Jan. 25, 1938. B. R. LEWIS 2,106,302

BOX CONSTRUCTION

Filed Feb. 7, 1936

Fig. 1

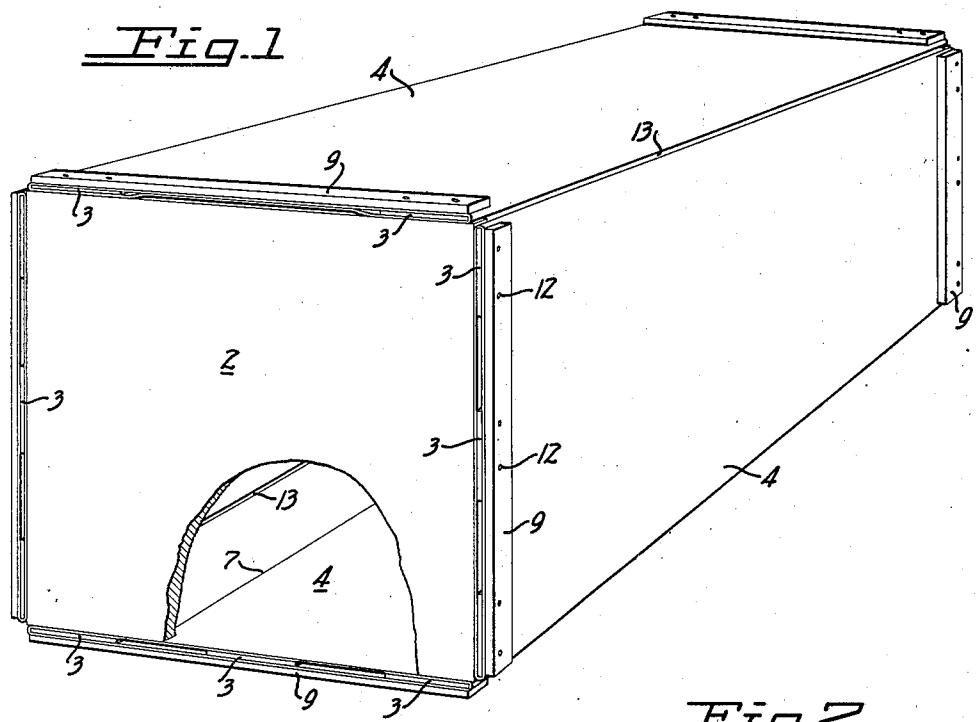


Fig. 2

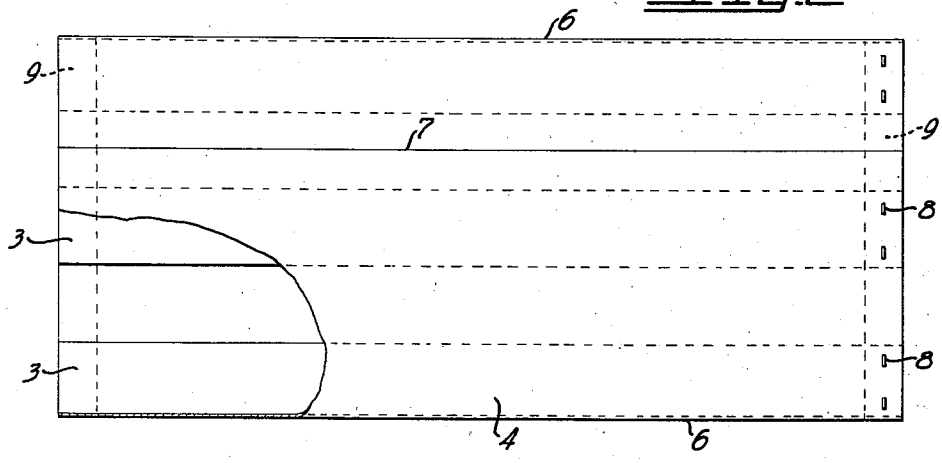
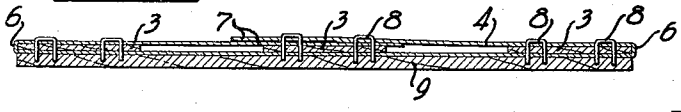


Fig. 3



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BOX CONSTRUCTION

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2 Claims. (Cl. 217—17)

My invention relates to a box of the type having slatted walls, such as used for packing fruit; and the broad object of my invention is to provide means for sheathing the slats to protect the fruit against injury, prevent contamination and provide greater protection against pilfering, and at the same time decrease the number of slats required for the walls.

The invention possesses other objects and features of advantage, some of which, with the foregoing, will be set forth in the following description of my invention. It is to be understood that I do not limit myself to this disclosure of species of my invention, as I may adopt variant embodiments thereof within the scope of the claims.

Referring to the drawing:

Figure 1 is a perspective view of a box embodying my invention, portions of the end wall being broken away to illustrate the construction more clearly.

Figure 2 is a plan view of one of the slatted walls, the upper layer of the sheathing or sleeve being broken away to show two of the inside slats; and

Figure 3 is a transverse vertical sectional view taken through an end of the slatted wall and showing the fastening means.

In terms of broad inclusion the box construction of my invention embodies a wall comprising a plurality of spaced slats, and a sleeve of sheet material embracing the slats. The latter are preferably arranged so that a slat lies along each side edge of the sleeve. Means are provided for fastening the slats within the sleeve, and cleats are preferably provided outside the sleeve and extending transversely across the ends of the slats. The ends of the box are preferably solid wooden pieces, to which the slatted walls are nailed.

In greater detail, and referring to the drawing, my box construction comprises end walls 2 of solid wood, to which the other walls are nailed. The top, side and bottom walls are slatted, and each comprises a plurality of spaced wooden slats 3 enclosed by a flat open-ended envelope or sleeve 4 of flexible sheet material, such as fibreboard. This sleeve is preferably made in one piece; the sheet being folded along the side edges 6 and glued along the overlapping edges 7. It will be apparent that a sleeve so made provides a sheath which embraces or surrounds the slats.

Two slats are positioned along the side edges 6 of the sleeve, and in the top wall these are preferably the only slats used. In the side and bottom walls a third or intermediate slat is preferably added for greater strength. Slats 3 are secured within the sleeve by suitable means, such as staples 8, penetrating the sleeve and slats adjacent the ends of the latter.

Cleats 9 are also provided outside the sleeve and are positioned to extend transversely across the ends of the slats 3. These cleats are fastened in place by the staples 8 which pass through the sleeve and slats and penetrate the cleats. See Figure 3. Staples 8 are applied during the fabrication of the walls; the latter being preferably manufactured in separate panels prior to assembling the boxes.

As shown in Figure 1, the slatted walls are fastened to the end walls 2 by nails 12 driven through the cleats 9. By this arrangement the slats 3 and enclosing sleeve 4 are interposed between the cleats 9 and end walls 2. The sleeved walls may be spaced slightly to provide ventilating openings 13 along the edges of the box. Such ventilation is desirable for citrus fruits.

An important feature of my construction is that a smooth wall surface is provided inside the box. This eliminates the damage occasioned by the fruit pressing against the edges of exposed slats. The double wall construction also provides excellent protection against injury from external means, such as objects falling against the box, or one box shifting against another. The double wall or cellular construction also provides an improved thermal insulation.

In addition, my improved walls offer greater protection against contamination and pilfering. Furthermore, the sheathed walls provide a substantially lightproof box, which is desirable in fruit packing cases.

These advantages are obtained without sacrificing the features of light weight and cheapness which characterizes a slatted wall box construction. While the presence of the fibreboard sleeves 4 tend to add slightly to the weight and cost of the box, thus is offset by the reduction in the number of wooden slats required, so that my box is substantially as light and cheap as the ordinary slatted crate.

While I have shown a box having top, side and bottom walls of my improved slatted and sleeved construction, it is understood that this type of wall may be used for the top wall or lid only, or for the top and bottom walls, the other walls being of ordinary construction.

It is also understood that the top wall may have more than two slats, in which case the lower layer of sheet material would be stapled to a center slat as shown in Figure 3, instead of

being stapled up against the end cleat 9 as shown in Figure 1.

I claim:

1. A box wall comprising a sheet of heavy paper folded to form a flat sleeve with the longitudinal edges of the sheet overlapping at one side of the sleeve, slats extending longitudinally through the sleeve, one of said slats underlying said overlapping edges, a cleat arranged outside the sleeve and extending transversely across the slats to reinforce the wall, and means for fastening the cleat, sleeve and slats together.

2. A box wall comprising a sheet of heavy paper folded to form a flat sleeve with the longitudinal edges of the sheet overlapping at one side of the sleeve, slats extending longitudinally through the sleeve, one of said slats underlying said overlapping edges, a cleat arranged outside the sleeve on the side opposite said overlapping edges and extending transversely across the slats to reinforce the wall, and means for fastening the cleat, sleeve and slats together.

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