No. 693,169. Patented Feb. 11, 1902.

H. B. SMITH.

BLANK FOR PAPER BOXES.

(Application filed Sept. 12, 1899.)

(No Model.) 2 Sheets—Sheet 1.

Fig. 1.

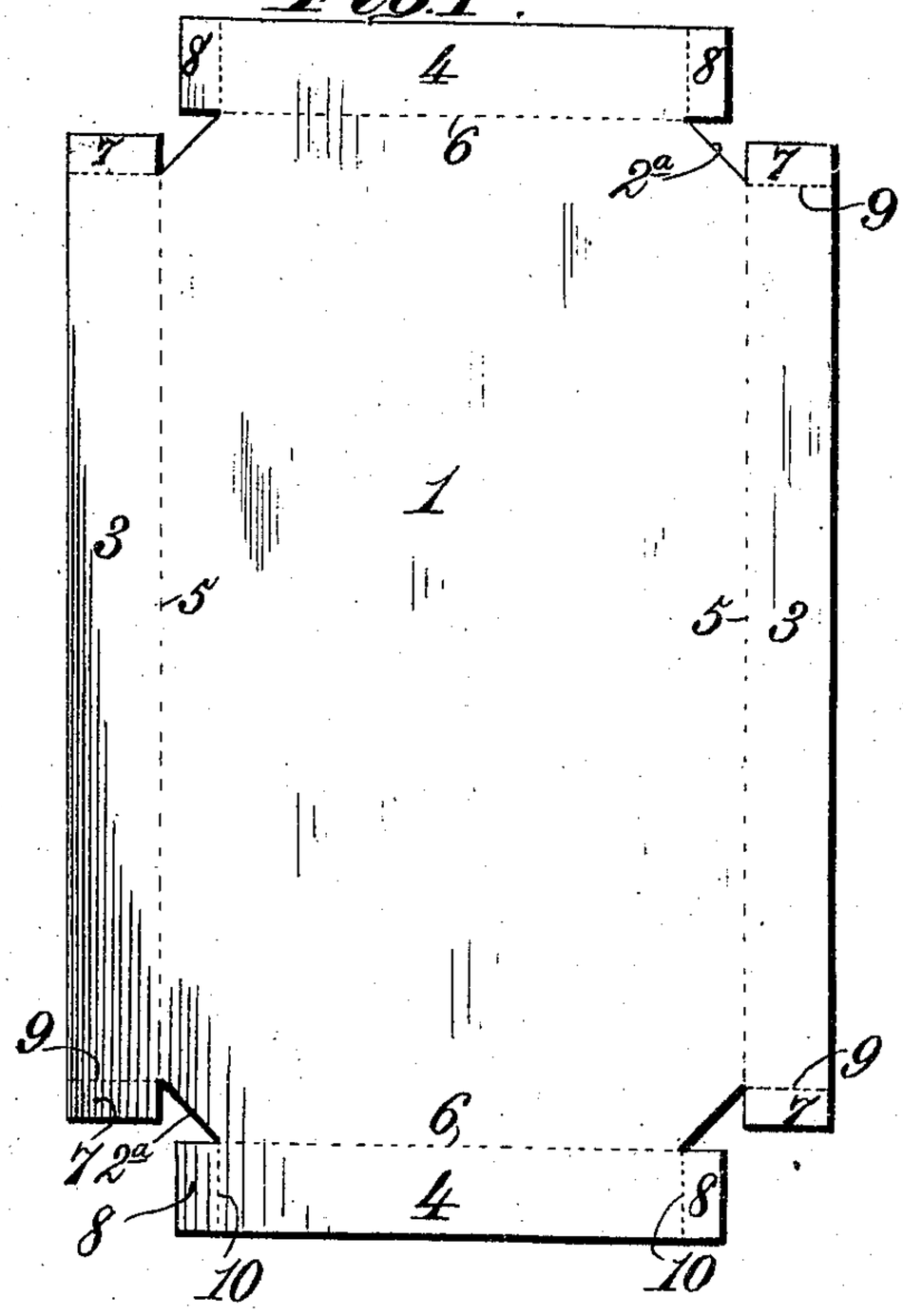


Fig. 2.

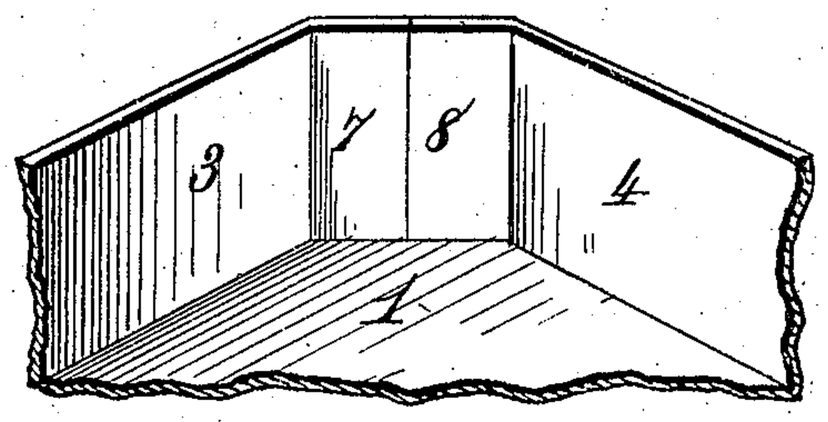


Fig. 3.

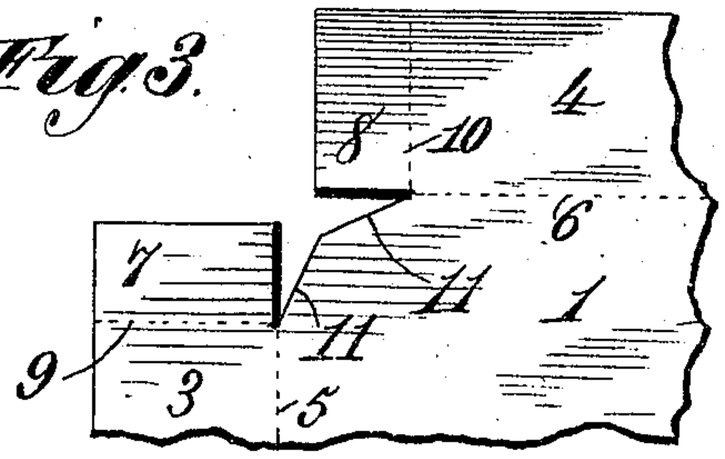


Fig. 4.

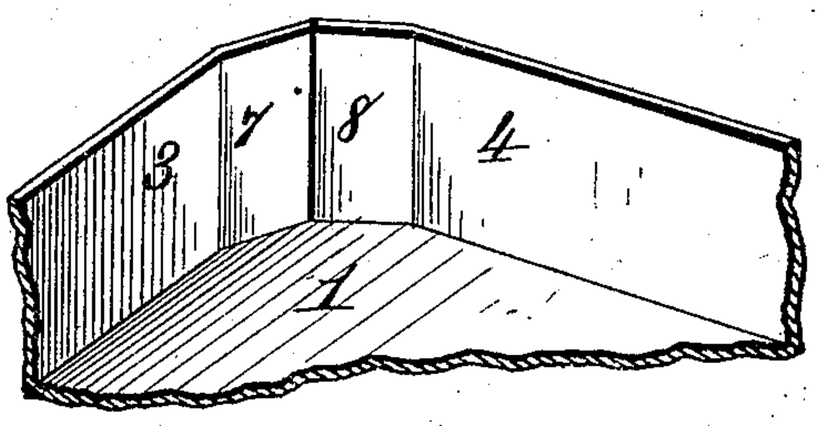


Fig. 5.

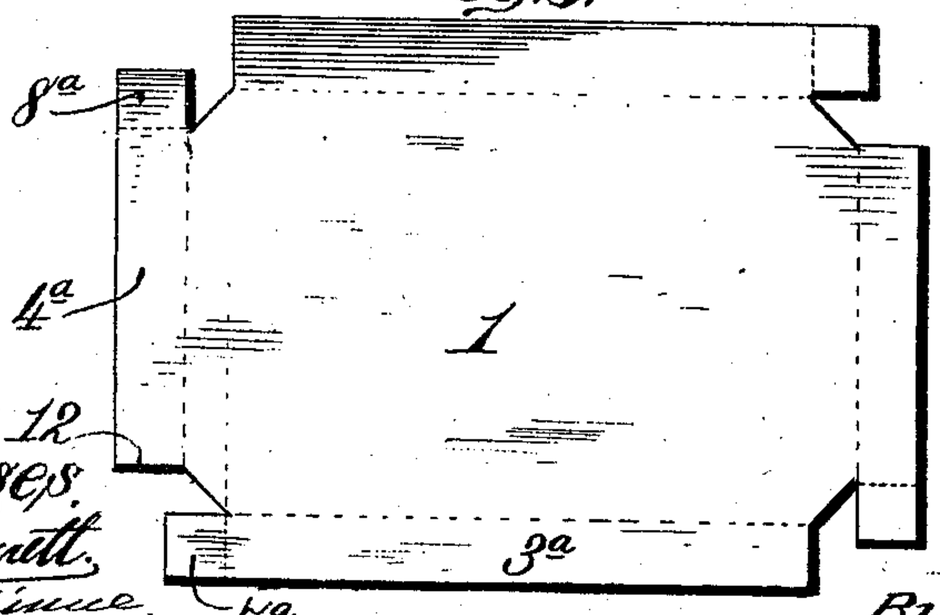
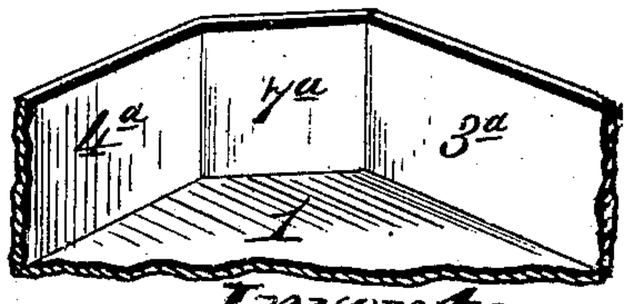


Fig. 6.



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No. 693,169. Patented Feb. 11, 1902.

H. B. SMITH.

BLANK FOR PAPER BOXES.

(Application filed Sept. 12, 1899.)

(No Model.) 2 Sheets—Sheet 2.

Fig. 7.

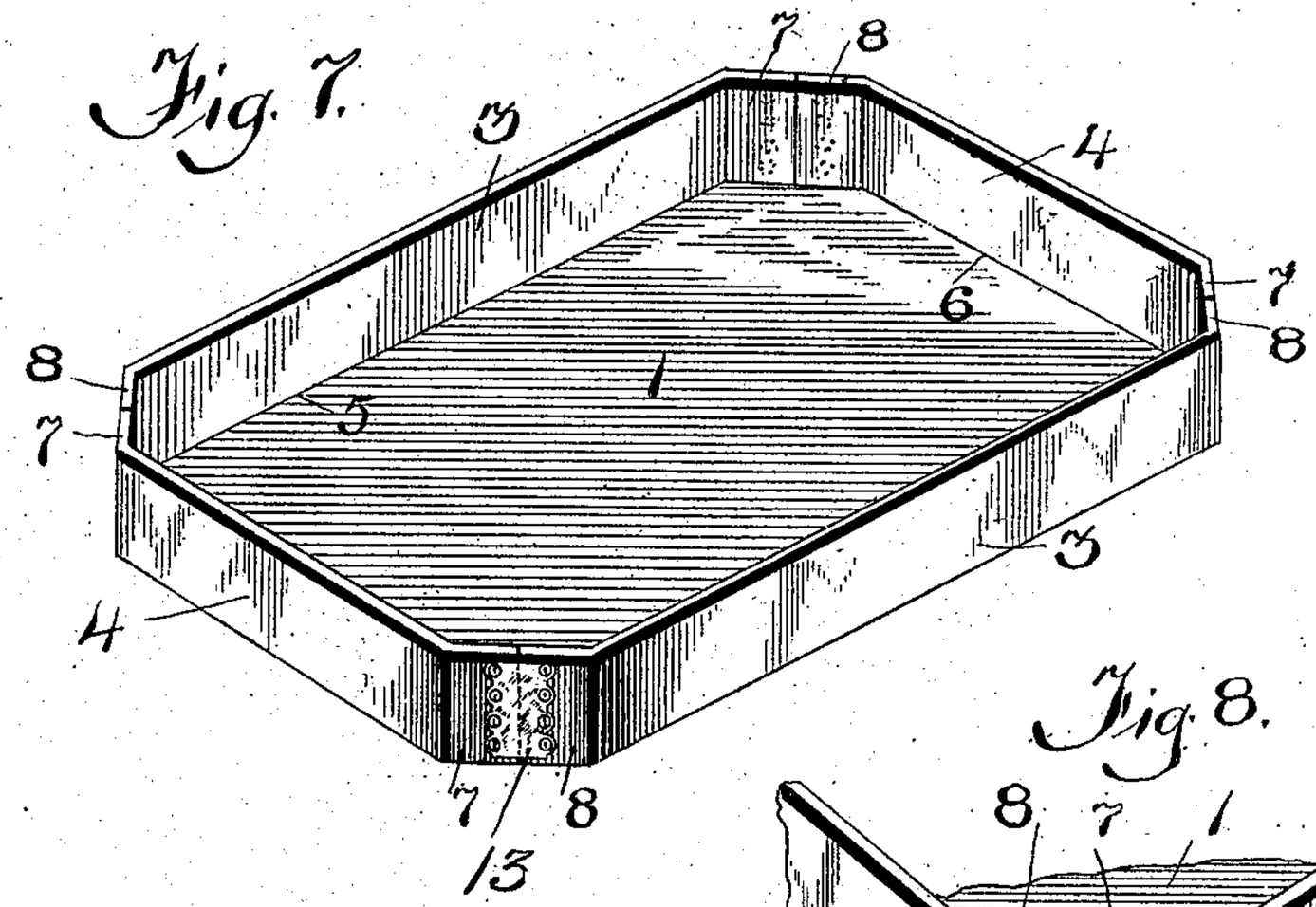


Fig. 8.

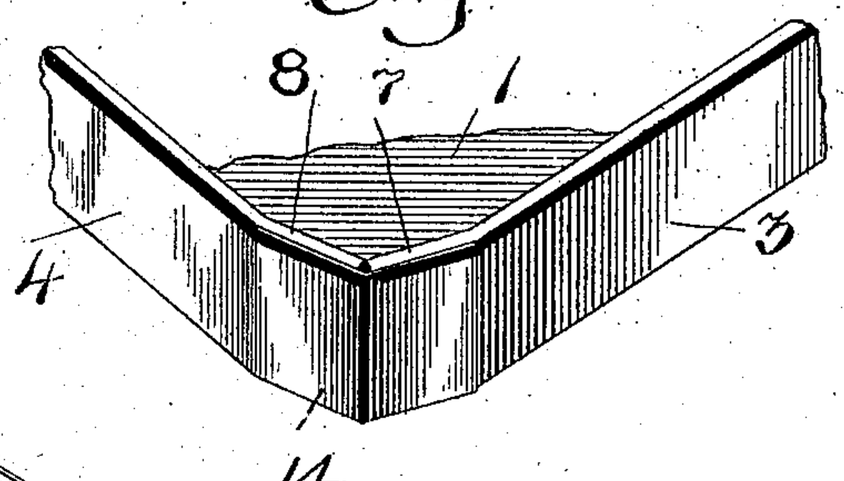
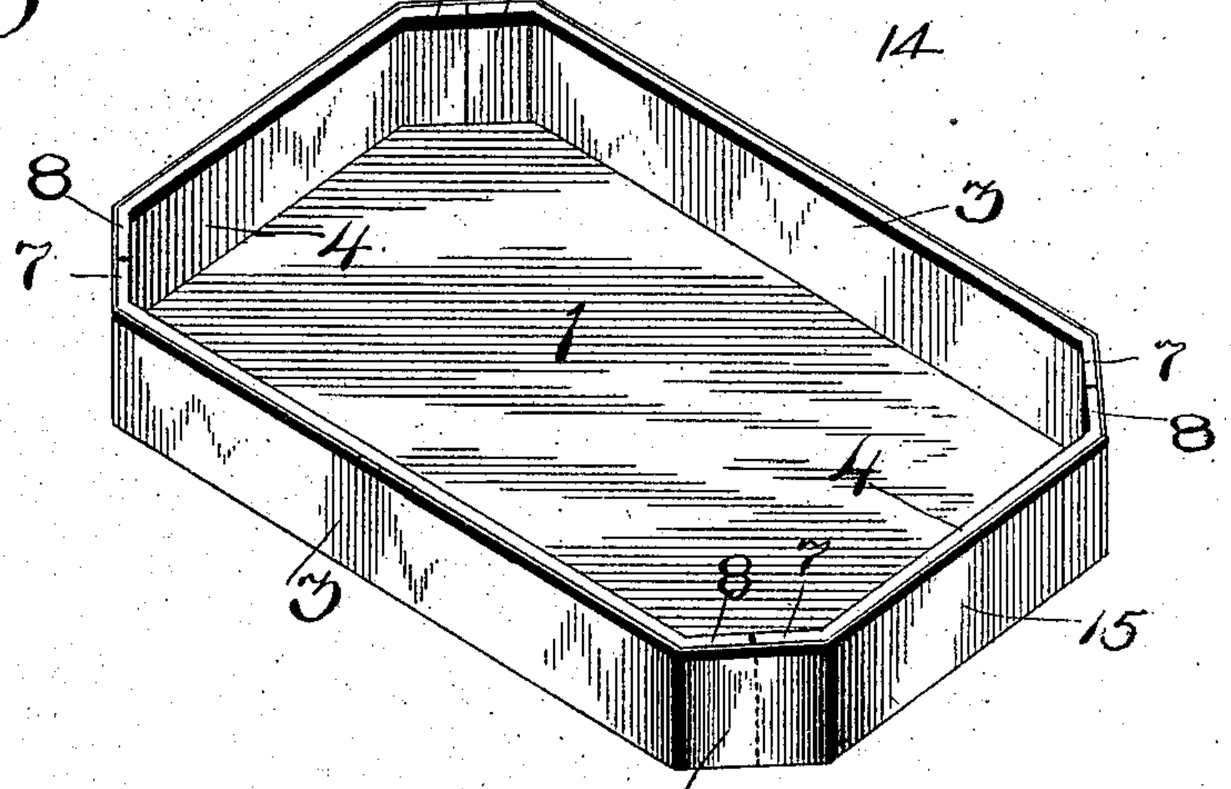


Fig. 9.



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UNITED STATES PATENT OFFICE.

HARRY B. SMITH, OF NEW YORK, N. Y.

BLANK FOR PAPER BOXES.

SPECIFICATION forming part of Letters Patent No. 693,169, dated February 11, 1902.

Application filed September 12, 1899. Serial No. 730,232. (No model.)

To all whom it may concern:

Be it known that I, HARRY B. SMITH, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Blanks for Paper Boxes, of which the following is a specification.

This invention relates to certain new and useful improvements in boxes having ornamental corners and in box-blanks from which said boxes may be formed, and more particularly to blanks for making paper boxes.

It is one object of the invention to provide an inexpensive and readily-constructed blank for forming paper boxes having cut-away corners formed at an angle to the sides and ends of the box, the bottom, sides, and ends of the box being formed from a single blank and the flaps or wings forming said ends and sides being constructed in such manner as to form when folded up and secured in position a smooth unbroken surface around the entire outer edge of the box, no overlapping parts whatever being present in the structure, which constitutes a prominent characteristic of the box.

There exists in the trade at the present time an extensive demand for paper boxes having ornamental corners, and particularly boxes wherein the corners are cut away at an angle to the sides and ends of the box; but as heretofore constructed such boxes have been too expensive to enable their general use in connection with articles sold at a nominal price. Furthermore, such boxes as heretofore constructed, so far as I am aware, are formed with overlapping portions or edges at the corners, which render the latter uneven, cumbersome, or bulky, prevent the top or cover of the box from forming a tight joint at the corners of the latter, and otherwise detract generally from the neatness and desirability of the box.

The present invention therefore comprises a box-blank made from paper, cardboard, or other suitable material and consisting of a body portion of any desired shape, having its corners cut away at an angle to the sides and ends of that portion of the blank designed to form the bottom of the box and provided with integral side and end wings or flaps, which latter are cut away at their ends to such a degree or extent that the combined length of all of said wings or flaps will not exceed the distance around the circumference of the said bottom or body portion, so that when they are folded up into position to form the box the adjacent ends of said wings or flaps will practically abut each other to form a close fit, but will not overlap one another, thus producing a smooth, continuous, and unbroken surface around the edges or circumference of the box.

The invention further comprises a novel form of box formed from a blank having a body portion with cut-away corners of any desired shape or configuration and integral side and end wings or flaps, said wings or flaps being folded up into position so that the adjacent edges thereof will abut but not overlap to provide a flush or smooth joint and then secured together by suitable fastening means, as hereinafter described in detail.

In order to enable others to construct box-blanks or boxes in accordance with my invention, I will describe the same in detail, reference being had for this purpose to the accompanying drawings, wherein—

Figure 1 is a plan view of one of my improved box-blanks. Fig. 2 is a perspective view of one corner of a box formed from the improved blank shown in Fig. 1. Fig. 3 is a plan view of one corner of a slightly-modified form of blank. Fig. 4 is a perspective view of one corner of a box formed from the blank shown in Fig. 3. Fig. 5 is a plan view of a blank similar to that shown in Fig. 1, but illustrating a slightly-modified manner of forming the side and end flaps or wings. Fig. 6 is a perspective view of one corner of a box formed from the blank shown in Fig. 5. Fig. 7 is a perspective view of a box made according to my invention from the blank shown in Fig. 1, the side and end flaps being secured by a metal corner-clip. Fig. 8 is a similar view of one corner of a box, showing the abutting edges of the flaps secured together by a short strip of paper pasted to said flaps. Fig. 9 is a similar view showing the abutting edges of the flaps as being secured together by a strip of covering-paper which is pasted or glued entirely around the outer edge or circumference of the box.

Referring to the drawings, the reference-nu-

meral 1 indicates the body of the blank, which in the present instance is shown as being rectangular in shape; but I wish it understood that I do not confine myself to any particular shape of blank, for obviously the shape and general outline of the blank may be varied at will without departing from my invention, the novel features of which I will now describe.

Referring to Fig. 1, the corners of the blank 1 are chamfered, beveled, or cut away at an angle to the sides and ends of that portion designed to form the bottom of the box, as indicated at 2^a, and the sides and ends of the blank are provided with integral flaps or wings 3 3 and 4 4, respectively, the body of the blank being scored, cut, or creased along the lines 5 5 and 6 6, where the said end and said flaps or wings join the said body of the blank, to facilitate the folding or upward bending of said flaps or wings during the formation of the box. The opposite free ends 7 and 8 of the side and end flaps, respectively, are cut off in such manner that the maximum length of each flap will be slightly less than the corresponding width and length, respectively, of the body portion of the blank, or, in other words, the combined length of all of said flaps does not exceed the circumference of the said body portion, whereby when the said flaps are folded up into the position shown in Fig. 2 to form the box and the free ends 7 and 8 of said flaps are bent around the chamfered or beveled corners 2^a the adjacent edges of the free ends of said flaps will just meet and abut each other to form a close joint or fit, but will not overlap, and this constitutes an important and prominent characteristic of the invention. To insure the ends of the flaps being bent, so as to accurately conform to the chamfered or beveled corners and to facilitate such bending the said flaps are scored, cut, or creased transversely on the lines 9 9 and 10 10, such scored, cut, or creased lines extending from the outer edges of the flap to the points where the free ends of the latter join the body of the blank.

After the wings have been folded up into position to form the box they can be retained in such position in any suitable manner, as by metal corner-clips, short strips of paper pasted or glued to the corners, or by a surrounding strip of covering-paper, which will be pasted entirely around the outer edge of the box, as clearly shown in Figs. 7, 8, and 9, and owing to the fact that a clean flush joint is formed at the chamfered or beveled corners, no overlapping parts being present, a smooth unbroken surface is provided, which not only adds greatly to the neatness and attractiveness of the box, but also permits the cover or top to form a tight joint with the box at every point.

In Figs. 3 and 4 of the drawings I have illustrated a slightly-modified form of blank, the corners of which instead of being chamfered or beveled off on a straight line, as shown in Fig. 1, are each chamfered or cut away at a compound angle—that is to say, while each corner is cut away at an angle to the sides and ends of the body portion of the blank, instead of being cut away on a straight line it is cut away on two straight lines 11 11, formed at an obtuse angle to one another, the apex of which lies equidistant between the points where the ends of the flaps 3 and 4 join the body of the blank; otherwise the construction of the blank is the same in all respects as that before described, and hence when the side and end flaps are folded up into position to form the box the free ends 7 and 8 of the side and end flaps will conform to the angular sides 11 11 of the corners, and their adjacent edges will just meet and abut each other at the apex of the angle formed by the sides 11 11 to form a close joint or fit in the manner before described.

In Figs. 4 and 5 I have illustrated a slightly further modified manner of constructing the blank. As shown in Fig. 4, the blank is formed in precisely the same manner as the blank shown in Fig. 1, excepting that instead of cutting off the opposite ends of the side and end flaps 3^a and 4^a in such manner that each will project beyond the points intersected by the chamfered or beveled corners only one end of each flap shall project in such manner, as indicated at 7^a and 8^a, the opposite end 12 being cut off at the point where the flap is intersected by the chamfered or beveled corner, the relative proportions of the flaps and body of the blank, nevertheless, being still retained in such manner that the combined length of all the side and end flaps shall not exceed the circumference of the body portion of the blank, whereby when the flaps are folded up into position to form the box the free ends 7^a and 8^a will conform to the chamfered or beveled corners of the blank and their vertical edges will just meet and abut the corresponding edges 12 of the adjacent flaps in the same manner and for the purpose before described.

In each of the different forms of blanks shown and described the flaps are scored, cut, or creased transversely, as shown, to facilitate folding the free ends of the flaps and to cause them to accurately conform to the chamfered or beveled corners of the blank, such lines of scoring in each instance being formed at the points where the ends of the chamfered or beveled corners join the flaps.

In Figs. 7, 8, and 9 of the drawings I have shown several ways of securing the abutting edges of the flaps in position for the formation of the box, as heretofore briefly alluded to. One manner of means comprises a metal clip 13, having openings punched therefrom upon opposite sides, leaving sharp edges or burs projecting therefrom which are forced into the material of the flaps and clenched upon the inside of the box, as best seen in Fig. 7. When applied, the fastening-clips cover the joint formed by the abutting edges of the flaps and hold the parts in a close and firm manner. The metal clip herein shown

is the one I prefer to employ; but I do not wish to be understood as limiting myself to such form of clip, for it will be obvious that any clip having prongs or burs extending therefrom may be equally as well employed.

Instead of using the metal clips shown in Fig. 7 I may paste or glue short strips of covering-paper 14 over the abutting edges of the flaps at the corners, as illustrated in Fig. 8, or I may employ a surrounding strip of covering-paper 15, which will be pasted or glued entirely around the outer edge or circumference of the box, as shown more clearly in Fig. 9.

As before stated, I do not wish to be understood as limiting myself to any particular form or shape of blank, for obviously the general shape and configuration of the blank may vary to suit different demands without departing from the spirit of my invention, the essential feature of which is to provide a box with chamfered or beveled corners and a continuous smooth and unbroken outer edge or wall entirely free from projections and the like, such as are usually present in boxes having overlapping portions at the corners.

What I claim, and desire to secure by Letters Patent, is—

1. A paper-box blank formed from a single sheet, comprising a body portion having the corners thereof cut away at an angle to the sides and ends respectively of said body portion and provided with integral side and end flaps, the maximum length of said flaps being slightly less than the maximum length and width respectively of the body portion of the blank, so that when said flaps are folded into position for the formation of the box the adjacent edges of the side and end flaps will abut or meet at the said angular corners of the box, but not overlap, substantially as described.

2. A paper-box blank formed from a single sheet, comprising a body portion having the corners thereof cut away at an angle to the sides and ends respectively of said body portion and provided with integral side and end flaps, said flaps being scored or creased transversely at the points intersected by the ends of the cut-away corners, the maximum length of said flaps being slightly less than the maximum length and width respectively of the body portion of the blank, so that when said flaps are folded up in position for the formation of the box the adjacent edges of the side and end flaps will abut or meet at the said angular corners of the box but not overlap, substantially as described.

3. A paper-box blank for forming boxes having angular corners, comprising a body portion having the corners thereof cut away on a compound angle to the sides and ends respectively of the said body portion and provided with integral side and end flaps, the maximum length of said flaps being slightly less than the maximum length and width respectively of said body portion of the blank, so that when said flaps are folded up into position for the formation of the box the adjacent edges of the side and end flaps will abut or meet at the said angular corners of the box but not overlap, substantially as described.

4. As a new article of manufacture, a paper box formed from a single blank, said blank comprising a body portion having the corners thereof cut away, and provided with integral side and end flaps, the maximum length of said flaps being slightly less than the maximum length and width respectively of the body portion of the blank, said flaps being folded up in position for the formation of the box so that the adjacent edges thereof will abut each other at the said cut-away corners but not overlap, and means for fastening the said abutting ends of the flaps together, substantially as described.

5. As a new article of manufacture, a paper box formed from a single blank, said blank comprising a body portion having the corners thereof cut away, and provided with integral side and end flaps, the maximum length of said flaps being slightly less than the maximum length and width respectively of the body portion of the blank, said flaps being folded up in position for the formation of the box so that the adjacent edges thereof will abut each other at the said cut-away corners but not overlap, and fastening means covering the said abutting edges of the flaps and secured to the latter on opposite sides, substantially as described.

6. As a new article of manufacture, a paper box formed from a single blank, said blank comprising a body portion having the corners thereof cut away, and provided with integral side and end flaps, the maximum length of said flaps being slightly less than the maximum length and width respectively of the body portion of the blank, said flaps being folded up in position for the formation of the box so that the adjacent edges thereof will abut each other at the said cut-away corners but not overlap, and metallic corner-clips covering the said abutting edges of the flaps and having portions thereof embedded in the said flaps to hold the parts intact, substantially as described.

7. As a new article of manufacture, a paper box formed from a single blank, said blank comprising a body portion having the corners thereof cut away at an angle to the sides and ends respectively of said body portion and provided with integral side and end flaps, the maximum length of said flaps being slightly less than the maximum length and width respectively of the body portion of the blank, said flaps being folded up in position for the formation of the box so that the adjacent edges thereof will abut each other at the said angular corners but not overlap, and means for fastening the said abutting ends of the flaps together, substantially as described.

8. As a new article of manufacture, a paper

box formed from a single blank, said blank comprising a body portion having the corners thereof cut away at an angle to the sides and ends respectively of said body portion and provided with integral side and end flaps, the maximum length of said flaps being slightly less than the maximum length and width respectively of the body portion of the blank, said flaps being folded up in position for the formation of the box so that the adjacent edges thereof will abut each other at the said angular corners but not overlap, and fastening means covering the said abutting edges of the flaps and secured to the latter on opposite sides, substantially as described.

9. As a new article of manufacture, a paper box formed from a single blank, said blank comprising a body portion having the corners thereof cut away at an angle to the sides and ends respectively of said body portion and provided with integral side and end flaps, the maximum length of said flaps being slightly less than the maximum length and width respectively of the body portion of the blank, said flaps being folded up in position for the formation of the box so that the adjacent edges thereof will abut each other at the said angular corners but not overlap, and metallic corner-clips covering the said abutting edges of the flaps and having portions thereof embedded in the said flaps to hold the parts intact, substantially as described.

10. A box formed from a single blank, comprising a body portion having cut-away corners and integral side and end flaps, the combined length of all of said flaps not exceeding the circumference of said body portion of the blank, so that when said flaps are folded up into position for the formation of the box the adjacent edges thereof will not overlap each other, and means for securing the said adjacent edges of the flaps together.

11. A box formed from a single blank, comprising a body portion having the corners thereof cut away at an angle to the sides and ends respectively of said body portion and provided with integral side and end flaps, the combined length of all of said flaps not exceeding the circumference of the said body portion of the blank, so that when said flaps are folded up into position for the formation of the box the adjacent ends thereof will not overlap each other, and means for securing the said adjacent ends of the flaps together.

12. A box-blank comprising a body portion having the corners thereof cut away at an angle to the sides and ends respectively of said body portion and provided with integral side and end flaps, the combined length of all of said flaps not exceeding the circumference of the said body portion of the blank, so that when said flaps are folded up into position for the formation of a box the adjacent edges thereof will not overlap each other.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

HARRY B. SMITH.

Witnesses:
DIEDRICH ABBES,
ELDRIDGE J. SMITH.