

[54] **TIPPABLE CONTAINERS**

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[51] Int. Cl..... **B65g 65/04**

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[56] **References Cited**

UNITED STATES PATENTS

2,484,122 10/1949 Ross..... 224/5 G
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FOREIGN PATENTS OR APPLICATIONS

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[57] **ABSTRACT**

This invention deals with an improvement in pivotal containers. In this invention the mounting on the container which the fork or arm of a truck or other lifting vehicle engages is in the form of a spiral shaped member which at its smallest radius is adapted to engage the ends of the fork or the arms and the member is pivoted so that its larger radius comes into engagement against the underside of the said fork or arm which then clamps the fork or arm to the pivotal mount on the container.

1 Claim, 3 Drawing Figures

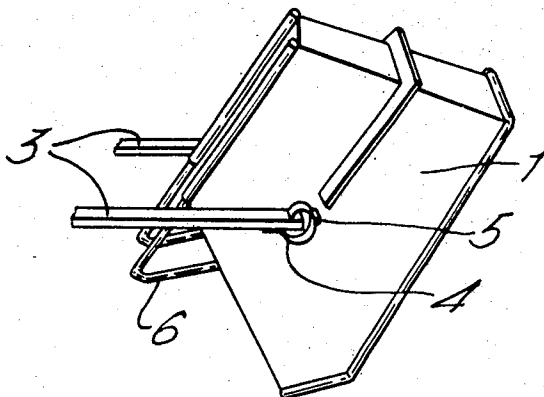


FIG. 1.

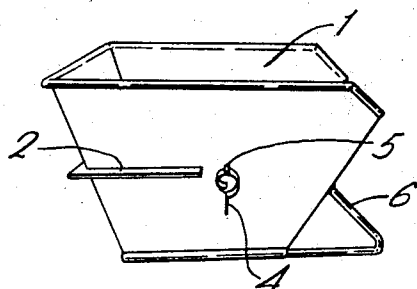


FIG. 2.

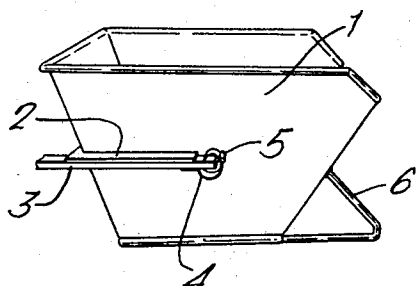
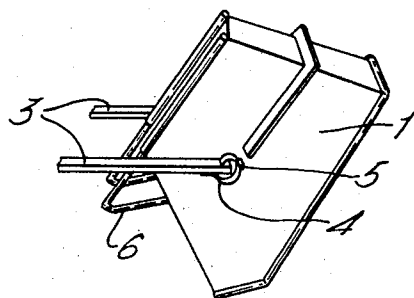


FIG. 3.



TIPPABLE CONTAINERS

The present invention relates to an improvement in tippable containers of the type to be lifted by a fork truck for transport to a location of discharge where the container is emptied in that it is pivoted about a pivotal axis, for example, the container is driven into engagement against a stationary edge.

A number of container embodiments for this purpose are previously known, and in Norwegian Pat. No. 120.409, a container is described having mountings for co-operation with tapered forks in such a manner that the containers are locked to the ends of the fork when the container is tipped. The container is also locked in transport position so that it is prevented from sliding forwardly on the fork. However, in this known embodiment, it is necessary for the forks to be tapered in shape, for example, by securing sleeves provided with fittings which co-operate with the containers to the forks. This is a disadvantage since the sleeves must be removed from the forks when these are to be used for transport of other objects. The operator may then forget to replace the sleeves or he may be tempted to avoid the extra work connected therewith, and the containers are then transported and emptied in an unsafe manner, with risk of injury, both to people and material.

The object of the present invention is primarily to eliminate the said disadvantage by providing a means which permits locking of the container to the forks, arms or other support members, without it being necessary to form these members in a special manner adapted to the container concerned.

In accordance with the invention, this is achieved by means of a mounting which may be locked to the free, conventional ends of the forks by pivoting the mounting, the said pivoting being produced by the ends of the fork immediately the fork begins to lift the container.

The invention thus relates to a means in a tippable container which is adapted to be lifted by a fork truck or similar implement having arms which, on lifting, are brought into engagement on either side of the container with mountings on said container, and it is substantially characterized in that the container is provided on either side with mountings which are adapted on co-operation with the ends of the forks or arms, to be locked thereto when the container is lifted.

Other features and details of the invention will be clear from the claims in this application.

The invention is further explained in the following with reference to the drawing where:

FIG. 1 illustrates a container effected in accordance with the invention, viewed from the side, and

FIG. 2 illustrates the same container viewed from the side in raised position.

FIG. 3 is a view of the container in discharge position.

The container is a receptacle 1 effected for the purpose with mountings 2 for forks 3 (FIG. 2) on a fork truck which is to lift the container for transport. In accordance with the invention, the container is provided on either side with a pivotable spiral mounting 4 having pivotal axis at 5. When the fork 3 is to lift the container 1, the fork is driven into the container so that the ends of the fork enter the spiral mountings 4 and, on lifting, pivot the mountings about axis 5 so that the mountings are locked to the ends of the fork 3, as illustrated on FIGS. 2 and 3.

On FIG. 3, the container 1 is disposed in discharge position in that projecting loops 6 are driven into engagement against an edge, whereby the container 1 tips about axis 5. It is seen on FIG. 3 how the mounting 4 is alone in securing the container 1 to the end of the fork 3. Due to the weight of the container, and the pivotal point 5 which is eccentric with respect to the mounting 4, the desired locking on the free ends of a wholly conventional lifting fork is achieved.

It is advantageous to effect the container 1 such that its centre of gravity with load is immediately behind the pivotal point 5 so that the container 1, on a slight tipping action will continue to tip until the load is discharged, whereafter the container, because of its point of gravity in empty state, returns to transport position.

Having described my invention, I claim:

1. The improvement in pivotal containers which are adapted to be lifted by the forks of a fork lift truck comprising mountings mounted for rotational movement relative to the container on both sides of said container in the form of a curved spiral shaped member, said member at its smallest radius portion being adapted to engage and lock onto the tips of said forks such that as its larger radius portion comes into engagement against the underside of the fork, the fork is locked to said member by the resilient clamping action between the smallest and the larger radius portions, whereby the container can be pivoted relative to said forks and thereby dumped.

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