(No Model.)

N. BRAGDON.

BOX.

No. 269,170. Patented Dec. 19, 1882.

Fig. 1.

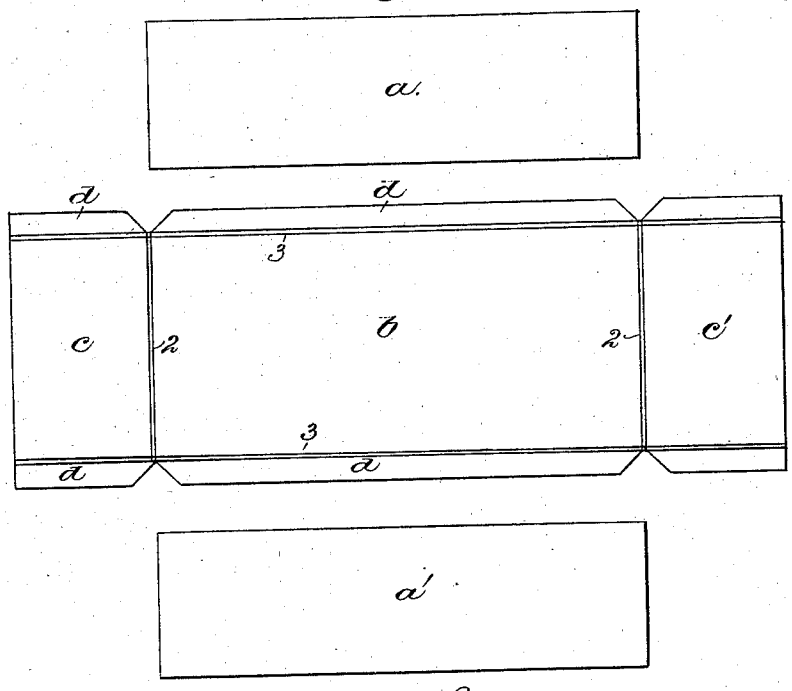


Fig. 2.

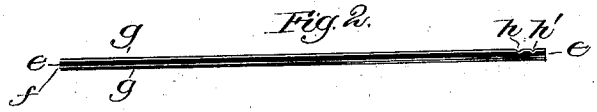
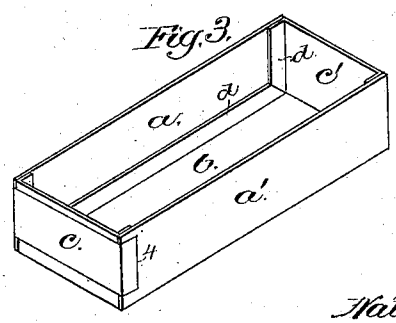


Fig. 3.



Witnesses
Thad. F. C. Pennington
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Inventor:
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by Crosby & Gregory Attys.

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UNITED STATES PATENT OFFICE.

NATHANIEL BRAGDON, OF DANVERS, MASSACHUSETTS.

BOX.

SPECIFICATION forming part of Letters Patent No. 269,170, dated December 19, 1882.

Application filed September 18, 1882. (No model.)

To all whom it may concern:

Be it known that I, NATHANIEL BRAGDON, of Danvers, county of Essex, State of Massachusetts, have invented an Improvement in Boxes, of which the following description, in connection with the accompanying drawings, is a specification.

My invention relates to the manufacture of boxes of paper or card board, and has for its object to produce a more satisfactory box at less cost of manufacture than has heretofore been done. Boxes have heretofore been made from pieces of straw-board cut to the proper shape and fastened together by suitable cement or paste to form the body of the box, which is subsequently covered with paper to give it a suitable finish, the straw-board affording the stiffness or body of the box, while the covering or lining gives it a better appearance to the eye. When boxes are made in this way the operation of pasting the paper upon the box, that is made of straw-board set up in its ultimate shape or form, moistens the said straw-board, and it is almost impossible to prevent bending or distorting the sides and ends of the box in the process of pasting on the finishing coat of paper, so that the finished box, when dried, is of irregular shape and unsightly appearance.

I have discovered that a box can be made by first coating the flat sheets of straw-board with the paper that is to give its finished surface, and subsequently cutting the said surfaced board into the proper shape for the blanks, creasing, bending, and fastening the said blanks together to form the completed box, the material of which is thus never dampened after it is cut from the flat sheets. In order to enable the blanks to be properly bent, the straw-board has usually been cut partly through along the line that is to be bent, and the coating of paper, that has been put on after the blank of straw-board is set up, covers the raw edges that are produced by thus scoring or partially cutting through the straw-board. In order to obviate thus cutting the straw-board after it has been provided with the finishing papered surface in flat sheets, in accordance with this invention, I enable the box to be bent by means of pressing its surfaces in a double line on the inside or side toward which the fold is to be made, thus causing the fiber on the said side to buckle or crush together, while the fiber on the other side stretches sufficiently to produce the desired bend in the blank without severing the fibers. As the fiber of straw-board is very short and brittle, it will not always stretch sufficiently to make a good joint when creased and bent, as just described. To obviate this the outside of that portion of the box-blank which is to be bent is covered with a strengthening-layer of Manila or equivalent paper which has a long, tough fiber, the said Manila paper being itself covered with a finishing or surfacing layer of white or other paper of finer quality, to give the desired finish to the complete box.

Figure 1 is a diagram of the blanks for making a paper box in accordance with this invention; Fig. 2, a section of the material employed in the said blanks, and Fig. 3 a perspective view of the said blanks set up to form a complete box.

The blanks *a a' b* may be of any usual shape, they being cut from material composed, as shown in Fig. 2, of ordinary straw-board or stiff pasteboard, *e*, and provided on one side with a continuous strengthening-covering, *f*, of Manila paper or other paper having a long tough fiber, and the said board thus covered with Manila paper having surfaces *g* on each side, of white paper or other material, which it is desired to have appear as the surface of the finished box. The said blank *b* is shown as of proper shape to form the bottom of the box, it being creased, as shown at 2, to enable the end portions, *c c'*, to be bent at right angles to the bottom portion. The said bottom portion and end portions are each provided with short wings or flaps *d*, which are enabled, by means of creases 3, to be turned at right angles to the said bottom and end portions to enable the side portions, *a a'*, to be attached to the said bottom and end portions, as shown in Fig. 3, the different blanks *a*, *a'*, and *b* being united by paste or cementing material in the usual manner. As the blank *b* is bent at 2 and 3 after it is covered with the finishing or surface paper *g*, see Fig. 2, the said creases 2 and 3 are made, as shown in Fig. 2, by pressing the side of the said blank toward which the fold is to be made in two parallel creases, *h h'*, the portion between the said creases compressing when the bend is made,

and the fiber of the Manila paper *f* on the opposite side stretching, so that no break is apparent in the fiber of the blank after being bent. The side pieces, *a a'*, do not have to be creased, and consequently the layer of manila need not be employed in the stock from which these are cut.

The finished boxes will differ from those made in the usual manner only in presenting raw edges at the top of the box and at the ends of the side pieces, *a a'*, and the box will usually be provided at the end with a label, which will be slightly wider than the end of the box, thus overlapping the side, as shown at 4, and covering the raw edges which would otherwise appear at the end of a box. For most purposes for which the boxes are to be employed the raw edge at the top will not be an objectionable feature, and the other advantages—namely, of having flat true sides and separate ends—will more than compensate for the said raw edges.

It is obvious that the side pieces, *a a'*, might be made continuous with the bottom and the end pieces attached thereto, or that other shapes might be employed for the blanks without departing from this invention.

The box will be provided with a cover made in substantially the same manner.

By the term "Manila paper" I intend to include as its equivalent any paper having a long tough interlocked fiber, so that the paper will stretch a considerable amount without breaking, Manila paper possessing this quality to a high degree and answering the purpose excellently in practice.

I do not in the present application claim the herein-described method or process of making paper boxes, as I intend to make it the subject of another application for Letters Patent.

I claim—

1. A box-blank composed of a basis of straw-board or pasteboard, provided with a layer of Manila paper on one side and with finishing or surfacing paper upon its other side and upon the said Manila paper, substantially as described.

2. A box-blank composed of straw-board having a covering of Manila paper on one side and creased by compression in two parallel lines on its other side, substantially as described.

3. The combination, with a body-sheet of straw-board, pasteboard, or equivalent board having a short brittle fiber, of a strengthening layer of Manila or equivalent tough-fibered paper on one side thereof and layers of finishing surface-paper on each side of the said board, substantially as and for the purpose described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

NATHANIEL BRAGDON.

Witnesses:
JOS. P. LIVERMORE,
F. A. POWELL.