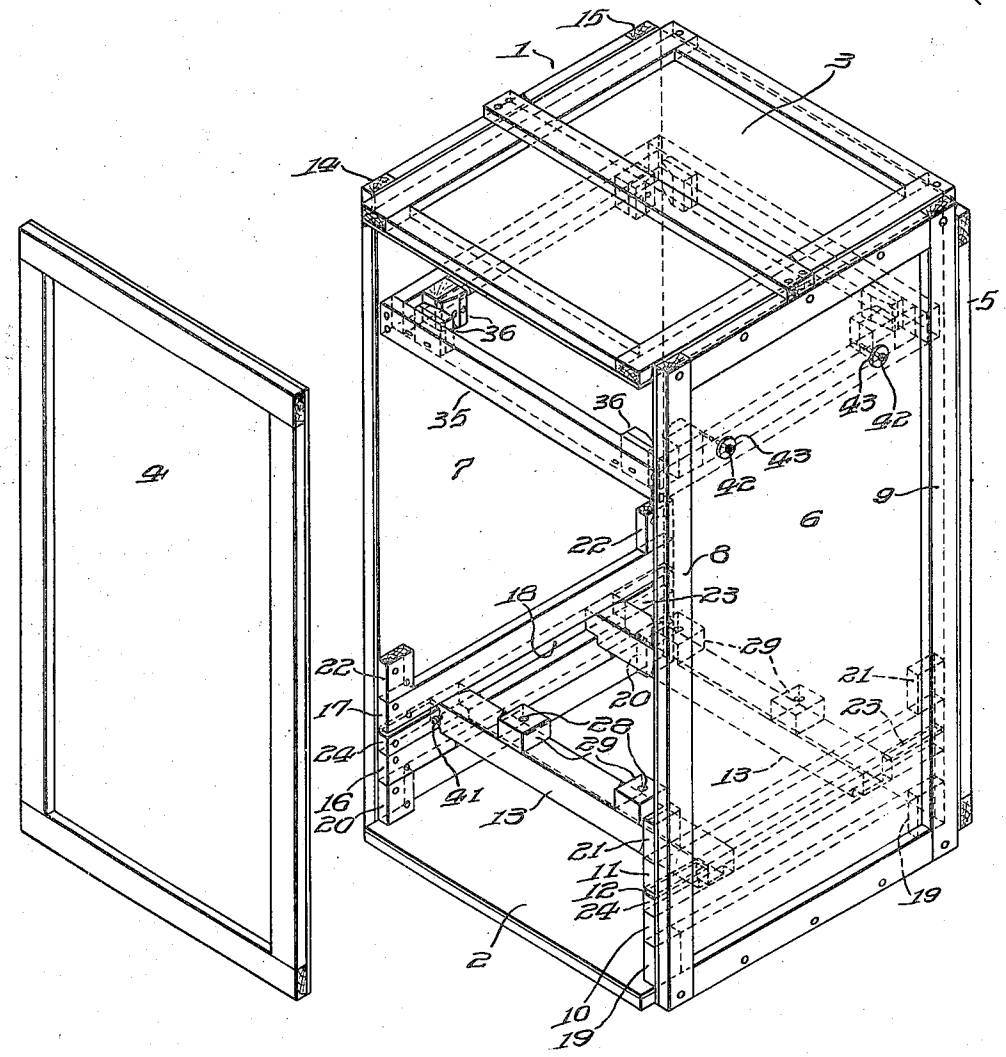
Jan. 27, 1925. 1,524,154

G. R. SCHENCK ET AL

DEVICE FOR PACKING, CRATING, AND SHIPPING ARTICLES HAVING EASILY MARRED SURFACES

Filed April 23, 1921 3 Sheets-Sheet 1

Fig. 1.



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Filed April 23, 1921 3 Sheets-Sheet 2

Fig. 2.

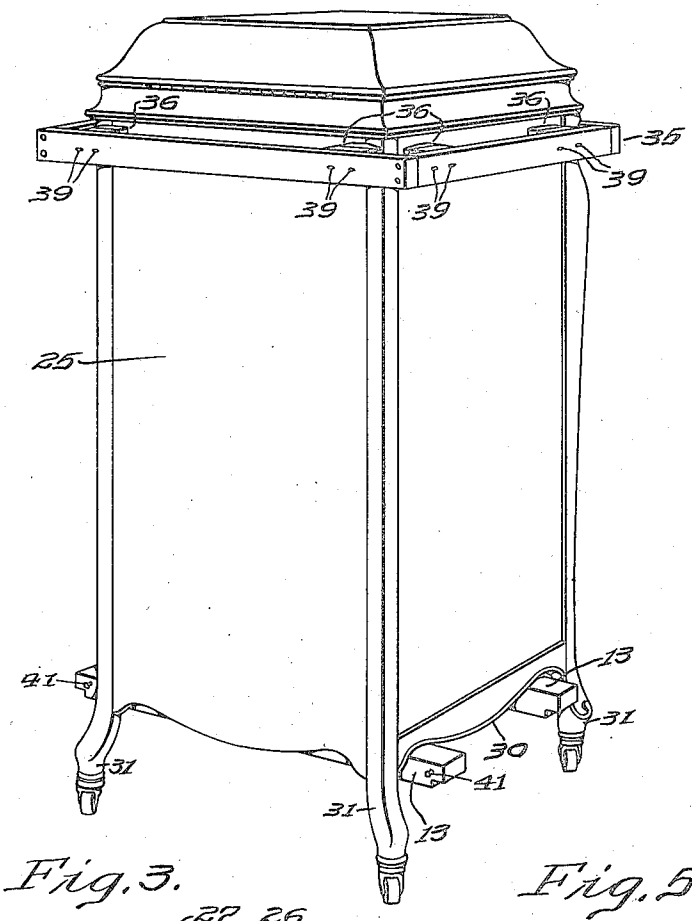


Fig. 3.

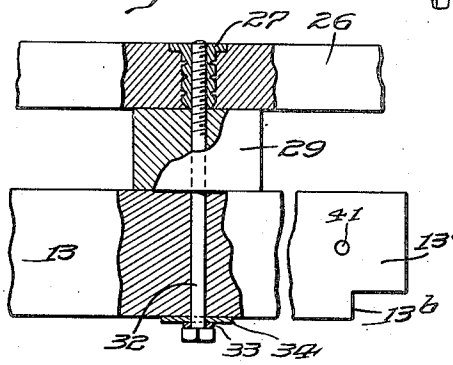
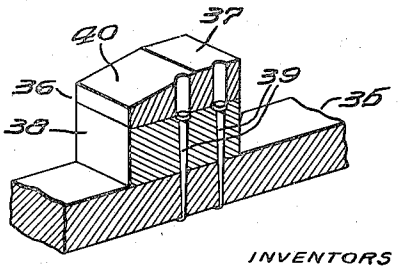


Fig. 4



Fig. 5.



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Filed April 23, 1921 3 Sheets-Sheet 3

Fig. 6.

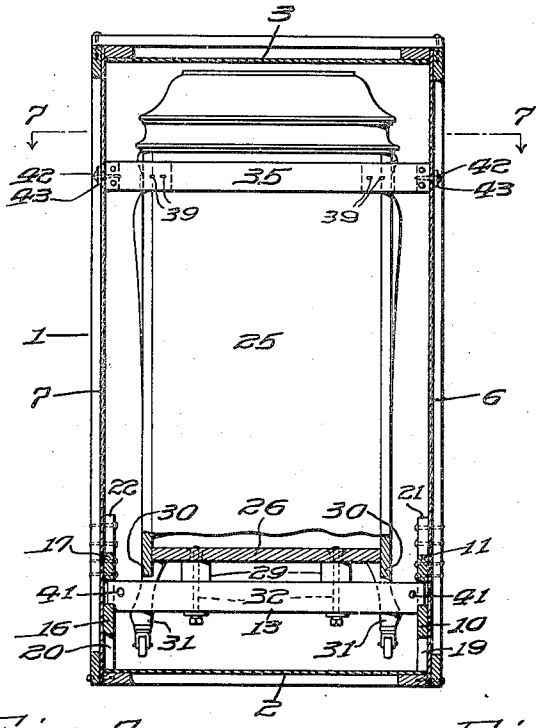


Fig. 7.

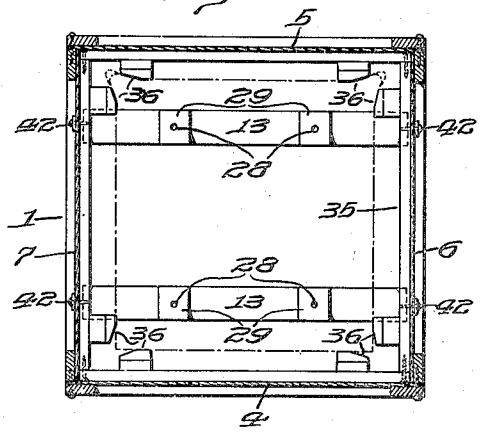
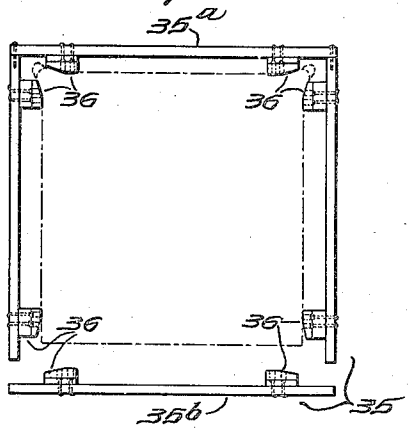


Fig. 8.



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UNITED STATES PATENT OFFICE.

GERRET R. SCHENCK, OF WOODBURY, AND WALTER T. MARKOWSKI, OF CAMDEN, NEW JERSEY, ASSIGNORS TO VICTOR TALKING MACHINE COMPANY, A CORPORATION OF NEW JERSEY.

DEVICE FOR PACKING, CRATING, AND SHIPPING ARTICLES HAVING EASILY-MARRED SURFACES.

Application filed April 23, 1921. Serial No. 463,893.

To all whom it may concern:

Be it known that we, GERRET R. SCHENCK and WALTER T. MARKOWSKI, citizens of the United States, and residents, respectively, of Woodbury, in the county of Gloucester, State of New Jersey, and of Camden, in the county of Camden, State of New Jersey, have invented certain new and useful Improvements in Devices for Packing, Crating, and Shipping Articles Having Easily-Marred Surfaces, of which the following is a specification.

Our invention relates to the crating, packing and shipping of articles which require particular care and attention to prevent injury to the finished surfaces thereof, and more particularly, the packing of such articles as talking machines, musical instruments, cabinets, pieces of furniture, and the like, all of which have highly polished or finished surfaces, which, after transportation, heretofore required to be refinished or retouched because of the marking, chafing, spotting, scratching, or polishing of parts of the surface thereof by reason of their contact, during transportation, with parts of the crate, box, or packing, in which they were shipped or transported.

The object of our invention is to provide a packing box, crate, or frame for such articles as have been referred to above, within which said article may be packed and securely held in position with parts of the finished easily marred surfaces of the crated article in direct contact with parts of the crate or box, but in which said surfaces will not be subjected to injury, such as the scratching, dulling or spotting which heretofore has invariably resulted whenever such surfaces were engaged by any part of the crating structure.

Further objects of our invention are to provide a pad or buffer which may be used in packing or crating, to engage squarely against the finished surface of the crated article and to hold the article firmly within the crate or box without the slightest injury to, or marring of, such surfaces.

Such a pad or buffer may be used to great advantage in packing heavy delicate articles provided throughout the exterior surface thereof (except perhaps the bottom) with a highly finished wooden surface, such for example, as a cabineted talking machine, which for safe shipping, would be directly mounted within and supported by a rigid casing or frame, and for the purpose of illustrating one of the ways in which our invention may be practiced, we have shown it as applied to the packing, boxing, or crating for shipping of a cabineted talking machine.

In the drawings forming a part of our invention, in which similar reference characters are used throughout the various views to designate the same parts, Fig. 1 is an isometric perspective view of a packing box or crate embodying our invention and adapted to contain a cabineted talking machine, the lid or cover being removed and shown to the left of the main part of the box or crate, and the guiding frame and skids being shown within the main box or casing in the positions which they occupy when the machine is packed and crated;

Fig. 2 is a perspective view of a cabineted talking machine to which skid cross-bars and a buffer frame or guide frame have been secured, the same being ready to be slid into the outer box or casing shown in Fig. 1;

Fig. 3 is a fragmentary view, partly in section, of a skid cross-bar illustrating the way in which the bottom of the talking machine is preferably bolted and secured to the skids;

Fig. 4 is a perspective view of a spring washer, such as is used in securing the crated article to the skid, the figure being on a larger scale than that shown in Fig. 3, wherein this washer is illustrated in its assembled relation to the bolt passing through the skids;

Fig. 5 is a perspective longitudinal sectional view of one of my pads, buffers, or cushions, secured to, and forming a part of, a side of the buffer or guide frame;

Fig. 6 is a view partly in section, showing the talking machine in position within the outer box or casing, with the skid cross-

bars in the runways provided in the outer box or casing, and the guide or buffer frame secured to the machine and to the opposite sides of the outer box or casing;

Fig. 7 is a sectional view of the packing box or crate taken on the line 7—7 of Fig. 6, and showing in dot and dash lines the outline of the talking machine fitted therein; and

Fig. 8 is a plan view of the guide or buffer frame with the fourth side thereof ready to be secured to the assembled other three sides or U-frame, the position of the talking machine being indicated in dot and dash lines. This figure is illustrative of the manner in which the guide or buffer frame is secured to the talking machine before placing the said machine in the outer box or casing.

Referring now first to Fig. 1, the outer casing or box 1 may be of any suitable size and material, but preferably each of the six sides thereof (the bottom 2, the top 3, the front or lid 4, the back 5, and the two sides 6 and 7), are of panel construction, each of the said sides consisting of a rectangular frame, to the inner side of which is nailed or otherwise secured a thin panel of suitable material, such, for instance, as a plurality of plies of veneer secured together. Each of the sides is similar to the lid 4 which is shown detached from the main or body portion of the casing in Fig. 1.

To the uprights 8, 9, of the side 6 are secured the stiff bars or guide rails 10 and 11, parallel to the bottom 2 of the casing 1 and parallel to each other, and forming between them a guideway 12 into which the ends of the skid cross-bars 13—13 are adapted to slide and be retained, as will be explained below. Similarly, to the two uprights 14, 15, of the side 7, are secured two similar stiff spaced guidebars 16, 17, parallel to the bottom 2 of the casing 1 and to each other. The said bars 16 and 17 form between them a guideway 18 positioned the same distance from the bottom 2 as is the guideway 12.

The lower guide rail 10 preferably rests against and upon the blocks 19—19, secured respectively to the uprights 8 and 9 and fitting between the said rail and the bottom 2 of the main box or casing 1, and the blocks 20—20 similarly support the guide rail 16. The upper guide rail 11 is braced to resist upward movement by the blocks 21—21 secured to the uprights 8 and 9 respectively and abutting against the top of the rail 11. Similar blocks, 22—22, are secured to the uprights 14 and 15 respectively of the side 7 and fixedly hold the upper guide rail 17 from upward movement.

The rear end of the guideways 12 and 18 are stopped off by blocks 23 secured respectively to the uprights 9 and 15 and abutting against the frame of the back 5. After the talking machine or other object to be crated has been placed within the box or casing 1, the opposite end of the guideways 12 and 18 adjacent the lid 4 are similarly stopped off by blocks 24—24 respectively, secured to the uprights 8 and 14, the ends of which blocks, 24—24, being adapted to abut against the frame of the lid or cover 4 when that is secured in place.

Preferably, the top 3 and bottom 2 are a little longer than the sides 6 and 7 secured thereto, so that they overhang at the front and back by the thickness of the lid 4 and back 5. This is so that the lid and back may be secured in two ways to the main portion of the box and casing 1, namely, through the frame of the lid and back to the uprights of the sides, and through the frame of the top and bottom to the top and bottom margins of the lid or back, thus greatly increasing the strength and rigidity of the assembled structure.

In Fig. 2 is shown a cabineted talking machine 25 ready to be placed within the outer box or casing 1. Such a talking machine, or any other similar instrument or piece of furniture, may readily be provided on the bottom 26 thereof (which bottom may be assumed to be the only surface of the article which does not have a highly finished easily scratched or marred surface) with nuts 27, (see Fig. 3), rigidly and permanently set therein. These nuts 27 are preferably so set into the bottom 26 as to register with both holes 28 in the cross skid bars 13, as will more fully appear below.

In crating such an article as a talking machine 25, to the said bottom 26 is secured the two cross skid bars 13, each preferably provided with a pair of blocks 29—29 loose thereon or respectively secured thereto in any suitable manner, and through the said blocks and the skids on which they are mounted, holes 28 are provided, the same being adapted to aline with the four nuts 27 in the bottom 26 of the machine.

The height of the blocks 29 is such as to permit the skids 13—13 to clear any apron 30 at the bottom of the sides of the machine, and the height of the guideways 12 and 18, is such that when the ends of the skids 13—13 are in the said guideways, the legs 31 of the machine are lifted clear of the bottom 2 of the outer casing, as is plainly shown in Fig. 6. Four bolts or screws 32, provided with spring washers 33 and plain washers 34, pass through the cross skid bars 13 and into nuts 27 rigidly mounted in the thick rigid bottom 26 of the machine 25. In this way the machine is rigidly attached to and mounted upon the skid bars 13, the same being firmly secured to the thick rigid bottom 26 of the machine 25.

After the skids 13—13 have been attached to the bottom 26 of the machine 25, or other

article to be crated, the guide frame or buffer frame 35 is secured around the said machine or other article to be boxed and crated, said frame 35 being provided with a plurality of pads or buffers 36 extending inwardly from the inner side thereof and having their inner faces shaped to conform generally to the surface of the article to be crated where they engage the same.

In Fig. 7 is shown the manner in which the said buffer frame 35 may be secured to a talking machine; the outline of the machine in the plane of the buffer frame 35 being indicated in dot and dash lines. Three sides of the buffer or guide frame, secured together to form a U-frame 35^a, are preferably placed around the machine 25 or other article to be boxed, and are held there with the faces of the buffer pads 36 pressed firmly against the exterior finished surface of the machine or other article, and then the fourth side, 35^b, is brought up with its pads or buffers 36 pressed against the back, preferably, of the machine 25, and while so held, the ends of the fourth side, 35^b, are nailed to the ends of the U-frame 35^a. The buffer pads 36 are thus drawn and firmly held against the finished surface of the sides of the cabineted machine or other similar article to be boxed or crated. In practice, we prefer to so tightly secure the frame 35 around the machine that it stays in the position in which it has been so placed, as above described, there held by the friction of the pads 36 with the finished surface of the article around which the frame 35 is thus secured.

A pair of pads or buffers 36 are preferably placed respectively near, but spaced from the ends of each side of the frame 35, and when, as in the case of a cabineted talking machine, one or more of the corners of the machine are provided with an outwardly curved surface, the faces of the buffers or pads 36 roughly or generally conform to such curved surface, as is clearly shown in Figs. 7 and 8.

It should be further noted that the ends of the skids 13 are respectively notched on the underside thereof to provide tongues 13^a and shoulders or abutments 13^b, the tongues 13^a being adapted to fit into the guideways 12 and 18 in the sides of the outer box or casing 1, and the shoulders 13^b to abut against the lower rails 10 and 16 respectively to prevent the skids from longitudinal movement when positioned within the outer box or casing 1.

The pads or buffers 36 are made of balsa wood, at least the portions thereof, which engage the surface of the article which is crated, are made of balsa wood. Preferably, these pads or buffers 36 are made of two layers, a facing 37 of balsa wood and a backing 38 of harder wood. Balsa wood is of itself not adapted to be secured directly to the buffer frame 35 by nailing. The wood is too soft to be secured to an object by nailing. A nail head can be easily driven directly through balsa wood. It can, however, be glued very firmly to another piece of harder wood. We prefer therefore, to glue the balsa wood facing 37 directly to a backing 38 of harder wood and to drive the head of a nail through the balsa wood facing 37 until the said head sinks into the backing 38 with the top of the head of the nail 39 flush with the top surface of the backing 38.

The facing 37 of balsa wood, is preferably provided with a beveled portion 40, shaped, generally, to conform with the surfaces with which it is adapted to contact. The surface of the facing 37 is preferably given a coating of paraffine, or some other similar wax or lubricant, and when so constructed, the pads 36 may be forced and held hard against any highly polished or finished wooden surface, and the article having such surface, and so packed, may be subjected to the hardest conditions of shipping without exhibiting any marring or disfigurement, dulling or polishing or scratching whatever of the surface of the article so engaged by the balsa wood pads or buffers.

After the talking machine or other similar article has been provided with the skids 13 and the buffer or guide frame 35 with the buffers or pads 36 of balsa wood pressed firmly against the finished surfaces of such article (as shown in Fig. 2), it is then slid into the outer box or casing 1, the tongues 13^a resting in and sliding in the guideways 12 and 18 which are so positioned with respect to the bottom 2 that the machine or article is supported entirely on the skids 13 with the legs 31 of the machine above and out of contact with the bottom 2. When the machine is properly positioned within the outer casing, the ends of the rear skid 13 rest against the stop blocks 23—23 at the ends of the guideways 12 and 18. The blocks 24—24 are then nailed to the uprights 8 and 14, and they are of a length to abut against the ends of the front skids 13 and the inner margin of the lid 4. In this manner, the skids 13 are prevented from sliding in the guideways 12 and 18, and the shoulders 13^b of the skids 13 abutting against the lower guideways 10 and 16 prevent the skids 13 from moving longitudinally and prevent the tongues 13^a from punching through the thin veneer sides of the outer box or casing 1.

It will be plain that only the ends of the stop-off blocks 23—23, 24—24 can be readily nailed to the stiff thick uprights 9, 15, 8 and 14 respectively, (the thin veneer panels not being thick or strong enough to which to nail) and therefore to prevent the unsecured ends of the blocks 23—23, 24—24 from working inwardly of the casing out of the

guideways 12 and 18, we provide each end of each skid 13, near the shoulders 13b thereof with a nail 41 projecting outwardly therefrom sufficiently to be engaged by the unsecured ends of the blocks 23—23, 24—24 should they work inwardly, due to the shocks, blows and vibrations incident to transportation. These nails 41 are clearly indicated in Figs. 1, 2 and 6.

Having thus been placed within the outer box or casing 1, the guide or buffer frame 36 is preferably secured to the side panels of the outer casing by wood or lag screws 42 provided with a washer 43 between the head of the screw and the outer surface of the panel. The buffer frame 35 is thus secured to the sides of the outer box or casing to insure the holding of the buffer frame 35 near the top of the machine 25 and to prevent it from sliding to a lower position during shipment.

After the buffer frame 35 have been thus secured to the sides of the outer box or casing 1, the lid 4 is nailed to the main box or casing 1 through the uprights of the lid or cover to the uprights 8 and 14 of the sides of the main box or casing and through the overhanging front edges of the top 3 and bottom 2 into the top and bottom edges of the frame of the lid.

It will now be apparent that by the practice of our invention, a talking machine may be rigidly crated within an outer box or casing in such a way that the weight thereof is substantially entirely supported on and by heavy skids, which in turn are removably secured in the frame work of the crate or box: and that the upper part of the said machine may be tightly held within the frame work of the box or crate, and retained in position by wooden blocks of balsa wood coated with a suitable wax-like lubricating material, such as paraffine, in engagement with the polished surface of the machine or cabinet, without effecting any injury to the surface thereof. We do not wish, however, to be construed as limiting our said invention to the packing or crating for shipment of talking machines only, although that is one of the principal objects of our invention, because other heavy articles, having surfaces which are highly finished and readily marred, may be packed or crated in the same or in a similar manner, and the same desirable results accomplished.

The balsa wood may be placed within the crate or box in any desired location and secured in any desired manner, dependent upon the size, shape and character of the article to be boxed, crated, or packed, and therefore this invention is not to be construed as limited to the construction in which buffer pads or blocks are secured in any definite part of the box or frame work. Our invention is adapted to be used to hold any crated object or article by engagement with the finished surface thereof.

Nor is our invention limited to any particular manner of securing the balsa wood pads or blocks to the crate, nor to any definite construction of pad or buffer, except when so specified in the claims, because any manner of holding balsa wood in a fixed position within the crate or housing so as to engage with the finished surfaces of the article packed or crated and hold the said articles firmly during transportation, is fully within the aim and scope of our invention.

The coating on the faces of the balsa wood in engagement with the crated article appears to act somewhat as a lubricant to assist in preventing any chafing or scratching of the finished surfaces in contact therewith, but on some kinds of articles, the soft, unabrasive, and uncoated balsa wood will not mar the surface in contact therewith, and in crating such articles the coating of paraffine or other similar wax-like material may be omitted. When, however, our invention is used in crating articles having a highly polished or highly finished wooden surface, we prefer to coat the contacting portions of the balsa wood with paraffine, or other similar wax-like lubricating material.

Having thus described our invention, what we claim and desire to protect by Letters Patent of the United States is:

1. A packing and shipping crate or box having all that portion thereof which is adapted to substantially engage with easily marred surfaces of the article to be crated therein, composed of balsa wood.

2. A packing and shipping crate or box having all that portion thereof, which is adapted to substantially engage with easily marred surfaces of the article to be crated therein, composed of balsa wood coated with paraffine.

3. In a packing or a shipping box or crate, a frame, and blocks of balsa wood fixedly secured to said frame at substantially all the various points thereof which are adapted to engage the finished surfaces of the article to be packed therein, to bear against said finished surfaces.

4. In a box or crate for packing or shipping an article having a highly finished, easily marred or scratched surfaces, a plurality of buffers or pads rigidly secured to said box or crate at every point where said crate is adapted to substantially contact with said finished surface, said buffers being adapted to bear firmly against said surfaces and the faces of said pads in engagement with said surfaces being composed of balsa wood.

5. In a box or crate for packing or shipping an article having a highly finished, easily marred or scratched surface, a plural-

ity of buffers or pads rigidly secured to said box or crate at every point where said crate is adapted to substantially contact with said finished surface, said buffers being adapted to bear firmly against said surfaces and the faces of said pads in engagement with said surfaces being composed of balsa wood coated with a lubricant.

6. In a box or crate for packing or shipping an article having a highly finished, easily marred or scratched surface, a plurality of buffers or pads rigidly secured to said box or crate at every point where said crate is adapted to substantially contact with said finished surface, said buffers being adapted to bear firmly against said surfaces and the faces of said pads in engagement with said surfaces being composed of balsa wood coated with paraffine.

7. In a packing or shipping box or crate for containing an article having an easily marred surface, of a frame, means on said frame for engaging said finished surface of said article, and comprising pieces or blocks of balsa wood, a backing of relatively harder material, and means for securing said balsa wood blocks to said backing, and means to secure said backing to said frame.

8. In a packing or shipping box or crate, for boxing or crating an article having an easily marred surface, a frame and means located at various points on said frame adapted to engage the article to be packed in said box or crating, said means being composed of balsa wood and a backing of relatively hard material to which said balsa wood is glued, and means for securing said first above-mentioned means to said frame.

9. In a box or crate for packing or shipping an article having a finished or easily marred surface, a main frame work and a pair of skids, means to attach said skids rigidly to the article crated therein, means to rigidly secure said skids to said frame work and a plurality of means rigid with said frame work and having a facing of balsa wood adapted to firmly engage the said finished surface of said article.

10. In a box or crate for packing or shipping an article having a finished or easily marred surface, a main frame work and a pair of skids, means to attach said skids rigidly to the article crated therein, means to rigidly secure said skids to said frame work, and a plurality of pads rigid with said frame work and having a facing of balsa wood coated with paraffine adapted to firmly engage with the said surface of said article.

11. In a box or crate for packing and shipping an article, a main frame work having guideways therein, a pair of skids having their ends in said guideways, means to rigidly secure said skids to the article crated therein, and means to prevent movement of said skids along said guideways, said skids being provided with shoulders abutting said guideways to prevent longitudinal movement of said skids within said frame work.

12. In a box or crate for packing and shipping, a main frame work having guideways therein, a pair of skids in said guideways, stop blocks secured at one end to said frame work and located in said guideways and having their unsecured ends abutting against said skids, and means on said skids to prevent the free ends of said stop blocks from rising out of said guideways.

13. A box or crate for crating and shipping talking machines, having guideways therein, a pair of skids, means to rigidly secure said skids to the bottom of said machine, the ends of said skids being seated in said guideways, a buffer frame fitting within said box or crate and secured to said machine near the top thereof, the inside of said frame being provided with balsa wood coated with paraffine, held firmly and squarely against the finished outside surface of said machine, and means to hold said skids substantially immovable in said guideways.

14. A pad or buffer for use in packing and crating an article having an easily marred or scratched surface, having a facing of balsa wood to engage the said finished surface of such article, and a backing of relatively harder material, permanently secured to said facing.

15. A pad or buffer for use in packing or crating an article having a finished surface ordinarily easily married or scratched by contact with a shipping container, which consists of a strip of balsa wood, to engage said finished surface, and a backing of relatively harder material to which said strip is glued.

16. A pad or buffer for use in packing or crating an article having an easily marred surface, having a facing of balsa wood, and a backing of relatively hard material permanently secured thereto, the exposed face of said facing of balsa wood being provided with a coating of wax-like material.

17. A pad or buffer for use in packing or crating an article having an easily marred surface, having a facing of balsa wood and a backing of relatively hard material permanently secured thereto, the exposed face of said facing of balsa wood being provided with a coating of paraffine.

18. A box or crate for packing and shipping an article having highly finished and relatively easily marred surfaces, all the interior parts of said box or crate which are arranged to substantially engage or contact with the finished surfaces of said article being composed of balsa wood.

19. A box or crate for packing and shipping an article having highly finished and relatively easily marred surfaces, all the interior parts of said box or crate which are arranged to substantially engage or contact with the finished surfaces of said article being composed of balsa wood having the surfaces thereof, which are adapted to engage said article, coated with paraffine.

In witness whereof, we have hereunto set our hands this 20th day of April, 1921.

GERRET R. SCHENCK.
WALTER T. MARKOWSKI.