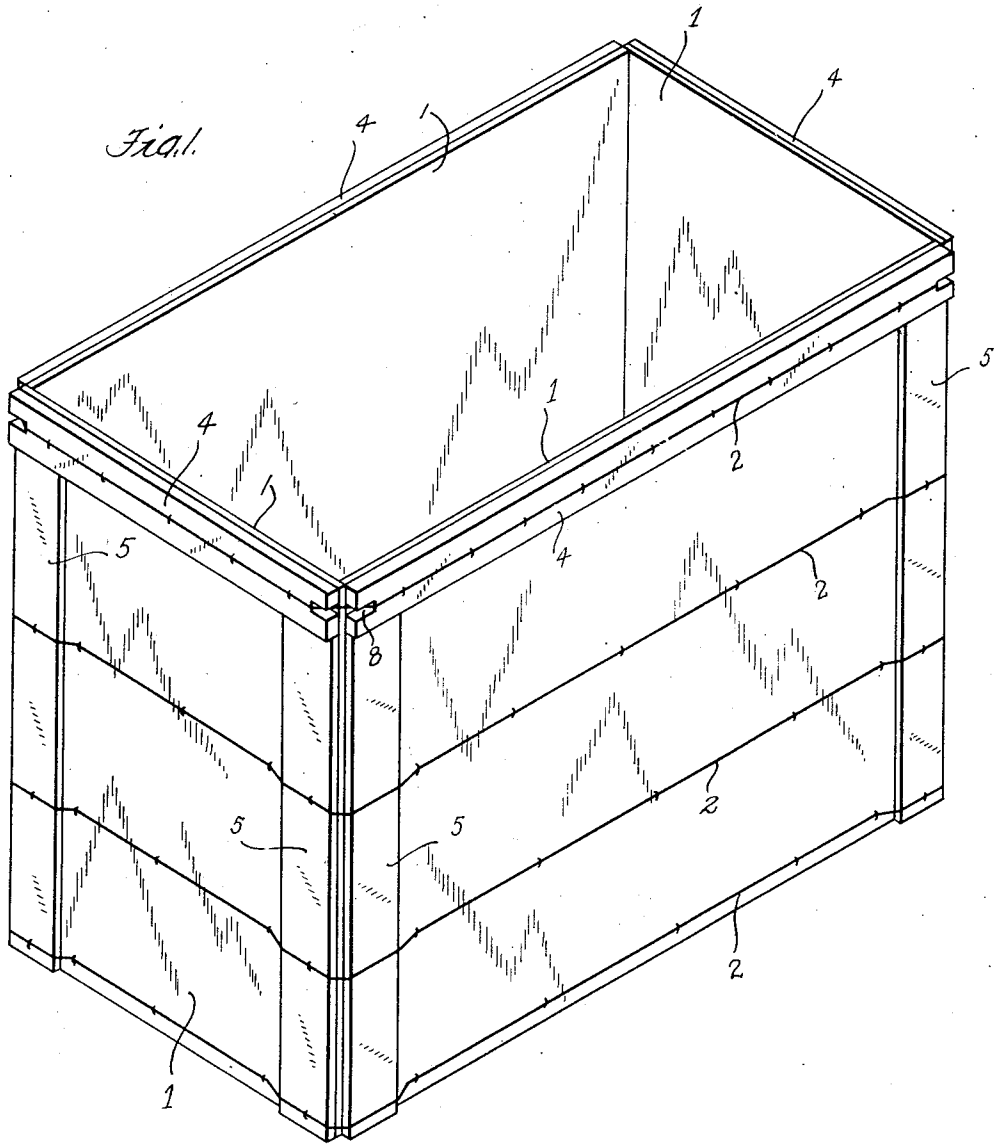
Dec. 19, 1933. G. C. BABCOCK 1,940,286

BOX AND CRATE

Filed July 20, 1929 2 Sheets-Sheet 1



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2 Sheets-Sheet 2

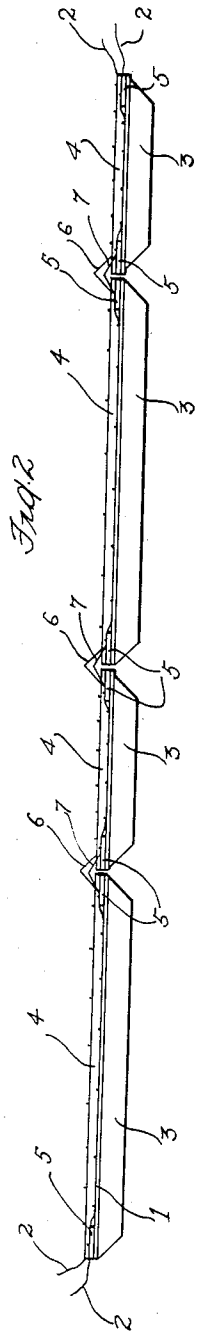


Fig. 2.

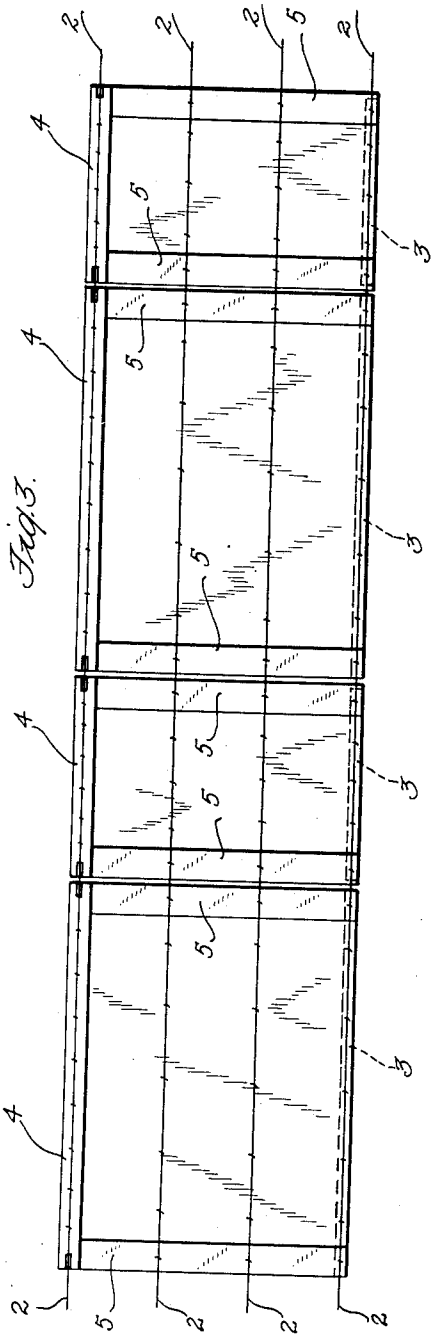


Fig. 3.

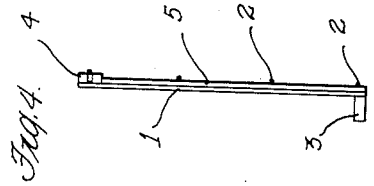


Fig. 4.

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UNITED STATES PATENT OFFICE

1,940,286

BOX AND CRATE

Guilford C. Babcock, Morris Township, Morris County, N. J., assignor to Stapling Machines Co., a corporation of Delaware

Application July 20, 1929. Serial No. 379,619

3 Claims. (Cl. 217—12)

This invention relates to boxes and crates and particularly to wirebound boxes and crates.

Among other objects the invention is intended to provide certain improvements contributing to the strength and rigidity of the type of wirebound box disclosed in my co-pending application Serial No. 330,228, filed January 4, 1929, whereby a box of equal strength may be made from less material, or a box of greater strength may be made without increasing the material.

In the drawings:

Fig. 1 is a perspective view of an illustrative box embodying the invention.

Fig. 2 is a side elevation on a smaller scale of a box blank which, when folded, constitutes the four sides of the box.

Fig. 3 is a top plan view of the box blank.

Fig. 4 is an end elevation of the box blank.

The illustrative box comprises four sections of side material 1 preferably of thin rotary cut veneer, plywood or resawed lumber, connected by flexible binders 2 stapled to the side material.

To reenforce the side material at the bottom of the box, interior cleats 3 are secured to the side material, preferably by the staples which secure the binders to the side material. The several interior cleats 3 form a cleat frame at the bottom of the box upon which a bottom section (not shown) may be placed.

To reenforce the side material at the top of the box, exterior cleats 4 are secured to the side material between the side material and a binder 2. A top or cover section (not shown) may be placed upon the exterior cleats and secured to one or more of them.

The box as thus far described, is shown and claimed in my said co-pending application Serial No. 330,228, reference to which is hereby made for a more detailed description.

To permit the use of the thinner side material over the major areas of the box sides, additional thicknesses of side material running perpendicularly of the box are provided in certain selected areas or lanes. In the illustrative box such additional thicknesses take the form of exterior battens 5 located adjacent each perpendicular edge of the sections of side material between the side material and certain of the binders 2. Such battens may be secured to the side material by the staples which secure the binders to the side material. The lower end of each batten 5 is preferably flush with the lower edge of the section of side material and the upper end of each batten 5 is preferably in contact with the underside of an exterior cleat 4.

While in the illustrative box two battens 5 are secured to each section of side material, it will be understood that the number and location of the battens 5 may be varied to suit different conditions.

As shown in Figs. 2, 3 and 4, the materials for the box sides are preferably assembled and wired in the flat to produce a foldable box blank, which is then folded into box form and binder ends joined to complete the continuity of the binders and to retain the several sections in box form.

To facilitate folding the flat blank into box form, the binders 2 may be raised or bowed over the intervals between sections as shown at 6 and 7 in Fig. 2. The ends of exterior cleats 4 may be provided with grooves 8 to receive a binder 2.

Among other advantages the invention provides an inexpensive shipping container so reenforced and balanced in construction as to possess great strength, rigidity and durability; the cleats functioning to resist strains in certain directions and the battens functioning to resist strains in other directions. When the battens 5 are located adjacent a corner of the box, they received the bite of the tensioned binders 2 and thereby preserve the integrity of the body of the side material.

The word "box" as used in the specification and claims is intended to include crates.

It will be noted that the top binding wire 2 which overlies the exterior cleats 4 is of greater length than the other binding wires 2 and yet is tensioned over the box corners with a degree of tension substantially uniform with the tension of the other wires.

I claim:

1. A wirebound box comprising relatively thin side material for the several sides of the box, an interior cleat secured to and extending crosswise each box side at the bottom of the box, an exterior cleat secured to and extending crosswise each box side at the top of the box, an exterior batten extending lengthwise each box side and secured thereto adjacent each lateral edge of the side, and flexible binders secured to and encircling the several sides of the box, whereby the thin side material extending over a major area of each side is supported by a frame extending over minor areas of the side to produce a strong side from a minimum amount of material.

2. A wirebound box comprising a plurality of side sections connected by flexible binders secured thereto, an interior cleat secured to each side section adjacent to and substantially parallel with its lower edge, an exterior cleat secured to each

side section adjacent to and substantially parallel with its upper edge, and an exterior batten secured to each side section adjacent to and substantially parallel with each side edge of the section, whereby each separate section of thin side material is supported in a rectangular frame, and the several frames are connected only by the flexible binders.

3. As an article of manufacture, a box side comprising in combination, a four-sided frame composed of an exterior cleat, an oppositely disposed interior cleat, two oppositely disposed slats, and a relatively thin sheet of side material interposed between the interior cleat and the slats and secured to the slats, the interior cleat and exterior cleat and closing the area within the frame, whereby relatively thin side material extending over a major area of the side is integrated with thicker materials extending over minor areas of the side to produce a strong side from a minimum amount of material.

GUILFORD C. BABCOCK.