(No Model.)

J. T. ROBINSON.

PAPER BOX AND METHOD OF MAKING SAME.

No. 501,664. Patented July 18, 1893.

Fig: 1.

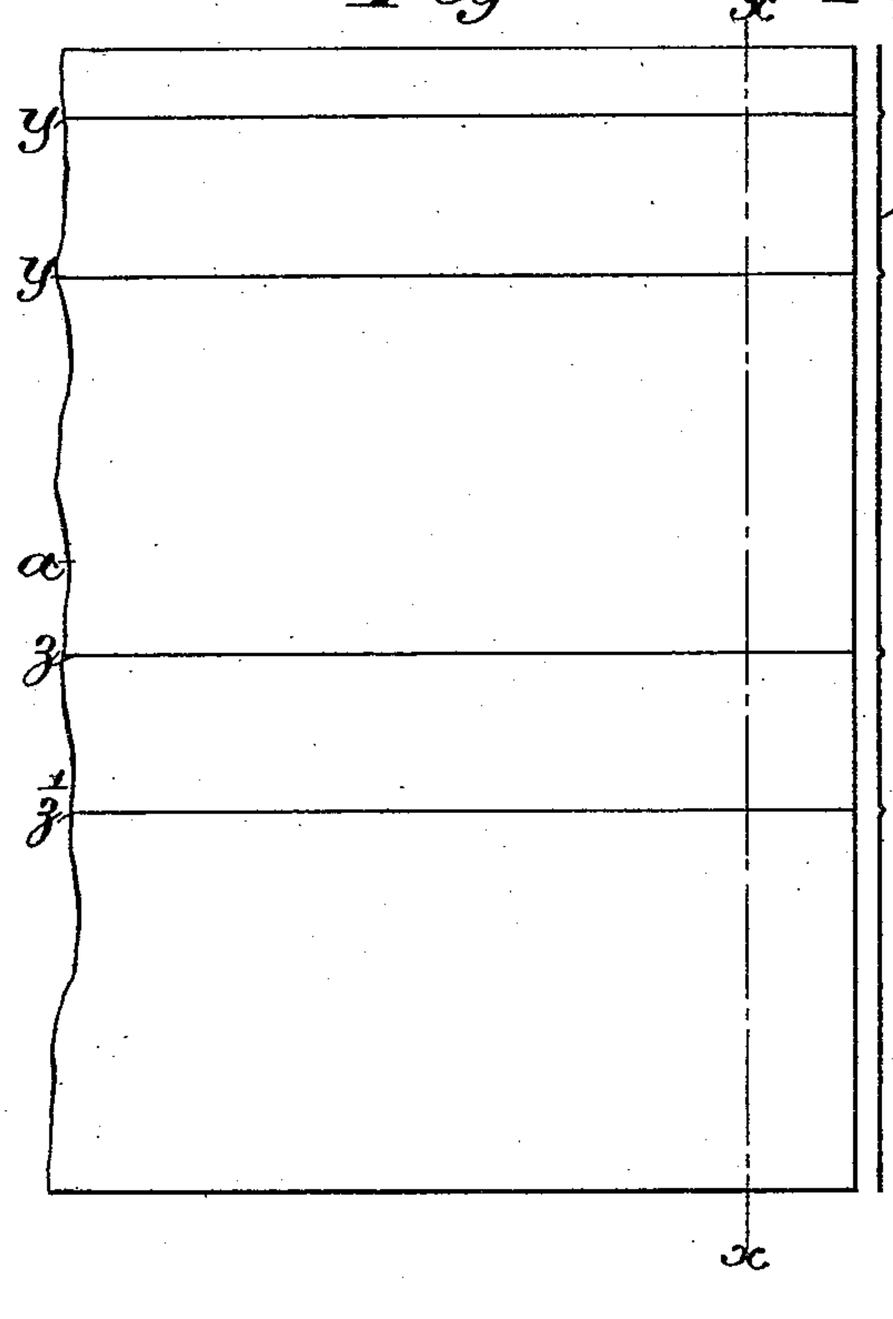


Fig: 2.

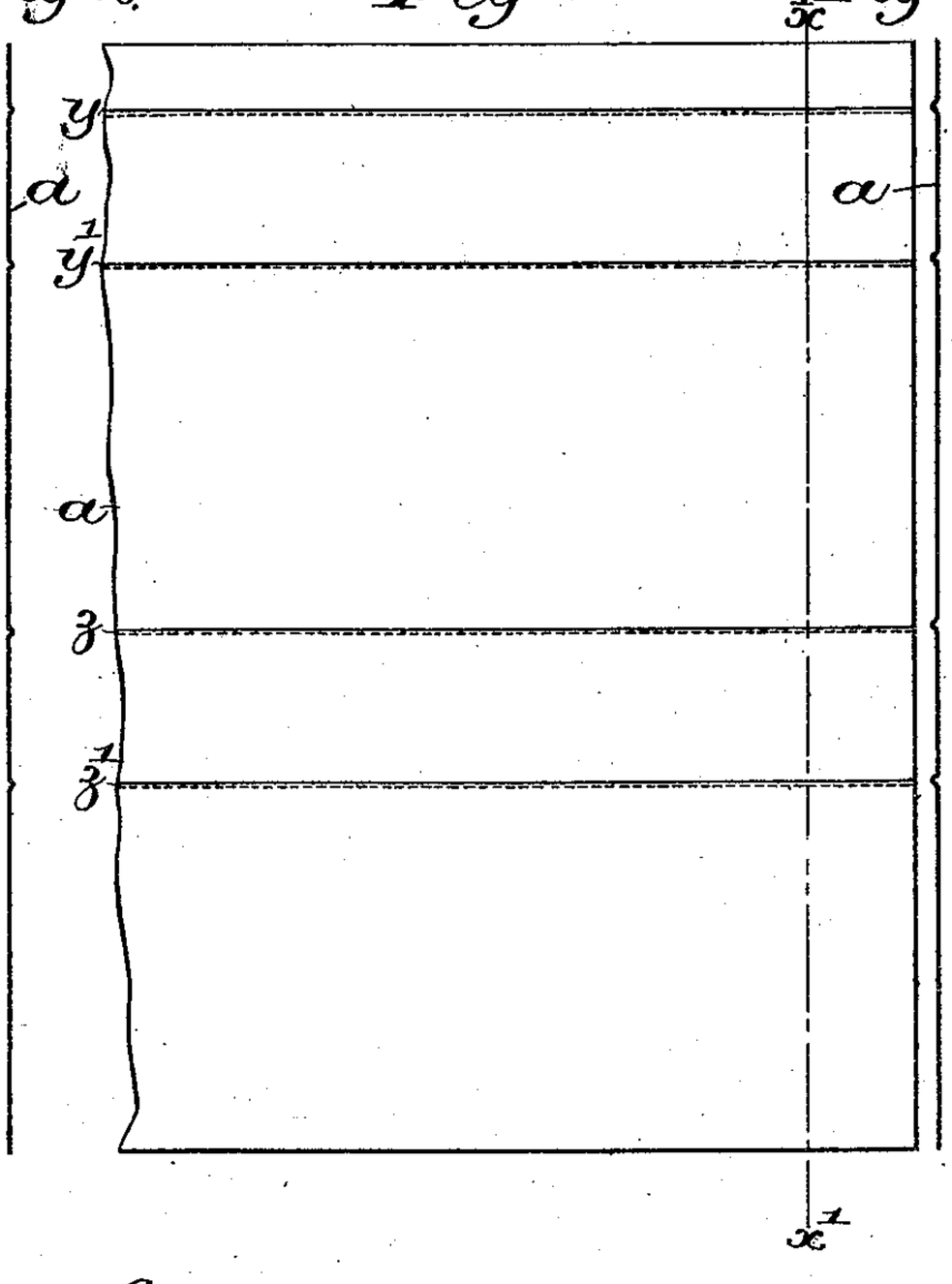
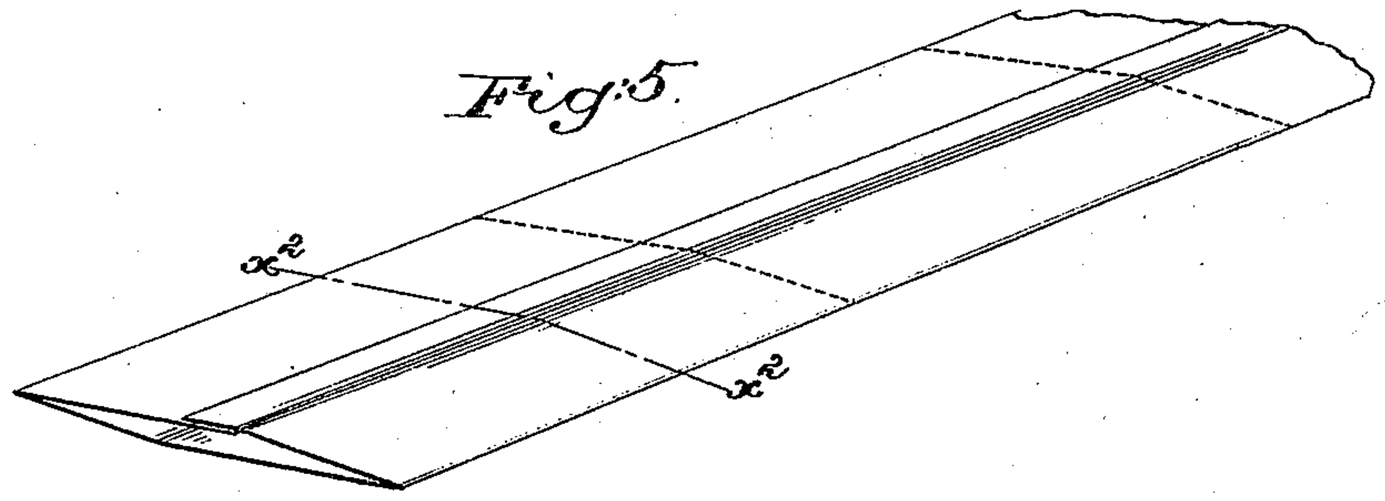


Fig: 3.

Fig: 4

Fig: 6.

Fig: 5.



Witnesses.
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UNITED STATES PATENT OFFICE.

JOHN T. ROBINSON, OF HYDE PARK, MASSACHUSETTS.

PAPER BOX AND METHOD OF MAKING SAME.

SPECIFICATION forming part of Letters Patent No. 501,664, dated July 18, 1893.

Application filed May 31, 1892. Renewed May 16, 1893. Serial No. 474,475. (No model.)

To all whom it may concern:

Be it known that I, JOHN T. ROBINSON, of Hyde Park, county of Norfolk, State of Massachusetts, have invented an Improvement in Paper Boxes and Methods of Making the Same, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

Various articles of merchandise, such as cigarettes, druggists' prescriptions, dye powders, cutlery, &c., are put up for sale in boxes composed of paper, the same being shaped to form the top, bottom, and two side edges of a box, the two ends being open to receive the merchandise suitably wrapped. In the production of this class of box a strip of paper board suitably printed and long enough for several boxes is creased longitudinally and but lightly, all the creases being in the same direction, and such creased strip is folded to form a tube. The tube is then cut transversely in lengths suitable for a single box, and when to be used the tubular sections are pinched widthwise to cause the tube to assume the outline of a parallelogram. Much difficulty is now experienced in getting the tubular sections into true parallelogrammic form. In my experiments to overcome this trouble I have ascertained that by creasing the strip at four places, and reversely or in opposite directions the lines of fold are so defined that the tubular sections when pinched across from edge to edge will instantly and unerringly assume true parallelogrammic form leaving uniform edges or corners. My invention, therefore, comprehends a box consisting of a tube-like body having four reversely creased parallel lines; also in the method of forming tubes for boxes which consists in creasing the paper reversely in the lines to form the four side corner lines, as will be described.

Figure 1, represents a strip of card-board adapted to form several boxes, the parallel lines showing the strip as creased once. Fig. 2, is a section in the line x, Fig. 1. Fig. 3, shows part of a strip creased reversely, the series of dotted lines representing a second creasing. Fig. 4, is a section in the line x', Fig. 3. Fig. 5, shows a tube formed by folding the reversely creased strip on the lines y—z; and Fig. 6, is a section in the x^2, Fig. 5, the dotted line showing the form the box will assume when pinched from edge to edge.

A proper strip of paper a, in lengths suitable preferably for a series of boxes, is creased longitudinally at y, y', z, z', see Fig. 1, the creases being from the top toward the under side of the strip, see Fig. 2. This strip after the first creasing is again creased in substantially the same lines or very close to the same lines as indicated by the dotted lines Fig. 3. This second creasing is, however, from the under side of the strip toward its upper side, see Fig. 4. This second or reverse creasing results in thorough softening of the fiber in the lines of the double creasing so that the paper is free to respond quickly and easily to any attempt to make a corner bend in the line of creasing, such corner forming true and straight, enabling the box to be made symmetrical. The paper board after having been reversely creased as represented in Figs. 1 to 4, is folded along the lines y'—z' to form a tube as in Fig. 5, and the overlapped edges of the said tube are suitably pasted together. This tube is then cut transversely into cover or box lengths, and when to be used are pinched from edge to edge and but slight pressure in such direction causes the box or cover to easily and instantly assume a parallelogrammic form in cross section, as in dotted lines Fig. 3, leaving the side edge corners well and sharply and smoothly defined.

The boxes or covers when in their flat condition Fig. 6, may be easily and cheaply transported because of the small amount of room required.

Under the term "box" I intend to designate any collapsible box made from paper.

In another application, Serial No. 434,864, filed by me on the 31st day of May, 1892, I have shown an apparatus by which paper may be creased in accordance with the method herein described.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A box blank composed of paper reversely creased on the same longitudinal folding lines indicating the corner or edge lines of the finished box, substantially as described.

2. In the method of making paper boxes, creasing the paper longitudinally in one and then in a reverse direction in the same line of fold, and folding the said paper along two of said creased lines to form a tube leaving two lines of reverse creasing in condition to be readily bent, and present true and symmetric side corners when the tube is pinched from edge to edge, substantially as described.

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

JOHN T. ROBINSON.

Witnesses:

GEO. W. GREGORY,

FRANCES M. NOBLE.