March 6, 1956 O. MORNINGSTAR ET AL 2,737,189

LOOSE COSMETIC POWDER COMPACT

Filed Oct. 11, 1954 2 Sheets-Sheet 1

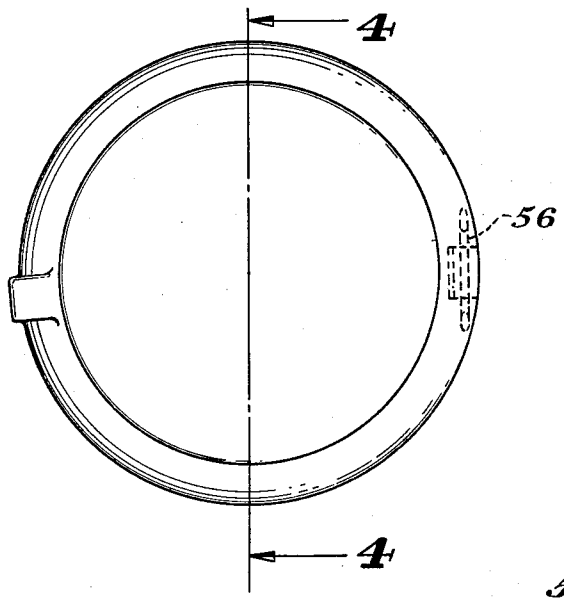


Fig. 1

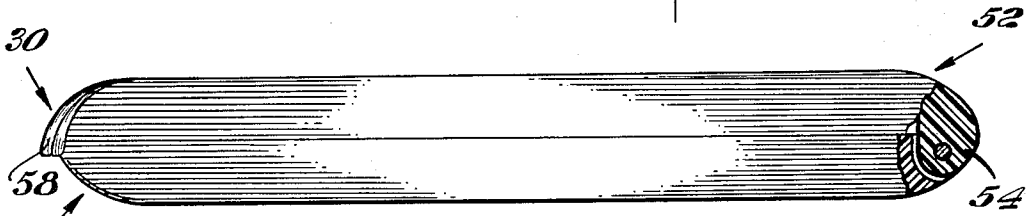


Fig. 2

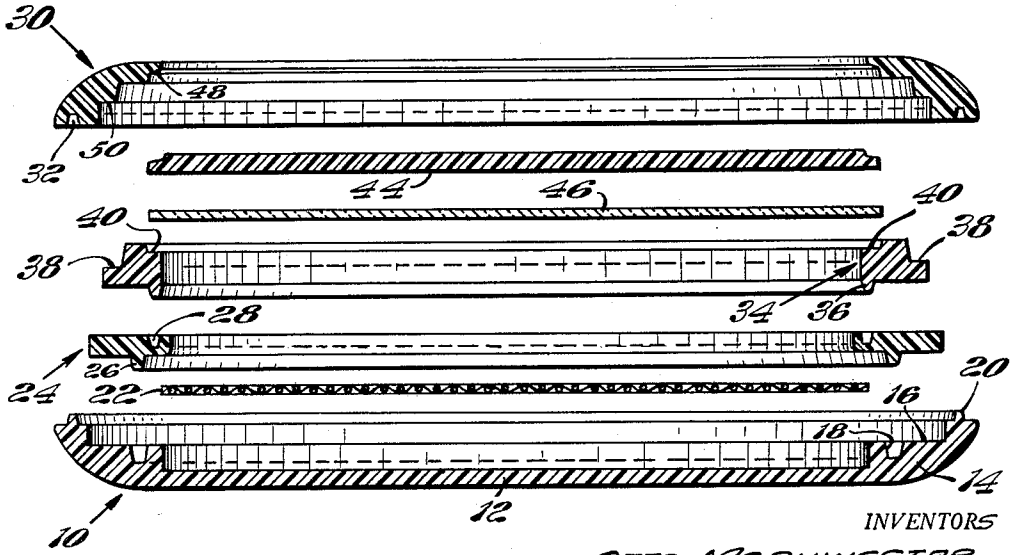


Fig. 3

INVENTORS
OTTO MORNINGSTAR
AND JOHN W. SOLOMON

BY
Kenway, Jenney, Witter & Hildreth

March 6, 1956 O. MORNINGSTAR ET AL 2,737,189

LOOSE COSMETIC POWDER COMPACT

Filed Oct. 11, 1954

2 Sheets-Sheet 2

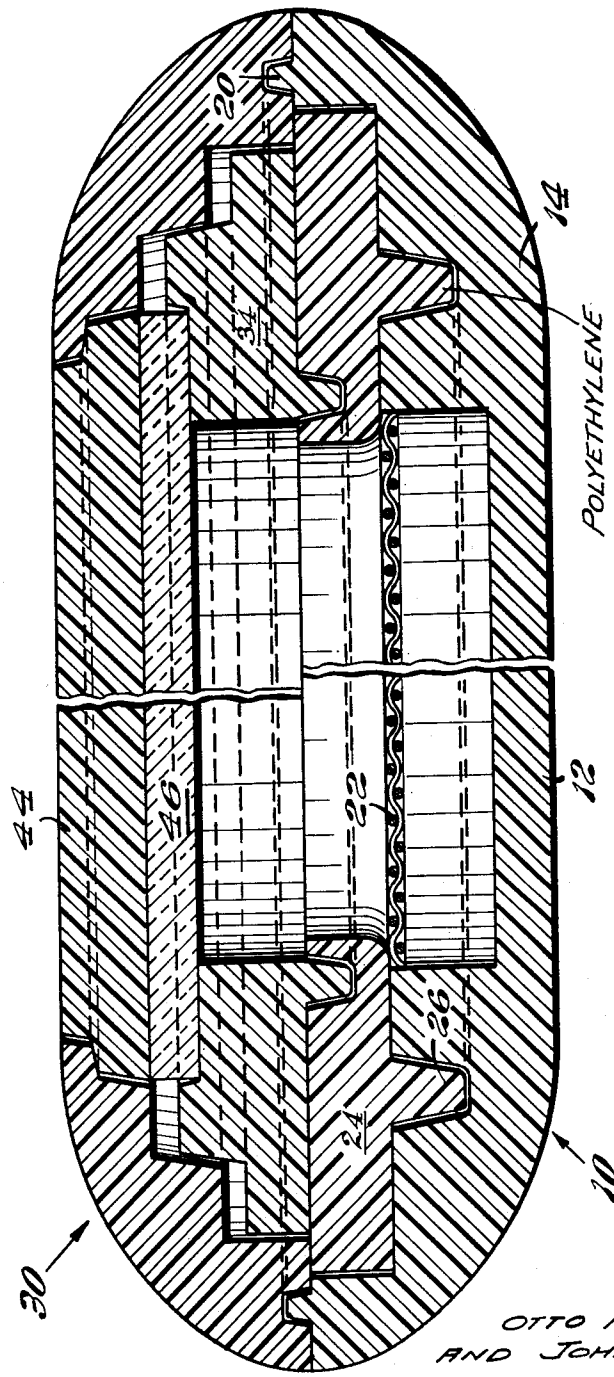


Fig. 4

INVENTORS
OTTO MORNINGSTAR
AND JOHN W. SOLOMON

BY
Kenway, Jenney, Witter & Hildreth

United States Patent Office 2,737,189 Patented Mar. 6, 1956

2,737,189

LOOSE COSMETIC POWDER COMPACT

Otto Morningstar, Newton, Mass., and John W. Solomon, New York, N. Y.

Application October 11, 1954, Serial No. 461,438

6 Claims. (Cl. 132—83)

This invention relates to cosmetic boxes, and more particularly to a compact suitable for carrying loose cosmetic powders.

The cosmetic industry has long been faced with the difficult task of developing an inexpensive box capable of retaining loose powders. The problem of constructing a compact of this character was a particularly difficult one, for substantially perfect seals are necessary between the cover and case to prevent leaking of the powder through the seams of the box. Heretofore the industry has only partially overcome the numerous difficulties by fabricating from metal compacts to hold loose powder. The metal edges of the compact, with great care, could be shaped to form an adequate seal to retain the powder but this necessarily created considerable expense on the part of the manufacturer, and although the operability of the seal between the cover and case was adequate, it did leave much room for improvement.

The use of metal in the construction of compacts gave rise to other problems. For example, when a tongue and groove were formed in the cover and case to provide a seal, powder would collect in the groove. Lacking flexibility, the groove could not expand to receive the tongue when powder partially filled it.

Ultimately, the cosmetic industry was forced to provide loose powder substitutes. Constant spilling of the loose powder from the relatively expensive metal compacts virtually gave birth to the cake powder industry. The inability of the cake powder to spill permitted the use of highly decorative and relatively inexpensive polystyrene in the manufacture of compacts. The cake powder did not require a highly efficient seal and, therefore, relatively rigid polystyrene provided the ideal substance to permit inexpensive fabrication of the cake powder compact.

The primary object of this invention is to greatly reduce the cost of constructing a loose powder cosmetic box.

Another object of this invention is to provide a highly efficient plastic seal between the cover and case of a polystyrene compact which prevents seeping of loose powder from the interior of the case.

To accomplish these and other objects, we provide as one important feature of this invention a polyethylene gasket on the rim of a polystyrene cosmetic case.

Still another important feature of this invention is the provision of a line seal between a relatively rigid plastic bezel carried by the cover of the compact and the polyethylene gasket carried on the rim of the case.

Still another feature of this invention is the provision of a tongue and groove connection between the rigid case and cover of the compact in addition to the seal provided by the bezel and gasket.

These and other objects and features of this invention will be better understood and appreciated from the following detailed description of a preferred embodiment thereof selected for purposes of illustration and shown in the accompanying drawing in which:

Fig. 1 is a plan view of a compact constructed in accordance with this invention,

Fig. 2 is an elevation view partially in section of the compact illustrated in Fig. 1,

Fig. 3 is an exploded view in section taken along sight lines 4—4 of Fig. 1, and

Fig. 4 is a view in section similar to Fig. 3 showing the various elements of the compact in assembled position.

Proceeding now to a detailed description of the invention, an inspection of the drawing reveals that the elements of the compact are organized within a case **10** and a cover **30**. The case and cover may readily be molded from polystyrene or other rigid plastic material and may be ornamented if desired.

The case **10** is provided with a relatively thin bottom wall **12** which cooperates with a cylindrical side wall **14** to form a shallow cavity for receiving loose cosmetic powder. The wall **14** intermediate its upper and lower portions is provided with an annular seat **16** in which is formed an annular groove **18**. The upper terminal portion of the wall has integrally molded with it a tongue **20** which cooperates with a slot **32** in the cover section.

Seated on the surface **16** of the wall **14** is a relatively flexible ring or gasket **24** preferably molded from polyethylene. The gasket **24** has integrally formed therewith a tongue **26** which is received by the slot **18** in the annular seat **16**. The gasket may be retained in position by pressing the tongue in the slot. The flexible tongue of polyethylene will by pressing, form a most satisfactory seal with the case. Not only does this eliminate the need of cementing the gasket to the wall but further permits the removal of the gasket when desired. The advantages derived from being able to remove the gasket will be made clear in the description that follows.

The gasket **24** is of a size to extend over the radially inner edge of the wall **14** of the case. A cloth compact sifter **22** which rests on top of the loose powder within the case and is of a diameter substantially equal to the diameter of the cavity is retained in position by the slight overhang of the gasket. The cooperation of the gasket with the sifter in this manner insures against slipping of the sifter and, therefore, prevents spilling of the powder when the cover is open. In addition, although the sifter is retained in position by the gasket, to refill the compact it is only necessary to remove the gasket from the seat **16** which permits withdrawal of the sifter. After the case has been refilled, merely placing the sifter above the powder and replacing the gasket on its seat insures against spilling of the compact contents.

Proceeding with the description of the gasket, it will be observed that a slot **28** is formed in the upper surface thereof adjacent its inner radial edge. The slot **28** cooperates with the tongue **36** of a bezel **34** forming part of the cover assembly to provide a line seal between the cover and case sections of the compact.

The annular bezel **34** molded of rigid plastic material, preferably polystyrene, performs a dual function in the compact. Most important, the rigid tongue **36** carried by its lower face cooperates with the inner flexible wall which defines the gasket groove to provide a substantially perfect seal for the cover and case assemblies. Furthermore, the bezel cooperates with the cover **30** to carry an ornamental disc **44** and a mirror **46** as part of the cover assembly.

The stepped configuration of the cover **30** provides seats for the disc **44**, the mirror **46**, and the bezel **34**. The assembled physical relationship of these elements is best illustrated in Fig. 4. After the disc **44** and the mirror **46** are placed on their seat **48**, the bezel is mounted on the cover with its faces **38** and **40** abutting the seat **50**

and the peripheral portion of the mirror 46, respectively. To retain the bezel, disc, mirror, and cover in their assembled position, cement or other adhesive material may be employed. Once the cover section is assembled, no need will arise for dismantling these elements and, therefore, the use of adhesive does not limit the life or restrict the use of the compact.

Having described the cover and case sections of the compact it will be appreciated that the various elements which comprise the assembly with the exception of the mirror and the sifter readily may be formed by conventional injection molding machines. Both polystyrene and polyethylene are conveniently worked by such apparatus which provides an inexpensive means of fabricating the compact. Moreover, the polystyrene bezel and polyethylene gasket achieves a virtually perfect seal for the cavity carrying the loose powder, by means of the cooperating tongue 36 and groove 28 in the respective parts. A second tongue and groove 20 and 32 formed in the case 10 and the cover 30 respectively constitute added protection against seepage of the contents of the compact through the seam of the box.

To secure the cover assembly to the case, a hinge generally designated by the numeral 52 is provided. A flange 54 integrally molded with the cover extends downwardly into a recess formed in the case, and is held in position by a pin 56 which passes through the flange and engages the walls of the recess. Across the diameter of the compact a latch 58 is provided to yieldably retain the cover to the case. The latch may be of any form, the details of which form no part of this invention. Obviously, the elements comprising the latch may be integrally molded with the cover and case sections, as illustrated.

Having thus described in great detail all of the components of the compact, the advantages derived therefrom will be fully appreciated. When closed, not only is a tongue and groove provided to seal the case and cover but a second seal of much greater effectiveness is provided between the bezel and gasket. The flexibility of the walls defining the groove in the gasket permit a negative clearance between the tongue and groove, thereby guaranteeing a positive seal between these elements. The difficulties which are encountered by powder partially filling the grooves of metal cases is entirely eliminated, for a slight pressure on the cover will cause the groove 28 to enlarge and receive the tongue 36, even though powder has partially filled it.

Another important advantage is achieved by employing the teachings of this invention. With the exception of the mirror and cloth sifter, the entire unit may be molded which greatly reduces the fabricating costs. Furthermore, the plastic compact invites the ornamentation so much desired by women.

In essence, this invention embodies an inexpensive and highly efficient compact particularly designed to hold loose powder. From an appreciation of the foregoing description numerous modifications of this invention will be readily apparent to one skilled in the art to which this invention pertains. Therefore, it is not intended that the scope of this invention be limited to the specifically described and illustrated embodiment, but only by the appended claims and their equivalents.

What we claim as new and desire to secure by Letters Patent of the United States is:

1. A compact comprising a case having an annular side wall and a bottom wall defining a cavity, a seat formed in said side wall intermediate its lower and upper marginal portions, a groove formed in said seat, a polyethylene gasket removably mounted on said seat and having a downwardly projecting tongue terminating in said groove, a cover member hinged to said case, a polystyrene bezel secured to said cover member and abutting said gasket when said cover member is in its closed position, and a cooperating tongue and groove formed in said gasket and bezel to seal the cavity when said cover is in its closed position.

2. A compact comprising a relatively shallow rigid plastic case, said case having walls defining a cavity in said case, a gasket seat formed in said walls intermediate their upper and lower terminal portions, a polyethylene gasket removably mounted on said seat and having a groove formed in its upper face, a cover member hinged to said case for closing said cavity, said cover having walls adapted to abut against the upper portions of the walls of said case, a tongue and groove connection formed in the abutting portions of said case and cover walls, a rigid bezel carried by said cover and having a lower face which abuts the upper face of said gasket, and a tongue integrally formed in the lower face of said bezel for mating with the groove in said gasket.

3. A loose powder compact comprising a cavity defined by a base and an annular wall for receiving loose cosmetic powder, an annular seat formed in said wall intermediate its upper and lower terminal portions, a tongue integrally molded with said wall on the upper surface thereof, a polyethylene gasket positioned on said seat, said seat and gasket having a cooperating tongue and groove connection for yieldably holding said gasket on said seat, an annular cover hingedly connected to said wall of said cavity having a lower face adapted to mate with the upper surface of said wall, a groove formed in said lower face for receiving said tongue on the upper surface of said wall, and a rigid ring carried by said cover adapted to mate at its periphery with said gasket, said gasket and ring having a cooperating tongue and groove for sealing said compact when said cover is closed.

4. A loose powder compact comprising a molded rigid plastic case having an upturned peripheral wall defining a shallow cavity, a relatively flexible molded plastic gasket removably carried by said wall and having an annular groove formed in its upper surface, a molded rigid plastic cover hingedly mounted on said case having a downwardly extending peripheral wall adapted to abut against the wall of said case, an annular rigid bezel of molded plastic carried by said cover and having a lower face which mates with the upper surface of said gasket when said cover is moved to its closed position, and a rigid tongue integrally molded with said bezel on its lower face for forming a seal with said groove in said gasket.

5. A loose powder compact comprising a base and an annular wall defining a cavity for receiving loose cosmetic powder, an annular seat formed in said wall intermediate its upper and lower terminal portions, a tongue integrally molded with said wall on the upper surface thereof, a polyethylene gasket positioned on said seat, said seat and gasket having a cooperating tongue and groove connection for yieldably holding said gasket on said seat, an annular cover hingedly connected to said wall and having a lower face adapted to mate with the upper surface of the wall, a groove formed in said lower face for receiving the tongue on the upper surface of said wall, a rigid ring carried by the cover and adapted to mate at its periphery with the gasket, said gasket and said ring having a cooperating tongue and groove for sealing the compact when the cover is closed, and an ornamental disc extending through the annular cover and held in place by the rigid ring.

6. A loose powder compact comprising a molded rigid plastic case having an upturned peripheral wall defining a shallow cavity, a relatively flexible molded plastic gasket removably carried by said wall and having an annular groove formed in its upper surface, a powder sifter disposed within the case and held in position by the gasket, a molded rigid plastic annular cover hingedly mounted on the case and having a downwardly extending peripheral wall adapted to abut against the wall of the case, an ornamental disc positioned adjacent the upper terminal portion of the peripheral wall of the cover, a mirror disposed over the lower surface of the ornamental disc, an

annular molded rigid plastic bezel carried by the cover holding the disc and mirror in place, said bezel having a lower face which mates with the upper surface of the gasket when the cover is moved to its closed position, and a rigid tongue integrally molded with the bezel on its lower face for forming a seal with the groove in the gasket.

References Cited in the file of this patent

UNITED STATES PATENTS

362,712	Boyd	May 10, 1887
1,599,652	Cranston	Sept. 14, 1926
1,736,724	Setvate	Nov. 19, 1929
1,798,620	Metcalf	Mar. 31, 1931
1,841,933	Bowers	Jan. 19, 1932
1,989,527	Powers	Jan. 29, 1935
2,399,997	Flaster	May 7, 1946
2,424,817	Grassi	July 29, 1947
2,438,841	Casalino	Mar. 30, 1948
2,606,586	Hill	Aug. 12, 1952