March 10, 1931. B. W. MOEHLE 1,795,613

FILLER

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Fig. 1.

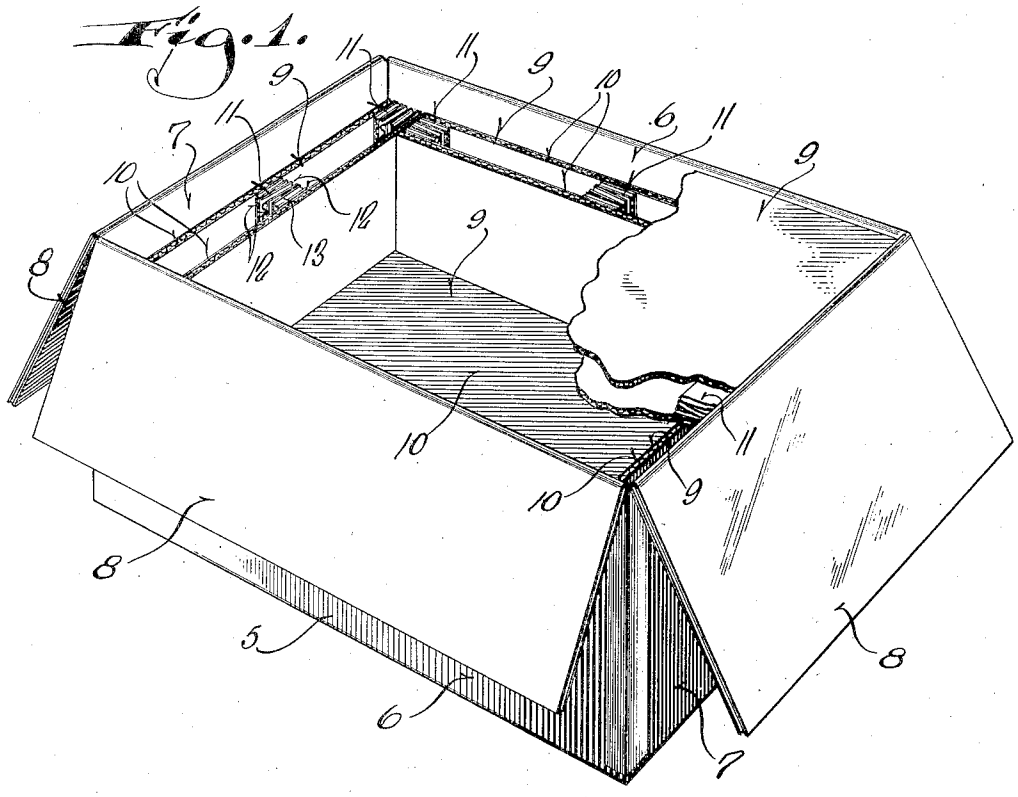


Fig. 2.

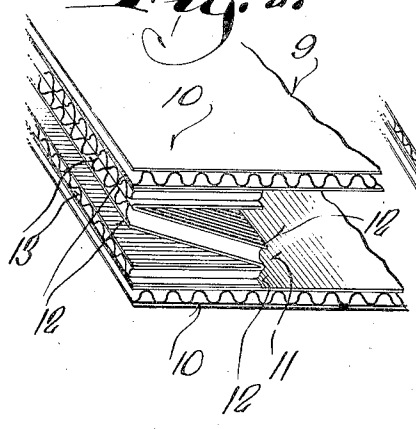
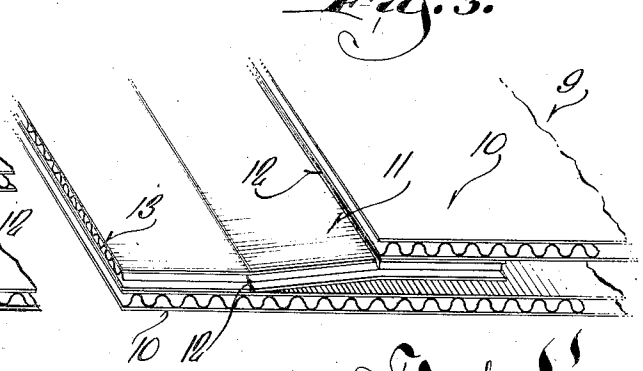


Fig. 3.



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FILLER

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Fig. 4.

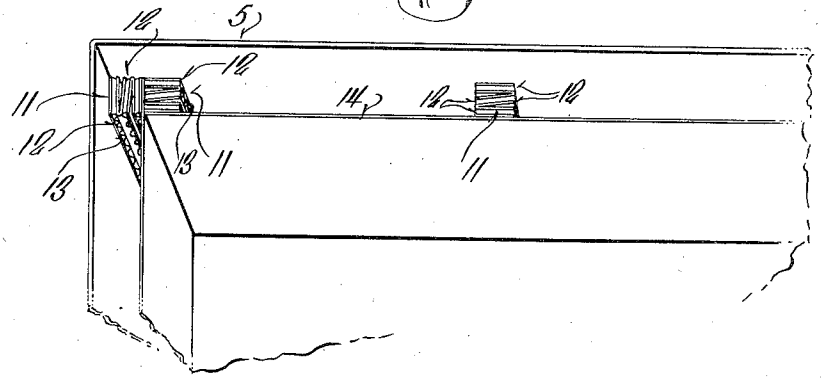


Fig. 5.

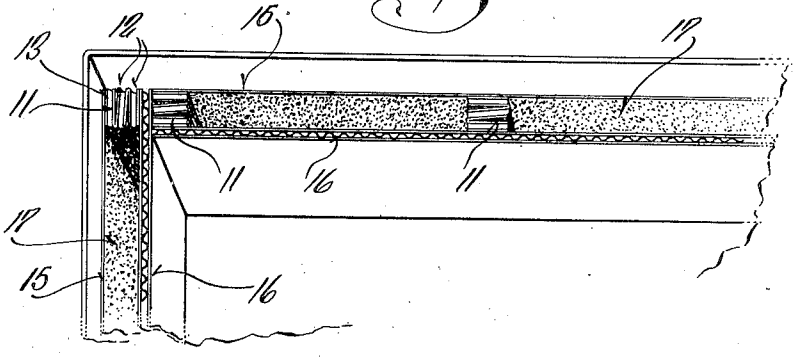


Fig. 6.

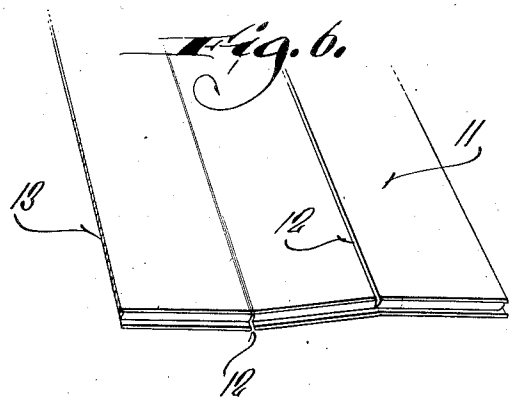
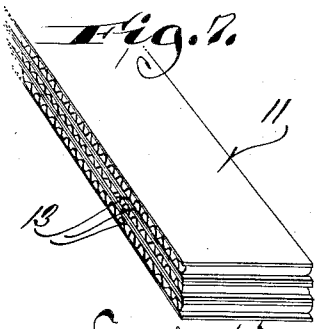


Fig. 7.



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UNITED STATES PATENT OFFICE

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FILLER

Application filed January 30, 1928. Serial No. 250,590.

This invention relates to certain new and useful improvements in fillers and refers more particularly to a filler and cushioning means employed in cartons or packing boxes for shipment of delicate instruments such as radio receivers and the like.

Heretofore fillers of this type have been formed of several layers or thicknesses of corrugated paper board or its equivalent, the board being placed one adjacent the other to the desired thickness to provide the necessary cushioning and this invention has as one of its objects to provide a filler of the character described which may be flattened to require a minimum space prior to its use and may have its thickness increased at the time of use.

Another object of this invention resides in the provision of a filler and cushioning means of the character described which is provided with walls spaced by foldable spacer members whereby the spacer member may be laid flat against the walls to facilitate handling and are capable of being readily set up for use in a packing box or the like.

Another object of this invention resides in the provision of a filler and cushioning means of the character described which consists of a pair of facings having foldable spacer members secured therebetween at spaced intervals whereby the filler members may be left in a substantially flat state from the time of their manufacture to the time of their use when the foldable spacer members may be folded upon themselves to increase the thickness thereof.

A further object of this invention resides in the provision of a filler member of the character described which provides the desired cushioning space between the article to be shipped and the container wall, with a minimum of material and consequently weight.

With the above and other objects in view which will appear as the description proceeds, my invention resides in the novel construction, combination and arrangement of parts substantially as hereinafter described and more particularly defined by the appended claims, it being understood that such changes in the precise embodiment of the hereindisclosed invention may be made as come within the scope of the claims.

In the accompanying drawings, I have illustrated several complete examples of the physical embodiment of my invention constructed according to the best modes I have so far devised for the practical application of the principles thereof, and in which:

Figure 1 is a perspective view of a container or carton with the cover members open, a portion of the top filler and cushion member broken away to illustrate structural details;

Figure 2 is a fragmentary perspective view of a corner portion of one of the filler and cushion members with its spacer member folded upon itself as in position of use;

Figure 3 is a fragmentary perspective view of the filler and cushion member corner illustrated in Figure 2 with the spacer member flattened as for shipment and handling;

Figure 4 is a perspective view of one corner of a container illustrating a slightly modified form of filler and cushion member in position for use;

Figure 5 is a view similar to Figure 4 illustrating another modified form of filler and cushion member;

Figure 6 is a fragmentary perspective view of a spacer member detached, and

Figure 7 is a fragmentary perspective view of a slightly modified form of spacer member.

Referring now more particularly to the accompanying drawings, in which like numerals designate like parts throughout the several views, 5 is a container or carton having side walls 6, end walls 7, bottom and top cover members 8. The container 5 may be of any conventional construction and the walls thereof are lined with the filler and cushion members 9 to provide the desired protection for the article, not shown, placed therein.

Each filler and cushion member 9 consists of a pair of facings 10 of corrugated paper board or other material between which spacer members 11 are secured at intervals. The spacer members 11 are likewise formed of corrugated board or other material and have

their opposite sides cut or scored, as at 12, to divide them into substantially equal longitudinal sections. The cuts or scores 12 extend transversely of the corrugations 13, as clearly shown in Figures 2 and 3, and the outermost sections have their opposite faces glued or otherwise secured to the inner sides of the facings 10. Each spacer member 11 of a filler and cushion member is secured to the facings in the same manner so that when the facings are moved laterally with respect to each other the spacer members assume a position illustrated in Figure 3 and the combined thickness of the filter and cushion members is approximately three-fifths of its normal operative thickness, when the spacer members are in three sections or parts. In this position the filler members require a minimum amount of space to facilitate their handling until the time of use, when lateral movement of the facings with respect to each other in the opposite direction folds the spacer members upon themselves to a position illustrated in Figure 2. In this manner a filler and cushion member of the desired thickness and affording a maximum of protection is provided with a minimum of material and, consequently, weight.

As illustrated in Figure 1, the filler and cushion members positioned adjacent the walls 7 of the container extend throughout the width thereof and the fillers extending across the walls 6 are of length corresponding to the distance between the filler members positioned along the walls 7. The bottom and top filler members are of a size to conform to the inside dimensions of the container as will be readily apparent.

In Figure 4, a slightly modified form of my invention is illustrated in which but one facing 14 is employed which may be any suitable material such as paste board or the like, the spacer members 11 being secured thereto as has been described in connection with my preferred embodiment. In this instance the outer sections of the spacer members abut directly against the walls of the container.

In Figure 5, a further modification is illustrated in which two facings are provided, one of which is preferably of thin paper stock or like material 15, and the other inner one 16 being of heavier stock such as corrugated board or the like. In this embodiment, the spaces between the facings and spacer members may be filled with a suitable filler 17, such as excelsior or the like.

If desired the spacer members 11 may be formed by cutting several strips of corrugated board, arranging them one on the other and gluing their adjacent faces to provide a solid spacer member as illustrated in Figure 7. In this case the spacer members may be shipped separately from their facings and assembled therewith by the user of the carton.

From the foregoing description taken in connection with the accompanying drawings, it will be readily apparent to those skilled in the art to which an invention of this character appertains that I have provided an improved filler and cushioning means for use in shipping of delicate instruments which may be collapsed prior to use to reduce the storage space required, which is capable of being readily placed in condition for use, and which affords a maximum of protection with a minimum of material and weight.

What I claim as my invention is:

1. A filler and cushion member of the character described, comprising a pair of facings, and spacers foldable in sections which when in use lay one upon the other each having a portion of one side secured to one facing and a portion of the other side to the other facing whereby the filler and cushion member may be collapsed to bring the facings close together by unfolding the spacer sections.

2. A filler and cushion member of the character described, comprising a pair of facings and spacers scored on their opposite sides to divide the same into sections, the outer sections of each spacer being secured one to each facing, whereby the spacer sections may be left flat and in the same plane to reduce the thickness and facilitate the shipment of the filler and cushion member and may be folded at the places scored to lay one upon the other to increase the thickness of the filler and cushion member prior to use.

3. A filler and cushion member of the character described comprising two similar facing sheets and spacers scored on their opposite sides to divide the same into sections, the outer sections of each spacer being secured one to each facing sheet whereby the spacer sections may be left flat and in the same plane to reduce the thickness and facilitate the shipment of the filler and cushion member and may be folded at the places scored to lie one upon the other to increase the thickness of the filler and cushion member prior to use.

4. An article of the character described, comprising a facing, and spacer members secured thereto at intervals, said spacer members being scored on opposite sides to divide the same into sections and being secured to the facing by having one side surface of one section fixed to the facing, whereby the spacer sections are adapted to be positioned flat against the facing and folded to lie one upon the other.

In testimony whereof I have hereunto affixed my signature.

BENJAMIN W. MOEHLE.