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(54) **FURNITURE PANEL WITH TOOL-HOLDER**

(57) The present invention relates to a panel (1) for furniture which is characterized in that it incorporates at least one housing seat (2) suitable for removably housing a maneuvering tool (20) for maneuvering the furniture hardware.

According to a first embodiment of the present invention, the tool (20) can be manually extracted from said

at least one housing seat (2), whereas according to an alternative embodiment, also preferred, the panel (1) is characterized in that it further comprises, housed inside said seat (2), a device (10) suitable for moving said operating tool (20) with respect to said seat (2).

Said device (10) advantageously comprises a push-pull mechanism (15).

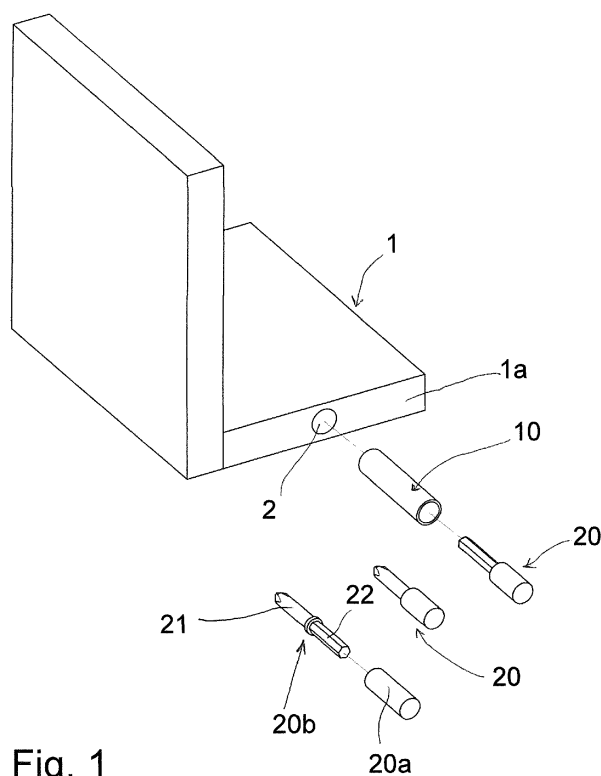


Fig. 1

Description

FIELD OF THE INVENTION

[0001] The present invention relates to a panel for furniture incorporating at least one seat suitable for containing at least one tool for maneuvering the furniture hardware.

[0002] The panel can indifferently be a horizontal panel, such as a base or intermediate shelf or a top, or a vertical panel, such as a shoulder.

[0003] The panel according to the present invention responds to the need felt in the field for always having at hand, although hidden so as not to spoil the aesthetics of the furniture, one or more tools for adjusting the hardware of the furniture itself.

STATE OF THE ART

[0004] Most high-quality furniture comprises hardware components such as hinges, joints, shelf brackets, hanging brackets, levelling feet and so forth.

[0005] This hardware must be manoeuvred both during the assembly of the furniture, and for subsequent adjustments, and during the disassembly of the furniture itself.

[0006] These operations often require the use of specific manoeuvring tools, not a simple screwdriver, therefore, but hex keys having specific dimensions or similar tools that are not always available at home nor easily available on the market.

[0007] There is hence the need for always having them available, even years after the purchase and/or first assembly of the furniture.

SUMMARY OF THE INVENTION

[0008] In light of the above, the undertaking of the present invention is to satisfy the above requirement in a simple and economical way.

[0009] Within this undertaking, the objective of the present invention is to allow the user to always have at hand the special tool necessary for maneuvering the furniture hardware.

[0010] Furthermore, the objective of the present invention is to provide a housing seat for a maneuvering tool on a component of a piece of furniture, which has a modest impact on the aesthetics of the furniture while remaining easily accessible for the user.

[0011] The above-mentioned undertaking, in addition to the above-mentioned objectives and others which will appear more evident further on, are achieved by a panel for furniture according to the enclosed claim 1.

[0012] Further characteristics of the preferred embodiments of the furniture panel according to the present invention described in the present patent application are the object of the dependent claims.

LIST OF FIGURES

[0013] Further characteristics and advantages will appear more evident from the description of a preferred but non-exclusive embodiment of the furniture panel illustrated by way of non-limiting example with the aid of the attached drawings in which:

Figure 1 is a schematic perspective view illustrating a furniture panel comprising a seat for a tool according to the present invention, in which a tool is shown in different assembly modes;

Figures 1A to 1C always show again in a schematic perspective view possible positions of the furniture panel according to the present invention;

Figure 2 shows, by way of example, an exploded view of a possible embodiment of the device which, in an alternative embodiment of the present invention, is suitable for moving the maneuvering tool with respect to the seat formed in the furniture panel;

Figures 3A to 3D illustrate sectional views of the movement phases of said maneuvering tool with respect to the seat formed in the panel in the case of the presence of the movement device of figure 2.

DETAILED DESCRIPTION OF THE INVENTION

[0014] With particular reference to the attached figures 1 and from 1A to 1C, a panel **1** for furniture according to the present invention is illustrated, which is characterized in that it incorporates at least one housing seat **2** configured for extractably housing a maneuvering tool **20** for maneuvering the hardware of the piece of furniture on which said panel **1** is assembled.

[0015] Said housing seat **2** is preferably incorporated in said panel **1** and facing outwardly, so as to be accessible, from one of the edges **1a** of the panel **1**.

[0016] The panel **1** can indifferently be a panel which will be mounted horizontally when assembling the furniture, such as for example a base as in figure **1A**, or an intermediate shelf as in figure **1C**, or a top, or a vertical panel, such as for example a shoulder, as in figure **1B**.

[0017] According to a first embodiment of the present invention, when the tool **20** is inserted into the seat **2** it does not protrude from said panel or protrudes just enough to be grasped by the user.

[0018] According to a first embodiment of the present invention, in fact, the furniture panel **1** comprises a seat **2** configured so as to house a tool **20** which can be manually extracted from said seat **2**.

[0019] In accordance with a second embodiment of the panel **1** for furniture according to the present invention, said panel **1** further comprises, housed inside said seat **2**, a device **10** suitable for moving the maneuvering tool **20** with respect to the seat **2**.

[0020] More specifically, said device **10** can be actuated between a first non-operating position in which said tool **20** is completely inserted within said seat **2**, and a

second operating position in which said tool **20** at least partially protrudes from said seat **2** so as to be able to be more easily grasped by the user.

[0021] According to a preferred embodiment of the invention, said device **10** advantageously comprises a known "push-pull" mechanism **15** for moving the tool **20** with respect to the seat **2** between said first non-operating position and said second operating position.

[0022] A possible embodiment of this device **10** of the "push-pull" type is shown by way of non-limiting example in figure 2, but for a skilled person in the field this device can evidently also be produced differently, according to what is within the reach of said skilled person in the field.

[0023] According to what is illustrated by way of example in the attached figures, said device **10** advantageously comprises at least one tool-holder element **11** suitable for being fixed, by fixing or interlocking means, inside said housing seat **2**.

[0024] Said housing seat **2** can advantageously have a cylindrical shape so as to house a tool-holder element **11** also having a cylindrical shape complementary to the seat. In any case, the tool-holder element **11** can have different shapes and, consequently, said housing seat **2** can have shapes suitable for receiving said tool-holder element.

[0025] Said tool-holder element **11** in turn houses a containment element **12** which contains the "push-pull" type mechanism **15**.

[0026] Said "push-pull" type mechanism **15** advantageously moves the tool **20** with respect to said tool-holder **11**, and therefore with respect to the seat **2** with which, as already mentioned, said tool-holder **11** is produced integrally.

[0027] Said "push-pull" type mechanism **15** is preferably housed within said containment element **12**, also preferably cylindrical in shape, and comprises a pusher element **13** which is axially moved by the elastic element **14** of said push-pull mechanism **15**.

[0028] Said pusher **13** in turn axially pushes said tool **20**, according to what can be seen in figures 3A to 3D.

[0029] Said pusher element **13** can therefore be moved with respect to said tool-holder **11** between said first non-operating position in which said tool **20** is completely inserted within said tool-holder **11**, preferably "flush" with respect to the edge **1a** onto which said seat **2** protrudes - the situation is that of figure 3A - and said second operating position in which said tool **20** at least partially protrudes from said seat **2** - as shown in figure 3C.

[0030] As already specified, said "push-pull" type mechanism **15** for moving said tool **20** preferably comprises at least one elastic element **14**, preferably but not necessarily consisting of a helical spring, for moving said pusher element **13** with respect to said tool-holder **11**, and therefore with respect to said seat **2**.

[0031] With reference to figures 3A to 3C, in order to move the tool **20**, it is sufficient for the user to press the portion of the tool that protrudes outwardly from the seat **2** making it move backwards with respect to said tool-

holder **11**, according to what is shown in figure 3B, to cause the release of the push-pull mechanism **15** which therefore pushes the tool **20** outwards, by means of the pusher **13**, bringing it to the second operating position of figure 3C.

[0032] At this point the user can grasp the tool **20** and extract it from said tool-holder **11**.

[0033] According to a preferred embodiment, said tool **20** is a modular tool comprising a first portion **20a** which acts as a handle and a second rod-shaped portion **20b** having a tool head at least one of its two ends **21**, **22**.

[0034] Said seat **2** is advantageously cylindrical in shape and said first portion **20a** of said tool **20** which acts as a handle is also cylindrical in shape so as to be able to be inserted into said seat **2**, whereas said second rod-shaped portion **20b** is suitable for being inserted into said tool-holder **11** so as to be abutted against said pusher **13** of said push-pull mechanism **15**, according to what can be seen for example in figures 3A to 3D, and has at least one of its ends shaped like a tool.

[0035] According to what can be seen for example in figure 1, the tool **20** can advantageously comprise a second rod-shaped portion **20b** removably associated with said first portion **20a** which acts as a handle, said second rod-shaped portion **20b** being provided at both of its ends **21**, **22** with a tool head, so that it can be used, for example, both as a screwdriver and as a hex key.

[0036] In an alternative embodiment, not shown in the attached figures, the seat **2** can be closed by a cap. In this case, of course, the tool-holder element **11** and the tool **20** must be housed inside the housing seat in a slightly withdrawn position, in order to allow the insertion of said cap.

[0037] The furniture panel according to the present invention can advantageously also comprise various seats for housing various tools.

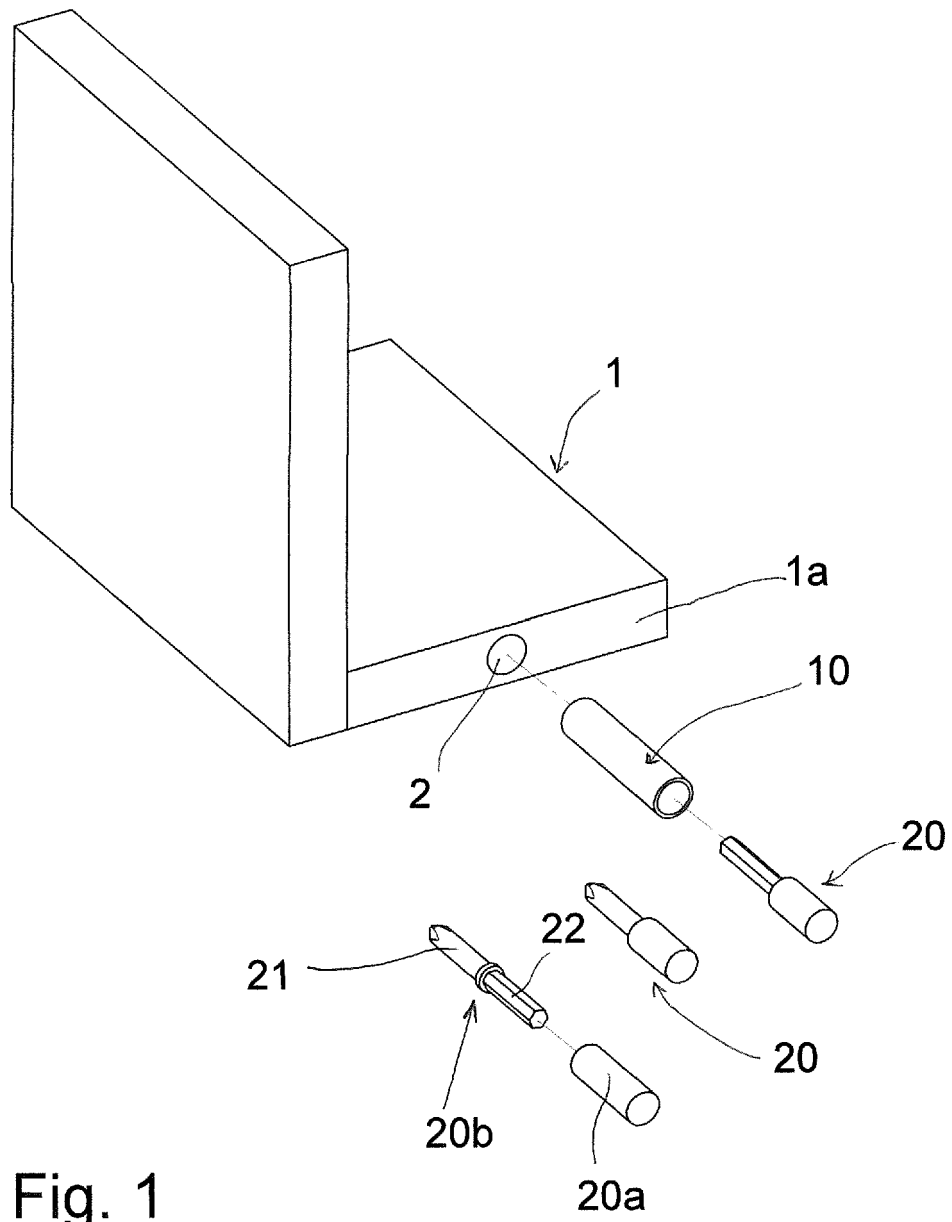
[0038] The objectives mentioned in the preamble of the present description have thus been achieved, namely allowing the user to always have at his disposal one or more special tools necessary for maneuvering the hardware of a piece of furniture.

[0039] It has also been shown how, by forming a seat inside the panel, the tool is practically invisible from the outside except for the section of the tool body protruding from the seat, preferably flush with the edge of the panel itself. In this way, a panel is provided with a tool-holder seat without jeopardizing the aesthetics of the panel, and therefore of the furniture itself.

[0040] The present invention has been described, for illustrative but non-limiting purposes, with reference to various preferred embodiments. It should be understood however that variations and/or modifications can be applied by a skilled person in the field without thereby departing from the relative protection scope, as defined in the enclosed claims.

Claims

1. A panel (1) for furniture **characterized in that** it incorporates at least one housing seat (2) suitable for removably housing a maneuvering tool (20) for maneuvering the furniture hardware. 5
2. The panel (1) for furniture according to the previous claim, **characterized in that** said tool (20) can be manually extracted from said at least one housing seat (2). 10
3. The panel (1) for furniture according to claim 1, **characterized in that** it further comprises, housed inside said at least one seat (2), a device (10) suitable for moving said maneuvering tool (20) with respect to said seat (2). 15
4. The panel (1) for furniture according to the previous claim, **characterized in that** said device (10) can be actuated between a first non-operating position in which said tool (20) is completely inserted within said seat (2), and a second operating position in which said tool (20) at least partially protrudes from said seat (2) so that it can be more easily grasped by the user. 20 25
5. The panel (1) for furniture according to the previous claim, **characterized in that** said device (10) comprises a "push-pull"-type mechanism (15) for moving said tool (20) with respect to said seat (2) between said first non-operating position and said second operating position. 30
6. The panel (1) for furniture according to the previous claim, **characterized in that** said device (10) comprises at least one tool-holder element (11) suitable for being fixed, by fixing or interlocking means, inside said housing seat (2) which in turn houses said "push-pull"-type mechanism (15). 35 40
7. The panel (1) for furniture according to the previous claim, **characterized in that** said "push-pull"-type mechanism (15) for moving said tool (20) with respect to said tool-holder (11), and therefore with respect to said seat (2), is housed within a containment element (12) of said "push-pull"-type mechanism (15) which also comprises at least one pusher element (13) suitable for abutting against said tool (20), which can therefore be moved with respect to said tool-holder (11) between said first non-operating position in which said tool (20) is completely inserted inside said tool-holder (11) which in turn is inserted "flush" within said seat (2), and said second operating position in which said tool (20) at least partially protrudes from said seat (2). 45 50 55
8. The panel (1) for furniture according to the previous claim, **characterized in that** said "push-pull"-type mechanism (15) for moving said tool (20) comprises at least one elastic element (14) for moving said pusher element (13) with respect to said tool-holder (11). 5
9. The panel (1) for furniture according to any of the previous claims, wherein said tool (20) is a modular tool comprising a first portion (20a) which acts as a handle and a second rod-like portion (20b) having two tool heads at the two ends. 10
10. The panel (1) for furniture according to any of the previous claims, wherein said seat (2) is cylindrical in shape and wherein said tool comprises said first portion (20a) which acts as a cylindrical handle suitable for being inserted within said seat (2), also having a cylindrical shape, and a second rod-like portion (20b) suitable for being inserted into said tool-holder (11) and abutting against said pusher element (13) of said push-pull mechanism (15). 15



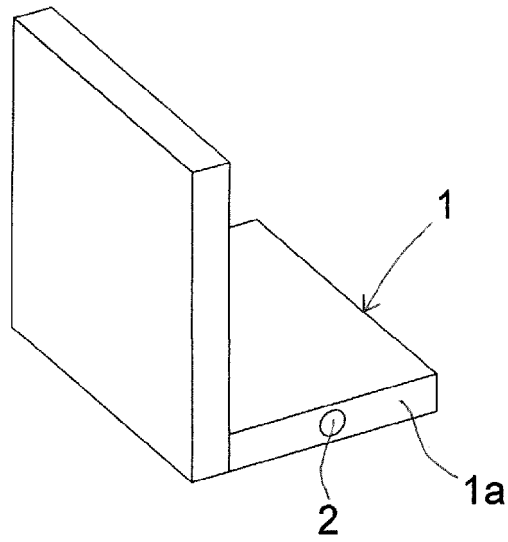


Fig. 1A

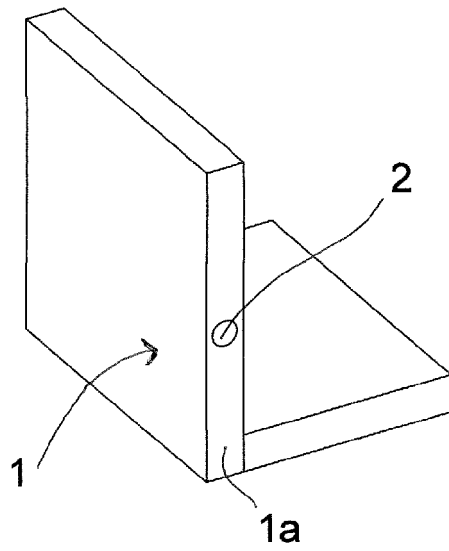


Fig. 1B

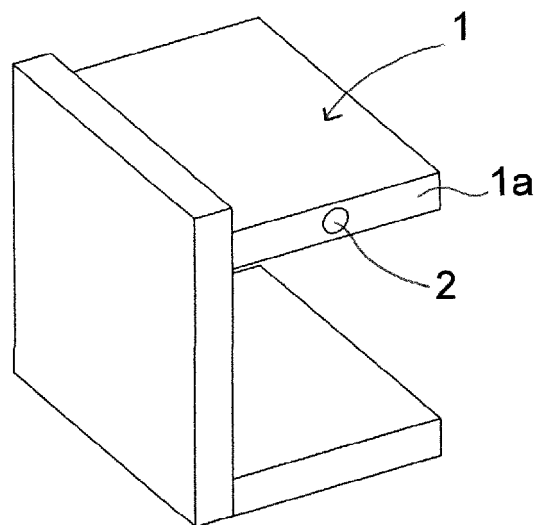


Fig. 1C

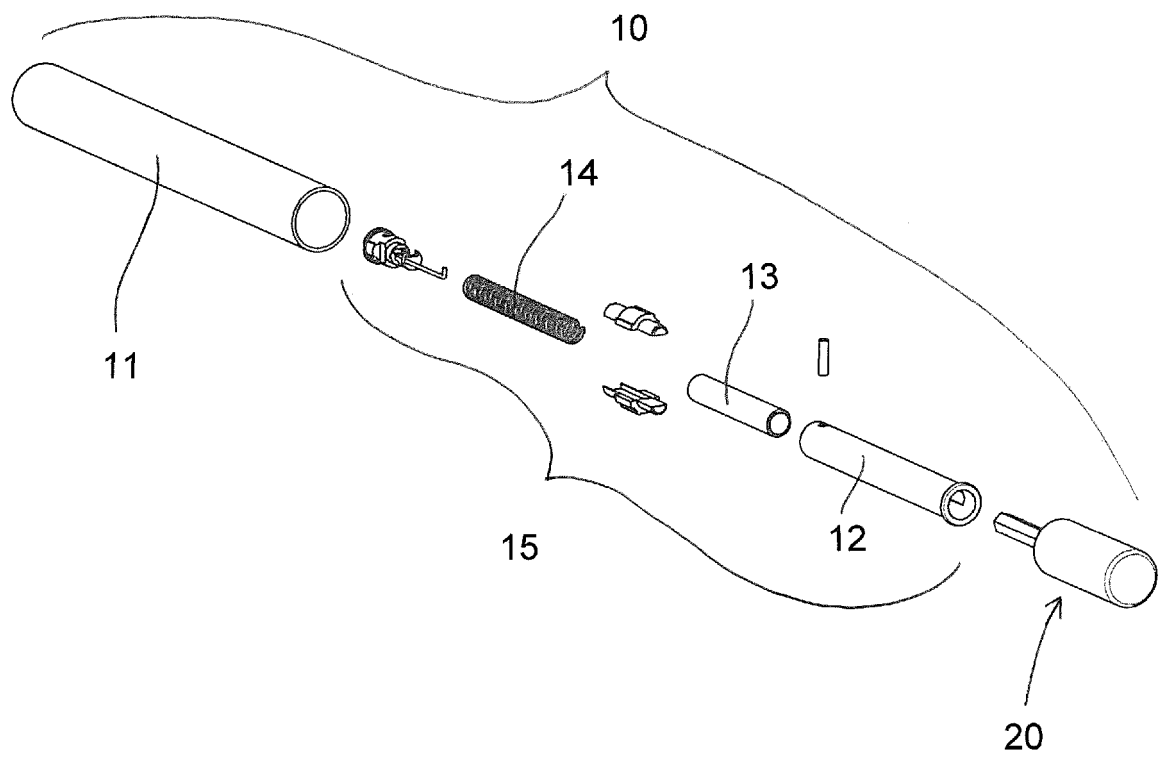


Fig. 2

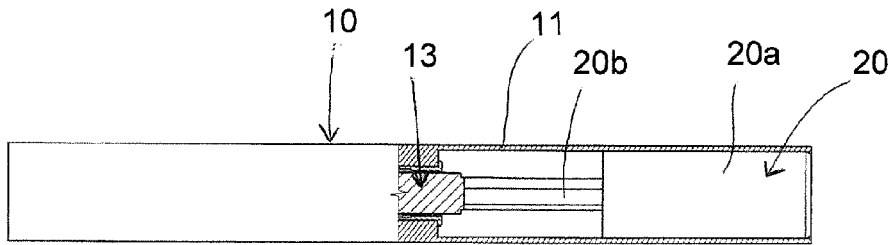


Fig. 3A

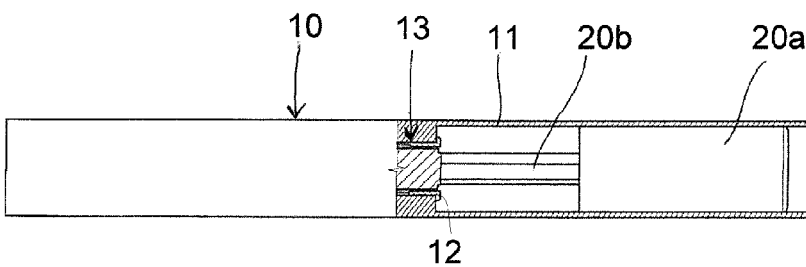


Fig. 3B

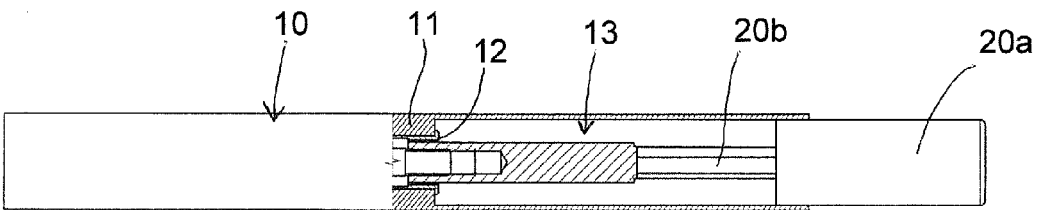


Fig. 3C

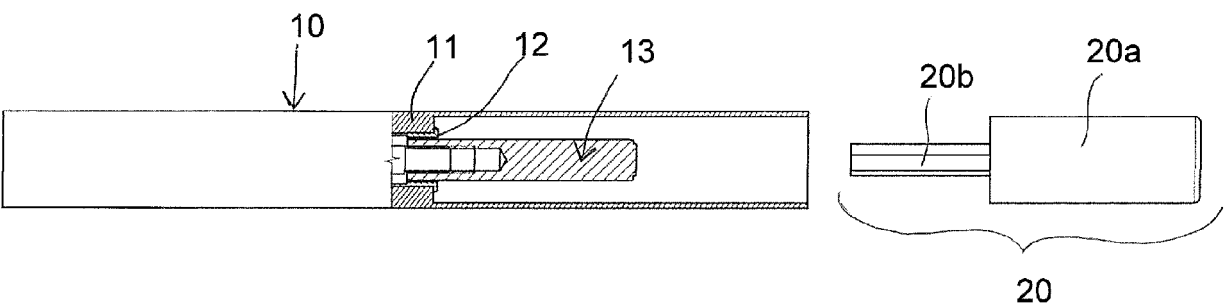


Fig. 3D



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Application Number
EP 20 20 7068

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EPO FORM 1503 03.82 (P04C01)

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The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 5 March 2021	Examiner Linden, Stefan
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