

Sept. 29, 1942.

H. BUDDECKE

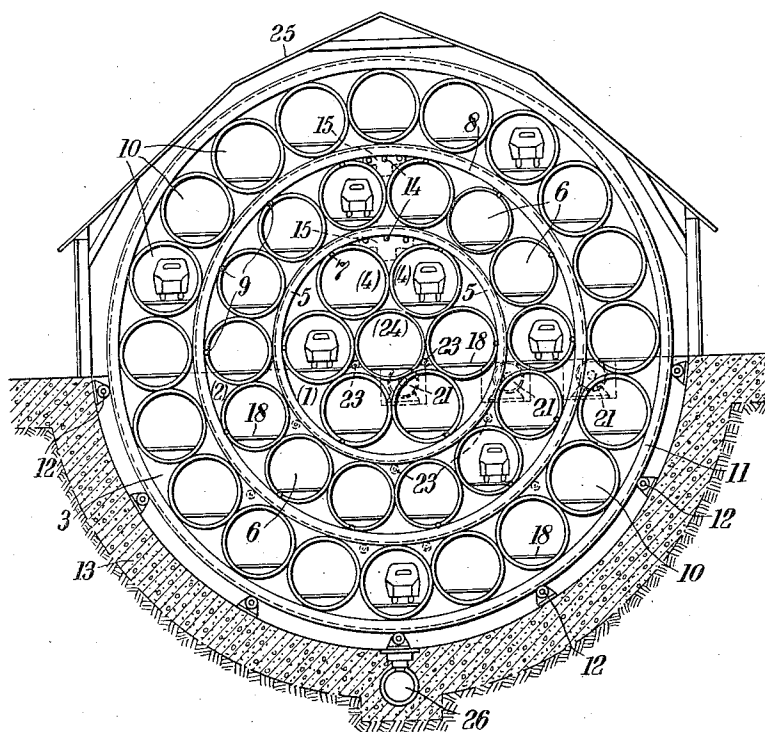
2,297,199

DEVICE FOR RECEIVING, CONVEYING, OR TRANSPORTING BULKY OBJECTS

Filed April 21, 1939

2 Sheets-Sheet 1

Fig. 1



Inventor:

H. BUDDECKE

By *Blair Kilgus*
ATTYS

Sept. 29, 1942.

H. BUDDECKE

2,297,199

DEVICE FOR RECEIVING, CONVEYING, OR TRANSPORTING BULKY OBJECTS

Filed April 21, 1939

2 Sheets-Sheet 2

Fig. 2

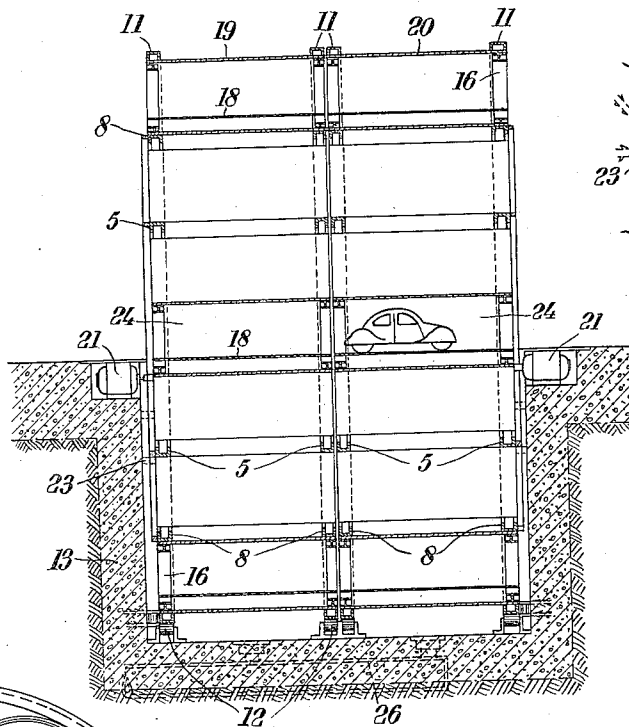


Fig. 5

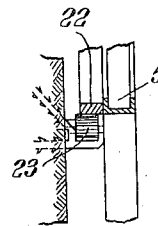
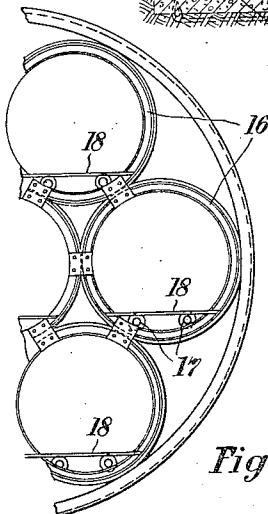
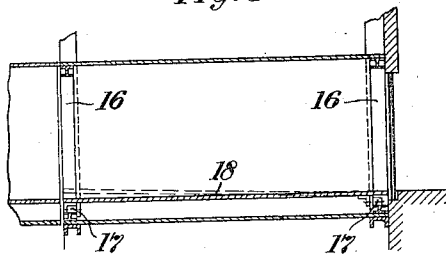


Fig. 3

Fig. 4



Inventor:

H. BUDDECKE

By *Blair Kilgus*
ATTY

UNITED STATES PATENT OFFICE

2,297,199

DEVICE FOR RECEIVING, CONVEYING, OR
TRANSPORTING BULKY OBJECTSHeinrich Buddecke, Adelsberg, near Chemnitz,
Germany; vested in the Alien Property CustodianApplication April 21, 1939, Serial No. 269,206
In Germany May 9, 1938

3 Claims. (Cl. 214—16.1)

The chief object of the invention is to produce a space-saving, reliable and cheap device for receiving, conveying or transporting bulky objects, especially those of large dimensions such as motor-cars, aeroplane bodies, and the like.

The accommodation of motor vehicles at different levels in elevator garages or garage towers having helical entry and exit tracks involves a good deal of space and is expensive. The same disadvantage results if separate cylindrical compartments are pivotally mounted after the manner of an American air swing about external shafts which are supported from two revoluble rings above the ground.

According to the present invention, a supporting surface for the contents of each compartment or container of the device which receives a car or goods (and is hereinafter referred to for convenience as a "compartment," although it is not necessarily a closed chamber) is slidably mounted in closed and preferably circular tracks so that it always assumes a horizontal position. As the supporting surface can always assume a horizontal position under its own weight and the weight of the contents of the compartment, the compartments may be arranged so that they are adjustable, displaceable, rotatable or otherwise movable in any desired track vertically or horizontally without the contents of the compartment departing from the position of equilibrium. Thus the compartments, which are preferably of cylindrical or prismatic shape, may be mounted in honeycomb manner, preferably with tracks for the supporting surface bearing firmly one against the other either directly or through the wall of the compartment and the entire system may be made rotatable. As a result of the honeycomb-like construction a system is then produced which is static in itself, is self-supporting and self-bracing. The compartments may be arranged to be displaceable along independent rigid tracks. The tracks may be rigid and stationary and the compartments may roll in them individually or together or the compartments may move with these guide tracks attached to them. In the latter case a circular construction of the tracks is especially advantageous and the honeycomb system may be arranged in the centre.

The invention will now be described with reference to the accompanying drawings which illustrate by way of example one of the ways in which it may be applied to a garage, although a similar arrangement may be employed for the storage of goods. In these drawings:

Figure 1 is an elevation and

Figure 2 a cross-section of the garage, which comprises a number of rings.

Figure 3 is an elevation, on a larger scale, showing compartments of the garage arranged in honeycomb fashion.

Figure 4 is a longitudinal section of one of the compartments of Figure 3.

Figure 5 shows, on an enlarged scale, how rings employed in the compartments of Figs. 3 and 4 are supported.

The multi-ring garage of Figures 1 and 2 comprises a central system 1, a first circular ring system 2 and a second circular ring system 3. The central system 1 comprises a number of compartments 4 arranged in honeycomb fashion and firmly connected to one another at their points of contact. The internal ring 5 of the first ring system 2, to which ring are attached the compartments 6, runs on rollers or balls 7 on the periphery of the central system 1. The internal ring 8 of the second ring system 3 runs upon rollers or balls 9 on the compartments 6 of the first ring system 2. The compartments 10 of the second ring system 3 are mounted between the inner guide ring 8 and an outer guide ring 11 and between which they have a rolling contact. The outer ring 11 runs on rollers or balls 12 which are carried by the correspondingly shaped trough 13. The guide rings 5 and 8 may also roll upon balls 14 on extension members 15 secured between the compartments of the system. Each compartment 4, 6 or 10 has, as is shown in Figs. 3 and 4, two annular tracks 16 which are preferably of double T or girder shape in cross-section, which in each system are supported or bear against one another and are firmly connected together.

A surface 18 for supporting the motor vehicle to be garaged or the goods to be stored rolls on the tracks 16 on rollers 17. The tracks 16 may also support the wall or covering of each compartment. As may be seen from Figure 2, two ring systems 19 and 20 are arranged one behind the other, each system being rotatable independently of the other. The guide rings 5, 8, 11 of the systems are preferably of U-shaped cross-section and each system can be rotated by itself by means of a pinion on the shaft of a motor 21, the pinion engaging with a toothed part 22 on the appropriate system. The part 22 may at the same time (see Fig. 5) serve as a means of further support for each ring system, support being given to it by rollers 23 secured in the masonry. Furthermore, the central compartment 24 of the central system may also be supported on similar

rollers in order to give support to this central system.

A number of ring systems may be arranged one behind the other, there being conveniently provided between each two systems a track for introducing the vehicles into the various compartments. The system is preferably so arranged that the supporting surfaces of the compartments which assume a central horizontal position are at ground level. Where there are a number of systems arranged one behind the other, the central compartment 24 is conveniently left free in order to provide access to another system.

The entire system may be covered by a roof 25; and a drain 26 may be provided in the pit 13.

The central system according to Figure 1 and Figure 2 may be employed by itself and be enlarged by the honey-comb-like addition of further compartments. It is convenient to surround the honeycomb system of this kind by an external guide ring.

Each compartment may be used individually for transport purposes, and the assembly of the compartment in honeycomb and ring form may be used for receiving, conveying or transporting purposes, especially in cases where differences in height are to be overcome. The arrangement according to the invention is also very suitable for use in constructional and conveying purposes for ships, where differences in height have to be overcome; and the supporting surfaces always take up a horizontal position even if the ship rolls.

As a result of the rotatability of the individual systems or of the displaceability of the individual compartments, any desired compartment may be brought to ground level for loading or discharging.

I claim:

1. A garage or the like comprising a plurality of ring systems of cylindrical open ended compartments in concentric ring shape arrangement, a movable platform in each compartment, supporting annular tracks for each compartment upon which the platform rolls for automatic horizontal adjustment, each compartment of each ring system being in direct contact with at least two compartments of the same ring system and directly supported thereby, and means for maintaining said ring systems in the relation described.

2. A device according to claim 1, in which said means includes a ring for each system to provide a holding and guiding means upon which the compartments of the adjacent ring system have a rolling contact.

3. A device according to claim 1, in which the central ring system is provided with a compartment in its center upon which compartment the other compartments of the central system rest and in turn support the adjacent system whereby the compartments of the entire structure are positioned in a honeycomb manner.

HEINRICH BUDDECKE.