

(19)



Europäisches Patentamt
European Patent Office
Office européen des brevets

(11) Publication number:

0 116 479**A2**

(12)

EUROPEAN PATENT APPLICATION

(21) Application number: 84300999.4

(51) Int. Cl.³: **A 45 C 15/06**
A 45 C 13/02

(22) Date of filing: 16.02.84

(30) Priority: 17.02.83 GB 8304468
27.04.83 GB 8311524
21.07.83 GB 8319698(43) Date of publication of application:
22.08.84 Bulletin 84/34(84) Designated Contracting States:
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Coventry, CV1 1NP(GB)(54) **Illuminated mirror assembly.**

(57) A box or case having a lid (2) which has a reflective lower surface (6) forming a mirror and a hollow peripheral frame (7,50,51) extending at least partly around the mirror. The hollow frame (7,50,51) contains at least one lamp (12) each positioned between mirrors (17,18) spaced apart within a portion of the frame and directing light from the lamp (12) or lamps in the peripheral direction within the hollow frame. Peripherally-extending inner and downwardly-facing walls (50,51) of the frame are transparent or translucent whereby the or each lamp (12) illuminates the area in front of the mirror (6). The base (1) of the box contains a tray assembly, particularly for cosmetics and beauty aids consisting of a base-plate (21) having open compartments (22-25) and two tiers of relatively and independently slidable trays (30,41), each having open compartments (31,45) in their upper faces.

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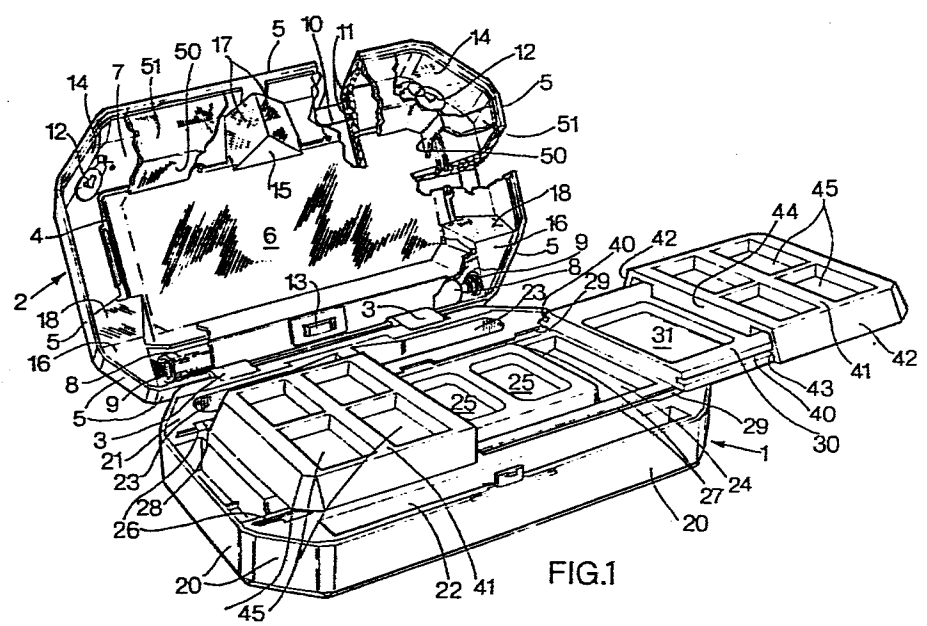


FIG.1

ILLUMINATED MIRROR ASSEMBLY

The invention relates to an illuminated mirror assembly and is particularly, but not exclusively concerned with an illuminated mirror assembly which forms or is incorporated in the lid of a beauty box or toiletries case.

- 5 According to the invention, an illuminated mirror assembly has a reflective base defining the mirror and a frame extending peripherally around the mirror, the frame being of hollow cross-section and containing within the hollow cross-section at least one electric lamp and a plurality of reflective surfaces to
10 direct light from the or each lamp peripherally of the frame over at least a substantial part of its periphery, at least the inner peripheral wall or peripherally-extending portion thereof, being transparent or translucent, whereby a region immediately in front of the mirror and bounded by the frame will be illuminated on
15 energisation of the lamp or lamps by light transmitted from within the hollow frame through said transparent or translucent wall or wall portion.

- The forwardly-facing wall of the frame may also be transparent or translucent over at least part of its peripheral length,
20 whereby light is transmitted forwardly of the mirror assembly.

- Preferably there may be an internal reflective surface positioned at each end of a portion of the frame to be illuminated by the lamp or each of the lamps, the lamp or the respective lamp being positioned between the or the respective pair of reflective
25 surfaces. Additionally, there may be a reflective surface positioned internally of the frame in the immediate vicinity of the or each lamp.

The lamp or lamps may be connected to an external electrical supply or to one or more batteries housed within the hollow

frame. The electrical circuit including the lamp and the battery or batteries may include an on/off switch means. Where the mirror assembly forms or is incorporated into the lid of a box or case, the on/off switch means may be arranged to switch off
5 the lamp or lamps when the lid is closed and to switch on the lamp or lamps when the lid is opened. A light intensity switch may also be provided.

The hollow frame or part of the wall portions thereof may be integral with the base of the mirror or the frame and the mirror
10 may be separately formed.

Where the mirror assembly forms or is incorporated into the lid of a box or case, the body or base of the box or case may include a slidable tray assembly of the kind comprising at least a base and a slide slidable over the base from a closed position in
15 which the slide covers at least a portion of the base and an open position in which the slide extends from one end of the base and is supported in the manner of a cantilever, thereby to expose the portion of the base the slide had covered in said closed position, the or each slide having at the end thereof which is inboard of
20 the base, a downwardly-extending L-shaped leg having a first limb which passes through a slot in the base to the underneath face thereof, the slot extending longitudinally of the base to permit the slide to be moved over the base between said closed and open positions, the leg also having a second limb which extends
25 longitudinally of the base beneath the base in a direction away from said inboard end of the slide and which is supported and guided in a guideway mounted on the underneath face of the base, the slide being supported in the manner of a cantilever, when it is in the open position, by said second limb.

30 The slide may have a pair of said L-shaped legs positioned one at or adjacent each side edge of the slide, the base having a

corresponding pair of longitudinally-extending slots therein in each of which the first limb of the respective leg is slidable and a pair of respective guideways beneath the base.

5 The slidable tray assembly may have a pair of said slides, each movable in opposite directions between a closed position in which the inboard ends of the slides abut at a position substantially mid-way between the ends of the base and an open position in which each slide is supported in the manner of a cantilever by its respective legs and extends from opposed
10 outboard ends of the base to expose the base. In this arrangement, the said second limbs of the legs of the pair of slides may be supported side-by-side in common guideways, whereby said second limbs of the legs of each of the slides are mutually supportive, thereby to provide increased stability when the slides are
15 closed and when they are partly or fully open.

The or each slide may carry a further slide guided for sliding movement thereon longitudinally of the respective slide , whereby the or each further slide may be movable between open and closed positions in which it will respectively expose and
20 cover the respective lower slide, irrespective of said lower slide being in the closed or open position relative to the base.

Any of the aforesaid slides and the base may be in the form of a tray having one or more open compartments in its upper surface, which compartments are open or closed depending on the position
25 of the immediately higher slide. The aforesaid further slides may be slidable lids for trays formed by the immediately lower slides and where the further slides are themselves in the form of trays, they may be fitted with lids.

The slidable tray assembly as set out hereinbefore is particularly,
30 but not exclusively, applicable to the containing and display of cosmetics or other articles concerned with toilet or make-up,

and is referred to hereinafter as a "beauty" tray assembly and the box or case in which the tray assembly is contained is referred to hereinafter as a "beauty" box.

By way of example, a beauty box, as hereinbefore defined, in
5 accordance with the invention, is now described with reference to the accompanying drawings, in which:-

Figure 1 is a perspective view of the beauty box showing the lid thereof open and partially broken to show the internal construction thereof and showing slides in the form of trays in the base of
10 the box in their closed positions at one side of a transverse centre-line and in their open positions at the other side of the transverse centre-line;

Figure 2 is a plan view of the box shown in Figure 1 showing the lid open and the trays in their closed positions;

15 Figure 3 is a plan view of a base plate fitted within the box and beneath the trays shown in Figures 1 and 2;

Figure 4 is a section on the line IV-IV in Figure 3;

Figure 5 is a plan view of one of the lower slidable trays shown in Figure 1;

20 Figure 6 is an end view of the tray shown in Figure 5;

Figure 7 is a plan view of one of the upper slidable trays shown in Figures 1 and 2, and

Figure 8 is an end view of the tray shown in Figure 7.

Referring first to Figure 1, the box 1 has a lid 2 hinged at
25 hinges 3 for movement between a closed position to the open position illustrated. The lid comprises a top 4 and peripheral walls 5.

A central portion of the top 4 carries on its underneath, that is its inner, surface a mirror 6 of rectangular shape or the underneath surface may be metallised to form the mirror. The top 4 extends beyond the edges of the mirror 6 and its marginal portions of the top 4 and the peripheral walls 5 contain an insert 7 which defines along the marginal portions of the top 4 and the peripheral walls 5, a hollow peripheral frame around the mirror 6. The portion of this frame adjacent the hinges 3 forms a battery housing for receiving a battery or a plurality of batteries 8 positioned end-to-end. The insert 7 or a separate portion of it is removable to permit the batteries 8 to be inserted and removed. The batteries 8 are inserted between spring contacts 9 in a manner similar to that adopted in cylindrical torch housings. The batteries are connected in a circuit by wires or conductors 10 extending in channels 11 beneath the insert 7 to a pair of electric lamps 12 provided one at each of the corners of the peripheral frame opposite the portion thereof which houses the batteries 8. The circuit comprising the batteries 8 and the lamps 12 includes an on/off switch. This is indicated at 13 and may be manually operable or be automatically closed when the lid is opened and opened when the lid is closed. The switch may incorporate a dimmer device whereby the intensity of the lamps 12 can be controlled.

The corner of the peripheral wall of the insert 7 behind each lamp 12 is oblique to each adjacent side portion of the peripheral wall, for example at substantially 45° thereto, and is metallised to provide a reflective surface 14, or contains a mirror to reflect light from the respective lamp 12 along the interior of each adjacent side portion of the hollow frame. The upper wall of the insert 7 at the mid-point 15 of the long side of the frame and at the ends 16 of the shorter sides adjacent the battery housing is formed with inclined upstanding reflective surfaces 17, 18 respectively, or mirrors, to reflect light from the lamps 12 therebetween from the ends of the respective parts of the hollow frame. The insert 7 has peripheral walls 50 facing the edges of the

mirror 6 and the front walls 51. The peripheral walls 50 are transparent or translucent over their whole lengths to form along the side portions of the frame between the reflective surfaces 17, 18, a luminaire which, when the lamps 12 are switched on, will be illuminated over the whole lengths thereof between the reflective surfaces 17, 18, with light reflected by the reflective surfaces 14, 17, 18 and transmitted through the transparent or translucent inner peripheral walls 50. The outer or front walls 51 may also be transparent or translucent to transmit light forwardly with respect to the mirror 6 or they may be opaque. The luminaire formed by the walls 50, 51 is a part separate from the remainder of the insert 7. The box 1, the lid 2 and the insert 7, together with the separate luminaire, defining the hollow frame and the battery housing may conveniently be moulded from synthetic plastics materials. The hollow frame defined by the insert 7 enables a region immediately in front of the mirror 6 to be illuminated discreetly and uniformly by light transmitted through the inner peripheral walls 50 extending along three sides of the frame. Where the front walls 51 of the insert 19 are also transparent or translucent, a region in front of the mirror 6 is also illuminated by forwardly-directed light.

Referring now to the base 1 of the beauty box shown in Figures 1 and 2, this comprises a bottom wall and upstanding peripheral walls 20 of which the upper edges are abutted by the lower edges of corresponding peripheral walls 5 of the lid when the latter is closed. The base contains a base plate 21 which is shown in Figures 3 and 4. This is made of a moulded or pressed shape, conveniently in a synthetic plastics material, and may be formed with a desired arrangement of recesses to receive articles such as make-up pencils or combs and cosmetics. Typical recesses are indicated at 22, 23, 24 and 25 in Figures 1, 2, 3 and 4.

The base plate 21 has two pairs of longitudinally-extending slots 26, 27 therein through each of which a leg on the aforesaid lower slidable tray is to be passed and along which it is to slide,

as hereinafter described with particular reference to Figures 5 and 6. Each of the slots 26, 27 has a notch 28, 29 in an edge thereof adjacent its outboard end to determine the open positions of the respective trays. Each of the lower slidable trays comprises

5 a flat tray-like portion 30 having in its upper surface a shallow recess 31 to contain, for example, cosmetics. Only one of the trays is illustrated. The other is of the same shape and size and may have a similar recess 31 or a different recess or recesses therein. Portion 30 of each tray has a pair of longitudinally-

10 extending legs 32, 33 which are positioned at a lower level than the respective portion 30 and are integrally joined thereto by a limb 34 extending perpendicularly to the leg which is therefore in the shape of an 'L'. The limb 34 is slidable along the respective slot 26, 27. To assemble the trays 30 on the base

15 plate, the legs 32, 33 are pushed through the respective slots 26, 27 from the top until the limbs 34 are located for sliding in the slots. The legs 32, 33 therefore extend parallel to the plane of the base plate 21 but at a level below its upper surface. One leg 32 of each tray is in the form of a longitudinally-extending

20 notch and the other leg 33 of each tray is in the form of a longitudinally-extending hook, as shown in Figures 5 and 6. The legs 32, 33 of each tray 30 are opposed with respect to each other and so the leg 33 of one tray slidably interfits with the leg 32 of the other tray 30 and vice versa. Thus as the legs 32, 33 of

25 the two trays 30 slidably interfit, they are self-supportive and so each tray 30 is slidable on the upper face of the base plate 21 and is maintained parallel thereto. Furthermore the interfitting legs 32, 33 of the two trays 30 are guided for sliding between pairs of longitudinally-extending lugs 35, 36 and 37, 38

30 in the base-plate 21. The two trays 30 are each slidable from a closed position in which their inner edges 39 abut at the transverse centre-line Y-Y shown in Figure 2 to an open or partly-open position in which the tray 30 extends beyond the base in the position shown in Figure 1. In a partly- or fully-open position,

35 the tray 30 is supported in the manner of a cantilever by its legs 32, 33 being supported by the respective lugs 35, 36 or 37, 38 and

where the other tray 30 is still in its closed position also by interfitting between the pairs of legs 32, 33. The respective trays 30 are also located in their fully-open positions by the limbs 34 being located in the respective notches 28, 29. The trays 30 are
5 slidable from their closed positions independently of each other and so it is possible for both trays 30 to be closed, for one tray 30 to be open and the other closed or for both trays 30 to be open.

Each side face of each tray 30 is bevelled and is formed with a longitudinally-extending groove 40. On top of each tray 30 there
10 is a further slidable tray 41. One of these is shown in Figures 7 and 8. These upper trays 41 also appear in Figures 1 and 2. The upper trays 41 have bevelled side faces 42 which slidably fit over the corresponding bevelled side faces of the respective tray 30. Each of the side faces 42 of the upper trays 41 has a longitudinally-
15 extending rib 43 on its inner face which slides along and is retained in the respective groove 40 in the side face of the tray 30. In this way the upper trays 41 are slidable on and are also carried by the respective trays 30 between closed positions as shown in Figures 1 and 2 in which their inner transverse edges 44
20 abut along the transverse centre-line YY and positions in which they can individually be slidable on the trays 30 as the latter are opened and can themselves be opened individually with respect to the respective tray 30 to an overhung position, as shown in Figure 1. The interfitting ribs 43 and grooves 40 together guide
25 the respective upper tray 41 for sliding on the tray 20 and hold the upper tray 41 firmly in its open position as shown in Figure 1. Each upper tray 41 may have a recess or plurality of recesses 45 in its top surface for holding, for example, cosmetics. The trays 30 and 41 are each preferably moulded from a synthetic
30 plastics material. Alternatively, the upper surfaces of the upper trays 41 can be plane and so simply form covers for the trays 30.

The trays 30 and 41 may be comparatively thin and so be housed when they are all in their closed positions within the lid 2,

when the latter is closed. Thus in this very compact arrangement a large number of recesses forming compartments are provided in total in the respective trays 30, 41 and in the base-plate 21.

5 Although the outer end edges of the trays are straight, they may alternatively be shaped in a pleasing curve.

Instead of the ribs 43 being on the upper trays 41 and the grooves 40 being formed on the lower trays 30, the ribs 43 may extend outwardly from the sides of the lower trays 30 and the grooves 40 may be formed in the side faces of the upper trays 41.

10 Although in the example described, there are two pairs of trays 30 and 41, only one pair of superimposed trays 30, 41 may, in some applications, be provided. Furthermore the upper trays 41 may, in some applications, be omitted.

15 Although in this example the trays 30, 41 have been described as trays, they need not have recesses or compartments therein and may instead be simple slides.

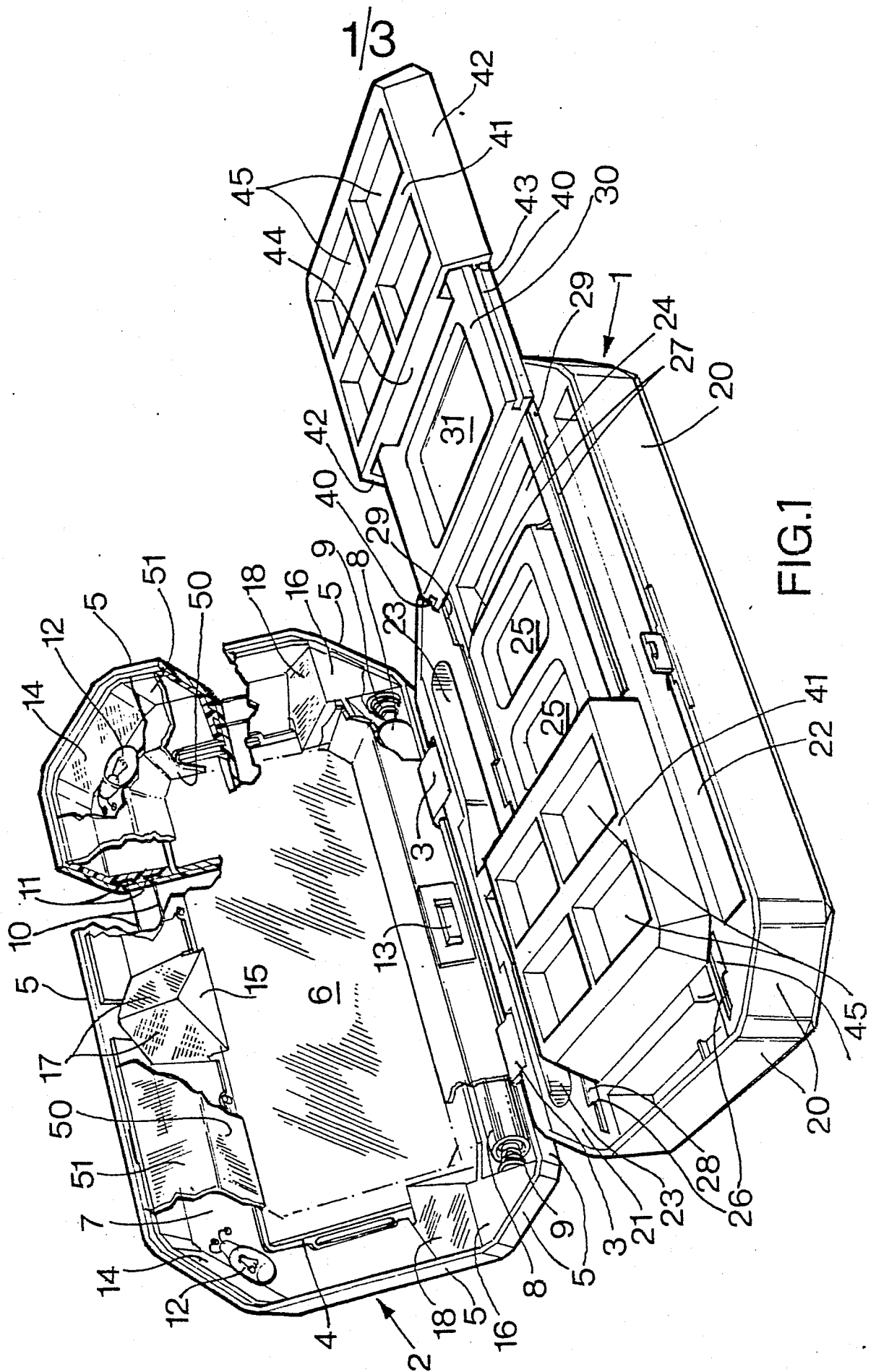
CLAIMS

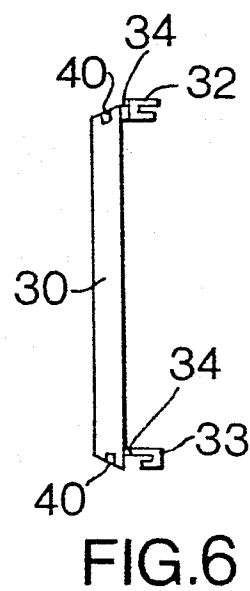
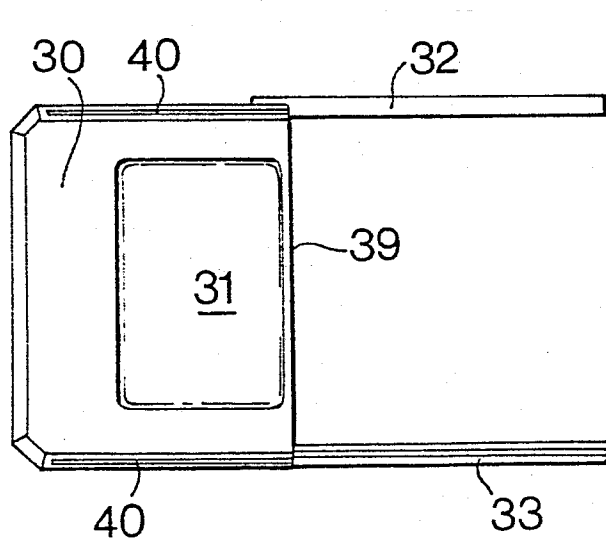
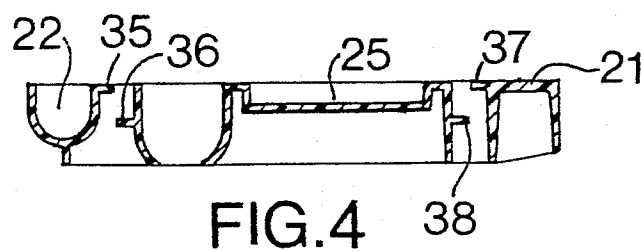
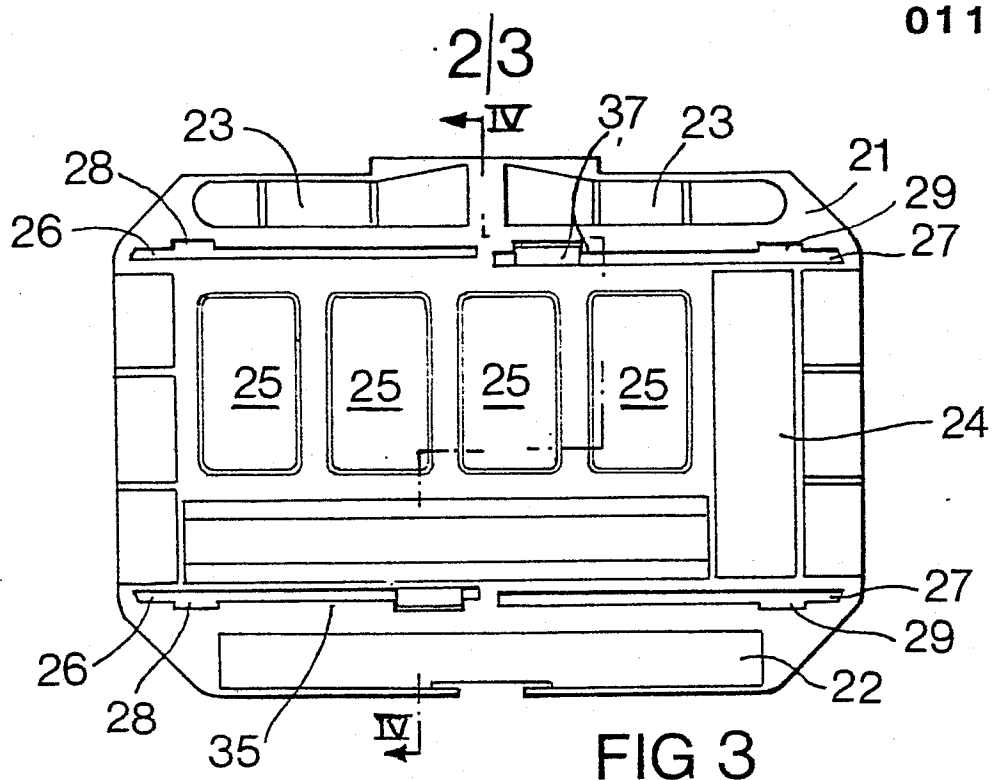
1. An illuminated mirror assembly having a reflective base defining the mirror (6) and a frame (7, 50, 51) extending peripherally around the mirror, characterised in that the frame (7, 50, 51) is of hollow cross-section and contains
5 within the hollow cross-section at least one electric lamp (12) and a plurality of reflective surfaces (17, 18, 14) to direct light from the or each lamp (12) peripherally of the frame (7, 50, 51) over at least a substantial part of its periphery, at least the inner peripheral wall (50)
10 or peripherally-extending portion thereof, being transparent or translucent, whereby a region immediately in front of the mirror (6) and bounded by the frame (7, 50, 51) will be illuminated on energisation of the lamp or lamps (12) by light transmitted from within the hollow frame (7,50,51)
15 through said transparent or translucent wall (50) or wall portion.
2. A mirror assembly as claimed in Claim 1 in which the forwardly-facing wall (51) of the frame (7, 50, 51) is also transparent or translucent over at least part of its
20 peripheral length, whereby light is transmitted forwardly of the mirror assembly.
3. A mirror assembly as claimed in Claim 1 or 2 in which there is an internal reflective surface (17, 18) positioned at each end of a portion of the frame (7, 50, 51) to be
25 illuminated by the lamp (12) or each of the lamps, the lamp (12) or the respective lamp being positioned between the or the respective pair of reflective surfaces (17, 18).
4. A mirror assembly as claimed in Claim 3 in which there is a reflective surface (14) positioned internally of the
30 frame (7, 50, 51) in the immediate vicinity of the or each lamp (12).

5. A mirror assembly as claimed in any preceding claim in which the lamp or lamps are connected to one or more batteries housed within the hollow frame.
- 5 6. A mirror assembly as claimed in any preceding claim in which the mirror assembly forms or is incorporated into the lid of a box or case.
- 10 7. A mirror assembly as claimed in Claim 6 in which the body or base of the box or case includes a slidable tray assembly comprising at least a base (21) and a slide (30) slidable over the base (21) from a closed position in which the slide (30) covers at least a portion of the base (21) and an open position in which the slide (30) extends from one end of the base (21) and is supported in the manner of a cantilever, thereby to expose the portion of
- 15 the base (21) the slide (30) had covered in said closed position, the or each slide (30) having at the end thereof which is inboard of the base, a downwardly-extending L-shaped leg (34,32,33) having a first limb (34) which passes through a slot (26,27) in the base (21) to the
- 20 underneath face thereof, the slot (26,27) extending longitudinally of the base (21) to permit the slide (30) to be moved over the base (21) between said closed and open positions, the leg also having a second limb (32,33) which extends longitudinally of the base (21) beneath the
- 25 base in a direction away from said inboard end of the slide and which is supported and guided in a guideway (35,36; 37,38) mounted on the underneath face of the base (21), the slide (30) being supported in the manner of a cantilever, when it is in the open position, by said second limb (32, 33).

8. A box or case as claimed in Claim 7 in which the slide has a pair of said L-shaped legs (34,32,33) positioned one at or adjacent each side edge of the slide (30), the base (21) having a corresponding pair of longitudinally-extending slots (26,27) therein in each of which the first limb (34) of the respective leg (34,32,33) is slidable and a pair of respective guideways (35,36; 37,38) beneath the base (21).
9. A box or case as claimed in Claim 8 in which the slidable tray assembly has a pair of said slides (30), each movable in opposite directions between a closed position in which the inboard ends (39) of the slides (30) abut at a position substantially mid-way between the ends of the base (21) and an open position in which each slide (30) is supported in the manner of a cantilever by its respective legs (32, 33) and extends from opposed outboard ends of the base (21) to expose the base.
10. A box or case as claimed in Claim 9 in which said second limbs (32, 33) of the legs of the pair of slides (30) are supported side-by-side in common guideways (35,36; 37,38), whereby said second limbs (32,33) of the legs of each of the slides (30) are mutually supportive, thereby to provide increased stability when the slides (30) are closed and when they are partly or fully open.
11. A box or case as claimed in any one of Claims 7-10 in which the or each slide carries a further slide (41) guided for sliding movement thereon longitudinally of the respective slide (30), whereby the or each further slide (41) is movable between open and closed positions in which it will respectively expose and cover the respective lower slide (30), irrespective of said lower slide (30) being in the closed or open position relative to the base (21).

12. A box or case as claimed in any one of Claims 7-11 in which any of the slides (30, 41) and the base (21) is in the form of a tray having one or more open compartments (22, 23, 24, 25, 31, 45) in its upper surface, which compartments are open or closed depending on the position of an immediately higher slide (30, 41) or the lid (2).
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