N. A. SMITH.

PACKING CASE.

APPLICATION FILED MAR. 18, 1908.

915,802.

Patented Mar. 23, 1909

2 SHEETS—SHEET 1.

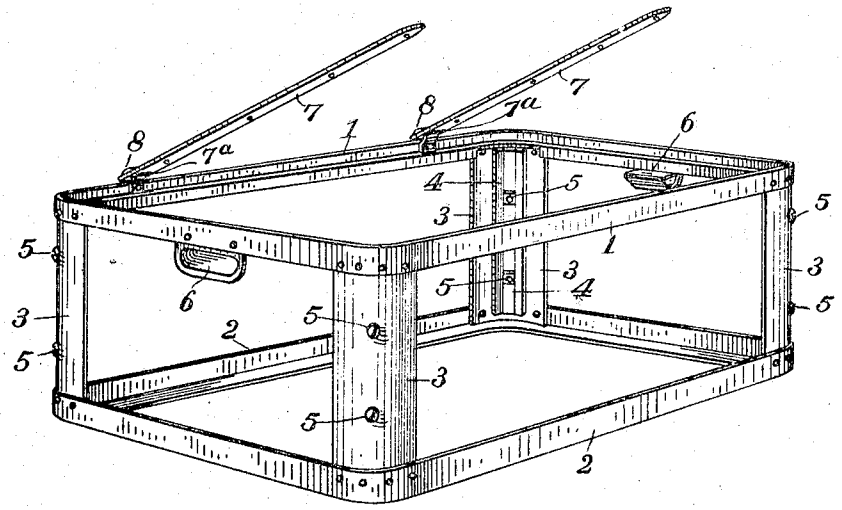


Fig. 1.

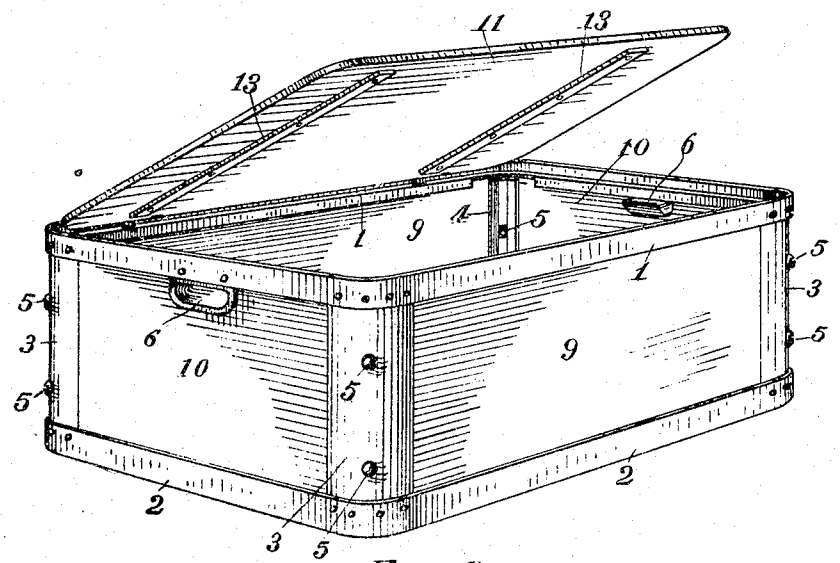


Fig. 2.

Witnesses
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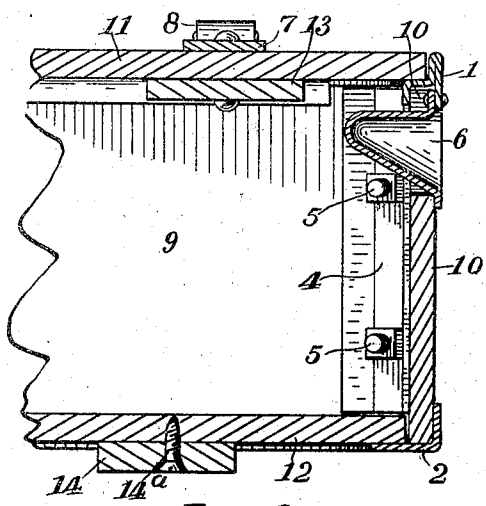


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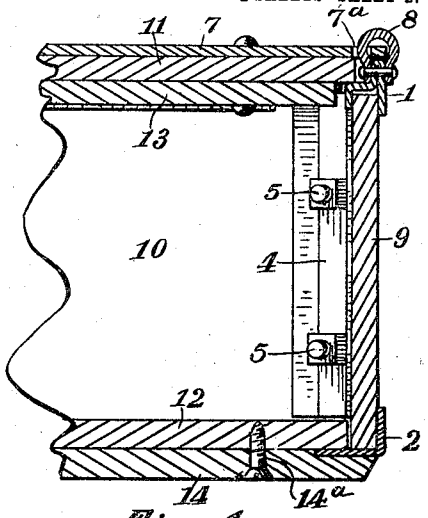


Fig. 4.

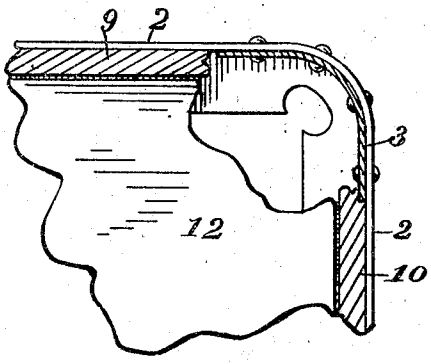


Fig. 5.

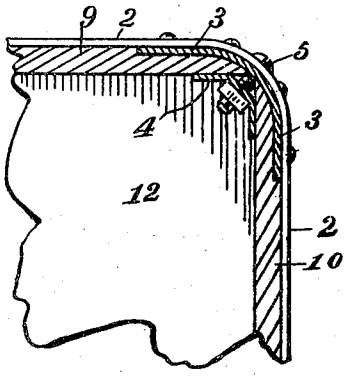


Fig. 6.

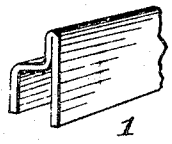


Fig. 7.

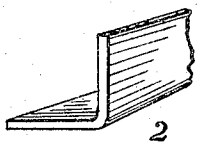


Fig. 8.

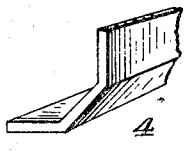


Fig. 9.

Witnesses
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UNITED STATES PATENT OFFICE.

NICHOLAS A. SMITH, OF GRAND RAPIDS, MICHIGAN.

PACKING-CASE.

No. 915,802. Specification of Letters Patent. Patented March 23, 1909.

Application filed March 18, 1908. Serial No. 421,916.

To all whom it may concern:

Be it known that I, NICHOLAS A. SMITH, a citizen of the United States of America, residing at Grand Rapids, in the county of Kent and State of Michigan, have invented certain new and useful Improvements in Packing-Cases; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in packing cases, and more particularly to such cases for packing bottles and like articles; and its object is to provide a strong and durable structure, easily assembled and taken apart for the purpose of repairs; to provide the same with a substantial metallic frame to which are detachably secured panels forming the various sides of the case, the panels being held at the margins and protected by said frame; and to provide the device with various new and useful features hereinafter more fully described and particularly pointed out in the claims, reference being had to the accompanying drawings in which:

Figure 1. is a perspective of the metallic frame of the case; Fig. 2. a perspective of the complete case; Fig. 3. an enlarged detail in vertical section through one end of the case; Fig. 4. the same through the side of the case to which the cover is hinged; Fig. 5. a detail in plan view of one corner of the case with parts broken away; Fig. 6. the same in horizontal section; and, Figs. 7, 8 and 9 details of the various shapes of bars used in the frame.

I first provide a strong metallic frame substantially as shown in Fig. 1. The upper horizontal member 1 of this frame is formed from a bar made of a thin metal strip folded longitudinally upon itself to form a rounded upper edge and having a flat outer portion, the inner portion being in part folded against the outer portion and about midway thereof extended inward at right angles to form a shoulder or ledge to support the cover and thence turned at right angles and spaced apart from the outer portion and parallel therewith to form a channel or groove to receive the upper edge of the side and end panels 9 and 10 and securely hold the same.

The lower horizontal member 2 of the frame consists of a strip of sheet metal bent at right angles longitudinally and having one portion vertical to engage the lower outer surface of the sides and ends and its other portion horizontal to engage the lower edge of the sides and ends and to also project beneath the bottom panel and support the same. These upper and lower members form equal parallelograms with rounded corners and are spaced apart in parallel planes one above the other and connected at the respective corners by plates 3 curved transversely to fit within the rounded corners of the upper and lower members and securely riveted thereto at the respective ends. These corner plates are also perforated to receive bolts 5, which bolts extend through clamping bars 4 adapted to hold the ends and side panels in place, which bars each have a flat middle portion through which the bolts extend and angular side portions arranged at right angles to each other and adapted to engage the respective inner surfaces of the adjacent side and end.

6—6 represent stamped metal sockets forming recessed handles and flanged at the periphery to engage the edge of the end panels 10 which are cut away to surround these sockets, the upper part of the flange being secured to the upper member of the frame. These sockets thus form suitable handles and also exclude the light and retain the contents of the case.

7—7 represent bars to which the cover 11 is secured. These bars are hinged to the upper member 1 of the frame by means of clips 8 riveted to said member and each clip extending through an opening 7^a in the end of the respective bar. Opposite the bars 7 and on the inner surface of the cover 11 are cleats 13 and the cover is securely fastened to the bars by means of rivets extending through the bars, cover and cleats. This cover 11 when closed rests upon the inwardly projecting shoulder of the upper member and is secured in closed position by any convenient means (not shown) being surrounded and protected by the folded upper edge of the said upper member. The side panels 9 and end panels 10 are also inserted in the channel in the under side of the upper member 1 at their upper edges and rest at their lower edges upon the horizontal part of the lower member 2 and are recessed and rounded at the ends to fit the corner plates. The bottom 12 engages the lower part of the sides 9 and ends 10 and securely retains them in place being in turn held in place by detachable shoes 14 attached to the under side

thereof by any convenient screws or bolts, 14ª and extending beneath the member 2.

It will be noted that the angles of the entire structure and the edges of all the panels are fully protected by the metal frame which latter is very strong and durable. Also that any panel can be readily removed and replaced by another by taking out the bottom and detaching the clamping bars 4. I propose to use panels of wood for the ends, sides, top and bottom of the device.

What I claim is:

1. In a packing case, a frame comprising an upper member provided with a groove in its under side and also having an inwardly projecting ledge and an upwardly projecting outer portion above the ledge, a lower member having a vertical outer portion and an inwardly extended horizontal portion, said members each forming a parallelogram with rounded corners, and corner plates curved transversely to fit said rounded corners and connecting the said members.

2. In a packing case, a frame comprising an upper member, having a vertical outer portion, an inner portion folded downward upon the upper part of the outer portion and thence extended inward and downward forming a ledge and groove in the said member, a lower member having a vertical outer portion and an inwardly projecting lower portion, each member forming a parallelogram with rounded corners, and corner plates connecting said members and curved transversely to fit the said rounded corners.

3. In a packing case, a frame comprising an upper member having a vertical outer portion and an inner portion folded upon the upper part of the outer portion and thence extended horizontally inward to form a ledge and thence downward to form a groove in the under side of the member, a lower member having a vertical outer portion and an inwardly extended horizontal portion, said members forming parallelograms with rounded corners, transversely curved corner plates connecting said members and attached thereto, clamping bars opposite the corner plates and having their side portions at right angles to each other, and detachable fastenings securing the corner plates and clamping bars to each other.

4. In a packing case the combination of an upper member provided with a groove in its under side, a lower member having a vertical outer portion and an inwardly projecting horizontal portion, said members each forming a parallelogram with rounded corners, corner plates curved transversely and attached at their respective ends to the upper and lower members, clamping bars opposite the corner plates and having their margins arranged at right angles to each other, side and end panels inserted in the groove of the upper member and resting on the lower member in engagement with the vertical part thereof and also recessed and rounded at the ends to fit the corner plates and engaged by the clamping bars, a bottom supported by the horizontal part of the lower member and engaging the lower part of the side and end panels, and means for detachably securing the bottom and clamping bars in place.

5. In a packing case the combination of an upper member provided with a groove in its lower side, an inwardly projecting ledge and an upwardly projecting outer portion above the ledge, a cover supported on the ledge and surrounded by said portion, a lower member having a vertical portion and a horizontal portion, said members having rounded corners, corner plates curved transversely and attached at their respective ends to the said members, clamping bars detachably secured to the corner plates, inwardly pressed sockets attached to said upper member, side and end panels inserted in said groove and engaging the inner surface of the lower member and the corner plates and engaged by the clamping bars, a bottom supported on the lower member and means for detachably securing the bottom and clamping bars in place.

In testimony whereof I affix my signature in presence of two witnesses.

NICHOLAS A. SMITH.

Witnesses:
GEORGIANA CHACE,
L. V. MOULTON.