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(54) **Storage device cover**

(57) A front cover (20) for a storage unit (16) is adapted, in use, to move between open and closed configurations and is biased to the closed configuration, in which closed configuration contents of the storage unit to which the front cover is adapted to be attached are not on view, wherein the front cover comprises hinging means (28) adapted to allow the front cover to pivot between the open and closed configurations and at least partially retract into the storage unit.

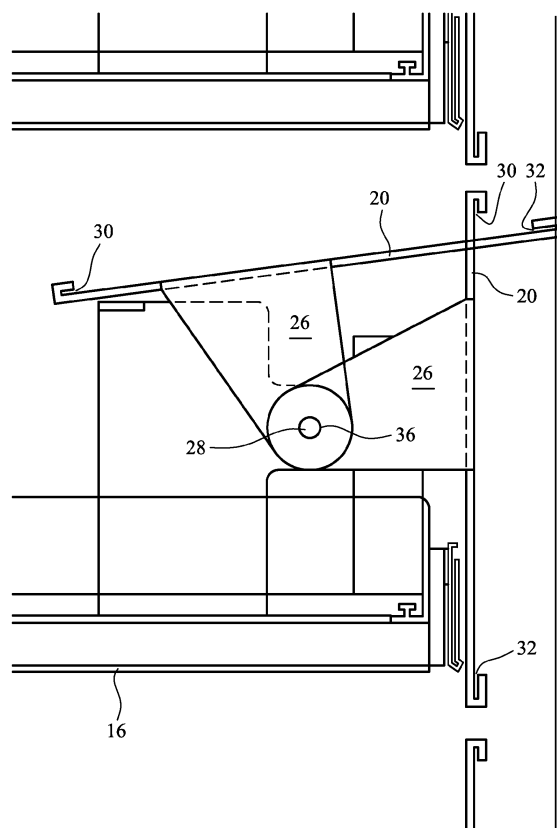


FIG. 2

Description

[0001] This invention relates to a storage device cover.

[0002] In a retail environment items for sale are frequently stacked in drawers or on shelves for purchase by customers. Some retail items are stored behind a retail counter and a customer would indicate by pointing which product he required. Sometimes it is inappropriate to leave all items for sale on show behind a checkout. In such a situation the shelves and drawers described above have the disadvantage that the products are permanently on display.

[0003] It is an object of the present invention to address the above mentioned disadvantage.

[0004] According to the present invention there is provided an apparatus and method as set forth in the appended claims. Other features of the invention will be apparent from the dependent claims, and the description which follows.

[0005] According to an aspect of the present invention there is provided a front cover for a storage unit, the front cover being adapted, in use, to move between open and closed configurations and being biased to the closed configuration, in which closed configuration contents of the storage unit to which the front cover is adapted to be attached are not on view, wherein the front cover comprises hinging means adapted to allow the front cover to pivot between the open and closed configurations and at least partially retract into the storage unit.

[0006] The hinging means may be adapted to allow the front cover to pivot upwards. The hinging means may be adapted to allow the front cover to pivot downwards.

[0007] The hinging means may include a counterweight, which is preferably adapted to bias the front cover to the closed configuration. The counterweight may include a counterweight arm, preferably extending away from a front face of the front cover, preferably towards an interior of said storage unit. The counterweight may be the counterweight arm. The counterweight may be a weight secured to the counterweight arm.

[0008] A centre of gravity of the front cover may be located rearwards of a front face of the front cover and may be rearwards of a pivot point of the front cover. Rearwards in this instance refers to a location behind a front face of the front cover towards an interior of a storage unit to which the front cover is in use to be attached.

[0009] A centre of gravity of the front cover may be located rearwards of a front face of the front cover and may be forwards of a pivot point of the front cover. Rearwards in this instance refers to a location behind a front face of the front cover towards an interior of a storage unit to which the front cover is in use to be attached.

[0010] Preferably the front cover is opaque.

[0011] Preferably the front cover is a front cover for a storage drawer, preferably a retractable storage drawer.

[0012] The front cover may be a front cover for a storage shelf.

[0013] Preferably the front cover is hinged at least one,

preferably two, side edge(s) thereof.

[0014] Preferably the front cover is hinged below a top edge thereof, preferably at least 10mm below the top edge, preferably at least 3mm below the top edge, preferably at least 5mm below the top edge, preferably at least 7mm below the top edge.

[0015] Preferably the front cover is hinged above a line running across a mid-height of the front cover when in the closed configuration.

[0016] Preferably the hinge is offset from the front cover, preferably laterally offset with respect to the front cover when the front cover is in a closed configuration.

[0017] Preferably the cover means comprises display item attachment means. Preferably the display item attachment means are adapted to secure a display item to the cover means. Preferably the display item attachment means comprise a first attachment section at an upper edge of the front cover, preferably extending along the upper edge. Preferably the display item attachment means comprise a second attachment section at a lower edge of the front cover, preferably extending along the lower edge. Preferably at least one of the first and second attachment means comprises a groove. The groove may be formed from a folded section of the front cover, preferably from a front face of the front cover.

[0018] The display item may be a picture, or a part of a picture, or may show text matter or a mixture of both.

[0019] The invention extends to a storage unit comprising a body section, at least one drawer and at least one front cover as described above.

[0020] Preferably the storage unit comprises a plurality of drawers, preferably a plurality of drawers in a lateral direction, preferably a plurality of drawers vertically.

[0021] Preferably each drawer has a front cover attached thereto.

[0022] Preferably each front cover has a portion of a display picture secured thereto, preferably secured to display item attachment means of the front cover.

[0023] Preferably the display picture depicts subject matter unrelated to contents to be held in the storage unit.

[0024] The invention extends to a kit of parts for a storage unit comprising a front cover portion for each storage drawer of the storage unit.

[0025] For a better understanding of the invention, and to show how embodiments of the same may be carried into effect, reference will now be made, by way of example, to the accompanying diagrammatic drawings in which:

Figure 1 is a schematic cross-sectional side view of a display cabinet incorporating a front cover for each drawer of the display cabinet;

Figure 2 is a schematic cross-sectional partial side view of the display cabinet of Figure 1 showing open and closed configurations of the front cover for the drawers of the display cabinet;

Figure 3 is a schematic front view of the display cabinet as shown in Figure 1;

Figures 4 to 6 show schematic front and side views respectively of three different sizes of front cover; and

Figure 7 shows a schematic cross-sectional partial side view of the display cabinet of Figure 1 showing open and closed configurations of a second embodiment of front cover.

[0026] Figure 1 shows a display cabinet comprising a roller shutter door 10 with a driving mechanism 12 therefor. The roller shutter door 10 runs inside rails 14.

[0027] The display cabinet incorporates retractable drawers 16 in which products may be placed for sale by a retailer. The drawers 16 are of a known type and are supported in slotted rails 18 located at a rear of the display cabinet. The drawers 16 incorporate a sliding tensioning mechanism to push products held in the drawers 16 towards a front thereof to make them easy to dispense. The drawers 16 typically have a transparent front edge that allows products in the drawer to be seen easily.

[0028] Each of the drawers 16 has a front cover 20 (more clearly seen in Figures 2 and 3).

[0029] Each front cover 20 has a rectangular front face 22 in which there are openings 24 provided to decrease the weight of the front cover 20.

[0030] Each front cover 20 has two flanges 26, one at each end of the front face 22. The flanges 26 extend from the sides of the front face 22 above a mid-way line M shown in Figure 4. Each flange 26 has a projection 28 which functions as a pivot point, as will be described below.

[0031] Each front cover 20 also comprises an upper slot 30 along an upper edge of the front face 22, which upper slot 30 faces down the front face 22. The upper slot 30 is formed by the material of the front face 20 being folded over to create the upper slot 30.

[0032] Each front cover 20 also incorporates a lower slot 32 along a lower edge of the front face 22, which lower slot 32 faces upwards towards the upper slot 30. The lower slot 32 is formed by folding the material of the front cover 20 to form the lower slot 32.

[0033] Each of the front covers 20 is arranged to be engaged with upstanding side pieces 34 of the drawer 16. The upstanding side pieces 34 are provided at opposite sides of each drawer 16. The projections 28 on the flanges 26 of each front cover 20 are located in openings 36 (see Figure 2) in the upstanding side pieces 34. The size of the front cover 20 and the location of the flanges 26 and projections 28 are chosen so that slight flexure of the flanges 26 is allowed to allow the projections 28 to be located within the openings 36 in the upstanding tabs 34 by means of a push fit.

[0034] In use, the front covers 20 can rotate freely with respect to the upstanding side pieces 34 of the drawers

16. This allows the front cover 20 to pivot between the two positions shown in Figure 2 i.e. from an open configuration in which the front face 22 of the front cover 20 is generally horizontally aligned to a closed configuration in which the front face 22 of the front cover 20 is in a generally vertical aligned.

[0035] As mentioned above, the flanges 26 are located above the mid-line M of the front face 22 of the front cover 20. This means that a majority of the weight of the front cover 20 is located to the front side of the projection 28 (which functions as a pivot point) when the front cover 20 is in the open configuration shown in Figure 2. This weight distribution means that the front cover 20 automatically rotates to the closed position shown in Figure 2 if it is not held open by a user. Thus, the default position for the front cover 20 is the closed position as shown in Figure 2.

[0036] The upper and lower slots 30, 32 provide means for supporting display material, which may be a picture, or part of a picture that can be located and displayed using the front cover 20. A picture, or other printed or visual material, can be inserted into the upper and lower slots 30, 32 and retained therein. The lower slot 32 may also provide suitable means for a user to grip and open/close the front cover 20.

[0037] As can be seen from Figures 1 and 3 an array of front covers 20 is provided in a display cabinet. This means that multiple pictures or pieces of display material can be placed in the upper and lower slots 30, 32 of each front cover 20. Each piece of display material may be a portion of a larger picture which can be formed in a mosaic style by using multiple display images.

[0038] As mentioned above, the display cabinet and drawers 20 with their upstanding side pieces 34 are already in use. Consequently, the front covers 20 disclosed herein can be provided as retro-fit items to a display cabinet.

[0039] The front covers 10 are made of sheet metal in this example, with a thickness of 1.2mm. Other dimensions are given in mm in Figures 4 to 6. As can be seen, different sizes of front cover 20 have been made to fit different sizes of drawer 16.

[0040] It can be seen from Figure 2 that the location of the flanges 26 and the pivot points provided by the projections 28 allows the front cover 20 to rotate up and back between a space created above the drawer 16 to which the front cover 20 is attached, but below another drawer 16 located above. This feature allows the front cover 20 to be opened and closed without fouling on a shelf drawer 16 located above (or below). Also, the front cover 20 is opaque, so the contents cannot be viewed when the cover 20 is down. Furthermore, the contents of a drawer 16 can be seen by a retailer when the front cover is lifted; this allows the potential disadvantage of an opaque front cover 16 to be overcome.

[0041] Figure 7 shows an alternative embodiment of front cover 200, in which all of the parts in common are shown with like numerals to the earlier mentioned parts.

The main difference in the embodiment shown in Figure 7 is that the front cover 200 hinges at the bottom to allow the front cover 200 to pivot downwards to open. This arrangement is beneficial for drawers 16 located at a lower part of the display cabinet.

[0042] The front cover 200 differs in that flanges 260 extend to a rear of the front face 22 and then turn downwards to a pivot point 28 at a lower region of the front cover 200. An extension 202 of the flanges 260 extends rearwards so that the centre of gravity of the front cover 200 is behind the pivot point 36. A counterweight section 204 may include a counterweight 206 to keep the weight distribution to the rear.

[0043] In use the weight of the front cover 200 is predominantly behind the pivot point 36, which means that the front cover 200 is biased to a closed position. A user can tilt the front face 22 downwards to reveal the contents of the drawer 16 to which it is attached, or to allow the drawer to be pulled outwards. For drawers 16 that are located below a user's eyeline a bottom hinged front cover 200 may be easier to use than a top hinged front cover 20.

[0044] When in the closed position the front cover 20/200 is located close to a front edge of the drawer 16. This allows the roller shutter door 10 to be closed without fouling on the front covers 20/200, despite the front covers 20/200 being a retro-fit item.

[0045] The provision of an array of drawers 16 having front covers 20/200 on which display material can be located is advantageous. Furthermore, the front covers 20/200 also hide from view the contents of the drawers 16, which may sometimes be appropriate, for example cigarettes and other smokers' articles.

[0046] Given that the front cover 20/200 can be opened without fouling on a drawer 16 above, the drawer 16 to which the front cover 20/200 is attached can be pulled out and pushed back into the display cabinet in the usual way. Consequently, functionality of the drawers 16 is not compromised by the presence of the front covers 20/200. In addition, a useful display face is presented by the plurality of front covers 20/200 that is located in a very advantageous position behind the counter and within the field of view of a customer.

[0047] The embodiments described above relate to the provision of a front cover on a drawer. The invention could be applied equally well to a shelf.

[0048] Attention is directed to all papers and documents which are filed concurrently with or previous to this specification in connection with this application and which are open to public inspection with this specification, and the contents of all such papers and documents are incorporated herein by reference.

[0049] All of the features disclosed in this specification (including any accompanying claims, abstract and drawings), and/or all of the steps of any method or process so disclosed, may be combined in any combination, except combinations where at least some of such features and/or steps are mutually exclusive.

[0050] Each feature disclosed in this specification (including any accompanying claims, abstract and drawings) may be replaced by alternative features serving the same, equivalent or similar purpose, unless expressly stated otherwise. Thus, unless expressly stated otherwise, each feature disclosed is one example only of a generic series of equivalent or similar features.

[0051] The invention is not restricted to the details of the foregoing embodiment(s). The invention extends to any novel one, or any novel combination, of the features disclosed in this specification (including any accompanying claims, abstract and drawings), or to any novel one, or any novel combination, of the steps of any method or process so disclosed.

Claims

1. A front cover for a storage unit is adapted, in use, to move between open and closed configurations and is biased to the closed configuration, in which closed configuration contents of the storage unit to which the front cover is adapted to be attached are not on view, wherein the front cover comprises hinging means adapted to allow the front cover to pivot between the open and closed configurations and at least partially retract into the storage unit.
2. A front cover as claimed in claim 1, in which the hinging means are adapted to allow the front cover to pivot upwards or downwards.
3. A front cover as claimed in claim 1 or claim 2, in which the hinging means include a counterweight, adapted to bias the front cover to the closed configuration.
4. A front cover as claimed in claim 3, in which the counterweight includes a counterweight arm, extending away from a front face of the front cover, towards an interior of said storage unit.
5. A front cover as claimed in any preceding claim, in which a centre of gravity of the front cover is located rearwards of a front face of the front cover.
6. A front cover as claimed in any one of claims 1 to 4, in which a centre of gravity of the front cover is located rearwards of a front face of the front cover and forwards of a pivot point of the front cover.
7. A front cover as claimed in any preceding claim, in which the front cover is a front cover for a storage drawer.
8. A front cover as claimed in any preceding claim, in which the front cover is hinged below a top edge thereof,

9. A front cover as claimed in claim 7 or claim 8, in which the front cover is hinged above a line running across a mid-height of the front cover when in the closed configuration. 5
10. A front cover as claimed in any preceding claim, in which the hinge is laterally offset with respect to the front cover when the front cover is in a closed configuration. 10
11. A front cover as claimed in any preceding claim, in which the cover means comprises display item attachment means adapted to secure a display item to the cover means. 15
12. A storage unit comprises a body section, at least one drawer and at least one front cover as claimed in any one of claims 1 to 11. 20
13. A storage unit as claimed in claim 12 comprising a plurality of drawers, at least one of which drawers has a front cover operable to pivot upwards to an open configuration and at least one drawer having a front cover operable to pivot downwards to an open configuration. 25
14. A kit of parts for a storage unit comprises a front cover portion as claimed in any one of claims 1 to 11 for at least one storage drawer of the storage unit. 30

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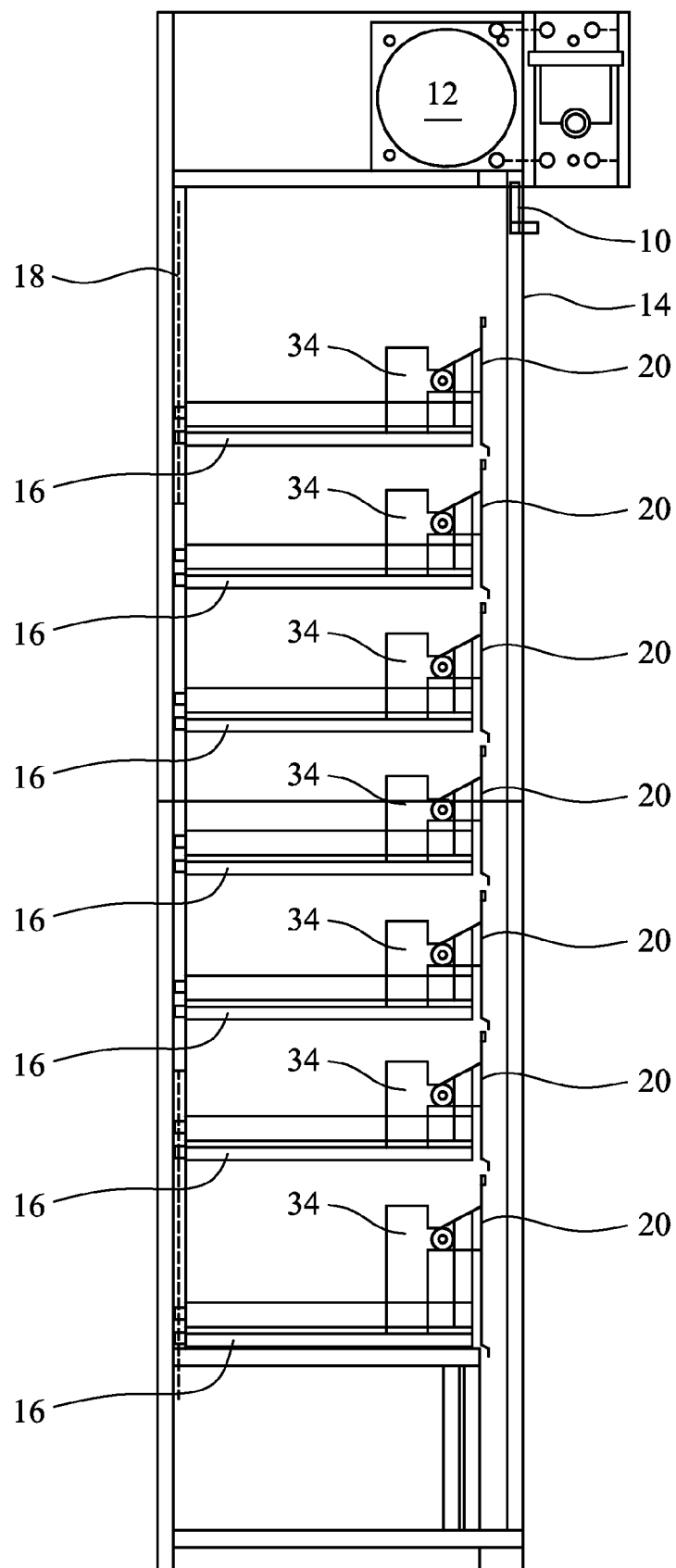


FIG. 1

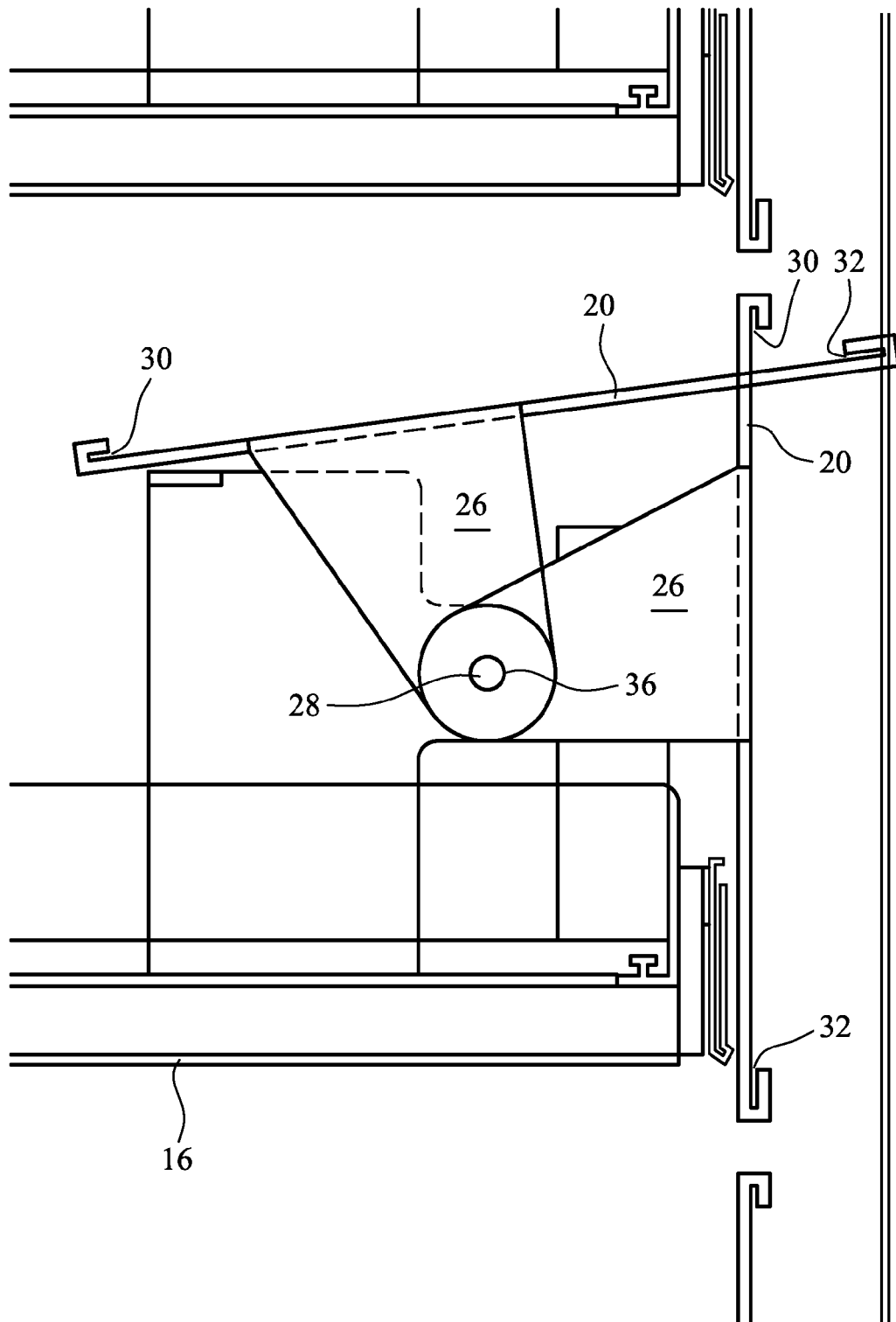


FIG. 2

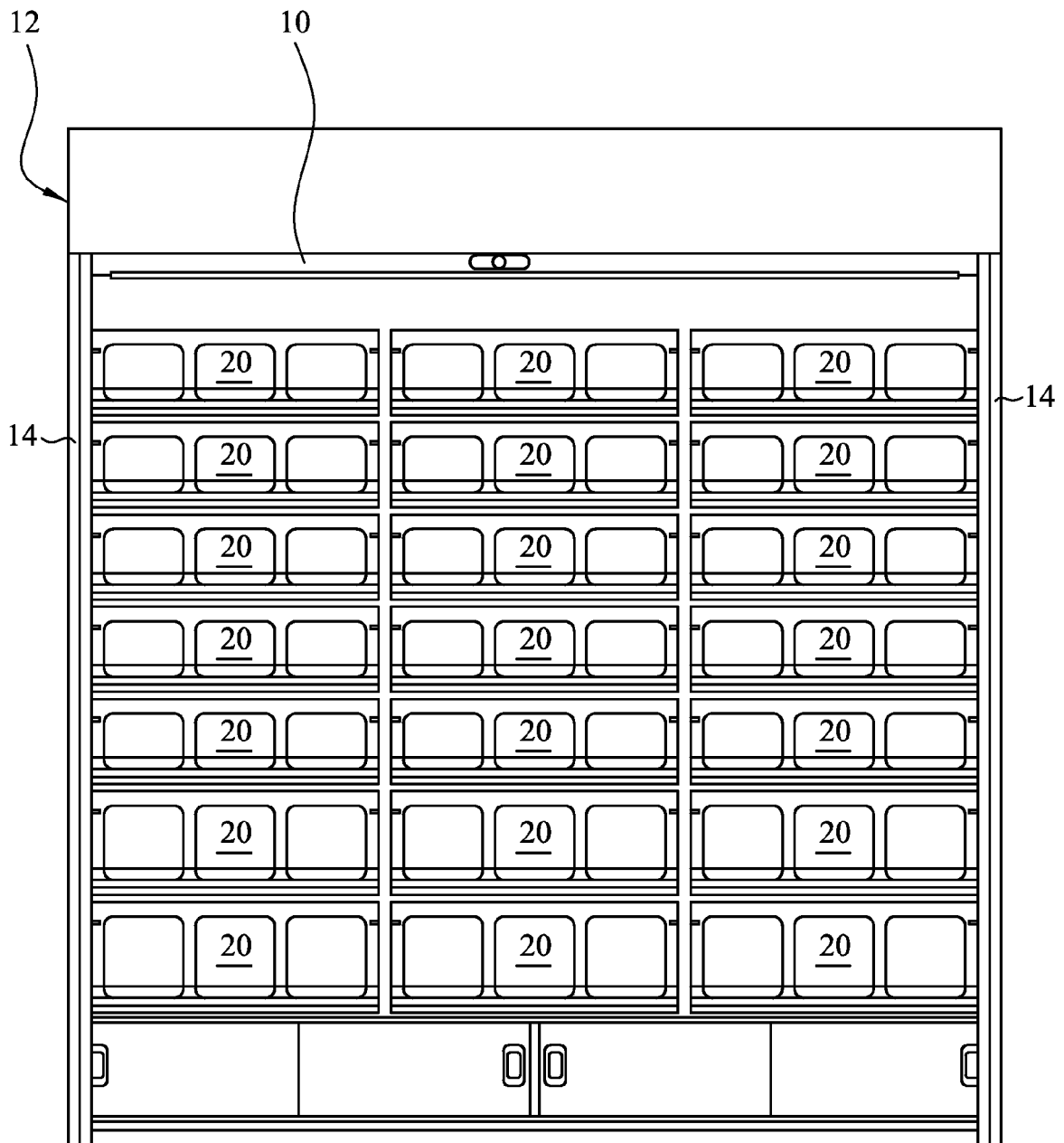


FIG. 3

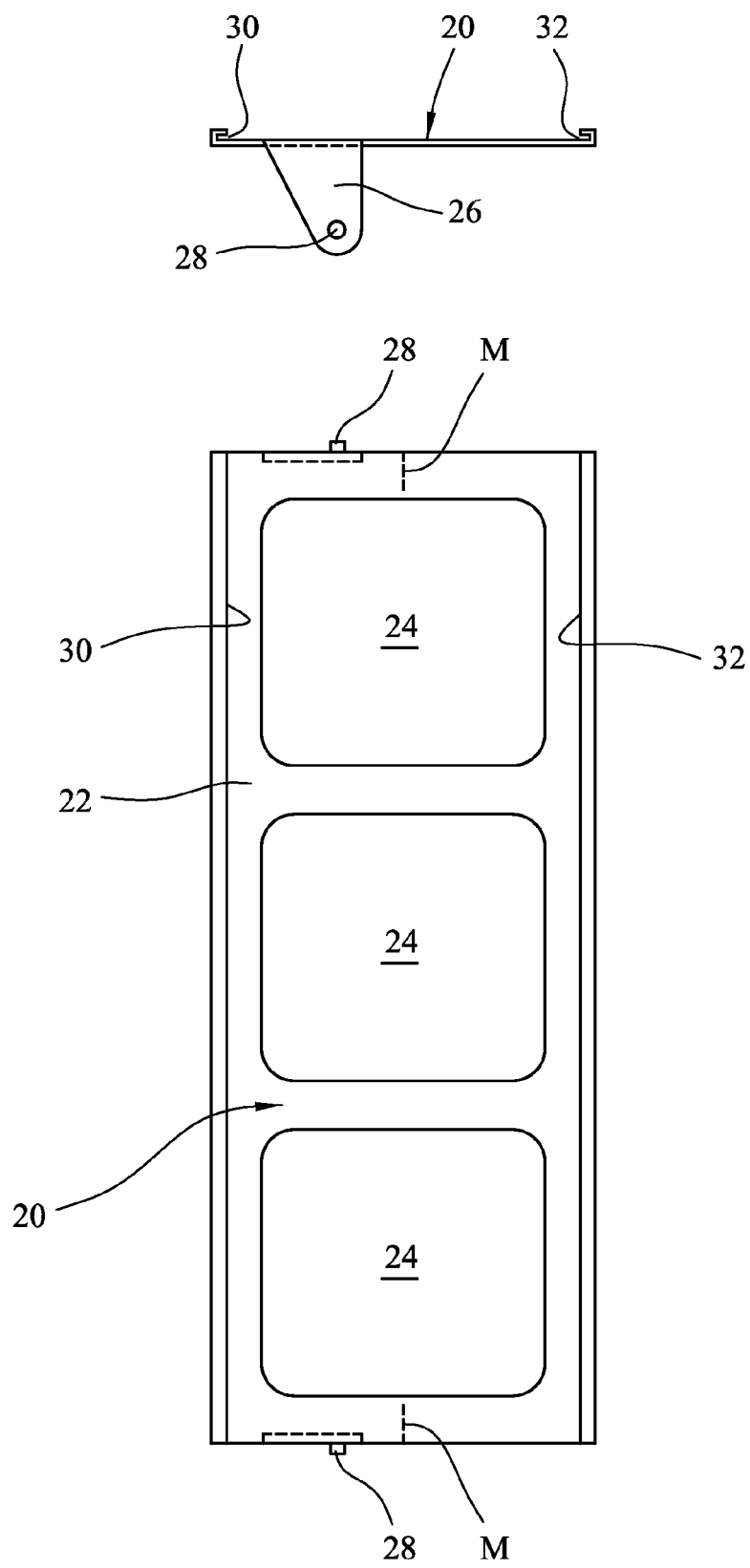


FIG. 4

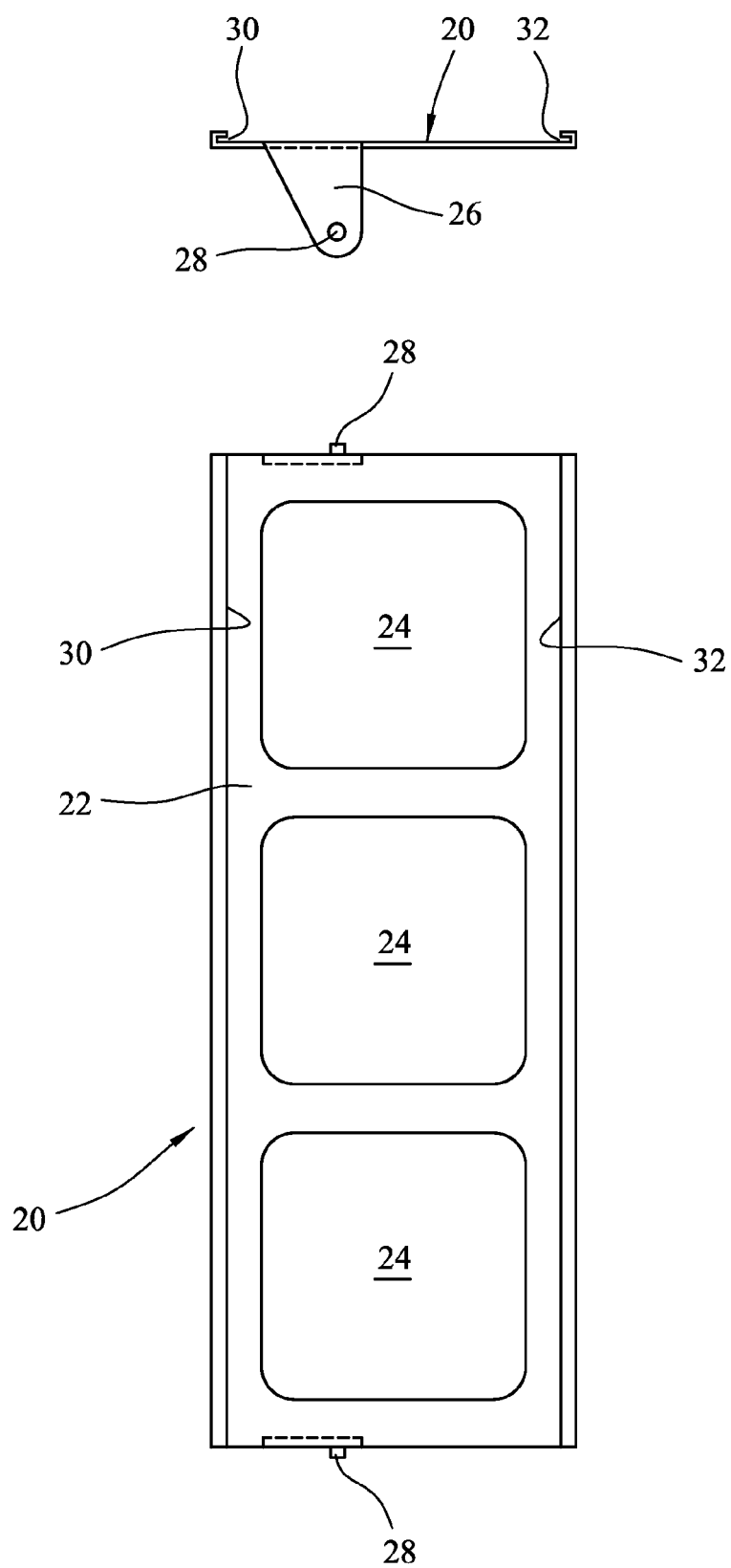


FIG. 5

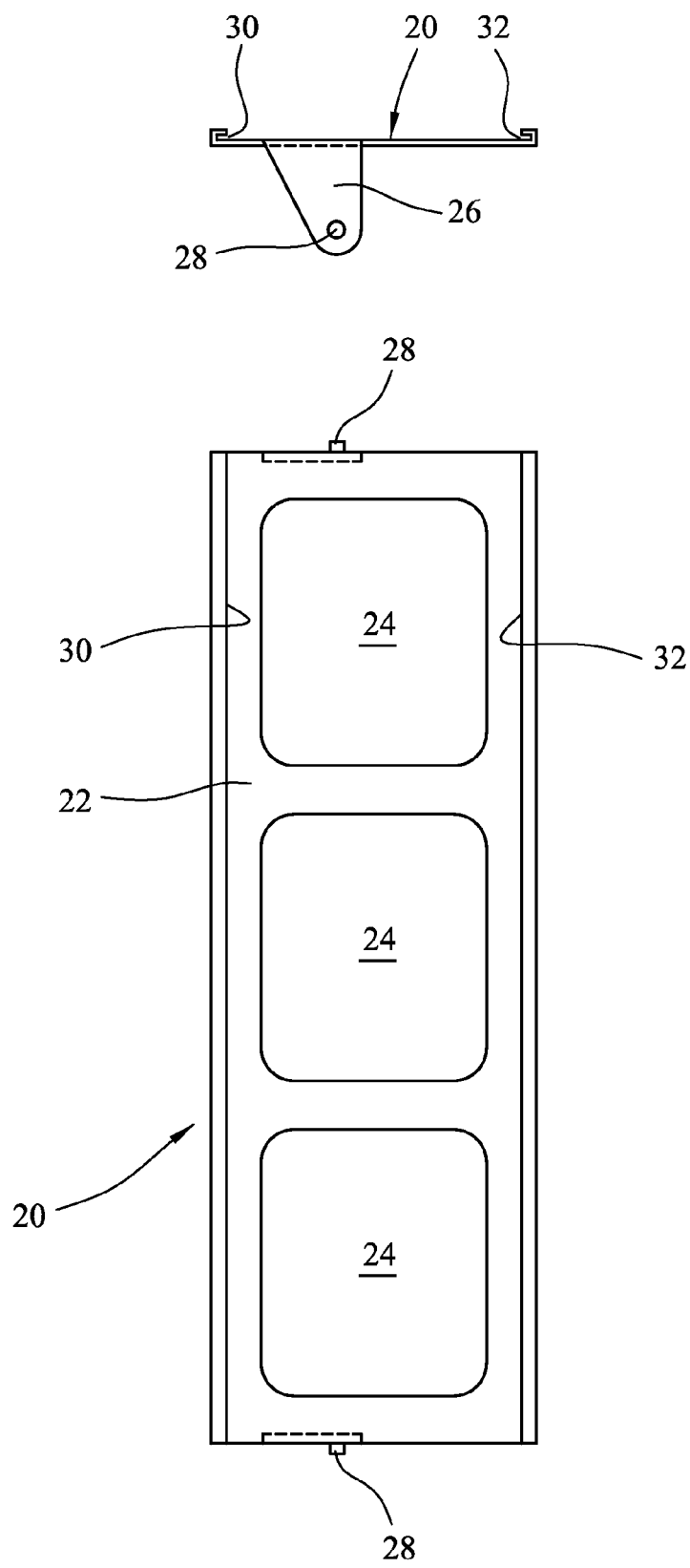


FIG. 6

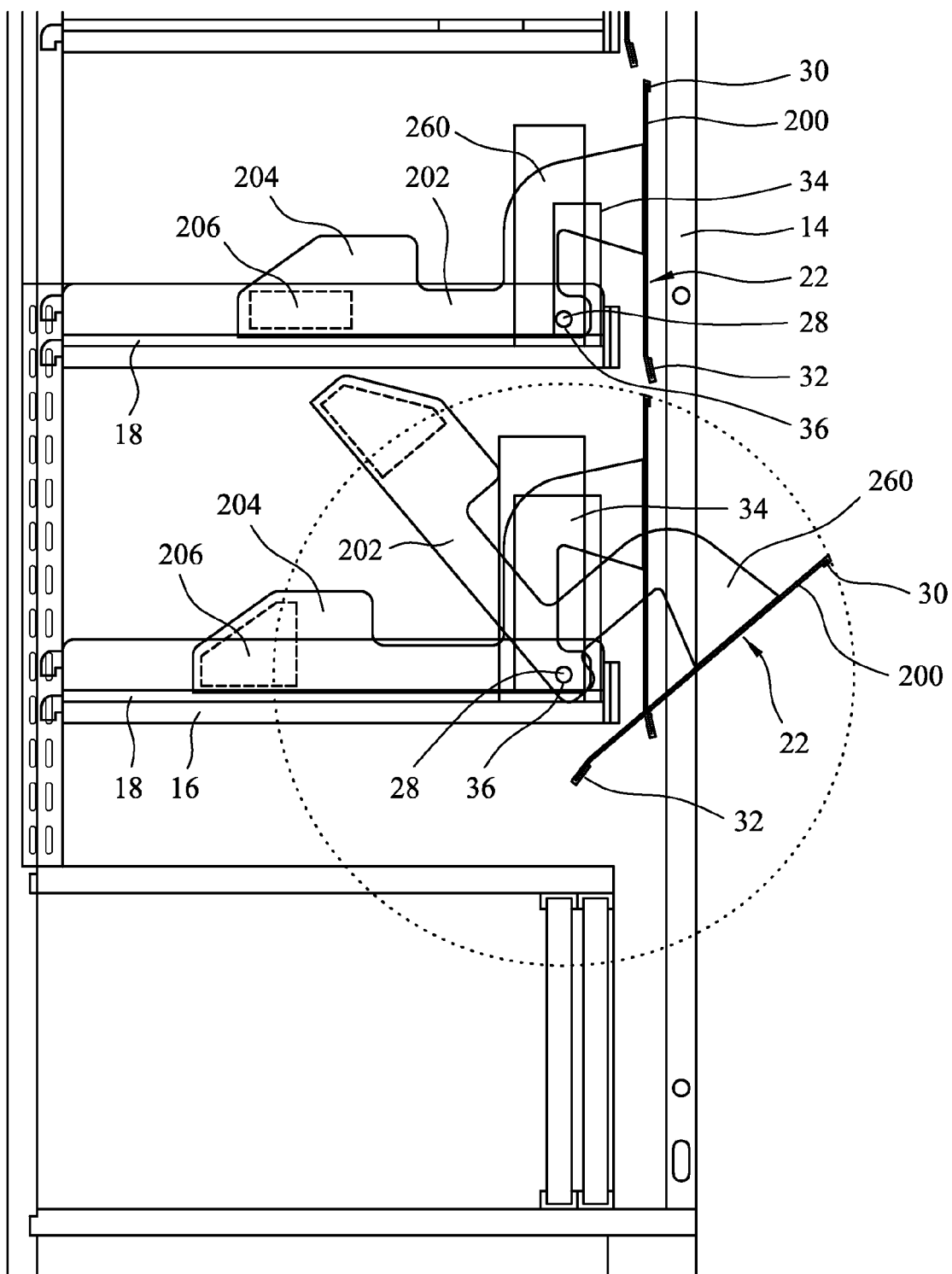


FIG. 7