

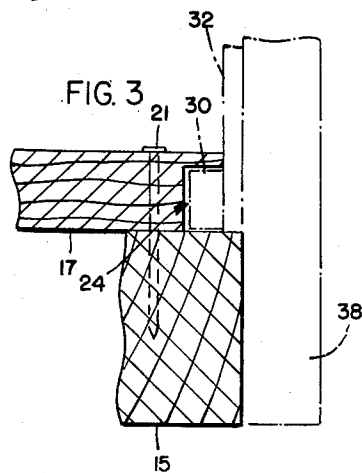
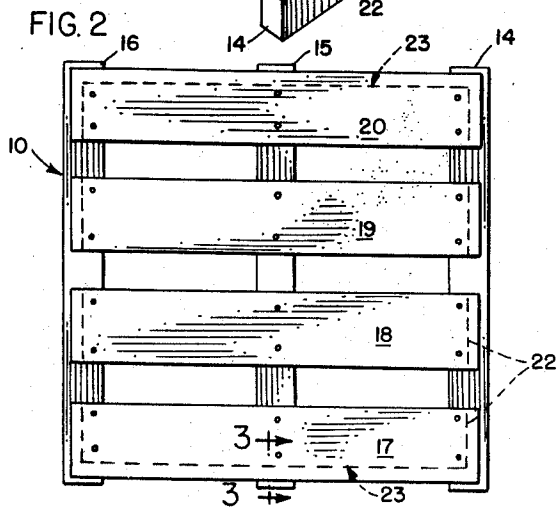
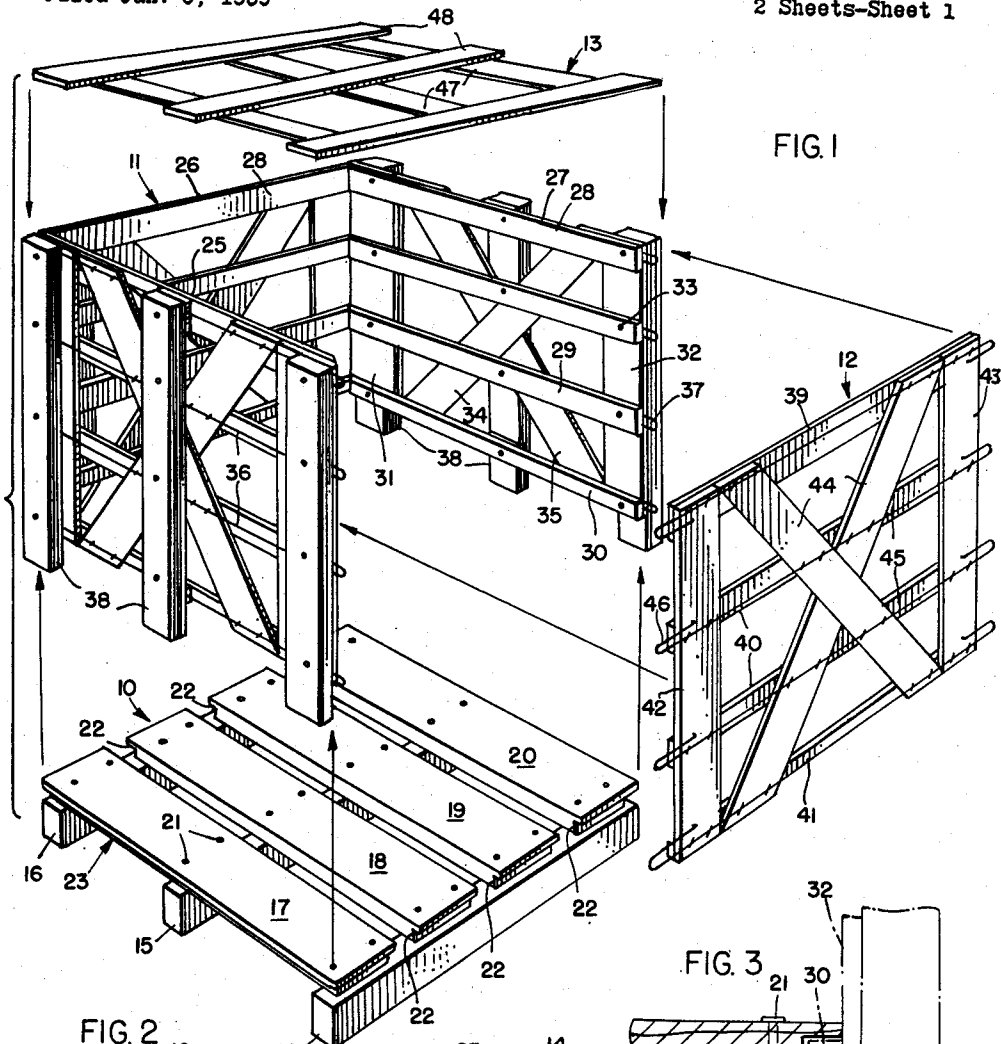
March 12, 1963

A. N. DEDMON  
WIREBOUND CRATE

3,080,992

Filed Jan. 9, 1959

2 Sheets-Sheet 1



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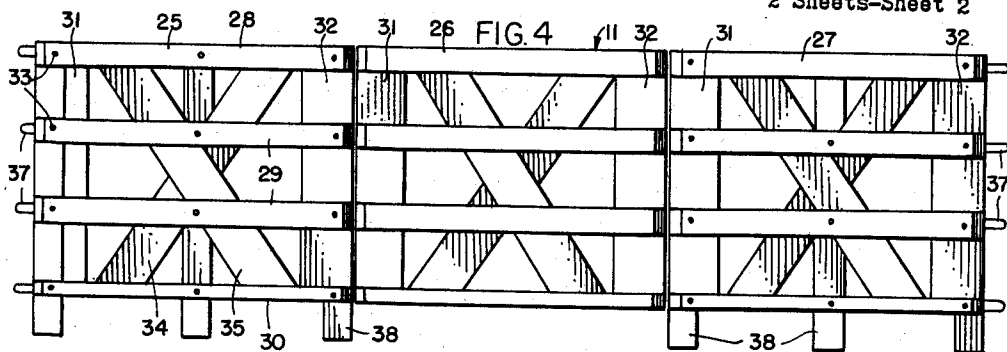


FIG. 5

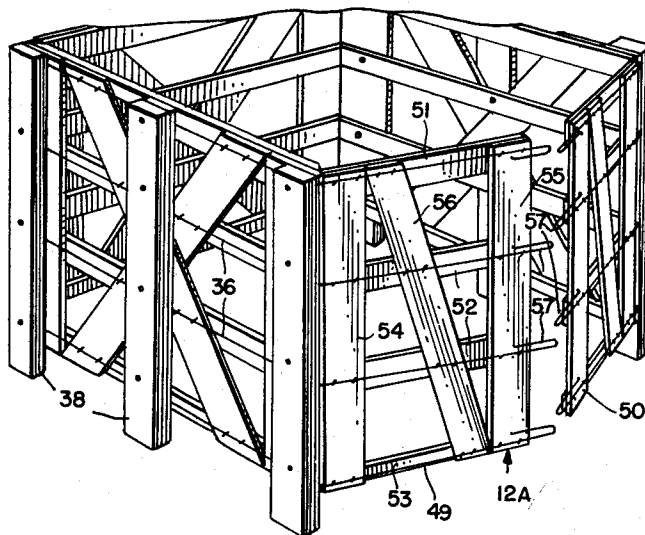
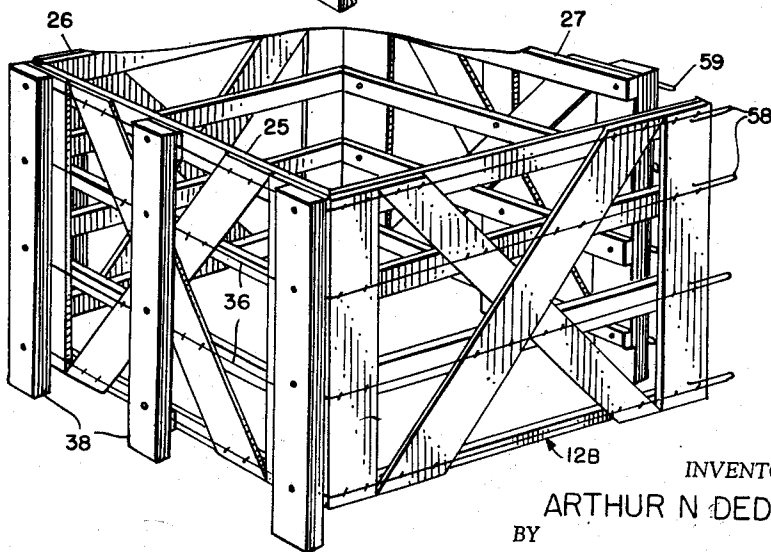


FIG. 6



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3,080,992

**WIREBOUND CRATE**

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This invention relates in general to a wirebound crate, and more particularly to a wirebound crate that can be shipped to a location of use in knocked down condition where it may be easily assembled for use as a shipping crate for shipping goods to a place of use.

The wirebound crate of the present invention includes a pallet, a mat having hingedly connected panels for attachment to the pallet and enclosing the crate on three sides, a panel means for closing the crate on the fourth side, and a top panel overlying the side panels. The pallet is peripherally rabbeted for coacting with locking cleats on the mat and the panel means whereby the mat and panel means will interlock with the pallet. Columnar members are secured to the panels on the mat and extend from the upper edges of the panels downwardly to the bottom of the pallets, and serve to greatly enhance the strength of the assembled wirebound crate whereby it may be used for shipping goods of considerable weight.

Accordingly, it is an object of this invention to provide a wirebound crate that can be shipped in several pieces in complete knocked down condition to a destination of use where it may then be easily assembled for packaging of goods to be shipped subsequently to a destination of use.

Another object of this invention is in the provision of a wirebound crate that can be shipped in knocked down condition and easily assembled, whereby the assembled crate can withstand tremendous stresses and serve to package goods of considerable weight.

A still further object of this invention resides in the provision of a wirebound crate that may be easily assembled from a number of pieces and which is adaptable for use in packaging goods of considerable weight, and is adapted to be easily handled for movement from one place to another.

Another object of this invention is to provide a wirebound crate having several components which may be easily shipped to a destination of use including a pallet, a mat capable of defining three walls of the crate, a panel means for defining the other walls of the crate, and a top panel for enclosing the top of the crate.

Other objects, features, and advantages of the invention will be apparent from the following detailed disclosure, taken in conjunction with the accompanying sheets of drawings, wherein like reference numerals refer to like parts, in which:

FIG. 1 is a perspective exploded view of the wirebound crate according to the present invention;

FIG. 2 is a top plan view of the pallet utilized in the wirebound crate of the present invention;

FIG. 3 is a fragmentary enlarged sectional view illustrating a detail of the crate, and taken substantially along line 3-3 of FIG. 2;

FIG. 4 is an inside plan view of the mat utilized in the wirebound crate of the present invention;

FIG. 5 is a fragmentary perspective view of a mat having another form of panel means for enclosing the mat; and

FIG. 6 is a perspective view like FIG. 5, illustrating still another form of panel means for enclosing the mat around the pallet.

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Referring now to the drawings, and especially to FIG. 1, the wirebound crate of the present invention includes generally a pallet 10, a mat 11 for forming three side walls of the crate, a panel means or front panel 12 for forming the other panel of the crate, and a top panel 13 for enclosing the top of the crate.

The pallet 10 includes spaced, parallel rails 14, 15 and 16, and cross slats 17, 18, 19 and 20 overlying the rails and extending perpendicularly thereto. Fasteners, such as nails 21, secure the cross slats to the rails and provide a rigid pallet structure. The spacing of the rails 14, 15 and 16 permits the use of a fork lift truck for handling of the wirebound crate when it is completely assembled and contains goods. Although the cross slats are shown slightly spaced from each other, they may be enlarged in width and in abutting relationship with each other if desired.

The pallet 10 is peripherally rabbeted, wherein the opposite ends of the cross slats are rabbeted at 22, and the outer longitudinal edges of the outermost slats 17 and 20 are rabbeted at 23. The rabbeted ends of the cross slats overlie the rails 14 and 16 and define therewith grooves 24. Similarly, the rabbeted edges of the cross slats 17 and 20 define grooves with the end portions of the rails by overlying same.

Referring now to FIGS. 1 and 4, the mat 11 includes panels 25, 26 and 27 hingedly connected together. Each panel includes an upper cleat 28, a pair of intermediate cleats 29, and a lower locking cleat 30. All of the cleats are horizontally extending and parallel to each other and arranged on the inside of the mat. A pair of spaced vertical slats 31 and 32 are secured to the opposite ends of the cleats by suitable fasteners 33. The slats 31 and 32 are parallel to each other and perpendicular to the cleats. Diagonally arranged bracing slats 34 and 35 are secured to the outer sides of the cleats to form an X-shaped brace and further rigidify the panels. It may be noted that the locking cleat 30 is smaller in width than the other cleats, and sized to be received in the grooves 24 of the peripherally rabbeted pallet, FIG. 3. Binding wires 36 are suitably secured to the outer sides of the panels along the cleats, as seen most clearly in FIG. 1. The binding wires are continuous along the panels thereby hingedly connecting the panels together, and terminate at opposite ends in loops or rock fasteners 37.

Columnar members or vertical stiles 38 are secured to the outer sides of the panels 25 and 27 thereby further enhancing the strength of the mat structure, but serving to enhance the overall strength of the assembled crate and give floor support to the opposite sides of the crate. These columnar members extend from the top edges of the panels 25 and 27 downwardly to the bottom of the pallet and engage the surface upon which the pallet is supported. Accordingly, loads transmitted to the panels 25 and 27 of the mat are supported by the columnar members 38.

The front panel or panel means 12, as seen in FIG. 1, includes an upper cleat 39, intermediate cleats 40, and a lower locking cleat 41 extending horizontally and parallel to each other, outer vertical slats 42 and 43 secured to the opposite ends of the cleats, diagonal bracing slats 44 arranged on the outer sides of the cleats and secured thereto, and binding wires 45 secured to the outer side of the panel and along the cleats' longitudinal axes. Loops or rock fasteners 46 are provided at the opposite ends of the binding wires and protruding from the outermost edges of the slats 42 and 43. These loops coact with the loops 37 on the mat for fastening the front panel 12 to the mat and the pallet. The lower locking cleat 41 is smaller in width than the other cleats and capable of being received in the groove formed by

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the rabbeted pallet. The rock fasteners are secured together in a manner well known in the art.

The top panel 13 includes inner cleats 47 and outer slats 48 extending perpendicular to the cleats and secured thereto. The cleats 47 are parallel to each other, and the slats 48 are parallel to each other, and the outermost cleats 47 are arranged to be received within the confines of the mat 11, whereby the outermost edges of the outermost cleats 47 engage the inner surfaces of the mat cleats 28.

In assembling the wirebound crate of the present invention from the knocked down position, the mat 11 is arranged so that the three panels 25, 26 and 27 extend around three sides of the pallet and the respective locking cleats 30 are in engagement with the respective rabbeted portions of the pallet for interlocking the pallet and mat together. If desired, fasteners may be employed to further secure the mat to the pallet. The front panel then may be arranged over the fourth side of the crate to define the fourth side wall whereby the lower locking cleat 41 is received in the grooves formed by the rabbeted cross slats of the pallet and the rails. Then, the rock fasteners may be secured together thereby firmly securing the front panel or panel means 12 to the pallet and the mat. Goods may be packed in the crate prior to mounting of the front panel 12 on the mat and pallet. Finally, the top panel 13 may be arranged over the open top of the crate and then secured to the upper ends of the mat structure and front panel 12.

One important usage of the wirebound crate of the present invention is for shipping automobile body glass, wherein corrugated board may be used to cushion the glass from the various components of the crate, and a special mounting provided for preventing the shifting of the glass within the wirebound crate during shipment thereof. The automobile body glass is of considerable weight, but the construction of the wirebound crate of the present invention is such as to be capable of easily handling such weight.

Referring now to FIG. 5, another form of panel means may be provided in place of the panel means 12, and which is generally designated by the numeral 12A. This panel means includes a pair of doors or panels 49 and 50 of half size relative to the panel 12 of FIG. 1. In this embodiment, the binding wires 36 of the mat are extended to include securement to the doors 49 and 50 and thereby hingedly connect the doors to the mat structure. Each door includes an upper cleat 51, intermediate cleats 52, a lower locking cleat 53, opposed vertical slats 54 and 55, and a diagonally extending bracing slat 56. The ends of the binding wires 36 extending across the doors 49 and 50 terminate in loops 57 defining rock fasteners for securing the inner ends of the doors together when mounting the mat and doors on a pallet.

Still another form of panel means for enclosing the mat structure is illustrated in FIG. 6 and generally designated by the numeral 12B. This panel is identical to the panel 12 of FIG. 1, and therefore will carry similar numerals to indicate similar parts, and differs therefrom in that one end of the panel is hingedly connected to one end of the mat. This is easily accomplished by merely extending the binding wires 36 from one end of the mat over the outer side of the panel 12B. The binding wires terminate at the free end of the panel 12B and loops 58 and at the other end of the mat in loops 59

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to define rock fasteners for fastening the free end of the panel 12B to the free end of the mat.

It will be understood that modifications and variations may be effected without departing from the scope of the novel concepts of the present invention, but it is understood that this application is to be limited only by the scope of the appended claims.

The invention is hereby claimed as follows:

1. A wirebound crate adapted to be received on a flat supporting surface, said crate comprising a pallet, a mat having three hingedly connected panels forming three side walls of the crate, a top panel, and front panel means forming the fourth side wall of the crate, said pallet having a plurality of spaced parallel rails engaging the supporting surface of the crate, a plurality of cross slats directly secured to said rails and extending perpendicular thereto, rabbeted portions on the ends of said cross slats and along the outer longitudinal edges of the outermost cross slats, said rabbeted portions overlying the rails to define therewith grooves, said panels of said mat extending upwardly from the pallet and having locking cleats secured along their bottom edges and received in the grooves of the pallet for interlocking the pallet and mat together, reinforcing vertical stiles secured to the outer sides of the opposed panels of said mat and extending from the upper edges of the panels to the bottom of the pallet and engaging the supporting surface of the crate, said front panel means extending across the other side of the crate and defining the fourth side wall thereof, a locking cleat on said panel means coacting with the rabbeted periphery of the pallet interlocking the panel means and pallet together, and said top panel extending over the side walls and secured thereto.

2. The structure of claim 1, wherein the front panel means comprises a panel extending between the opposite open ends of the mat, and rock fasteners on opposite ends of the panel and the corresponding ends of the mat for securing the panel to the mat.

3. The structure of claim 1, wherein the front panel means comprises a pair of doors sized to cooperatively extend between the opposite open ends of the mat, the ends of said doors adjacent the open ends of the mat being hingedly connected to the mat, and rock fasteners at the other ends of the doors for fastening them together.

4. The structure of claim 1, wherein the front panel means comprises a panel extending between the opposite open ends of the mat, one end of the panel being hingedly connected to the corresponding end of the mat, and rock fasteners carried by the other end of the panel and the corresponding end of the mat for securing the panel and mat together.

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