No. 766,980. PATENTED AUG. 9, 1904.

Z. B. WEBB.

FOLDING BOX.

APPLICATION FILED NOV. 11, 1903.

NO MODEL.

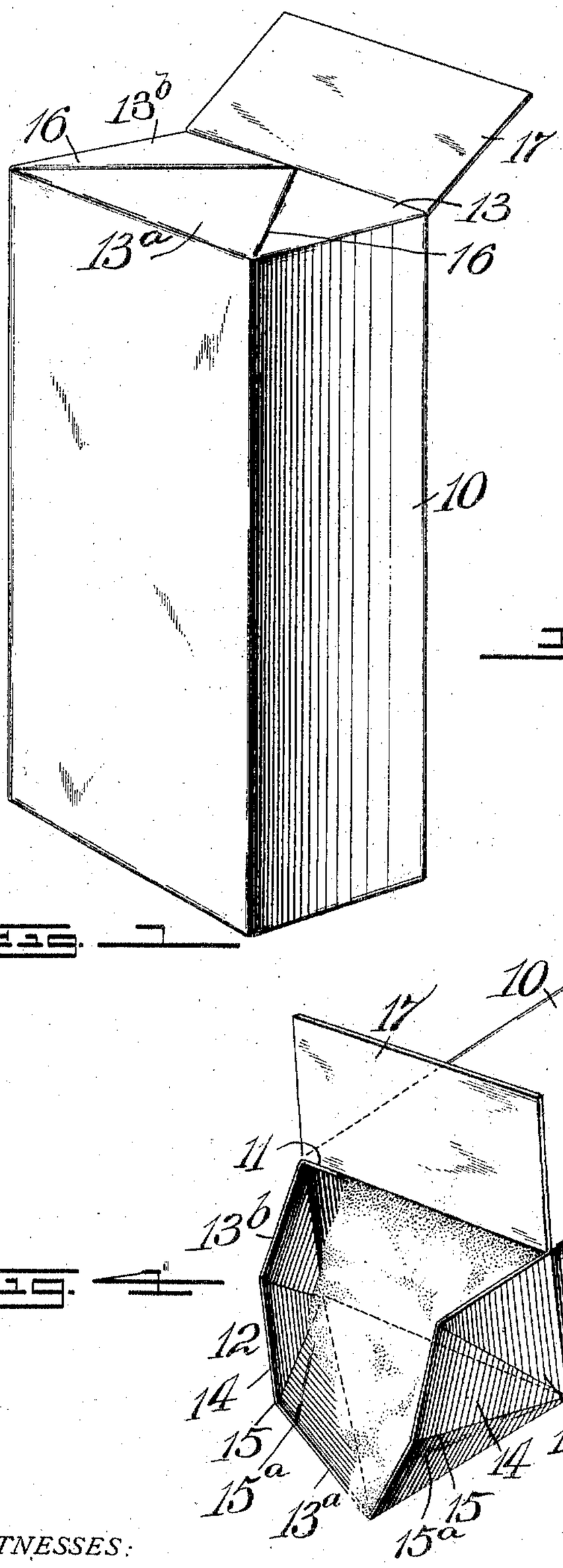

Fig. 1.

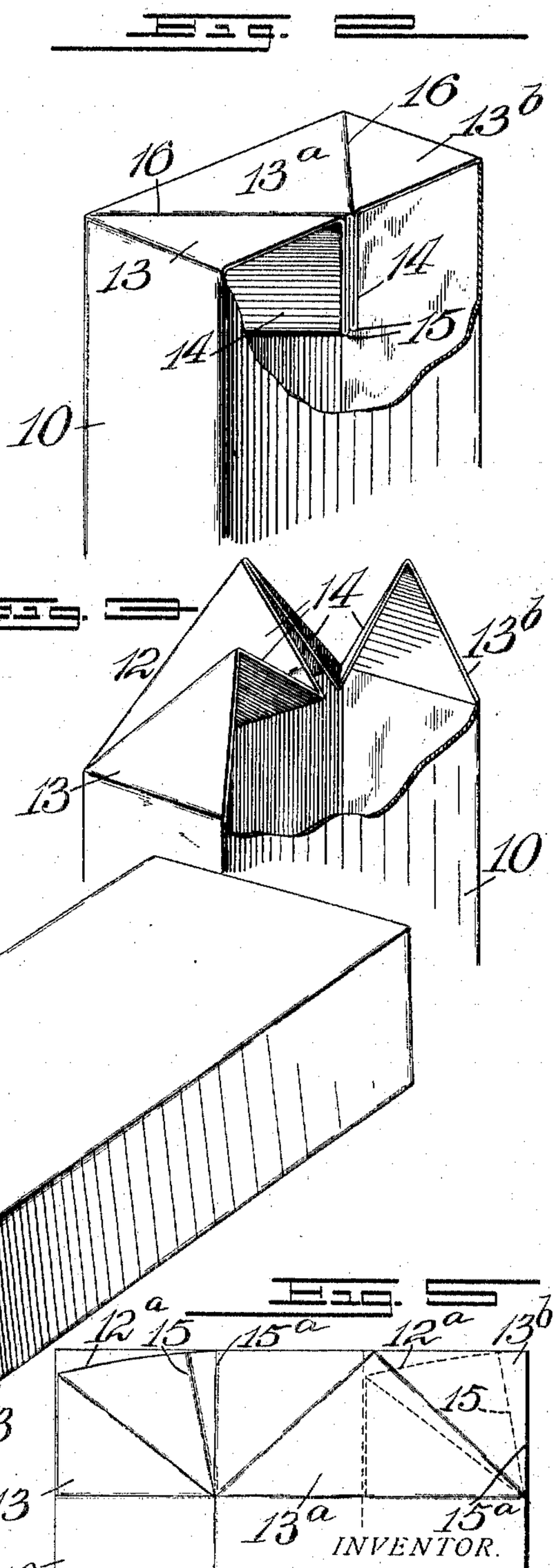

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

WITNESSES:

Wm. H. Canfield.

John F. Carolan.

INVENTOR.

BY Zaida B. Webb.

N. B. Hutchinson, ATTORNEY.

No. 766,980. Patented August 9, 1904.

UNITED STATES PATENT OFFICE.

ZAIDA B. WEBB, OF FLORHAM PARK, NEW JERSEY, ASSIGNOR TO WEBB FOLDING BOX COMPANY, OF NEWARK, NEW JERSEY, A CORPORATION OF NEW JERSEY.

FOLDING BOX.

SPECIFICATION forming part of Letters Patent No. 766,980, dated August 9, 1904.

Application filed November 11, 1903. Serial No. 180,683. (No model.)

To all whom it may concern:

Be it known that I, ZAIDA B. WEBB, of Florham Park, in the county of Morris and State of New Jersey, have invented a new and Improved Folding Box, of which the following is a full, clear, and exact description.

My invention relates to improvements in folding boxes, though the box may be in part glued without departing from the principle of the invention.

The invention relates more particularly to so-called "non-sifting" boxes, such as are used as packages for breakfast-foods, flour, starch, and other material more or less fine, which is likely to sift through the joints of an ordinary cheap paper box.

Many attempts have been made to produce a cheap non-sifting box, and the attempts are usually rather unsuccessful, chiefly for these reasons: First, the trade requires a box which has a perfectly flat end without too many thicknesses of material; second, it requires a box which can be quickly manipulated to effect the permanent closure, so that the operatives who do the work will not reject the box on account of increased labor to effect such closure, and, finally, the box must cut to the best advantage—that is, it must not contain any more material than the ordinary box of commerce, which has the infolding flaps, but which is not tight.

The object of my invention is to produce a box which shall meet the above requirements.

To these ends my invention consists of a box the construction of which will be hereinafter described and claimed.

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

Figure 1 is a perspective view of a box, showing my improvements, the ends being closed except for the final turning down of the outside flap. Fig. 2 is a broken perspective view of the box with the end folds turned in and with the anchor folds or wings extending down into the box-body. Fig. 3 is a broken perspective view showing the folds partially turned in. Fig. 4 is a perspective view of the open box and shows particularly how the continuous flap forming part of my invention serves as a spout when the box is to be emptied; and Fig. 5 is a broken view showing the position of the parts when the box is knocked down or flattened.

The box as illustrated has a rectangular body portion 10, which is scored at the corners, so that it may be flattened down, as usual, as shown in Fig. 5, the box shown being of the usual glued type where the meeting parts of the body are overlapped and glued, as at 11 in Fig. 4; but the structure of the body does not enter into my invention and may be of any usual type, whether glued or folded.

The most important features of my invention are comprised in the structure of the continuous flap 12, which is an extension of three sides of the box ends, and to show the economy of stock it will be seen, by reference to Fig. 5 at 12^a, how the flap is actually cut away a little in order that it may fold properly. Each flap 12 is made up of the three-face folds 13, 13^a, and 13^b, (see Figs. 1 and 2,) which are adapted to lie flat on the box end and in a continuous plane, and the several face-folds are united by the bellows or anchor folds 14, which are scored at the point where they connect with the face-folds and are scored at 15, so that the folds may be easily tucked in and their opposite members made to abut at one end, as shown clearly in Fig. 2. This construction causes the double bellows or anchor folds to extend downward into the box, as in Fig. 2, the folds being embedded in the material held by the box, so that they serve to stiffen the box end and prevent it from being easily disarranged. They also prevent the shifting of the material. When the folds are turned down in this manner, it causes the edges of the folds 13, 13^a, and 13^b to meet, as shown at 16, and the joint is absolutely tight by reason of the bellying-folds 14, which are turned down into the material, as above stated, and as the folds 13, 13^a, and 13^b are simply extensions of three sides of the box it will be seen that there can be no leakage at the box-corners. The scores

15 do not quite coincide with the corners of the box 10 when the latter is knocked down or flattened, and so the folds 14 have a second score 15[a], adapted to aline with the aforesaid box-corners, so that the blank can be flattened down conveniently, as usual, for shipment. The fourth side of the box 10 has a flap 17 extending from the ends, this flap being of the same size as the box end, so that after the folds 13, 13[a], and 13[b] are in the position shown in Fig. 1 the operator smears their outer surfaces with glue or paste and then turns down the flap 17, which forms the box end and makes the said end tight.

When the box is to be set up, the body 10 is squeezed up into its usual rectangular shape, and the operator then presses in the two score-lines 15, which causes the anchor folds or wings 14 to pass inward and downward, and at the same time that this pressure is made on the score-lines the whole flap 12 is turned inward and downward, so that the operation can be almost instantly performed. When the box is opened, the flap 17 is loosened, and then by simply pouring out the material the flap 12 is forced out to the position shown in Fig. 4, and it makes a very serviceable spout, by means of which the contents of the box can be conveniently guided into any desired place or receptacle.

From the foregoing description it will be seen that I thus produce a box which economizes material to a great extent, which is perfectly tight, and which can be easily manipulated so as to effect a closure.

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

1. The combination with the box-body, of a continuous flap forming an extension of the body, said flap being constructed so as to fold inward and form a series of end folds adapted to abut edge to edge and lie in the same plane, and a second series of folds adapted to project into the box from the end and apart from the walls thereof.

2. A folding box, comprising a body portion, a continuous flap extending from three sides of the body to form end folds, the said flap being scored so as to produce a series of folds lying edge to edge in the same plane across the box end, and a second series of folds connecting the first series and projecting from the box end directly into the box at an angle to the walls so as to be embedded in the contents of the box.

3. The combination with the box-body, of the continuous end fold extending from three sides of the body and arranged to produce three abutting folds lying in the same plane and a second series of folds connecting the first folds and projecting into the box, and a flap projecting from the fourth edge of the box and adapted to fold in over the first-mentioned flap.

4. The combination with a box end, of anchoring-wings forming a part of the box end and extending diagonally from the box-corners into the middle portion of the box so as to become embedded in the contents thereof.

5. The combination with a box, of anchoring-wings forming a connection between the box sides and ends, the said wings being arranged to project into the middle portion of the box from the corners thereof and become embedded in the box contents.

ZAIDA B. WEBB.

Witnesses:
J. C. BANTA,
W. B. HUTCHINSON.