March 23, 1954

J. H. BINK ET AL

2,673,120

CONTAINER FOR VAPORIZABLE SOLID MATERIAL

Filed May 16, 1951

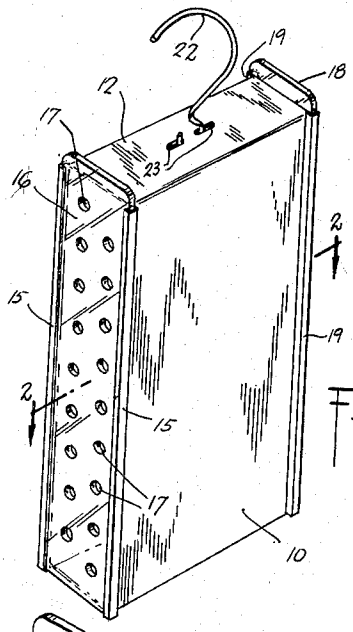


Fig. 1.

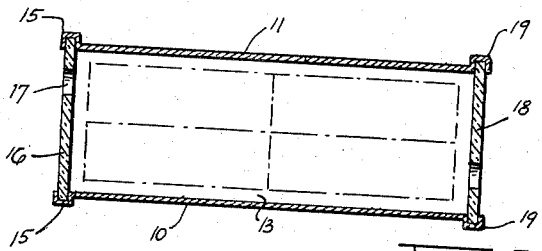


Fig. 2.

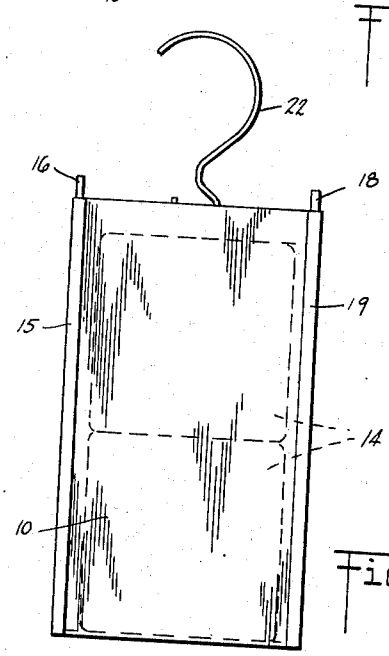


Fig. 3.

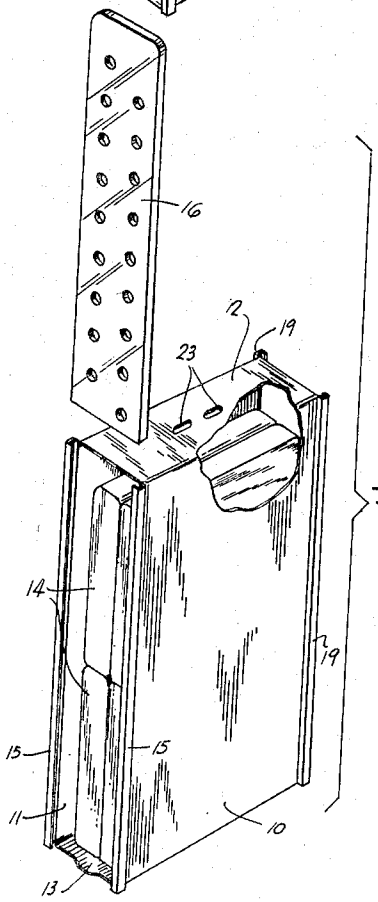


Fig. 4.

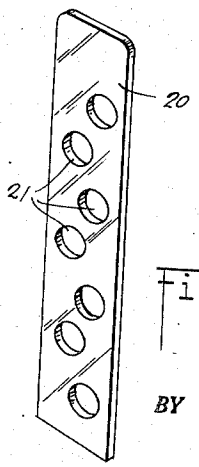


Fig. 5.

INVENTORS.
JULIUS H. BINK
ARTHUR J. EVERS

BY

ATTORNEY

Patented Mar. 23, 1954

2,673,120

UNITED STATES PATENT OFFICE

2,673,120

CONTAINER FOR VAPORIZABLE SOLID MATERIAL

Julius H. Bink and Arthur J. Evers, New York, N. Y., assignors to Reefer-Galler, Inc., New York, N. Y., a corporation of New York

Application May 16, 1951, Serial No. 226,652

3 Claims. (Cl. 299—24)

1

The present invention relates generally to containers, and has particular reference to containers for vaporizable solid material such as paradichlorobenzene.

It is a general object of the invention to provide a container of improved structural character whereby the vapor generating material can be more easily accommodated, more readily renewed when necessary, and more efficiently utilized.

A more particular object is to provide a container which is primarily intended for generation of anti-moth vapors in closets or in garments or garment enclosures, and which is specially suited to accommodate the vaporizable material in the form of relatively flat substantially rectangularly-shaped blocks.

The container of the present invention is generally rectangular and flat. The front and rear walls are relatively wide, the top, bottom and side walls are relatively narrow. The invention contemplates that the relative dimensions of these walls be predetermined by the dimensions, number and arrangement of the blocks to be accommodated therein. The embodiment illustrated in the drawings show this predetermination to be such that four blocks can be accommodated, arranged as shown in the drawings.

A feature of the invention resides in the provision of air circulation perforations only in one or more of the narrower walls of the container, preferably in one or both of the side walls, whereby the air entering the container will encounter the flattened vaporizable blocks edgewise and travel in paths parallel to the larger faces of the blocks.

Another feature of the invention lies in forming at least one of the container walls of transparent material so that the amount of unvaporized material remaining in the container is always visible therethrough.

Another feature of my invention is the provision of groups of pairs of separately formed end walls having openings therein, each pair being different from the other pairs of the group as to the size, number or location of the openings provided therein, so that a particular pair of end walls can be selectively employed for the container which will serve most efficiently for a particular closet or space.

An unusually efficient, compact, inexpensive and sturdy construction results when both side walls are transparent and perforated and when each of these walls is slidably mounted, as by forming opposed guide channels in the front and rear walls of the container. It is this preferred

2

embodiment of the invention which has been chosen for illustration and description herein.

Accordingly, one way of achieving the foregoing objects and advantages, and such other objects and advantages as may hereinafter appear or be pointed out, is illustratively exemplified in the accompanying drawings, in which:

Fig. 1 is a perspective view of a container constructed in accordance with the present invention;

Fig. 2 is a cross-sectional view substantially along the line 2—2 of Fig. 1;

Fig. 3 is a front elevational view of the container;

Fig. 4 is an exploded view showing one of the side walls removed; and

Fig. 5 is a perspective view of a modified side wall that may be selectively employed.

The container illustrated has front and rear walls 10 and 11, and top and bottom walls 12 and 13, composed of sheet material such as metal. If desired, these four walls may be composed of a single blank shaped or suitably cut and bent into the desired form, with the meeting edges joined together in any suitable usual manner.

It will be observed that in the drawings the blocks are shown relatively thin and square-faced; that the length of the front and rear walls of the container is shown as approximately twice its width; that this width in turn is shown as slightly greater than the length and width of the block; and that the width of the other four walls are shown as slightly greater than twice the thickness of the blocks. As a result four blocks can be accommodated within the container shown in the drawings, arranged laterally in pairs with each pair in end to end relation lengthwise of the container. This is one exemplification of the practical application of the invention which contemplates broadly that the dimensions of the container walls be varied to accommodate blocks varied in size, number and arrangement.

The ends of the casing 10 are closed by end walls 16 and 18, either or both of which are transparent so that the interior of the container remains visible at all times to the user to determine by mere inspection the amount of unvaporized material still remaining within the container.

The end walls 16 and 18 are shown as provided with perforations 17 through which the vaporizer permits circulation of air into, through and out of the container and the discharge of vapors therefrom into the space or closet to be serviced thereby.

The invention contemplates further that the openings in the side walls 16 and 18 be predetermined as to number, size and location for a particular space in which the device is to be employed and that this predetermination be availed of, to control the evaporization of the contents thereof to serve most efficiently for a particular closet or other type of enclosed space by providing a group of end walls which are formed separate from the container and whose openings differ as to size or number or location, so that that particular type of end wall can be selected for the container which can best service a particular closet or similar space. For example, the end wall 16 of Fig. 4 exemplifies one predetermination of these openings, whereas the side wall 16' of Fig. 5 exemplifies a different predetermination, it being understood that in practice, the group may encompass as many different types of predeterminations as practical considerations require or permit. As a result, the container 10 of Fig. 4 can be provided with that selected pair of end walls which best meet the requirements of the particular closet or space for which it is intended.

The means for attaching a pair of end walls to the container shown in the drawings comprises a pair of opposed guide channels 15 provided along the long edges of the front and rear walls 10 and 11 on one end to slidably receive within these channels one of the pair of side walls selected for use. The long edges on the front and rear walls are formed at the other end with opposed guide channels 15 in which the second of the pair of selected end walls can be slidably received.

When the container is in use, the side wall is in the position shown in Fig. 1. It permits the interior of the container to remain visible at all times, as a result of which the user can always determine, by mere inspection, the amount of unvaporized material still remaining within the container.

Whenever a refilling becomes necessary or desirable, the side wall 16 can be slid edgewise, either part way or into the completely withdrawn position shown in Fig. 4. This greatly facilitates the refilling operation, and when it is completed the wall can be restored to its normal closed position.

The perforations 17 in the wall 16, and the corresponding perforations in the opposite side wall 18, permit circulation of air into and out of the container. It will be observed that the air currents necessarily encounter the blocks of vaporizable material edgewise, and travel along paths which are parallel to the larger faces of the blocks. This results in more efficient vaporization, i. e., a greater amount of vapor-laden air is liberated per unit volume of space occupied by the container. Also, the wearing away of the vaporizable blocks is more uniform than would otherwise be the case, and this desirable result is especially true where both side walls of the container are provided with perforations.

In order to vary the rate of vaporization of the accommodated blocks, one or both of the side walls can readily be replaced by a side wall such as that which is shown at 20 in Fig. 5. It will be noted that this wall is a similar strip of transparent material, having the same external dimensions as either of the strips 16 and 18, but being provided with perforations 21 which are larger.

If desired, a series of such side walls may be provided, each with a different size, shape or arrangement of perforations, whereby selected walls may be employed, depending upon the nature of the use to which the device is to be put.

The rectangular and relatively flat nature of the container makes it readily usable in a variety of locations. For example, it may be fitted flatwise against the wall of a closet or the like or into a corner. For purposes of suspending the container in a proper upright condition, it is provided with a hook 22 which engages within a pair of apertures 23 formed in the top wall 12. The container may also be received into the sleeve or other portion of a garment or the like.

The details herein described and illustrated, except as they are otherwise specifically mentioned in the appended claims, are given merely by way of example. For this reason it will be understood that changes in these details may be made without necessarily departing from the spirit and scope of the invention as expressed in the claims.

Having thus described our invention and illustrated its use, what we claim as new and desire to secure by Letters Patent is:

1. A substantially rectangular container for vaporizable material in solid form, comprising relatively wide front and rear walls and relatively narrow top, bottom and side walls, means engaging the top wall for suspending the container, at least one of said side walls being composed of a strip of transparent material and having perforations to permit air circulation into and out of the container, and channels formed on the front and rear walls for supporting said side wall in slidable relation so that a refilling opening can be formed by sliding said side wall at least partially out of said channels.

2. A substantially rectangular container for vaporizable material in the form of relatively flat square-shaped blocks, comprising relatively wide unperforated front and rear walls and relatively narrow side walls, and perforations in said side walls to permit air to circulate into and out of the container and to encounter said blocks edgewise, said side walls being composed of strips of transparent material and said front and rear walls being provided with opposed channels in which said side wall strips are slidably mounted.

3. A package for dispensing vaporizable material comprising a container whose width is defined by a pair of relatively wide front and rear walls and whose thickness is defined by a pair of relatively narrow end closure walls one of which is transparent to permit inspection of the contents of the container, a plurality of blocks of vaporizable material aligned within the container in the direction of one of its said dimensions, and openings in an end closure wall to permit air circulation into and out of the container, one of the end closure walls being mounted for movement from its normal container closing position to provide a filling opening through which the container may be refilled.

JULIUS H. BINK.
ARTHUR J. EVERS.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
2,352,075	Brownstein	June 20, 1944
2,514,902	Sabath	July 11, 1950