No. 892,062. PATENTED JUNE 30, 1908.

A. T. KRUSE.

SHEET METAL PACKING CASE.

APPLICATION FILED AUG. 8, 1906.

2 SHEETS—SHEET 1.

Fig. 1

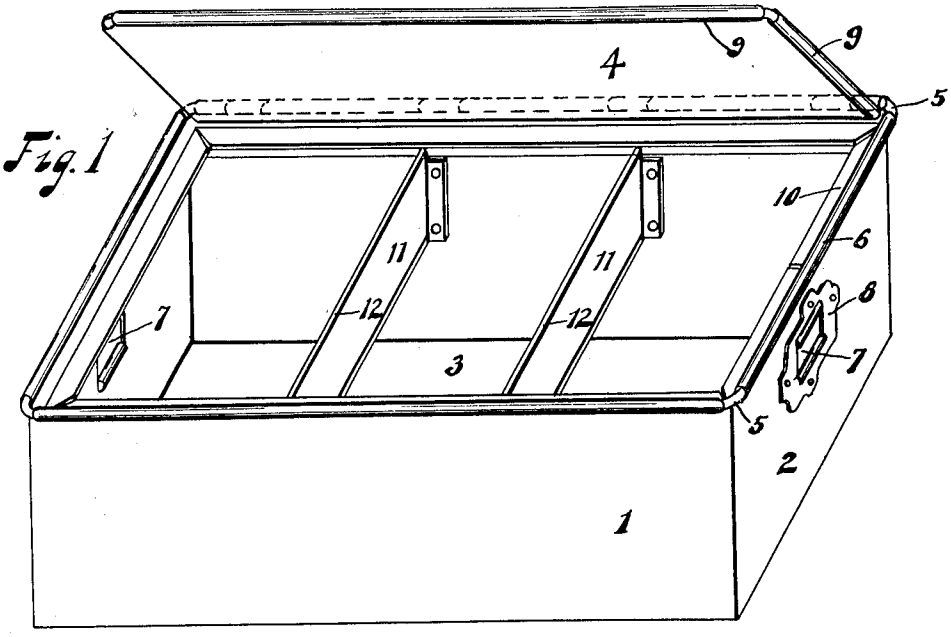


Fig. 2.

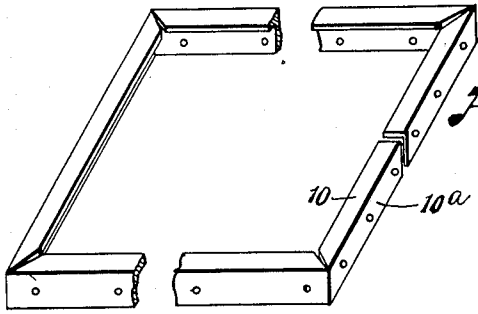


Fig. 3.

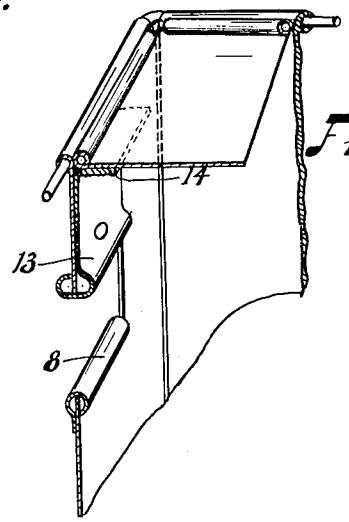
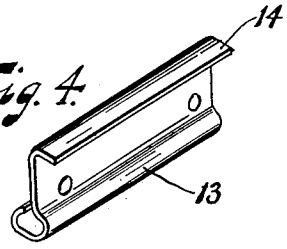


Fig. 4.



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SHEET METAL PACKING CASE.

APPLICATION FILED AUG. 8, 1906.

2 SHEETS—SHEET 2.

Fig. 5.

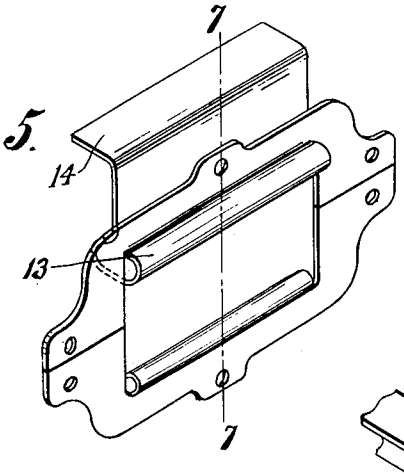


Fig. 6.

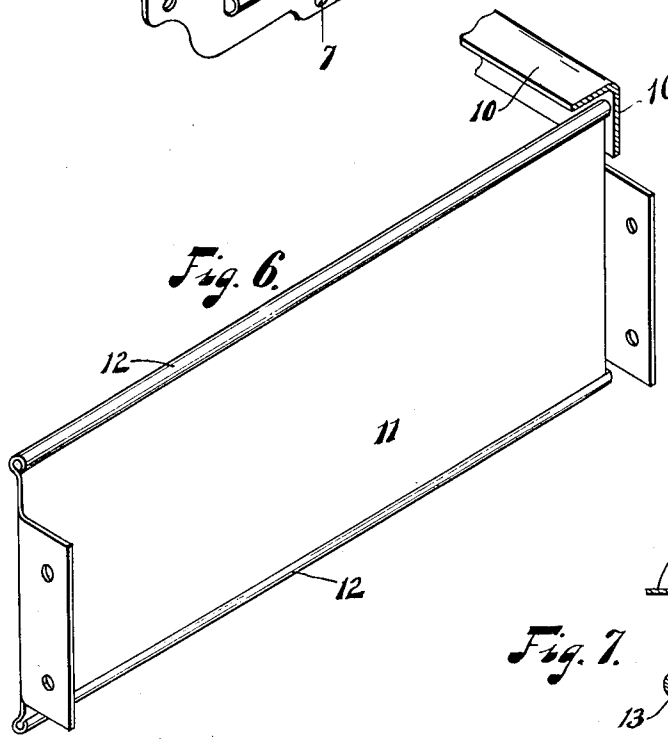
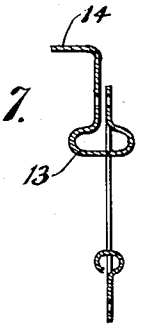


Fig. 7.



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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. 892,062. Specification of Letters Patent. Patented June 30, 1908.

Application filed August 8, 1906. Serial No. 329,701.

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 certain 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 and storage of liquids contained in bottles and similar vessels.

The invention relates particularly to that class or type of packing-cases for this purpose which are provided with a hinged lid or cover, of strong construction, adapted to fit down within and flush with the top edges of the sides and ends of the case, and the paramount object of the invention is to provide simple and efficient means for supporting and strengthening the lid or cover in its closed position as well as the top portions of the sides and ends of the case whereby the parts are adapted to coöperate with each other to provide a case of great strength and durability.

Another object is to provide means for supporting and strengthening the closed lid or cover intermediate the ends thereof, as it has been found that the middle portion of the lid or cover has a tendency to sag or become bent down, especially when employed in connection with cases of more than the usual or ordinary length.

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

Referring now to the accompanying drawings, forming a part of this specification, Figure 1, is a perspective view of a packing-case embodying my invention. Fig. 2, a perspective view of the inwardly-extending supporting and strengthening-flange secured to the inner sides of the upper portions of the side and end walls of the case. Fig. 3, a detailed view of a combined handle and supporting-plate secured in one of the handle openings of the case. Fig. 4, a perspective view of the combined handle and supporting-plate. Fig. 5, a perspective view of the modified form of the combined handle and supporting-plate. Fig. 6, a perspective view of one of the cross supporting-bars or plates and a portion of the inwardly-extending supporting and strengthening flange shown in relative position. Fig. 7, a cross sectional view taken through line "7—7" of Fig. 5.

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

The packing-case is preferably of rectangular form consisting of sides 1, and ends 2, provided with a bottom 3, and a hinged lid or cover 4. The sides and ends 1, and 2, have their upper edges bent over and about a wire 5, to form a beading 6, and handle openings 7, provided with handle plates 8, are provided in the ends of the case, as shown. If desired, similar handle openings and plates may be formed in the side walls of the case.

The hinged lid or cover 4, has its marginal edges bent over and about a wire to form a beading 9, adapted to close down within and flush with the beading 6 of the sides and ends of the case.

The upper portions of the sides and ends of the case are further strengthened by means of an inwardly-extending supporting and strengthening-flange 10, preferably composed of a single strip of iron having notches or recesses cut in its sides where it is to be bent at the corners of the case.

The supporting and strengthening-flange 10, is secured to the inner sides and ends of the case by means of rivets passing through a depending portion 10^a, or in some other suitable and convenient manner, and said flange 10, is adapted to take under and support the marginal edges of the lid or cover when in its closed position. The side walls 1, and said lid or cover 4, are further strengthened and supported by means of cross supporting-bars or plates 11, mounted and interposed between the side walls 1, and having the ends thereof bent over and secured to said side walls by means of rivets, or in some other suitable and convenient manner. The upper and lower edges of said cross supporting-plates are bent over and about to form a beading 12, and, it will be observed, upon referring to Figs. 1, and 6, that the beading 12, at the upper edges of the supporting-plates 11, near the ends thereof, is adapted to take under and abut against the inwardly-extending supporting

and strengthening-flange 10 and the ends of said plates 11, abut against the depending portion 10^a, so that the relative position and coöperation of these parts will add strength to the adjacent portions of the case. When the lid is closed the upper beadings 12, of the supporting-plates 11, are adapted to take under to support and strengthen the lid or cover thus removing any liability of the middle portion of the same to become crushed or sagged in by any weights or blows from above.

In Figs. 3, 4, 5, and 7, I have shown the combined handle and supporting-plate adapted to be secured within the handle openings 7, of the walls of the case and consisting of the handle-rib portion 13, taking over the upper edge of the handle opening and then extending upwardly and bent inwardly to form a supporting-plate or flange 14, taking under and supporting the marginal ends of the lid or cover when in its closed position as shown in Fig. 3, or, where an inwardly-extending supporting and strengthening-flange 10, is used, as shown in Fig. 1, of the drawings, the supporting-plate 14, may take under and rest immediately beneath said strengthening-flange 10. It is also evident that a recess could be cut out of the supporting and strengthening-flange 10^a, for the reception of the supporting-plate or flange 14. The combined handle and supporting-plate or flange shown in Figs. 3, and 4, may be used in connection with a handle plate like that disclosed in Fig. 1, or, if desired, it may be made an integral part of the upper portion thereof, as shown in Figs. 5, and 7, of the drawings.

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 a packing case, the combination with suitable sides and ends provided with a cover adapted to fit down within and flush with the upper edges of said sides and ends and handle-openings formed in said ends; of combined handle and supporting-plates mounted in said openings and adapted to take under and support the marginal ends of said cover in its closed position.

2. In a packing-case, the combination with suitable walls provided with handle-openings and a beading at the upper edges thereof, and a cover provided with a beading about its edges within and flush with said beading of the sides and ends; of combined handle and supporting-plates mounted in said handle-openings and adapted to take under and support the marginal edges of said cover in its closed position.

3. In a packing-case, the combination with suitable side and end walls provided with a cover, and handle openings formed in said end walls; of combined handle and supporting-plates secured within said handle openings and consisting of handle-rib portions taking over the upper edge of said handle openings and then extending upwardly and bent inwardly to form supporting-plates or flanges adapted to take under and support the marginal ends of the cover in its closed position.

4. In a packing-case, the combination with a suitable handle opening formed in one of the walls of the case; of a handle and supporting-plate secured within said handle opening and consisting of a handle-rib portion taking over the upper edge of said handle opening, a main body portion extending upwardly and secured to the wall of the case, and an inwardly-extending supporting-plate or flange formed integral therewith.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ALFRED T. KRUSE.

Witnesses:
CLIFFORD D. SCHMALTZ,
A. M. KRUSE.