(No Model.) 3 Sheets—Sheet 1.

J. T. CRAW.

DOUBLE TELESCOPE BOX.

No. 502,952. Patented Aug. 8, 1893.

Fig. 1.

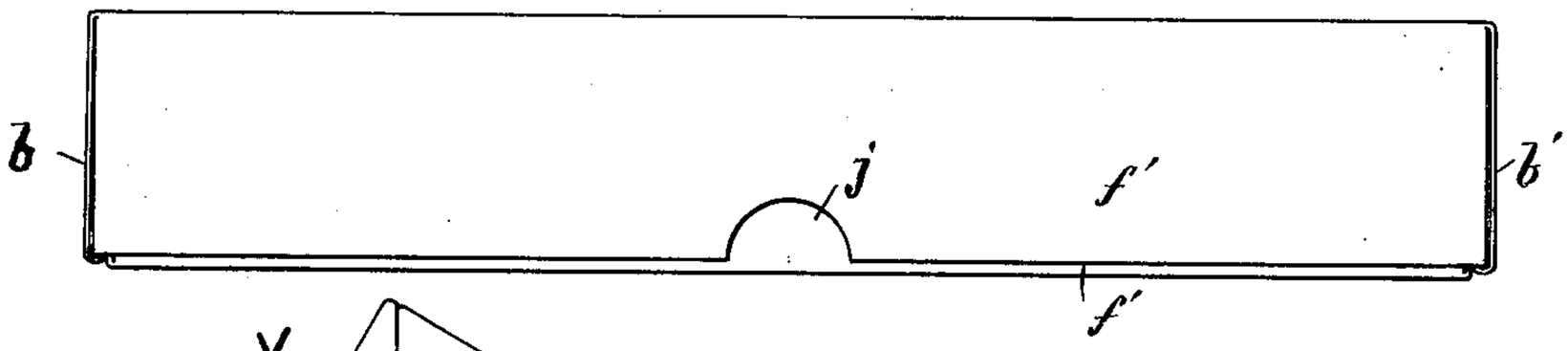


Fig. 2.

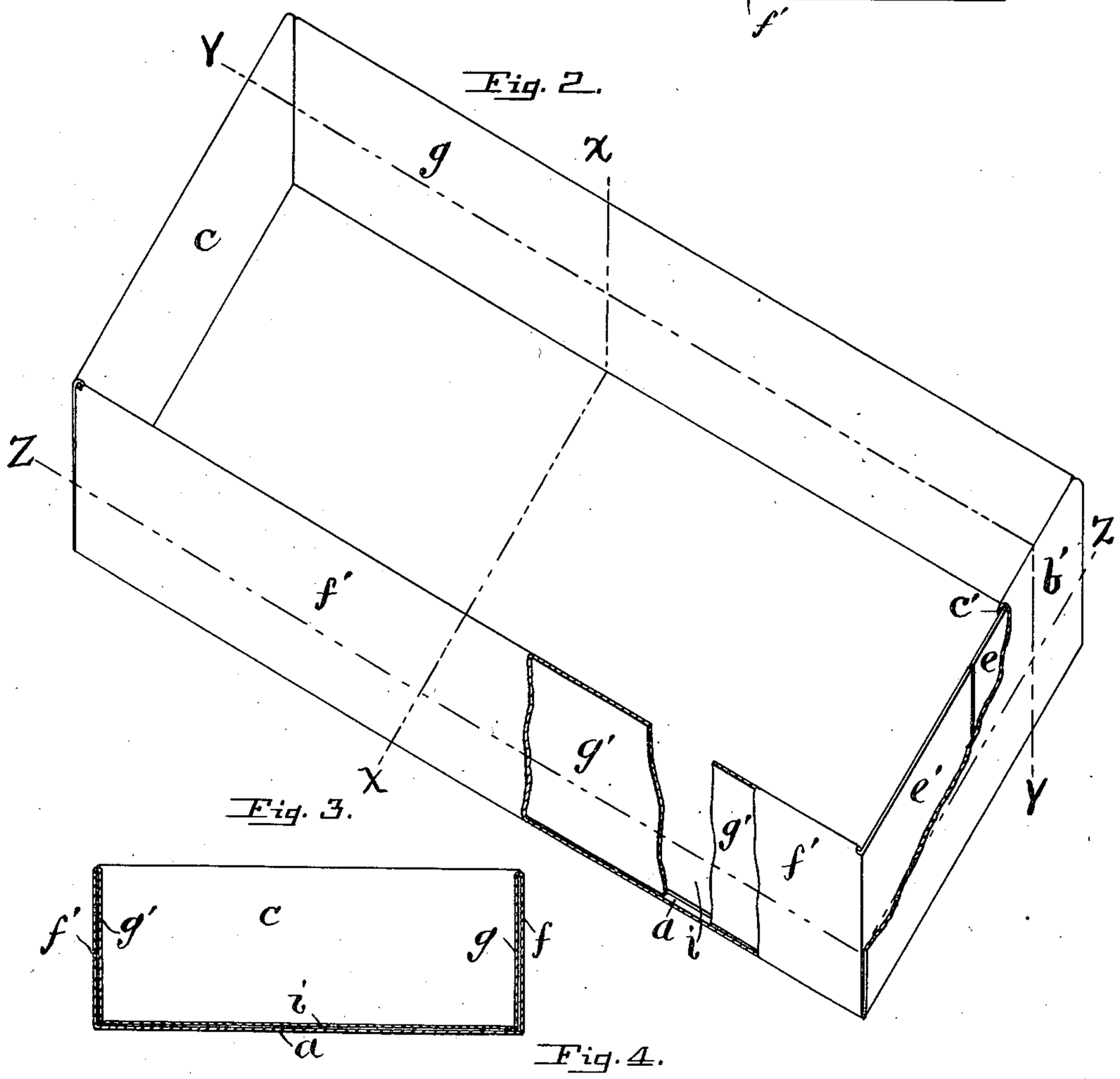
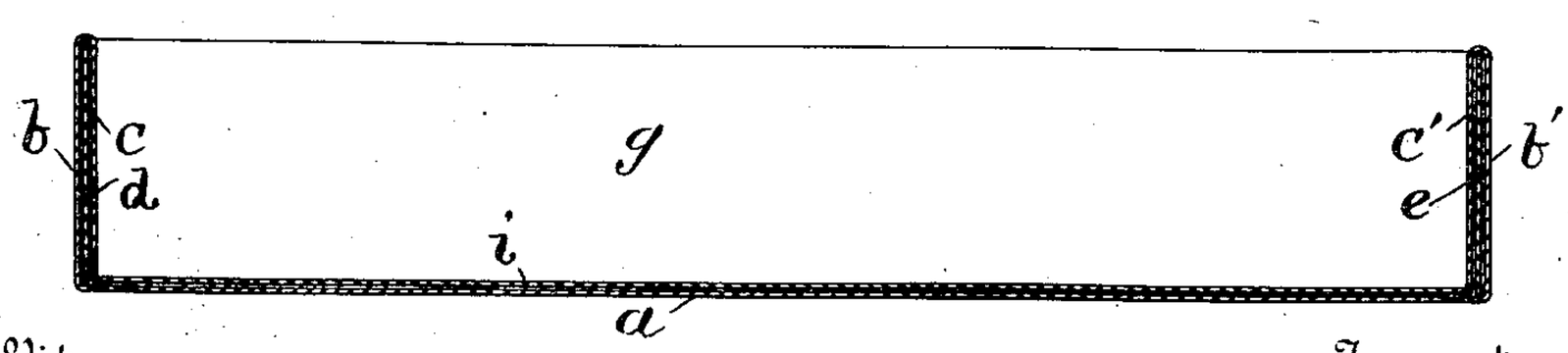


Fig. 3.

Fig. 4.



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J. T. CRAW.

DOUBLE TELESCOPE BOX.

No. 502,952. Patented Aug. 8, 1893.

Fig. 5.

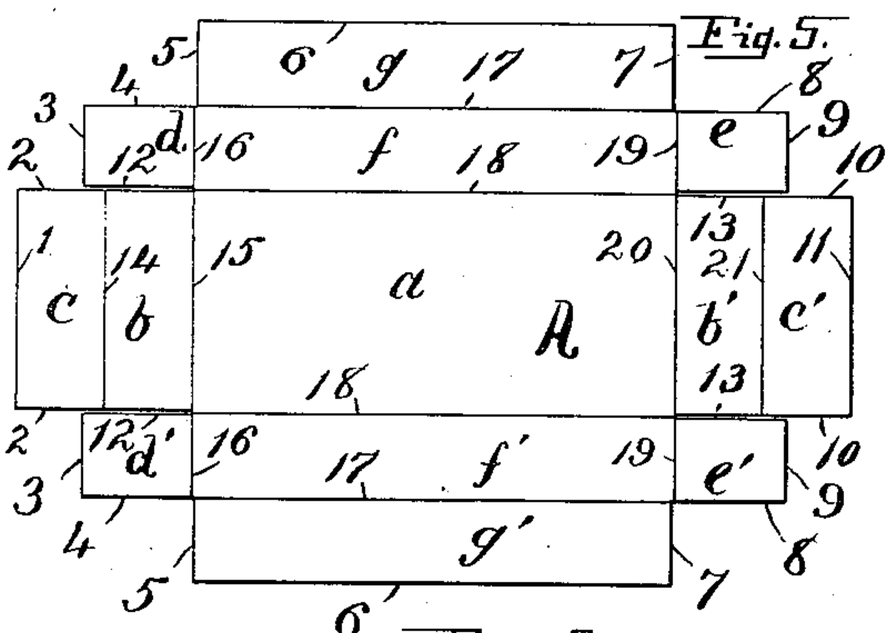


Fig. 6.

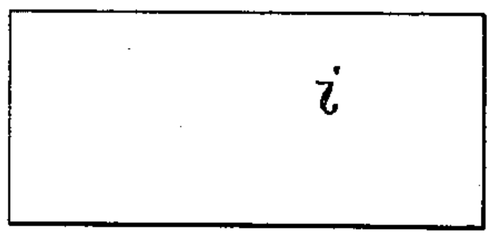


Fig. 7.

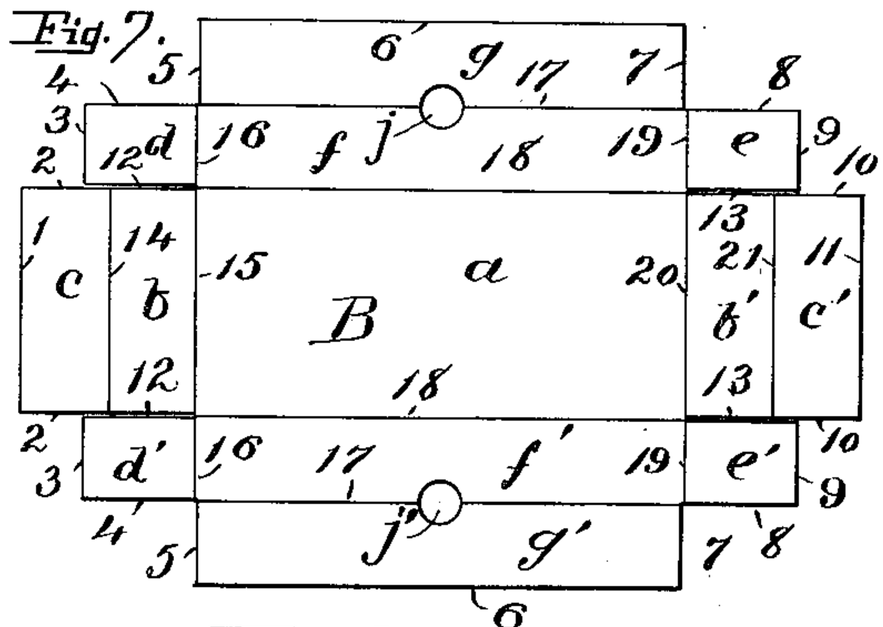


Fig. 8.

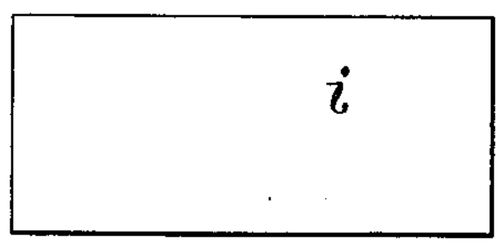


Fig. 9.

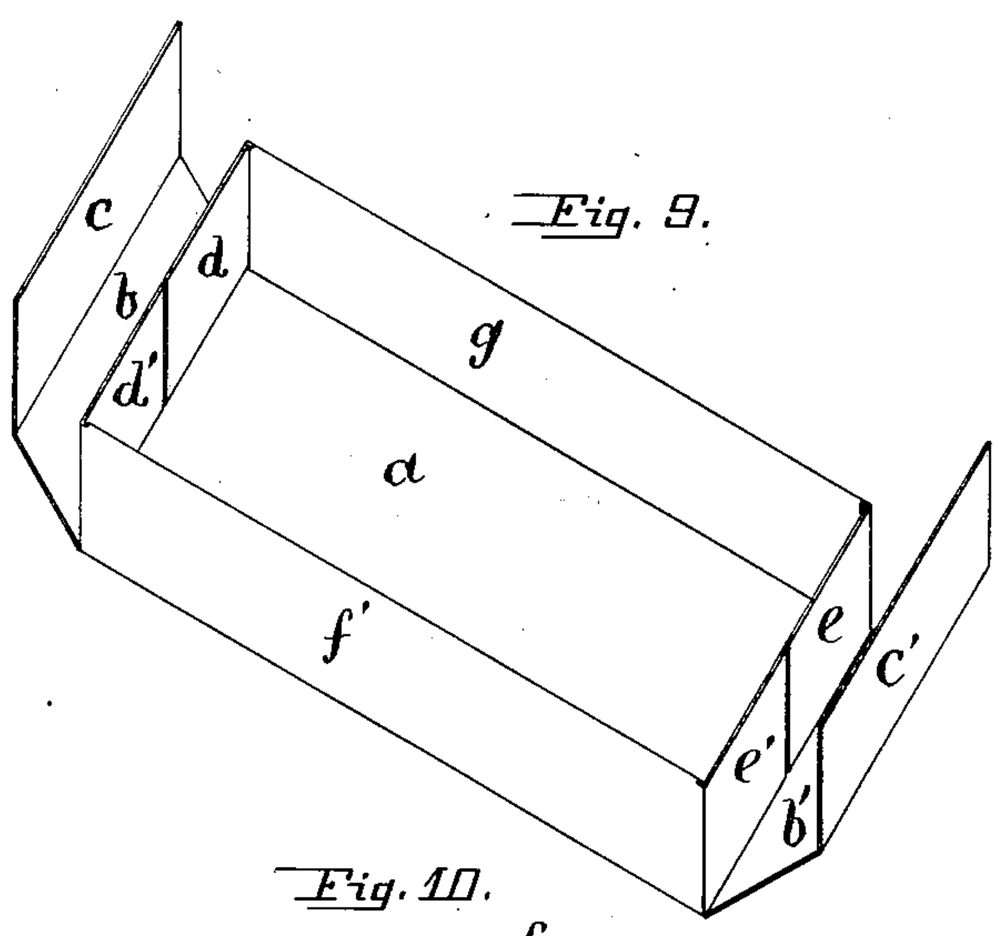
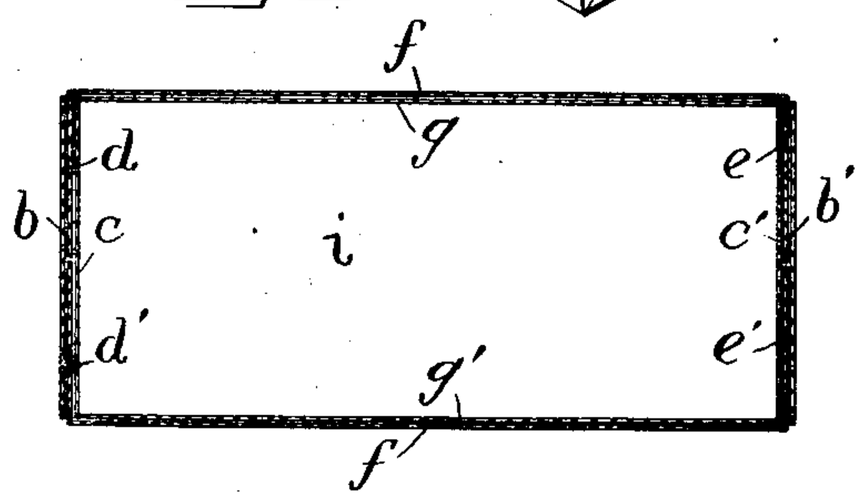


Fig. 10.



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(No Model.)

3 Sheets—Sheet 3.

J. T. CRAW.

DOUBLE TELESCOPE BOX.

No. 502,952. Patented Aug. 8, 1893.

Fig. 11.

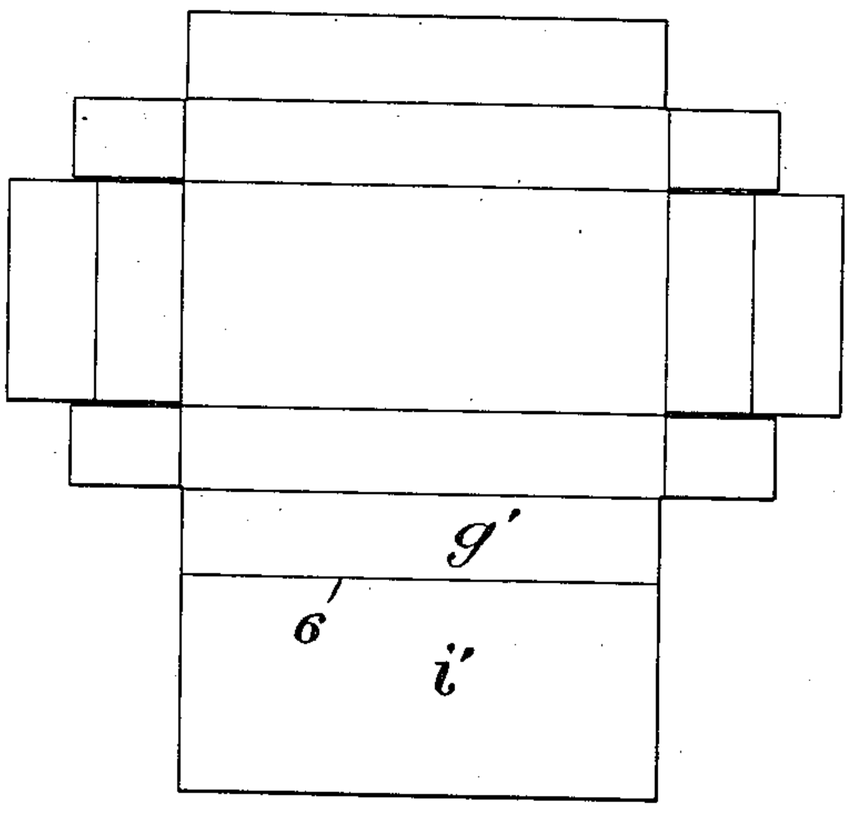


Fig. 13.

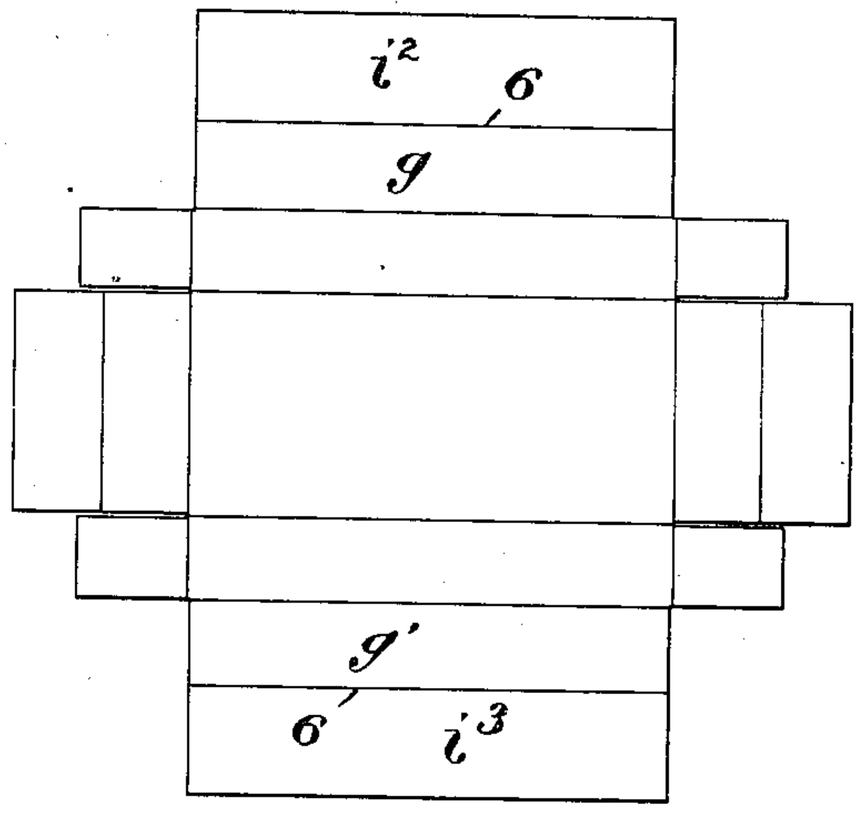


Fig. 12.

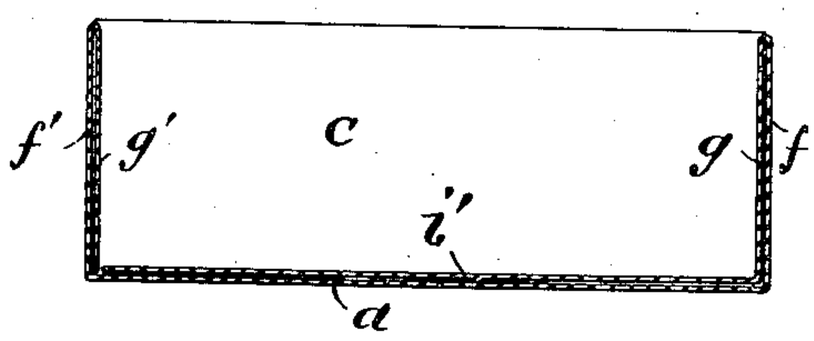
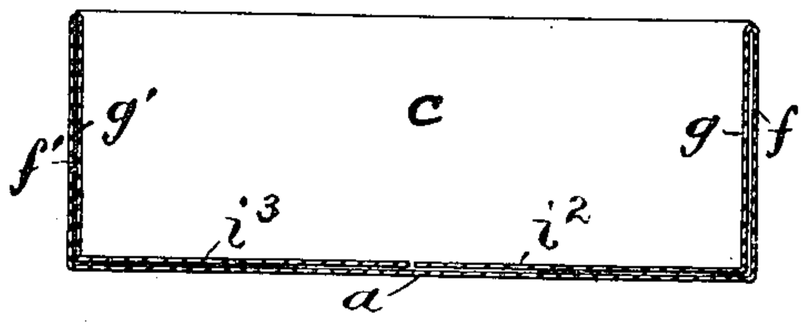


Fig. 14.



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UNITED STATES PATENT OFFICE.

JOSEPH T. CRAW, OF JERSEY CITY, NEW JERSEY, ASSIGNOR OF ONE-HALF TO BROWN & BAILEY, OF PHILADELPHIA, PENNSYLVANIA.

DOUBLE TELESCOPE BOX.

SPECIFICATION forming part of Letters Patent No. 502,952, dated August 8, 1893.

Application filed October 4, 1892. Serial No. 447,844. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH T. CRAW, a citizen of the United States, and a resident of Jersey City, in the county of Hudson, State of New Jersey, have invented certain new and useful Improvements in Double Telescope Boxes, of which the following is a specification.

My invention relates to a new article of manufacture, to wit, a double telescope box, that is to say, a box whereon the cover fits with telescoping action. The box is termed double because for the first time in the history of the art the blank of which it is formed is so cut and scored that there are formed side and end flaps which turn down in clear to the bottom, thereby doubling the sides and ends, and showing the same color and finish on the inside as on the outside; and further, the bottom of the box is formed double, the inside flap showing the same color and finish as the rest of the box. The same construction is used with the cover, and thus I produce a double box (as well as cover) every part of which is of a uniform color, finish and handsome appearance, whereas heretofore, the inside and bottom of the boxes have exhibited the back of the board, which is of inferior color and finish from the front. By my method of doubling the thickness of the bottom, which I effect by giving a very tight fit to the inner thickness of board, I give much additional stiffness to the bottom of the box (or top of the cover) where stiffness is most needed, and can therefore use lighter board for the sides and ends, thereby saving in the weight of board and cost of box.

My invention also relates to methods of construction such that the several flaps of the box and cover shall interact upon each other as clamps and thereby hold the completed box in shape without the use of glues, cements, clips or any other fastenings whatever.

Referring to the drawings which accompany the specification to aid the description, Figure 1 is a longitudinal elevation of the box and cover complete. Fig. 2 is a perspective, partly broken, of the box, without the cover. This view clearly shows the relative positions of the several flaps in the box after folding. Fig. 3 is a vertical cross-section on the line X—X of Fig. 2. Fig. 4 is a longitudinal vertical section on the line Y—Y of Fig. 2. Fig. 5 is a plan view on a much smaller scale of the blank out of which the box is made, and showing the various scores, cuts and flaps ready for folding. Fig. 6 is a plan view of the inside bottom clamp on the same scale as Fig. 5. Fig. 7 is a plan view of the blank out of which the cover is made, and showing the various scores and cuts ready for folding. Fig. 8 is a plan view of the inside cover clamp. Figs. 7 and 8 are on the same scale as Figs. 5 and 6. Fig. 9 is a perspective view on a scale between Figs. 2 and 5 of the box partly folded. Fig. 10 is a horizontal section as on the line Z—Z of Fig. 2, but on the scale of Fig. 9. Fig. 11 is a plan view of a modified blank, wherein the bottom clamp is in the same piece with the rest of the box, and Fig. 12 is a vertical cross-section of the box, made of this blank. The scale is the same as Fig. 2. Fig. 13 is a plan view of a modified blank wherein the inside bottom clamp is in two pieces, each piece being connected with one side flap, and Fig. 14 is a vertical cross-section (on the scale of Fig. 2) of a box made of such blank.

Referring to Figs. 1 to 10 inclusive, a blank A, of paper board is taken and at a single operation is cut on the external boundary lines 1; 2, 2; 3, 3; 4, 4; 5, 5; 6, 6; 7, 7; 8, 8; 9, 9; 10, 10; 11; is also cut on the internal lines 12, 12; 13, 13; and is scored on the lines 14, 15, 16, 16; 17, 17; 18, 18; 19, 19; 20 and 21. Thereafter an attendant plucks away the waste parts so as to leave the outline as described, separates the flaps on the aforesaid cuts, 12, 12, 13, 13, and breaks the aforesaid score lines, 14; 15; 16, 16; 17, 17; 18, 18; 19, 19; 20 and 21. Thus there is produced a blank having the rectangular bottom flap, *a*; end flaps, *b*, *b'*; turn down end flaps, *c*, *c'*; inside end flaps, *d*, *d'*, and *e*, *e'*; side flaps, *f*, *f'*, and turn down side flaps, *g*, *g'*. In connection with these flaps it is especially noted that (first) the inside end flaps, *d*, *d'*, *e*, *e'*, are each attached to one of the side flaps and are one-half as long as the box is wide on the inside; (second) that the turn down side flaps *g*, and *g'*, are each a very little shorter at each end than the side flaps, *f*, *f'*, the difference at each end being the thickness of the board;

(third) the breadth of the end flaps b and b', being equal each to each, exceeds the breadth of the side flaps, f, f', (which also are equal each to each) by about the thickness of the board, and the breadth of the turn down end flaps, c, c, (being equal each to each) exceeds the breadth of said flaps, f, f', by perhaps half as much. Now the blank, thus prepared, is taken and folded, first turning up the side flaps, f, f', then folding in the inside end flaps d, d', e, e', as in Fig. 9; folding down in the turn down side flaps, g, g', (which fold easily clear to the bottom of the box because of being shorter than the flaps, f, f';) next folding up the end flaps, b, b', then folding down the turn down end flaps, c, c', inside of the flaps, d, d', e, e', respectively, the said flaps, c, c', turning clean and easily over the flaps, d, d', e, e', because of the end flaps, b, b', being a little wider (or higher) than the side flaps, f, f'. When so turned down in, said flaps, c, c', are pushed back and crowded between the edges, 5, 5, and 7, 7 respectively of the flaps, g, g', and the flaps, d, d', e, e', respectively, and are here held by the clamping action of the said flaps, g, g'. Also said flaps, c, c', being each a little higher, (or wider) than the flaps, b, b', bind on the bottom, a. Thus by the aforesaid proportions and relations of said flaps, $b, b', c, c', d, d', e, e', f, f', g, g'$, I provide a two-fold clamping action to hold the sides and ends of the box in position. Finally the inside bottom clamp, i, which may be made of heavier board, and is of a size to fit tightly within the box all around, and has of course the upper side of the same color and finish as the outside of the box, is put in and tightly clamps the turn down end and side flaps all around. This piece, i, also manifestly stiffens the bottom of the box, which is the part where the pressure of the board comes, and gives efficient strength even if the board be light. Also by reason of turning clear down and in the flaps, c, c', g, g', and of the finished side of the flap, i, being up, the interior of the box has the same color and finish as the exterior, which adds much to the neat appearance.

The cover is formed of a blank, B, with relatively the same cuts and scores as the box, and in Figs. 7 and 8 the same letters and figures are applied to similar parts as in the foregoing figures. But as will be understood, the cover will be made a little larger in plan than the box so as to telescope over the same. Also, at the same operation with the cutting and scoring of the cover blank B, (or at a separate operation) holes j, j', are punched in said blank, B, being so positioned as to be intersected by the lines, 17, 17, so that when the blank is folded to form the cover, said holes, j, j', become semicircular thumb notches, in each side of the cover, as seen in Fig. 1. After the various flaps of the cover are folded, as described for the box, the inside cover clamp, i, Fig. 8, is inserted, thereby clamping the sides and ends of the cover all around, and also giving to the cover inside the same color and finish as it has outside.

In Fig. 11 is shown a blank wherein the doubling piece for the bottom, i', is formed integral with one of the side flaps, (g',) the line 6 being now a score line. In all other respects the blank is similar to that hereinbefore described. The manner of folding in the said piece i', will be evident from Fig. 12.

In Fig. 13 a blank is shown wherein the doubling piece is formed in two halves i^2, i^3, each being one-half of the end of the box and integral with one of the flaps, g, g', and both of the lines 6, 6, being now score lines.

Fig. 14 shows how said pieces, i^2, i^3, are folded in. In all other respects the blank is similar to that hereinbefore described.

Evidently the cover as well as the box can be made of blanks like those shown in Figs. 11, 12, 13 and 14.

Now, having described my improvements, I claim as my invention—

1. A knock-down box and cover, each having side and end flaps adapted to turn down inside the box and cover and extending to the bottoms of the same, and a clamping piece adapted to clamp said side and end flaps, substantially as described.

2. A box and cover, each having turn-in side and end flaps extending to the bottom thereof, and a separate clamp piece, engaging said flaps, substantially as described.

3. A telescoping box and cover, each having turn-in side and end flaps and an inside clamp piece of the same finish as said side and end flaps and adapted to clamp the same, substantially as described.

4. In knock-down boxes and covers, and in combination with side and end flaps which will turn in and down to the bottoms of said boxes and covers, separate bottoms for locking said flaps, substantially as described.

5. In blanks for knock-down box covers the combination with side flaps and turn-in side flaps of holes situated to be bisected by the scores between the said side flaps and turn-in side flaps and so that when the last named flaps are turned in the halves of said holes will register and form thumb notches in the sides of the cover, substantially as described.

6. A telescoping box and cover having side flaps, turn-in side flaps shorter than said side flaps, end flaps, inside end flaps narrower than said end flaps, turn-in end flaps wider than said end flaps, and an inside clamp piece adapted to clamp said turn-in side and end flaps, substantially as described.

7. A knock down box having turn-in side and end flaps extending to the bottom of the box and showing within the same finish as the exterior of the box, and also having a separate bottom adapted to be inserted within the box and clamp said turn-in flaps and showing the same finish as the exterior of the box, substantially as described.

8. A knock down box cover having turn-in

side and end flaps extending to the bottom of the cover and showing the same finish within as the exterior of the cover, and also having a double bottom adapted to be inserted in the cover and clamp said turn-in flaps and showing within the same finish as the exterior of the cover, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 13th day of September, 1892.

JOSEPH T. CRAW.

Witnesses:
FRED. C. COCHRAN,
ARTHUR L. KENT.