

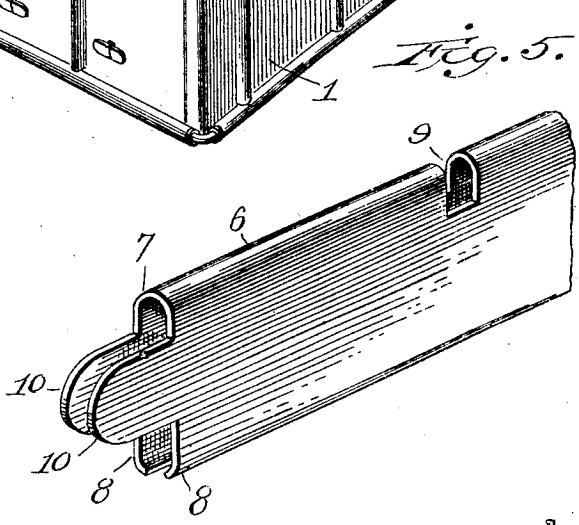
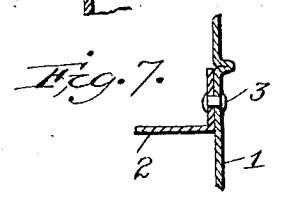
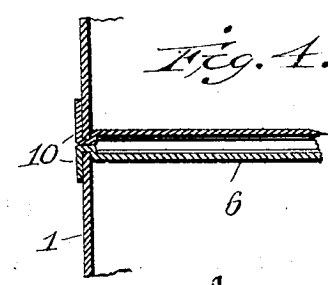
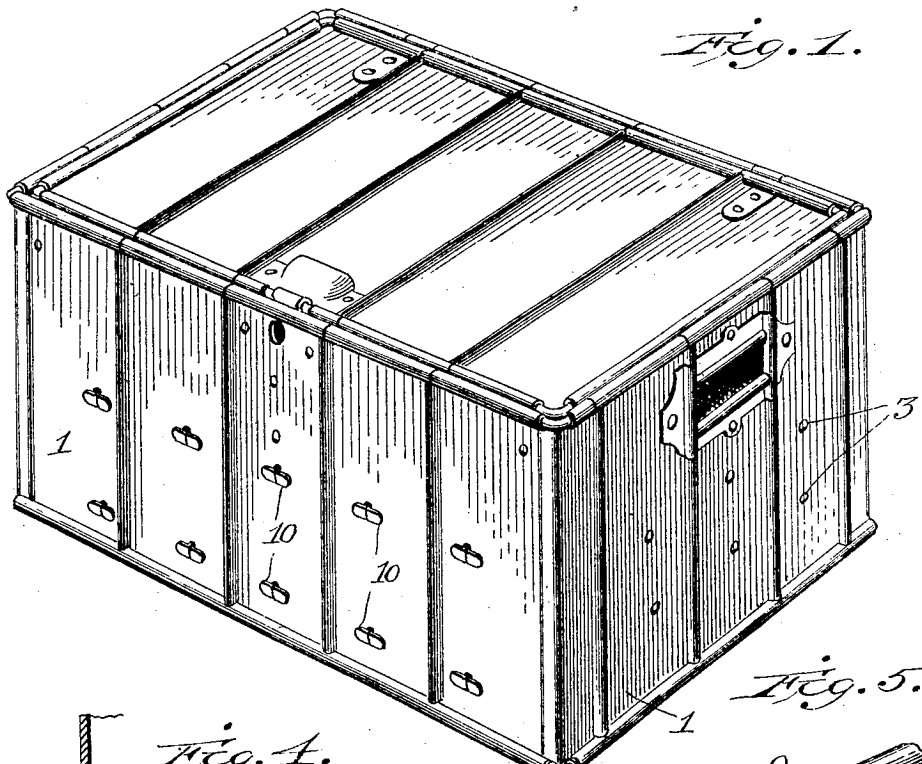
No. 805,424.

PATENTED NOV. 21, 1905.

A. T. KRUSE.  
SHEET METAL PACKING CASE.

APPLICATION FILED DEC. 3, 1904.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 2.

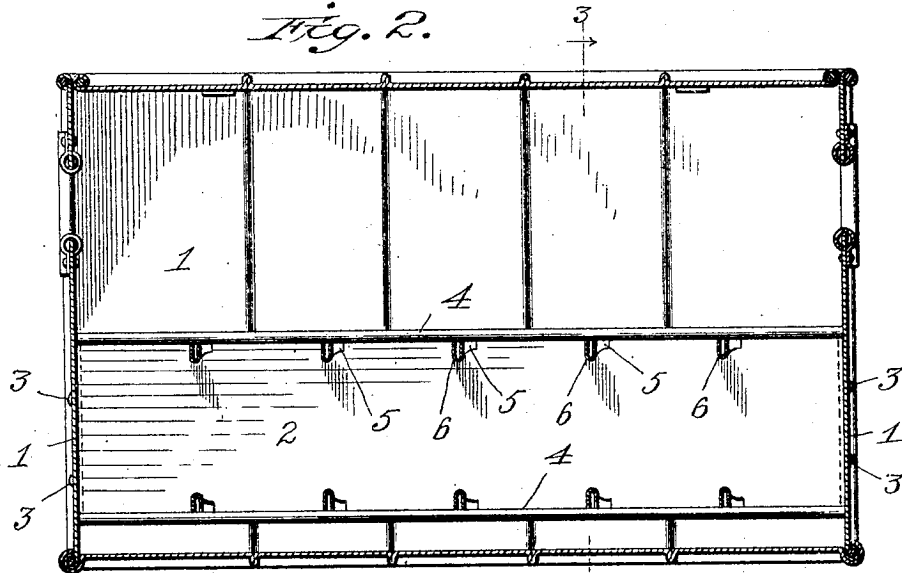


Fig. 3.

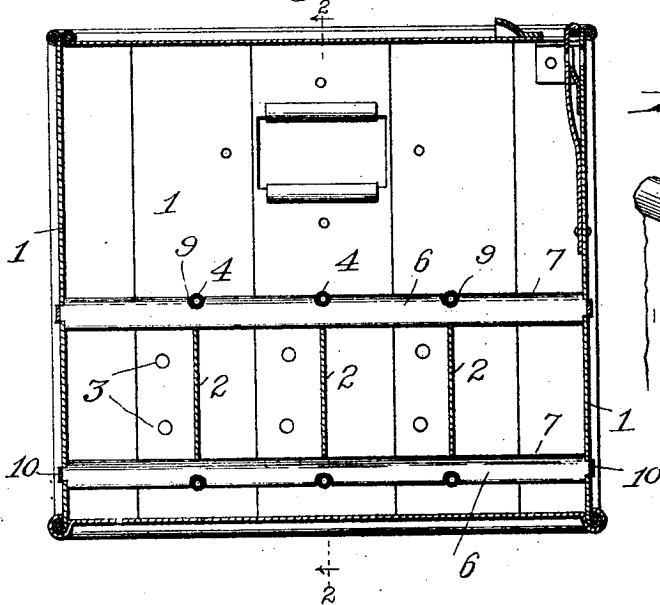
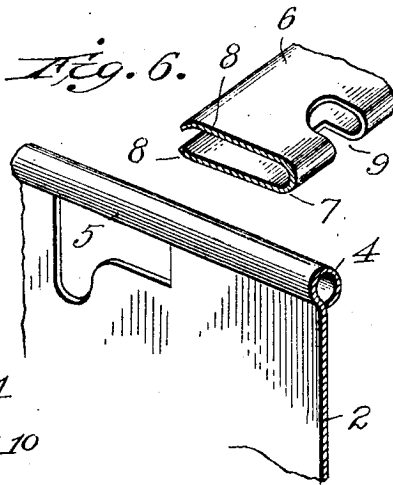


Fig. 6.



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# UNITED STATES PATENT OFFICE.

ALFRED T. KRUSE, OF DEFIANCE, OHIO, ASSIGNOR TO THE AMERICAN STEEL PACKAGE COMPANY, OF DEFIANCE, OHIO, A CORPORATION OF OHIO.

## SHEET-METAL PACKING-CASE.

No. 805,424.

Specification of Letters Patent.

Patented Nov. 21, 1905.

Application filed December 3, 1904. Serial No. 235,344.

*To all whom it may concern:*

Be it known that I, ALFRED T. KRUSE, a citizen of the United States, residing at Defiance, in the county of Defiance and State of Ohio, have invented new and useful Improvements in Sheet-Metal Packing-Cases, of which the following is a specification.

My invention relates to improvements in sheet-metal packing-cases especially designed for the transportation of liquids—such as mineral waters, milk, beer, pop, &c.—contained in bottles and similar vessels.

15 Holders for bottles, &c., have been extensively employed for the carrying of liquids from place to place, and such holders have usually been made of wooden boxes with partitions or divisions to prevent the bottles coming into direct contact with each other, and in some instances a false bottom has been employed, with perforations adapted to receive the bottle-necks. Such holders, however, are objectionable from the fact that being made of wood they soon become soaked with fluid, filthy, decayed, and broken.

25 The present invention relates particularly to sheet-metal partitions or divisions adapted to prevent the bottles coming into direct contact with each other and designed especially for use in sheet-metal packing-cases having side and end walls, substantially as shown in the accompanying drawings, and particularly shown, described, and claimed in my application for Letters Patent for "sheet-metal packing-cases," filed February 4, 1904, Serial No. 192,058.

35 The invention consists, essentially, of a series of main supporting-bars extending lengthwise of the case and a series of cross or auxiliary supporting-bars intersecting said main bars and extending crosswise of the case and all of said supporting-bars having the ends thereof secured to the side and end walls of the case.

45 The paramount object of the invention is to produce a generally improved sheet-metal packing device for use in sheet-metal packing-cases which will be exceeding simple in construction, cheap of manufacture, and efficient in use.

50 With these ends in view the invention consists in the novel construction, arrangement, and combination of parts hereinafter described, illustrated in the accompanying draw-

ings, and particularly pointed out in the appended claims.

Referring now to the drawings, forming a part of this specification, Figure 1 is a perspective view of one of my sheet-metal cases equipped with my improved sheet-metal supporting-bars. Fig. 2 is a longitudinal sectional view of the same. Fig. 3 is a transverse sectional view of the same. Fig. 4 is a detail sectional view of the end of one of the cross or auxiliary supporting-bars as secured to the side walls of the case. Fig. 5 is a detail perspective view of the end of one of the cross or auxiliary supporting-bars. Fig. 6 is a detail view of a portion of one of the main supporting-bars and cross or auxiliary supporting-bars. Fig. 7 is a detail sectional view of the end of one of the main supporting-bars as secured to the end walls of the case.

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

In the drawings, 1 designates the side and end walls of the case, within and between which the sheet-metal supporting-bars, hereinafter more fully described, are mounted and interposed.

2 designates a series of main supporting-bars extending longitudinally of the case and secured in the present instance to the end walls 1 of the case by having the ends thereof bent at right angles to abut against said end walls 1 and held in proper position by means of rivets 3.

4 designates a beading formed with said supporting-bars 2 by having the upper and lower edges thereof bent over and about to form the same, substantially as shown.

5 designates a series of openings or recesses formed in the upper and lower edges of said supporting-bars 2, adjacent to said beading 4, and adapted to receive a series of cross or auxiliary supporting-bars 6, hereinafter more fully described. Upon referring to the drawings it will be seen that said cross supporting-bars 6 each consist of a single piece of sheet metal bent upon itself into substantially inverted-U shape in cross-section to form its upper portion 7 and having its lower or depending sides or brackets 8 bent inwardly or beveled, as shown. This is done for the purpose of forming the same into convenient shape for handling and inserting the same in

the openings or recesses 5 of the main supporting-bars 2 (see Fig. 6) when assembling the supporting-bars 2 and 6 and also to prevent the edges from coming in contact with the labels of the bottles when withdrawn, so as not to tear them, as might otherwise be the case. 9 designates a series of recesses formed along the upper portion 7 and lower portion 8 of said cross supporting-bars 6 and designed to receive and form a seat for the beading 4, formed by the upper and lower edges of said main supporting-bars 2, as shown in Figs. 2 and 3 of the drawings.

10 designates ears formed at the ends of the cross supporting-bars 6 and designed to take into a series of vertical slots formed in the side walls of the case and secured therein by having the ends thereof bent back against said side walls, as shown most clearly in Fig. 1 of the drawings. For convenience in riveting or turning the ends of the ears 10 back one of the ends is formed longer than the other, as shown in Fig. 4 of the drawings.

Various changes in the form, proportion, and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described my invention without having attempted to set forth all the forms in which it may be made or all the modes of its use, I declare that what I claim, and desire to secure by Letters Patent, is—

1. In sheet-metal packing-cases, the combination of a series of main supporting-bars extending longitudinally thereof and suitably secured to the end walls, a beading formed with the upper and lower edges of said main supporting-bars, a series of openings or recesses formed therein adjacent to said beading, a series of cross supporting-bars intersecting said main supporting-bars by passing through said openings formed therein, a series of recesses formed along the upper portion of said last-mentioned bars and adapted to receive and form a seat for the beading of the main supporting-bars, and means for securing the ends of said cross-bars in the front and rear walls of the case.

2. In a sheet-metal packing-case, the combination of a series of main supporting-bars suitably secured to the end walls of the case and provided with a beading formed at the upper and lower edges thereof and a series of openings formed therein adjacent to said beading, a series of cross supporting-bars and provided with a series of recesses formed along the upper portion thereof and adapted to take over the beading of said main bars, and means for securing the ends thereof, to the front and rear walls of the case.

3. In a sheet-metal packing-case, the combination with a series of main supporting-bars secured to the end walls of the case, a beading formed with the upper and lower edges thereof, and a series of openings formed therein adjacent to said beading; of a series of cross supporting-bars mounted in said openings of said main supporting-bars, a series of recesses formed therein and adapted to take over and form a seat for said beading of the main bars, and means for securing the ends thereof in the walls of the case.

4. In sheet-metal packing-cases, the combination with a series of main supporting-bars suitably secured to the walls thereof; of a series of cross supporting-bars, suitably secured to the walls of the case and intersecting said first-mentioned bars, and each consisting of a piece of sheet metal bent upon itself into substantially inverted-U shape, in cross-section, and having its depending sides or edges bent inwardly or beveled.

5. In a sheet-metal packing-case, the combination with a series of main supporting-bars suitably secured to the walls of the case and provided with a series of openings near the upper and lower edges thereof; of a series of cross supporting-bars suitably secured to the walls of the case and intersecting said first-mentioned bars through said openings, and each consisting of a piece of sheet metal bent upon itself into substantially inverted-U shape in cross-section.

6. In a sheet-metal packing-case, the combination with a series of main supporting-bars secured to the walls of the case and provided with a series of openings near the upper edges thereof; of a series of cross supporting-bars, of inverted-U shape in cross-section, intersecting said first-mentioned bars through said openings and secured to the walls of the case.

7. In a sheet-metal packing-case, the combination with a main supporting-bar provided with a beading formed at the upper edge thereof and an opening formed therein adjacent to said beading; of a cross supporting-bar intersecting said main supporting-bar by passing through said opening formed therein, and a recess formed along the upper portion thereof and adapted to receive and form a seat for the beading of said main supporting-bar.

In testimony whereof I have affixed my signature in presence of two subscribing witnesses.

ALFRED T. KRUSE.

Witnesses:

CURTIS M. WILLOCK,  
FRANK B. DIEHL.