

March 14, 1967

L. R. M. WETTLEN

3,308,771

LOADING PALLET

Filed Feb. 24, 1966

2 Sheets-Sheet 1

FIG. - 2 -

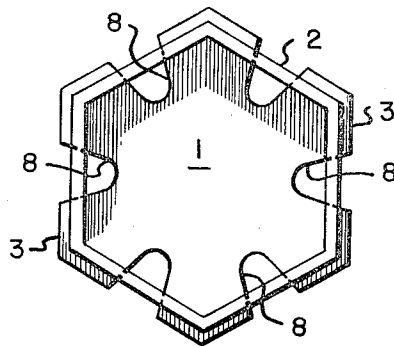
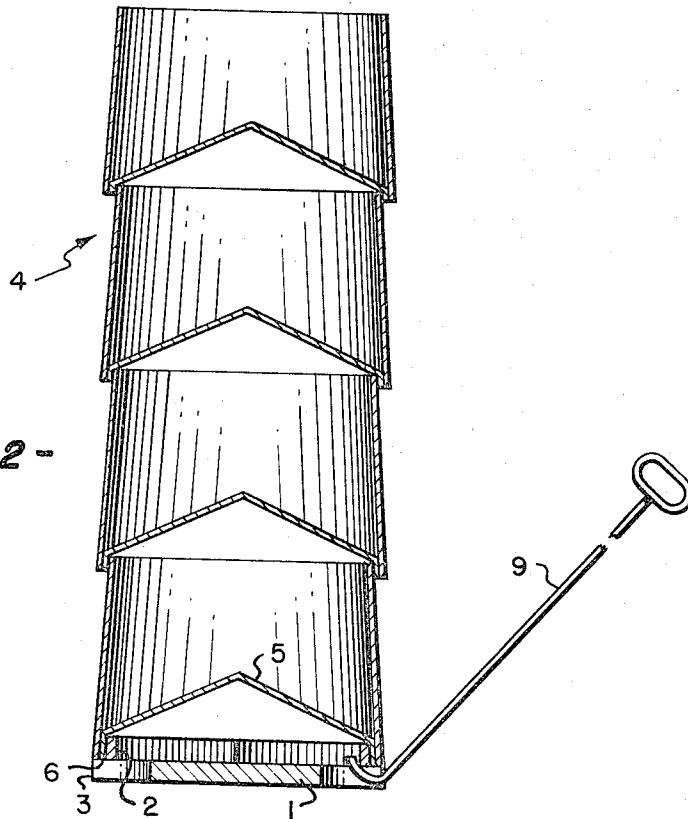


FIG. - 1 -

INVENTOR.
LARS R. M. WETTLEN
BY
Earle R. Marden
ATTORNEY

March 14, 1967

L. R. M. WETTLEN

3,308,771

LOADING PALLET

Filed Feb. 24, 1966

2 Sheets-Sheet 2

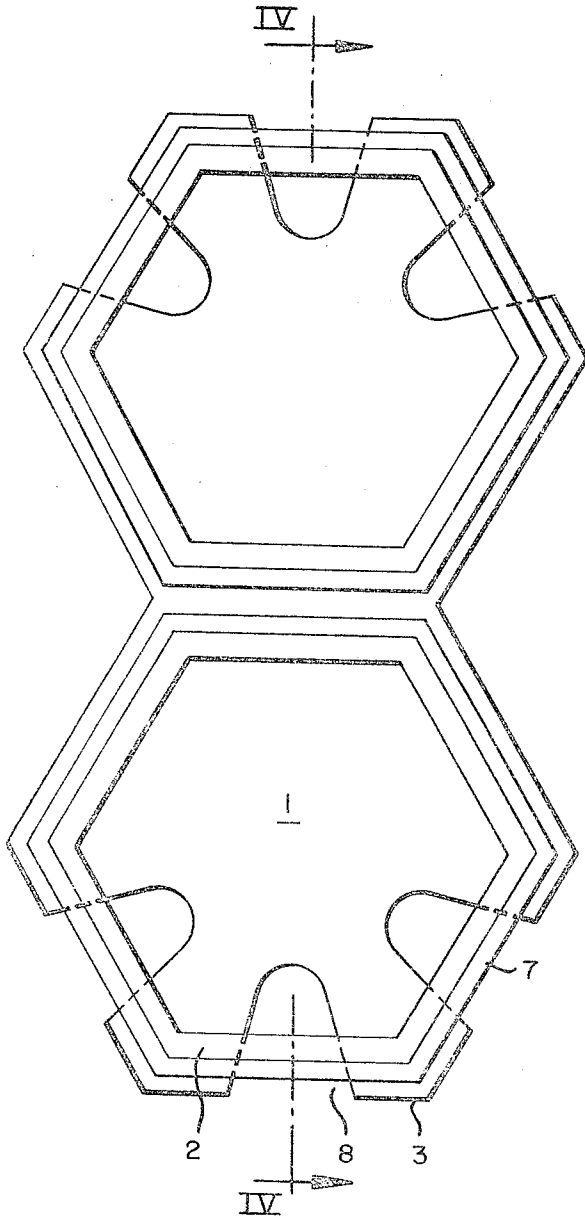


FIG. -3-

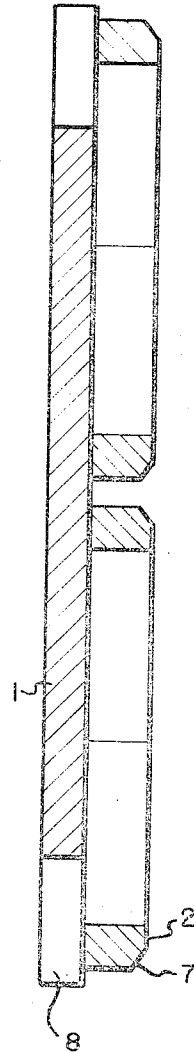


FIG. -4-

INVENTOR.
LARS R. M. WETTLEN
BY

Earle W. Marden
ATTORNEY

1

3,308,771

LOADING PALLET

Lars Roland Malte Wettlen, Lomma, Sweden, assignor to AB Tetra Pak, Lund, Sweden, a Swedish company
 Filed Feb. 24, 1966, Ser. No. 529,757
 Claims priority, application Germany, Apr. 24, 1965, A 23,654

2 Claims. (Cl. 108—51)

The invention relates to plates for transportation of stackable cases with the section at the floor level wider than on top, and especially meant for transportation of prismatic containers with cone or pyramid shaped bases for tetra shaped packages.

The stackable cases which, if empty, can be inserted in each other and after they are filled, by slight turning, can be piled one on top another and are available in many forms and sizes. Of special importance is the prismatic cases for tetrahedron shaped packages, described in the German Patent No. 961,156, and the great potential this kind of packages possesses, depending on the inverted cone or pyramid shaped base of the cases. These cases have an inverted cone or pyramid shaped base on which the lowest layer of the tetra shaped packages rests. For that reason, the side walls of the container have a slope that allows stacking. In addition to transporting these prismatic cases for tetra shaped packages, with minor changes it can serve for piling other kinds of stackable cases whose side walls are somewhat wider near the base. These stackable cases can be of circular or not circular shape.

Up to now when unloading or moving this kind of cases, they had to be carried individually from the stack. Only by special formed cases was it possible to move approximately two containers with the help of a pincer as the German Patent No. 961,156 describes. Up until now it has been impossible to move the whole stack at the same time.

The purpose of this invention is to make it possible to transport the stackable cases without removing any cases or carrying the cases a few at a time.

The device consists of a plate for transporting the stackable cases. At the floor level the plate has wide edge with a suitably shaped retaining ring mounted on the top of the plate which conforms to the inside base of the stacked case in such a manner that the lower lip of the case rests with its base on the ring and lower edge against the plate.

After accumulating a certain amount of cases, this kind of transportation plate can be moved in different ways. These plates can, for instance, be equipped with small rollers, but the preferred shape is such that the plate has a cut out in at least one side to allow attachment of, for instance, a hook. With a pull hook attached, the transportation plate with all stacked containers can be moved around easily. This has the advantage that the plate rests firmly on the floor and prevents the stack from flipping.

Preferable end use of this kind of plate is going to be with familiar prismatic cases for tetra shaped packages. These cases are usually of a hexagonal section with a domed cone or pyramid shaped, frustum of a cone, or pyramid shaped, inverted base. For transportation of these containers, the plate could preferably have a hexagonal shaped base or it can consist of two attached hexagonal plates. In the first mentioned case, one stack can be moved at a time; in the second case, two stacks can be moved at the same time. If necessary or desired, an extension of this scheme would allow the transportation plate to be designed so that it would move three or more stacks of containers at the same time.

In the cases where the plates are used for longer transportation of the cases with cone or pyramid shaped bases,

2

the ring can be shaped on top to conform exactly to the cone or pyramid shape inside the base of the case, allowing even better support of the cases, and the crease otherwise formed by the ring in the base of the case will be avoided.

The advantage of the transportation plate as described is that larger cases and any desired stack height can be moved without great effort and without the risk of tipping the stack. By keeping this kind of plate in stock and use, loading and moving time and manpower will be saved.

The invention will be further described by the drawing.

FIG. 1, a view of a transportation plate per invention for transportation of prismatic cases for tetra shaped packages;

FIG. 2, a vertical section of the plate in FIG. 1 shown with piled cases and an attaching hook;

FIG. 3, a view of a developed plate per invention for transportation of two stacks at a time; and

FIG. 4, a vertical section IV—IV of FIG. 3.

In the drawing of the plate, the plate consists of a base plate 1 and a ring 2 mounted all around so located from the edge that an outer edge 3 is obtained. On the outer edge 3 rests the lowest case of the stack 4, with its base 5 resting on the ring 2, and the edge of the base 6 resting on the outer edge 3.

As shown in FIGS. 3 and 4, when used for cases with a fixed cone or pyramid shaped base, the ring has in this design a bevel 7 whose angle is equal to the angle of the cases base.

For easier moving of the plate there are predetermined cut outs 8 in the base plate where a pull hook 9 can be inserted and be attached to ring 2.

While in the FIGS. 1 and 2 one loading plate for transportation of prismatic containers is shown, FIGS. 3 and 4 show a different design per invention where two stacks of containers can be moved at the same time. In this concept the two rings form two separate adjacent hexagons.

That which is claimed is:

1. Loading plate for transportation of stacked cartons comprising: a base plate, a ring member on said base plate, said base plate having a portion extending outwardly beyond said ring member, a carton telescoping over said ring member with the bottom thereof resting on said extending portion of said base plate, said ring member having a shape which conforms to the inner shape of the base portion of the carton and a notch in said base plate extending from said outwardly extending portion to a position toward the center of said base beyond said ring member to provide an attachment point for a pull instrument.

2. The structure of claim 1 wherein said ring member is hexagon shaped.

References Cited by the Examiner

UNITED STATES PATENTS

1,784,909	12/1930	Romine	108—51 X
1,970,787	8/1934	Wickersham	220—97
2,493,163	1/1950	Rausing	220—97
2,673,022	3/1954	Prossen	108—51 X
2,766,993	10/1956	Reichelt	220—97 X
2,919,800	1/1960	Jarund	206—65
3,000,496	9/1961	Larson	206—65
3,237,760	3/1966	Deremer et al.	108—51 X

FOREIGN PATENTS

448,886 6/1936 Great Britain.

FRANK B. SHERRY, *Primary Examiner.*

FRANCIS K. ZUGEL, *Examiner.*

G. O. FINCH, *Assistant Examiner.*