(No Model.)

F. A. JONES.

PROCESS OF MANUFACTURING BOXES.

No. 386,074. Patented July 10, 1888.

Fig. 1.

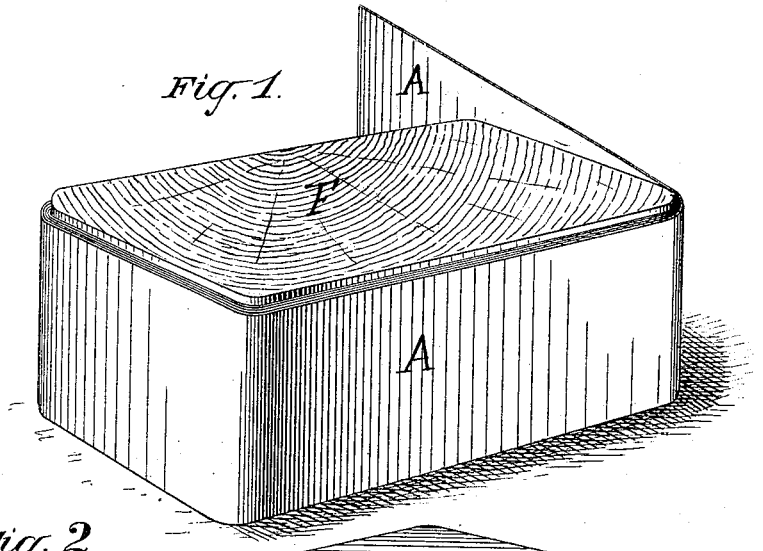


Fig. 2.

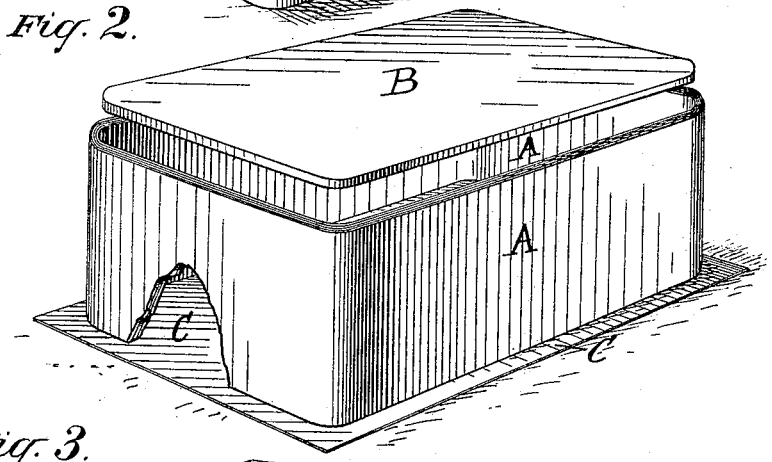


Fig. 3.

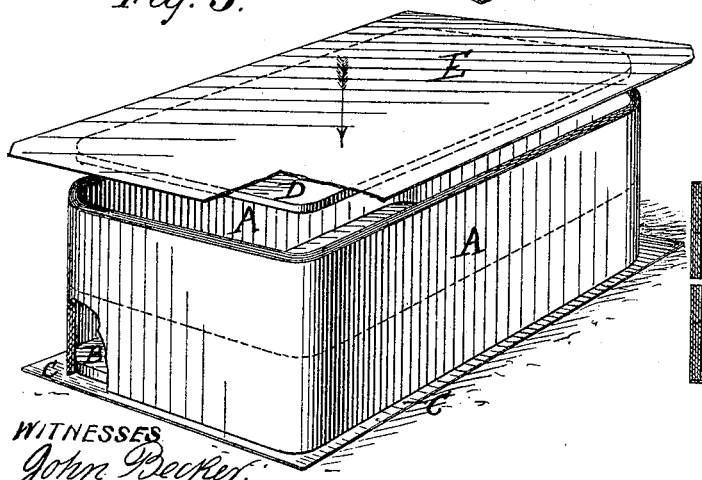
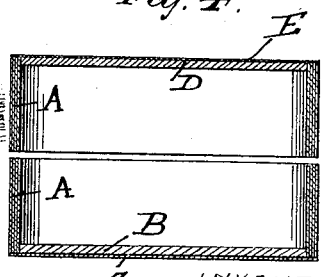


Fig. 4.



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UNITED STATES PATENT OFFICE.

FRANK A. JONES, OF NEW YORK, N. Y.

PROCESS OF MANUFACTURING BOXES.

SPECIFICATION forming part of Letters Patent No. 386,074, dated July 10, 1888.

Application filed January 6, 1888. Serial No. 259,982. (No model.)

To all whom it may concern:

Be it known that I, FRANK A. JONES, a citizen of the United States, and a resident of the city of New York, in the county of New York and State of New York, have invented certain new and useful Improvements in the Process of Manufacturing Boxes, of which the following is a specification.

My invention is an improvement in the art of manufacturing boxes of paper and other similar material—as card-board—and relates more particularly to small fancy boxes, but may be applied to the manufacture of boxes of any size and adapted to any use.

In the drawings illustrating my invention, in which like letters indicate like parts, Figure 1 shows the method of forming the sides of the box around the mold or form. Fig. 2 shows the method of forming one of the ends of the box. Fig. 3 shows the method of forming the other end of the box. Fig. 4 is a sectional view of the completed box divided into the top and bottom or upper and lower sections.

In my improved method of manufacture the entire box—the sides, and top, and bottom—is constructed of stiff paper, or card or straw board, or similar material, which may be of any thickness desired to give the requisite strength and firmness to the box.

The sides of the whole box, or of the upper and lower sections, or lid and body of the box, are formed in one piece and divided after the box is completed or the top and bottom put on, as shown at A in the drawings. These sides are formed first, and are constructed around a frame or form, F, Fig. 1, by which the desired shape or configuration is given to the box. To enable the sides A to more readily take the shape of the form or mold F, they are constructed of several layers of thin card or straw board firmly glued together. These layers, having been first moistened, so as to be more pliable, are covered with glue on one side and then wound on or around the mold or form F until the desired thickness is attained, the several layers being firmly glued to each other as they are wrapped over the mold. These several layers may be formed of separate strips or lengths cut long enough to lap around the mold, or may consist of one long strip wound around the mold several times, as shown in Fig. 1, the several layers being firmly glued together as they are wound over each other. By this latter method there are no joints in the layers, and the sides of the box are smoother and stronger than when made of separate lengths.

The layers or sides A are allowed to remain on the form or mold F until perfectly dry, when, on being removed from the form, they will retain the shape of the latter, and after being sandpapered or smoothed are ready for the end pieces or the top and bottom.

One of the ends, either the top or bottom, is attached to the sides in the following manner: A thin piece of paper or board, C, is covered on one side with glue and placed with the glued side uppermost on a suitable support or table. The edge of the sides A is then placed on the glued side of the paper C, as shown in Fig. 2, and held until the paper C is secured to the edge of the sides A. A piece of board, B, of a suitable thickness to form the top or bottom of the box, as the case may be, is made of a size and shape to exactly fit within the sides A. This board or end piece B is placed within the sides at the open end, as shown in Fig. 2, and pushed down upon the glued paper C, as will be seen from Fig. 3, in which a portion of the side is broken away to show the end piece B in place. This end piece is held on the paper C until firmly attached to the latter by the glue, and as the paper C is secured to the edge of the sides the board B will be securely fastened within the sides A, so as to form the top or bottom of the box. The paper C should be stiff enough to hold the end piece B rigid and not permit it to bend in or out from the sides. After the end B is in place within the sides at one end of the box a similar end piece D is fitted within the sides at the other end, as follows: A piece of paper, E, similar to the paper C, is covered with glue on one side, and an end piece or board D, of suitable thickness and made the same size and shape as the end B, is placed on the paper E and attached to it by the glue. The paper E, with the end piece D on its under side, is then placed on the edge of the sides, at the open end of the box, as shown in Fig. 3, so that the end piece D fits within the sides and the paper E rests on the edge. The paper E is thus secured to the

edge of the sides A and the end piece D fastened within the sides, in the same manner as the end piece B at the other end of the box. The box is now complete, having the sides A and the ends or top and bottom, B and D. After the parts are sufficiently dry the edge of the paper C and E which projects beyond the sides of the box is removed and the box is divided, as shown in Fig. 4, into the top and bottom or cover and body of the box. As will be evident, this division may be made at any point on the sides, depending on whether the upper or lower section of the box is to be the deeper, according to the use for which the box is adapted. These two sections are connected together in any suitable manner, and the box thus made may be covered with any material desired. The end pieces or top and bottom, B and D, being within the sides A, serve to strengthen the box and keep the sides extended and in place. In some cases, as where the division between the upper and lower section is very near the top and the cover has but little depth, it is not necessary to form the top or upper end in the manner described; but in such cases the top or end piece D may be glued directly on the edge of the sides A and the piece E dispensed with.

Various shapes may be given to the sides of the box by varying the form and shape of the mold or form F, the nature of the material forming the layers permitting the sides to readily take and retain the shape of the mold over which they are formed.

In place of paper or thin card-board the pieces C and E may be of any suitable material found desirable, and the top or bottom piece, B and D, may be covered with satin or fancy paper or other material, thus giving a finish to the inside of the box.

What I claim is—

The process of uniting the body and end of a box—namely, forming the body, placing it onto a glued portion of a sheet of suitable material supplied with glue on its upper side, inserting the end through the body, and pressing it against the glued sheet, as and for the purpose stated.

Signed at New York, in the county of New York and State of New York, this 19th day of December, A. D. 1887.

FRANK A. JONES.

Witnesses:
THOS. W. FRAMPTON,
WM. P. CAINS.