

Aug. 19, 1924.

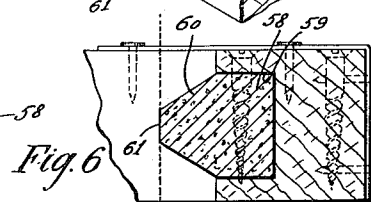
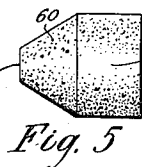
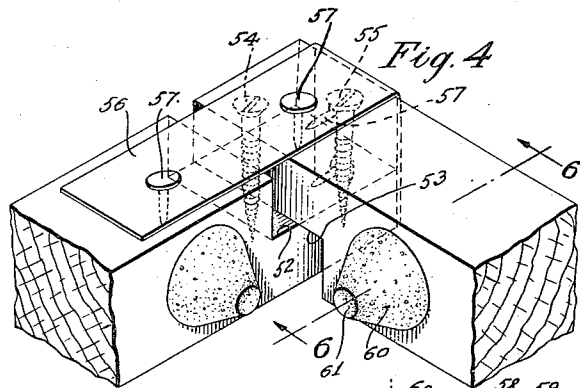
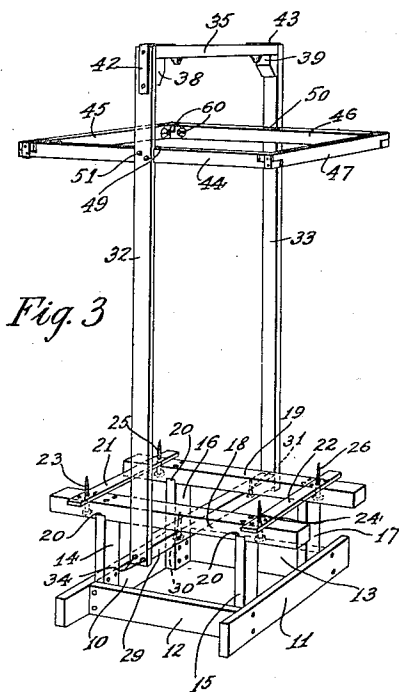
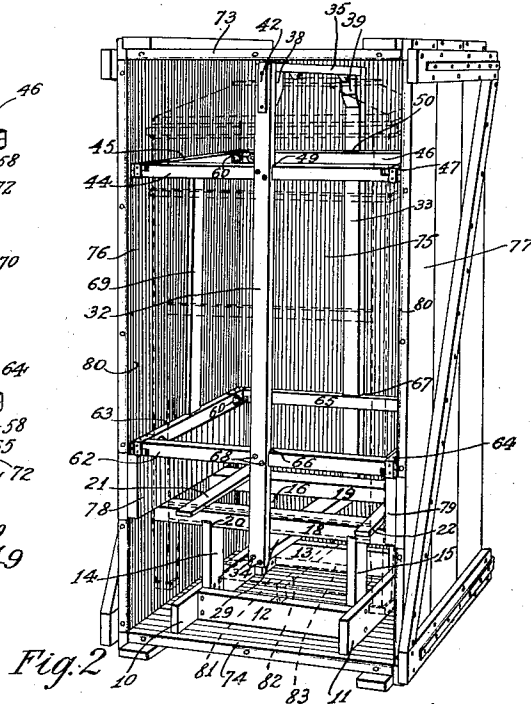
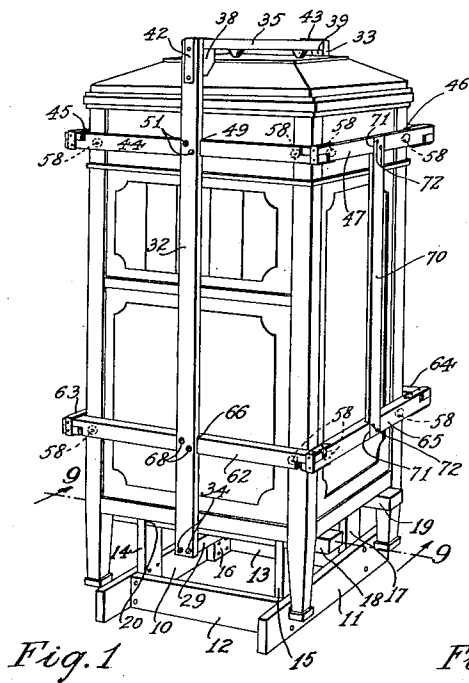
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E. R. ZABRISKIE

METHOD AND MEANS FOR PACKING ARTICLES FOR SHIPMENT

Filed Oct. 19, 1921

2 Sheets-Sheet 1



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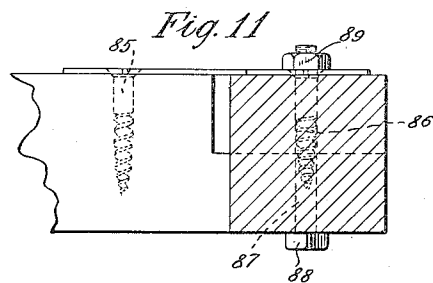
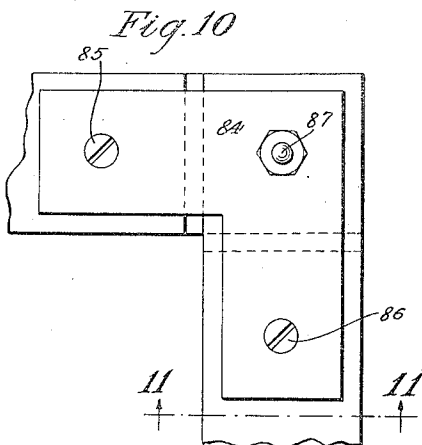
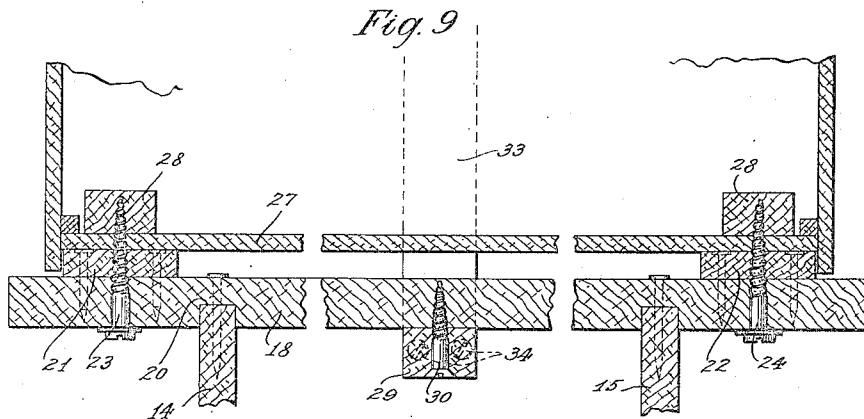
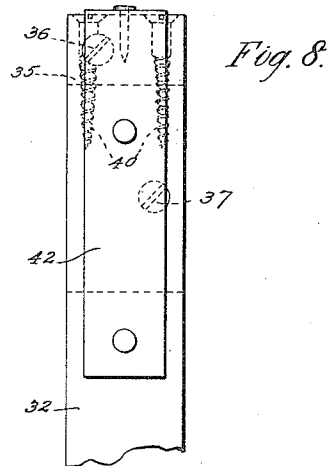
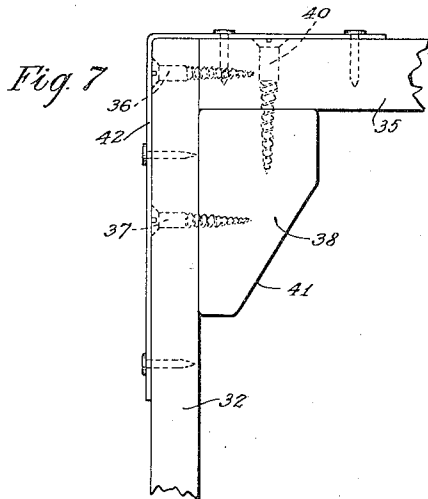
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METHOD AND MEANS FOR PACKING ARTICLES FOR SHIPMENT

Filed Oct. 19, 1921

2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE.

ERNEST R. ZABRISKIE, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR, BY MESNE ASSIGNMENTS, TO COLUMBIA PHONOGRAPH COMPANY, INC., A CORPORATION OF NEW YORK.

METHOD AND MEANS FOR PACKING ARTICLES FOR SHIPMENT.

Application filed October 19, 1921. Serial No. 509,633.

To all whom it may concern:

Be it known that I, ERNEST R. ZABRISKIE, a citizen of the United States, and a resident of the city of Bridgeport, county of Fairfield, and State of Connecticut, have invented certain new and useful Improvements in Methods and Means for Packing Articles for Shipment, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to improvements in methods and means for packing articles for shipment.

The present embodiment of the invention is particularly intended for packing phonograph cabinets of the so-called "floor type," although it should be understood that the invention is not limited to the packing of these particular articles.

In shipping phonograph cabinets—especially for export—it is very important that they be packed so as to withstand the very roughest handling, for it has been found with the methods heretofore employed, that even though great care was taken in packing the cabinets, they very often became damaged during shipment. It is quite usual, in moving packing-crates during shipment, to stand them on any one of their several sides, and to roll, drop, or so roughly handle them, that unless the article packed therein be thoroughly protected against the various shocks and concussions to which it may be subjected, it will be broken, its delicate, finished surface marred, or otherwise damaged. The present invention has, therefore, been conceived to provide an improved method of packing which is thoroughly protective and capable of withstanding the rough handling to which such shipments are subjected.

A particular object of the invention is to so store the article within the crate that it will be protected at all sides, and at the same time will permit of yielding pressure of the crate thereon, so that sudden shocks, due to dropping or rolling the crate, will be absorbed to a certain extent, before reaching the article.

Another object is to provide a minimum area of contact between the crate and the surface of the article, the crate structure,

according to the invention, being adapted to contact with the article only at separated relatively small spots, and the nature of the material of the contacting parts being such as not to mar or damage the surface of the article.

A further object is to provide adjustable connections between the ends of the protective strips surrounding the cabinet, or other article, so that while they will be of a standard length and form, they may be accurately fitted to each individual cabinet.

A still further object is to provide for the removal of the upper part of the packing-crate, so that when the cabinet is received—in a store, for instance—the upper part of the crate may be removed to enable the top of the cabinet to be lifted, and a demonstration made of the phonograph, without the necessity of entirely removing the crate. This enables the merchant to then re-ship the cabinet to his customer in its original packing, the re-attachment of the upper part being very simple.

Finally, an object is to provide a crating structure, which will be simple and inexpensive to build and may be removed with facility, and without danger of damaging the article during removal.

With these and other objects in view, an embodiment of the invention is shown in the accompanying drawings, and this embodiment will be hereinafter more fully described with reference thereto, and finally, the invention pointed out in claims.

In the drawings:

Fig. 1 is a perspective view, showing an article—in this instance a floor-type phonograph cabinet—crated and mounted on a skid, constructed according to this invention.

Fig. 2 is a perspective view, showing the same fitted within the packing case, the cabinet being shown in dotted lines.

Fig. 3 is a perspective view of a modified form of packing-crate and skid.

Fig. 4 is an enlarged detail perspective and semi-phantom view of one of the adjustable corner connections of the crate structure.

Fig. 5 is a view, in elevation, of one of the cushioning-pads, or cork members,

(adapted to be interposed between the crate and the surface of the cabinet), showing the same before use.

Fig. 6 is a vertical sectional view, taken along the line 6—6 of Fig. 4, and showing the cork member positioned in its cleat.

Fig. 7 is a fragmentary side elevation of the upper corner of the crate, showing phantom-wise the connecting means.

Fig. 8 is a front view thereof.

Fig. 9 is a vertical sectional view along the line 9—9 of Fig. 1, showing the portion of the crate adjacent the lower end of the cabinet, and the connection of the cabinet thereto.

Fig. 10 is a plan view of a modified form of the corner connection of the crate structure, shown in Fig. 7.

Fig. 11 is a vertical sectional view, taken along the line 11—11 of Fig. 10.

Similar reference characters indicate corresponding parts throughout the several figures of the drawings.

Referring to Figs. 1 and 2 of the drawings, the embodiment of the invention shown therein is especially intended for those shipments in which an exceedingly sturdy construction is essential to the safe shipment of the cabinets such, for instance, as export shipments.

The form, shown in Fig. 3, is for shipments where the likelihood of excessively rough handling is not so great. For this purpose, certain of the parts employed in the first form of the invention, for great strength, are omitted from this form. In both forms, the under structure, or skid, is the same; and also, that much of the crate employed in the form shown in Figs. 1 and 2, which is utilized in the form shown in Fig. 3; so that for clearness sake, reference may be had to Fig. 3 in the description of the form shown in Figs. 1 and 2.

The skid comprises a base-frame consisting of parallel side rails 10 and 11, and parallel cross-rails 12 and 13 spaced from the ends of the rails 10 and 11. Within the corners formed between the rails, there are secured the lower ends of upright posts 14, 15, 16, and 17, and to the upper ends of which are secured rails 18 and 19 disposed in parallel relation to the rails 12 and 13. The rails 10 and 11 project relatively to the rails 18 and 19, in one direction, while the rails 18 and 19 project relatively to rails 10 and 11, in the other direction. Mortise recesses 20 are provided in the rails 18 and 19 to receive the ends of the uprights.

Upon these rails 18 and 19, there are secured cross-bars or cleats 21 and 22 adapted to engage the under side of the cabinet, and being of such length as to fit within the overhanging side panels of the cabinet, to support the lower edges of these panels out of contact from the rails 18 and 19, as clearly

shown in Fig. 9. The parts just described, are all fastened together by nails suitably placed, as will be understood by those skilled in the art, and as illustrated, for example, in the drawings.

The cabinet is mounted upon the skid, and rests directly upon the cleats 21 and 22, and is securely fastened by lag-screws 23, 24, 25, and 26 passing up through the rails 18 and 19, the cleats 21 and 22, and the base 27 of the cabinet, into sill pieces 28 (Fig. 9) glued upon the interior side of the base.

Centrally of the rails 18 and 19, and beneath them, there is provided a cross-bar 29 secured to the rails by screws 30 and 31, respectively. This bar projects forwardly and rearwardly at its ends, and is adapted to support the crating structure built about the cabinet.

The crating structure consists of uprights 32 and 33 (Fig. 3) extending upwardly along the front and rear sides of the cabinet, in spaced relation thereto, and secured to the ends of the bar 29 by screws 34. At the upper ends of the uprights, there is connected a bar 35 extending across the upper end of the cabinet, and in spaced relation thereto, the ends of the bar being connected, at each end, to the uprights by two screws 36 and 37 (Figs. 7 and 8)—the screws 36 engaging the ends of the bar, and the screws 37 engaging the corner blocks 38 and 39 provided in the angles between the uprights and the cross-bar. The blocks are also secured to the bar 35 by screws 40, and are beveled, as at 41, so that they fit into the space between the crate and the upper corner of the cabinet, but do not engage the cabinet. The corners are further secured by steel-ribbon angle-straps 42 and 43 nailed into place.

A rectangular frame extends about the upper portion of the cabinet, and comprises four strips 44, 45, 46, and 47 connected at their corners—the strips 44 and 46 being provided with central cut-out recessed portions which embrace the uprights, as at 49 and 50, and which are secured to the uprights by screws 51.

The corner construction (Figs. 4 and 6) consists in mortising the ends of the overlapping strips, as at 52 and 53, in an amount greater than required by the width of the piece, and securing them by screws 54 and 55, and then further securing them by steel-ribbon angle-straps 56 fastened by nails 57. This construction permits of the adjustment of the frame to fit the cabinet.

In order to space the crating from the finished surface of the cabinet, resilient plugs, or pads, are interposed between the crate and the surface, at suitable points,—two of these being provided upon the top bar 35, to engage the upper surface of the cabinet, and one being provided at each end

of the horizontal strips 44, 45, 46, and 47 of the rectangular frame portion, to engage the upright corner pieces of the cabinet, as clearly indicated in Fig. 1. These blocks preferably (Figs. 5 and 6) consist of a cylindrical member 58, preferably formed of paraffined cork, or other smooth-surfaced resilient substance, glued or otherwise held in a socket 59 formed in the wooden strip, and having a truncated cone-shaped projecting portion 60, the flat end 61 of which engages the surface of the cabinet.

As regards the form shown in Fig. 3, the crate is now complete, consisting of a single frame vertically surrounding the cabinet and connected to the skid, and a single frame horizontally surrounding the cabinet and supported upon the vertical frame, the cabinet, itself, being securely connected, at its base, to the skid, and spaced at its sides and top surface from the crate by the resilient cork inserts.

In the form shown in Figs. 1 and 2, further protective crating is provided, consisting of a rectangular frame extending about the lower part of the cabinet, similar to the upper frame, and comprising strips 62, 63, 64, and 65 adjustably connected at the corners, the strips 63 and 64 being provided with cut-outs 66 and 67 to embrace the uprights 32 and 33, and being secured thereto by screws 68. Upright bracing strips 69 and 70 are connected to the side strips of the upper and lower frames, these side strips being provided with cut-outs 71, to embrace the ends of the bracing strips, which are fastened thereto by screws 72.

It will be noted that the side strips mortised at their ends, and recessed centrally, are of the same standard form, and may be interchangeably used at random—this, of course, being true only in the case of cabinets of square design, cabinets having a depth which is greater or less than the length requiring crating strips proportioned to fit them.

The crated cabinet, mounted on the skid, is now slid into the packing-case, which comprises the upper and lower end walls 73 and 74, the rear wall 75, side walls 76 and 77, and a front cover wall (not shown.) This packing-case is preferably furnished as a shook, which may be conveniently assembled when needed.

Upon the inner surfaces of the side walls, there are mounted horizontally-disposed cleats 78 and 79, (Fig. 2), which form tracks beneath which the ends of the rails 18 and 19 engage, and above which the side strips 63 and 65 of the lower horizontal frame engage, the crate being thus held against vertical movement within the packing-case.

The packing-case is lined with paraffined paper 80, or other suitable material, to protect the cabinet from dust and moisture.

In order to remove the crated cabinet from the casing, the front wall is removed, and the cabinet is slid out upon the cleats 78 and 79. Then, if it is desired to demonstrate the phonograph, without entirely removing the crate, the upper bar 35, together with the corner blocks 38 and 39, is removed so that the top of the cabinet is free to be raised. The tone leaves of the cabinet, which are held against movement during shipment, by tying, or otherwise securing them in place, are spaced from the upright strip 32 sufficiently to permit of their operation.

In order to remove the top bar 35, the nails securing the steel-ribbon straps to the uprights 32 and 33, are removed, so that the straps may be bent upwardly to expose the ends of the screws 36 and 37. The screws may now be removed to free the top bar and the corner blocks carried thereby, and the bar lifted from engagement with the top of the cabinet.

As shown in dotted lines in Fig. 2, a box 81, containing accessories for use with the phonograph, may be placed in the space within the base frame of the skid, and secured by straps 82 and 83 nailed at their ends to the frame.

In Figs. 10 and 11, there is illustrated a modified form of corner connection for the horizontally-disposed frames of the crate. The strips are mortised at their ends, and overlap as before, and upon their upper sides, there is provided a right angle corner piece 84 secured at its ends by screws 85 and 86, engaging the respective strips, and secured at its corner by a bolt 87 extending through registering-holes formed in the overlapping ends of the strips. The head 88 of the bolt engages one of the strips at its under side, while a holding nut 89 engages the upper surface of the angle piece. This arrangement provides a corner construction of great strength, and one which may be conveniently disassembled by merely removing the bolt and disengaging the two screws.

While the invention is illustrated in the drawings and described with particularity as a packing method and means for phonograph cabinets, it is to be especially understood that the invention is not restricted to the form shown or to the specific details of the method described, but covers the method in its broadest use with a structure adapted to contain any other article. Moreover, certain features of the invention are capable of use without other features thereof. Reference is therefore to be had to the appended claims for a definition of the limit of the invention.

Having described the invention, what is claimed is:

1. In a packing for cabinets or the like, a case, means adapted to be secured to the cab-

inet for supporting it within and for spacing it from the walls of the case and means secured to the case and slidably engaging the supporting means and adapted to prevent vertical movement thereof.

2. In a packing for cabinets or the like, a case, a skid for supporting the cabinet within the case in spaced relation to the walls thereof, and comprising a frame secured to the base of the cabinet and adapted to support it in raised position from the floor of the case, and means secured to the case and adapted to prevent vertical movement of the frame and cabinet.

3. In a packing for articles having legs, a case, a skid for supporting the article within the case in spaced relation to the walls thereof, and with the legs supported in raised position from the floor of the case, and means secured to the case and adapted to prevent vertical movement of the skid and article.

4. The combination of a support for an article, means securing the support to the underside thereof, crating means extending around the other sides of the article in spaced relation thereto, and resilient means interposed between said crating means and the surface of the article.

5. In a packing for cabinets or the like, a cabinet support comprising a base-frame, and cleats supported thereby and adapted to support the cabinet, means securing the cabinet to the cleats, means extending around the sides and top of the cabinet in spaced relation thereto, and resilient means interposed between the said means and the cabinet.

6. In a packing for cabinets or the like, a case, a support for the cabinet comprising a base-frame, a pair of spaced parallel bars secured to the frame, means adapted to secure the bars to the underside of the cabinet, portions of the frame projecting relatively to the sides of the cabinet, and adapted to engage the sides of the case to space the sides of the cabinet therefrom.

7. In a packing for cabinets or the like, a case, a support for the cabinet comprising a base-frame, a pair of spaced parallel bars secured to the frame, means adapted to secure the bars to the underside of the cabinet, portions of the frame projecting relatively to the sides of the cabinet, and adapted to engage the sides of the case to space the sides of the cabinet therefrom, and means secured to the case and adapted to prevent vertical movement of the support and cabinet.

8. In a packing for cabinets or the like, a case, a support for the cabinet comprising a base-frame, a pair of spaced parallel bars secured to the frame, means adapted to secure the bars to the underside of the cabinet, portions of the frame projecting relatively

to the sides of the cabinet, and adapted to engage the sides of the case to space the sides of the cabinet therefrom, horizontal slide rails secured to two opposed sides of the case, and adapted to engage above the projecting portions of the support to prevent vertical movement of the support and cabinet, and also permit horizontal removal of the support and cabinet upon the removal of a side of the case.

9. In a packing for cabinets or the like, a case, a support for the cabinet comprising a base-frame, a pair of spaced parallel bars secured to the frame, means adapted to secure the bars to the underside of the cabinet, portions of the frame projecting relatively to the sides of the cabinet and adapted to engage the sides of the case to space the sides of the cabinet therefrom, horizontal slide rails secured to two opposed sides of the case, and adapted to engage above said projecting portions of the support, a crating structure surrounding the sides of the cabinet and including a horizontally-disposed rectangular frame slidably engaging the upper sides of said horizontal slide rails.

10. In packing means for cabinets or the like, a case, means secured to the cabinet for supporting the cabinet within the case, and projecting therefrom at its sides, to engage the walls of the case to space the cabinet therefrom, crating means surrounding the cabinet, and resilient means interposed between the crating means and the surface of the cabinet.

11. In packing means for articles having legs, a case, a skid for supporting the article within the case, and comprising a horizontal frame, uprights supported thereby, horizontal rails supported by the uprights and adapted to support it in raised position, means securing the horizontal rails to the article, the legs of the article extending downwardly in spaced relation to the base and sides of the case.

12. In packing means for cabinets or the like, a case, a skid for supporting the cabinet within the case and comprising a horizontal rectangular frame having projecting portions adapted to engage two opposite sides of the case to prevent relative movement of the skid in one direction, uprights supported by the horizontal frame, horizontal rails supported thereby and projecting at their ends to engage the other two opposite sides of the case, to prevent relative movement of the skid in the other direction.

13. In a packing for articles having legs and side panels, a case, a skid adapted to support the article within the case with the legs raised from the base of the case, and the sides spaced from the sides of the case, means carried by the skid engaging the base of the article and adapted to support the

lower edges of the side panels out of engagement with the skid.

14. In packing means for cabinets having legs and side panels projecting below the base of the cabinet, a casing, a skid adapted to support the cabinet within the case with the legs raised from the base of the case, and the sides spaced from the sides of the case, means carried by the skid and engaging the base of the cabinet and adapted to support the lower edges of the side panels out of engagement with the skid.

15. In packing means for cabinets or the like, a crating strip having sockets and extending above a surface of the cabinet, and spacing means interposed between the strip and cabinet surface, and comprising pads seated in said sockets and projecting into engagement with the surface of the cabinet.

16. In packing means for cabinets or the like, a crating strip having sockets and extending above a surface of the cabinet, and spacing means interposed between the strip and cabinet surface, and comprising pads seated in said sockets and having truncated-cone-shaped portions, their reduced ends projecting into engagement with the surface of the cabinet.

17. In packing means for cabinet-like articles, a casing, a base support for the article, means securing the support thereto, and crating strips extending about the sides and top of the article.

18. In packing means for cabinets or the like, having a movable top, a casing, a support for the cabinet, means securing the support thereto, crating strips extending about the sides and top of the cabinet, the strip extending about the top being readily removable to permit movement of the top.

19. In packing means for cabinets or the like, a casing, a base support for the cabinet, means securing the support thereto, crating means comprising a rectangular frame, extending vertically about the cabinet and supported by the base support, and a rectangular frame extending horizontally about the cabinet and supported by the vertical frame.

20. In packing means for cabinets or the like, a casing, a base support for the cabinet, means securing the support thereto, crating means comprising a rectangular frame extending vertically about the cabinet and supported by the base support, and a rectangular frame extending horizontally about the cabinet and supported by the vertical frame, and resilient pads interposed between the frames and the surface of the cabinet, and adapted to space the frames therefrom.

21. In packing means for cabinets or the like, a casing, a base support for the cabinet, means securing the support thereto, crating means comprising a rectangular frame extending vertically about the cabinet and sup-

ported by the base support, and a rectangular frame extending horizontally about the cabinet and supported by the vertical frame, and resilient pads interposed between the top of the vertical frame and the top of the cabinet and relatively near the ends thereof, and between the sides of the horizontal frame and the sides of the cabinet and relatively near the ends of said sides.

22. In packing means for cabinets or the like, a casing, a base support for the cabinet, means securing the support thereto, crating means comprising a rectangular frame extending vertically about the cabinet, and supported by the base support, the top of the vertical frame comprising a horizontally-disposed strip having corner blocks carried at its ends, and screws securing the upper ends of the uprights of the vertical frame to said corner blocks, whereby the top strip may be readily removed upon removal of said screws.

23. In packing means for cabinet-like articles, crating means comprising a frame extending vertically about the article, and a frame extending horizontally about it and supported by said vertical frame, the corners of the horizontal frame being adjustable.

24. In packing means for cabinets or the like, crating means comprising a frame extending vertically about the cabinet, and a frame extending horizontally about the cabinet and supported by said vertical frame, the corners of the horizontal frame comprising interlocked and overlapping portions, and means adjustably connecting said portions.

25. In packing means for cabinet-like articles, crating means comprising a frame extending vertically about the article, and a frame extending horizontally about the article and supported by said vertical frame, and readily removable means connecting the corners of the horizontal frame.

26. In packing means for cabinets or the like, a casing, a base support for the cabinet, means securing the support thereto, crating means comprising a rectangular frame extending vertically about the cabinet and supported by the base support, and a plurality of rectangular frames extending horizontally about the cabinet in spaced relation to each other and supported by the vertical frame.

27. In packing means for cabinets or the like, a casing, a base support for the cabinet, means securing the support thereto, crating means comprising a rectangular frame extending vertically about the cabinet and supported by the base support, and a plurality of rectangular frames extending horizontally about the cabinet in spaced relation to each other and supported by the vertical frame along two opposed sides of the horizontal frames, and vertically-disposed con-

necting strips secured to the other two opposed sides.

28. In packing means for cabinets or the like, a casing, a base support for the cabinet, means securing the support thereto, crating means comprising a rectangular frame extending vertically about the cabinet and supported by the base support, and a plurality of rectangular frames extending horizontally about the cabinet in spaced relation to each other and supported by the vertical frame along two opposed sides of the horizontal frame, and vertically-disposed connecting strips secured to the other two opposed sides, the side pieces of the horizontal frames having recessed portions respectively engaged by the vertical frame and the vertical connecting strips, all of said side pieces being identical in form.

29. The method of standardizing crate construction, comprising forming the individual crate-members with half-lap joints, the joints being cut into each member deeper than required by the width of the member fitting it, assembling the members closely around the crated-article, and then fastening them in position.

30. The method of packing an article, comprising enclosing it within a crate, separating it therefrom by a resilient non-abrasive medium, removing the side of a packing case, placing the crate in the case in such manner that it cannot move relative to the case, and replacing the side of the case.

31. The improved method of packing, which consists in crating the article to space it from the case, placing it in the case, providing means secured to the case to prevent vertical movement of the crate within

the case and permitting lateral sliding movement into and out of the case, and preventing such lateral movement by means of a removable cover.

32. In packing means for cabinets or the like, a crate including individual crate-members having half-lap joints permitting the members when secured together to fit closely around the crated article, and angular, metal pieces adapted to be secured around the joints to strengthen them.

33. In a packing for cabinets, a case, a crate adapted to surround the cabinet and slidable into and out of the case, and means for holding the crate against longitudinal and transverse movement in the case.

34. In a packing for cabinets, a case, a crate adapted to surround the cabinet and slidable into and out of the case, and inter-engaging means between the case and crate for holding the crate against longitudinal movement relative to the case.

35. In a packing for cabinets, a case, a crate adapted to surround the cabinet and slidable into and out of the case, and means adapted to hold the crate against movement in the case.

36. In packing means for cabinets or the like, a crate including individual crate-members each having their ends mortised an amount greater than the width of the member whereby half-lap joints are formed permitting adjustment of the members to have them fit closely around the crated article when secured.

Signed at Bridgeport, in the county of Fairfield, and State of Connecticut, this 14th day of October, A. D. 1921.

ERNEST R. ZABRISKIE.