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R. A. OWEN  
LIGHTED COMPACT

3,217,154

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2 Sheets-Sheet 1

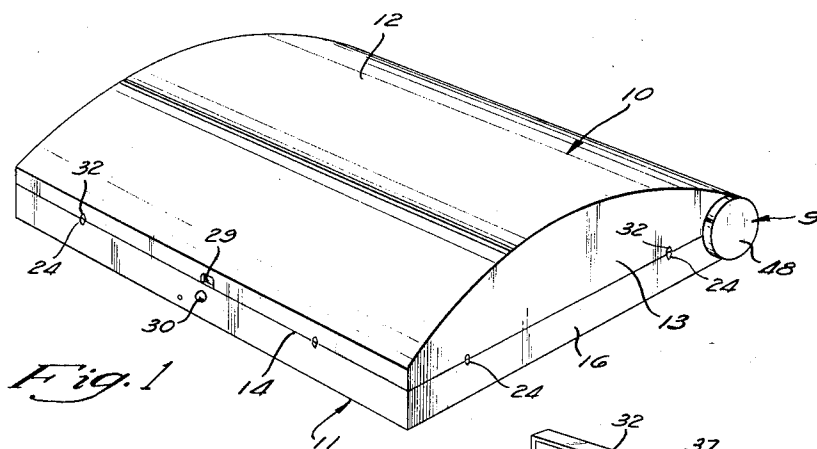


Fig. 1

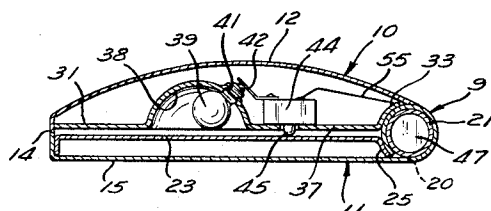


Fig. 4

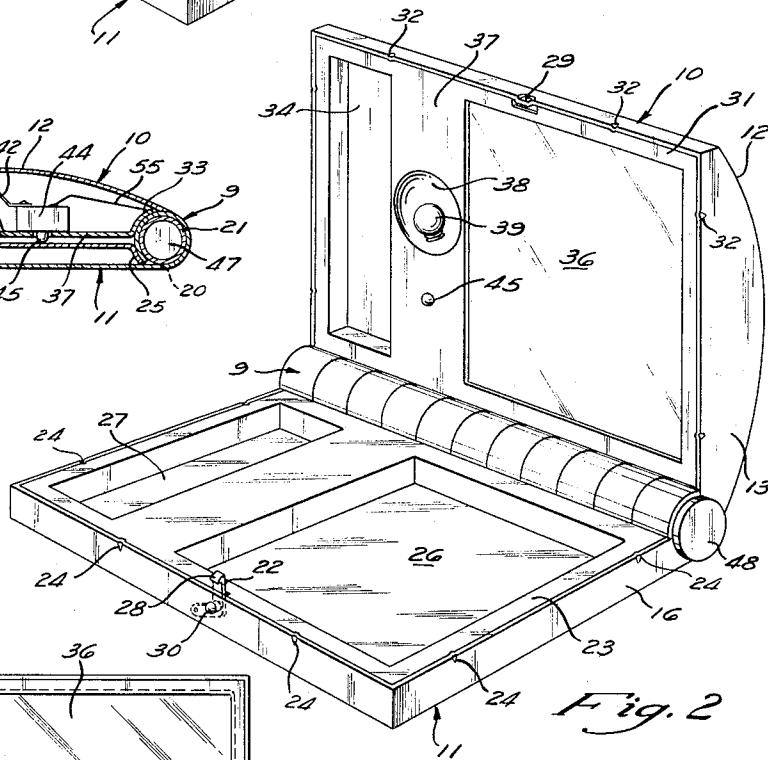


Fig. 2

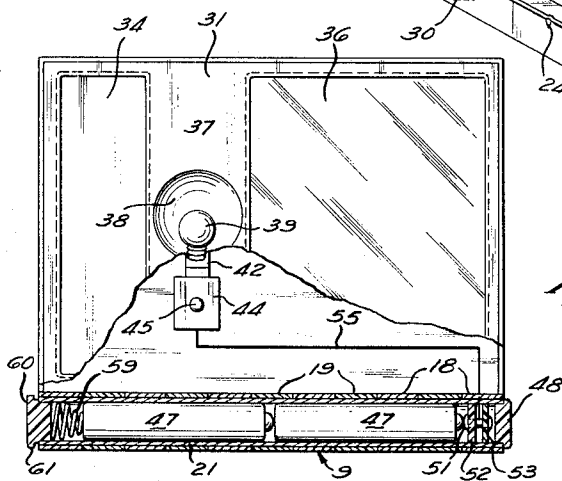


Fig. 3

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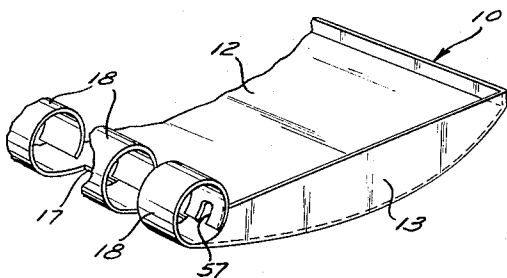


Fig. 5

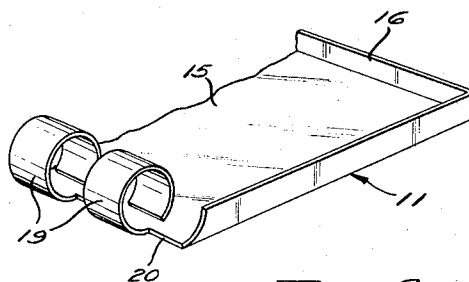


Fig. 6

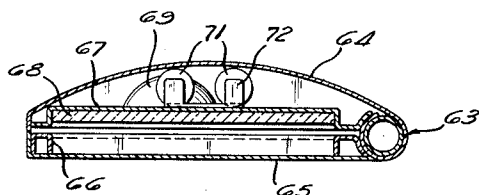


Fig. 7

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## LIGHTED COMPACT

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This invention relates generally to ladies compacts and more particularly to a compact having a built-in lighting unit for illuminating the user's face.

It is a primary object of this invention to provide a ladies compact having a built-in light for illuminating the user's face which is small and compact in size and shape to allow it to fit into a purse and which is readily adaptable for the application of exterior ornamentation in a variety of ways.

It is another object of this invention to provide a ladies compact having a built-in light to illuminate the user's face which is constructed and arranged in a manner similar to that of ordinary compacts to allow it to be easily held in the hand and used in a manner similar to that customary for ordinary compacts.

It is another object of this invention to provide a ladies compact having a built-in light which gives desirable lighting for the user's face and in which the batteries and other electrical equipment for the light require a minimum of space to allow maximum interior space for powder, a lipstick, and similar materials.

It is another object of this invention to provide a ladies compact having a built-in light having a novel construction for mounting the batteries in which the batteries are carried as an integral part of the hinge structure between the two parts of the compact case.

It is still another object of this invention to provide a ladies compact having a built-in light which allows easy servicing to replace the batteries and light bulb as they become worn out from use.

It is still another object of this invention to provide a ladies compact having a built-in light to illuminate the user's face which is simple in construction and adaptable to low cost manufacture.

Additional objects and advantages of this invention will readily become apparent to those skilled in the art upon a more complete understanding of the preferred embodiment shown in the accompanying drawings and described in the detailed description.

In the drawings:

FIGURE 1 is a perspective view of a ladies compact according to the present invention;

FIGURE 2 is a perspective view similar to FIGURE 1 but showing the compact in the opened position;

FIGURE 3 is an elevational view with parts broken away of the lid of the compact;

FIGURE 4 is a cross-sectional view through the compact;

FIGURE 5 is a fragmentary perspective view of the lid member;

FIGURE 6 is a fragmentary perspective view of the bottom case member; and

FIGURE 7 is a cross-sectional view showing a modified embodiment of the invention.

Referring now to the drawings in greater detail, the compact as shown in FIGURES 1 and 2 includes a lid or cover member 10 and a bottom or case member 11 which are joined together along their rearward edges by a hinge structure indicated generally at 9. The lid member 10 is generally rectangular in shape and has an arcuate upper surface 12 and side walls 13. The bottom member 11 has a flat bottom surface 15 from which side walls 16 extend upward to meet the side walls 13 of the cover member when the compact is closed. Preferably

the cover and bottom members 10 and 11 are formed from thin sheet metal to give them sufficient strength and rigidity, while permitting easy fabrication of the parts.

The case members 10 and 11 are held together along the front edge 14 by a suitable catch such as spring catch 22 secured to the inside of the bottom member 11 as shown in FIGURE 2. Catch 22 has a hook portion 28 which engages a detent 29 formed on the inside of the cover member 10 and is released to open the compact by depressing a button 30 which projects through a suitable opening in the side of the bottom member 11.

The hinge 9 is formed by curved projections or fingers 18 formed along the rearward edge of cover 10 which alternate with similar curved projections or fingers 19 along the rearward edge of the bottom member 11. The projections 18 and 19 when interfitted define a tubular space into which is fitted a tubular hinge member 21. The projections 18 on the cover member 10 are formed to have inner diameter slightly less than the outer diameter of tube 21 so that the tube is clamped or gripped tightly by these projections and will rotate with the lid 10. The projections 19 on the bottom member 11 are made slightly larger in diameter so that they will rotate freely on the tube 21. This arrangement provides a strong and rigid hinge which includes a built-in stop to limit the opening of the two members to an angle of preferably somewhat greater than 90°, as shown in FIGURE 2. When the cover is raised to this position, the rearward edge 17 of the top surface 12 comes into abutting contact with the rearward edge 20 of bottom surface 15 to positively prevent further rotation of the case members 10 and 11. This feature allows the user of the compact to hold the open compact by the cover 10, so that when the cover 10 is held in a convenient position, the bottom member 11 is able to open only to a horizontal position to prevent spilling of the contents of the compact.

A bottom liner or insert member 23 is fitted within the bottom member 11 and held in place by means of detents 24 formed along the upper edge of the bottom side walls 16, and also by a bent projection 25 along the rearward edge of the bottom liner 23 which fits beneath the hinge projections 18 and 19, as can be seen most clearly in FIGURE 4. The bottom liner 23 is provided with a lipstick recess 27 along one side and with a powder recess 26 at the other side. The bottom liner 23 may be formed from thin sheet metal or it may be molded from a suitable plastic. If desired, cloth or paper linings may be provided for the powder and lipstick recesses 26 and 27.

The cover member 10 is also provided with a liner 31 preferably formed from sheet metal. Liner 31 is held in place within the cover 10 by means of detents 32 along the cover side walls 13 and by means of a bent projection or edge 33 which fits beneath curved projections 18 and 19 of the hinge structure. Liner 31 is provided with a rectangular recess 34 in alignment with the lipstick recess 27 in the bottom liner 23 to provide a space for a lipstick having a vertical extent between the arcuate surface 12 of cover 10 and the bottom surface 15 of bottom member 11. With this arrangement, the thickness of the compact is reduced to that minimum necessary to provide adequate clearance for the lipstick held within the recess 27.

A mirror 36 is secured to the liner 31 in a position to overlie the powder recess 26 when the compact is closed. The mirror 36 is spaced from lipstick recess 34 by a flattened area 37 which carries a concave reflector recess 38 formed in the metal of the liner 31. The inner surface of the reflector recess 38 is finished with a brushed or frosted finish to diffuse the light from the light bulb 39 which is shown as mounted in a threaded opening 41 in

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the lower edge of recess 38. Of course, a separate lamp socket can be provided at this point to receive the light bulb 39, and this construction would be resorted to if the liner 31 was made from a non-conductive material such as molded plastic. However, advantage may be taken of the metallic construction of liner 31 so that the threaded opening 41 not only serves as a socket to hold light bulb 39, but also as the contact for one side of the electrical circuit. The circuit for light bulb 39 is completed by a spring contact 42 (see FIGURE 4) which is mounted on a switch 44 secured to the inner side of flattened surface 37 below the reflector recess 38. Switch 44 is operated by a switch button 45 which projects through a suitable opening in the face of flattened area 37 so that it may be easily depressed by the user as she holds the compact in her hand.

The batteries 47 are carried within the tubular hinge member 21, as shown most clearly in FIGURE 3. At the one end, the tube 21 is closed off by a button or plug 48 which is fixedly secured in the end of the tube. A battery contact 51 adapted to contact the center or positive battery terminal is mounted between a pair of insulating wafers 52 and 53 and projects beyond the inner wafer 52 to contact the battery terminal. A wire 55 is secured to battery contact 51 between the wafers 52 and 53 and extends radially outward through an opening in the tube 21 and a notch 57 formed in the end one of the curved projections or fingers 18 (see FIGURE 5). The wire 55 then passes through the space between the cover 10 and its liner 31 to a terminal on the switch 44. To complete the electrical circuit, a spring 59 engages the other end or casing of the batteries 47 and makes contact directly to the tube 21 so that the tube 21 and cover member 10 provide the ground circuit to the light bulb 39 through the contact at the threaded opening 41. If liner 31 is made from plastic, then a second wire will be used between the bulb and tube 21 in a manner similar to wire 55. A removable plug 60 is secured in the end of tube 21 to hold the spring 59 and batteries 47 in place within the tube. Plug 60 may be provided with a projecting rim 61 so that it may be easily pried out and removed for replacement of the batteries. The plugs 48 and 60 have been shown as made from plastic, but they may also be made from sheet metal and recessed completely within tube 21.

It will be seen that the compact allows space for both powder or similar makeup and for a lipstick of standard size. The mirror 36 permits the user to look at her face and the light bulb 39 may be turned on simply by depressing the switch button 45. By providing the reflector recess 38 or bulb 39 with a frosted surface, the light may be diffused to provide a softer level of radiation. Since the light is on the same horizontal level as the mirror 36 and since the reflector focuses the light in a direction substantially perpendicular to the mirror, this arrangement provides direct lighting on the user's face without producing shadows which would give a distorted appearance to the user's face. The batteries 47 may be obtained in very small sizes, having a diameter substantially the same as that of an ordinary lead pencil so that the diameter of the tubular hinge member 21 may be kept quite small. This arrangement allows the compact to be quite small in size and in general the principal factor limiting the size to which the compact may be reduced is the size of the lipstick which must be of sufficient size to allow it to be easily held in the hand during use. Of course, if it is not desired to provide a recess for the lipstick, the overall length of the case may be greatly shortened and only one battery used, or one battery can be mounted in the hinge and one in the cover as hereinafter described.

The shape of the arcuate surface 12 of the cover 10 not only provides space to give the lipstick recess sufficient depth to receive a lipstick of the ordinary size, but it also allows recessed mounting of the light bulb 39 so that the reflector recess 38 surrounding the bulb does not project above the surface of the flattened area 37. If it is desired

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to make the compact smaller in size, as is possible when the lipstick recess is not present, the arcuate surface 12 of the cover 10 can be flattened considerably, in which case the light bulb 39 will project above the surface of the flattened area 37. In such a case, a recess can be provided in the surface of the bottom liner 23 to receive the light bulb when the compact is closed.

The general arrangement of the compact is not unlike that of ordinary compacts having a base or bottom member to receive the various materials carried and a hinged lid carrying a mirror. Thus the user is able to operate the compact in the usual manner since it opens to an upright position in a manner in which it may be easily held in the hand while allowing easy access to the contents in the bottom member. By having the case of the compact formed in two members joined together along a hinge, the compact may easily be decorated to give a pleasing appearance by using a textured form of sheet metal for the members 10 and 11, or alternatively they may be covered with leather, cloth or a plastic material as desired. Of course, additional ornamentation such as medallions and the like may be attached to the exterior surfaces of the casing members 10 and 11 without affecting the operation of the compact.

An alternative mounting for the batteries is shown in the embodiment of FIGURE 7. The compact shown therein is generally arranged in the same manner as the compact shown in FIGURES 1 through 6, except that the hinge may be made smaller in size since the batteries are not mounted in the hinge. The compact in FIGURE 7 includes a lid 64 and bottom member 65 similar to the members 10 and 11 and joined together by a hinge structure 63. The bottom member 65 has a bottom liner 66 and the lid 64 likewise has a top liner 67 carrying a mirror 68 and a recessed reflector indicated at 69. The batteries indicated at 71 are held in suitable clamps 72 secured to the top liner 67 and are wired in the usual fashion to a switch for operating a light bulb in the recessed reflector 69. Since, as previously stated, the lid 64 is arched to allow sufficient space for a lipstick, while the area for the powder can generally be made quite shallow, there is sufficient space between the top liner 67 and the lid 64 for mounting the batteries 71 without the necessity of changing the shape of lid 64 to provide additional space for the batteries.

While the preferred embodiments of the compact have been shown and described in considerable detail, it is understood that this invention is not limited to the particular forms, and various modifications and rearrangements as will appear to those skilled in the art may be made without departing from the scope of the invention as set forth in the following claims.

What is claimed is:

1. A compact comprising a bottom case member, a cover member for said bottom case member, hinge means joining said cover member to said bottom case member for pivotal movement between open and closed positions, said hinge means including a tubular hinge member, first projecting finger means surrounding said tubular hinge member and secured to said cover member, second projecting finger means surrounding said tubular hinge member and secured to said bottom case member, one of said finger means being adapted to clamp said tubular hinge member to prevent relative rotation between said tubular hinge member and said one finger means, the other of said finger means being rotatably journaled on said tubular hinge member, said cover member providing an inner surface exposed when the cover member is in the open position, a mirror mounted on said inner surface, a light bulb, means mounting said light bulb on said inner surface adjacent said mirror, an electric battery mounted within said tubular hinge member, and means providing an electric circuit between said light bulb and said electric battery.

2. A compact comprising a bottom case member, a

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cover member for said bottom case member, hinge means joining said cover member to said bottom case member for pivotal movement between open and closed positions, said hinge means including a tubular hinge member, first projecting finger means surrounding said tubular hinge member and secured to said cover member, second projecting finger means surrounding said tubular hinge member and secured to said bottom case member, said first finger means being adapted to clamp said tubular hinge member to prevent relative rotation between said tubular hinge member and said cover member, said second finger means being rotatably journaled on said tubular hinge member, said cover member providing an inner surface exposed when the cover member is in the open position, a mirror mounted on said inner surface, a light bulb, means mounting said light bulb on said inner surface adjacent said mirror, an electric battery mounted within said tubular hinge member, contact means for said electric battery within said tubular hinge member, an opening in the wall of said tubular hinge member adjacent

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said contact means, and means providing an electric circuit between said light bulb and said electric battery, said last mentioned means including at least one wire passing radially outward through said opening in said tubular hinge member to extend between said contact means and said light bulb.

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