D. FRASER.

BOX.

APPLICATION FILED AUG. 6, 1908.

905,806. Patented Dec. 1, 1908.

Fig. 1.

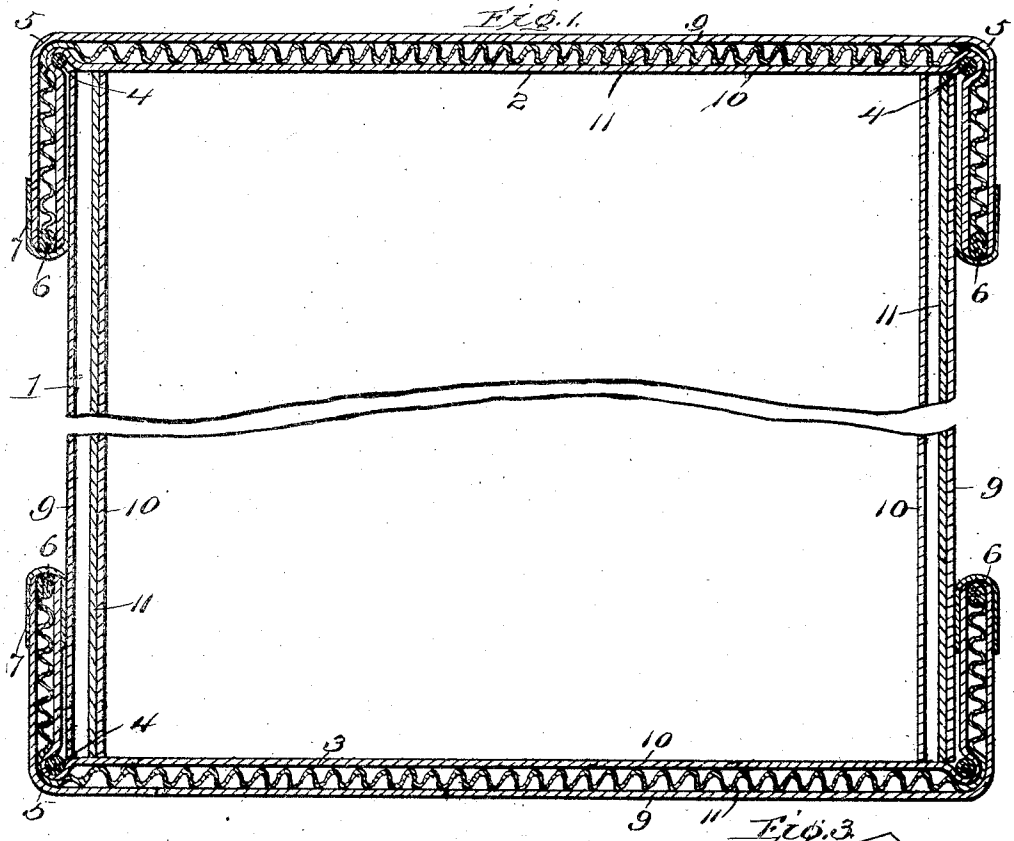


Fig. 2.

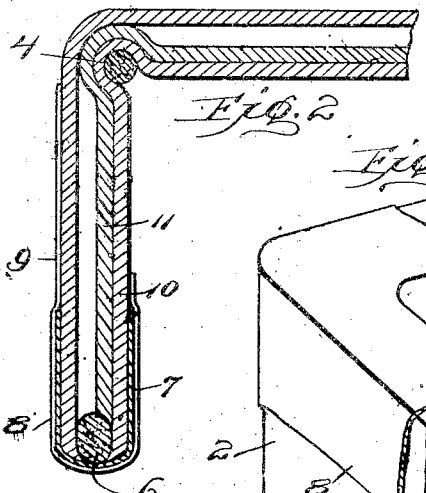


Fig. 3.

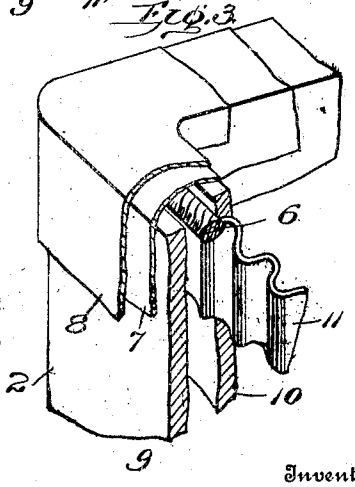
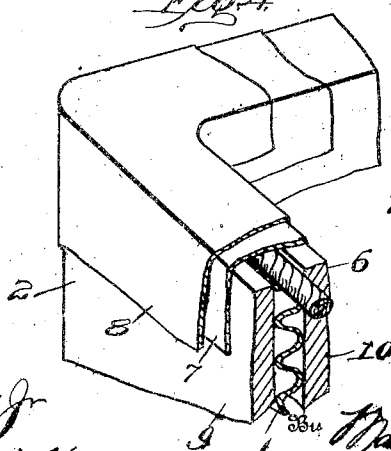


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

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BOX.

No. 905,806. Specification of Letters Patent. Patented Dec. 1, 1908.

Application filed August 6, 1908. Serial No. 447,314.

To all whom it may concern:

Be it known that I, DUNCAN FRASER, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Boxes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to packing boxes such as are used for shipping glassware, bottled goods, and merchandise of various kinds.

The object of the invention is to provide in a packing box made of strawboard of the ribbed, fluted or corrugated variety, means for preventing the cords used for tying the box from cutting the edges of the bottom and cover, and means for strengthening these portions by the employment of a cord embedded, or glued or cemented in the walls of the box forming a solid ridge.

In the accompanying drawings, Figure 1 is a vertical, transverse section of a box constructed in accordance with my invention, a portion of the central part being broken away. Fig. 2 is a view in section of a portion of the cover, showing the cords embedded therein. Fig. 3 is a perspective view showing the construction of the corners of the cover. Fig. 4 is a detail view in section of a portion of the cover, taken on one of the sides at right angles to that shown in Fig. 2, and illustrating, therefore, the corrugations running in a different direction.

Referring to the drawings in detail, 1 indicates the side walls of the box, 2 the cover and 3 the bottom thereof. The bottom may be secured to the side walls, or, if for any reason it is so desired, it may be made detachable and manufactured in exactly the same manner as the cover. The side walls are preferably made of a corrugated or fluted strawboard and the cover and bottom of the same material. The strawboard is faced on its outer side with a surface piece 9 if suitable material, and the inner side is provided with a lining 10, which constitutes the inner wall. The complete wall of the box includes, therefore, members 9, 10 and 11, the latter representing the filling material, which is secured at all points of contact by glue or other means to the walls 9 and 10. The body portion of the box may be made in one piece, folded into the form of a rectangle or other figure. The cover and bottom are each formed of one piece of material of the character mentioned. The corrugations in two sides of the cover will therefore run parallel with the corrugations in the upper portion of the cover, while the corrugations of the other two sides, if the box be formed of rectangular cross-section, will constitute in effect continuations of the corrugations in the flat portion of the cover, but disposed at right angles thereto.

A cord 4 of hemp or other material is embedded in the angle 5 of the cover and extends all the way around the same. This cord is pressed into the filling material at the angle and occupies the position relative to the walls of the cover shown clearly in Fig. 2. This cord will come in contact with the upper edges of the walls of the box when the cover is in position and will serve to strengthen that portion of the cover and prevent its being cut by a cord, strap or other device used for tying or carrying the box. The edge of the cover is also provided with an embedded cord 6 which cord may lie within the space formed by the upper corrugation. It will be clear that this remark applies only to the sides of the cover in which the corrugations run parallel with the flat, main portions of the cover. In the opposite sides, where the corrugations run in the other direction, the cord will lie in a groove or channel formed by the continuation of the side walls of the cover slightly beyond the inner filling. The cord located in this position serves to strengthen the edge of the cover and prevent the corners from tearing apart. A binding strip 7 is secured over the edge of the cover and is attached to both the outside and inside walls as clearly shown in Figs. 2 and 3. The corners are further protected by a binding piece 8 which is secured to the strip 7 and to the inner and outer walls.

A box formed in the manner described is adapted to resist any ordinary strain and it will be observed that the embedded cord serves a special purpose in connection with the fluted or corrugated strawboard, inasmuch as such material is particularly weak along the line of an angle formed by bending a portion of the material in such direction that the corrugations of both sections run in the same direction.

What I claim is:

1. In a box, the combination of two walls projecting at an angle to each other, and a cord partially embedded in the material forming said walls along the line formed by the junction thereof.

2. In a box, the combination of two walls at an angle with each other, said walls being formed of a plurality of thicknesses of material, of a cord partially embedded within the material forming some of the layers of said walls.

3. In a box, the combination of two walls projecting at an angle to each other, said walls consisting of plain sides and a compressible filling material, and a cord partially embedded in the filling material along the line formed by the junction of said walls.

4. In a box, the combination of two walls projecting at an angle to each other, said walls consisting of substantially plain sides and an independent compressible filling material having a fluted conformation, and a cord partially embedded in the material forming one of said plain sides and in said filling material.

5. In a box, the combination of two walls at an angle to each other and formed with a filling of compressible material, a cord partially embedded within the material constituting the walls and running along the line formed by the junction of said walls, and a second cord embedded in the material constituting one of said walls at the free edge thereof.

6. In a box, the combination of two walls projecting at an angle to each other, said walls consisting of substantially plain sides, and a filling material of fluted or corrugated conformation secured to said sides, the corrugations of one of said walls projecting in a plane at an angle to the corrugations of the other of said walls, and a cord partially embedded in the material forming said walls.

7. In a box, the combination of two walls projecting at an angle to each other, said walls consisting of substantially plain sides and a filling material of fluted or corrugated conformation secured to said sides, the corrugations of one of said walls projecting in a plane at an angle to the corrugations of the other of said walls, a cord partially embedded in the material forming said walls, and a second cord embedded in the material forming one of said walls and located at the free edge thereof.

8. In a box, the combination of two walls projecting at an angle to each other, said walls consisting of substantially plain sides and a filling of corrugated material, said filling material terminating a short distance from the edges of the sides, a cord located in the recess formed thereby, and extending at an angle to the corrugations, and a cord partially embedded in the material forming the sides and along the line forming the juncture of the walls of the box.

9. In a box, the combination of a wall consisting of substantially plain sides and a filling of fluted or corrugated material secured to said sides, a second wall formed integral with said first-mentioned wall and provided with corrugations extending in a parallel plane with those of the first wall, a third wall formed integral with the wall first-mentioned and provided with a filling material, the corrugations of which extend in a plane at an angle to those of the first wall, a cord embedded in the material along the line formed by the juncture of the first wall with the second and third walls, and a second cord embedded in the material at the outer edges of the second and third walls.

In testimony whereof I affix my signature in presence of two witnesses.

DUNCAN FRASER.

Witnesses:
MARTIN H. DAY,
GEORGE J. RIEGLER.