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(54) A SUPPORT BRACKET FOR A CONTAINER CASSETTE FOR AN AUTOMATED TELLER MACHINE

(57) The present disclosure relates to systems for container cassettes containing values such as banknotes, such as container cassettes which are suitable for automated teller machines (ATM). More specifically, the present disclosure relates to an improved device and kit which involves providing a higher robustness for container cassettes. It refers to a support bracket (20) for a container cassette for an automated teller machine (ATM) having front (21), rear (22) and top (23) walls forming a coupling space (24) and having protrusions (25) extending in parallel along a coupling direction and defining slots (26) forming coupling levels, as well as at least one side holder (27), whereby a container cassette cover holder is slidably providable through a side of the coupling space and couplable to the slots. A bracket may further comprise a securing tab (28) for further retaining robustness.

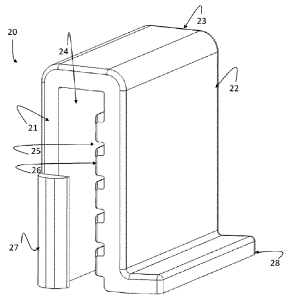

Figure 2a

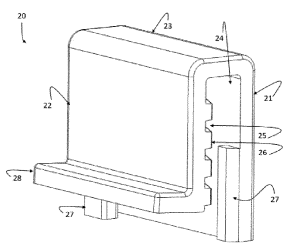

Figure 2b

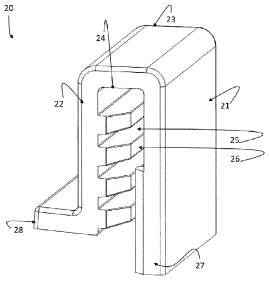

Figure 2c

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Description

FIELD OF THE DISCLOSURE

[0001] The present disclosure relates to systems for container cassettes containing values such as banknotes, such as container cassettes which are suitable for automated teller machines (ATM). More specifically, the present disclosure relates to an improved device and kit which involves providing a higher robustness for container cassettes.

PRIOR ART

[0002] Container cassettes suitable for Automated Teller Machines (ATM) are used to contain valuable items, in the case of ATMS such valuable items (or values) consisting of banknotes.

[0003] Container cassettes are providable inside a vault, which in turn is providable inside an ATM.

[0004] Container cassettes typically contain a space for the provision of values, e.g., banknotes, and a cover. There are covers known in the art which have holders - usually two provided centrally close to a side of the cover - protruding perpendicularly from the cover into the space for the provision of values, when the cover is closed on top of the said space. These holders define several possible levels formed by protrusions and slots, to which a levelling panel can be coupled to. When providing banknotes inside a container cassette, the banknotes occupy, in height, only a part of the space for their provision. By selecting a level and coupling a levelling panel to such level, the remaining space is occupied by such levelling panel, and the notes are thereby securely provided inside the cassette.

[0005] A levelling panel is a mere plastic panel used for such purpose.

[0006] Still, since container cassettes are designed to comprise valuable items, they include numerous protection mechanisms. One of the main mechanisms presently used is the provision of neutralization means inside the cassettes - typically ink which renders the values useless - the neutralization means being activated upon the detection of a theft attempt. A theft attempt may involve the usage of an explosion dimensioned to break a vault in which security container cassettes are provided.

[0007] The neutralization means are provided inside a cassette, and they may occupy the space left by banknotes in height, thus replacing the levelling panel and further providing the ability to neutralize the values, e.g., with ink.

[0008] The neutralization means with the ability to ink valuable items are designed to be installed in the same holders protruding from the cover, being coupled to the levels. Typically, the neutralization means are coupled to the lowest level, although they may be coupled to other levels of the holders.

[0009] This means that the holders, which originally were used to support a simple plastic panel, are used to support much higher loads, due to the installation of the neutralization means, and thereby become points of fragility of the cassette. When they eventually break, the whole cassette has to be replaced.

[0010] The solution of the present disclosure provides a simple and effective way of overcoming such issues.

SUMMARY OF THE INVENTION

[0011] The present disclosure refers to a support bracket for a container cassette for an automated teller machine (ATM). The support bracket comprises a front wall and a rear wall, the front wall and the rear wall extending in parallel along a coupling direction thereby having a same width, and forming a coupling space in between them, wherein the bracket comprises a top wall, wherein a top side of the front wall is connected to a top side of the rear wall by the top wall, thereby covering a top of the coupling space, and a bottom of the coupling space is left open, and

wherein a face of the rear wall facing the coupling space having protrusions extending in parallel along the coupling direction and defining slots forming coupling levels, and
wherein the support bracket comprises at least one side holder, a side holder extending from a side of the front wall and perpendicularly to the coupling direction, such that such side of the coupling space is left open except for a part which is covered by the side holder, and which leaves the coupling space sides open in height and in width, whereby a container cassette cover holder is slidably providable through a side of the coupling space and couplable to the slots.

[0012] The present disclosure further refers to a bracket kit comprising two brackets according the present disclosure.

[0013] The present disclosure further refers to a container cassette kit comprising a container cassette, values neutralizations means and a bracket kit according to the present disclosure, e.g., the values consisting of banknotes,

wherein the container cassette contains a space for the provision of values, e.g., banknotes, and a cover,
wherein the cover comprises two cover holders provided centrally close to a side of the cover, the cover holders protruding perpendicularly from the cover into the space for the provision of values, when the cover is closed on top of the said space, wherein the cover holders define several possible levels formed by cover protrusions and slots,
and wherein the neutralization means are provided on an inner face of the cover and therein fixed by

means of the brackets of the bracket kit, each of the brackets of the bracket kit being slidably coupled to a corresponding cover holder, the slots and protrusions of each bracket correspondingly coupling to the protrusions and slots of the corresponding cover holder.

[0014] The present disclosure also refers to the use of the bracket of the present disclosure for fixing values neutralization means to cover holder a container cassette,

wherein the container cassette contains a space for the provision of values, e.g., banknotes, and a cover, wherein the cover comprises two cover holders provided centrally close to a side of the cover, the cover holders protruding perpendicularly from the cover into the space for the provision of values, when the cover is closed on top of the said space, wherein the cover holders define several possible levels formed by cover protrusions and slots,
and wherein the neutralization means are provided on an inner face of the cover and therein fixed by means of the bracket, the bracket being slidably coupled to a corresponding cover holder, the slots and protrusions of the bracket correspondingly coupling to the protrusions and slots of the corresponding cover holder.

DESCRIPTION OF DRAWINGS

[0015]

Figure 1- a representation of a container cassette kit having cover holders and brackets slidably coupled to such holders.
Figure 2a - a representation of a bracket according to the present disclosure.
Figure 2b - a representation of another bracket according to the present disclosure.
Figure 2c - another view of the bracket of Figure 2b.
Figure 3 - a partial representation of a container cassette kit having two brackets and two cover holders provided in the cover of the container cassette, the figure showing the coupling direction with which the brackets are slidably coupled to the cover holders, thereby retaining the neutralization means of the kit.
Figure 4a - a partial representation of a container cassette kit according to the present disclosure, with a bracket according to Figure 2a.
Figure 4b - a partial representation of a container cassette kit according to the present disclosure, with a bracket according to Figure 2b.

DETAILED DESCRIPTION OF THE DISCLOSURE

[0016] The present disclosure refers to a support bracket (20) for a container cassette for an automated teller machine (ATM).

[0017] The support bracket (20) is presented in the Figures, as previously described.

[0018] The support bracket (20) comprises a front wall (21) and a rear wall (22), which extend in parallel along a certain direction. This direction forms the coupling direction, along which the bracket (20) is slidably couplable to a cover holder (13) of a cover (12) of a container cassette for an ATM.

[0019] The coupling space (24) is an open space, inside which the cover holder (13) will be provided, upon coupling with a bracket.

[0020] The front wall (21) and the rear wall (22) have a same width. The width is the extension of the front and rear wall (22)s along the coupling direction.

[0021] The bracket (20) further comprises a top wall (23), which further confines the coupling space (24), covering its top. It is so that a top side of the front wall (21) is connected to a top side of the rear wall (22) by the top wall (23), thereby covering a top of the coupling space (24). The top wall (23) extends along the whole width of the front and rear wall (22)s, thereby fully covering the top of the coupling space (24) as shown, for instance, in Figure 2a.

[0022] The opposite end of the coupling space (24), which may be referred to as its bottom, is left open. This open face is one of the sections of the coupling space (24) which allows for a cover holder (13) to enter through, besides the two sides of the coupling space (24), which are subsequently described.

[0023] A side of the coupling space (24) is thus also left open. Both sides may be left open. Such sides of the coupling space (24) are left open except for a part which is covered by a side holder. Such side is thus partially covered by the respective side holder.

[0024] A side holder (27) extends from a side of the front wall (21) and perpendicularly to the coupling direction, such that such side of the coupling space (24) is left open except for a part which is covered by the side holder. Such partial cover may be seen, for instance, in Figure 2a. In addition, a side holder (27) leaves the coupling space (24) sides open in height and in width, also as seen in Figure 2a (or Figures 2b/2c).

[0025] Moreover, a face of the rear wall (22) facing the coupling space (24) has protrusions (26) extending in parallel along the coupling direction and defining slots (25) forming coupling levels. The protrusions (26) may extend in such along all the width of the rear wall (22).

[0026] The provision of the partially open sides and open bottom of the coupling space (24) defined by the front, rear and top wall (23)s, together with the protrusions (26) and corresponding slots (25), allow that a container cassette cover holder (13) is slidably providable through a side of the coupling space (24) and couplable to the slots (25). When a tab of neutralization means (14) is provided in between the lower side of the front wall (21) of the bracket (20) and a portion of the

cover (12) next to the cover holder, the cover holder (13) being slidably coupled to the bracket, such lower side of the front wall (21) of the bracket (20) retains the tab of the neutralization means (14) and, thereby, the neutralization means (14) connected to the cover (12).

[0027] This coupling is highly robust, as it uses all of the protrusions and slots of the cover holder, instead of only one level. It thereby virtually impedes any breakage of the cover holder (13) of the cover (12) of the cassette due to an excessive load of the neutralization means (14).

[0028] This coupling position is shown in Figure 4a, for instance.

[0029] The bracket (20) may comprise two side holders (27), each side holder (27) extending from a side of the front wall (21) and perpendicularly to the coupling direction, such that such side of the coupling space (24) is left open except for a part which is covered by the side holder, and which leaves the coupling space (24) sides open in height and in width, whereby a container cassette cover holder (13) is slidably providable through a side of the coupling space (24), couplable to the slots (25) and tightly therein maintained by an oppositely provided side holder. The side holders (27) thus act as a stopper for the cover holder, while still enabling the slidable coupling.

[0030] One of the side holders (27) may further extend into the coupling space (24), perpendicularly to the face of the front wall (21) facing the coupling space (24).

[0031] One of the side holders (27) may further extend into the coupling space (24), along the face of the front wall (21) facing the coupling space (24).

[0032] The side holders (27) as stoppers thus better fill in all the empty spaces of a cassette, ensuring the solidity and reinforcement of the whole assembly.

[0033] The bracket (20) may further comprise a securing tab (28) protruding perpendicularly from a lower side of the rear wall (22) and oppositely to the open space, the lower side being provided in the rear wall (22) oppositely to a top side of the rear wall (22) from which the top wall (23) extends. The securing tab (28) is represented in the Figures, and it provides a larger surface to pressure a tab of the neutralization means (14) and better retain them in their fixed position of the cover (12).

[0034] The bracket (20) may be a single piece.

[0035] The bracket (20) may be made of a resilient material, such that when the container cassette cover holder (13) is slidably provided through a side of the coupling space (24) and into the coupling space (24), the bracket (20) is slightly deformed.

[0036] The resilient material may be a material of a thermoplastic polymer containing carbonate groups, particularly polycarbonate.

[0037] The front wall (21) may have the same height as the rear wall (22).

[0038] The front wall (21) may have a higher height than the height of the rear wall (22), such that the front wall (21) extends beyond a lower side of the rear wall (22), the lower side being provided in the rear wall (22) oppositely to a top side of the rear wall (22) from which the top wall (23) extends.

[0039] The rear wall (22) may comprise *n* to m protrusions (26) and *n* + 1 to *m* + 1 slots (25), *n* and *m* consisting of integers equal or higher than 1, preferably the rear wall (22) comprising 3 protrusions (26) and 4 slots (25), 4 protrusions (26) and 5 slots (25), 5 protrusions (26) and 6 slots (25), 6 protrusions (26) and 7 slots (25), 6 protrusions (26) and 7 slots (25) or 7 protrusions (26) and 8 slots (25).

[0040] The present disclosure includes, as referred, a bracket kit. The bracket kit may comprise two brackets (20), each of which suitable for slidably coupling to a corresponding cover holder (13).

[0041] A container cassette kit (10) comprises, besides other features known in the art, a container cassette, values neutralizations means and a bracket kit according to the previous claim, e.g., the values consisting of banknotes.

[0042] The container cassette has a case form, thereby containing a space for the provision of values (11), e.g., banknotes, and a cover (12). The cover (12) may be rotatably connected to the portion of the cassette forming the space for the provision of values (11).

[0043] The cover (12) may comprise two cover holders (13).

[0044] Cover holders (13) are typically provided centrally close to a side of the cover (12), and protrude perpendicularly from the cover (12) into the space for the provision of values (11), when the cover (12) is closed on top of the said space.

[0045] Figure 1 shows a container cassette in an open position. When the cover (12) is rotated and closed on top of the space for the provision of values (11), the cover holders (13) protrude into such space.

[0046] Cover holders (13) define several possible levels formed by cover protrusions and slots, as shown in Figure 1.

[0047] The neutralization means (14) are provided on an inner face of the cover (12) and therein fixed by means of the brackets (20) of the bracket kit, each of the brackets (20) of the bracket kit being slidably coupled to a corresponding cover holder, the slots (25) and protrusions (26) of each bracket (20) correspondingly coupling to the protrusions and slots of the corresponding cover holder, as shown in Figures 4a and 4b.

[0048] As will be evident to a person skilled in the art, the present disclosure should not be limited to the embodiments described herein, with a number of changes being possible, which remain within the scope of this disclosure.

[0049] Of course, the particulars disclosed herein are combinable, in the different possible forms, being avoided the repetition of all such combinations.

Claims

1. A support bracket (20) for a container cassette for an

automated teller machine (ATM), the support bracket (20) comprising a front wall (21) and a rear wall (22), the front wall (21) and the rear wall (22) extending in parallel along a coupling direction thereby having a same width, and forming a coupling space (24) in between them, wherein the bracket (20) comprises a top wall (23), wherein a top side of the front wall (21) is connected to a top side of the rear wall (22) by the top wall (23), thereby covering a top of the coupling space (24), and a bottom of the coupling space (24) is left open, and

wherein a face of the rear wall (22) facing the coupling space (24) having protrusions (26) extending in parallel along the coupling direction and defining slots (25) forming coupling levels, and
wherein the support bracket (20) comprises at least one side holder, a side holder (27) extending from a side of the front wall (21) and perpendicularly to the coupling direction, such that such side of the coupling space (24) is left open except for a part which is covered by the side holder, and which leaves the coupling space (24) sides open in height and in width, whereby a container cassette cover holder (13) is slidably providable through a side of the coupling space (24) and couplable to the slots (25).

2. A bracket (20) according to the previous claim wherein it comprises two side holders (27), each side holder (27) extending from a side of the front wall (21) and perpendicularly to the coupling direction, such that such side of the coupling space (24) is left open except for a part which is covered by the side holder, and which leaves the coupling space (24) sides open in height and in width, whereby a container cassette cover holder (13) is slidably providable through a side of the coupling space (24), couplable to the slots (25) and tightly therein maintained by an oppositely provided side holder.

3. A bracket (20) according to the previous claim wherein one of the side holders (27) further extends into the coupling space (24), perpendicularly to the face of the front wall (21) facing the coupling space (24).

4. A bracket (20) according to any of the claims 2-3 wherein one of the side holders (27) further extends into the coupling space (24), along the face of the front wall (21) facing the coupling space (24).

5. A bracket (20) according to any of the preceding claims wherein it further comprises a securing tab (28) protruding perpendicularly from a lower side of the rear wall (22) and oppositely to the open space, the lower side being provided in the rear wall (22) oppositely to a top side of the rear wall (22) from which the top wall (23) extends.

6. A bracket (20) according to any of the preceding claims wherein it is a single piece.

7. A bracket (20) according to the previous claim wherein it is made of a resilient material, such that when the container cassette cover holder (13) is slidably provided through a side of the coupling space (24) and into the coupling space (24), the bracket (20) is slightly deformed.

8. A bracket (20) according to the previous claim wherein the resilient material is of a thermoplastic polymer containing carbonate groups, particularly polycarbonate.

9. A bracket (20) according to any of the preceding claims wherein the front wall (21) has the same height as the rear wall (22).

10. A bracket (20) according to any of the claims 1-6 wherein the front wall (21) as a higher height than the height of the rear wall (22), such that the front wall (21) extends beyond a lower side of the rear wall (22), the lower side being provided in the rear wall (22) oppositely to a top side of the rear wall (22) from which the top wall (23) extends.

11. A bracket (20) according to any of the preceding claims wherein the rear wall (22) comprises n to m protrusions (26) and $n + 1$ to $m + 1$ slots (25), n and m consisting of integers equal or higher than 1, preferably the rear wall (22) comprising 3 protrusions (26) and 4 slots (25), 4 protrusions (26) and 5 slots (25), 5 protrusions (26) and 6 slots (25), 6 protrusions (26) and 7 slots (25), 6 protrusions (26) and 7 slots (25) or 7 protrusions (26) and 8 slots (25).

12. A bracket kit comprising two brackets (20) according to any of the preceding claims.

13. A container cassette kit (10) comprising a container cassette, values neutralizations means and a bracket kit according to the previous claim, e.g., the values consisting of banknotes, wherein the container cassette contains a space for the provision of values (11), e.g., banknotes, and a cover (12), wherein the cover (12) comprises two cover holders (13) provided centrally close to a side of the cover (12), the cover holders (13) protruding perpendicularly from the cover (12) into the space for the provision of values (11), when the cover (12) is closed on top of the said space, wherein the cover holders (13) define several possible levels formed by cover (12) protrusions and slots,
and wherein the neutralization means (14) are pro-

vided on an inner face of the cover (12) and therein fixed by means of the brackets (20) of the bracket kit, each of the brackets (20) of the bracket kit being slidably coupled to a corresponding cover holder, the slots (25) and protrusions (26) of each bracket (20) correspondingly coupling to the protrusions and slots of the corresponding cover holder (13).

14. Use of the bracket (20) of any of the claims 1-11 for fixing values neutralization means (14) to cover holder (13) a container cassette,

wherein the container cassette contains a space for the provision of values (11), e.g., banknotes, and a cover (12), wherein the cover (12) comprises two cover holders (13) provided centrally close to a side of the cover (12), the cover holders (13) protruding perpendicularly from the cover (12) into the space for the provision of values (11), when the cover (12) is closed on top of the said space, wherein the cover holders (13) define several possible levels formed by cover (12) protrusions and slots,
and wherein the neutralization means (14) are provided on an inner face of the cover (12) and therein fixed by means of the bracket, the bracket (20) being slidably coupled to a corresponding cover holder, the slots (25) and protrusions (26) of the bracket (20) correspondingly coupling to the protrusions and slots of the corresponding cover holder (13).

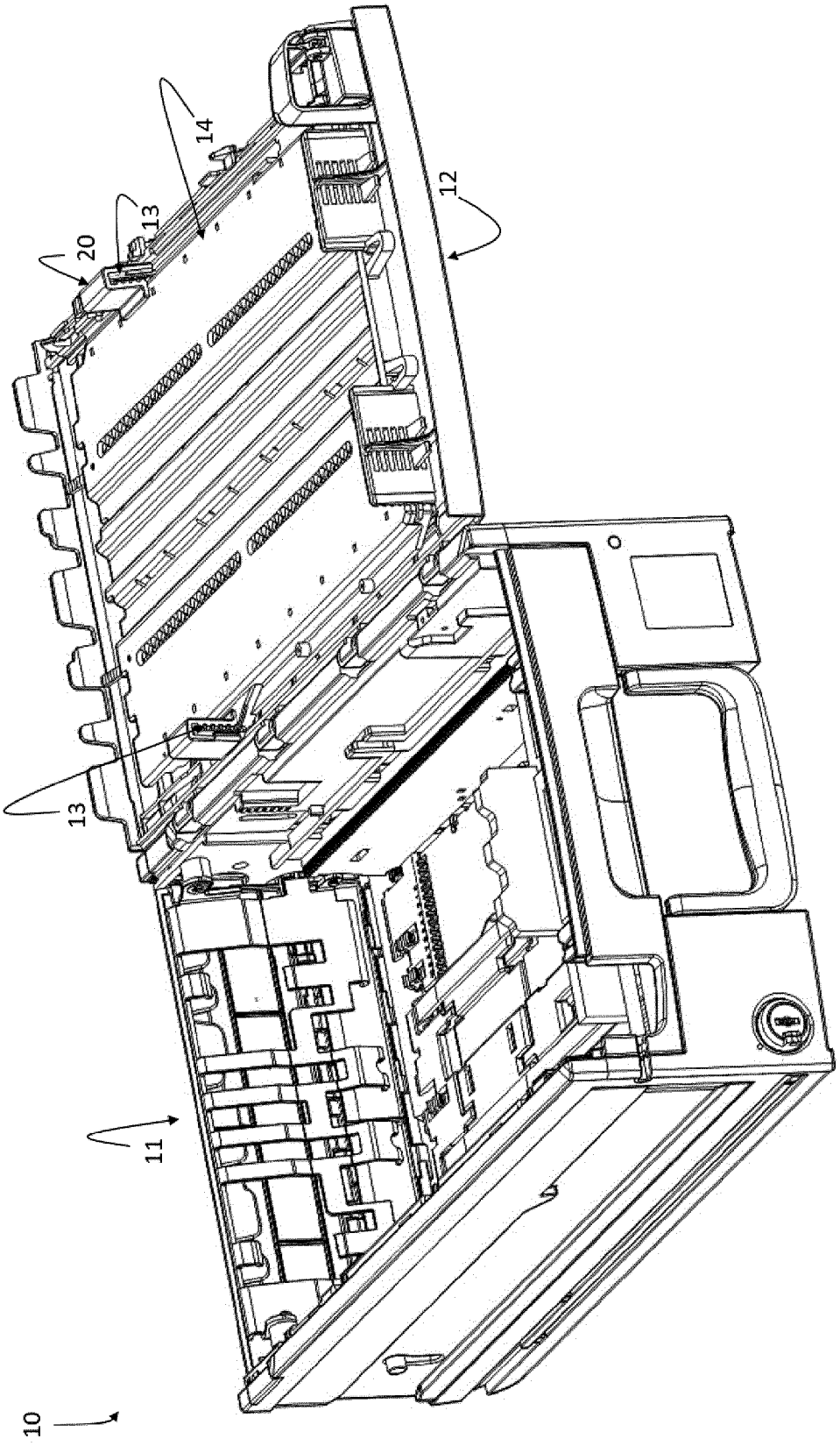

Figure 1

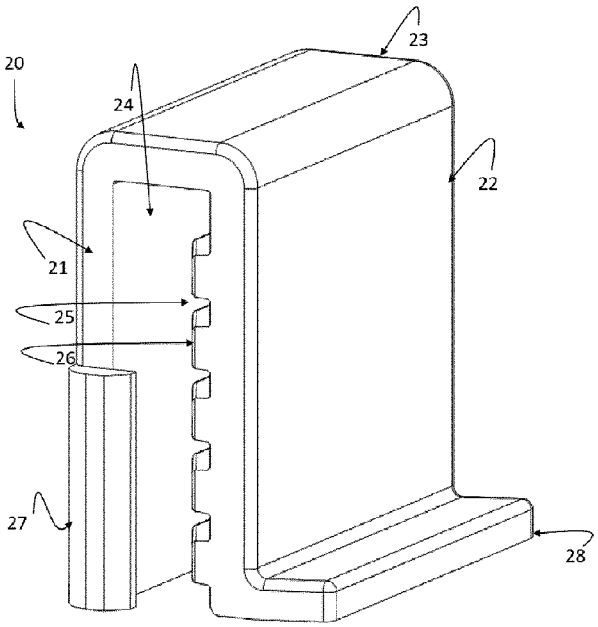

Figure 2a

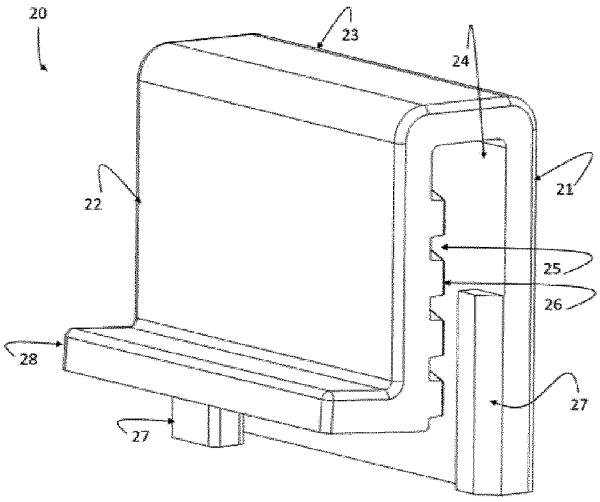

Figure 2b

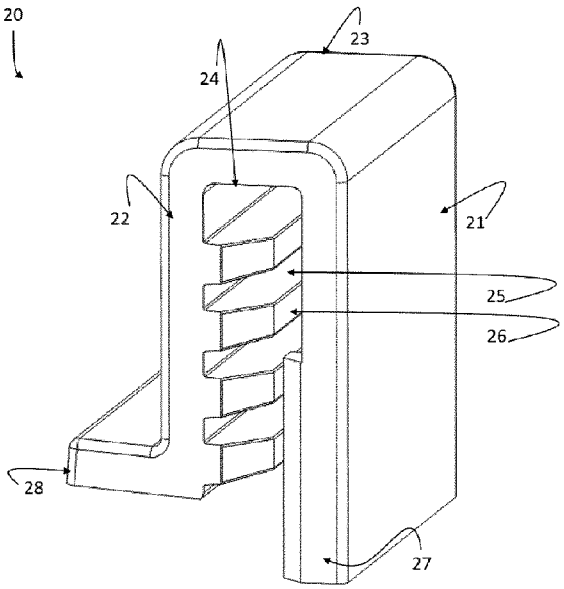

Figure 2c

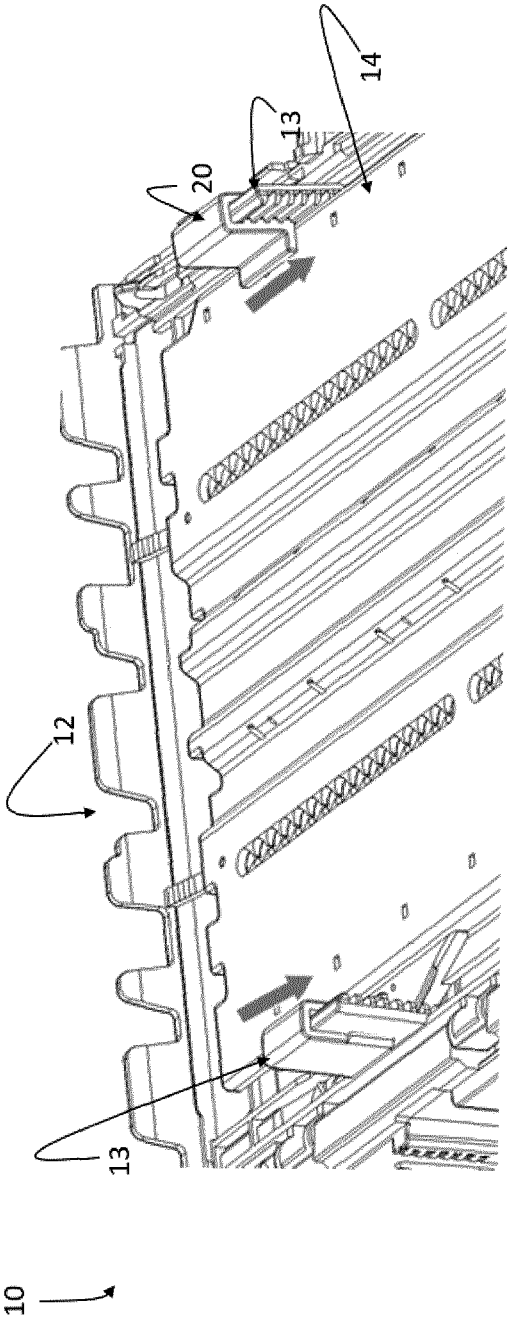

Figure 3

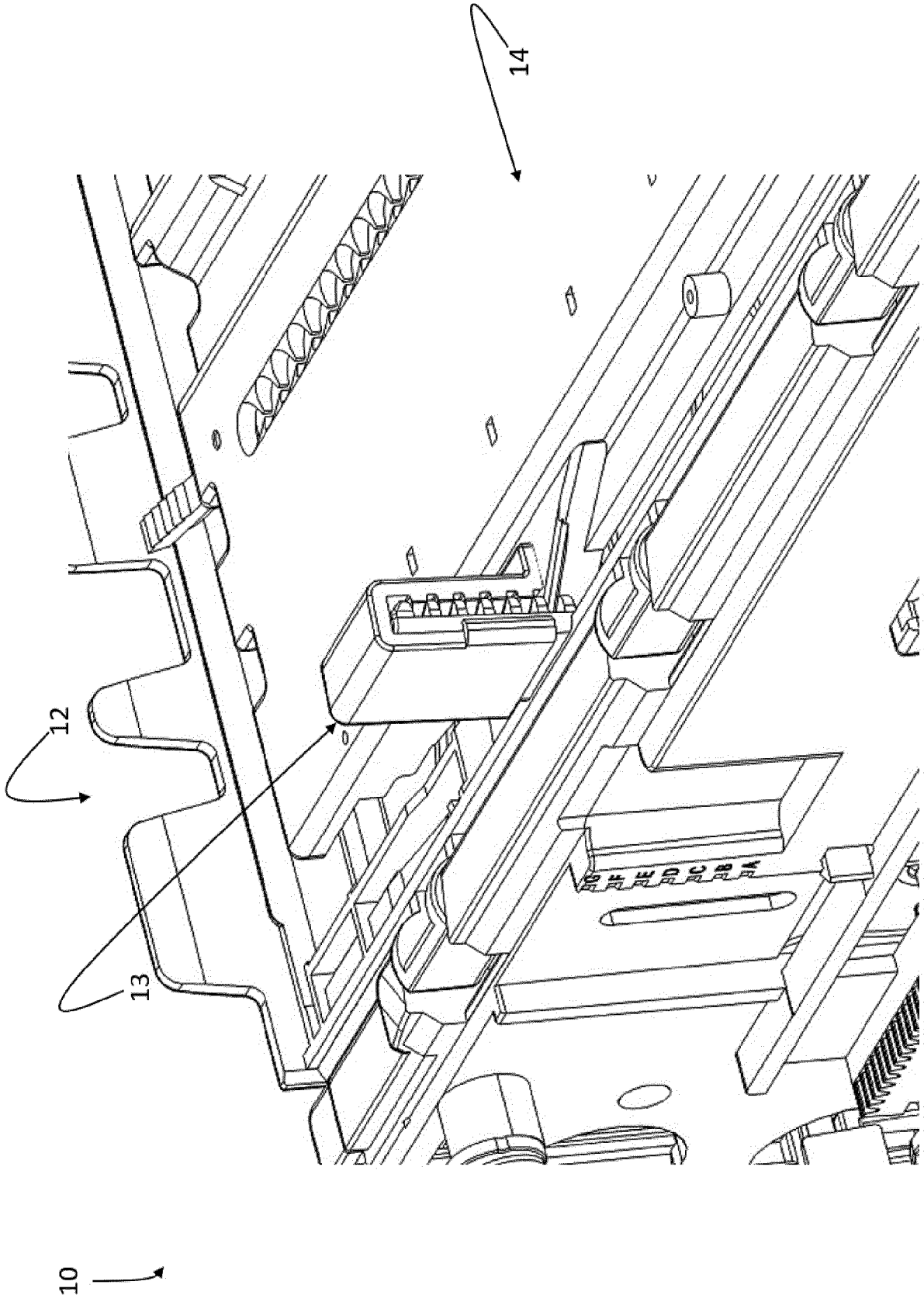

Figure 4a

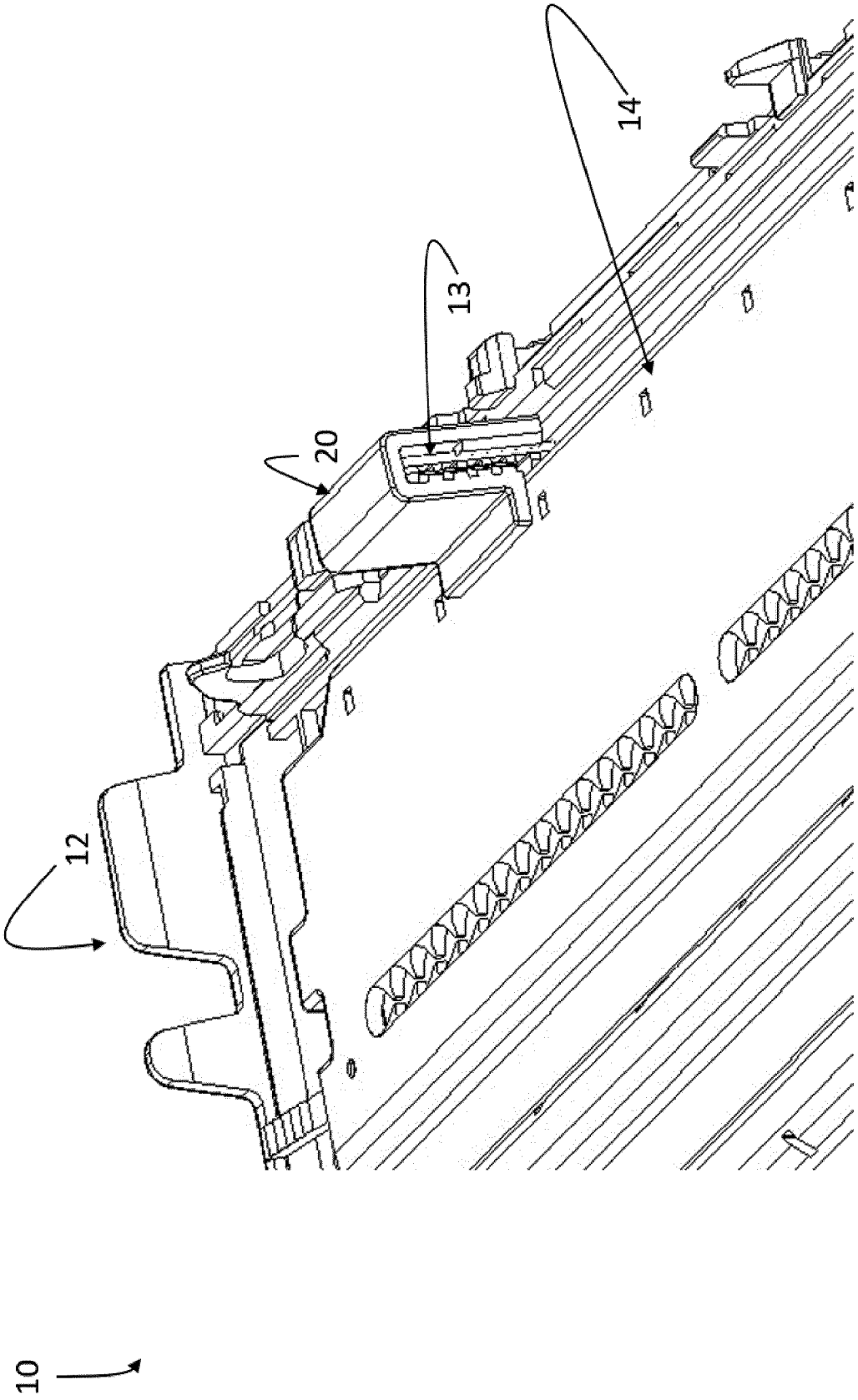

Figure 4b

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EUROPEAN SEARCH REPORT

Application Number
EP 23 20 4749

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
X	CN 208 796 342 U (SHENZHEN YIHUA COMPUTER CO LTD ET AL.) 26 April 2019 (2019-04-26)	1-13	INV. G07D11/125
Y	* figures 2, 3, 4 *	14	
Y	EP 3 543 969 A1 (TMD SECURITY NETHERLANDS B V [NL]) 25 September 2019 (2019-09-25)	14	
A	* figures 7, 8 *	1-13	

TECHNICAL FIELDS SEARCHED (IPC)

G07D

The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
The Hague	3 May 2024	Schikhof, Arnout

CATEGORY OF CITED DOCUMENTS

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