This invention relates to improvements in shipping and storage containers.

The principal objects of the invention are directed to the provision of a novel container which is especially adapted for shipping and storage purposes. While the novel features of my container make it suitable for many and various purposes, it is particularly suitable for the storage and shipping of sheet material, such as sheets of cellulose ester material or the like.

According to special features of the invention, the container is light in weight yet strong and durable in construction so as to be capable of withstanding severe shocks and strains during handling.

In the shipping of sheet material, such as sheets of cellulose ester material, which are of considerable area, the usual dimensions being about 22 inches wide by 52 inches long, it has been customary to pack stacks of the sheets in wooden boxes. These wooden boxes, in order that they might stand the usual strains of shipping, have been made of one inch board. The boxes were relatively thin as compared with their width and length because of the nature of the contents and have not been satisfactory for many reasons, among which are the facts that they are expensive to manufacture and require considerable nailing.

Furthermore, such wooden boxes despite, and perhaps because of, their bulkiness easily become broken and cracked during shipping. As is well known, wood readily dries out so that there are produced cracks and openings therein. Consequently dust has been known to get into the boxes and impair the material. Also, since the boxes made of wood must be made purposefully heavy in order to be sufficiently strong to withstand the strains, their first cost is excessive and the shipping expenses are objectionably high.

According to the features of this invention, there is provided a shipping container which is light in weight so that it may be readily handled and shipped at low cost and is possessed of great strength and rigidity. The container, because of its novel construction, may be readily assembled and packed.

Various other novel features and advantages of the invention will be more fully referred to in the accompanying description of the present preferred form thereof, reference being had to the accompanying drawing, wherein:

Fig. 1 is a perspective view of the parts of the container of the invention in separated relation;

Fig. 2 is a fragmentary perspective view of a corner of the outer element of the container;

Fig. 3 is a fragmentary enlarged elevational view showing the construction of the supporting member of the container;

Fig. 4 is a small-scale perspective view of the container of the invention with the parts in assembled relation; and

Fig. 5 is an enlarged fragmentary sectional elevational view through the end portion of the container.

Referring now to the drawing more in detail, the invention will be fully described.

The container of the invention in a general way consists essentially of an inner tray member 15, a reinforcing member 4 and an outer cover member 6. These members are arranged for telescopic engagement, one with the other, as will shortly appear.

The tray member 2 is preferably made of corrugated fibre board or the like and has a bottom wall portion 8, side wall portions 16, and end walls 12. The side and end wall portions 10 and 12 are arranged for bending into a set up position wherein they extend upwardly from the bottom wall 8, substantially as shown.

The reinforcing member 4 is composed of relatively rigid material such as wood or the like. This consists of side wall portions 14 and end wall portions 16, the ends of which are secured together in some suitable manner to form a substantially rigid frame.

According to the preferred form of the invention, as shown in Fig. 3, the portions 14 and 15 of the reinforcing member have their ends provided with interfitting alternate grooves 16 and ribs 20 which may be secured together in some manner, as by gluing.

The cover member 6 is preferably made from corrugated fibre board or the like, but it is desired to point out that it need not necessarily be of the same material as the tray 2. The cover has an outer wall 22, side walls 24 and end walls 26. There are endmost portions such as 28 on certain of the walls of the cover such as 26 the end walls 26 and these are arranged to lie adjacent the adjacent walls, such as 24, and secured thereto in some suitable manner. Preferably staples such as 30 are used to secure these portions since the side and end walls of the cover are thus firmly held in their set-up position shown.

The tray 2 is of such size that it may be readily slipped within the frame 4 with the side and end walls 10 and 12 of the tray fitting closely adjacent.
the side and end walls 14 and 16 of the frame. The cover 6 is of such size that its end and side walls may embrace the said frame.

5 The cover 6, reinforcing frame 4, and cover 6, are adapted to be arranged in telescopic relation. It will be noted that in their telescoped position, the walls of the frame are disposed between the wall members of the tray and cover.

10 In packing the container, the contents are placed within the tray. In the case of sheets of material, the sheets are, of course, arranged in stacked relation on the bottom wall 8 of the tray and their marginal edges may be wrapped, if desired.

15 The sheets 5 are disposed in the tray and the tray 2 is disposed within the reinforcing frame. Since, as stated, the tray is preferably made of corrugated fibre board or similar material, its side walls are adapted to function more or less as a cushion for the edges of the sheets. This, of course, protects the edges of the sheets as is desirable in the case of pliable sheets of pyroxylin.

20 When the cover is slipped over the reinforcing frame, with the sheets thus packed, the container is then banded in some suitable way such as by means of a plurality of metal straps, indicated by 32. These preferably extend lengthwise and crosswise of the container.

25 Then, a sealing member is secured to the outer side of wall 8 of the tray and to the outer sides of the walls 24 and 26 of the cover, and this may take the form of sealing tape 23. Thus, the tape overlies the exposed edges of the walls 14 and 16 of the reinforcing frame so that the container is completely sealed. It will be noted that in this way there are no cracks or crevices through which dust may enter the container to injure or deteriorate material therein. In the case of sheets of cellulose ester material and the like, this is an important consideration.

30 It will be noted that the container is simple in form so as to be economical to manufacture and is light in weight yet rugged in construction so as to insure at all times adequate protection for the material within the container.

35 The container of the invention is adapted for many and various uses and while various changes and modifications may be made thereof without departing from the spirit and scope of the invention, it is desired to be limited if at all by the appended claims rather than by the foregoing description. What is claimed is:

1. A shipping container of the class described comprising, an inner tray member having a rectangular substantially flat bottom wall and substantially vertical side and end walls of approximately equal height extending upwardly from the marginal edges of said bottom wall, a rectangular reinforcing frame consisting of joined-together side and end walls approximately the same height as said side and end walls of the tray member, said side and end walls of the frame being disposed closely adjacent the outside of the side and end walls respectively of the tray member, a rectangular cover member including a substantially flat upper wall and side and end walls extending downwardly from the marginal edges of said upper wall, said side and end walls of the cover member being disposed closely adjacent the outside of the side and end walls respectively of the frame, and binding means associated with said tray and cover members whereby said frame is held between the side and end walls of the tray member in abutment with the inside of the upper wall of the cover member.

2. A shipping container of the class described comprising, an inner tray member having a horizontally-disposed bottom wall and substantially vertical side and end walls extending upwardly from the marginal edges of said bottom wall, a reinforcing frame consisting of joined-together side and end walls surrounding the side and end walls respectively of the tray member, a cover member including an upper wall and side and end walls extending downwardly from the marginal edges of the upper wall outside of the side and end walls of the frame, binding means associated with said cover and tray members whereby the frame is held between the side and end walls of the members to form a telescopic assembly, and sealing means secured to said side and end walls of the cover member and to the outside of said bottom wall of the tray member.

3. A shipping container of the class described comprising, an inner tray member of relatively flexible fibrous material having a horizontally-disposed bottom wall of a certain length and width and substantially vertical side and end walls extending upwardly from the marginal edges of said bottom wall, a reinforcing frame of greater length and width than said tray member and formed of relatively rigid fibrous material, said frame consisting of joined-together side and end walls which are disposed closely adjacent the outsides of the side and end walls respectively of the tray member, a cover member of greater length and width than said frame including an upper wall and side and end walls extending downwardly from the marginal edges of the upper wall and disposed closely adjacent the outsides of the side and end walls of the frame whereby a telescopic assembly is provided, and binding means associated with said cover and tray members whereby the said frame is held between the side and end walls of the members.

4. A shipping container of the class described comprising, an inner tray member of relatively bendable material having a rectangular substantially flat bottom wall and side and end flaps bent upwardly from the marginal edges of said bottom wall, a rectangular reinforcing frame consisting of joined-together side and end walls which are disposed closely adjacent the outside of the side and end flaps respectively of the tray member, a rectangular cover member including a substantially flat upper wall and side and end walls extending downwardly from the marginal edges of said upper wall, said side and end walls of the cover member being disposed closely adjacent the outside of the side and end walls respectively of the frame, and binding means associated with said tray and cover members whereby said frame is held between the flaps of the tray member and the side and end walls of the cover member with the upper marginal edges of the frame in abutment with the inside of the upper wall of the cover member.

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