

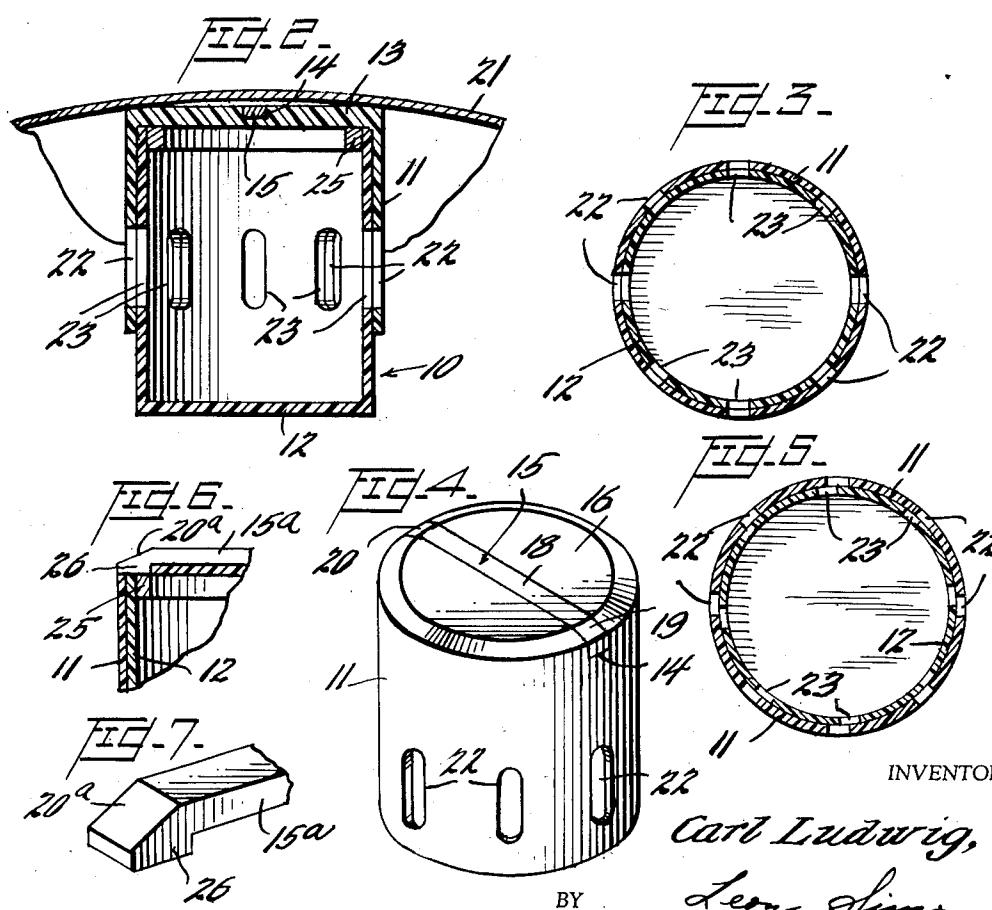
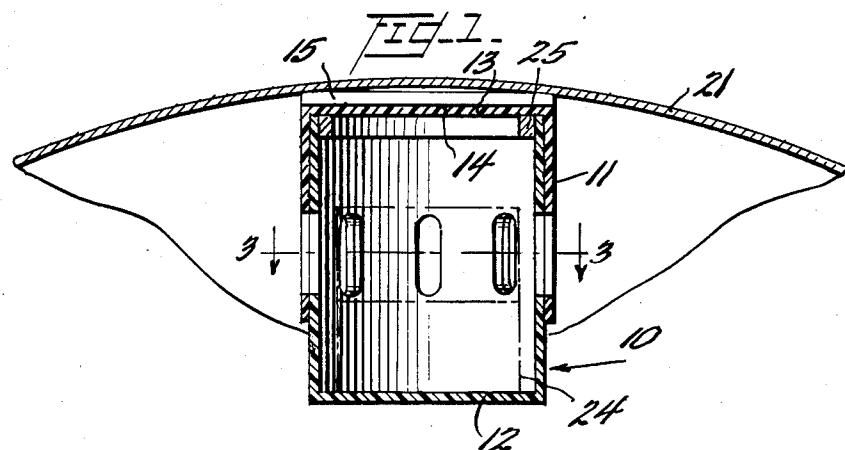
May 17, 1955

C. LUDWIG

2,708,595

CONTAINER

Filed Sept. 18, 1953



United States Patent Office

2,708,595
Patented May 17, 1955

1

2,708,595

CONTAINER

Carl Ludwig, District Heights, Md.

Application September 18, 1953, Serial No. 380,963

10 Claims. (Cl. 299—24)

The present invention relates to a novel container forming an enclosure for an air treatment medium. More particularly, the present invention relates to a container which is provided with metered openings for enclosing a material capable of deodorizing, or having other effects on air circulating through such openings, and further provided with a magnet serving to support said container from a ferro-magnetic metal surface.

It is known to provide diaper cans, garbage cans and the like with a container fitted into the cover thereof and capable of enclosing a deodorant material. Such containers have not proven to be generally desirable since they are prone to rust and usually form, at least in part, an integral part of the cover of such diaper can or garbage can. Further, such containers are very difficult to clean, since they cannot, for the most part, be removed.

It is an object of the present invention, therefore, to provide a novel container, which is capable of being firmly supported from a garbage can, diaper can or other ferro-magnetic surface, and which is at the same time easy to remove from such surface for cleaning or re-charging.

Still another object of the present invention is to provide a container of the character set forth having affixed to a base portion thereof a permanent magnet capable of supporting the container from a ferro-magnetic metal surface; such container being preferably formed from a suitable plastic material.

A third object of the present invention is to provide a container of the character set forth composed of a pair of interfitting members, each of such members having openings cooperating with the other such members so that upon rotation of one member relative to the other the openings may be made more or less coextensive so as to meter the circulation of air through the interior of such container.

The fourth object of the present invention is to provide a container, of the character described, having a magnet carried thereby of such shape that it will readily cooperate to firmly support such container on either a flat or concave ferro-magnetic metal surface.

The fifth object of the present invention is to provide a container of the character set forth provided with a magnet in one portion thereof which serves to support such container from a ferro-magnetic surface and further serves to regulate the movement of a second portion of such container relative to the first so as to open or close a series of openings formed in such container.

Other objects and advantages of the present invention will become apparent from the subsequent description and figures of the drawing wherein:

Figure 1 is a vertical section of the container of the present invention in position on a concave ferro-magnetic metal surface such as the cover of a diaper can;

Figure 2 is a section similar to the section of Figure 1 but taken at 90° therefrom;

Figure 3 is a section taken generally along the line 3—3 of Figure 1;

Figure 4 is a perspective view of one of the members

2

composing the novel container of the present invention;

Figure 5 is a section similar to that of Figure 3 but showing the two interfitting members composing the container in a different position relative to each other;

5 Figure 6 is a detail section illustrating a modified form of magnet; and

Figure 7 is a perspective of an end of the modified magnet of Figure 6.

Referring to the figures of the drawing and particularly 10 to Figure 1 thereof, the container of the present invention is indicated generally at 10. The container 10 is composed of two generally cylindrical interfitting members of which the outer member is indicated at 11, and the inner member at 12. Each of these members, as may be understood, is of generally cylindrical shape and includes a base portion and cylindrical walls extending therefrom to an open end. Each of the portions 11 and 12 is preferably molded of a plastic material such as phenol formaldehyde condensation products, polyethylene or the like. The 15 base portion 13 of the member 11 is preferably provided with a groove 14, which is adapted to house a permanent magnet 15 formed of any suitable well-known magnetic alloy. The magnet 15 may be held within the groove 14 by a suitable adhesive or may be so shaped that it may permanently form a part of the base portion 13 during the molding thereof.

As best shown in Figure 4, the base portion 13 is provided with a central, relatively flat area 16 and a circumferential bevel 17. Similarly the magnet 15 is provided 20 with a central portion 18 and beveled end portions 19 and 20. As best shown in Figure 1, the provision of the bevel 17 and the beveled end portions 19 and 20 serves to insure better adherence of the magnet and the container supported thereby to a concave surface such as the cover member indicated at 21, this cover 21 being formed from a suitable ferro-magnetic metal such as iron or mild steel.

Inasmuch as the covers of diaper cans, garbage cans and the like are generally of concave configuration on their insides, it is obvious that this beveled arrangement of the magnet 15 and the bevel 17 on the base portion 13 helps to conform this base portion and magnet to such concave surfaces. It may be further noted, however, that the container here disclosed may be more readily supported from 45 a flat surface due to the generally flat central portion 18 of the magnet and the relatively flat central portion of the base member 13 as indicated at 16.

Each of the members 11 and 12 are formed with cooperating openings, the openings of the member 11 being 50 indicated at 22 and the openings in the member 12 being indicated at 23. As best shown in Figure 5, movement of or rotation of one of the members 11 relative to the other member 12 will serve to render the openings 22 and 23 coextensive so as to fully open the interior of the container of the present invention to circulation of air therethrough or to partially open such interior or to completely close such interior. The container can therefore serve to house either a cake or other suitable form of disinfectant or deodorant or insecticide such as indicated in dotted lines in Figure 1 and designated by the reference numeral 24.

Circumferentially disposed within the open end of the member 12 is a metal ring 25 formed of any suitable ferro-magnetic metal such as iron or steel. The ring 25 may be suitably fastened to the member 12 as by a suitable adhesive or by rivets not shown. In the alternative, the ring 25 may be formed to enclose the open end of the member 12 so as to form a protective bead over such open end. It will be noted that when the member 12 is telescopically positioned in the member 11 the metal ring 25 is adjacent to the base portion 13 and, therefore, also adjacent and subjected to the influence of the magnet 15.

It is evident, therefore, that the magnet 15 will serve to prevent removal of the member 12 from within the member 11 and will also serve to retard any rotational movement of the member 12 relative to the member 11. The degree of opening, therefore, or coextensive relationship of the openings 22 and 23 will be controlled by the influence of the magnet 15 upon the metal ring 25. The magnet 15 also helps retain the member 12 within the member 11.

In Figures 6 and 7 a modified form of magnet 15a is shown provided with beveled ends such as the end 20a similar to the magnet of the previously described modification. In this form of the invention, however, the magnet is provided with a foot portion 26 which as best shown in Figure 6 is in actual contact with the ring 25. In this form of the invention the influence of the magnet on the metal ring 25 is, therefore, greater than in the previously described modification.

It is obvious that although the magnet 15 has been shown as an elongated bar, it may also take the shape of a disk substantially coextensive with the base member 13. In such case the metal member 25 need not take the form of a complete ring. It is further within the scope of the present invention to form a greater or lesser part of the inner member 12 of a ferro-magnetic metal.

I claim:

1. A container comprising a generally cylindrical plastic member having a substantially flat base portion, and including means extending from said base portion and defining with said base portion an enclosure for an air treatment medium, said means being provided with a plurality of openings for the circulation of air into said enclosure, and a magnet member on said base portion for supporting said container on a ferro-magnetic surface.

2. A container comprising a base portion, means extending from said base portion and defining with said base portion and enclosure for an air treatment medium, said means being provided with a plurality of openings for the circulation of air into said enclosure, a magnet member on said base portion for supporting said container on a ferro-magnetic surface, and closure means arranged to move into position to close said openings and having a portion of ferro-magnetic material disposed adjacent said magnet member whereby movement of said closure means is controlled by said magnet member.

3. A container comprising a first member, a second member telescopically fitted within said first member and forming with said first member an enclosure for an air treatment medium, cooperating openings formed within said first and second members so that movement of one member relative to the other renders said openings coextensive and provides for the circulation of air into said enclosure, and a magnet member on one of said first-mentioned members for supporting said container on a ferro-magnetic surface, said magnet member having beveled ends and a relatively flat center section between said ends.

4. A container comprising a first member, a second member telescopically fitted within said first member and forming with said first member and enclosure for an air treatment medium, cooperating openings formed within said first and second members so that movement of one member relative to the other renders said openings coextensive and provides for the circulation of air into said enclosure, a magnet member on one of said first-mentioned members for supporting said container on a ferro-magnetic surface, and a ferro-magnetic metal portion on the second of said members adjacent said magnet member whereby movement of said members relative one another is controlled by said magnet member.

5. A container comprising a first plastic generally cylindrical member having a base portion and an open end, a second plastic generally cylindrical member having a base portion, an open end and proportioned to telescopically interfit with said first member to form an enclosure

for an air treatment medium, cooperating openings formed within said first and second members so that movement of one member relative to the other renders said openings coextensive and provides for the circulation of air into said enclosure, and a magnet member fixed to the base portion of one of said members for supporting said container on a ferro-magnetic surface.

6. A container comprising a first plastic generally cylindrical member having a base portion and an open end, a second plastic generally cylindrical member having a base portion, an open end and proportioned to telescopically interfit with said first member to form an enclosure for an air treatment medium, cooperating openings formed within said first and second members so that movement of one member relative to the other renders said openings coextensive and provides for the circulation of air into said enclosure, a magnet member fixed to the base portion of one of said members for supporting said container on a ferro-magnetic surface, and a ferro-magnetic metal portion on the second of said members adjacent said magnet member whereby movement of said members relative one another is controlled by said magnet member.

7. A container comprising a first plastic generally cylindrical member having a base portion and an open end, a second plastic generally cylindrical member having a base portion, an open end and proportioned to telescopically interfit with said first member to form an enclosure for an air treatment medium, cooperating openings formed within said first and second members so that movement of one member relative to the other renders said openings coextensive and provides for the circulation of air into said enclosure, a magnet member fixed to the base portion of one of said members for supporting said container on a ferro-magnetic surface, said magnet member having beveled ends and a relatively flat center section between said ends.

8. A container comprising a first plastic generally cylindrical member having a base portion and an open end, a second plastic generally cylindrical member having a base portion, an open end and proportioned to telescopically interfit with said first member to form an enclosure for an air treatment medium, cooperating openings formed within said first and second members so that movement of one member relative to the other renders said openings coextensive and provides for the circulation of air into said enclosure, a magnet member fixed to the base portion of one of said members for supporting said container on a ferro-magnetic surface, and a circumferential ferro-magnetic metal portion on the open end of said second member whereby upon interfitting of said first and second members the metal portion is in close proximity said magnet.

9. A container comprising a first plastic generally cylindrical member having a base portion and an open end, a second plastic generally cylindrical member having a base portion, an open end and proportioned to telescopically interfit with said first member to form an enclosure for an air treatment medium, cooperating openings formed within said first and second members so that movement of one member relative to the other renders said openings coextensive and provides for the circulation of air into said enclosure, a magnet member fixed to the base portion of one of said members for supporting said container on a ferro-magnetic surface, and a ferro-magnetic metal portion on the second of said members adjacent said magnet member whereby movement of said members relative one another is controlled by said magnet member, said magnet member having a portion in contact with said ferro-magnetic metal portion.

10. A container comprising a first plastic generally cylindrical member having a base portion and an open end, a second plastic generally cylindrical member having a base portion, an open end and proportioned to telescopically interfit with said first member to form an enclosure for an air treatment medium, cooperating openings formed within said first and second members so that

movement of one member relative to the other renders said openings coextensive and provides for the circulation of air into said enclosure, a magnet member fixed to the base portion of one of said members for supporting said container on a ferro-magnetic surface, and a circumferential ferro-magnetic metal portion on the open end of said second member whereby upon interfitting of said first and second members the metal portion is in close proximity

said magnet, said magnet member having a portion in contact with said ferro-magnetic metal portion.

References Cited in the file of this patent

UNITED STATES PATENTS

2,247,600 Brennan et al. ----- July 1, 1941
2,555,047 Logue ----- May 29, 1951