

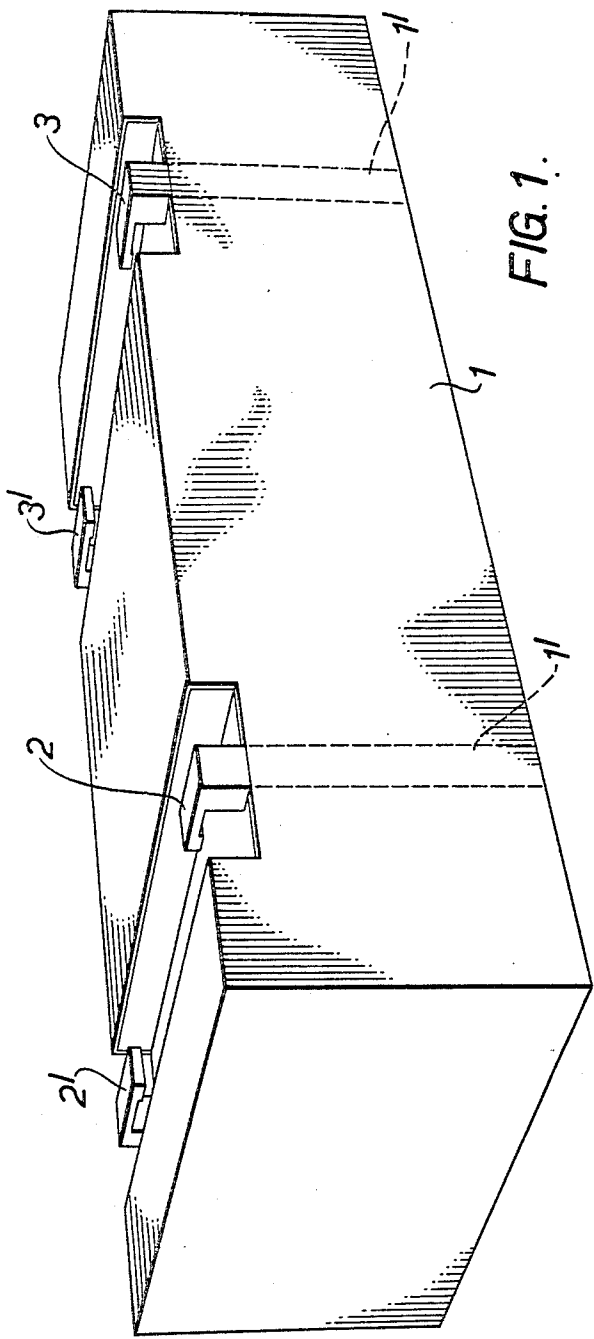
Dec. 16, 1969

F. MUNCH
CONTAINER

3,484,014

Filed Sept. 21, 1967

2 Sheets-Sheet 1



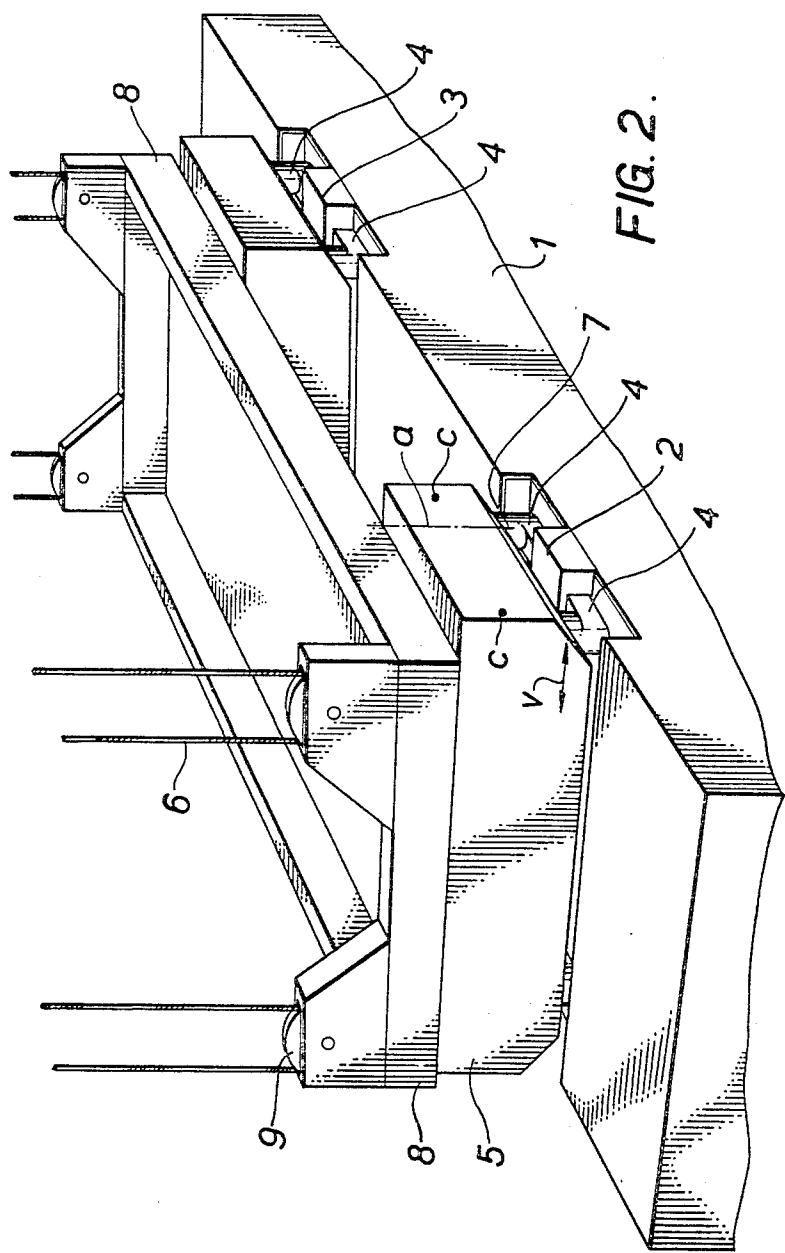
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CONTAINER

Fredrik Munck, Bergen, Norway, assignor to Sverre
Munck A/S, Bergen, Norway

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2 Claims

ABSTRACT OF THE DISCLOSURE

An arrangement in loading containers wherein the containers have formed thereon, in transversely extended recesses in the upper surface thereof, pairs of symmetrically arranged brackets, each bracket of a pair extending from a side wall of the container towards the other side wall of the container. The pairs are spaced apart a certain equal distance regardless of the overall length of the container.

The invention relates to containers of the kind which consist of a parallelepipedic box body or frame body suited for loading, unloading, transport and storage of goods. Such containers are at the top provided with engaging members for lifting gear suspended from a crane or a ship's boom.

The invention has for its object to provide a container of said type, whereby lifting thereof is made possible by means of a lifting gear provided with gripper elements, the distance between the engaging members of the container being standardized, i.e. the engaging members have a certain spacing corresponding to the gripper elements of the lifting gear. The engaging members of the container thus are independent of the size of the container. Thereby is made possible that containers of optional sizes and form can be used for loading and unloading of goods by means of one and same standard equipment in the form of lifting gear having gripper elements.

Besides the simplification obtained by the necessity of having at disposal only one lifting gear of fixed dimensioning and still being able to lift containers having different sizes, one also obtains a more favourable load distribution in the container. The engaging members of the container are assumed symmetrically mounted in pairs having a certain spacing from the ends of the container. Thereby the load will be more favourably transferred than in previously known containers which are suspended from the upper corners. The bottom or bottom frame of the container according to the invention thus do not require to be made from so heavy materials, whereby weight and costs can be reduced.

To have a better understanding of the above mentioned and further characterizing features of the invention, reference should be had to the following description and the embodiment schematically shown in the drawings.

FIG. 1 shows in perspective view a container according to the invention, and

FIG. 2 shows the same container suspended from a lifting gear or framework.

The container according to the example shown consists of a parallelepipedic box body for transport goods. It will immediately be understood that whichever form or structure of the container can come into question for the use in connection with the invention, the container itself forming no part of the present invention.

According to the invention the container 1 is provided with two pairs of brackets 2, 2' and 3, 3' arranged as shown in FIG. 1, i.e. as inwardly directed angular members rigidly connected to the container and having the

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top surface located in the same plane as the top surface of the container. Thereby the advantage is obtained that for stacked containers the weight will be taken up by these brackets 2, 3 and by reinforcements 1' the load can be transferred to the underlying container. In the stacking of such containers thus is obtained a substantially more favourable transfer of load than for previously known containers of this kind.

The engagement members 2, 3 of the container 1 are designed to cooperate with gripper elements of a lifting frame suspended from under a crane or ship's boom. In the example shown said gripper elements are constituted by hooks 4 which can be swung in under the brackets 2. The hooks 4 are arranged at lifting heads 5 from under the lifting frame 8, which is suspended by wires 6 passing the pulleys 9.

The hooks 4 can be movable in relation to the lifting heads 5 in different ways to obtain engagement with the brackets 2 of the container 1. The hooks 4 thus can be movable in pairs against and away from each other in crosswise direction of the container as suggested by the double arrow v. If the hooks 4 are moved against each other they will go out of engagement with the brackets 2. If they are moved in outward direction away from each other, they go to engagement under the brackets 2 and are ready for lifting the container.

The hooks 4 can in case be arranged separately rotatable about their axes a. If they are turned so that the horizontal engagement parts protrude inwardly in direction of the middle of the container, the latter is released. If they, however, are swung in direction outwardly to the position shown in FIG. 2 parallel with the container the hooks will engage at the lower surface of the brackets 2, 3.

The brackets 2 may also cooperate with gripping hook pairs. This means that the elements 4 are formed by cooperating pairs which can be swung up or down around the point of rotation c. The hooks can thereby be swung out of engagement or into engagement in a plan parallel with the side plane of the container.

Thus it will be understood that when in the claims is stated that the engagement members cooperate with gripper elements, the last-mentioned expression should cover all kinds of mechanical devices which can be brought to engagement with or be released from brackets arranged in two pairs symmetrically arranged at a certain spacing from the ends of the container and with their top sides located substantially in the same plane as the top side of the container.

I claim:

1. An arrangement relating to containers of various sizes of the type used for loading, unloading, transporting and storage of goods, all of said containers being of parallelepipedic shape and having side walls and a generally planar top surface extending across the top of the container between the side walls, and including at least two recesses formed in and extending transversely across the top of the container, each of said containers comprising at the top thereof pairs of symmetrically positioned engagement members arranged to cooperate with lifting gear of a lifting head suspended from a frame; the engagement members being rigidly secured to the container, each engagement member being in the form of a pair of brackets located in one of the recesses and extending horizontally and inwardly from the container side wall transversely across the container toward the other bracket of its pair, and said pairs being spaced along the length of the container from each other pair, the upper surface of each bracket being in substantially the same plane as the top surface of the container, the said brackets being secured to reinforcements of the walls of the container, whereby when the containers are stacked, part of the

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weight is absorbed by the brackets and the reinforcements, the said lifting head including gripping hooks which are movable into the recess between the brackets and under the brackets to grip thereunder and establish lifting connection with the container.

2. A container of the type used for loading, unloading, transporting, storage and the like, said container being of parallelepipedic shape and having side walls and a generally planar top surface extending across the top of the container between the side walls, and including at least two recesses formed in and extending transversely across the top of the container, said container comprising at the top thereof pairs of symmetrically positioned engagement members arranged to cooperate with lifting gear of a lifting head suspended from a frame, engagement members being rigidly secured to the container, each engagement member being in the form of a pair of brackets located in a said recess and extending horizontally and inwardly from the container side walls transversely across the container toward the other bracket of its pair, the upper surface of each bracket being in sub-

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stantially the same plane as the said top surface of the container, said brackets being secured to reinforcements of the said side walls of the container, whereby when the containers are stacked, part of the weight is absorbed by the brackets and the reinforcements, and whereby the brackets are designed for engagement with gripping hooks of a lifting head which are movable into the recess, between the brackets, and under the brackets to grip thereunder and establish lifting connection with the container.

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GEORGE E. LOWRANCE, Primary Examiner

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