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J. L. ENGEL

2,064,526

CONTAINER

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FIG. 1.

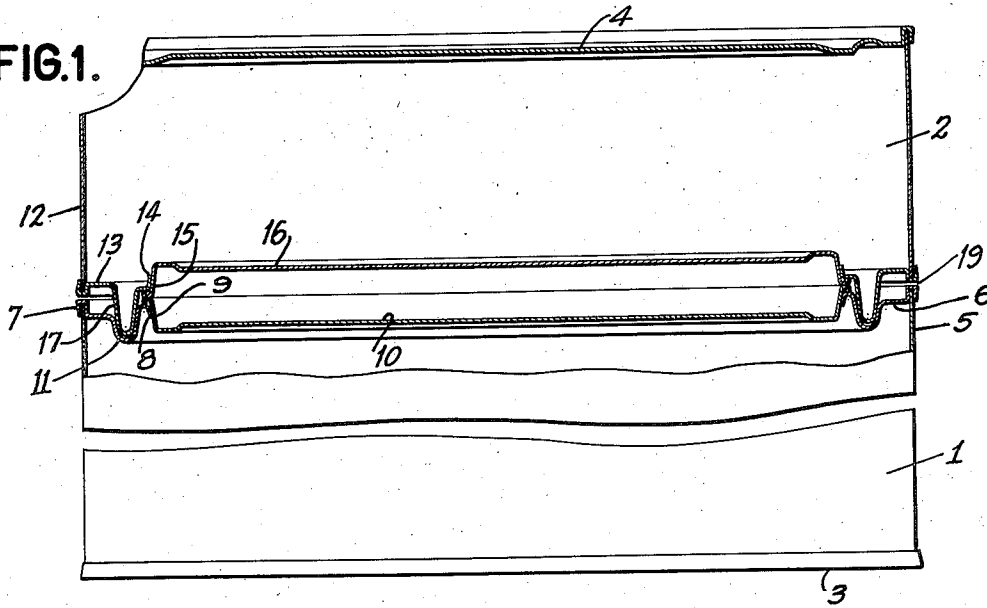


FIG. 2.

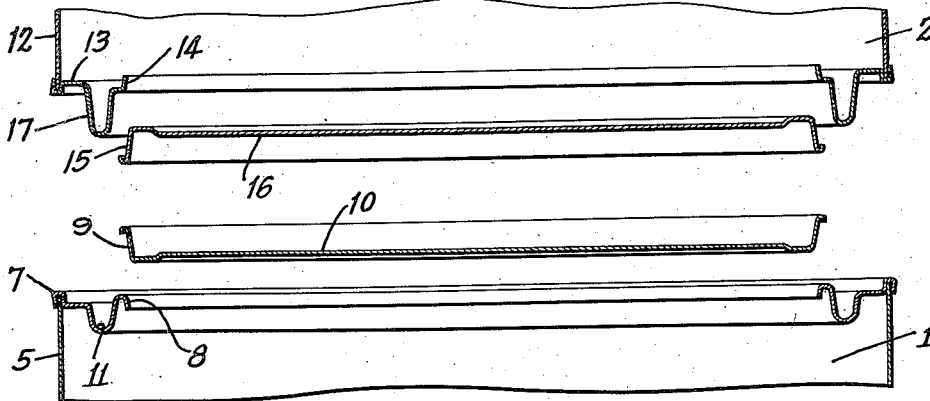
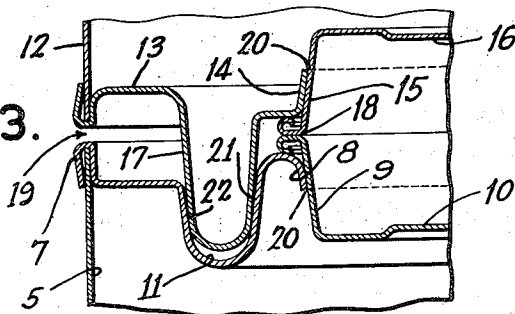


FIG. 3.



INVENTOR.
J. Leonard Engel
BY *Harold F. Watson*
ATTORNEY

UNITED STATES PATENT OFFICE

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CONTAINER

John Leonard Engel, Brooklyn, N. Y.

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5 Claims. (Cl. 220—20)

This invention relates to metal containers of the type in which paints and other liquids are generally shipped and sold.

An important feature of my invention is the provision of a container in which the several ingredients of a final product may be kept separate during shipment and in which they can be conveniently and efficiently mixed when ready for use. The invention is especially useful in connection with the sale of certain paints, such as aluminum paint, whose ingredients, a liquid and a paste, may not be mixed until just before the paint is to be applied and at that time must be thoroughly mixed in the correct proportions. Many other uses, however, will be apparent.

Such paints have generally been sold in double containers of the type shown in United States Patent No. 929,842, issued August 3, 1909 to Edmund Eckart. The liquid ingredient or vehicle of the paint is placed in the bottom compartment of such containers and the solid or paste ingredient is protected from exposure to the air by a single friction seal which may leak and spoil the contents. Also the two containers may become separated accidentally as they are held together only by a single friction contact between the base of the upper container and the cover of the main container.

The proper mixing of paints in containers of this type has been a source of much difficulty and annoyance. The paste must be scraped out of its container and placed in the liquid. As a practical matter it is impossible to scrape all of it out, so the practice has been to pour some of the liquid into the paste container, stir it to dissolve as much of the paste as it will take up, pour the mixture back into the liquid container, mix it with the balance of the liquid, pour some of that mixture back into the paste container, stir it to take up some more of the paste, and so on until the mixer's patience has been exhausted. A frequent result has been the spilling of some of the liquid, the failure to use all of the paste, or both. The effect of either is that the proportions of liquid and paste in the final mixture are incorrect, materials are wasted, and a great deal of inconvenience is experienced.

These difficulties are avoided by the use of my invention, by which loss by evaporation and the accidental separation of the two compartments are effectively prevented and the complete mixture of all of the ingredients is effected without danger of spilling or waste, assuring a mixture of the ingredients in the correct proportion.

Additional features of my invention are the provision of a container of this type which is easy to open and use, is inexpensive to manufacture, and in which the seals are protected from deformation by rough handling.

The nature of the invention will be understood from the following description, taken in conjunction with the accompanying drawing, in which:

Figure 1 is a vertical section of the double compartment container assembled,

Figure 2 is a vertical section of the open end portions of the two compartments and their respective covers disassociated from one another, and

Figure 3 is an enlarged detail of the friction rings at the open end of each of the compartments and their respective covers, in vertical section.

The container consists of two compartments, 1 and 2, preferably cylindrical in form and made of sheet metal. Each compartment has a base, 3 and 4, soldered or otherwise permanently fastened to the side walls.

The cylindrical side wall 5 of the compartment 1 is surmounted by a friction ring 6 whose outer edge 7 is turned down and soldered or otherwise attached to the side wall 5 and whose inner edge is down-turned to form a tapered cylindrical seat 8 for the flared edge 9 of a cover 10. The central portion of the friction ring 6 is depressed to form a tapered groove as shown at 11.

The side wall 12 of the compartment 2 is similarly surmounted by a friction ring 13 whose inner edge is depressed to form a seat 14 for the flared edge 15 of a cover 16. The central portion of the friction ring 13 is raised as shown at 17. The width of the raised portion 17 is such that when compartment 2 is inverted and forced down onto the top of compartment 1 in the manner shown in Figure 1, it is wedged into and is firmly held by the tapered groove 11 in such a position that the flanged edges of the cover disks are in contact with each other as shown at 18 and there is some space between the outer edges of the friction rings, as shown at 19, for the insertion of a prying tool.

In packing, the proper amounts of the two ingredients are placed in their respective compartments which are then sealed with their respective covers. One of the compartments should be large enough to contain the entire mixture. One compartment is then inverted and forced down on the top of the other until the two compartments are in the position shown in Fig-

ure 1. The container is now ready for shipment and the contents of each compartment are now protected from leakage and evaporation by three friction seals, viz., the seals 20 between each compartment and its cover, and the seals between the friction rings at 21 and 22. The covers are firmly held in place by the contact between their flanged edges as shown at 18.

When the contents are to be used, the two compartments can be readily pried apart by inserting a tool in the opening 19. The covers of the two compartments are then removed by inserting a prying tool under their flanged edges. The paste container is then replaced on the liquid container and the two ingredients can be mixed by shaking. Leakage is prevented during this process by the double friction seal between the rings at 21 and 22. After all of the paste has been washed out of the paste compartment and mixed with the liquid the paint is ready for use with slight additional stirring if necessary.

As previously stated, when packed for shipment each ingredient is protected from exposure to the air and from leakage by three distinct seals; the seal between its compartment and its cover, and the two seals between the friction rings. Each of these seals is inside the container and will not be damaged by rough handling. Each of the compartments is virtually as easy to manufacture as an ordinary can and the cost of my mixing container is not materially greater than the cost of separate containers for each of the two ingredients.

Although I have shown but one form of container embodying my invention, it will be understood that it may be embodied in various other forms. For instance, the bottom of the upper compartment might be modified by providing thereon friction means for engagement with friction means upon the top of the lower compartment. In this event, the upper compartment, prior to mixing, would have its cover uppermost, rather than lowermost as in the drawing.

The terms and expressions employed in the foregoing specification are used descriptively and I do not desire to be limited to the particular construction described and illustrated, as many modifications thereof may be made without departing from the scope of my invention.

I claim:

1. A container comprising upper and lower compartments each compartment having in one end an opening adapted to receive a closure, separate closures for said compartments, said compartments being arranged with their closure re-

ceiving ends adjacent, and cooperating frictional connecting means formed upon the adjacent ends of said compartments.

2. A container comprising upper and lower compartments each compartment having in one end an opening adapted to receive a closure, separate closures adapted for frictional engagement with the edges of said openings in said compartments, said compartments being arranged with their closure receiving ends adjacent, and cooperating frictional connecting means formed upon the adjacent ends of said compartments.

3. A container comprising two compartments, each of said compartments having a closed end and an end provided with an opening adapted to receive a closure, a separate closure adapted to engage frictionally within the opening of each said compartment, one of said compartments having its end portion adjacent said opening provided with an annular depressed portion, and the other compartment having its end portion adjacent said opening provided with an annular elevated portion adapted to engage frictionally with the walls of said depressed portion of said first compartment.

4. A container comprising two compartments, each of said compartments having a closed end and an end provided with an opening adapted to receive a closure, a separate closure adapted to engage frictionally within the opening of each said compartment, one of said compartments having its end portion adjacent said opening provided with an annular depressed portion, and the other compartment having its end portion adjacent said opening provided with an annular elevated portion adapted to engage frictionally with the walls of said depressed portion of said first compartment, said parts being so related that said closures are maintained firmly seated in their respective openings by engagement with each other when said compartments are maintained in frictional interengagement.

5. A container comprising upper and lower compartments each compartment having in one end an opening adapted to receive a closure, separate closures for said compartments, said compartments being arranged with their closure receiving ends adjacent, and cooperating frictional connecting means formed upon the adjacent ends of said compartments, the adjacent external edges of said compartments, when said compartments are connected, being spaced apart sufficiently to admit a prying tool therebetween.

J. LEONARD ENGEL. 55