March 21, 1950 M. W. WOODMAN 2,501,016

PAINT CAN AGITATOR

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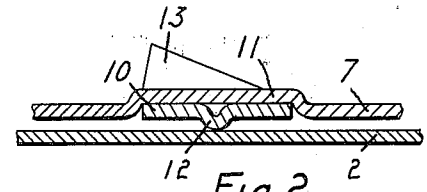


Fig. 2

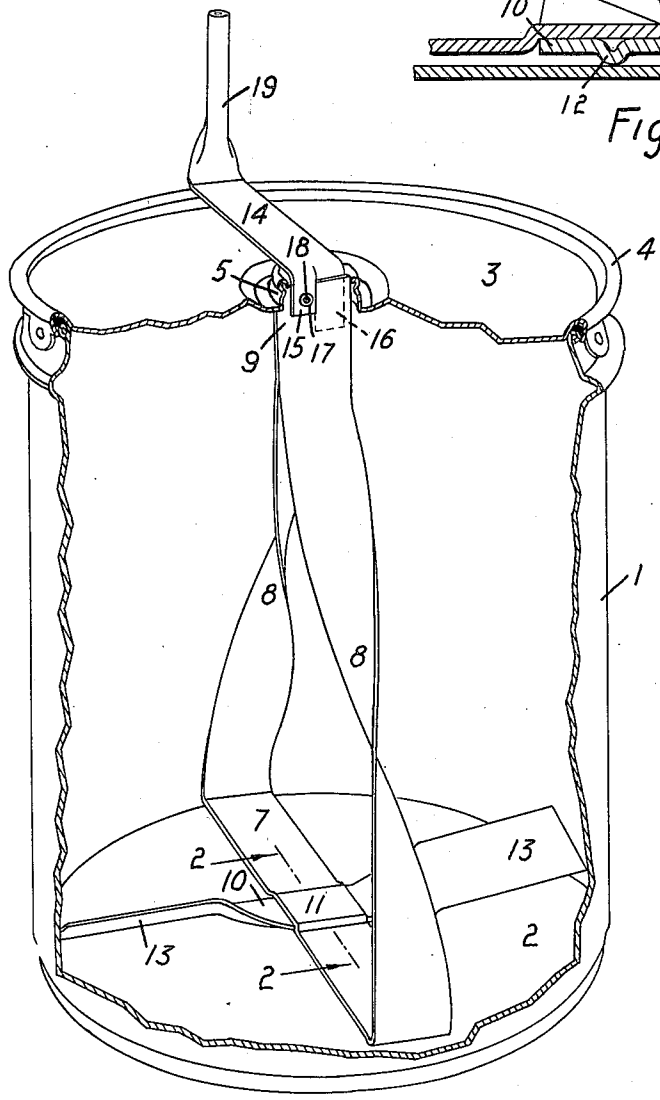


Fig. 1

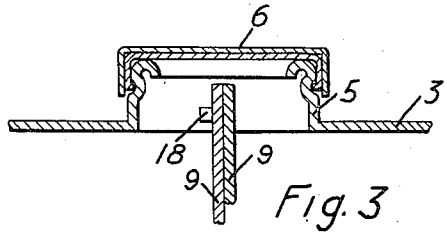


Fig. 3

INVENTOR.
Melvin W. Woodman
BY Evans & McCoy

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PAINT CAN AGITATOR

Melvin W. Woodman, Cleveland, Ohio

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5 Claims. (Cl. 259—108)

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This invention relates to agitators for containers such as paint cans and has for an object to provide an agitator that does not require the attachment of any member to the container and which does not require any alteration in the structure of the container.

A further object of the invention is to provide an agitator which is so constructed that it centers itself within the container and which has a bearing portion by means of which it is rotatably supported upon the smooth bottom of a container.

With the above and other objects in view the invention may be said to comprise the agitator as illustrated in the accompanying drawings and hereinafter described, together with such variations and modifications thereof as will be apparent to those skilled in the art to which the invention pertains.

Reference should be had to the accompanying drawings forming a part of the specification in which:

Figure 1 is a perspective view showing an agitator embodying the invention mounted in a container of the paint can type;

Fig. 2 is a fragmentary section taken on the line indicated at 2—2 in Fig. 1;

Fig. 3 is a fragmentary vertical section taken through the central opening in the top of the container with the detachable closure cap in place and showing the upper end of the agitator positioned within the opening beneath the cap.

In the accompanying drawings the invention is shown applied to a paint can of conventional construction that has a cylindrical body portion 1, a flat circular bottom 2 and a circular top 3. The top 3 has an upstanding marginal bead 4 and is attached to the body 1 of the container. The top 3 is also provided with a central opening surrounded by an upstanding flange 5 which is formed to receive a suitable detachable closure cap 6.

The agitator of the present invention has a body formed by bending a sheet metal strip to triangular form and provided with a horizontally disposed base 7 of a length slightly less than the diameter of the bottom 2 of the container and sides 8 of substantially equal length which converge upwardly from opposite ends of the base 7. The strip forming the body of the agitator is bent on transverse lines at the ends of the base 7 to provide the upwardly converging sides 8. The base 7 and sides 8 form agitator blades and the sides 8 are twisted intermediate their ends to provide portions at various inclinations to the line of travel of the blades. The sides 8 have

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upper end portions 9 that are secured together back to back by suitable means such as spot welding directly above the center of the base 7. The base portion of the agitator has a cross member 10 in the form of a sheet metal strip that is of a length substantially equal to the base 7 and which crosses the base 7 centrally thereof. The member 10 has a flat central portion that fits in an upwardly pressed portion 11 centrally of the base 7 with its bottom face substantially flush with the bottom face of the base 7 and is secured to the under face of the base 7 by suitable means such as spot welding.

A central rounded bearing protuberance 12 is provided on the under side of the base portion of the agitator and this protuberance is preferably formed integrally with cross member 10, being pressed up from the member 10 at the center thereof prior to the assembly of the cross member 10 with the base 7. The base 7 and cross member 10 form radial blades at the base of the agitator and opposite ends of the cross member 10 are oppositely twisted to provide oppositely inclined blades 13 disposed at substantially right angles to the base and having their lower edges horizontally disposed and substantially in the plane of the bottom of the base 7.

The height of the triangular body portion of the agitator is such that when the agitator is supported by the protuberance 12 on the bottom of the container, the upper ends 9 of the blades 8 are disposed within the opening at the top of the container and below the upper edge of the flange 5 so as not to interfere with the application of the detachable closure 6. When the cap 6 is removed the agitator may be rotated within the can by means of a handle 14 which may be formed of flat strip material with down-turned forked tongues 15 and 16 at one end thereof that are adapted to straddle the abutting ends 9. The tongue 15 is provided with an opening 17 that receives a short stud or pin 18 attached to the upper end of the agitator and the outer end of the handle is provided with a suitable hand grip 19 by means of which the handle may be turned to rotate the agitator. The length of the handle 14 is such that the outer end portion thereof is adapted to slide upon the bead 4 of the cover 3 during its rotation.

By reason of the fact that the base portion of the agitator is of a diameter but slightly less than the internal diameter of the paint can, the agitator centers itself with respect to the can when it is lowered into the can. The agitator is placed in the can prior to the application of the cover 6

thereto and is retained in an upright position in the container by the upper ends 9 of the agitator blades 8 positioned within the central opening in the top of the container.

The rounded protuberance 12 provides a substantially frictionless bearing support and the agitator by reason of the radial blades forming the base of the agitator, together with the upwardly converging blades 8 has a very effective stirring action on liquid within the receptacle.

It is to be understood that in accordance with the provisions of the patent statutes variations and modifications of the specific devices herein shown and described for purposes of illustration may be made without departing from the invention.

What I claim is:

1. An agitator for a container having circular bottom and top walls and a central opening in the top wall comprising a base portion of a diameter slightly less than said bottom wall and having radially disposed blades, said radial blades being formed by sheet metal strips crossing centrally, the crossing portions of said strips being flat and horizontally disposed, one of said strips having a downwardly projecting integral protuberance rounded to provide a bearing support for the agitator on said container bottom, one of said strips having end portions converging upwardly from said base portion to a centrally disposed upper end, said body portion being of a length such that its upper end is positioned in said central opening of the top wall when the agitator is supported by said bearing protuberance on the bottom wall of the container.

2. An agitator for paint cans and the like comprising a triangular blade member formed of a sheet metal strip of substantially uniform width, said member comprising a substantially horizontal base having flat horizontally disposed portions and upwardly converging sides of substantially equal length integral with said base, said sides being twisted intermediate their ends to dispose portions of each at opposite inclinations and secured together at their upper ends, and a second blade forming member in the form of a sheet metal strip of a length substantially the same as said base, said second member having its central portion crossing said base centrally thereof and secured thereto, portions of said second member on opposite sides of said base being bent to dispose the same at opposite inclinations.

3. An agitator for paint cans and the like comprising a triangular blade member formed of a sheet metal strip of substantially uniform width, said member comprising a substantially horizontal base having flat horizontally disposed end portions and upwardly converging sides of substantially equal length twisted intermediate their ends to disposed portions of each at opposite inclinations and secured together at their upper ends, blades projecting radially from the central portion of said base and a centrally disposed rounded bearing protuberance beneath said base for rotatably supporting the agitator on the bottom of a container.

4. An agitator for a paint can having circular top and bottom walls and a central opening in the top wall comprising a triangular blade member formed of a sheet metal strip with a base portion of a length but slightly less than the diameter of the bottom wall and side portions of equal length secured together at their upper ends and of a length to extend from the ends of said base portion to said central opening when the base portion is closely adjacent the bottom wall of the container, said side portions of the said blade member being twisted intermediate their ends to dispose portions of each at opposite inclinations, and a second blade member in the form of a sheet metal strip of a length substantially the same as that of said base portion, said second blade member crossing said base member and being secured centrally thereto, said second blade member being bent to dispose portions thereof on oposite sides of said base portion at opposite inclinations.

5. An agitator such as set forth in claim 4 in which one of said blade members is provided centrally thereof with an integral rounded bearing protuberance engageable with the container bottom.

MELVIN W. WOODMAN.

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