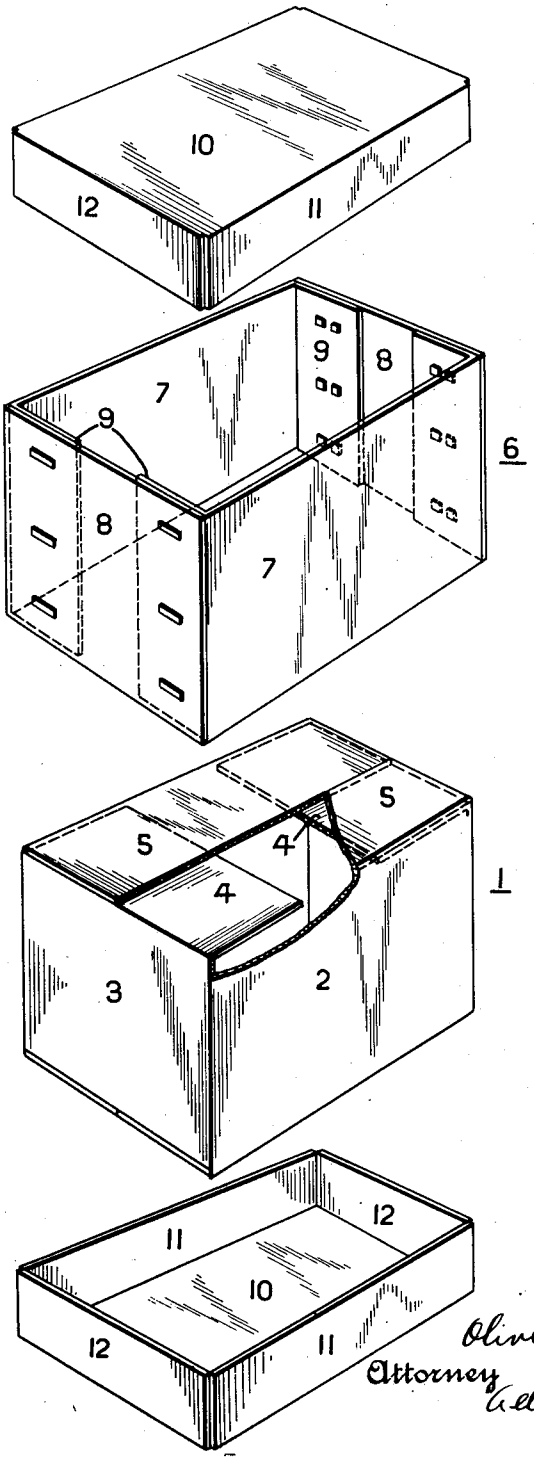
May 30, 1933. O. B. ANDREWS 1,911,339

PACKING BOX

Original Filed July 11, 1929 2 Sheets-Sheet 1

FIG. 1.



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FIG. 2.

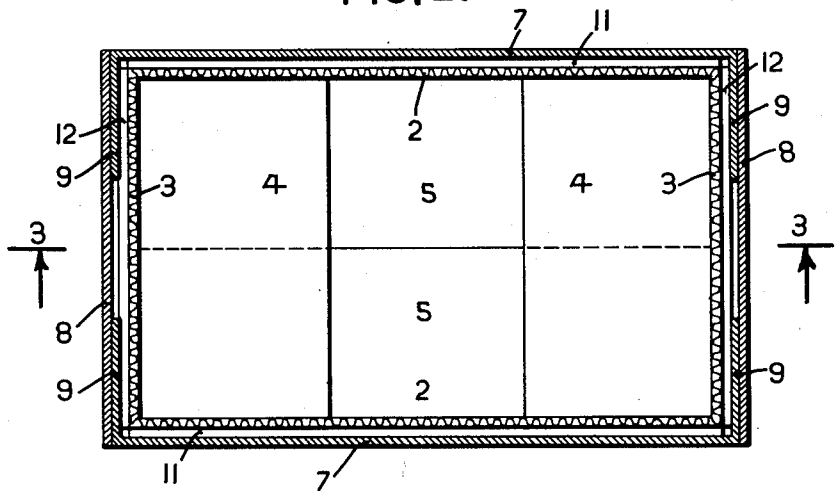
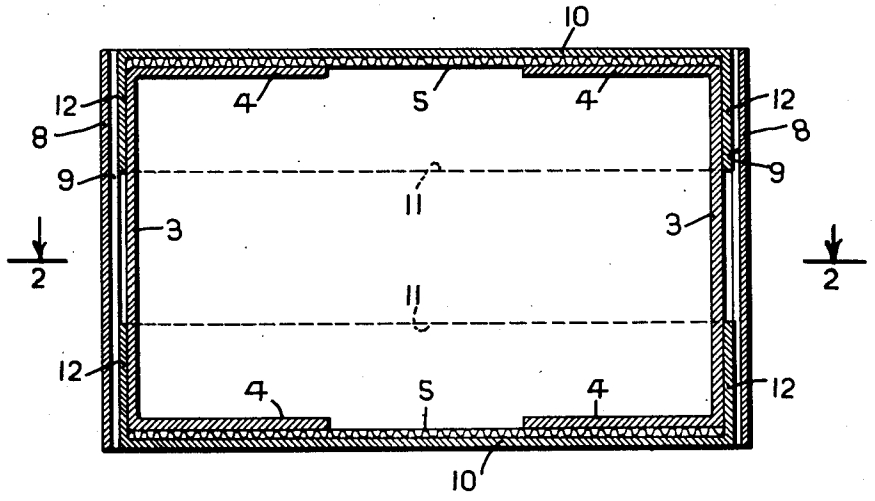


FIG. 3.



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Patented May 30, 1933

1,911,339

UNITED STATES PATENT OFFICE

OLIVER B. ANDREWS, OF CHATTANOOGA, TENNESSEE

PACKING BOX

Application filed July 11, 1929, Serial No. 377,368. Renewed April 14, 1933.

This invention relates to packing boxes, and more particularly to boxes formed from a plurality of blanks of fibre board and arranged to be assembled to form a strong, compact container.

The invention particularly provides a box which may be formed of any desired size and comprises an inner container having top and bottom closure flaps. An open ended outer container is adapted to receive the inner container and provide an outer surface for the completed box. Top and bottom trays having inwardly extending flaps are provided for closing the ends of the outer container, the flaps being so arranged that they may be inserted between the inner and outer containers and secured thereby in assembled relationship.

As a further feature the invention provides for coating the outer surface of the outer container with a waterproofing material to render the same impervious to moisture and at the same time provide a neat and smooth finish for the box. The finished surface strengthens the container by preventing moisture and other materials from damaging the same and renders the container suitable for packing articles which previously have required the use of wooden boxes. In fact, the container may be made of any desired size and has been found to be sufficiently strong for packing and shipping materials weighing from 200 to 600 lbs. In this respect it is an adaptation of the paper box which renders the same suitable for use in fields heretofore employing only wooden boxes.

The invention also consists in certain new and original features of construction and combinations of parts hereinafter set forth and claimed.

Although the novel features which are believed to be characteristic of this invention will be particularly pointed out in the claims appended hereto, the invention itself, as to its objects and advantages, the mode of its operation and the manner of its organization may be better understood by referring to the following description taken in connection with the accompanying drawings forming a part thereof, in which

Fig. 1 is a perspective view of the component parts of the box;

Fig. 2 is a horizontal section of the assembled box taken on the line 2—2 of Fig. 3; and

Fig. 3 is a longitudinal section of the assembled box taken on the line 3—3 of Fig. 2.

Like reference characters denote like parts in the several figures of the drawings.

In the following description and in the claims parts will be identified by specific names for convenience, but they are intended to be as generic in their application to similar parts as the art will permit.

Referring to the drawings more in detail and particularly to Fig. 1, the invention is shown as comprising a body member 1 having sides 2, ends 3, end flaps 4 and side flaps 5. Said body member is formed from a blank of fiber board in a well known manner and is folded into assembled position with the flaps 4 and 5 bent over to form a closure for the box. Container 1 is preferably formed of a heavy fiber board, such as corrugated board, which is particularly strong per unit of weight.

An outer container 6 having sides 7 and ends 8 is formed of a suitable size to permit the inner container 1 to be telescoped therein. Container 6 is preferably formed by riveting or otherwise securing ends 8 to flaps 9 which are formed on sides 7. This manner of construction provides a double thickness for the corners and effects a particularly strong assembly.

Top and bottom covers 10 are provided with inturned side flanges 11 and end flanges 12, which are bent inwardly to the position shown in Fig. 1 and are of such size as to permit insertion between inner container 1

and outer container 6 when the box is in assembled position. Covers 10 may be formed of a single blank which is suitably scored and cut to form flanges 11 and 12 and to permit said flanges to be bent into upstanding position.

Outer container 6 and covers 10 are formed of comparatively strong fiber board and are preferably coated on the outside and inside with a waterproofing composition which renders them impervious to moisture. As an example of a material which may be employed it has been found that 4 lbs. of Pontinac or Manila Gum dissolved in 1 gallon of C. D. alcohol or silicate of soda is suitable for this purpose. Silicate of soda has been found particularly suitable and provides a smooth, glossy finish to the outer surface of the box as well as forming a waterproofing compound.

In applying the waterproofing compound, the box board is compressed under heavy pressure and the compound, as for example, silicate of soda, is applied to the surfaces thereof after which the board is dried at a high temperature until the coating has become hard. This produces a board practically as rigid as wood and is particularly adapted for use in heavy containers.

In assembling the box the material to be slipped is placed in the inner container 1 and flaps 4 and 5 are folded to completely close the same. Container 1 is then placed within outer container 6 and cover members 10 are applied to close the top and bottom. The flanges 11 and 12 of cover members 10 extend between the outer and inner containers and are held in position thereby.

It is to be noted that the stitched corners of the outer container positioned around the inner corrugated container provide three thicknesses of material for reenforcing the corners. It is also to be noted that the outer container may be treated both outside and inside with the above mentioned waterproofing compound if desired, and that so treated forms a particularly strong and rugged box. The waterproofing of the box in addition to rendering the same more rugged from a mechanical standpoint, protects the material contained within the box from moisture and in addition retains moisture in the material when it is originally present. This latter feature is particularly important in the case of shipment of yarn in which a certain amount of moisture is required.

While certain novel features of the invention have been shown and described and are pointed out in the annexed claims, it will be understood that various omissions, substitutions and changes in the forms and details of the device illustrated and in its operation may be made by those skilled in the art without departing from the spirit of the invention.

What is claimed is:

1. A packing box of the class described composed of separate self-sustaining sections comprising an inner container section, an outer protective and reenforcing section, and reenforcing protective end cover members for said inner container section, said inner and outer sections having flap portions arranged to present triple thickness reinforced box edges.

2. A packing box of the class described composed of separate self-sustaining sections comprising an inner container section, an outer protective and reenforcing section, and reenforcing protective end cover members for said inner container section, said cover members each having flanges fitting over the walls of said inner section and being covered by said outer section, said inner and outer sections having flap portions arranged to present triple thickness of material along the vertical edges of the box.

3. A packing box of the class described composed of separate self-sustaining sections comprising an inner container section, an outer protective and reenforcing section, and reenforcing protective end cover members for said inner container section, said inner container section having top and bottom closure flaps, both of the inner and outer container sections having vertically extending side flaps, said flaps being so arranged as to present triple thickness of material along the vertical and horizontal edges of the box.

4. A packing box of the class described composed of separate self-sustaining sections comprising an inner container section, an outer protective and reenforcing section, and reenforcing protective end cover members for said inner container section, said cover members have flanges lying between the outer wall of the inner section and the inner wall of the outer section whereby the major portions of the surfaces of said walls are kept out of contact, said outer section and said cover members being composed of material treated so as to render the same absorbent to present a moisture retaining and insulated box useful for shipping perishable products.

5. A packing box including an inner container having top and bottom closure flaps, a self-sustaining outer container section surrounding and reinforcing said inner container, and cover members having flanges extending between said inner and outer container sections, said closure flaps and cover members together presenting reinforced triple thickness top and bottom box edges.

6. A shipping box including an inner container having top and bottom closure flaps, a self-sustaining outer container section surrounding and reinforcing said inner container, and covers for said outer container having flanges extending between said inner

and outer containers, the side walls of said inner and outer containers being spaced apart to provide insulating space therebetween, said outer container and said cover members being coated with a waterproofing compound to present a moisture retaining insulated box useful for shipping perishable products.

In testimony whereof I have hereunto set my hand.

OLIVER B. ANDREWS.