No. 748,376. PATENTED DEC. 29, 1903.

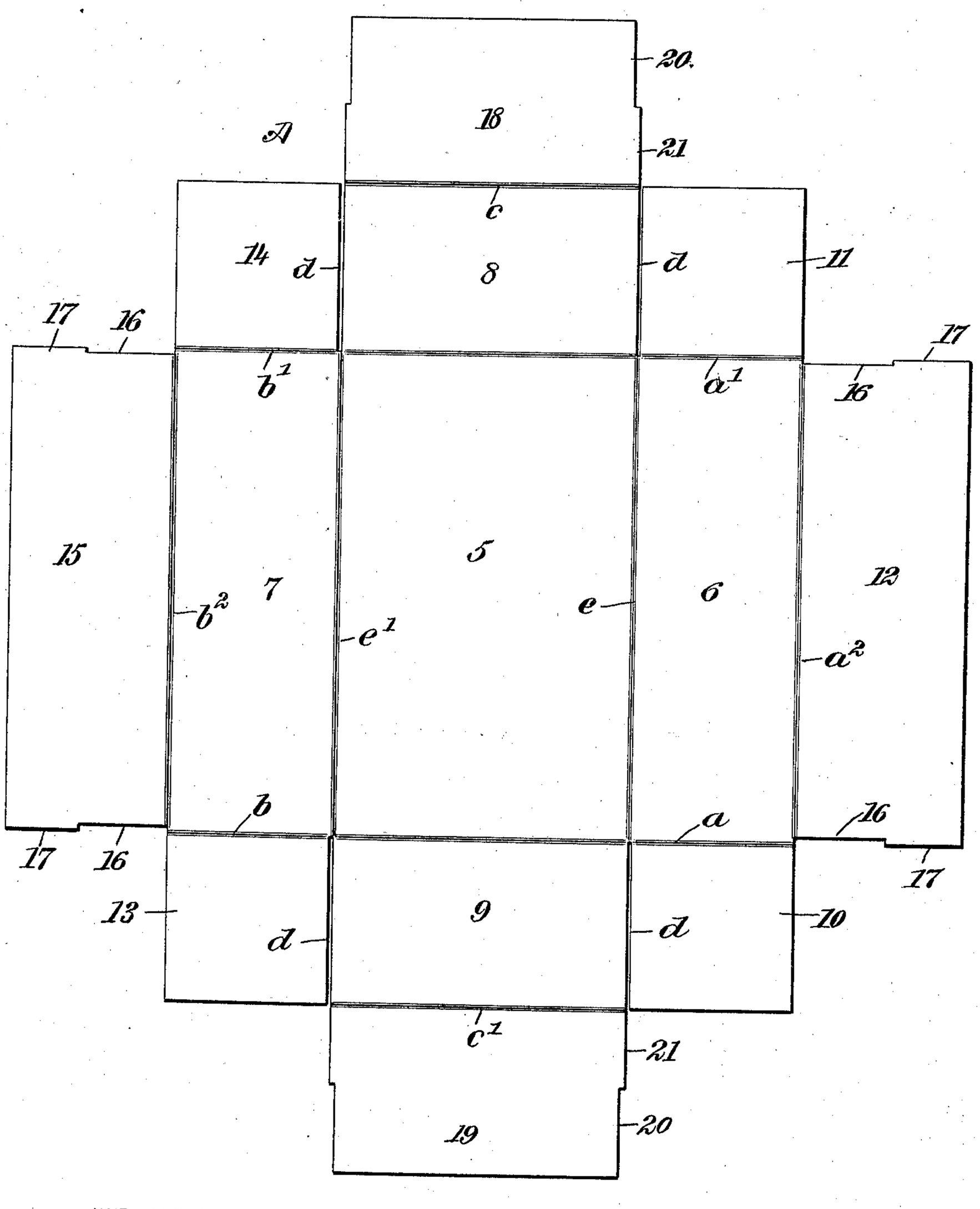
M. HIRSCH.

FOLDABLE PAPER BOX.

APPLICATION FILED MAR. 16, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.



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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 2.

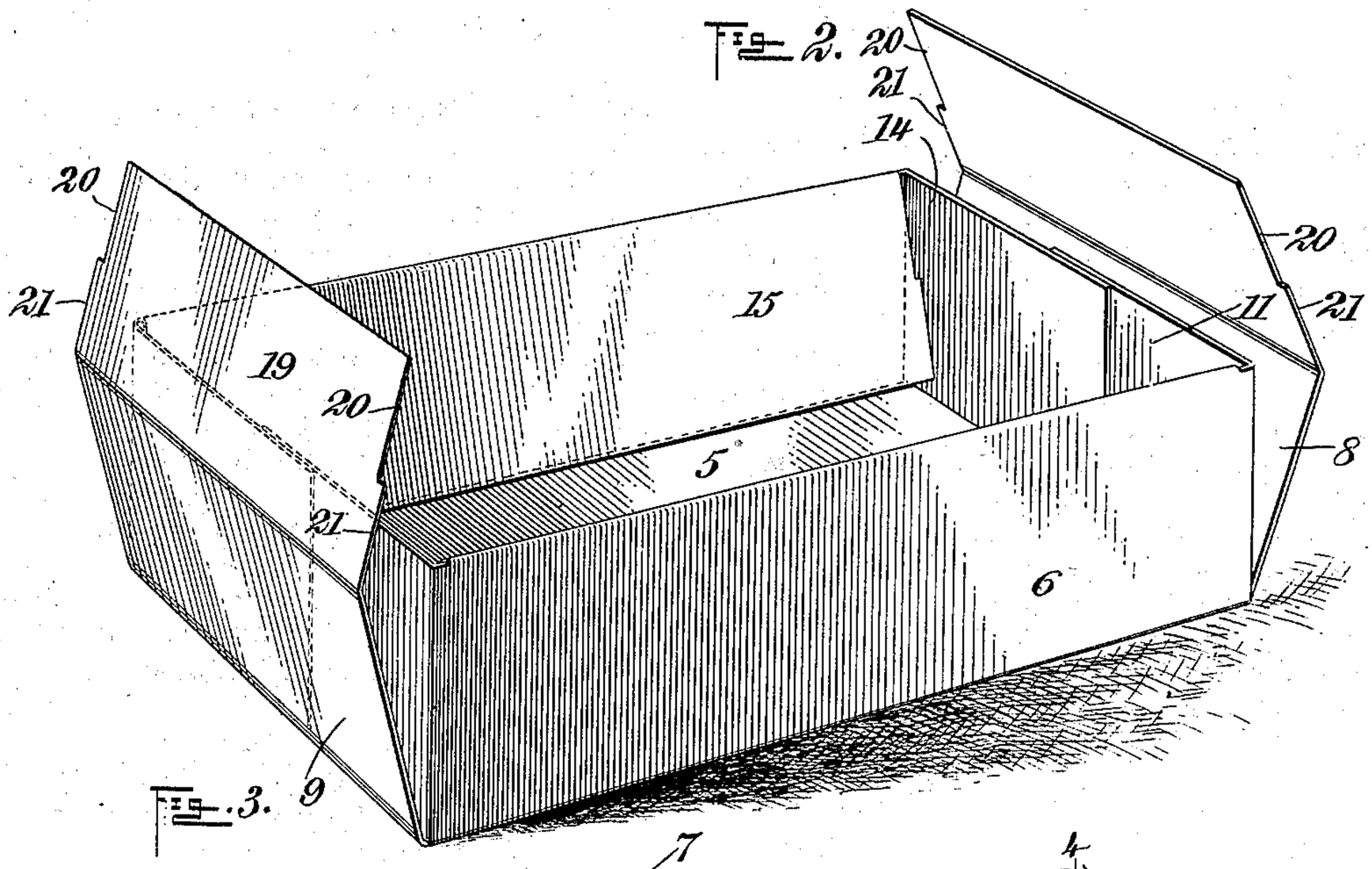

Fig. 3.

Fig. 4.

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UNITED STATES PATENT OFFICE.

MORRIS HIRSCH, OF NEWARK, NEW JERSEY.

FOLDABLE PAPER BOX.

SPECIFICATION forming part of Letters Patent No. 748,376, dated December 29, 1903.

Application filed March 16, 1903. Serial No. 147,966. (No model.)

To all whom it may concern:

Be it known that I, MORRIS HIRSCH, a citizen of the United States, and a resident of Newark, in the county of Essex and State of New Jersey, have invented a new and Improved Foldable Paper Box, of which the following is a full, clear, and exact description.

The present invention relates to improvements in paper boxes; and the object of the invention is to provide an improved box the blank of which is cut from a single piece of paper stock and is adapted for assemblage into a complete article without the use of mucilaginous material.

Further objects and advantages of the invention will appear in the course of the subjoined description, and the novelty will be defined by the annexed claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of a blank adapted to form a paper box. Fig. 2 is a perspective view showing the blank partly folded. Fig. 3 is a sectional plan view on the dotted line 3 3 of Fig. 4. Fig. 4 is a vertical cross-section on the dotted line 4 4 of Fig. 3.

In the drawings I have shown one form of the box, the same being made from a blank A, which is cut, stamped, or otherwise produced in a single piece from a sheet of paper stock or equivalent material. (See Fig. 1.) This blank consists of a body or middle portion 5, side folds 6 7, end folds 8 9, and a proper number of flaps on the side and end folds. The side fold 6 is shown as having flaps 10 11 at its end portions and a flap 12 at its side portion, and this side fold is scored or creased, as indicated at $a\ a'\ a^2$, to indicate the lines on which the end and side flaps 10 11 12 are adapted to be folded. In a similar way the other side fold 7 is provided at its ends with flaps 13 14 and with a side flap 15, said fold 7 being scored or creased at $b\ b'\ b^2$. The side flaps 12 15 of the folds 6 7, forming parts of the box-blank, are each provided with shallow notches or cut-out portions 16, thus producing the narrow lips 17. The lips 17 are on the end edges of the side flaps 12 15, while the notches or cut-outs 16 are within said lips, the said notches being equal in depth to the thickness of the stock from which the blank is produced.

The end folds 8 9 are provided with flaps 18 19, respectively, which are adapted to be folded on the crease-lines $c\ c'$, and each end flap has its side edges cut away at 20, thus producing narrow lips 21. The cut-away portions 20 and the lips 21 of the end flaps 18 19 are reversed as respects position with reference to the notches 16 and lips 17 of the side flaps 12 15 in order that the end flaps and the side flaps may have interlocking engagement on the bending of the box-blank into the shape shown by Fig. 2. The flaps 13 at the end portions of the side folds 6 7 are separated from the end folds 9 by slits or incisions *d*.

The entire blank A is adapted to be cut, scored, or creased and slitted at one operation from a piece of paper stock, and this blank is of such shape that it can be produced rapidly and economically with a minimum amount of waste of the paper stock.

To bend the blank and form the box, the side folds 6 7 are turned up on the score-lines $e\ e'$, and the flaps 10 11 13 14 of these side folds are turned inwardly across the body portion 5. The flaps 12 15 of the side folds are now folded on the lines $a^2\ b^2$ within and into overlapping relation relative to the flaps 6 7, and, finally, the end folds 8 9 are turned upwardly against the lapping flaps 10 13 and 11 14, so that the end flaps 18 19 may lie within the same. This adjustment of the end flaps 18 19 brings the tongues 21 thereof into positions to fit into the notches 16 of the side flaps 12 15, and the lips 17 of these side flaps have interlocking engagement with the notched edges of the end flaps, thereby securing an interlocking engagement between the edge portions of the side flaps and the end flaps, which is sufficient to prevent the box member from collapsing. The notches or cut-away portions 16 20 of the side and end flaps are of sufficient depth to receive the lips of the flaps, and this construction enables me to secure the desired interlocking engagement of the parts without increasing the bulk of the box and without the employment of separate tongues and slits, as commonly used in devices of this class. It will also be observed that the end and side flaps are held in place by the mutual engagement of the parts and

without resorting to the use of paste, glue, or any other material or devices for holding the parts in their assembled positions.

The box is shown by Figs. 3 and 4 in an inverted condition to enable it to be used as the top member of a two-part or telescopic box; but the box may be used as the bottom part of such a telescopic structure, Fig. 2 illustrating the box in a partially-folded condition.

It is to be understood that I reserve the right to use the box constructed as described in any way and for any purpose to which it may be adapted.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A box-blank comprising a body, side and end folds, and side and end flaps, the whole being foldable into a box without cementing either of the parts; each of said side and end flaps being provided at each end with a cut-away or notched portion for a part of its length and leaving the remaining portion of said edge intact to produce a lip; the notch and lip at each end of each of said flaps being disposed in reversed order to the notch and lip on the proximate edge of an adjacent flap, said side and end flaps having mutual interlocking engagement in the plane of the walls of the box on the folding of the parts.

2. A box made without waste from a single piece of material, and comprising a body portion, side and end folds, and side and end flaps on the respective folds, each flap being provided at each of its ends with a transverse lip and with a notch which extend continuously across the edge thereof; the notch and the lip on the proximate edges of two adjacent flaps being disposed in reversed order and having mutual interlocking engagement in the plane of the walls of the box; said side and end flaps being uncemented to the respective folds and held in their folded conditions solely by the interlocking engagement of the parts.

3. A box-blank comprising a body portion, side folds provided with end wings, end folds, side flaps on the side folds, and end flaps on the end folds, each of said side and end flaps being provided at the respective ends thereof with a notch and a lip which extend continuously along the edge thereof, and the notches and lips on the proximate edges of adjacent flaps being disposed in reversed order with relation one to the other.

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

MORRIS HIRSCH.

Witnesses:
JNO. M. RITTER,
H. T. BERNHARD.