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(54) Modular cash drawer insert

(57) An insert (7) for a modular cash drawer which includes a lid (10) which is hinged to the base 8 of the insert. The base (8) of the insert includes compartments (9) for receiving coins. Note storage means in the form of pouches or pockets (11) formed by note partition members (33, 34, 35) are mounted above the base of the insert. Vertical dividers (40) divide the pouches formed by the partition members into two or more compartments.

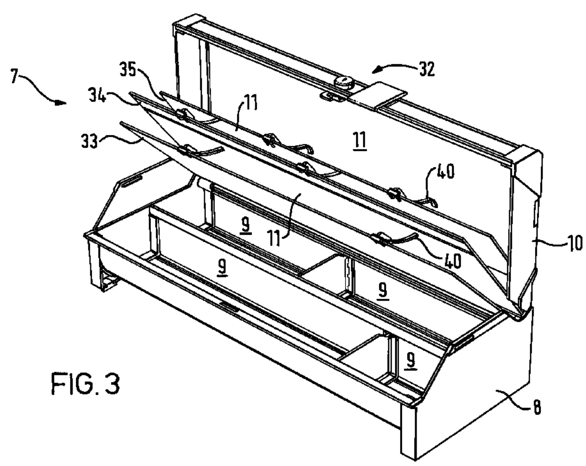

FIG. 3

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Description

[0001] The present invention relates to an insert for a modular cash drawer, and to a modular cash drawer having such an insert.

[0002] Cash drawers are well-known which extend out from the base of cash registers to allow access to the money therein.

[0003] Modular cash drawers are an alternative type of cash drawer which do not extend out from a register but are fixed in position and are mounted, e.g. at a supermarket checkout, at a position that may be to one side of a cash register. The drawer may be electrically connected to the register by suitable wiring. The present invention relates to such modular cash drawers.

[0004] Typically, a modular cash drawer may comprise an elongate lidded metal box in the base of which is mounted, as an insert, an open tray having compartments for holding coins and notes. The tray, for example, may have elongate compartments on one side in which notes are placed side by side on their long edges, and may have a number of coin compartments on the other side.

[0005] This storage arrangement is somewhat unsatisfactory as the capacity for notes is limited and the compartments can quickly overfill. Furthermore, it can be difficult to accommodate differently sized notes.

[0006] In a variation on this design, only a limited number of notes are kept in the compartments, and excess notes are pushed into a slot under the coin area of the tray. This arrangement however makes the retrieving of the notes rather awkward.

[0007] The present invention has as an object the provision of an improved capacity insert for a modular cash drawer and a cash drawer having such an insert.

[0008] Viewed from one aspect, the present invention provides an insert for a modular cash drawer comprising a base in which are compartments for holding coins, and storage means for notes mounted above the base.

[0009] The invention also extends to a modular cash drawer comprising an outer casing and an insert for holding coins and notes, the insert comprising a base in which are compartments for holding coins and storage means for notes mounted above the base.

[0010] In the present invention note storage means are mounted above the base (i.e. coin compartment) of a modular cash drawer insert. This provides increased capacity for storing the notes, and allows the notes to be stored and removed with ease. Furthermore, the coin storage area is also able to be increased.

[0011] The insert of the present invention may be sized so as to fit into existing cash drawers and to replace current coin/note trays. It is preferably removable from the cash drawer. This arrangement allows the cash to be easily removed from a register by removing the whole insert, and also allows for the replacement of the insert by a new insert, e.g. of different design. The insert preferably therefore includes a lid or cover, which most preferably can be locked to the base of the insert when closed, as this provides increased security when the insert is out of the cash drawer.

[0012] The note storage means can be mounted above the base of the insert as desired. It is preferably mounted in the lid or cover of the insert, if provided, as this is a particularly convenient way of mounting the note storage means.

[0013] Thus viewed from a third aspect, the present invention provides an insert for a modular cash drawer comprising a base in which are compartments for holding coins, and a cover/lid in which is mounted storage means for notes.

[0014] Viewed from a fourth aspect, the invention also extends to a modular cash drawer comprising an outer casing and an insert for holding coins and notes, the insert comprising a base in which are compartments for holding coins, and a cover/lid in which is mounted storage means for notes.

[0015] In this arrangement, part of the note storage means may also be mounted in or suspended from other parts of the insert such as its base. For example, the note storage means could be mounted in or suspended from both the lid or cover, and the rear wall of the base of the insert. In a further arrangement, the note storage means may be entirely mounted in the base of the insert.

[0016] The note storage means can take any suitable form, and preferably comprises one or more pouches/pockets into which the notes may be inserted, e.g. end-on.

[0017] These pouches/pockets may be formed in any suitable manner. For example, they may be formed from one or more pieces of, e.g. flexible, sheet material which are connected to the insert (e.g. its lid or the base of the insert) at their bottom and, if desired, side, edges, and receive notes via their open top edge. The pouches are preferably transparent, as this allows easier identification of the notes therein.

[0018] Preferably, the pouches are made from one or more partition members. These may be planar elongate elements, extending preferably the full width of the insert, and may be suitably stiff/rigid. They are preferably hinged to the lid or the rear wall of the base of the insert along their bottom edges, and can also be connected to the insert lid and/or to one another by flexible connectors at e.g. their opposed side ends.

[0019] By hinging the partition members, the pouches can be easily moved closer or further apart to access the notes therein, up to of course the maximum extent of the capacity of the pouches. They are also able to lay flat against one another to a greater or lesser extent depending on how full they are, thereby providing a compact arrangement when the cash drawer is closed and allowing one pouch to be filled preferentially at the expense of the capacity of one or more of the others.

[0020] The bottom hinge of the pouch partition elements may be a flexible hinge to facilitate the expansion of the pouches as necessary. The flexible hinge could take the form of a canvas strip to which each of the partition elements is attached.

[0021] The side connections, if used, could comprise one or more ribbon elements. One ribbon could connect all of the partition members together. Alternatively, a separate ribbon element may be provided between each pair of partition members and between the final ribbon member and the insert lid. The partition members may have slots or openings along their side edges for the ribbons, or possibly other connections, to tie to.

[0022] The pouch or pouches may also have vertical dividers to divide each pouch into two or more compartments. These dividers may e.g. be in the form of flexible material side elements or clip-on elements which clip onto the partition members of the pouch and may be removed and/or moved along the partition members to alter the size of the pouch compartments.

[0023] In a particularly preferred embodiment, at least part of the note storage means (e.g. most preferably the bottom pouch or partition member) is resiliently biased towards its open, in use position, i.e. away from the lid of insert and towards the base of the insert. The other note partition members as well as the bottom one can be resiliently biassed towards their in use position if desired. Alternatively, they can be allowed to fall open under their own weight when the insert is open.

[0024] This arrangement ensures that the note storage means is open for use whenever the insert is opened. It also means that the note pouches remain in position as the lid of the insert is closed until the lid reaches their position. This helps to avoid the note pouches potentially closing or moving before the lid covers them as the insert is closed (which could cause the notes to fall out). Thus this arrangement has enhanced security and ease of use.

[0025] The resilient biassing of the note storage means and the note partition members can be achieved as desired, e.g. by means of appropriately arranged springs.

[0026] In a particularly preferred embodiment, the lid of the insert is arranged such that it will open automatically as the lid of the cash drawer opens.

[0027] The lid of the insert may be attached to the lid of the cash drawer to achieve this. Although the attachment could be permanent, e.g. by the use of adhesive, because it is preferred for the insert to be removable from the cash drawer, the attachment of the insert lid to the cash drawer lid is preferably detachable. The attachment may be by e.g. magnets on the insert which engage with a metal lid of the cash drawer, or may be in the form of Velcro™ portions on both the inner surface of the cash drawer and on the outer surface of the insert. It may also take the form of hook and latch means.

[0028] In a particularly preferred embodiment the lid of the insert is instead resiliently biassed towards its open position, as this is a particularly convenient way of having the insert lid open automatically when the cash drawer opens. Springs can conveniently be used to achieve this.

[0029] Where the insert lid is resiliently biassed open, the insert preferably includes manually operable latches for retaining it closed against the resilient bias when it is outside the cash drawer. The latches may be lockable, or another lock may be provided, if desired.

[0030] A particularly advantageous result of mounting the notes storage means above the base of the insert and in particular in or partially in the lid of the insert is that the lid can close over the base to close the insert and prevent loss of or access to the money when the insert is out of the cash drawer.

[0031] The insert may therefore also include lock means to lock the insert lid closed. These may take the form of e.g. a key lock that has a latch element.

[0032] The insert lid and base may be connected together by a flexible hinge, such as a canvas strip. This can then also mount the pouch elements discussed above. The flexible hinge is able to compensate for differences in thickness of the note storage means depending on how full they are. The fabric may be connected to the base, lid and pouch members by e.g. rivets and/or clamping bars. Alternatively, the lid and base may be connected by a fixed hinge.

[0033] The insert lid preferably has flanged sides which overlap the sides of the insert base when the lid is in the closed position. This helps to secure the contents of the insert when closed. The use of both a flexible hinge and overlapping sides can also ensure that the insert can accommodate different fill levels of the note pouches when closed.

[0034] The cash drawer and insert may be made of any suitable materials. The drawer casing itself may be metal, and the insert may be of metal and/or plastics construction. The insert base may, for example, be formed from extruded plastics, e.g. ABS plastic, or may be injection moulded. It may comprise a base portion in the form of one or more parallel channels having dividers and end portions, e.g. of plastic, positioned, e.g. by adhesive, at suitable locations along the channel lengths so as to define suitably sized compartments. The partition members may comprise rigid, preferably transparent, plastics members, e.g. having slots in their ends for e.g. the ribbon connections to tie to.

[0035] Viewed from a further aspect, the invention provides a modular cash drawer comprising an outer casing in which is a removable insert for storing coins and notes, the insert comprising a coin tray and a lid-mounted note storage portion having at least one pocket therein for holding notes, coupons and the like.

[0036] Viewed from a still further aspect, the present invention provides an insert for a modular cash drawer comprising a base portion for storing coins and a lid portion for storing notes.

[0037] Although the present invention is particularly applicable to inserts for modular cash drawers, the principle of providing note storage means mounted above coin compartments can also be used in cash drawers generally. Thus according to a yet further aspect of the present invention, there is provided a cash drawer comprising a base in which are compartments for holding coins, and storage means for notes mounted above the base.

[0038] According to another aspect of the present invention, there is provided a cash drawer comprising a base in which are compartments for holding coins, and a cover/lid in which is mounted storage means for notes.

[0039] A number of preferred embodiments of the present invention will now be described, by way of example only, and with reference to the accompanying drawings, in which:

Figure 1 is a perspective view of a first embodiment of a modular cash drawer in accordance with the present invention;
Figure 2 is a detail of the insert of the drawer shown in figure 1;
Figure 3 is a perspective view of a second embodiment of a modular cash drawer insert in accordance with the present invention;
Figure 4 is a schematic side cross sectional view of the insert of figure 3; and
Figure 5 is a further perspective view of the insert of figure 3.

[0040] Like reference numerals are used for like features throughout the drawings.

[0041] Referring to Figs. 1 and 2, a first embodiment of a modular cash drawer 1 comprises an outer metal casing having a base 3 and a lid 4 which are hinged together and may be locked by suitable locking means, e.g. a key lock 5 actuating latches 6. The cash drawer 1 also comprises a removable insert 7 for defining compartments for holding coins, notes, coupons, etc.

[0042] The cash drawer 1 in use may be connected electrically to a cash register, e.g. at a supermarket check-out, and is generally mounted in or on a retail or banking cash pay point.

[0043] The insert 7 comprises a base portion 8 in which are a number of compartments 9 of the same or, if desired, of differing size for holding coins of various denominations. It further comprises a lid portion 10 with a number of pouches/pockets 11 for holding notes, coupons and other such paper matter. In the present case, three pouches are shown.

[0044] The insert lid portion 10 is connected to the cash drawer lid 4 so that when the lid 4 rises, the insert lid portion 10 also rises. This attachment may be a manually removable attachment. For example, the attachment may be by Velcro™ strips on both the inner surface of the lid 4 and the outer surface of the lid portion 10, or by magnets on the outer surface of the insert lid portion 10 for attaching to the metal drawer lid 4, or by hook and latch means on the two lids.

[0045] The pouches 11 are defined by three suitably rigid front partition members 12 connected to the lid portion 10 along their lower edges by flexible hinges 13. In this case, the hinges 13 comprise a strip of fabric, e.g. canvas, having folds therein for allowing for expansion of the distance between the partition members 12.

[0046] The partition members 12 are also connected at their side edges to the lid portion 10 by a ribbon 14 at each end. In an alternative embodiment, there are separate ribbons connecting each of the rigid members 12 one to the other. The ribbons 14 allow the pouches to be easily moved closer or further apart to access the notes therein and to allow one pouch to be filled and expand in preference to another, up to of course the maximum extent of the capacity of the pouches.

[0047] The foremost of the members 12 may be of less height than the one behind so as to allow for greater access to the notes. The so-defined front pouch may be used for smaller notes or coupons, etc.

[0048] In the embodiment shown, the lid portion 10 is also connected to the base portion 8 by a flexible hinge which in this case comprises the same canvas strip as that used to form the partition hinges 13. Alternatively, however, a fixed hinge could be used.

[0049] The lid portion 10 has flanged edges 15 which overlap the sides of the base portion 8. When a flexible lid/base hinge is used which allows for expansion of the hinge, this expansion together with the overlapping flange edges 15 helps to accommodate different fill amounts of the pouches, whilst ensuring that the lid portion 10 closes over the base portion 9 without a gap.

[0050] The insert 7 may be provided with a lock (not shown) for locking the base and lid together when it is out of the cash drawer.

[0051] The rigid members 12 have openings 16 to facilitate removal of the notes, etc., from the pouches, and also to ensure their visibility.

[0052] The insert base portion 8 may be formed from extruded plastics, e.g. ABS plastic, or may be injection moulded. It may be formed from a base portion of two parallel channels 17 having plastic dividers 18 and end portions 19 glued at suitable positions along the channel lengths to define the compartments.

[0053] The flexible hinges 13, which are e.g. formed of canvas, may be rivetted and/or clamped to the base 8, lid 10 and partition members 12. The partition members 12 may be formed of rigid plastics material and may have slots at their ends for the ribbons 14 to tie to.

[0054] The pouches 11 could also be formed in any other suitable manner, e.g. from flexible sheet material connected to the lid at side and bottom edge portions and leaving the top edge open for receiving the notes. The pouches may also include vertical dividers to allow each pouch to have two or more compartments. These may e.g. take the form of flexible, e.g. folded canvas, strips and/or other dividing elements which e.g. may clip onto the partition members 12 and may be placed in desired positions and moved along the partitions.

[0055] Figures 3, 4 and 5 show a second embodiment of a modular cash drawer insert in accordance with the present invention.

[0056] In this embodiment the insert 7 includes a lid 10 which is hinged to the base 8 of the insert at a fixed ball and socket hinges 30. The hinges 30 further include appropriately arranged helical springs which resiliently bias the lid 10 of the insert towards its open position. This ensures that the insert lid will tend to open automatically whenever the cash drawer containing it opens. Sliding latches 31 (Figure 5) may be provided on the insert to hold the insert closed against its tendency to open, if desired, so that it may be held closed when outside the case drawer. These latches may be lockable or a further lockable latch 32 can also be provided on the insert, if desired.

[0057] The base 8 of the insert includes, as in the preceding embodiment, compartments 9 for receiving coins.

[0058] In this embodiment note storage pouches or pockets are provided by means of note partition members 33, 34, 35 (which correspond to partition members 12 in the preceding embodiment),which are preferably made from a transparent plastics material. In this embodiment the lower two note partition elements 33, 34 are mounted by means of ball and socket hinges 36, 37, respectively to the rear wall 38 of the base 8 of the insert, and the uppermost note partition member 35 is mounted to the lid 10 of the insert by means of a ball and socket hinge 39.

[0059] The lowermost note partition member 33 is resiliently biassed towards its open position (i.e. away from the lid 10 of the insert and towards the base 8 of the insert), by a suitable spring arrangement in its ball and socket hinge 36. This helps to ensure that this note storage partition member moves into an open position ready for use whenever the insert lid is raised. Resiliently biassing the lowermost note partition member 33 towards its open position also helps to ensure that closing the insert does not disturb the notes in the note storage means, because the resilient bias will tend to cause the note partition members to remain in position until they are swept up by the closing lid, at which point the lid will cover the note partition members and prevent any notes, etc. therein from falling out.

[0060] The other note partition members 34, 35 may also be resiliently biassed towards their open positions, but this is not necessary and in the present embodiment they are not so biassed, but will tend to fall to their open, in use, positions against the lowermost insert 33 under their own weight when the insert opens.

[0061] The note partition members 33, 34, 35 are also provided with vertical dividers 40 to divide the pouches formed by the partition members into two or more compartments. The vertical dividers 40 are made of a plastics material and can be clipped to the partition members 33, 35, 35 as desired. As can be seen, the dividers 40 extend through holes in the next upper partition member. This helps to maintain the partition members as a cohesive unit, but is not necessary.

[0062] Figure 5 shows the insert of figures 3 and 4 in its closed position. It can be seen that the insert provides in itself, a self contained and secure unit.

[0063] It can be seen from the above that in the present invention the note pouches can be easily arranged to store a number of differently sized notes, and the cash drawer insert of the present invention will thus be particularly useful when different currencies and size of notes must be stored, e.g. when the European single currency is introduced. Furthermore, the pouches may easily hold e.g. coupons or cheques, etc. The inserts may be sold separately by themselves for e.g. retrofitting into existing cash drawers.

Claims

1. An insert (7) for a modular cash drawer (1) comprising a base (8) in which are compartments (9) for holding coins, and storage means (11) for notes mounted above the base.

2. The insert of claim 1, further comprising a lid (10).

3. The insert of claim 1 or 2, wherein the note storage means is entirely mounted in the base of the insert.

4. The insert of claim 2, wherein the note storage means is mounted in the lid of the insert.

5. An insert for a modular cash drawer comprising a base (8) in which are compartments (9) for holding coins, and a cover/lid (10) in which is mounted storage means (11) for notes.

6. An insert for a modular cash drawer comprising a base portion (8) for storing coins and a lid portion (10) for storing notes.

7. The insert of claim 4, 5, or 6, wherein part of the note storage means is mounted in the base of the insert.

8. The insert of claim 7, wherein the note storage means (11) is suspended from both the lid and the rear wall (38) of the base of the insert.

9. The insert of any one of the preceding claims, wherein the note storage means comprises one or more pouches into which notes may be inserted.

10. The insert of claim 9, wherein the pouches comprise one or more planar elongate partition members (12) which extend the full width of the insert and are hinged to the lid or the rear wall of the base of the insert along their bottom edges.

11. The insert of any one of the preceding claims,

wherein part of the note storage means is resiliently biased towards its open, in use position.

12. The insert of claim 2 and any one of the preceding claims, wherein the lid of the insert is arranged such that it will open automatically as the lid of the cash drawer opens.

13. The insert of claim 12, wherein the lid of the insert is resiliently biassed towards its open position.

14. The insert of claim 2 and any one of the preceding claims, further comprising lock means (32) to lock the insert lid closed.

15. The insert of claim 2 and any one of the preceding claims, wherein the insert lid has flanged sides which overlap the sides of the insert base when the lid is in the closed position.

16. A modular cash drawer (1) comprising an outer casing and an insert (7) for holding coins and notes, the insert comprising a base (8) in which are compartments (9) for holding coins and storage means (11) for notes mounted above the base.

17. A modular cash drawer comprising an outer casing and an insert for holding coins and notes, the insert comprising a base in which are compartments for holding coins, and a cover/lid (10) in which is mounted storage means for notes.

18. A modular cash drawer comprising an outer casing in which is a removable insert for storing coins and notes, the insert comprising a coin tray and a lid-mounted note storage portion having at least one pocket therein for holding notes, coupons and the like.

19. The modular cash drawer of claim 16, 17 or 18, wherein the insert further comprises the features of any one of claims 1 to 15.

20. A cash drawer comprising a base in which are compartments for holding coins, and storage means for notes mounted above the base.

21. A cash drawer comprising a base in which are compartments for holding coins, and a cover/lid in which is mounted storage means for notes.

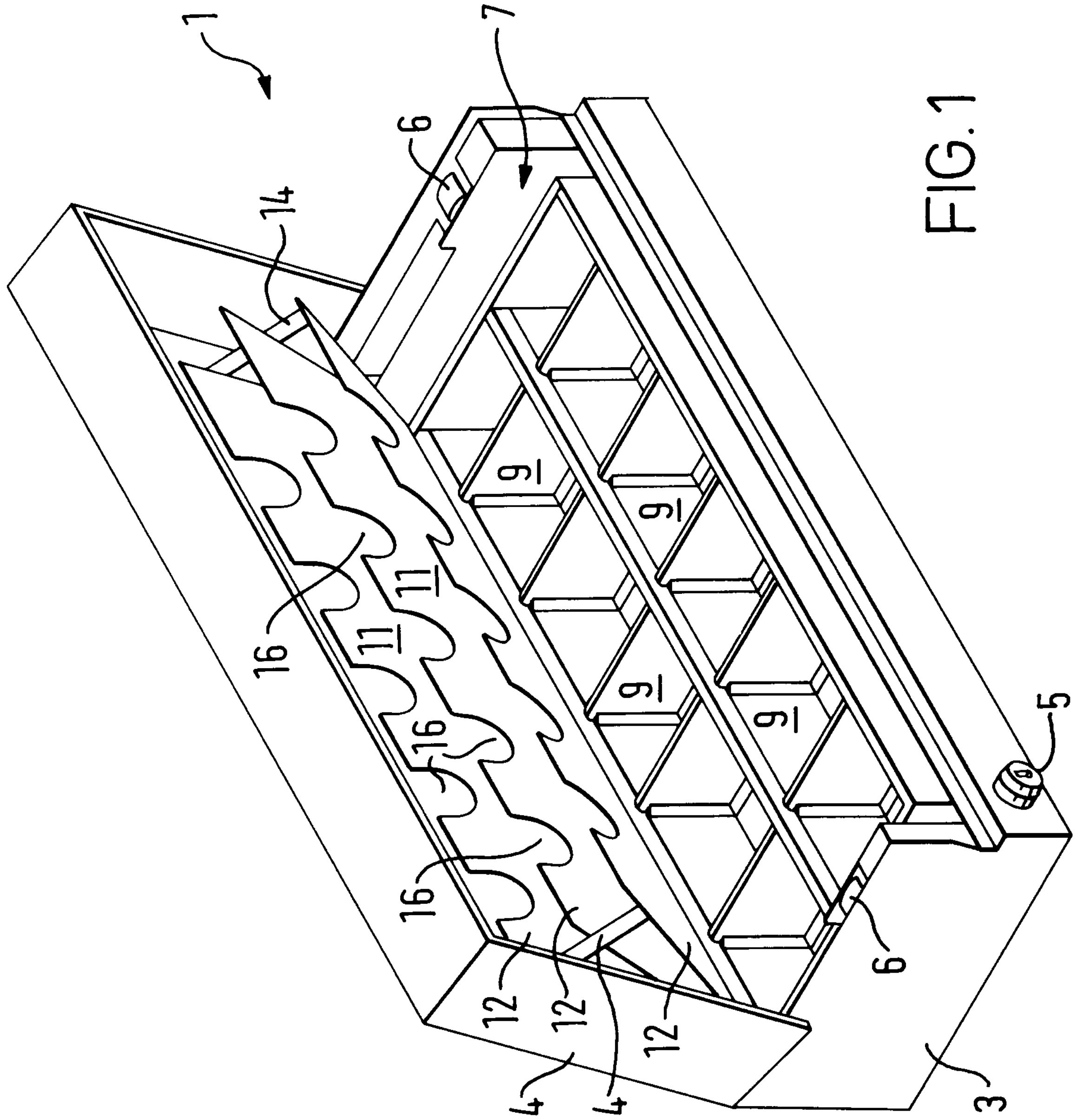


FIG. 1

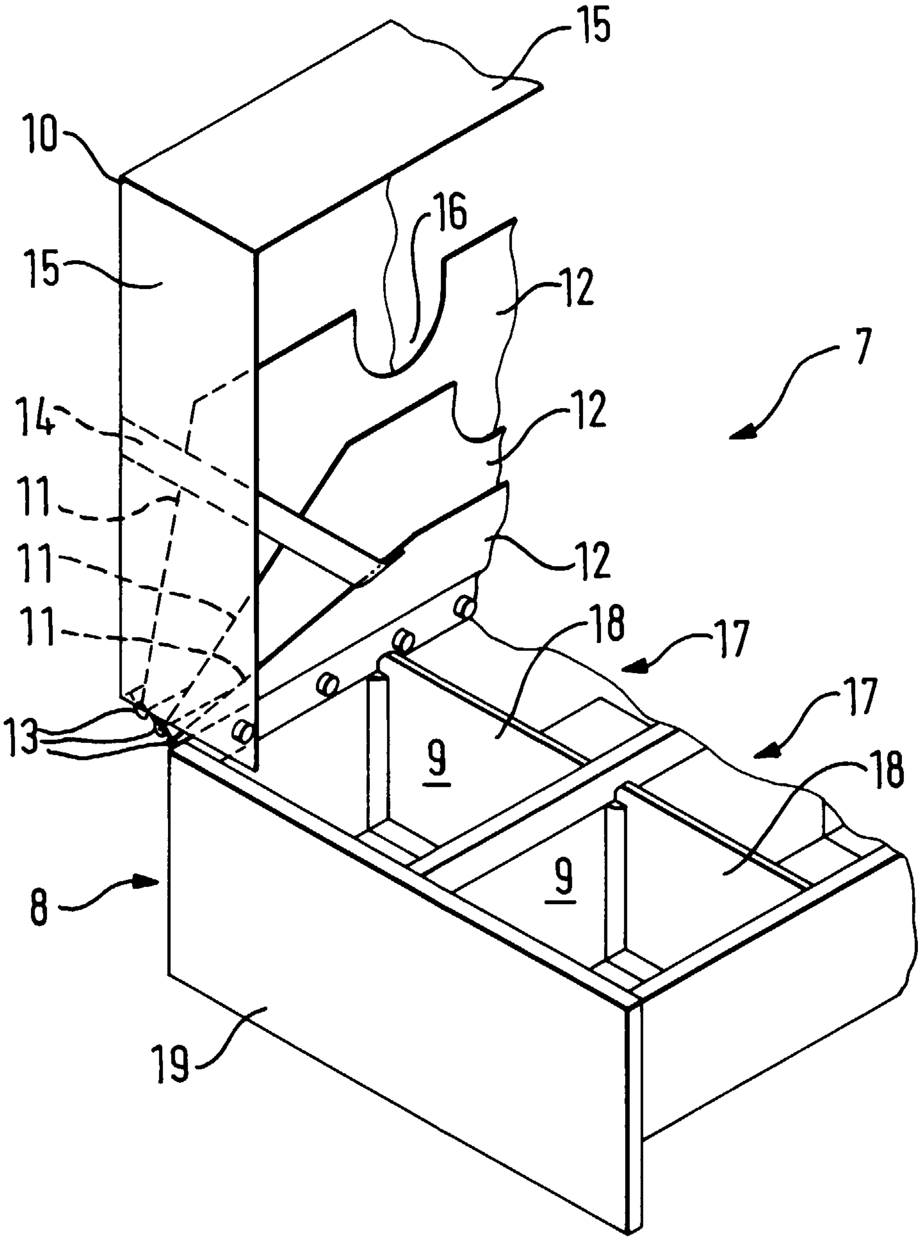


FIG. 2

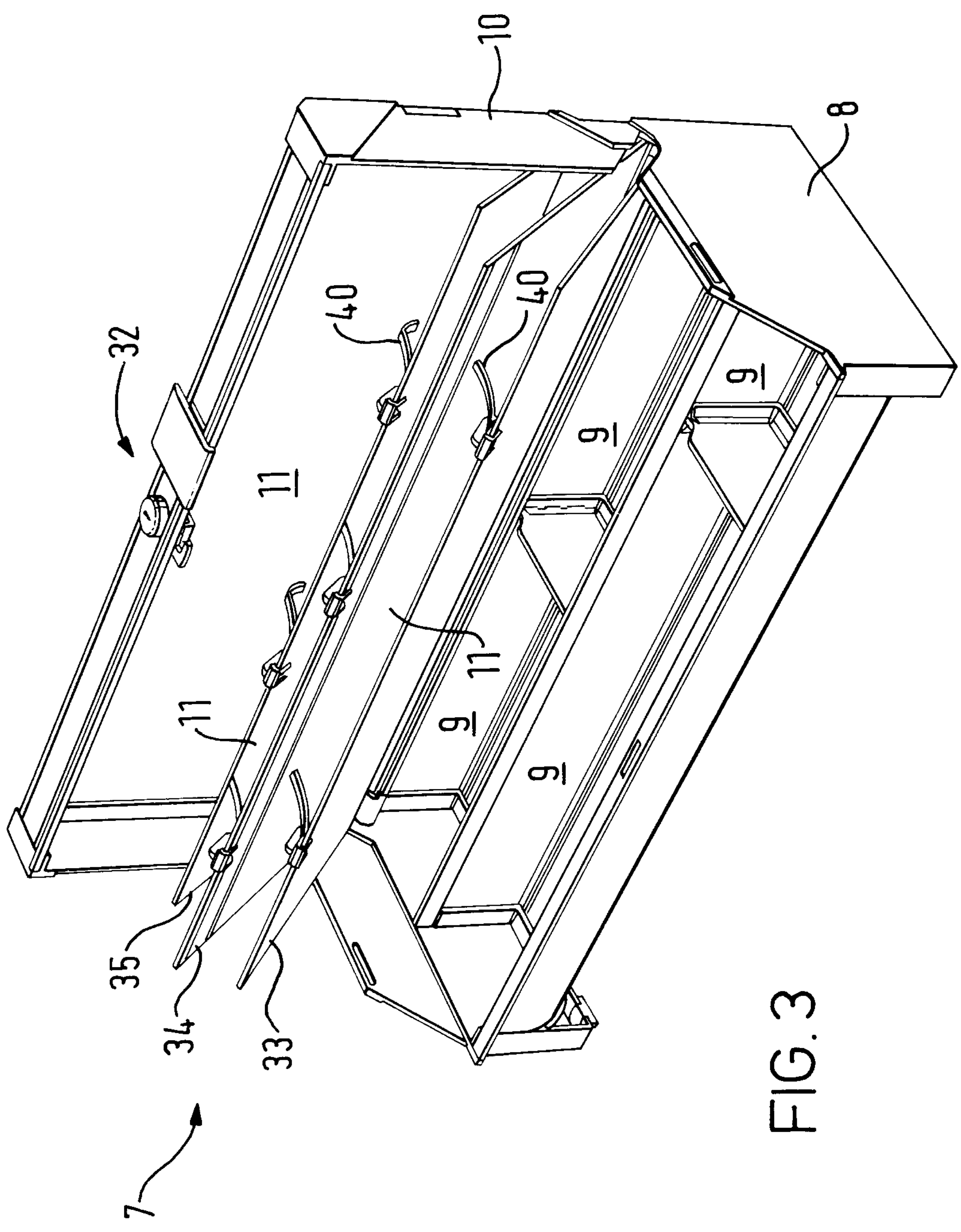
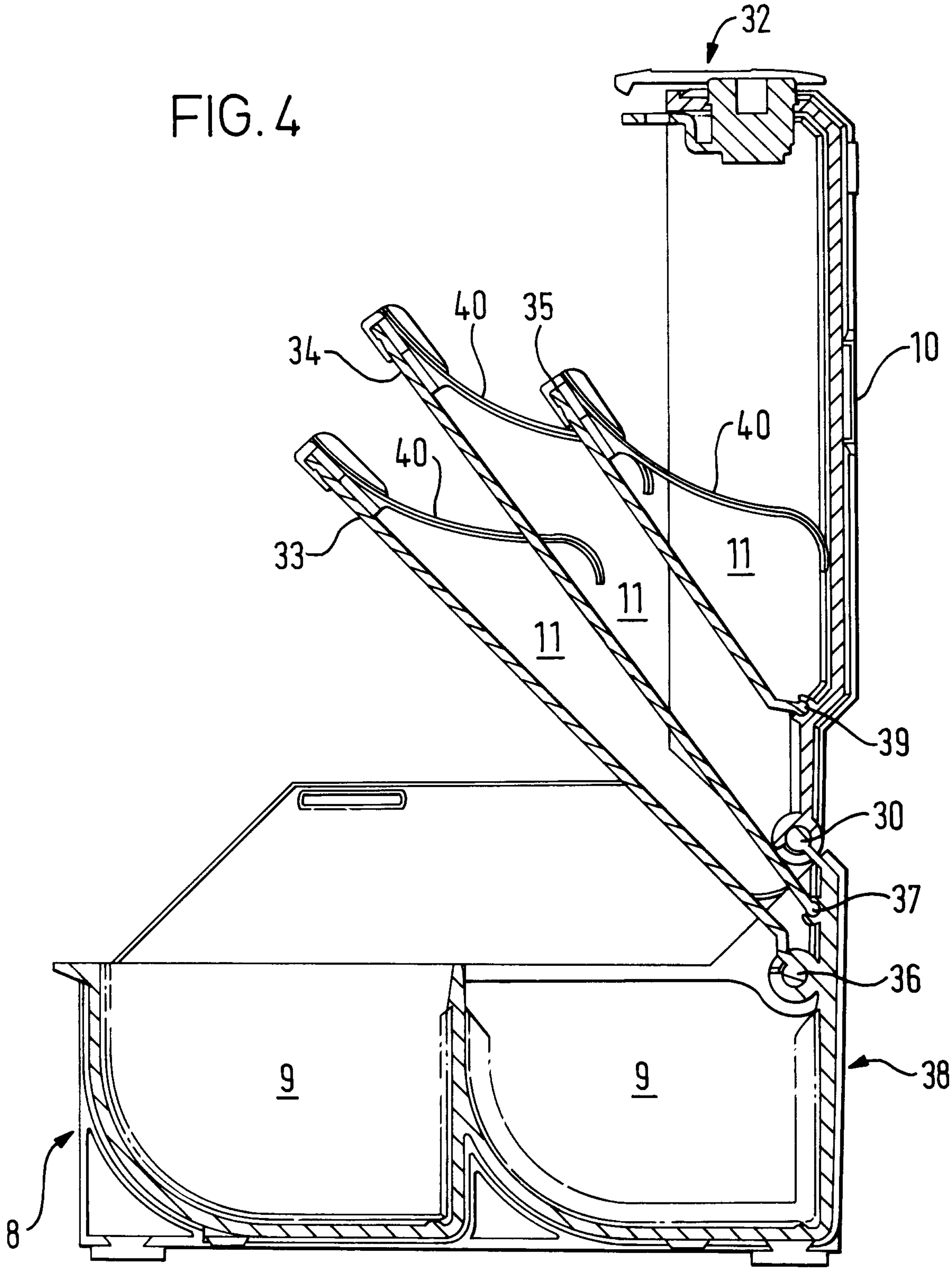


FIG. 3

FIG. 4



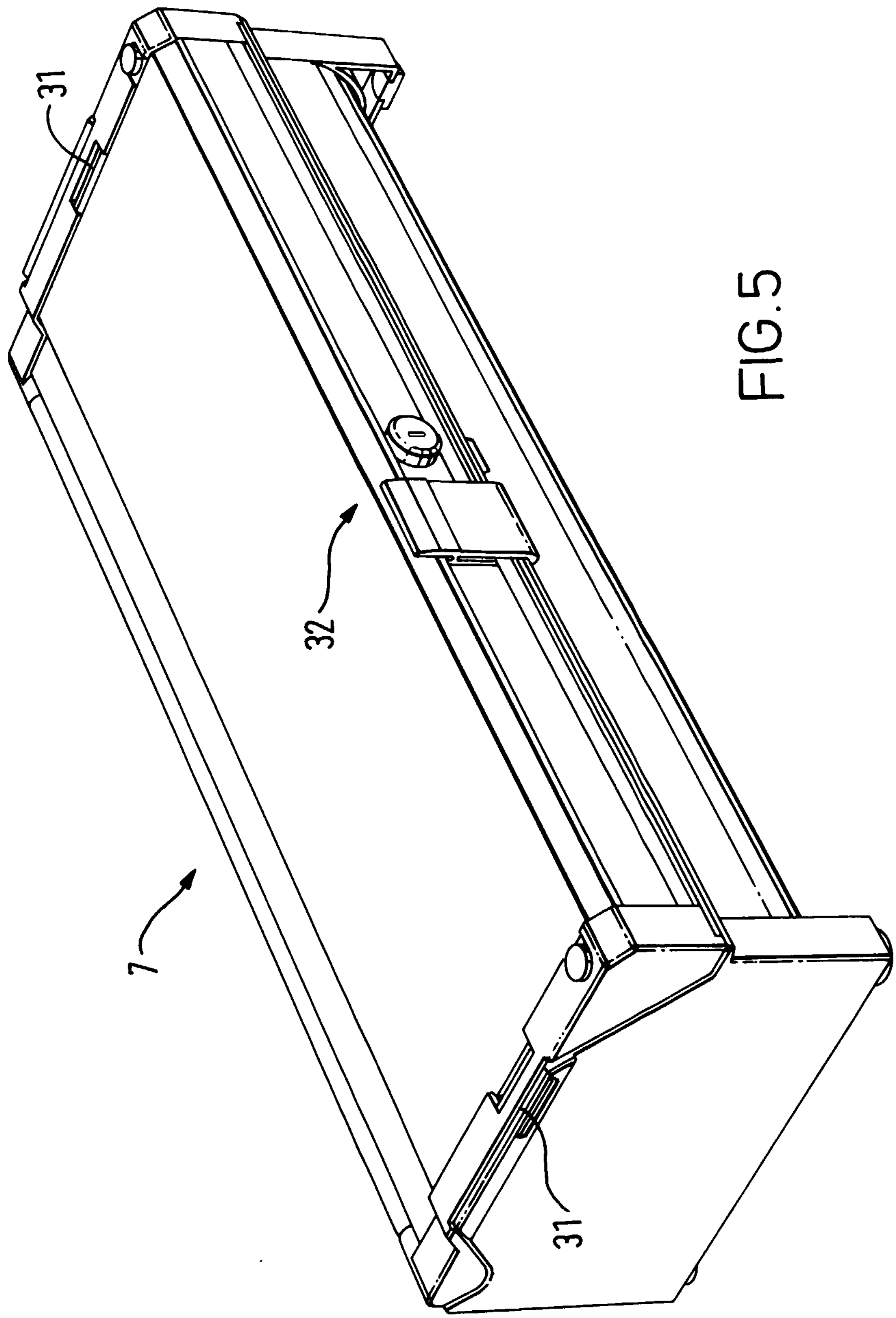


FIG.5

European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 98 31 0585

DOCUMENTS CONSIDERED TO BE RELEVANT

Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
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A	DE 11 68 135 B (KASSENFABRIK EMIL MOGLER) 16 April 1964 * figures 1-3 * ---	1,3, 16-19	
A	DE 295 19 608 U (INKIESS MARGOT VOSS GMBH) 15 February 1996 * claims; figure 1 * ---	1,3, 16-19	
A	ANONYMOUS: "Pop-Up Cash Box" IBM TECHNICAL DISCLOSURE BULLETIN, vol. 26, no. 10B, March 1984, pages 5773-5774, XP002098878 New York, US * the whole document * -----		

TECHNICAL FIELDS SEARCHED (Int.Cl.6)

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
THE HAGUE	6 April 1999	Guivol, O

CATEGORY OF CITED DOCUMENTS

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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 98 31 0585

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06-04-1999

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