Jan. 1, 1963 P. A. OPROMOLLA 3,071,278

BOX

Filed March 1, 1961

FIG. 1

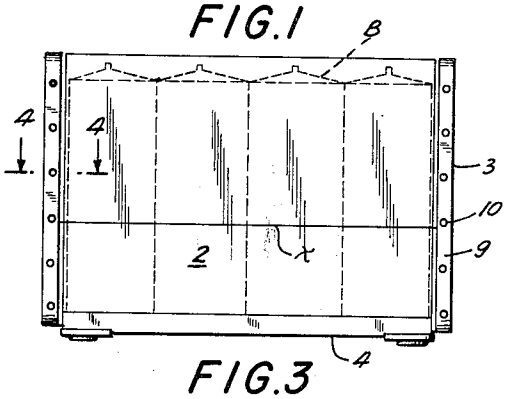


FIG. 2

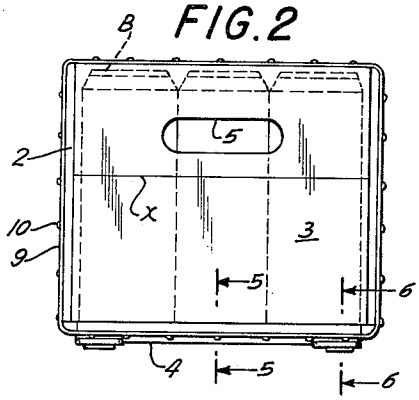


FIG. 3

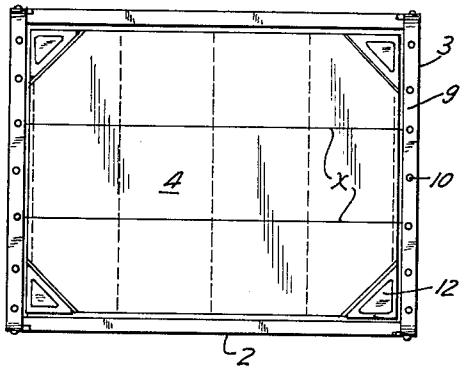


FIG. 4

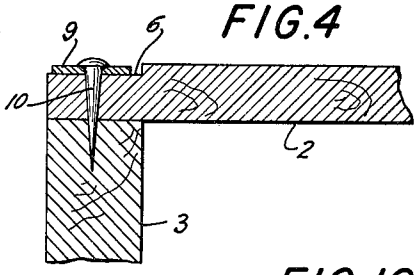


FIG. 10

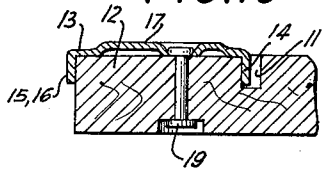


FIG. 5

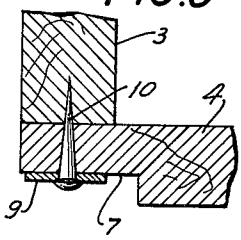


FIG. 6

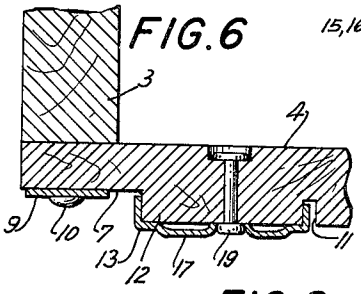


FIG. 7

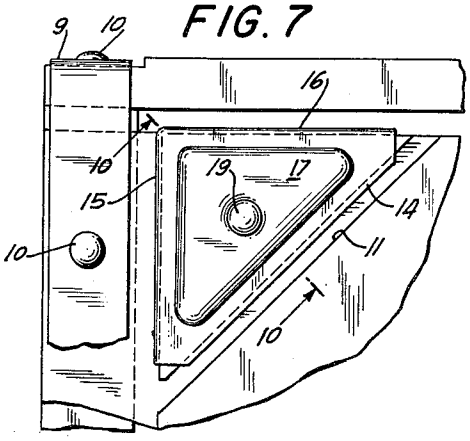


FIG. 8

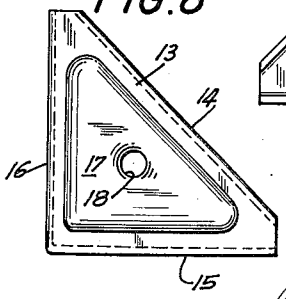
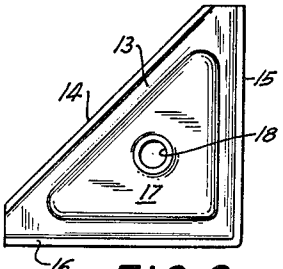


FIG. 9



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BOX

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7 Claims. (Cl. 217—69)

This invention relates to boxes, and more particularly to wooden crates or carriers, such as used for handling and shipping milk bottles or cartons.

Boxes of the character indicated must be of sturdy and comparatively inexpensive construction and be capable of sliding on the flooring of trucks without catching and breakage. It is known practice to furnish the bottom of such boxes with two or more generally parallel metal shoeing members, extending the length of the box and serving as skids to protect the wood of the box and also to provide rounded edges or ends to facilitate passing over irregularities. Boxes of this type are comparatively expensive, and it is the general object of the present invention to provide a box having comparable advantages in operation but requiring the use of much less metal and providing for a very simple attachment of the metal shoeing elements.

With this object and still others which will appear in the following description in mind, the invention consists in the combinations and arrangements of parts and details of construction which will now first be fully described with reference to the accompanying drawing and then be more particularly pointed out in the appended claims.

In the drawing:

FIG. 1 is a side elevation view of the box of the invention;

FIG. 2 is an end elevation view of the box;

FIG. 3 is a bottom plan view of the box;

FIG. 4 is a detail fragmentary section on the line 4—4 of FIG. 1;

FIG. 5 is a detail section on the line 5—5 of FIG. 2;

FIG. 6 is a fragmentary section on the line 6—6 of FIG. 2;

FIG. 7 is a fragmentary bottom plan view showing one corner of the box;

FIG. 8 is a similar view of one of the shoes;

FIG. 9 is a reverse view of the shoe; and

FIG. 10 is a section on the line 10—10 of FIG. 7.

The box may contain a number of milk bottles or cartons, B, of any of the usual sizes, and the example chosen for illustration contains twelve quart milk bottles of usual shape. The side walls 2, end walls 3 and bottom 4 are composed of rectangular wooden panels, each of these panels being formed of two or more boards joined together as by means of tongue and grooving and gluing connections, as is usual, the separate boards of these panels meeting along the various joint lines *x*. The end walls have hand-holes 5 (FIG. 2) for lifting and holding the box. The ends of the side walls are rebated as indicated at 6 (FIG. 4), and the bottom is similarly rebated as indicated at 7 (FIGS. 5 and 6), the bottom being ordinarily thicker and being rebated to a greater depth than the sides. Metal reinforcing straps 9 are wrapped around the ends of the box, and are secured to the box by means of nails or drive screws 10, which also serve to secure the sides and bottom 2, 4 to the box ends 3. The rebating of the side walls 2 is relatively shallow so that the straps 9 are slightly recessed or substantially flush with the side walls 2, while the straps are positioned considerably above the bottom of the box, generally, by reason of the deeper rebating of the bottom 4.

Each of the four corners of the bottom 4 is diagonally

slotted as indicated at 11, forming a triangular isolated raised portion 12 at each corner of the bottom and metal shoes 13 (FIGS. 8, 9) fit over these triangular corner portions 12, as indicated. Each shoe 13 has a diagonal flange 14 received in a slot 11, end and side flanges 15, 16 fitting around the corner of the box bottom or unrebated portion thereof. The shoe 13 has a central boss 17 and extends down below the level of the box bottom generally by the thickness of its metal plus the thickness of this boss, as appears clearly from the figures (FIGS. 6, 10). The center of the boss 17 is depressed and perforated as indicated at 18 and receives a rivet 19 securing the shoe to the box bottom. As will be evident, a sliding movement of the box against any kind of a ledge or edge will engage against the rounded surfaces of the shoes 13 adjacent the flanges thereof and against the rounded edges of the bosses 17, thus providing substantially complete protection of the box bottom against impact of any such obstructions and also protecting the wood of the bottom against abrasion in sliding.

What is claimed is:

1. A rectangular wooden carrier box comprising side walls, end walls and a bottom, the bottom having a diagonal slot adjacent each of its corners, and a triangular metal protecting shoe secured at each corner of the bottom, the said shoe having flanges around its edges overlapping the side and end of the bottom corner and fitting into the said slot.

2. A rectangular wooden carrier box comprising side walls, end walls and a bottom, the bottom having a diagonal slot adjacent each of its corners, and a triangular metal protecting shoe secured at each corner of the bottom, the said shoe having flanges around its edges overlapping the side and end of the bottom corner and fitting into the said slot and a domed central portion extending below the level of the box bottom.

3. A rectangular wooden carrier box according to claim 2, in which the said shoe has an aperture and recessed area in the middle of said domed portion, the inside of the said recessed area abutting against the box bottom, and comprising also securing means passing through the said aperture.

4. A rectangular wooden carrier box according to claim 3, in which the securing means comprises a rivet passing through the box bottom.

5. A rectangular wooden carrier box comprising side walls, end walls and a bottom, the bottom being rebated at each end and having a diagonal slot adjacent each of its corners, and a triangular metal protecting shoe secured at each corner of the bottom, the said shoe having flanges around its edges overlapping the side and rebated end of the bottom corner and fitting into the said slot.

6. A rectangular wooden carrier box according to claim 5, comprising also a metal strap around each box end and received in the rebated end of the box bottom so as to be above the level of the said shoes.

7. A rectangular wooden carrier box according to claim 6, in which the ends of the box side walls are also rebated and the straps are received in the rebated portions thereof.

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