July 16, 1929. H. J. SCHAFFER 1,721,260

CONTAINER

Filed March 8, 1927

Fig. 1.

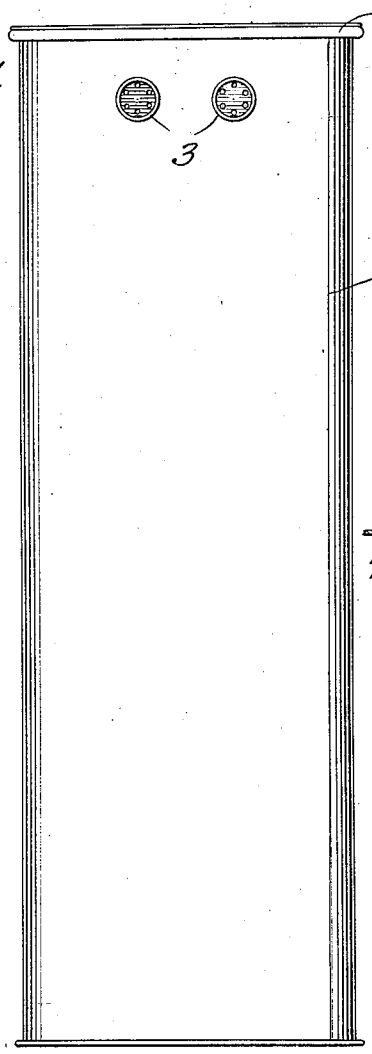
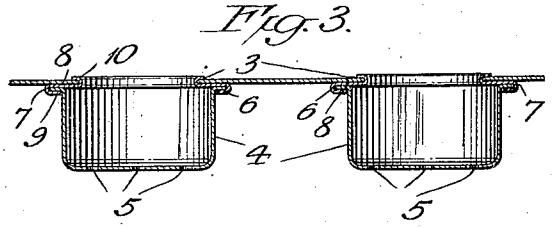


Fig. 3.



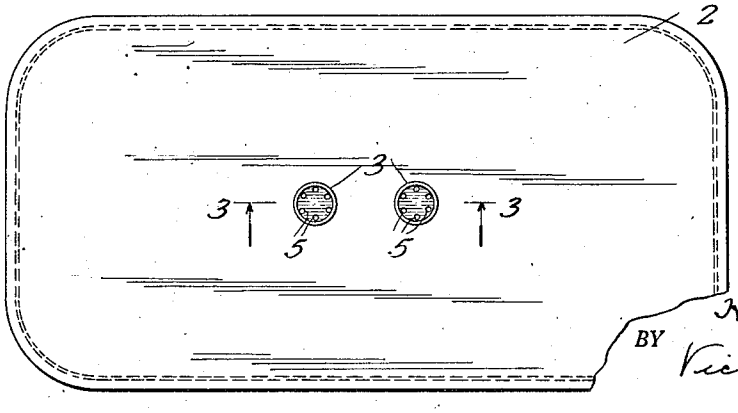


Fig. 2.

INVENTOR.
Henry J. Schaffer
BY Victor D. Bost
ATTORNEY

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UNITED STATES PATENT OFFICE.

HENRY J. SCHAFFER, OF BROOKLYN, NEW YORK, ASSIGNOR TO JACOB SCHAFFER, OF BROOKLYN, NEW YORK.

CONTAINER.

Application filed March 8, 1927. Serial No. 173,629.

My invention relates to containers formed of sheet metal, and has for an object, to provide an improved container with a removable cover, either the cover or casing of which may be lifted without the use of outwardly projecting handles, which will permit of ventilation of the container through the walls, and which will at the same time prevent the entrance into the container of various small vermin.

There are many situations in which a sheet metal container is advantageously utilized for containing and protecting various articles. In some cases these articles are preferably protected by a substantially airtight container. In other cases, it is highly desirable, or even imperative, that the container provide means for ventilation, in order that effluvia of various sorts may pass freely away from the encased articles to the atmosphere. In such cases, the odors may be attractive to various small vermin, such as mice or insects, and it is accordingly highly desirable, or essential, that ventilation openings be provided, with incorporated protective means to prevent the ingress of such vermin. Furthermore, in many cases it is desirable that the container be provided with convenient means, such as handles or grips for carrying, and with grips upon the cover to facilitate the removal thereof. It is often further desirable that the grips or handling means do not project appreciably beyond the surface of the container, in order that stowage in small compass or stowage of a number of containers closely packed together, be facilitated.

My invention provides means for the construction of a simple, inexpensive combined grip and ventilating means, with means for protecting the user's fingers and means for the manufacture by the simplest possible processes. My invention provides ventilation openings with a perforated guard, set well back from and inside of the container surface, and with all sharp edges protected through the utilization of drawn and rolled metal members, adapted to maximum simplicity of application.

Various other objects and advantages will be apparent from the following description of an embodiment of my invention when read in connection with the accompanying drawings, wherein:

Fig. 1 is an end elevation of a sheet metal container embodying the elements of my invention;

Fig. 2 is a top view of the same device showing another application of my invention in the same embodiment, and

Fig. 3 is an enlarged sectional view of a portion of the device of my invention, indicated by the line 3—3 of Fig. 2.

In the illustrated embodiment of my invention, I provide a sheet metal container 1 which may be of rectangular form, and which has a removable cover 2, likewise formed of sheet metal. These members may be made by any suitable manufacturing process. The container 1 may be formed by properly bending a sheet of metal, seaming the edges together and seaming on a bottom. The cover 2 may be similarly made or may be formed by drawing from a single sheet of metal. Opposite walls of the casing 1 are then provided with apertures 3. The number of apertures may be varied according to the requirements for ventilation of the container, and according to the probable weight of the contents thereof. If little ventilation only is required and the contents are light in weight, a single aperture upon opposed sides may be found sufficient. If not, additional apertures may be provided, depending upon the requirements for ventilation and the difficulty of lifting the container, each aperture being adapted to provide a definite amount of ventilation and to accommodate one lifting finger, so that if the contents are heavy, two, three, or even four apertures may be provided upon the opposed sides in order that the user may obtain a grip by a sufficient number of fingers or to provide adequate area for air passage.

The protecting means of my invention may then be incorporated with the apertures 3 as shown in Fig. 3. I provide cup-shaped members 4 which are perforated at the bottoms by openings 5 and are provided with outwardly flaring rims 6. These members 4 are shown as cylindrical with flat bottoms. The number and size of the openings 5 may be determined by the amount of ventilation required and by the size of the vermin against which protection is required. For most purposes the cup members 4 may desirably be about an inch in diameter or a little less and may desirably be approximately one-half of an inch deep. The number of openings in the

bottom may be varied according to the needs, and they may desirably be perforations about one-eighth of an inch in diameter or somewhat smaller. Circular attaching collars 7 are also provided. These may desirably consist of annular flat portions 8 having exterior formed rim portions 9 and interior formed rim portions 10. The exterior rim portion 9 of each is adapted to be rolled or otherwise forced down over the flaring rim 6 of the cup 4, thereby attaching the collar member 7 firmly thereto. The interior rim member 10 may then be passed through the opening 3 and may be rolled or forced down upon the metal of the container 1. The curved inner surface of the portion 10 thus provides a smooth surface to protect the user's fingers so that they cannot be injured or cut by sharp edges. Likewise the presence of the rolled member 10, which forms a bead surrounding the edge of the aperture, provides a substantial amount of additional strength in the metal of the container to withstand the lifting forces which are applied. Likewise the flat portion 8 of the attaching member provides further additional stiffness and strength, and is further stiffened by the rim 6 and the rolled member 9. In this way, an exceedingly stout, durable, rigid reinforcement is provided for the lifting opening. By the dimensions chosen, the openings 3 are made sufficiently large for the convenient insertion of a finger in each, or the thumb and a finger, and a firm grip is thereby readily obtained. Also the depth of the cup 4 is such that while it permits of the insertion of one's fingers sufficiently far to obtain a firm grip, it does not take up an undue amount of space within the interior of the container. Likewise the interior diameter of the cups 4 is greater than the opening through the aperture 3, and an interior ledge is thus provided over which the fingers may be hooked for still further strengthening and stabilizing the grip obtained.

I further find it desirable to provide apertures within the cover member 2 similar to those in the sides of the portion 1. In this location, I find that two apertures are usually ample for lifting, since only the weight of the cover need be carried. These openings are desirably provided and positioned symmetrically with respect to the center of the cover, to facilitate lifting. These cover apertures are desirably protected by structures similar to those described in connection with the sides of the containers and may consist of a pair of cups with attaching collars as shown in Fig. 3 and previously described. A firm grip is thus conveniently obtained upon the cover, by means of which it may be lifted. In the event that additional ventilation is required, and an upward current of air entering by the side openings and leaving by the cover openings is desired, additional openings may be provided, adjusted in extent to supply the desired opening area. The cup members and attaching members are similar to those adapted for the sides and are similarly attached and perform similar functions.

For purposes of sanitation and for purposes of rust prevention, the surfaces of the cups and attaching members may be protected in various ways. They may desirably be tinned or galvanized and the interior of the cups may desirably be covered with a white enamel, which also makes the lifting means more noticeable, thereby facilitating handling by the user, and also attract the user's attention in the event that dirt or soil accumulates therein. The coating of white enamel likewise facilitates cleaning when needed.

By the device of my invention and construction, the container has no outwardly projecting handles or lifting means, but convenient flush lifting means both for the cover and container proper are provided. Likewise ventilation to the container is provided, with protection against ingress of vermin, such as mice or insects. The construction likewise stiffens the container and its parts, and is readily assembled by simple expeditious mechanical operations, without the use of heat, and without danger of misplacement of the cups as may occur when they are hastily soldered, and with the provision of much additional durability. Also the cup 4 and collar 7 being of symmetrical circular shape, no particular positioning is required in making their attachment to the container wall, 1 or 2.

While I have shown but a single embodiment of the device of my invention in the accompanying description, it is capable of various modifications therefrom without departing from the spirit thereof, and it is desired, therefore, that only such limitations shall be imposed thereon as are required by the prior art or indicated by the appended claims.

I claim as my invention:

1. A container having sheet metal walls with adjacently spaced apertures therein, each to receive a finger on the same hand, said apertures being larger than the average diameter of a finger, an open cup member with a flared rim surrounding each such aperture and cooperating therewith, and a separate attaching member cooperating between said container wall and said rim of the cup member to secure the latter to the wall so as to provide a socket for a finger within the cup member.

2. A container having sheet metal walls with spaced apertures therein, said apertures being larger than the average diameter of a finger, a flared cup member cooperating therewith, and an attaching member cooperating between said container wall and said cup member, and comprising a flat annular

ring portion having oppositely projecting internal and external rim members.

3. A container having sheet metal walls with an aperture therein, said aperture being larger than the average diameter of a finger, a cup member with a flat peripheral rim cooperating therewith, and an attaching member cooperating between said container wall and said cup member, and comprising a flat annular ring portion interposed between said rim and wall having oppositely projecting internal and external rim members respectively folded over flat against and firmly engaging with said container wall at the edge of said aperture and with said cup rim.

4. A container having sheet metal walls with adjacently spaced apertures therein, said apertures being larger than the average diameter of a finger and disposed each to receive a finger of the same hand, a flared plurally perforated open cup member cooperating therewith, and a separate attaching member cooperating between said container wall and the flare on said cup member to secure the latter to the wall to provide a finger socket.

5. A container having sheet metal walls with spaced apertures therein, said apertures being larger than the average diameter of a finger, a flared cup member cooperating therewith, and an attaching member cooperating between said container wall and said cup member, said attaching member comprising a flat annular ring portion having oppositely projecting internal and external rim members respectively engaging with said container wall and said cup rim, and folded thereover, and ventilating means comprising a plurality of perforations in the material of said cup, having a diameter less than the body size of vermin.

6. In a container having a sheet metal wall provided with spaced finger-gripping apertures, the combination of a fastening member, said fastening member passing through said aperture and engaging both sides of said wall, and a cup-shaped member secured to said fastening member on one side of said wall.

7. In a container having a sheet metal wall with apertures therein, a finger grip and ventilating means, comprising a perforated metal cup member having an attaching edge, and means comprising an annular member cooperating with the aperture in said container wall and with said attaching edge, for the simultaneous protection of an edge of said aperture and attachment of said cup member thereto.

In witness whereof, I hereunto subscribe my signature.

HENRY J. SCHAFFER.