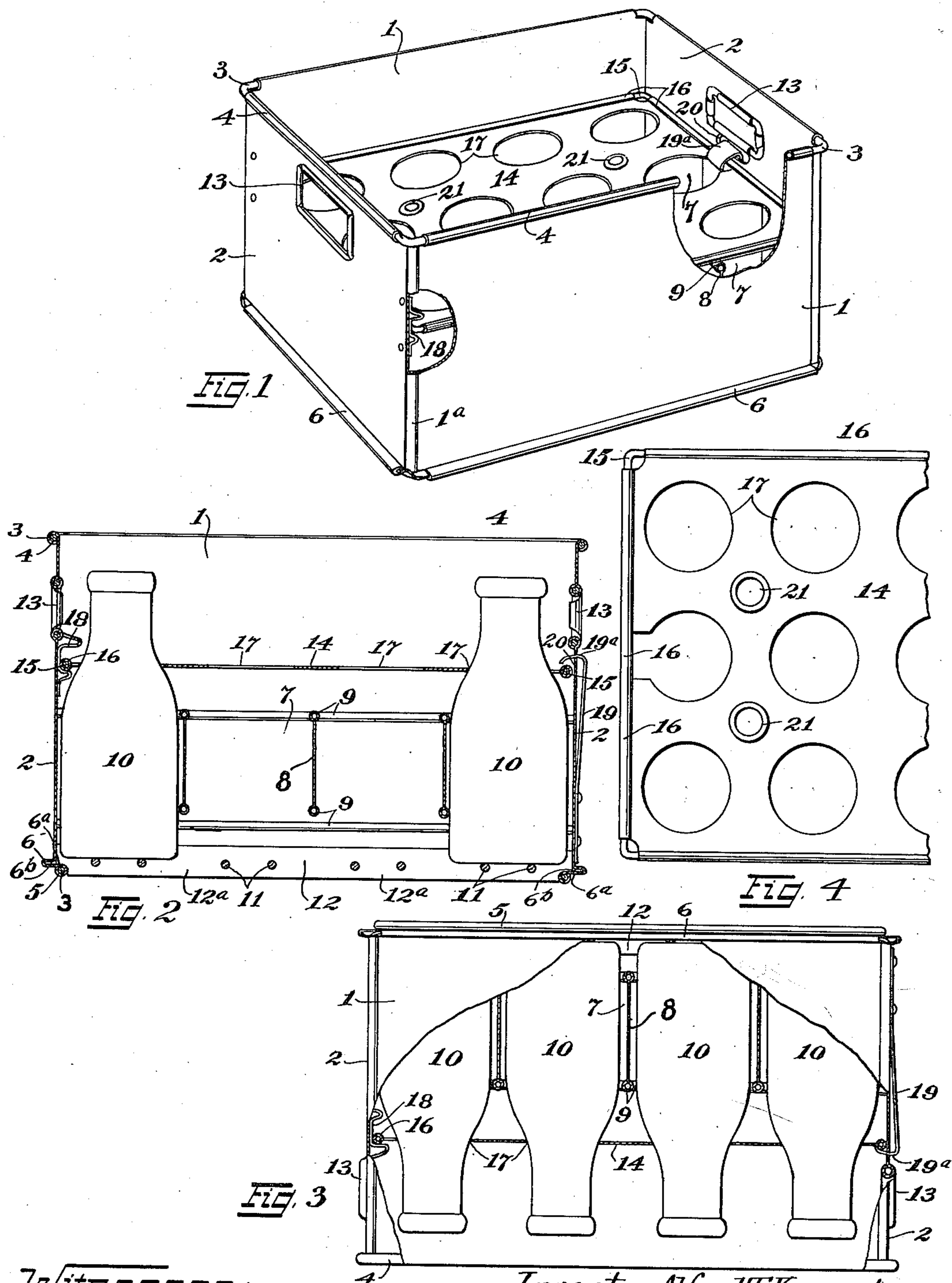


A. T. KRUSE, DEC'D.
A. M. KRUSE & C. M. WILLOCK, EXECUTORS.
PACKING CASE.
APPLICATION FILED JUNE 30, 1909.

975,962.

Patented Nov. 15, 1910.



Witnesses:
H. C. Valentier
M. G. Linnhart.

Inventor, Alfred T. Kruse, deceased
Curtis M. Willock
August M. Kruse, Ex'rs
by Obed B. Billman
ATTORNEY.

UNITED STATES PATENT OFFICE.

ALFRED T. KRUSE, DECEASED, LATE OF DEFIANCE, OHIO; AUGUST M. KRUSE AND CURTIS M. WILLOCK, EXECUTORS, ASSIGNORS TO THE AMERICAN STEEL PACKAGE CO., OF DEFIANCE, OHIO, A CORPORATION OF OHIO.

PACKING-CASE.

975,962.

Specification of Letters Patent.

Patented Nov. 15, 1910.

Application filed June 30, 1909. Serial No. 505,302.

To all whom it may concern:

Be it known that ALFRED T. KRUSE, deceased, late a citizen of the United States, and resident of Defiance, in the county of Defiance and State of Ohio, did invent certain new and useful Improvements in Packing-Cases, of which the following is a specification.

This invention relates to improvements in packing cases designed, primarily, for the transportation and storage of liquids contained in bottles and similar vessels.

The invention relates more particularly to bottle retaining means or attachments for what are known as "milk cases" of the "open bottom" type or class of packing cases, such for example,—as that disclosed in the application of Alfred T. Kruse, filed May 27, 1907, Serial No. 375,776, of which this application is a continuation as to all subject-matter common to the two applications.

The present form of packing case with its attachments is designed with special reference for use as a milk-case in connection with milk bottle washing and filling machines, the bottles being securely retained in the bottle-cells, so that the case may be inverted for washing or cleansing purposes, by means of a removable bottle-retainer-plate adapted to fit within the upper portion of the case and provided with a plurality of neck-receiving openings designed to take over the necks of the bottles and impinge against inclined shoulder portions thereof. The system of handling bottled milk in crates or cases and by the use of machines as above referred to is such that from the time the case of empty bottles is returned to the bottling plant until it is sent out with full bottles for market, the bottles do not leave the case, the bottles while remaining in the case being thoroughly cleansed and filled by the machines adapted to handle the filled milk cases bodily in the cleansing and filling operations.

The present form of case also relates to the class known as "stacking-cases," that is,—the lower marginal edges of the case side walls are provided with an inwardly extending ledge or "seat" terminating in a depending friction-bearing-beading, said ledge or seat being adapted to rest upon and said depending friction-bearing-beading

being adapted to take or rest within the upper marginal or beaded edge of the sub-
jacent case, upon which it is stacked. The open bottom structure is admirably adapted to provide a proper support for the case with its contents upon the ordinary conveyor now in common use by the manufacturers and handlers of bottled liquids and to form a convenient bearing surface for the same.

With the above mentioned ends in view, the invention consists in the novel construction, arrangement and combination of parts, hereinafter described, illustrated in one of its embodiments in the accompanying drawings, and particularly pointed out in the appended claims.

Referring to the drawings, forming a part of this specification, Figure 1, is a perspective view of a milk case equipped with a bottle-retaining plate and attachments in accordance with this invention. Fig. 2, a longitudinal sectional view of the same provided with bottles to illustrate the relative position of the parts. Fig. 3, a side view of a filled inverted case having a portion of its side wall broken away for the purpose of illustrating the manner of supporting the inverted bottles by the improved bottle-retaining plate. Fig. 4, an enlarged plan view of a portion of the improved bottle-retaining-plate.

Similar numerals of reference designate like parts throughout all the figures of the drawings.

The case body is preferably of rectangular form and made up of separate side and end walls 1, and 2, secured at the corners by means of an ordinary overlapping seam 1^a. The upper and lower marginal edges of the side and end walls are preferably bent or curled about a wire 3, forming upper and lower beadings 4 and 5 respectively. The lower portions of said walls just above said lower beading are preferably crimped or flanged to form an outwardly-extending horizontal bottom-supporting-flange 6, comprising an outwardly-extending upper horizontal member connected to a second or lower inwardly-extending member extending inwardly beyond the vertical planes of said side and end walls forming a ledge 6^a, and providing an inner recess 6^b, between

said upper and lower horizontal members of said bottom supporting flange for receiving and containing the ends of the bottle supporting bars of the open bottom structure as hereinafter described. The lower or ledge forming member of said bottom supporting flange terminates in the lower beading 5; said lower beading 5, forming a depending friction bearing beading upon which the case normally rests, said depending beading being also adapted to take or rest within the upper marginal edge or beading 4, of the subjacent case upon which the case is stacked so as to interlock and hold the stacked cases in vertical alinement.

The bottle cell forming structure may be of any suitable and convenient form, said cell forming structure, in the present instance, comprising a plurality of main or longitudinally extending partition plates 7, intersected by a plurality of auxiliary or cross partition-plates 8, said partition plates having their edges curled over forming upper and lower beadings 9, adapted to abut or impinge against the bodies of the bottles 10, resting within the bottle-cells. The bottle-cell forming structure is formed above the open bottom structure, hereinafter described, and may be interposed and secured to the lower portions of the case side walls in any suitable and convenient manner.

The open bottom structure comprises a plurality of bottle-supporting bars 11, having their ends taking into the inner recess 6^b, formed by said bottom supporting flange 6, and preferably, resting upon the ledge 6^a, formed by the lower member thereof. The intermediate portions of said bottle supporting bars are supported by means of longitudinally-extending supporting bars 12, extending, in the present instance, directly beneath and in alinement with the partition-plates 7, said longitudinally-extending supporting bars having their ends resting upon the ledge 6^a, and provided with depending portions 12^a, interposed between and extending flush with the depending friction bearing beadings 5, to cooperate with the latter in forming a proper support for the case with its contents upon the ordinary conveyor now in common use as hereinbefore referred to.

The ends of the case body are preferably provided with beaded handle openings 13, as shown, and as a means for securely retaining the bottles in the case when the latter is inverted in the bottle cleansing and filling machine during the cleansing operation, a bottle-retaining-plate 14, is removably mounted within the case body above the bottle cells as hereinafter described, said bottle-retaining plate comprising a main body portion or sheet of metal having its marginal edges curled over and about a wire 15,

forming a beading 16, and provided with a plurality of bottle-neck-receiving openings 17, adapted to receive and contain the necks of the bottles arranged in the bottle-cells and impinging against the inclined shoulders of the bottles and holding the latter in position when the case is inverted as shown in Fig. 3, of the drawings. As suggested in Figs. 2, and 3, of the drawings the bottle-retaining plate is preferably mounted so as to provide a limited vertical movement for the bottle-retaining plate and the bottles in the bottle-cells when the case is inverted.

The bottle retaining plate is removably mounted within the case walls, and preferably, in a horizontal plane intermediate the horizontal planes of the handle openings and the cell forming structure and is, preferably, secured therein by having one of its beaded marginal edges taking into a pair of pivot-lug-brackets 18, secured within and to one of the end walls of the case and having its opposite or free beaded edge secured by means of a spring-latch-bar 19.

The spring latch-bar is preferably secured to one of the end walls on the outer side thereof and terminates at its upper or free end in a hooked head 19^a, extending inwardly and having its upper surface beveled or inclined so that when the free end of the bottle-retaining plate is pressed downwardly in engagement therewith it will be pressed outwardly and will snap into engagement with the adjacent beaded edge of the bottle-retaining plate when the latter has been brought to its normal position. The hooked head is disposed beneath and adjacent to the handle-opening 13, so as to be operable by the thumb or finger of the hand for disengaging the hooked head of the spring latch-bar, and as a convenient construction for this purpose the hooked head preferably extends through an opening 20, formed beneath the handle opening 13, it being evident, however, that if desired the relative arrangement of the parts might be such that the hooked head 19, could with convenience and propriety extend through the handle opening 13, itself. The bottle retaining plate is reversible or interchangeable, and as a convenience in inserting the same in the case body and over the necks of the bottles and removing the same therefrom beaded finger-openings 21, are provided intermediate the neck-receiving openings of the bottle retaining plate, it being understood in this connection that the bottle retaining plate is simply used in connection with the cases in passing the same through the bottle washing and filling machine.

From the foregoing description, taken in connection with the accompanying drawings, the operation and advantages of the invention will be readily understood.

Having thus described an embodiment of

the invention, what is claimed and desired to be secured by Letters Patent is,—

1. A packing-case, comprising an open bottom rectangular case body provided at its ends with handle-openings and carrying a bottle-cell-forming structure, a bottle-retaining plate mounted in said case body above said cell-forming structure and in close proximity to said handle-openings, said retaining-plate being provided with bottle-neck-receiving openings and resting in a plane above the shoulder portions of the bottles in said cell-forming structure, and means for removably supporting and latching said bottle-retaining-plate, said latching means comprising a latch-bar engaging said retaining-plate in close proximity to one of said handle-openings and being adapted to be detached by the hand while resting in the latter.

2. In a packing-case, a case body having its lower marginal edges crimped into an outwardly-extending bottom-supporting-flange providing an inner recess, said flange having its lower member extended inwardly forming a ledge within the vertical planes of said walls and terminating in a depending friction-bearing beading, and an open bottom comprising a series of bottle-supporting-bars having their ends resting on said ledge and extending into said inner recess and a plurality of friction-bearing supporting-bars having their ends resting on said ledge and intersected by and supporting the intermediate portions of said bottle-supporting-bars.

3. In a packing-case, a case body carrying a bottle-cell forming structure and provided with a bottom-supporting flange forming an inner recess, said flange having its lower member extended inwardly forming a ledge within the vertical planes of said walls and terminating in a depending friction-bearing beading, and an open bottom comprising bottle-supporting bars resting on said ledge and extending into said inner recess, and intersecting supporting-bars resting on said

ledge and provided with depending friction-bearing portions interposed between and extending flush with said depending friction-bearing beading.

4. In a packing-case, a case body carrying a bottle-cell forming structure and provided with a bottom supporting flange having its lower member terminating in a depending friction-bearing beading inset from the outer edges of said flange, a plurality of bottle supporting-bars resting above said depending friction-bearing beading and secured within said bottom supporting flange, and intersecting supporting-bars mounted above said beading and provided with depending friction-bearing portions interposed between and extending flush with said depending friction-bearing beading.

5. A packing-case, comprising an open bottom rectangular case body provided with oppositely-disposed handle-openings and a bottle-cell-forming structure, a bottle-retaining plate mounted in said case body in close proximity to said handle-openings and provided with bottle-neck-receiving openings supporting the shoulder portions of the bottles when the case is reversed, and means for latching said bottle-retaining plate within said case body, said means including a latch member normally engaging the marginal edge of said plate and extending in close proximity to a handle-opening whereby said latch member may be detached by the hand while resting in said handle-opening.

In testimony whereof, we, as executors of the last will and testament of the said ALFRED T. KRUSE, deceased, have hereunto affixed our signatures, in presence of two witnesses.

AUGUST M. KRUSE,
CURTIS M. WILLOCK,

Executors of the estate of Alfred T. Kruse, deceased.

Witnesses:

M. PARTEL,
E. J. ALLEN.