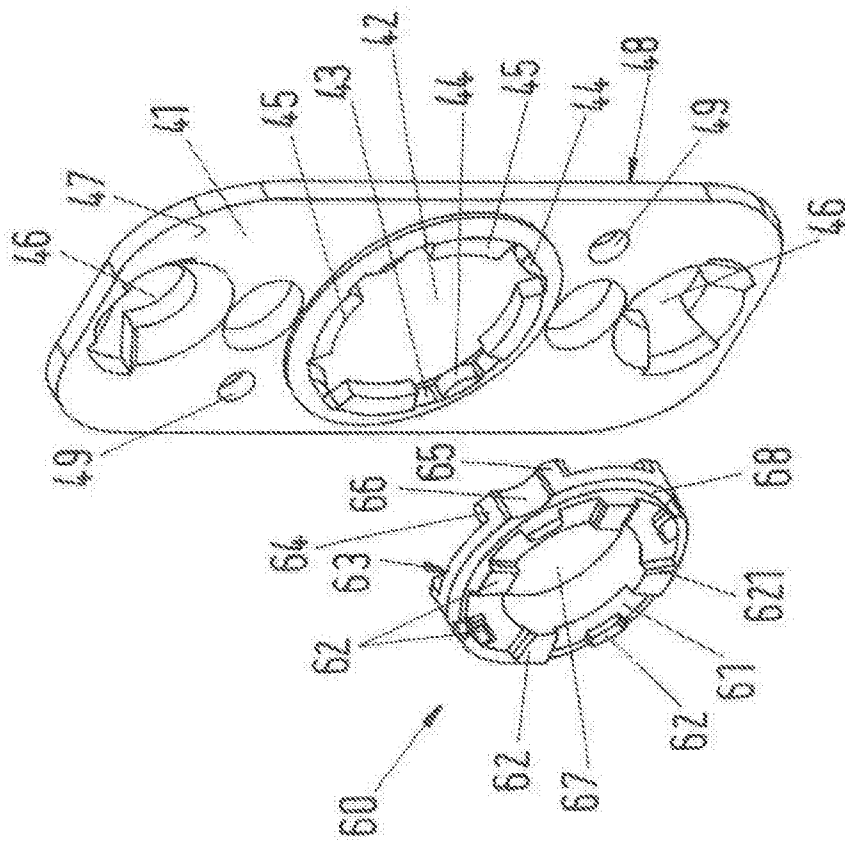


Fig.4

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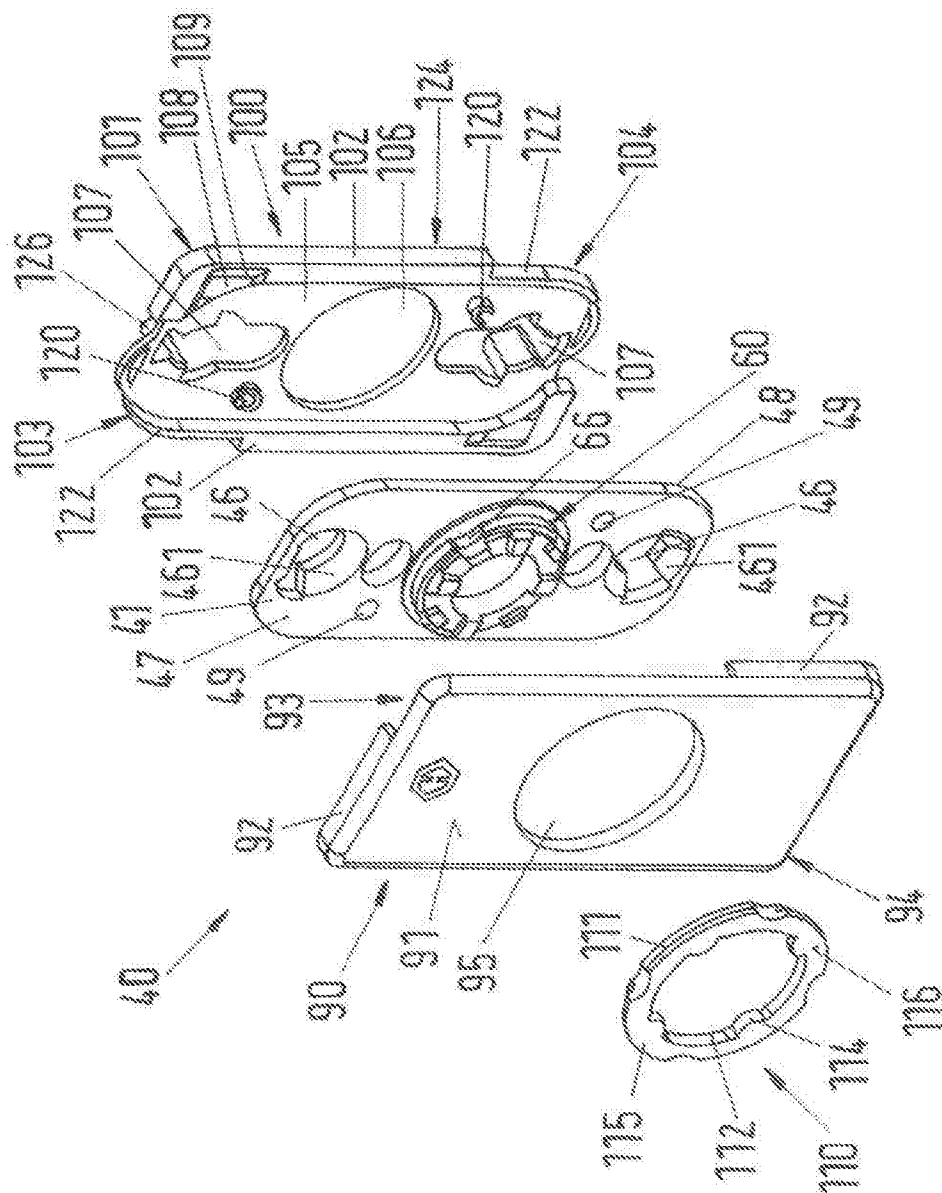


Fig.5

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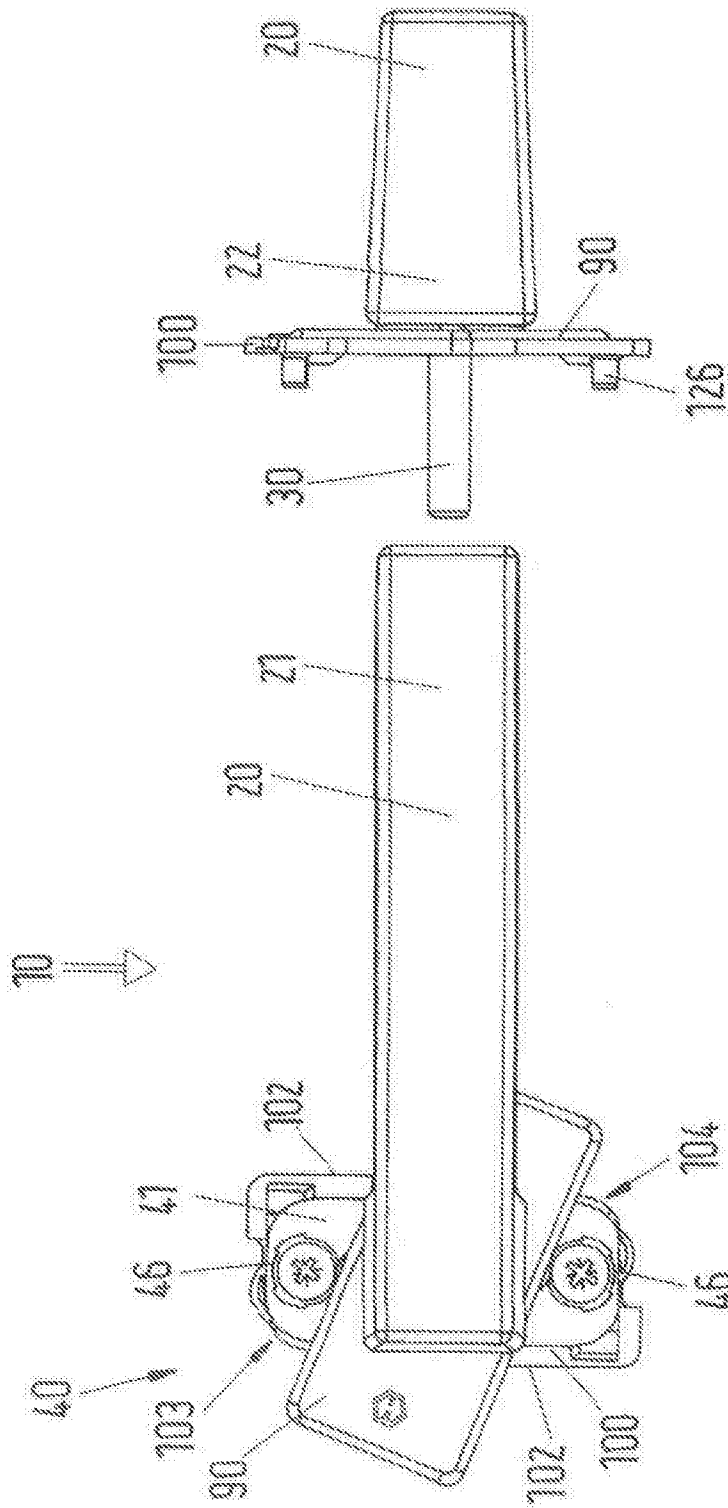


Fig.6

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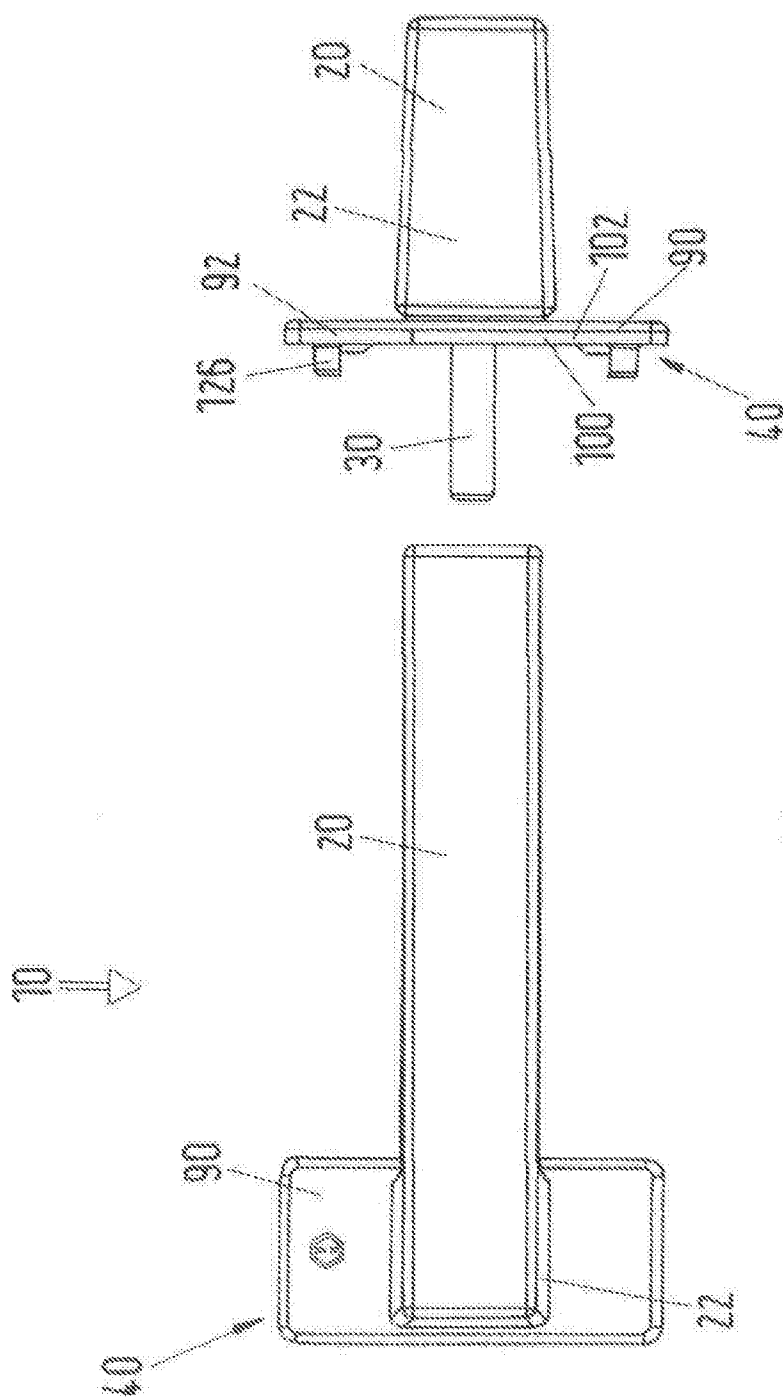


Fig. 7