

**(12) STANDARD PATENT**  
**(19) AUSTRALIAN PATENT OFFICE**

(11) Application No. **AU 2012250482 B2**

(54) Title  
**Pull-out guide for a drawer**

(51) International Patent Classification(s)  
**A47B 88/00** (2017.01)

(21) Application No: **2012250482**

(22) Date of Filing: **2012.05.02**

(87) WIPO No: **WO12/149588**

(30) Priority Data

(31) Number  
**A 628/2011**

(32) Date  
**2011.05.05**

(33) Country  
**AT**

(43) Publication Date: **2012.11.08**

(44) Accepted Journal Date: **2017.02.16**

(71) Applicant(s)  
**Julius Blum GmbH**

(72) Inventor(s)  
**Grabherr, Benjamin;Meusburger, Marc**

(74) Agent / Attorney  
**Fisher Adams Kelly Callinans, L 6 175 Eagle St, BRISBANE, QLD, 4000, AU**

(56) Related Art  
**US 2009/0212679 A1**  
**WO 2010/141964 A1**

(12) NACH DEM VERTRAG ÜBER DIE INTERNATIONALE ZUSAMMENARBEIT AUF DEM GEBIET DES  
PATENTWESENS (PCT) VERÖFFENTLICHTE INTERNATIONALE ANMELDUNG

(19) Weltorganisation für geistiges  
Eigentum

Internationales Büro

(43) Internationales  
Veröffentlichungsdatum

8. November 2012 (08.11.2012)



(10) Internationale Veröffentlichungsnummer

WO 2012/149588 A1

(51) Internationale Patentklassifikation:  
A47B 88/04 (2006.01)

(21) Internationales Aktenzeichen: PCT/AT2012/000123

(22) Internationales Anmeldedatum:  
2. Mai 2012 (02.05.2012)

(25) Einreichungssprache: Deutsch

(26) Veröffentlichungssprache: Deutsch

(30) Angaben zur Priorität:  
A 628/2011 5. Mai 2011 (05.05.2011) AT

(71) Anmelder (für alle Bestimmungsstaaten mit Ausnahme  
von US): JULIUS BLUM GMBH [AT/AT];  
Industriestrasse 1, A-6973 Höchst (AT).

(72) Erfinder; und

(75) Erfinder/Anmelder (nur für US): GRABHERR,  
Benjamin [AT/AT]; Kapellenstraße 19, A-6973 Höchst  
(AT). MEUSBURGER, Marc [AT/AT]; Hinteregge 105,  
A-6863 Egg (AT).

(74) Anwälte: TORGLER, Paul, N. et al.; Wilhelm-Greil-  
Strasse 16, A-6020 Innsbruck (AT).

(81) Bestimmungsstaaten (soweit nicht anders angegeben, für  
jede verfügbare nationale Schutzrechtsart): AE, AG, AL,

AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY,  
BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM,  
DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT,  
HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP,  
KR, KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD,  
ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI,  
NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW,  
SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM,  
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM,  
ZW.

(84) Bestimmungsstaaten (soweit nicht anders angegeben, für  
jede verfügbare regionale Schutzrechtsart): ARIPO (BW,  
GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ,  
TZ, UG, ZM, ZW), eurasisches (AM, AZ, BY, KG, KZ,  
RU, TJ, TM), europäisches (AL, AT, BE, BG, CH, CY,  
CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT,  
LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE,  
SI, SK, SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA,  
GN, GQ, GW, ML, MR, NE, SN, TD, TG).

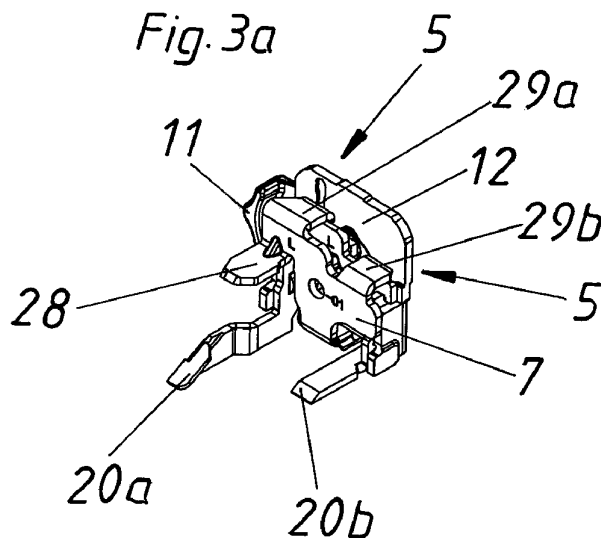
Veröffentlicht:

— mit internationalem Recherchenbericht (Artikel 21 Absatz  
3)

[Fortsetzung auf der nächsten Seite]

(54) Title: PULL-OUT GUIDE FOR A DRAWER

(54) Bezeichnung : AUSZIEHFÜHRUNG FÜR EINE SCHUBLADE



(57) Abstract: A pull-out guide for a drawer (2) having a body rail (3c) which can be attached to the furniture body (4) and having at least one pull-out rail (3a) which can be moved relative to the body rail (3c), comprising a holding element (5) with at least one attachment means by means of which the holding element (5) can be attached or is attached to the pull-out rail (3a), and a connection element (7) by means of which the drawer (2) can be connected to the pull-out rail (3a), wherein the connection element (7) is mounted such that it can be moved relative to the holding element (5) between a first end position and a second end position, wherein a spring element (8) is provided, said spring element holding the connection element (7) in a neutral position which is located between the first end position and the second end position.

(57) Zusammenfassung: Ausziehführung für eine Schublade (2) mit einer am Möbelkorpus (4) zu befestigenden Korpuschiene (3c) und wenigstens einer relativ zur Korpuschiene (3c) verfahrbaren Ausziehschiene (3a), umfassend ein Halteelement (5) mit wenigstens einem Befestigungsmittel, über das das Halteelement (5) an der Ausziehschiene (3a) befestigbar oder befestigt ist, und einem

Verbindungselement (7), über das die Schublade (2) mit der Ausziehschiene (3a) verbindbar ist, wobei das Verbindungselement (7) relativ zum Halteelement

[Fortsetzung auf der nächsten Seite]

WO 2012/149588 A1



- 
- *vor Ablauf der für Änderungen der Ansprüche geltenden Frist; Veröffentlichung wird wiederholt, falls Änderungen eingehen (Regel 48 Absatz 2 Buchstabe h)*

## Pull-out guide for a drawer

The invention relates to a pull-out guide for a drawer having a body rail, which is to be attached to the furniture body, and having at least one pull-out rail, which can be moved relative to the body rail, comprising a holding element with at least one attachment means, by means of which the holding element can be attached or is attached to the pull-out rail, and having a connection element, by means of which the drawer can be connected to the pull-out rail, wherein the connection element is mounted such that it can be moved relative to the holding element between a first end position and a second end position.

The Austrian patent application A 148/2010 discloses a pull-out guide for a drawer, in which the pull-out guide, which can be moved relative to the body rail, comprises a holding element with a connection element, with which the drawer can be connected to the pull-out rail in an adjustable manner. An adjustment mechanism serves to move the connection element horizontally relative to the holding element, wherein a rotatory movement component is converted into a translatory movement of the connection element by means of a rotationally movable converting mechanism. The drawer can thereby be moved in the lateral direction relative to the pull-out rail, in order, for example, to make the joint arrangement uniform or to establish a correct pull-out direction of the drawer in the furniture body.

In the case of a pull-out guide fitting according to the Austrian patent application A 148/2010, comprising two pull-out guides which are respectively arranged on two side panels of a drawer, provision is made for a holding element, as described above, having an adjustment mechanism for laterally aligning the drawer relative to the pull-out rail, to be arranged on a pull-out guide. However, on the side opposite this pull-out guide, it can be sufficient for the connection element to be mounted such that it can be moved relative to the holding element without providing its own adjustment mechanism for lateral adjustment. Hence, whilst the connection element on a pull-out guide is actively moved relative to the holding element using the adjustment mechanism, the connection element on the opposite side can passively follow these movements.

In addition to the lateral adjustment mechanism, which is only provided on one side, the holding elements can comprise further adjustment mechanisms on both pull-out

guides for adjusting the height of the drawer relative to the pull-out rail, wherein the adjustment mechanism for height adjustment in each case can be actuated independently of the adjustment mechanism for lateral adjustment.

5 The disadvantage of such pull-out guides is that when the drawer is removed from the connection elements these connection elements remain in the respectively withdrawn position. Whilst resetting the connection element at that pull-out guide whose holding element is provided with an adjustment mechanism for lateral adjustment is still relatively easily possible, for the opposite connection element the associated  
10 connection point of the drawer, for example in the form of a recess, has first laboriously to be found, in order to place the corresponding connection element there. As a result, connecting or attaching the drawer to the pull-out guides again is made more difficult.

The object of the present invention is to avoid these disadvantages and provide a pull-  
15 out guide, in which the drawer can be refitted or reconnected to the pull-out guide more easily.

This is achieved by a pull-out guide having the features of Claim 1.

20 The pull-out guide according to the invention comprises a holding element which can be attached or is attached to the pull-out guide by means of at least one attachment means. The attachment means can also be an integral part of the pull-out rail, i.e. the pull-out rail is formed as one piece with the integrally formed attachment means of the holding element.

25 The holding element furthermore comprises a connection element, by means of which the drawer can be connected or is connected to the pull-out rail. The connection element is connected to the drawer itself. The connection to the pull-out rail is ultimately made via the holding element. The connection element is mounted such that  
30 it can be moved, preferably linearly slid, relative to the holding element between a first end position and a second end position. When the drawer is connected to the connection element, a relative movement between the drawer and the pull-out rail is enabled by the relative movability of the connection element with respect to the holding element.

35

By now providing a spring element, by which the connection element is held in a neutral position which is located between the first end position and the second end position when it is not connected to the drawer, when the drawer is detached from the pull-out guide the connection element is automatically reset to the neutral position. The neutral position can, for example, be arranged centrally between the first and the second end positions and hence correspond to a central position. The spring element produces a restoring force as soon as the connection element is displaced from the neutral position. The spring element is dimensioned in such a way that the connection element is reset when it is not connected to the drawer. The spring element thus has a restoring spring force such that it is too weak to move the connection element together with the connected drawer to the neutral position independently. This measure prevents the lateral adjustment by the adjustment mechanism mentioned in the introduction being counteracted, since the spring element essentially only takes effect in the state where there is no connection to the drawer. The spring element itself can have one or more elastically formed or spring-loaded parts. Provision can also be made to arrange one or more spring elements in the holding element according to the invention.

The connection element can, for example, be arranged in the drawer rear panel or in the drawer side panel, for example in the face side of the inner body of the same, for connection to the drawer. The pull-out guide according to the invention in particular enables a drawer consisting of a wood-based material to be assembled and adjusted, which as a general structural part can be detached from, can be attached to, preferably can be assembled without the use of tools on and/or can be disassembled without the use of tools from the pull-out guide.

Provision is preferably made for the holding element to be connected to the drawer in the rear area, for example for it to be connected to the drawer on the drawer rear panel. For this purpose, the holding element can be arranged on the rearward end of the pull-out guide or of the extensible rail of a pull-out guide.

Further advantageous embodiments of the invention are defined in the dependent claims.

In one embodiment of the invention, the pull-out guide comprises a middle rail arranged between the pull-out rail and the body rail and movable relative to them. Such a pull-out guide enables the drawer to be fully pulled out.

- 5 In one particularly preferred embodiment, provision is made for the connection element to be mounted such that it can be moved horizontally relative to the holding element in the assembled position of the pull-out guide, i.e. in the functional state. The movement of the connection element between the first and the second end positions is in this case horizontal. In particular, movability is provided in the lateral direction transverse to the  
10 longitudinal direction of the pull-out rail, i.e. the movement of the connection element between the first and the second end positions is lateral in the assembled position of the pull-out guide, that is to say, horizontal and perpendicular to the longitudinal direction of the pull-out rail.
- 15 The connection element can thereby be reset to a neutral position with respect to the lateral displacement of the connection element relative to the pull-out rail. In interaction with a holding element arranged on the opposite pull-out guide having an adjustment mechanism for lateral adjustment for actively moving the connection element, the holding element of the pull-out guide according to the invention can serve as a passive  
20 holding element with movably mounted connection element. In the state connected to the drawer, the movement of the connection elements corresponds to one another, whilst in the unconnected state the connection element of the pull-out guide according to the invention is held in a neutral position.
- 25 Provision is particularly preferably made for a guide device to be arranged on the holding element, by which the connection element is guided such that it can be slid on the holding element.

This guide device can have a guide rail or guide ridge mounted in the holding element,  
30 wherein a guide casing or guide profile, which at least partly encompasses the guide rail or the guide ridge and is mounted such that it can be slid along the guide rail, is arranged on the connection element. In principle, the profile of the guide rail or of the guide ridge can be any shape. The guide rail is simply formed as a guide pin. Such a guide device ensures that the connection element is correctly and stably slid in the  
35 lateral direction.

The guide device can furthermore have an elongated hole arranged in the holding element or a slotted guide arranged in the holding element, with which a guide pin or guide peg of the connection element engages, wherein the guide pin or the guide peg is mounted such that it can be slid in the elongated hole or in the slot.

In a further embodiment of the invention, the connection element comprises a hook-shaped holding lug which in the assembled state, in which the holding element is connected to the drawer, engages with recesses in the drawer. The recesses can be pre-drilled drill holes. The holding lug in the assembled state can be held within the recesses by a press fit or by a push fit. The holding lug can be cylindrical or can have additional latching elements for a more stable connection.

Whilst provision can generally be made for the connection element to be acted upon by the spring element or for the spring element itself to be part of the connection element, and hence for this to be elastically formed, in the case of a hook-shaped holding lug provision is preferably made for this holding lug to be elastically formed or to be acted upon by a spring element. The spring strength is to be selected corresponding to the above criteria.

In one embodiment, a height-adjustment mechanism is provided for vertically moving the connection element on the holding element, by which the vertical position of the drawer relative to the pull-out guide, i.e. with regard to its "height", can be set. The movement of the connection element is transferred to the drawer through the indirect or direct connection of the connection element to the drawer. The height adjustment comprises an adjustment mechanism, with which the extent of the vertical movement can be set and hence the drawer can be actively and finely adjusted relative to the pull-out rail. "Vertical" again refers to the assembled position of the pull-out guide.

A rotationally movable converting mechanism can at the same time be provided, wherein a rotatory movement of the converting mechanism can be converted into a translatory movement of the connection element. Preferably, the converting mechanism can be rotated or pivoted about an axis arranged essentially parallel to the longitudinal axis of the pull-out rail. By rotating or pivoting the converting mechanism, a

transformation into a translatory movement of the connection element takes place using suitable mechanical means which are known in the prior art.

5 The converting mechanism can be pivotably or rotatably mounted on the holding part or on an attachment part which is mounted on the drawer. A vertical movement of the drawer relative to the pull-out rail always implicates a translatory movement. A converting mechanism, by which a rotatory movement component can be transformed into a translatory movement component, has the advantage that lever actions can be utilised, so that a delicate movement is actively possible. The height adjustment  
10 mechanism can thereby be designed in such a way that the vertical position of the drawer relative to the pull-out rail can be adjusted continuously or in stages.

In one embodiment, the converting mechanism is formed with a handle for actuating the height adjustment mechanism without the use of tools. The vertical position of the  
15 drawer relative to the pull-out rail can thereby be set easily.

However, additionally or alternatively, the converting mechanism can also be provided with a screw, wherein the converting mechanism can be actuated by a rotation of the  
20 screw.

In order to make height adjustment easier, provision can furthermore be made for the converting mechanism to be at least partly formed in the shape of a lever or eccentrically, so that manually only slight force is required to move even heavy and  
25 large drawers.

The converting mechanism can also comprise an adjusting wheel, which has a tothing, or an additional toothed wheel, which is engaged with a vertically arranged tothing, for example a toothed rack, to vertically move the drawer.

30 In one embodiment of the invention, the holding element is fixedly connected to the pull-out rail. For this purpose, stop faces or support elements can be integrally formed on the holding element which are engaged with corresponding recesses in the pull-out rail or are welded to the pull-out rails. However, the holding element can also be detachably connected to the pull-out rail.

35

- To adjust the height, provision can be made for at least one support bracket to be arranged on the holding element, on which the drawer or the drawer bottom at least partly rests in the assembled state. The at least one support bracket can be vertically moved relative to the pull-out rail by the height adjustment mechanism and can be part of the connection element. The at least one support bracket can, however, also be arranged on the holding part, wherein the holding part is mounted such that it can be vertically moved on the holding element. Actuation of the height adjustment mechanism in this case produces the vertical movement of the holding part.
- 10 Furthermore, a further adjustment mechanism can also be provided, by which a movement of the connection element relative to the holding element in the assembled position takes place in the horizontal direction, preferably in the lateral direction with respect to the pull-out rail. This further adjustment mechanism in this case serves as a lateral adjustment mechanism. In principle, the lateral adjustment mechanism can be constructed similar to the height adjustment mechanism and can have similar mechanical means. Instead of a vertical translatory movement of the connection element, a horizontal translatory movement in the lateral direction (in each case in the assembled position of the pull-out guide) simply has to be generated.
- 15
- 20 The position of the drawer can be actively set with high accuracy both in the vertical and in the lateral directions by a height adjustment mechanism and a lateral adjustment mechanism. Provision is also made for the lateral adjustment mechanism to be actuated independently of the height adjustment mechanism, whereby the lateral adjustment and the height adjustment are decoupled and the greatest possible variety of settings is provided.
- 25
- The lateral adjustment mechanism and/or the height adjustment mechanism can be releasably locked by a locking device, so that further movement in the lateral direction and/or vertical direction of the drawer relative to the pull-out rail is prevented.
- 30 Both the height adjustment mechanism and the lateral adjustment mechanism can be self-locking, so that after the drawer has been actively adjusted relative to the pull-out rail an automatic further movement in the lateral or vertical direction is prevented. This self-locking can, for example, be based on a frictional engagement of the components of the adjustment mechanism.

In the event that the lateral adjustment mechanism comprises a rotationally movable converting mechanism, which preferably can be rotated about an axis arranged essentially parallel to the longitudinal axis of the pull-out rail, a rotatory movement of the converting mechanism can be converted into a translatory movement of the connection element in the lateral direction, i.e. transverse to the pull-out rail.

The invention furthermore comprises a pull-out guide fitting for a drawer having two pull-out guides which are to be arranged on opposite sides of a drawer. The pull-out guide fitting comprises a pull-out guide as described above which is to be arranged on a first side of the drawer. A second pull-out guide, which is to be arranged on the opposite side of the drawer, comprises a second holding element having a second connection element. The second holding element is attached or can be attached to the second pull-out rail. The drawer can be connected to the pull-out rail of the second pull-out guide with the connection element.

According to the invention, provision is made for the second holding element to have a lateral adjustment mechanism for setting the lateral position of the drawer relative to the pull-out rail of the second pull-out guide. The pull-out guide with the second holding element can be designed in the same manner as in the Austrian patent application A 148/2010. The lateral movement of the drawer relative to the pull-out rail is according to this effected by means of the second connection element. On the other hand, the connection element can be mounted essentially floating on the holding element of the pull-out guide opposite the second pull-out guide and due to the dimensioning of the spring element with respect to the spring strength can follow the relative movement of the second connection element on the second holding element of the second pull-out guide if a drawer is connected to both connection elements and via both holding elements to the pull-out rails of the first and second pull-out guides. The essentially floating mounting is preferably limited to being horizontally movable between the first and the second end positions of the connection element, whilst in the vertical direction an attachment or movability guided by means of a height adjustment device can be provided. However, in principle, a floating mounting of the connection element is also possible in both movement directions. The lateral adjustment mechanism of the second connection element is designed in such a way that the second connection element can be moved in a direction which corresponds to that between the first and the second end positions of the connection element or is parallel to it.

While for laterally adjusting the drawer with the pull-out guide fitting according to the invention a pull-out guide has an active lateral adjustment mechanism and the other pull-out guide has a passively guided connection element following the active adjustment, which is held by the spring element in a neutral position in a state not connected to the drawer, both pull-out guides can have a height adjustment mechanism which can be designed as described above. A height adjustment mechanism on both sides of the drawer prevents crooked fitting of the drawer with respect to the horizontal.

10

Both the height adjustment mechanisms and the lateral adjustment mechanism of both pull-out guides can be designed as described above.

The invention furthermore relates to a drawer having at least one pull-out guide as described above or a pull-out guide fitting as described above.

15

The invention furthermore relates to a piece of furniture having at least one such drawer.

Further details and advantages of the present invention are explained more fully below by means of the description of the figures with reference to the drawings.

20

Fig. 1 shows a partly broken-open perspective view of a piece of furniture according to the invention,

25

Fig. 2 shows a perspective view of a drawer having a pull-out guide fitting according to the invention,

30

Figs. 3a and 3b show a perspective view of a holding element according to the invention and an associated exploded representation,

35

Figs. 4a to 4c show frontal views of the holding element according to the invention in different positions,

35

Figs. 5a to 5c show plan views relating to Figs. 4a to 4c,

- Fig. 6 shows a perspective view of a part of a pull-out guide fitting according to the invention with holding element and second holding element,
- 5 Figs. 7a and 7b show a drawer having a pull-out guide fitting according to the invention in two different lateral positions,
- Figs. 8a and 8b show views from the rear relating to Figs. 7a and 7b and
- 10 Figs. 9a and 9b show a perspective view of a spring-loaded connection element and a further exploded representation of the associated holding element.
- 15 The partly broken-open perspective view of Fig. 1 shows a piece of furniture 1 having a plurality of drawers 2 which are arranged in a furniture body 4, can be pulled out and which are mounted in the furniture body 4 in each case by means of two pull-out guides 3, 13 arranged on opposite sides of the furniture body 4. The pull-out guides 3, 13 are arranged on opposite side panels 2c of the drawer 2, wherein the pull-out guides 13 are not visible due to the angle of view. The drawer 2 has a front panel 2a on its front side and a drawer rear panel 2d on its rear side. The drawer bottom 2b is arranged in between.
- 20 Fig. 2 shows a perspective view of a drawer 2, in which a pull-out guide 3 according to the invention is arranged on a side panel 2c. A second pull-out guide 13 is arranged on the opposite side panel 2c. The pull-out guides 3, 13 comprise body rails 3c, 13c and pull-out rails 3a, 13a mounted on them such that they can be moved. A holding element 5 is arranged on the pull-out rail 3a. The holding element 5 has a height adjustment mechanism 6. The second holding element 15 correspondingly has a second height adjustment mechanism 16. The holding element 5 and the second holding element 15 each have a guide device, by which the connection element 7 or the second connection element 17 is guided such that it can be slid in the vertical direction (in the assembled state of the pull-out guide 3, 13) in order to move on the holding element 5 or the second holding element 15. The connection element 7 is
- 35 spring-loaded by a spring element 8. A lateral adjustment mechanism for actively

setting the lateral position of the second connection element 17 is only arranged on the second holding element 15. With regard to movability in the horizontal direction (in the assembled position of the pull-out guide 3), the connection element 7 of the holding element 5 is mounted floating with the exception of the spring loading by the spring element 8. In the state connected to the drawer 2, the connection element 7 can therefore follow the movement of the second connection element 17 effected by the lateral adjustment mechanism.

Fig. 3a shows the holding element 5 in a perspective view. An associated exploded representation is shown in Fig. 3b. The height adjustment mechanism 6 comprises a converting mechanism 11 in the form of an adjusting lever which in the assembled position is pivotably mounted about an axis arranged parallel to the longitudinal direction of the pull-out rail 3a by means of the two-part bearing pin 18a, 18b. The latching elements 24 serve to lock with corresponding recesses 33 which are arranged on the rear side of the mounting plate 12 which is part of the holding element 5.

The recesses 23 formed as elongated holes serve to guide the connection element 7 during the vertical movement, i.e. when setting the vertical position of the connection element 7 by means of the height adjustment mechanism 6. Corresponding projections 34, which are arranged on the rear side of the base support 10 and which are engaged with the recesses 23 and are mounted such that they can beslid in these resesses 23, serve for this purpose.

The pin 18a is connected to the converting mechanism 11 through the opening 25 in the base support 10 and the opening 19 in the mounting plate 12. By a rotation of the adjusting lever, the base support 10 is moved vertically owing to the connection via the opening 25, wherein this movement is guided through the side panels of the base plate 12 and the recesses 23. The adjusting lever of the converting mechanism 11 is rotated about an axis parallel to the longitudinal direction of the pull-out rail 3a. In doing so, this rotatory movement is transferred or transformed into a translatory movement of the base support 10 and ultimately of the connection element 7 connected to the base support 10.

The base plate 12 is attached directly to the pull-out rail 3a. The base support 10 has support brackets 20a, 20b, on which the drawer bottom 2b at least partly rests when

the drawer 2 is connected to the connection element 7. In addition to the connection to the drawer via the connection element 7, as a result the vertical movement of the base support 10 is transferred to the drawer 2, so that it moves in the vertical direction relative to the pull-out rail 3a. The support brackets 20a, 20b are mounted in  
5 corresponding openings in the pull-out rail 3a.

An intermediate plate 21 is arranged in the base support 10 in such a way that its vertical movements are transferred to the intermediate plate 21. The spring element 8 is mounted on a projection 22 of the intermediate plate 21. Guide ridges 26a, 26b are  
10 arranged on the top of the intermediate plate 21 and serve to guide the lateral and the vertical movements of the connection element 7. The connection element 7 has a hook-shaped holding lug 28 which can engage with a corresponding opening of the drawer rear panel 2d to connect the connection element 7 to the drawer 2 and to transfer vertical or horizontal movements of the connection element 7 to the drawer 2.  
15

Guide profiles 29a, 29b are arranged on the top of the connection element 7 and are engaged with the guide ridges 26a, 26b. The holding profiles 29a, 29b can slide over the guide ridges 26a, 26b in the lateral direction, so that there is a guided lateral movement. In the case of a vertical movement of the intermediate plate 12, the  
20 connection element 7 is also vertically moved with it likewise by the guide profiles 29a, 29b encompassing the ridges 26a, 26b.

A holding profile 30, which is engaged with the spring element 8, is arranged on the bottom of the connection element 7. The connection element 7 is spring-loaded by the  
25 spring element 8 via this holding profile 30.

Fig. 4a shows the connection element 7 in a first end position. The spring element 8 is displaced from its neutral position and exerts via the holding profile 30 a restoring force on the connection element 7 in the direction of arrow A. The connection element 7 is in  
30 the process displaced in the lateral direction.

Fig. 4b shows the connection element 7 in the neutral position, in which no force is exerted on the connection element 7. Compared with Fig. 4a, the connection element 7 has been slid to the right along the ridges 26a, 26b. The ridges 26a, 26b serve as a  
35 guide for the guide profiles 29a, 29b.

Fig. 4c shows the connection element 7 in a second end position. The spring element 8 has been displaced from its neutral position in the lateral direction, whereby a force is exerted on the connection element 7 in the direction of arrow B, so that it is slid back to the neutral position, provided that the drawer 2 is not connected to the connection element 7, since the spring element 8 would not in this case be formed strongly enough for a reset to take place.

In Figs. 4a to 4c, the connection element 7 is only displaced in the lateral direction between the first end position and the second end position. A drawer 2 connected to the connection element 7 would, in the case of such a displacement, be moved in the lateral direction relative to the pull-out rail 3a. As is apparent by reference to the position of the connection element 7 relative to the recesses 23 and from the position of the converting mechanism 11, in Figs. 4a to 4c the connection element 7 is not moved in the vertical direction, i.e. with respect to the height.

In Figs. 5a to 5c, in each case a plan view of the holding element 5 with the connection element 7 corresponding to Figs. 4a to 4c is shown. It can be identified that the holding lug 28 of the connection element 7 is mounted such that it can be moved between the first end position (Fig. 5a) and the second end position (Fig. 5c). Fig. 5b corresponds to the neutral position between the first end position and the second end position.

Fig. 6 shows parts of a pull-out guide fitting, comprising two pull-out rails 3a, 13a which are mounted such that they can be moved on body rails 3c, 13c which are not illustrated in this figure. The holding element 6 arranged on the pull-out rail 3a corresponds to the holding element shown in the previous figures. A second holding element 15, in which a second connection element 17 is mounted such that it can be moved, is arranged on the pull-out rail 13a. A second height adjustment mechanism 16 essentially corresponds to the height adjustment mechanism 6 in terms of its function and design. In particular, the second height adjustment mechanism 16 also has a converting mechanism 11 having an adjusting lever 11. However, in contrast to the connection element 7, the second connection element 17 is not acted upon by a spring element 8. Instead, the second holding element 15 has a lateral adjustment mechanism, by which the lateral position of the second connection element 17 can be

actively set. Such a lateral adjustment mechanism is shown in the Austrian patent application A 148/2010.

5 If the connection element 7 and the second connection element 17 are connected to a drawer via the holding lugs 28, when the lateral adjustment mechanism is actuated the movement of the second connection element 17 is transferred to the connection element 7. The spring element 8 only causes the connection element 7 to be reset into the neutral position when the drawer 2 is not connected. The lateral adjustment mechanism has a converting mechanism 9 which can be operated by hand. However, 10 this can also be actuated by a screwdriver via the actuating element 27. The lateral position of the drawer 2 relative to the pull-out rail 13a can thus be set via the second holding element 15. The connection element 7 can follow this movement when it is connected to the drawer 2. When it is not connected to the drawer 2 the connection element 7 is held in the neutral position by the spring element 8. The holding lug 28 of 15 the connection element 7 can thereby be easily inserted into openings provided in the drawer 2 for this purpose, whereby the drawer 2 can be simply assembled.

Fig. 7a shows a perspective view of a drawer 2 having a pull-out guide fitting according to the invention. The holding element 5, which is arranged on the pull-out rail 3a, is in 20 its neutral position. The drawer 2 can be moved laterally relative to the pull-out rails 3a, 13a by actuating the lateral adjustment mechanism on the second holding element 15. The holding lugs 28 of the holding elements 5, 15 are arranged in corresponding openings in the drawer rear panel 2d.

In contrast, in Fig. 7b the connection element 7 of the holding element 5 is moved in 25 the direction of the second end position. The spring element 8 is, however, not strong enough to slide the connection element 7 together with the drawer 2 connected via the holding lug 28 back into the neutral position, as would be the case without a drawer 2 connected.

30 Figs. 8a and 8b show a partly broken-open rear view of the drawer 2 with the pull-out guide fitting according to the invention corresponding to Figs. 7a and 7b. In Fig. 8a the connection element 7 is in the neutral position, whilst in Fig. 8b a movement in the direction of the second end position is effected. Middle rails 3b, 13b, which are mounted such that they can be moved, can be identified arranged between the pull-out rails 3a, 35 13a and the body rails 3c, 13c.

Fig. 9a shows a perspective view of the connection element 7 together with the spring element 8 mounted on the holding profile 30. The bearing 32 is mounted on the projection 22 of the intermediate plate 21. When the connection element 7 is laterally displaced it is acted upon by the spring element 8, so that a restoring force in the direction of the neutral position is present.

Fig. 9b shows a further exploded representation of the essential elements of the holding element 5 in a different view from Fig. 3b. Recesses 33, arranged circularly on the mounting plate 12 and formed corresponding to the latching elements 24 of the converting mechanism 11, can be identified. A step by step rotation of the converting mechanism 11 and hence a step by step vertical movement of the connection element 7 is made possible by the latching elements 24 which engage with the recesses 33 in a locking manner.

Projections 34, which are mounted in the recesses 23 in the mounting plate 12 such that they can be slid, are arranged on the intermediate plate 12. They serve to guide the base support 10 and hence the connection element 7 when the height adjustment takes place, i.e. when the translatory movement effected by the converting mechanism 11 takes place.

CLAIMS

1. Pull-out guide for a drawer having a body rail, which is to be attached to the furniture body, and having at least one pull-out rail, which can be moved relative to the body rail, comprising a holding element with at least one attachment means, by means of which the holding element can be attached or is attached to the pull-out rail, and having a connection element, by means of which the drawer can be connected to the pull-out rail, wherein the connection element is mounted such that it can be moved relative to the holding element between a first end position and a second end position, characterised in that a spring element is provided, by which the connection element is held in a neutral position which is located between the first end position and the second end position.
2. Pull-out guide according to claim 1, characterised in that the connection element is mounted such that it can be moved horizontally relative to the holding element, preferably in the lateral direction transverse to the longitudinal direction of the pull-out rail, in the assembled position of the pull-out guide.
3. Pull-out guide according to any one of claims 1 or 2, characterised in that the connection element is connected or can be connected to the rear panel of the drawer.
4. Pull-out guide according to any one of claims 1 to 3, characterised in that a guide device is arranged on the holding element, by which the connection element is guided such that it can be slid in order to move on the holding element.
5. Pull-out guide according to claim 4, characterised in that the guide device has at least one guide rail or a guide ridge mounted in or on the holding element, wherein a guide casing or guide profile, which at least partly encompasses the guide rail or the guide ridge and is mounted such that it can be slid along the guide rail or the guide ridge, is arranged on the connection element.

- 5
6. Pull-out guide according to claim 4, characterised in that the guide device has at least one elongated hole arranged in or on the holding element or a slotted guide arranged in the holding element, in which a guide pin or guide peg of the connection element is mounted such that it can be moved.
- 10
7. Pull-out guide according to any one of claims 1 to 6, characterised in that the connection element comprises a hook-shaped holding lug, preferably being elastically formed or spring-loaded, which in the state connected to the drawer can engage with recesses in the drawer.
- 15
8. Pull-out guide according to any one of claims 1 to 7, characterised in that the holding element comprises a height-adjustment mechanism for vertically moving the connection element relative to the holding element in the assembled position of the pull-out guide.
- 20
9. Pull-out guide according to claim 8, characterised in that the height-adjustment mechanism comprises a rotationally movable converting mechanism, which can preferably be actuated by a screw and/or a handle preferably comprising a lever, the converting mechanism is preferably rotationally movable about an axis arranged essentially parallel to the longitudinal direction of the pull-out rail, and wherein a rotatory movement of the converting mechanism can be converted into a translatory movement of the connection element.
- 25
10. Pull-out guide according to any one of claims 8 or 9, characterised in that a lateral adjustment mechanism is arranged on the holding element which can be actuated independently of the height adjustment mechanism, and wherein the connection element can be moved between the first end position and the second end position by the lateral adjustment mechanism.
- 30
11. Pull-out guide according to claim 10, characterised in that the lateral adjustment mechanism comprises a rotationally movable converting mechanism, preferably rotationally movable about an axis arranged essentially parallel to the longitudinal axis of the pull-out rail, wherein a rotatory movement of the converting mechanism can be converted into a translatory movement of the
- 35
- connection element.

12. Pull-out guide fitting for a drawer having two pull-out guides which are to be arranged on opposite sides of a drawer, comprising:
- a pull-out guide according to any one of claims 1 to 11 which is to be arranged on a first side of the drawer and
  - a second pull-out guide which is to be arranged on the second side of the drawer, wherein the second pull-out guide has a second holding element having a second connection element, with which the drawer is connected or can be connected to the pull-out rail of the second pull-out guide, and wherein the second holding element has a lateral adjustment mechanism, with which the second connection element can be moved relative to the second holding element in a direction parallel to the movability of the connection element between the first end position and the second end position.
13. Pull-out guide fitting according to claim 12, characterised in that the lateral adjustment mechanism comprises a rotationally movable converting mechanism, preferably rotationally movable about an axis arranged essentially parallel to the longitudinal axis of the pull-out rail, wherein a rotatory movement of the converting mechanism can be converted into a translatory movement of the second connection element.
14. Pull-out guide fitting according to any one of claims 12 or 13, characterised in that a second height adjustment mechanism is arranged on the second holding element, by which the second connection element can be vertically moved relative to the second holding element in the assembled position of the second pull-out guide fitting.
15. Piece of furniture having at least one pull-out guide according to any one of claims 1 to 11 or a pull-out guide fitting according to any one of claims 12 to 14.

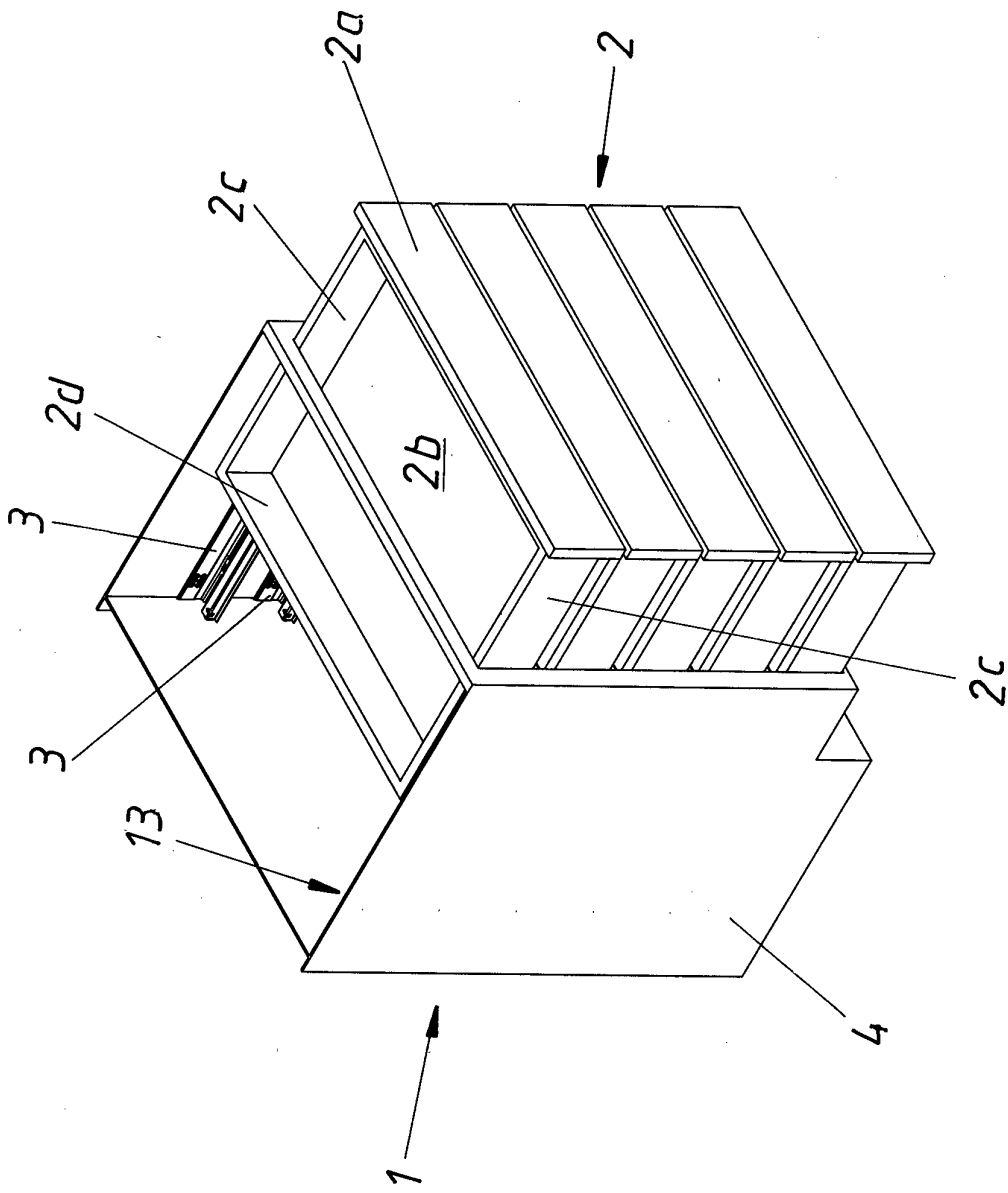


Fig. 1

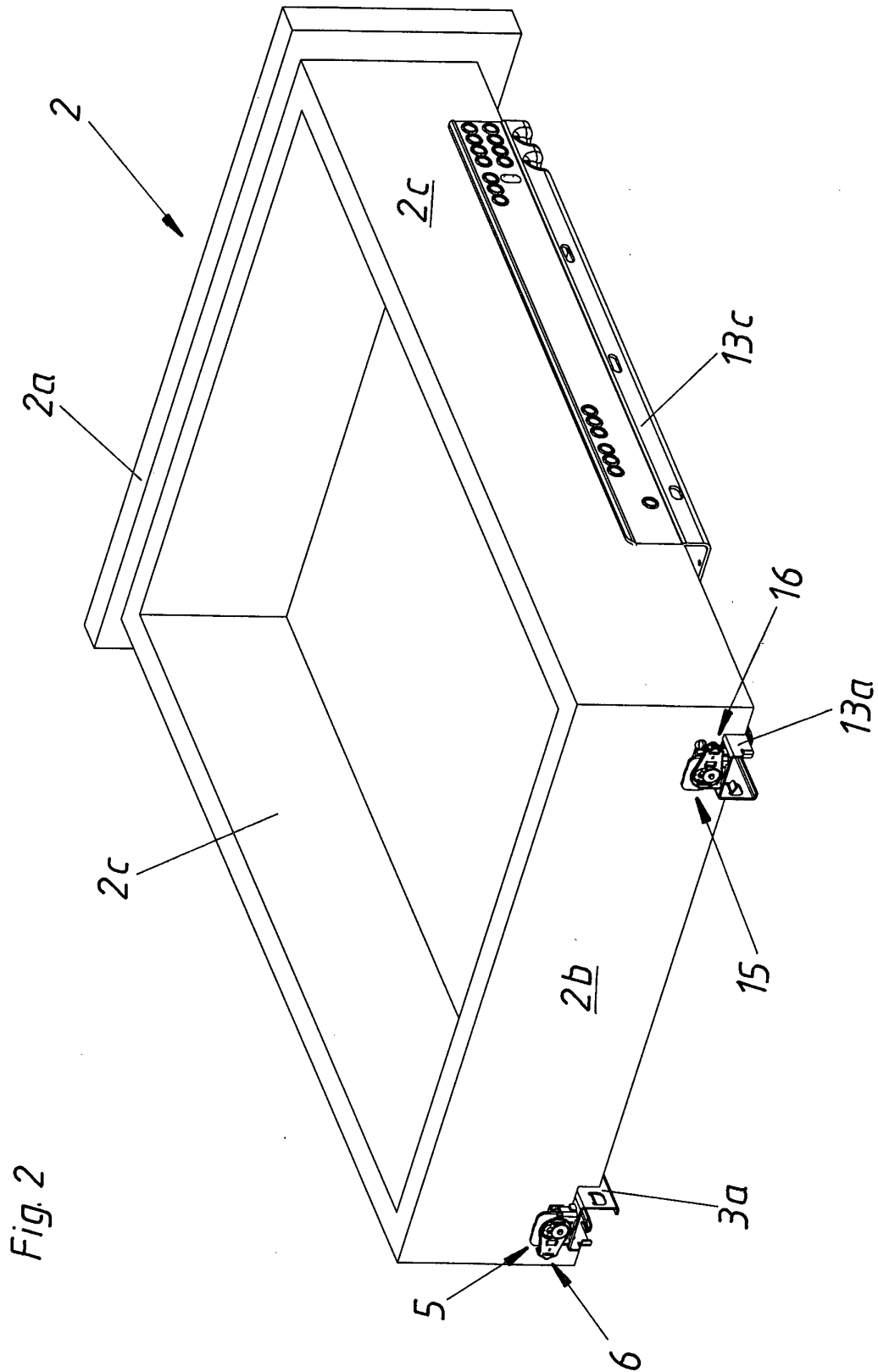


Fig. 2

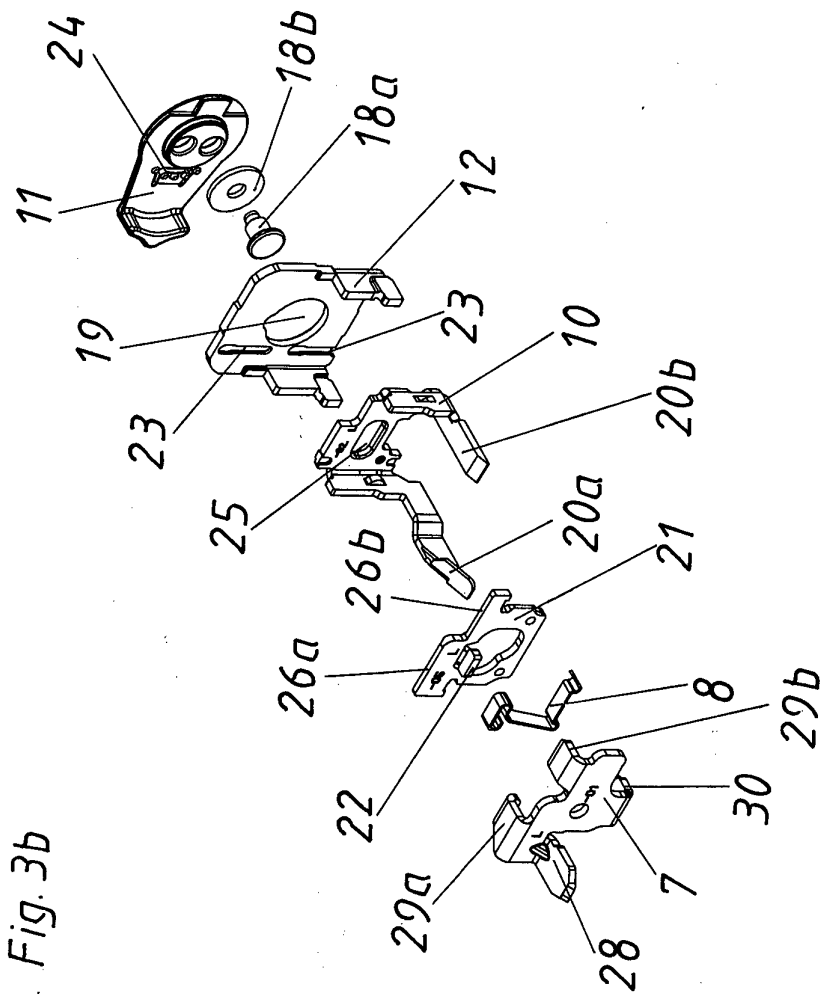
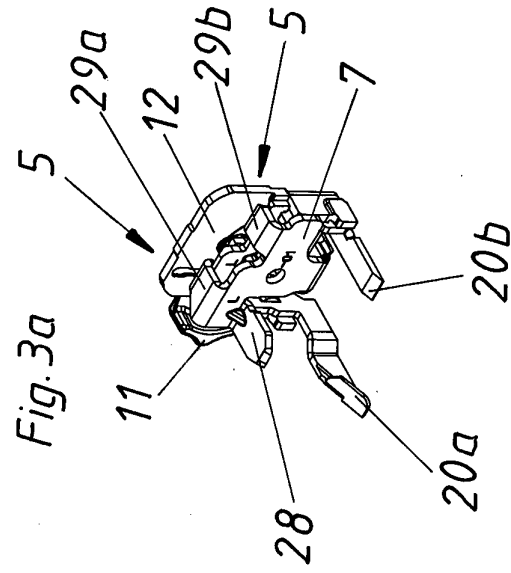


Fig. 3b

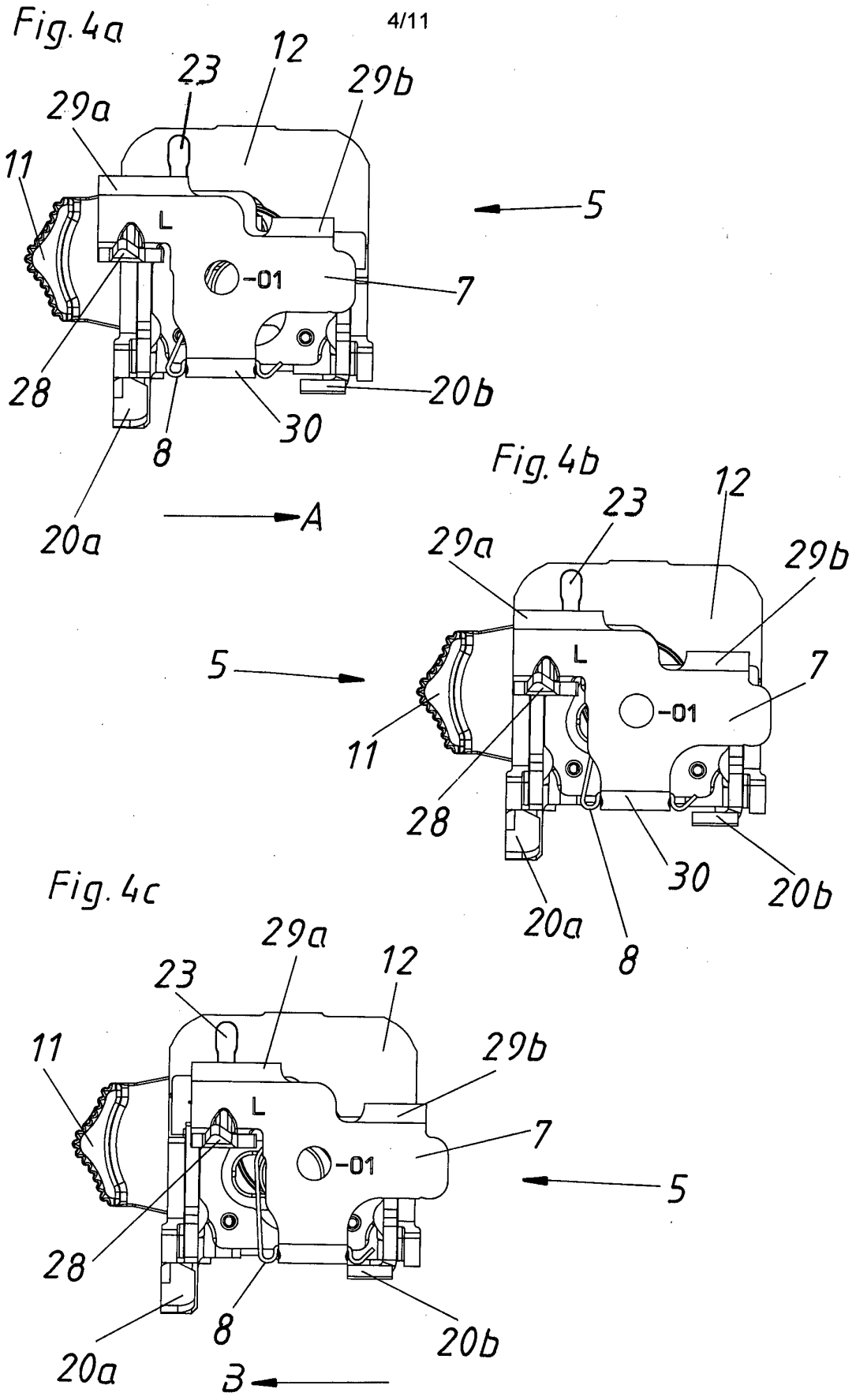


Fig. 5a

5/11

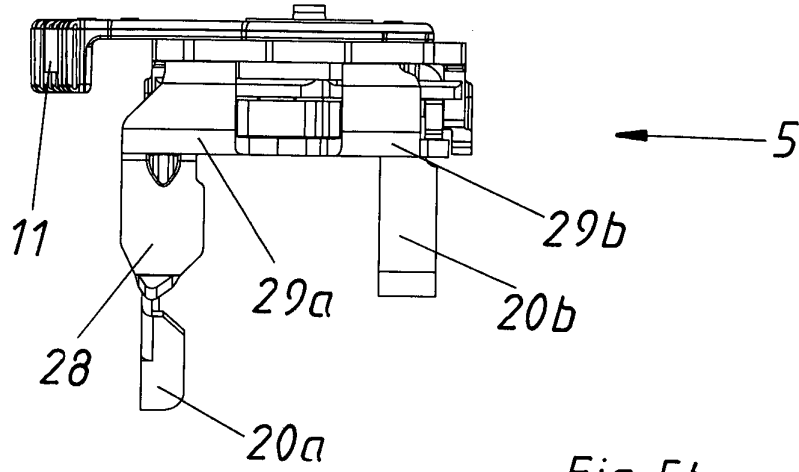


Fig. 5b

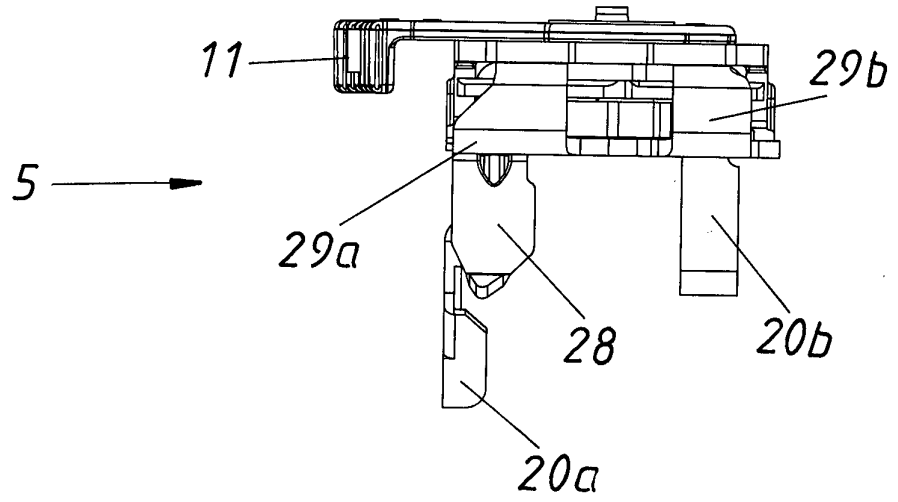
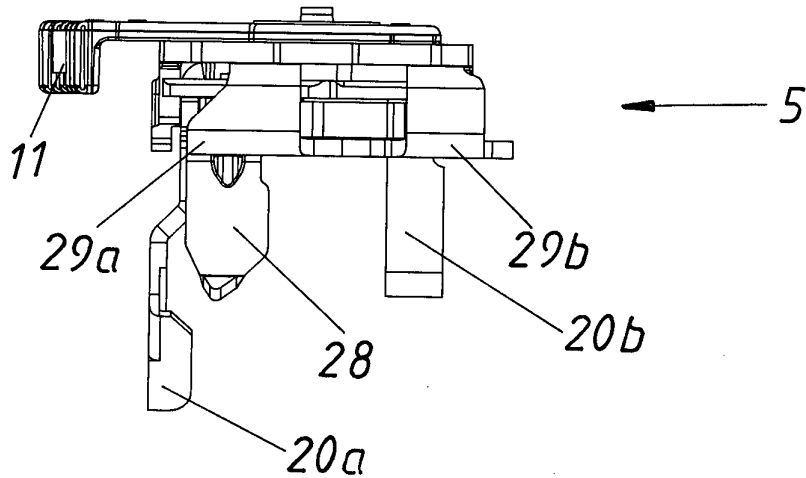


Fig. 5c



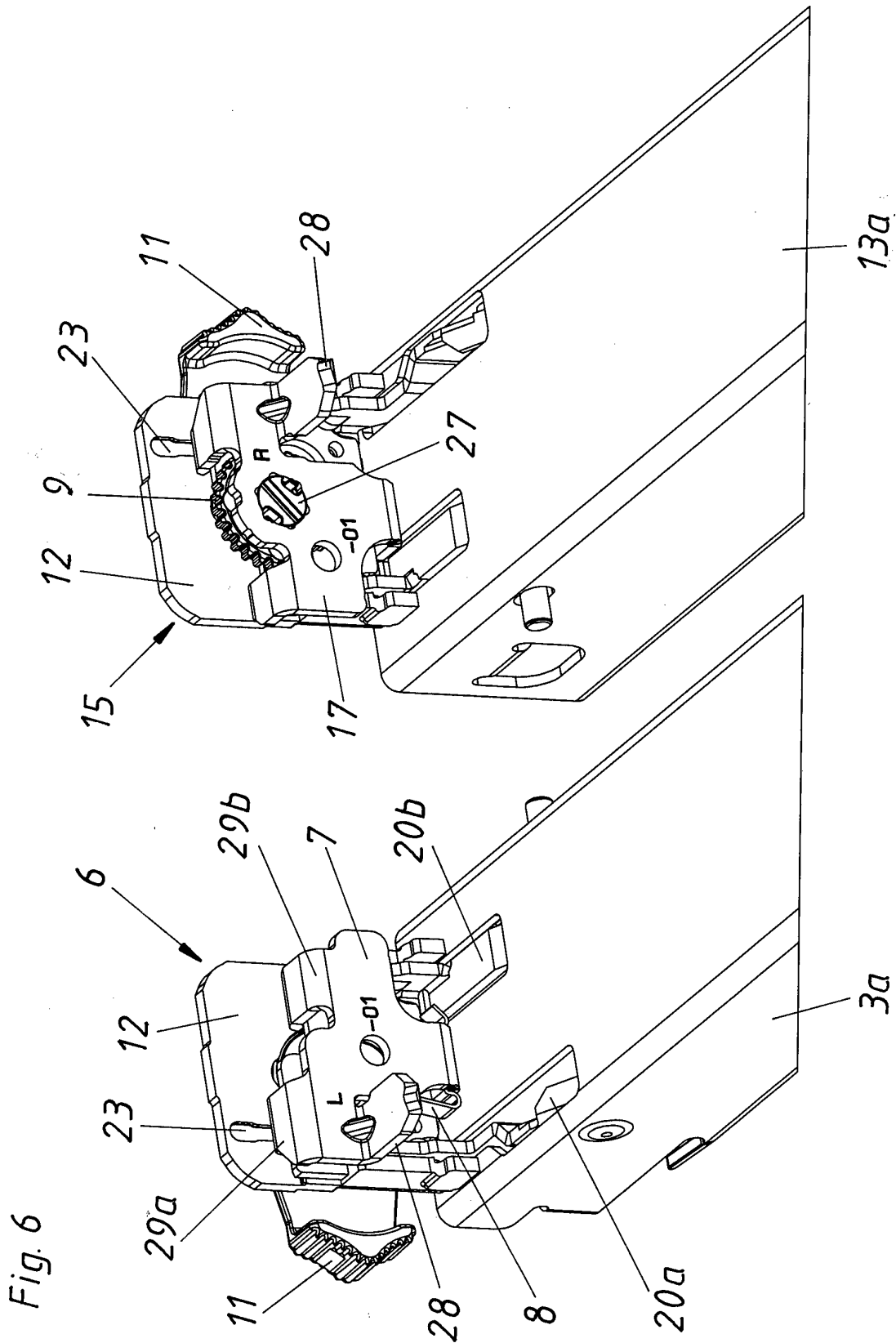


Fig. 6

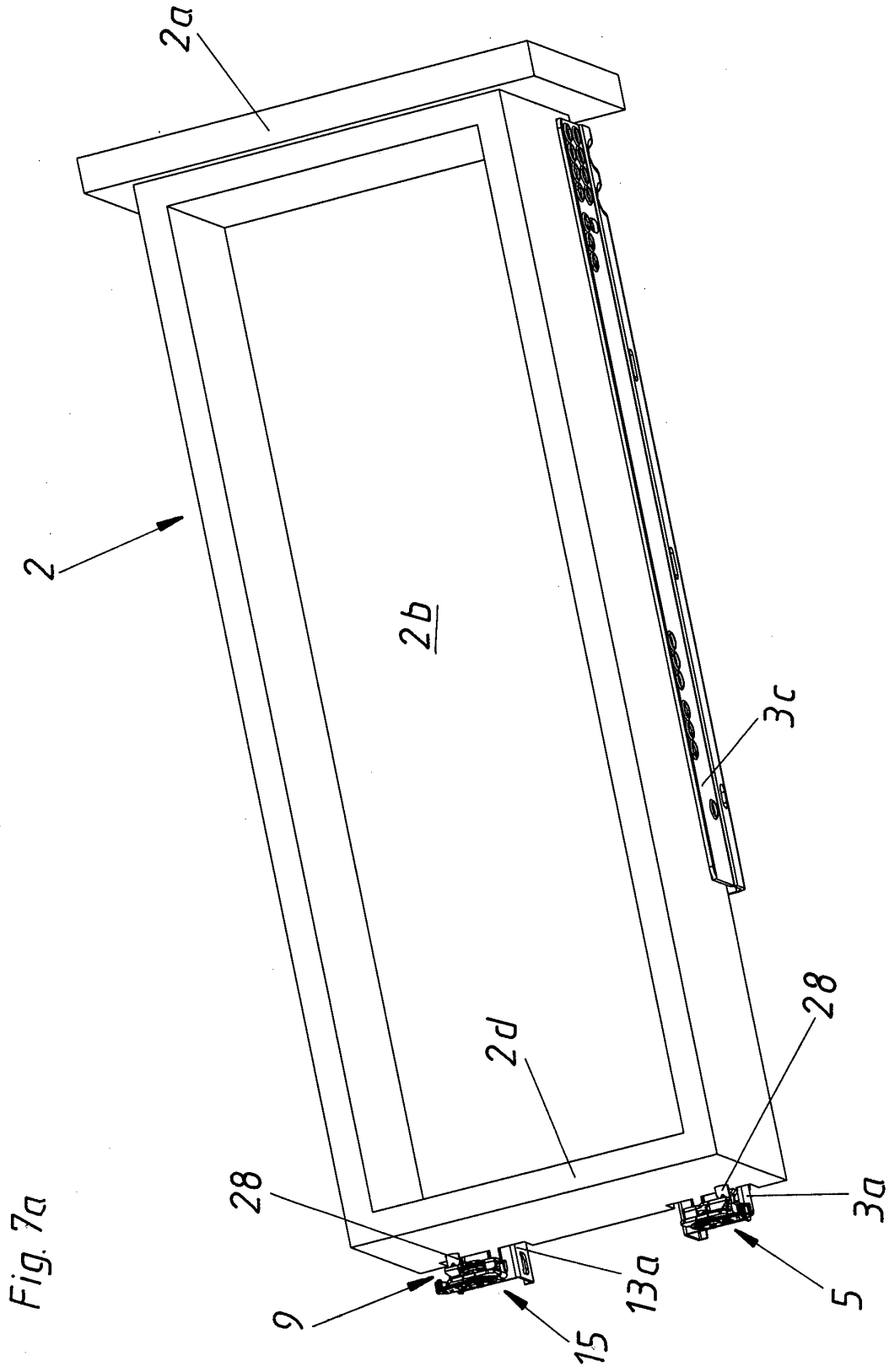
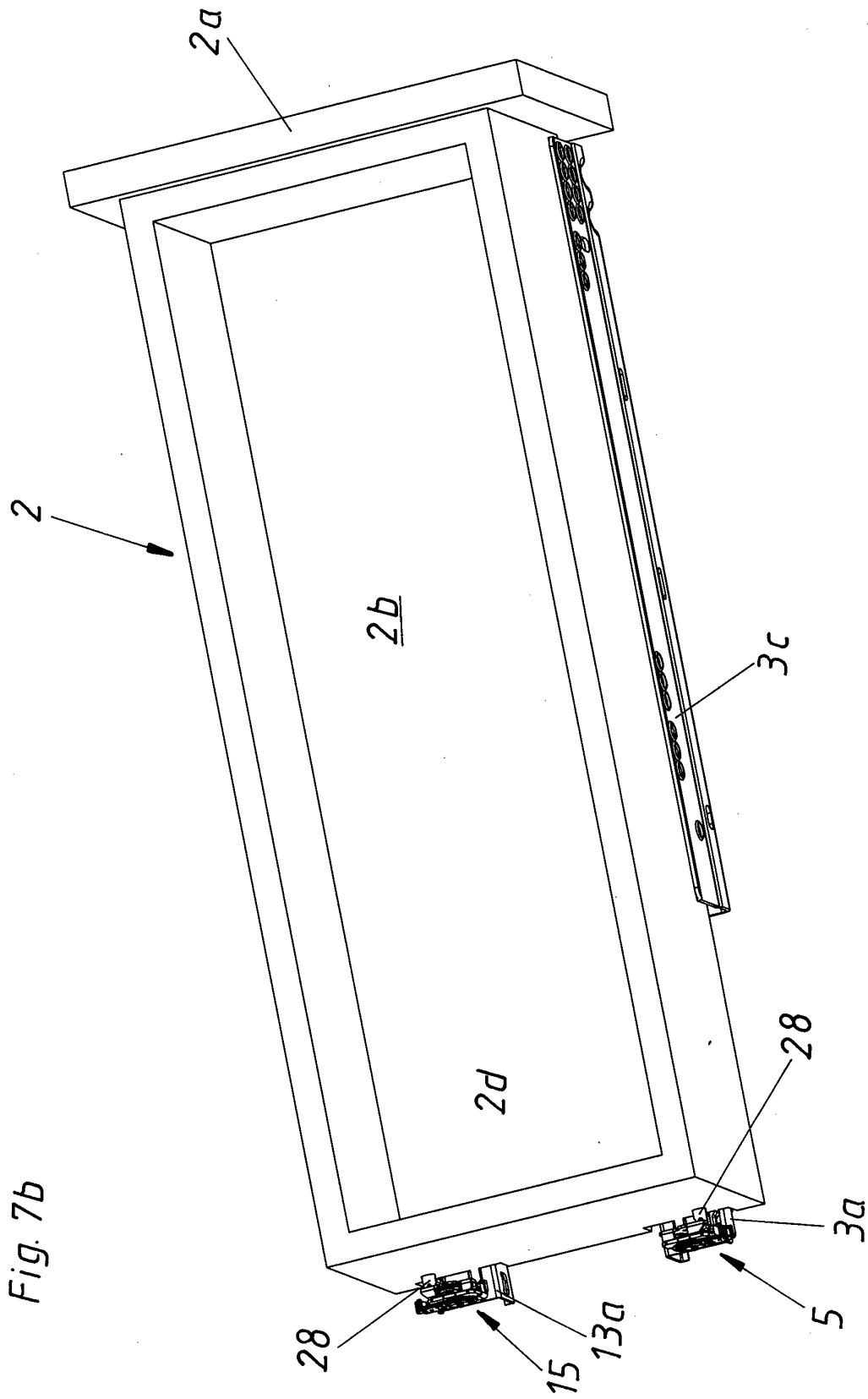
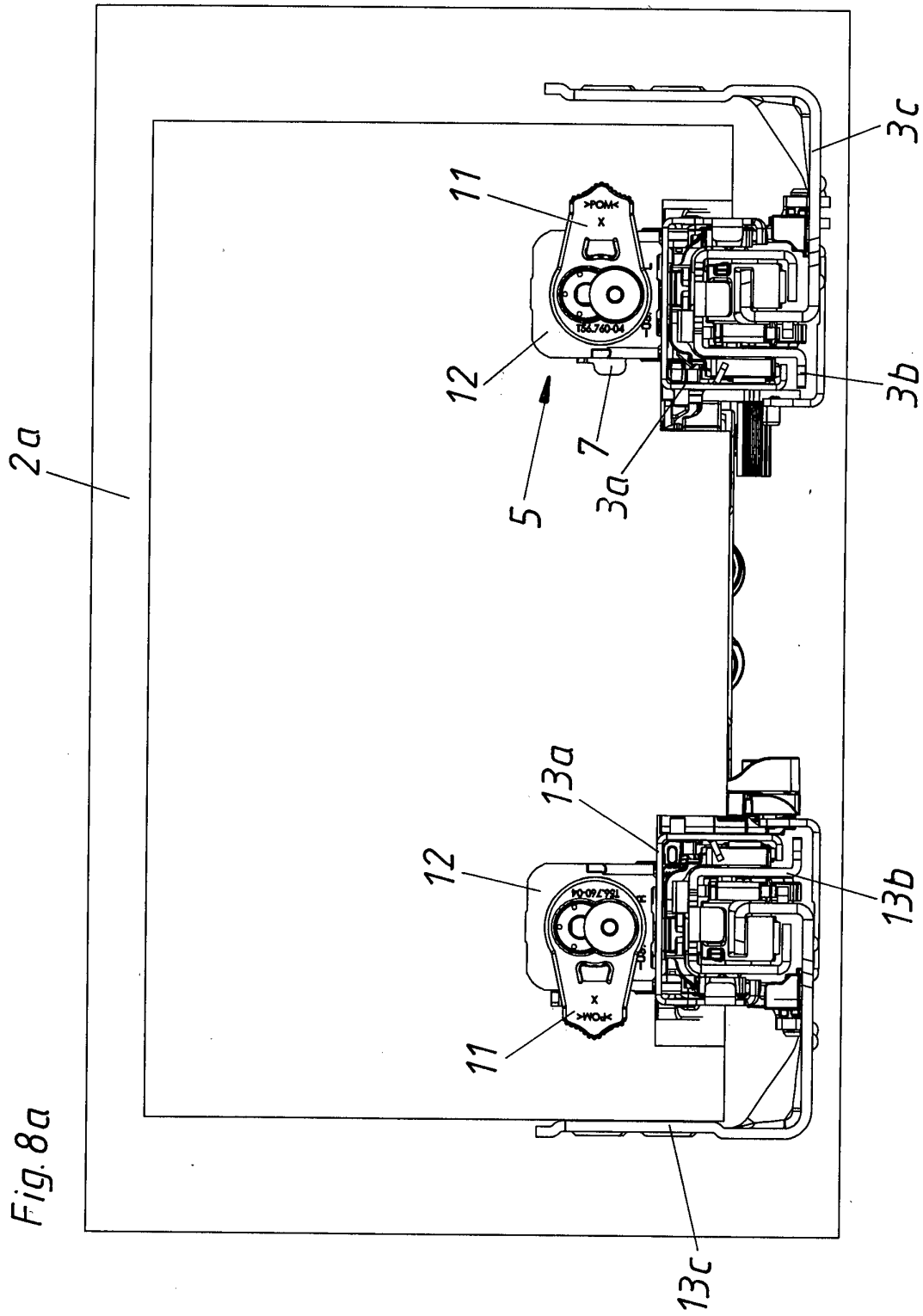


Fig. 7a





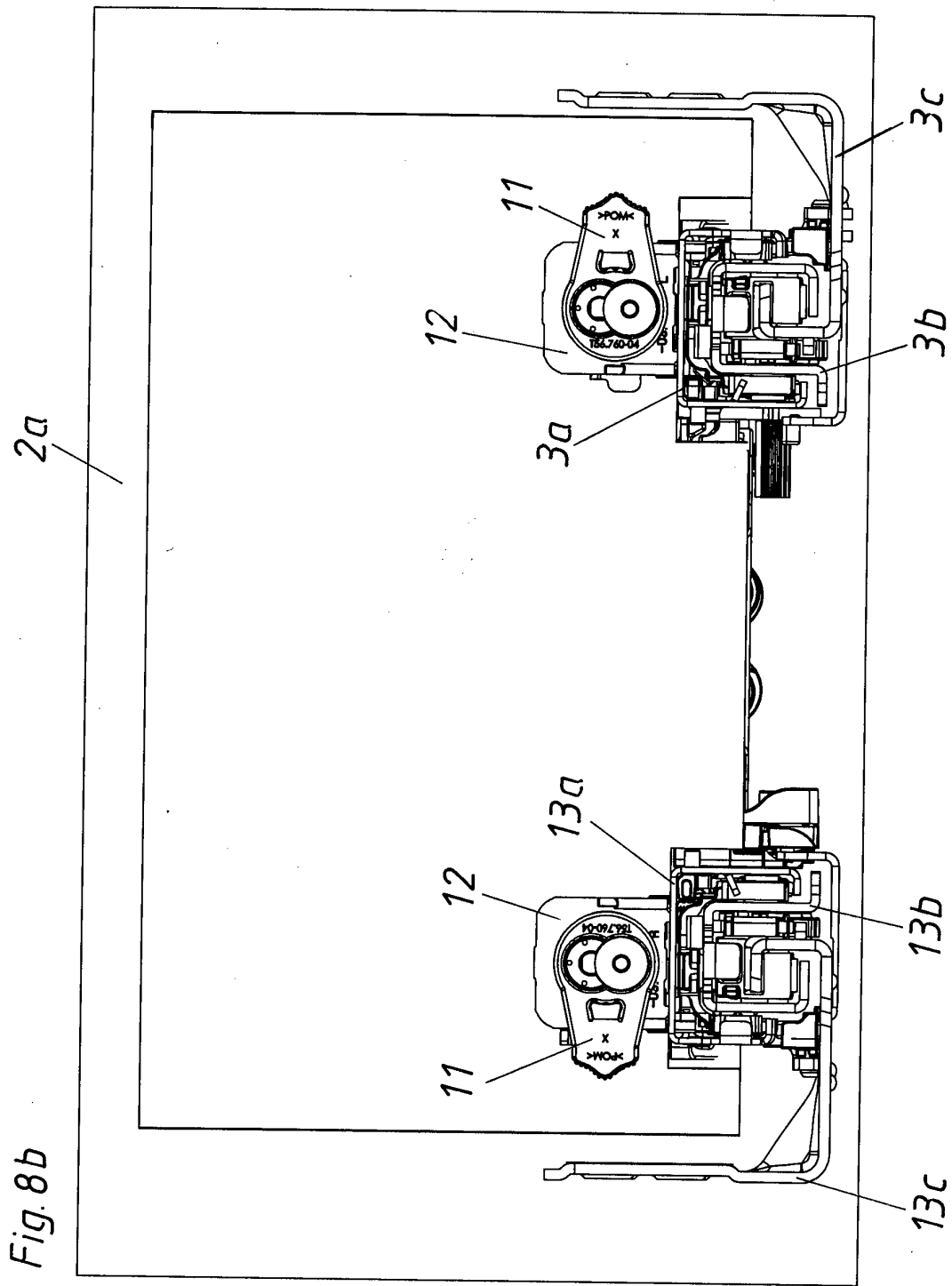


Fig. 9b

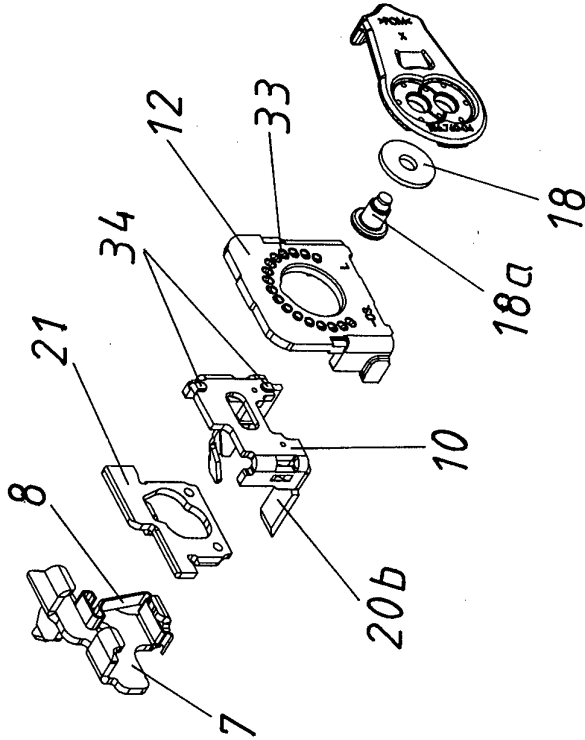


Fig. 9a

