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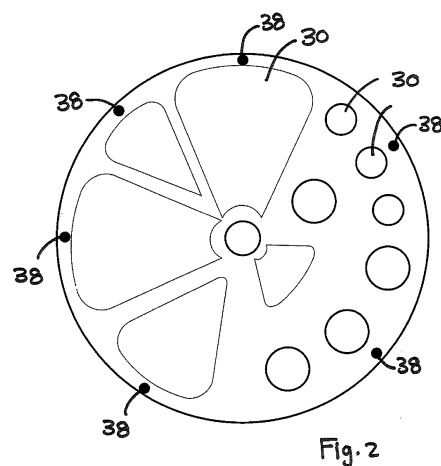
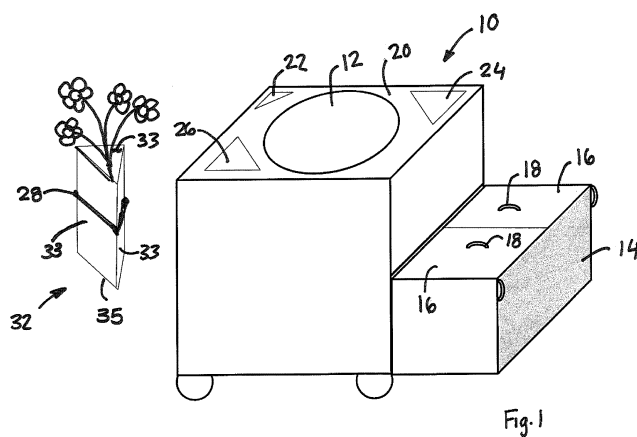
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(56) Documents Cited:
WO 1992/006619 A CN 201563952 U
CN 201115522 Y CN 102293523 A
DE 029708211 U US 6154956 A
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(58) Field of Search:
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(54) Title of the Invention: **A rotatable safety device for furniture**
Abstract Title: **Rotatable safety device for furniture**

(57) A rotating apparatus 12 for a furniture item 10. The rotating apparatus 12 is configured to be received in an open receiving area on a top surface 20 of the furniture item, such as a cabinet or table. The apparatus 12 includes one or more openings 30. Each opening 30 is adapted to receive a receptacle 32. The receptacle comprises a cross sectional shape corresponding to the shape of the opening 30. The apparatus deduces the risk of the receptacle being knocked over and is particularly useful for the elderly or infirm.



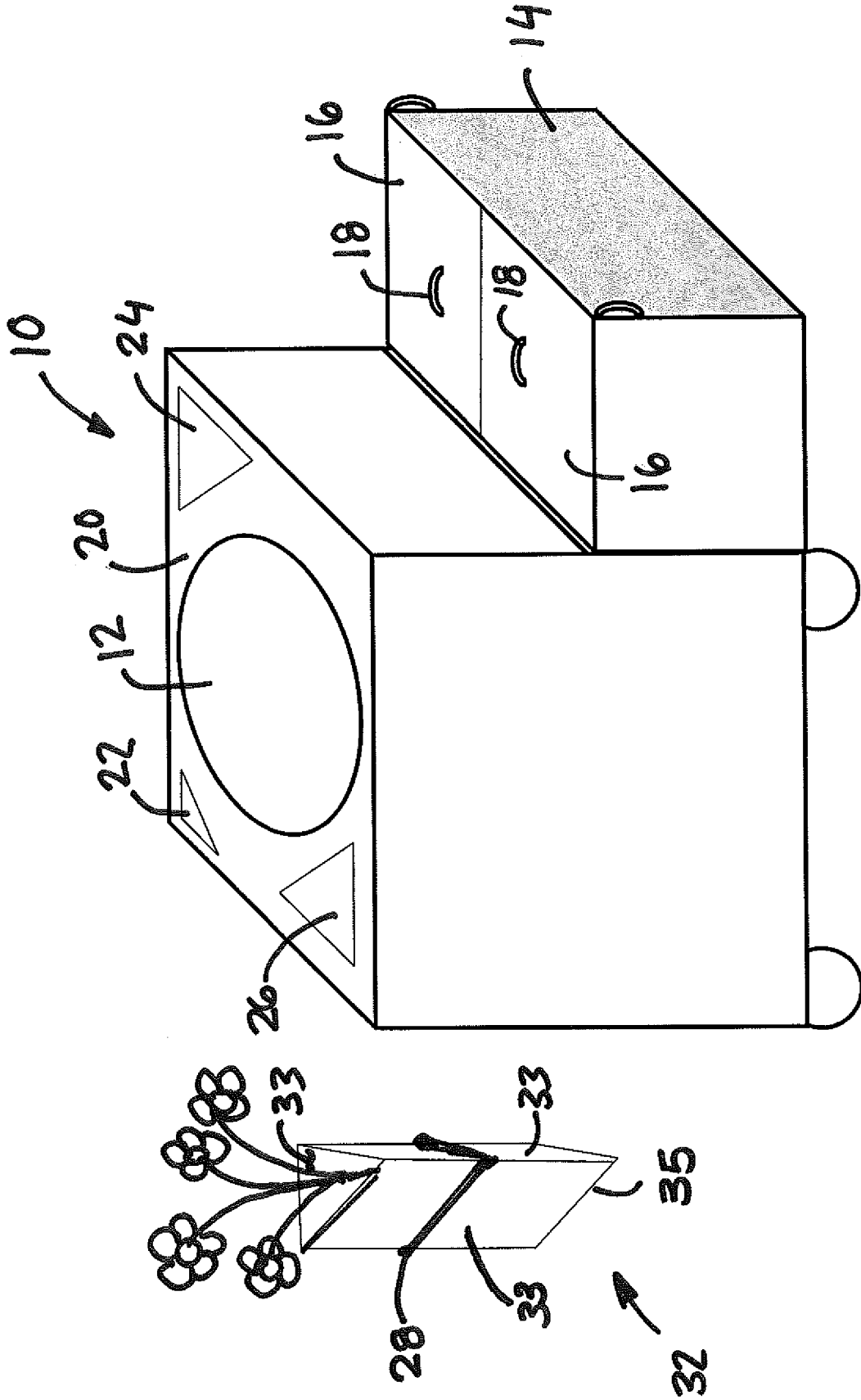


Fig. 1

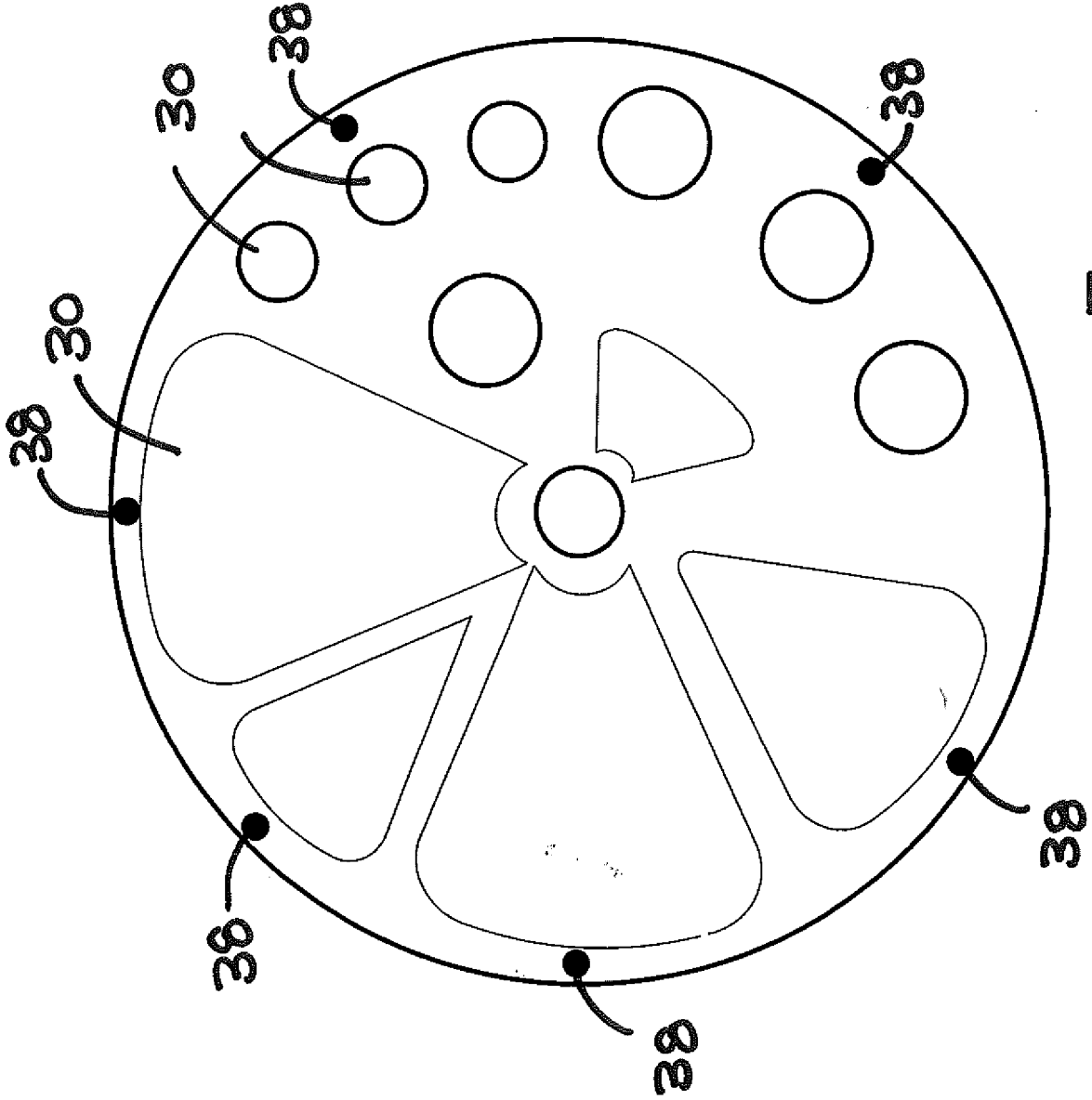


Fig. 2

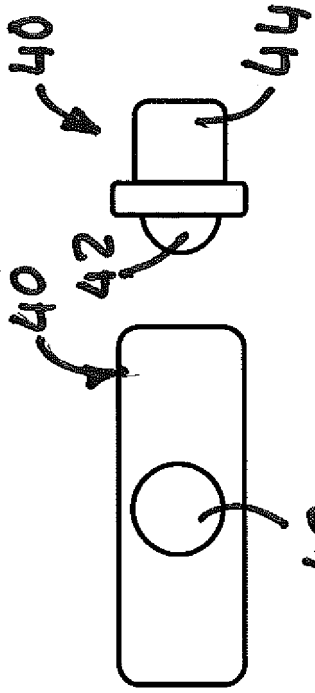


Fig. 3

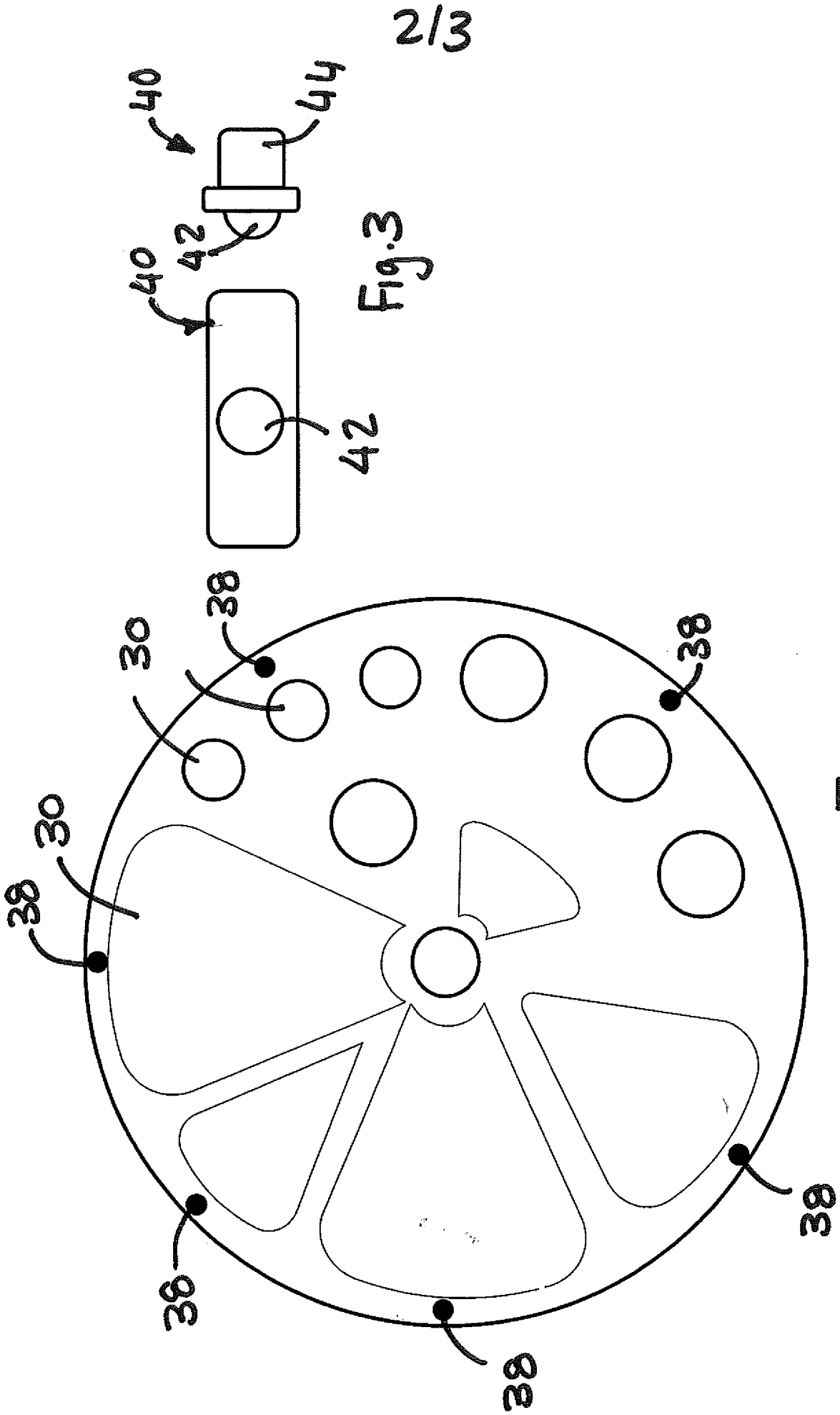


Fig. 3

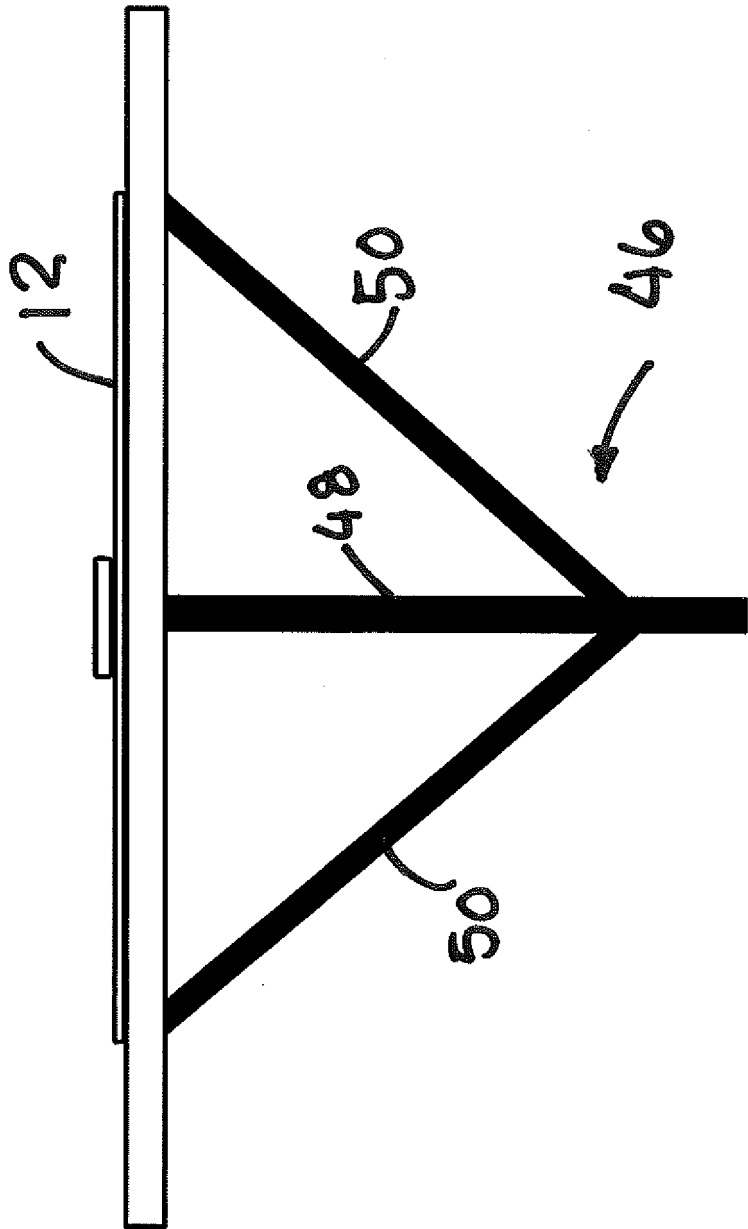


Fig. 4

A ROTATABLE SAFETY DEVICE FOR FURNITURE

FIELD OF THE INVENTION

The present invention relates to a rotatable safety device for use with a furniture item such
5 as a table or cabinet top. In particular, the present invention relates to a rotatable safety
device as an aid for disabled or infirm person.

BACKGROUND TO THE INVENTION

Elderly, infirm and people with poor mobility generally require medication, drinks, and some
provisions to be close to hand. In particular, where a person is looked after at home by care
10 in the community, who generally visit at various times in the day, but do not provide round
the clock care. As such there are times in the day where such people are home alone.

A table or cabinet alongside a chair or bed used by the person can quickly become littered
with items and as such the likelihood of the person knocking items over is high. This can be
quite frustrating and often upsetting for a person who may not be able enough to bend to
15 retrieve the fallen object and as such the reliance is on the next visit from a carer or the risk
of falling over.

It is therefore desirable to provide a device that reduces the risk of knocking over items and
spillages.

It is further desirable to provide a device that improves independence for people with some
20 reliance on care support, for example at home, in residential care or hospital.

SUMMARY OF THE INVENTION

A first aspect of the present invention provides a rotating apparatus for a furniture item; the
apparatus comprising one or more openings, wherein each opening is adapted to receive a
receptacle, wherein the receptacle comprises a cross sectional shape corresponding to the
25 shape of the opening, one or more walls and a base portion.

One or more of the receptacles may be fixed within its respective opening. In addition or
alternatively, one or more receptacles may be removable from its respective opening.

Each receptacle may include a section of increased cross sectional area, wherein the
increased cross-sectional area acts as a stop to prevent the receptacle passing through the
30 opening. The section of increased cross-sectional area may be provided at a rim of the

receptacle. Alternatively, the section of increased cross-sectional area may be provided partway up the receptacle. The section of increased cross-sectional area may comprise a ridge.

5 The rotating apparatus may further comprise a support pedestal operable to support and to facilitate rotation of the rotating apparatus. The support pedestal may comprise a columnar member. The pedestal may also comprise one or more branches extending from the columnar member to an area close to an edge of the rotating apparatus.

10 The rotating apparatus may also comprise a ball catch arranged on a perimeter edge of the rotating apparatus or arranged on a perimeter edge of the receiving area in the furniture item receiving the rotating apparatus. One or more recesses for receiving the ball of the ball catch are arranged in the opposing perimeter edge of the rotating apparatus or the furniture unit for receiving the ball to stop rotation of the rotating apparatus at one or more predetermined positions.

15 The rotating apparatus may comprise one or more indicators on an upper surface thereof. The indicators provide tactile identification of areas or sections of the rotating surface such that partially sighted or blind users can easily locate a section and therefore the contents of that section. The location of the indicators may coincide with the location of the recesses at the predetermined positions.

BRIEF DESCRIPTION OF THE DRAWINGS

20 Embodiments of the present invention will now be described, by way of example only, with reference to the accompanying drawings, in which:

Figure 1 illustrates a cabinet including a rotating member in the cabinet surface according to embodiments of the present invention;

25 Figure 2 illustrates a plan view, looking down, on the rotating member according to embodiments of the present invention;

Figure 3 illustrates an example of a ball catch as an example of means to control movement of the rotating member illustrated in Figures 1 and 2; and

Figure 4 illustrates an example of a pedestal arrangement used to support and facilitate rotation of the rotating member as illustrated in Figures 1 and 2.

BRIEF DESCRIPTION

Figure 1 illustrates a care cabinet 10 which incorporates a surface mounted or recessed rotating member 12 according to embodiments of the present invention.

5 The illustrated cabinet 10 includes a drawer 14 comprising two removable cases 16 that each include a handle 18 such that the contents of the drawer 14 can be organised and can be easily lifted from the drawer 14 without the user having to bend unnecessarily to retrieve the contents from the drawer 14. The cabinet 10 also includes, in the cabinet top 20, a number of holes 22, 24, 26 and a rotating member 12 in the centre.

10 In Figure 1, the rotating member 12 is shown as a solid. However, referring to Figure 2, the rotating member 12 shall include a number of holes 30 that together with a suitably shaped and sized receptacle form recessed sections of varying shapes and sizes; these are similar to the holes and recessed sections 22, 24, 26 at the corners of the cabinet 10. An example of a rotating member 12, including holes and recessed sections 30 is illustrated and described further below with reference to Figure 2.

15 Each hole 22, 24, 26, 30 whether included in the cabinet top 20 or in the rotating member 12, includes a receptacle, for example a vase 32 (see figure 1). The receptacles can be fixedly or detachably placed in the holes 22, 24, 26, 30 in the cabinet top 20 or in the rotating member 12 to form recessed sections closed at the base.

20 In the example illustrated in Figure 1 the vase 32 is an example of a receptacle that can be detachably placed in a hole 30. In this particular example, the vase 32 has a triangular cross-sectional area; therefore the vase 32 comprises three walls 33 and a closed base 35 such that flowers and water can be contained. The vase 32 is an example where part of the receptacle 32 is located below the cabinet top 20 and part of the receptacle extends above the cabinet top 20. As such the risk of knocking over items from the cabinet surface 20 is
25 minimised. In alternative embodiments the receptacle is below the surface of the cabinet 10.

The receptacles may include a ridge 28 (see figure 1) that is larger than the hole 30 in which the receptacle is to be located. The ridge acts to prevent the receptacle falling through the hole.

30 In the illustrated example, the vase 32 has a ridge 28 partway along the vase 32 such that part of the vase walls 33 are below the cabinet surface 20 and part of the vase walls 33 are located above the cabinet surface 20. For a receptacle located entirely below the surface of

the cabinet the ridge 28 it will be appreciated that the ridge 28 is provided at the upper rim of the receptacle.

The rotating member may include fixed and removable receptacles and may additionally include removable items such as a lamp, clock or other items as discussed further below.

5 Referring to Figure 2, an example of a rotating member 12 according to an embodiment of the present invention is illustrated. In the illustrated example five shaped holes 30 and eight circular holes 30 are included. When the receptacles are received in the holes recesses are provided and the depth of each recess is dependent on its purpose and on the depth of receptacle received in the hole. It will be appreciated that the depth of the recess shall be
10 dependent on its purpose.

For example a recess may be provided to contain a base of a lamp (not illustrated), where the lamp base is contained in a recess and the stem and bulb section of the lamp extends above the cabinet top 20. Also, a recess may be provided to house a clock (not illustrated), where a base portion of the clock is received in the recess and extends below the surface of
15 the cabinet top 20 and an upper portion of the clock, including the clock face, may be level with or extend above the surface of the cabinet top such that the clock face is visible. Other recesses are provided to hold, for example medication, drink containers, a newspaper or magazine. It will be appreciated that the purpose of each recess is the organisation of items on top of a cabinet 10, easy access and the reduction of incidents of knocking items from a
20 surface when reaching for something else. It will be further appreciated that the arrangement of, the number of and the sizes of holes, receptacle and resulting recesses can be tailored to suit the specific needs of the user.

The rotating member 12 also includes indicators 38, which can provide a tactile indicator to assist a partially sighted or blind user to identify the contents by a section or area of the
25 rotating member 12. In addition, upon rotation (as described further below) the rotating member 12 is adapted to stop at predetermined locations and as such the indicators 38 assist the partially sighted or blind user to identify the contents of the recessed segment or area in the region of the stop.

Figure 3 illustrates a ball catch 40 that is used to control rotation of the rotating member 12 and to stop rotation at predetermined locations. For example, a user may be sitting in a chair
30 alongside the cabinet 10 and wants to reach the contents of a particular recess (see figure 2) in the rotating member 12 that is farthest from them at the particular time. The user rotates

the rotating member 12 and as it rotates a ball 42 of the ball catch 40 is pushed back inside the carriage section 44 of the ball catch 40 until the ball 42 aligns with a groove or recess (not illustrated) at a predetermined location, either on the edge of the rotating member 12 or on an edge of the cabinet surface, at which point the ball 42 will move out of the carriage
5 under a spring load to locate in the groove or recess and shall facilitate stopping rotation of the rotating member 28. As described above the indicators 38 assist the user in identifying that the rotating member 38 has stopped at the desired location.

Figure 4 illustrates an example of a support pedestal 46 used to support and facilitate rotation of the rotating member 12. In the illustrated example, the pedestal 46 includes a
10 central columnar rod 48 as the primary means of support for the rotating member 12 and includes branches 50 that extend at an angle from the central rod 48 to a region close to the perimeter of the rotating member 12. The pedestal 46 is arranged such that the rotating member 12 can rotate with little risk of jamming.

Whilst specific embodiments of the present invention have been described above, it will be
15 appreciated that departures from the described embodiments may still fall within the scope of the present invention.

CLAIMS

1. A rotating apparatus for a furniture item; the apparatus being configured to be received in an open receiving area on a top surface of the furniture item the apparatus
5 comprising: one or more openings, wherein each opening is adapted to receive a receptacle, wherein the receptacle comprises a cross sectional shape corresponding to the shape of the opening, one or more walls and a base portion.
2. A rotating apparatus according to claim 1, wherein one or more of the receptacles are fixed within its respective opening.
- 10 3. A rotating apparatus according to claim 1 or 2, wherein one or more receptacles are removable from its respective opening.
4. A rotating apparatus according to any of claims 1 to 3, wherein each receptacle may include a section of increased cross sectional area, wherein the increased cross-sectional area acts as a stop to prevent the receptacle passing through the opening.
- 15 5. A rotating apparatus according to claim 4, wherein the section of increased cross-sectional area is provided at an upper rim of the receptacle.
6. A rotating apparatus according to claim 4, wherein the section of increased cross-sectional area is provided partway up the receptacle.
7. A rotating apparatus according to claim 5 or 6, wherein the section of increased
20 cross-sectional area comprises a ridge.
8. A rotating apparatus according to any preceding claim, further comprising a support pedestal operable to support and to facilitate rotation of the rotating apparatus.
9. A rotating apparatus according to claim 8, wherein the support pedestal comprises a columnar member.
- 25 10. A rotating apparatus according to claim 9, further comprising one or more branches extending from the columnar member to an area close to an edge of the rotating apparatus.
11. A rotating apparatus according to any preceding claim, further comprising a ball catch, comprising at least a ball and carriage from which the ball extends to stop rotation of the apparatus and which substantially contains the ball upon rotation of the apparatus,

wherein the ball catch is arranged on a perimeter edge of the rotating apparatus or arranged on a perimeter edge of the open receiving area.

5 12. A rotating apparatus according to claim 11, further comprising one or more recesses shaped to receive the ball of the ball catch to stop rotation of the apparatus, wherein the one or more recesses are provided in the perimeter edge of the rotating apparatus when the ball catch is located on the perimeter edge of the open receiving area; or the ball catch is provided on the perimeter edge of the open receiving area in the furniture unit when the ball catch is located at the perimeter of the apparatus.

10 13. A rotating apparatus according to any preceding claim, further comprising one or more indicators on an upper surface of the rotating apparatus.

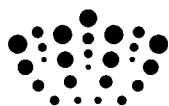
14. A rotating apparatus according to claim 13, wherein the one or more indicators are arranged to indicate areas or sections of the rotating surface such that tactile identification of areas or sections is provided

15 15. A rotating apparatus according to claim 13 when dependent on claim 11, wherein the indicators are located to coincide with the location of the recesses at predetermined positions.

16. A furniture item comprising a rotating apparatus according to any preceding claim.

17. A rotating apparatus as hereinbefore described and with reference to the accompanying drawings.

20 18. A furniture item as hereinbefore described and with reference to the accompanying drawings.



Application No: GB1302636.4

Examiner: Mr Paul Makin

Claims searched: 1-18

Date of search: 20 May 2013

Patents Act 1977: Search Report under Section 17

Documents considered to be relevant:

Category	Relevant to claims	Identity of document and passage or figure of particular relevance
X,Y	X:1,3,8,9, 10,16 Y:11,12	CN 201115522 Y (LUO) see the figures and WPI Abstract Accession No. 2008-M05365
X,Y	X:1,3,8,1 3-16 Y:11,12	DE 29708211 U (CHEMCOAT) see the figures and WPI Abstract Accession No. 1998-482354
X,Y	X:1,2,4- 9,16 Y:11,12	CN 102293523 A (LUOA) see the figures and WPI Abstract Accession No. 2012-A74999
X,Y	X:1,3,8,9, 16 Y:11,12	CN 201563952 U (FEI) see the figures and WPI Abstract Accession No. 2010-L89396
X,Y	X:1,3,8,9, 16 Y:11,12	US 2007/283853 A (SUN) whole document
X,Y	X:1,3,8,9, 16 Y:11,12	WO 92/06619 A (FRUCHAUD) whole document
Y	11,12	US 6154956 A (FROHARDT) see catches 136

Categories:

X	Document indicating lack of novelty or inventive step	A	Document indicating technological background and/or state of the art.
Y	Document indicating lack of inventive step if combined with one or more other documents of same category.	P	Document published on or after the declared priority date but before the filing date of this invention.
&	Member of the same patent family	E	Patent document published on or after, but with priority date earlier than, the filing date of this application.

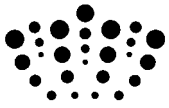
Field of Search:

Search of GB, EP, WO & US patent documents classified in the following areas of the UKC^X :

Worldwide search of patent documents classified in the following areas of the IPC

A47B

The following online and other databases have been used in the preparation of this search report



WPI, EPODOC

International Classification:

Subclass	Subgroup	Valid From
A47B	0011/00	01/01/2006
A47B	0049/00	01/01/2006