Feb. 12, 1935. B. F. KELLS 1,990,788

REENFORCED CONTAINER

Filed June 3, 1933

Fig. 1.

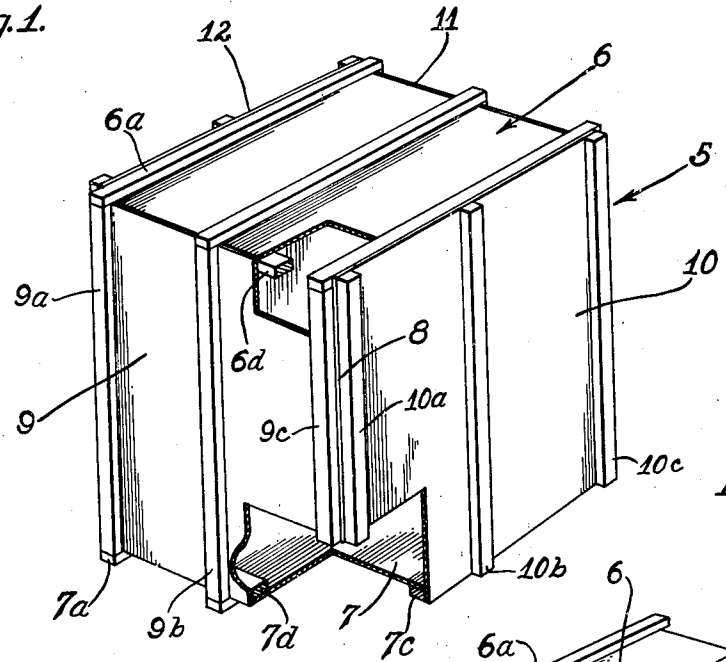


Fig. 2.

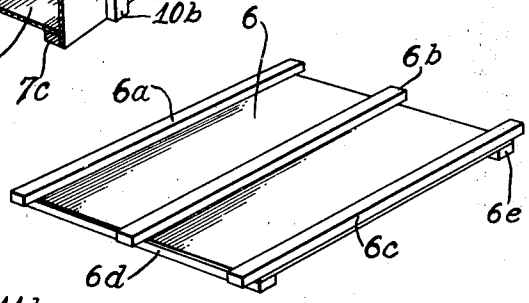
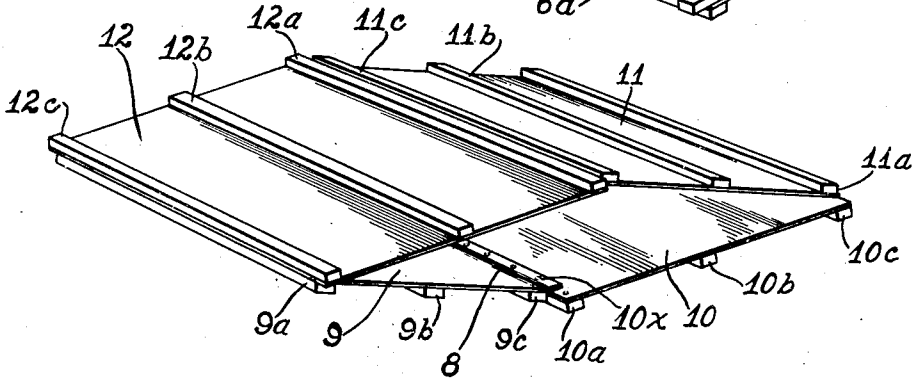


Fig. 3.



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REENFORCED CONTAINER

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1 Claim. (Cl. 217—12)

This invention relates to collapsible containers and more particularly to collapsible containers provided with reenforcing members whereby a strong, durable container is provided which may be shipped to the user or packed in flat condition and set up with a minimum of time and effort.

One object of the invention is to provide a collapsible container having reenforcing cleats secured thereto in such a manner that the container may be readily and easily assembled and closed for shipment by nailing or a similar operation.

Another object of the invention is to provide a container having a tubular collapsible body section formed of panel material such as fibre board provided with reenforcing cleats or frame members, and having top and bottom end closures provided with cooperating members capable of being secured to the reenforcing members on the body section as by nailing or by similar means.

A further object is to provide a generally improved collapsible, reenforced container of fibre board capable of accommodating relatively heavy, bulky objects such as washing machines, stoves and the like which have not been feasible heretofore to pack in fibre board containers.

To these and other ends the invention resides in certain improvements and combinations of parts, all as will be hereinafter more fully described, the novel features being pointed out in the claim at the end of the specification.

In the drawing:

Fig. 1 is a perspective view, partially broken away, of one embodiment of the invention;

Fig. 2 is a perspective view of a cover member for the container shown in Fig. 1; and

Fig. 3 is a perspective view of the tubular body section in partially collapsed condition.

Similar reference numerals throughout the several views indicate the same parts.

The present invention provides an inexpensive but sturdy container adapted to be substantially completed in the box factory and sent to the user in a flat condition whereby very little space is consumed in shipment and subsequent storage. The present container is admirably suited for the packaging of relatively weighty articles and materials, and it affords all of the advantages of the usual braced crate and, in addition, the present container is substantially dust proof.

Referring more particularly to the drawing, the container illustrated in Fig. 1 comprises a tubular body section 5 with upper and lower end closures 6 and 7. The body section 5 is preferably made from panel material such as fibre or paper board of suitable thickness, although any other type of sheet material having similar characteristics may be employed. The body member is preferably scored substantially parallel to its tubular axis, as indicated at 8, 8, so as to provide four side walls 9, 10, 11 and 12, these walls being dimensioned so as to provide a tubular body of rectangular form capable of being collapsed so that the walls lie with their inner faces in contact.

For the purpose of strengthening the tubular body member reenforcing members are secured to each side wall, two reenforcing members preferably being secured to lie along each side of each score line 8, 8.

While the tubular body member may be formed from a single blank of sheet material it is preferable, particularly for containers of a comparatively large size, to form the body member from at least two blanks, each forming two side walls of the body member and each provided with an attaching flap 10*x* (see Fig. 3) for securing the edges of the blanks to each other. The separate members of the body blank may be secured to each other at the same time the cleat is applied along the joint by nailing through the overlapped edges of the blank.

While any convenient number of reenforcing cleats may be used on the side walls of the body blank there are preferably secured three cleats on each wall as indicated in the drawing. One of the cleats is placed at a point intermediate the edges of the wall and the other two cleats are secured along said edges whereby, as previously stated, there will be provided a pair of cleats along each corner of the completed container. The cleats attached to the walls 9, 10, 11 and 12 are herein designated by the numerals 9*a*, 9*b*, 9*c*; 10*a*, 10*b*, 10c; etc.

The top and bottom closure members 6 and 7 are preferably formed substantially alike and therefore description of one closure will suffice. As shown in Fig. 2 the panel portion of closure 6 is preferably provided with securing members, in the present instance in the form of cleats 6*a*, 6*b* and 6*c*, extending in parallel relationship, and with cleats 6*a* and 6*c* extending along opposite edges of the closure. The ends of cleats 6*a*, 6*b* and 6*c* preferably extend beyond the panel part of the closure a distance approximately equal to the thickness of the material from which the cleats are formed to thus provide projecting members or means adapted to rest upon the edge of the side walls and at least partly overlap the ends of the cleats on such side walls so as to in-

sure the proper positioning of the closure with respect to the end of the body section. Inner securing members shown as cross cleats 6*d* and 6*e* are preferably secured on the opposite surface of the closure from the first mentioned cleats and are disposed along the extremities thereof as illustrated.

In order to insure the container being practically dust proof the closure members and the ends of the tubular body member are so constructed that the material of each side wall will overlap a cleat on the closure member. For this purpose the closure length is such as to permit it to fit against the interior of the ends of the walls of the body member and with the projecting ends of cleats 6*a*, 6*b* and 6*c* extending over and resting upon the respective ends of cleats 9*a*, 9*b* and 9*c*. The outer surface of the closure member will lie flush with the edges of end walls 9 and 11.

As illustrated, the side walls 10 and 12 are preferably extended beyond the end walls a distance substantially equal to the thickness of the cleats secured on the closures so that the end edges on walls 10 and 12 will lie substantially flush with the outer surface of cleats 6*c* and 6*a*.

The container when thus assembled will appear as illustrated in Fig. 1, and is then ready for nailing. It is only necessary to nail the ends of cleats 8*a*, 8*b*, 8*c* to the cleats 6*c* and 7*c*. In like manner cleats 12*a*, 12*b*, 12*c* will be nailed to cleats 6*a* and 7*a*. Cleats 9*a*, 9*b*, 9*c* and cleats 11*a*, 11*b*, 11*c* will be nailed respectively to inner cleats 6*d*, 7*d* and 6*e*, 7*e*.

From the foregoing, it is apparent that the present invention thus provides a container which is not only formed from a minimum amount of panel material and a minimum number of reenforcing cleats, but is also substantially dust-proof and of a very rigid construction. The inherent stiffness of the fibre board eliminates any necessity of cross bracing, as the assembly of cleats is thus prevented from any possibility of becoming distorted.

While the present description sets forth a preferred embodiment of the invention it will be apparent that certain changes may be made in the construction without departing from the spirit of the invention. For example, the walls 9 and 11, as shown, may be made wider than walls 10 and 12. It is desired therefore that the present invention be considered in all respects as illustrative, reference being had to the appended claim rather than to the foregoing description to indicate the scope of the invention.

I claim:

A shipping container comprising a four sided tubular body section of fibre or paper board, said body section being scored to provide hinge lines parallel to the tubular axis and being free of projections on the inner faces of the sides whereby the tubular body may be folded flat, reenforcing wood cleats on two opposite side walls of the body section, a closure of fibre or paper board adapted to be fitted into the end of the body when set up, reenforcing wood cleats secured on two opposite sides of the outer surface of said closure, the respective opposite side walls of the body member adjacent said last mentioned wood cleats on the closure being extended beyond the panel portion of the closure so as to overlap the cleats thereon, whereby the reenforcing cleats on the body may be secured to the cleats on the closure with the projecting ends of the side wall panels secured between the engaged cleats, and additional wood cleats at the remaining opposite sides of the closure, said cleats being secured on the inner face of the closure and within the limits of the tubular body section when assembled therewith, whereby the remaining opposite side walls of the body section may be secured respectively to said last mentioned cleats.

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