Dec. 11, 1962 C. VEYRIE 3,067,890

STORAGE AND HANDLING DEVICE

Filed Nov. 10, 1959

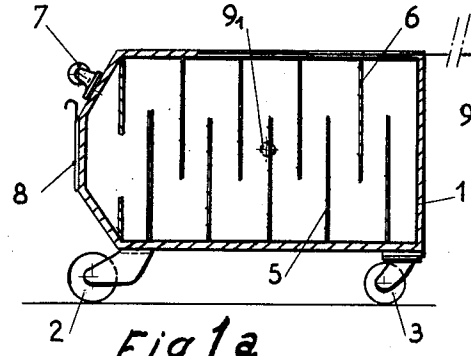


Fig 1a

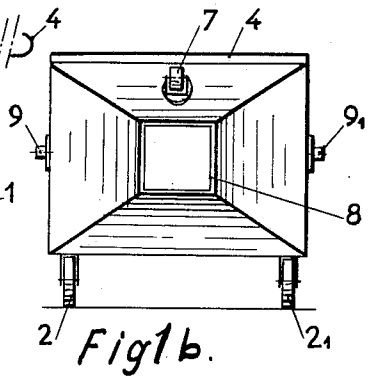


Fig 1b.

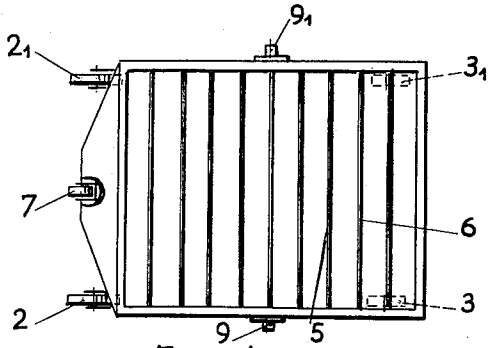


Fig 1c.

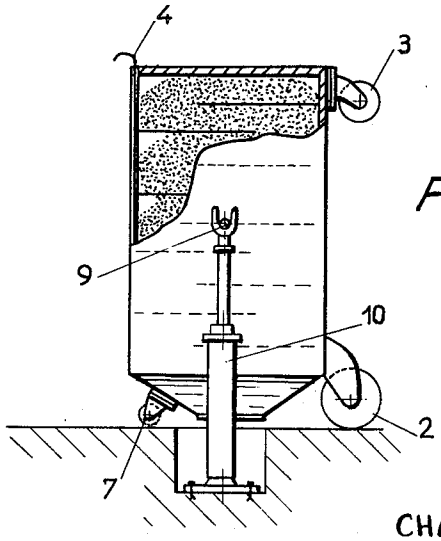


Fig. 2

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3,067,890

Patented Dec. 11, 1962

3,067,890

STORAGE AND HANDLING DEVICE

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Filed Nov. 10, 1959, Ser. No. 852,076
Claims priority, application France Nov. 28, 1958
7 Claims. (Cl. 214—300)

It is known to use receptacles formed by boxes mounted on trolleys formed with wheels or castors and commonly referred to as "containers" for conveying pulverous or granulated products from the storage reservoirs to the machines which are to treat the said products.

However, it sometimes happens that because of manufacturing requirements, the products remain a fairly long time in the said receptacles before being discharged. These circumstances are generally not disadvantageous, except in the case where the products in question are liable to form lumps, or when the danger exists of their elements adhering to one another and becoming agglomerated, if they remain a certain time in the container.

This situation can arise when the products have adhesive properties, or even when they are softened by heat or because of the pressure due to their own weight when they are accumulated over a relatively great height.

For example, granules with a rubber base which are used for the fabrication of numerous manufactured products become agglomerated when the temperature reaches approximately 25° C., or when they are heaped to a height reaching about 60 centimeters.

The present invention has for its object to obviate this disadvantage.

It is concerned with a container formed by a box comprising an open face capable of being closed by a tight cover and formed on the opposite face with a set of castors on which it rests in a horizontal position known as the "filling" position, and is characterized by the fact that it comprises two series of internal partitions forming between them baffle members and disposed in such a way as to be vertical when the box is in the filling position, and to be horizontal when the said box is rocked into a vertical position known as the "storage" position.

The box can in addition comprise a closable discharge orifice on the face which forms its bottom when it is in storage position.

This arrangement is used in the following manner:

With the container resting on its castors in the horizontal position, its upper cover is withdrawn and the discharge orifice is closed; it is then possible completely to fill the container, because the vertical partitions do not in practice form any obstacle to this filling operation. If it is then necessary for the container to be immobilized for a certain time without using its load, the upper tight cover is replaced and the assembly is caused to swivel into the vertical position. The partitions are then in superimposed horizontal planes and form a number of floors for the mass forming the load, which is thus divided into a certain number of partial loads of small height, equal to the spacing of the partitions, and this avoids the agglomeration effects referred to above. When it is subsequently desired to empty the container, it is then possible either to swivel it once more so that its open surface faces downwardly, after having first withdrawn its cover, or to leave it in the storage position and to open the lower discharge orifice so that the load will flow through the baffles between the partitions, if necessary as a result of a shaking or oscillating movement imparted to the container.

One possible construction of a device according to the invention is shown by way of example in the accompanying figures.

FIG. 1*a* is a longitudinal sectional view of such a container in the filling position, FIG. 1*b* is an end view thereof and FIG. 1*c* is a plan view with the cover removed; FIG. 2 is a view of the container in the storage position. In these figures, **1** represents the container which rests on castors **2**, 2_1 and **3**, 3_1 in the filling position and which is provided on its upper surface with a removable cover **4**. A certain number of vertical partitions, such as **5**, disposed perpendicularly of the longitudinal axis of the container and with a height smaller than the height of the container in the filling position, extend from that surface of the container which, in this position, forms its base. Similarly, other partitions **6** parallel to the partitions **5** and intercalated between them and also of a height smaller than that of the container extend from the upper edges of the latter.

In addition, the container carries a supplementary supporting point formed by a fifth wheel or castor **7**, which co-operates with the wheels **2**, 2_1 in order that the container can be kept in the vertical swivelled position for storage purposes. The surface which in this position forms the bottom of the container is in the form of a truncated pyramid and comprises at its base an orifice which can be closed by means of a door **8**.

Finally, the lateral sides of the container are provided with two trunnions **9**, 9_1 which permit the said container to be lifted by means of two jacks, such as **10**, for the purpose of discharging the same, as shown in FIG. 2. These trunnions are preferably fixed above the center of gravity of the loaded container, so that it is sufficient, for discharging the latter, to displace it into the transport position until the trunnions are disposed above the forks of the jacks, and then to actuate the latter for raising the container, which then rocks of its own accord into the discharge position.

The partitions **5** and **6** can be fixed or movable.

I claim:

1. A storage and handling device comprising a container having a side with a loading aperture therein, a cover for said aperture movable to a closed position, two series of partitions within said container forming baffles, said container being provided with first wheel means for supporting said container in a filling position in which the walls of said loading aperture are disposed in a common horizontal plane and said partitions extend in substantially vertical planes, said container being provided with second wheel means for supporting said container in a storage position in which said walls of said loading aperture are disposed in a common vertical plane, said cover is in said closed position, and said partitions extend in substantially horizontal planes, said first wheel means and said second wheel means including wheels common to both said first wheel means and said second wheel means.

2. Device according to claim 1, characterized in that said partitions are perpendicular to the longitudinal axis of the container.

3. Device according to claim 1, wherein said container comprises wall means forming the base of said container when said container is in said storage position, said wall means being in the form of a truncated pyramid.

4. Device according to claim 1, characterized in that said container comprises on two lateral surfaces thereof journals which permit of it being lifted and of it being rocked by raising the said container by means cooperating with said journals.

5. Device according to claim 4, characterized in that said journals are disposed above the center of gravity of the loaded container.

6. A storage and handling device comprising a container having a wall including removable cover means, said container being adapted to receive material to be

stored when said cover means is removed, means projecting from different walls of said container adapting said container for selective support in horizontal and vertical positions for adapting said container respectively to receive and to store said material, said means projecting from different walls including a plurality of wheel means carried by a wall of said container opposite said first-named wall, said wheel means being adapted to support said container in said horizontal position, two series of partitions disposed within said container and forming baffles, said partitions extending at right angles to the longitudinal axis of said container, said means projecting from different walls of said container comprising a wheel member attached to an end wall of said container, means for supporting said container in said vertical position comprising said wheel member and some of said plurality of wheel means.

7. A storage and handling device according to claim 6, wherein said end wall comprises faces forming a truncated pyramid, said wheel member being attached to one of said faces.

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