

April 5, 1932.

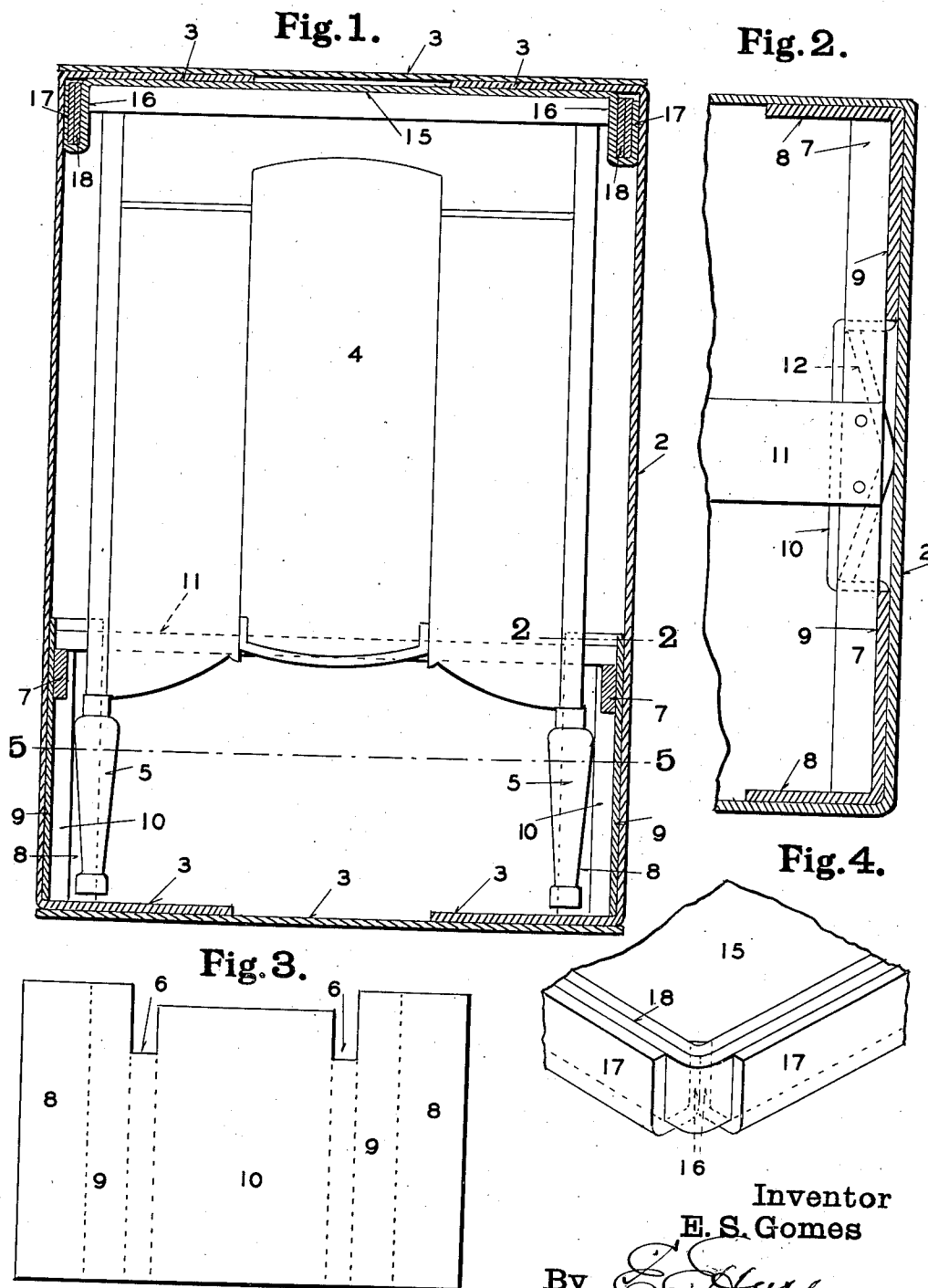
E. S. GOMES

1,852,113

PACKING CASE

Filed March 23, 1931

3 Sheets-Sheet 1



Inventor
E. S. Gomes
By *E. S. Hoffman*
Att'y.

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E. S. GOMES

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Fig. 5.

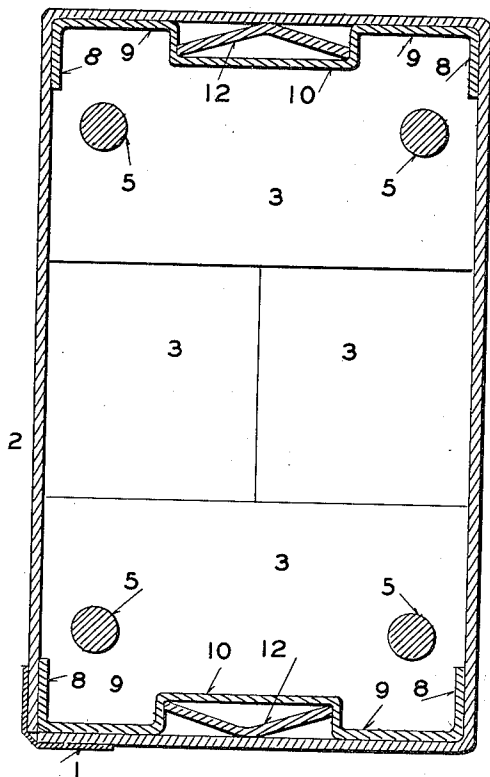


Fig. 6.

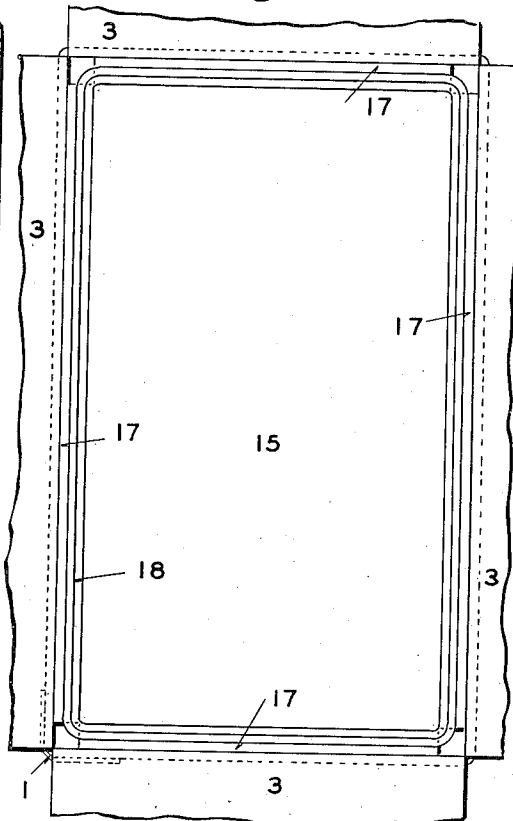


Fig. 7.

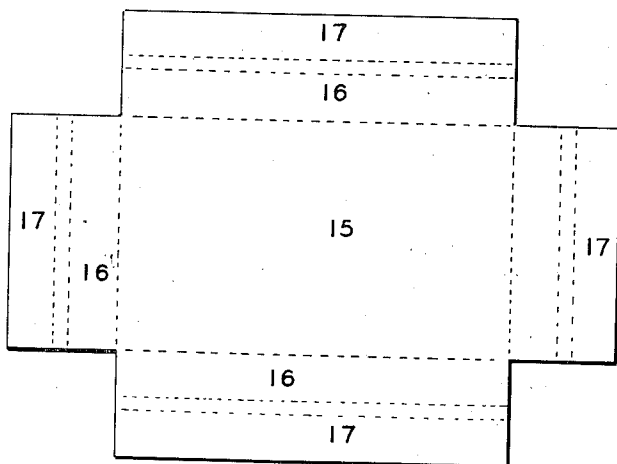
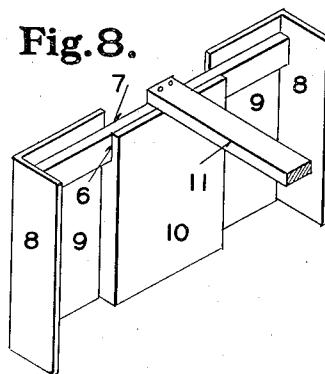


Fig. 8.



Inventor
E. S. Gomes

By

E. E. Huffman
Att'y.

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E. S. GOMES

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Fig. 9.

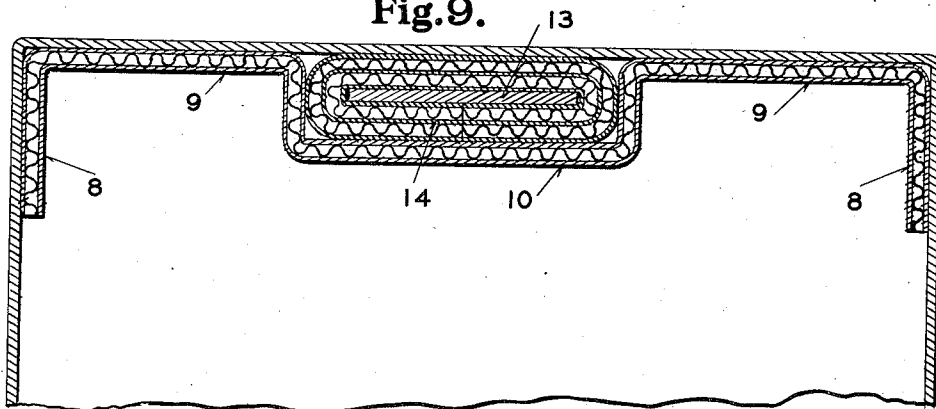


Fig. 10.

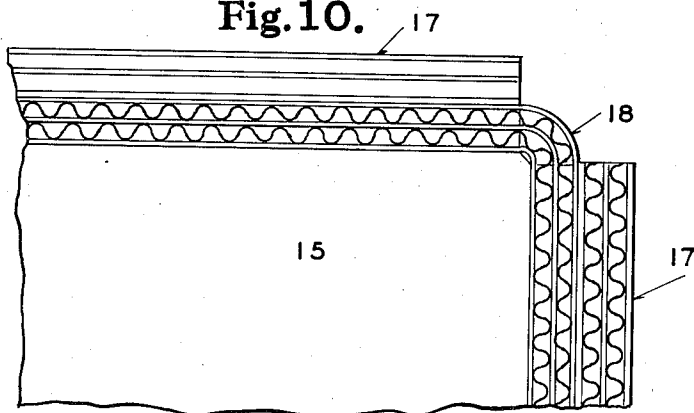
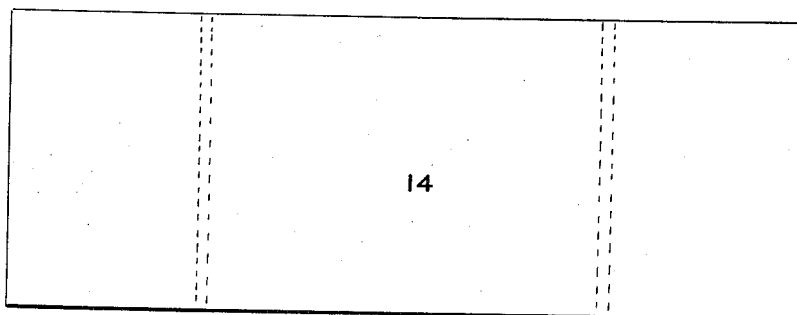


Fig. 11.



Inventor
E. S. Gomes

By *E. G. Hupfmay*
Att'y.

UNITED STATES PATENT OFFICE

EARL S. GOMES, OF CINCINNATI, OHIO, ASSIGNOR TO ROBERT GAYLORD INCORPORATED,
OF ST. LOUIS, MISSOURI, A CORPORATION OF MISSOURI

PACKING CASE

Application filed March 23, 1931. Serial No. 524,512.

My invention relates to a packing case and particularly to a case adapted to contain a cabinet or similar article having legs, or other depending or projecting portions liable to be broken or injured if subjected to shock during shipment or storage.

One object of my invention is to provide improved supporting means for engaging the article intermediate of its length to hold the legs or other projecting part or parts out of contact with the box or crate; and further, to so construct such supporting means that it may be applied to a box or crate of any material without the use of nails, glue or other fastening means.

Another object of my invention is to provide cushioning means in the form of a cap fitting over one end of the article to prevent its lateral movement in the container.

In the accompanying drawings, which illustrate a packing case made in accordance with my invention, together with one form of cabinet adapted to be contained therein, Figure 1 is a vertical section, the cabinet being shown in elevation; Figure 2 is a somewhat enlarged section taken on the line 2—2 of Figure 1, the cabinet being omitted; Figure 3 is a plan view of a blank for forming one end section of the supporting member; Figure 4 is a perspective view of one corner of the cap; Figure 5 is a section taken on the line 5—5 of Figure 1; Figure 6 is a top plan view of the container with the sealing flaps open; Figure 7 is a plan view of a blank for forming the body of the cap; Figure 8 is a perspective view of one end of the support; Figure 9 is an enlarged cross section through one end of the container and support showing a modified form of support filler; Figure 10 is an enlarged top plan view of one corner of the cap; and Figure 11 is a plan view of a blank for forming the support filler shown in Figure 9.

The box or crate forming the container of my packing case may be made of wood or other material such as solid fiber board, or single or double wall corrugated fiber board. In the drawings I have shown the container as made of solid fiber board and of the type formed from a unitary blank having its edges

secured together by a binding strip 1 to form a rectangular box 2 and its ends closed by integral sealing flaps 3. This box is of such size as to fit a radio cabinet 4 having legs 5 which, due to their relatively fragile character, are particularly liable to injury in shipment. To hold the legs out of contact with the box, I provide a support consisting of a pair of end sections and a frame carried thereby and adapted to engage with the bottom of the cabinet. Each end section is formed from a blank of the shape shown in Figure 3 and of any suitable bendable material but preferably of double-faced corrugated fiber board, as shown in Figure 9.

Formed in the upper edge of the blank are a pair of notches 6 of a width equal to the thickness of one of the cross bars 7 of the frame and extending to a depth below the central part of the blank equal to the width of one of said bars. The central portion of the blank is preferably somewhat lower than the side parts so that the upwardly projecting parts of the latter serve as guides when the cross bars are inserted. The blank is bent along the dotted lines (Figure 3) so as to produce a pair of wings 8 adapted to bear against the long walls of the box, a pair of panels 9 adapted to bear against one of the short walls, and a tubular column 10. Cross bars 7 are seated in the notches 6 (as best shown in Figure 8) and are connected by one or more longitudinal bars 11 nailed or otherwise secured thereto to form therewith the frame of the support. The ends of the cross bars bear against the wings 8 which thus form reinforcement for the walls of the box to resist thrust of the frame in the direction of the length of the cross bars 7, and the panels 9 form reinforcement for the walls to resist thrust of the frame in the direction of the length of the bar 11. In order that the walls of the column may not be required to bear the entire weight of the cabinet supported thereby, especially when the weight of the latter is considerable, I place in each column a filler of such height as to contact with the lower edge of the cross bar and thus partially or wholly relieve the walls of the column of pressure.

In Figures 2 and 5, I have shown a filler formed from a sheet 12 of fiber board bent longitudinally along a central line to produce a part of such shape that while not completely filling the column it will remain perpendicular therein. When the device is to be used to contain a cabinet or other article of great weight, I prefer to use the form of filler shown in Figure 9. This filler is composed of a strip of solid fiber board 13 or other comparatively rigid material surrounded by a wrapper 14 formed by bending a sheet of double wall corrugated fiber board of the shape shown in Figure 11, as indicated by dotted lines in the figure. The filler so produced is of sufficient thickness to completely fill the column and is capable of sustaining great pressure and, due to its cellular nature, does not add unduly to the weight of the device.

While I have shown the end sections of the support as independent both may be formed from a single blank, one or both wings 8 extending entirely across the long walls of the box. However, I prefer the construction shown, both on account of economy of material and ease in positioning the support in the box.

After the cabinet has been placed in position on the support, which should be of such height (as shown in Figure 1) that the legs will not reach the adjacent end of the box, the cap is applied to the top of the cabinet. The cap is formed from a blank of the shape shown in Figure 7 and while it may be made of any bendable material, I prefer to use double wall corrugated fiber board, as shown in Figure 10. The blank is bent, as indicated by dotted lines in Figure 7, to form a rectangular panel or cover 15 of the size and shape of the top of the cabinet, four downwardly projecting flaps 16 and four return flaps 17. Holding the cap in position is a retaining band or loop 18 which, like the cap, is preferably made of double wall corrugated fiber board. This retaining band is forced into position between the flaps 16 and 17 after the cap has been applied to the cabinet. As the flaps 16 are not connected at the corners they are capable of movement relative to the cover 15 so that the cap is in effect expansible during application and hence can be applied without injury to the finish of the cabinet, while after application of the retaining band it is held snugly against the cabinet to avoid chafing which would be liable to occur if the cap were made large enough to slip easily over the cabinet in finished form. After the application of the cap the box is closed in the usual manner by securing the sealing flaps 3 over the cap. The combined thickness of the flaps 16 and 17 and the band 18, all of the cellular material, forms a padding which not only prevents lateral movement of the cabinet

in the box but also provides a cushion to deaden any blow received by the box.

Having fully described my invention, what I claim as new and desire to secure by Letters Patent of the United States is:

1. In a device of the class described, the combination with a container, of a support for the contained article, said support comprising a pair of sections situated adjacent to opposing walls of the container and each provided with a tubular column intermediate its ends, and a rigid frame including end bars extending across the inner ends of said columns, said frame being adapted to sustain the weight of the contained article.

2. In a device of the class described, the combination with a container, of a support for the contained article, said support comprising a pair of sections situated adjacent to opposing walls of the container and each provided with a tubular column intermediate its ends, a rigid frame including end bars extending across the inner ends of said columns, and fillers in said columns contributing to the support of said end bars, said frame being adapted to sustain the weight of the contained article.

3. In a device of the class described, the combination with a container, of a support for the contained article, said support comprising a pair of sections situated adjacent to opposing walls of the container and each provided with a tubular column intermediate its ends, a rigid frame including end bars extending across the inner ends of said columns, and fillers in said columns contributing to the support of said end bars, said fillers being formed of sheets of fiber board bent longitudinally to increase their lateral dimension, said frame being adapted to sustain the weight of the contained article.

4. In a device of the class described, the combination with a container, of a support for the contained article, said support comprising a pair of sections situated adjacent to opposing walls of the container and each provided with a tubular column intermediate its ends, a rigid frame including end bars extending across the inner ends of said columns, and fillers in said columns contributing to the support of said end bars, said fillers each comprising a core and a wrapper of corrugated fiber board, said frame being adapted to sustain the weight of the contained article.

5. In a device of the class described, the combination with a container, of a support for the contained article, said support comprising a pair of sections situated adjacent to opposing walls of the container and each provided with a tubular column, a filler for each of said columns, said fillers each being formed of a core of solid fiber board and a wrapper of double wall corrugated fiber board, and a rigid frame supported from said columns,

said frame being adapted to support the weight of the contained article.

5 6. In a device of the class described, the combination with a container, of a support for the contained article, said support comprising a pair of sections situated adjacent to opposing walls of the container and each formed of a sheet of fiber board bent to form between its ends an integral tubular column
10 having notched side walls, and a frame including end bars positioned in said notches, said frame being adapted to sustain the weight of the contained article.

15 7. In a device of the class described, the combination with a container, of a support for the contained article, said support comprising a pair of sections situated adjacent to opposing walls of the container and each formed of a sheet of fiber board bent to form between its ends an integral tubular column
20 having notched side walls, a filler in each of said columns, and a frame including end bars positioned in said notches and bearing on said filler, said frame being adapted to sustain the weight of the contained article.

25 8. In a device of the class described, the combination with a container, of a support for the contained article, said support comprising a pair of sections situated adjacent
30 to opposing walls of the container and each formed of a sheet of fiber board bent to form a pair of wings and an intermediate tubular column having notched side walls, and a frame including end bars positioned in said
35 notches and contacting with said wings, said frame being adapted to sustain the weight of the contained article.

40 9. In a device of the class described, the combination with a container, of a support for the contained article, said support comprising a pair of sections situated adjacent to opposing walls of the container and each formed of a sheet of fiber board bent to form
45 a pair of wings and an intermediate tubular column having notched side walls, a filler on each of said columns, and a frame including a pair of cross bars positioned in said notches with their lower edges contacting with said
50 fillers and the ends contacting with said wings, said frame being adapted to sustain the weight of the contained article.

In testimony whereof, I hereunto affix my signature this 16th day of March, 1931.

EARL S. GOMES.