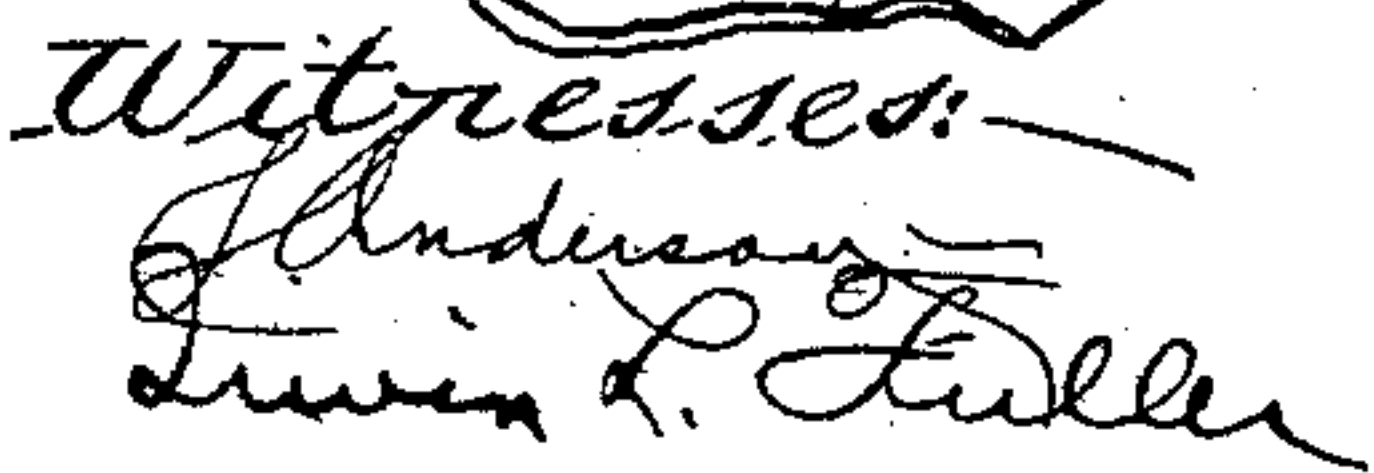


PAPER BAG.

908,380.

Patented Dec. 29, 1908.

2 SHEETS--SHEET 1.



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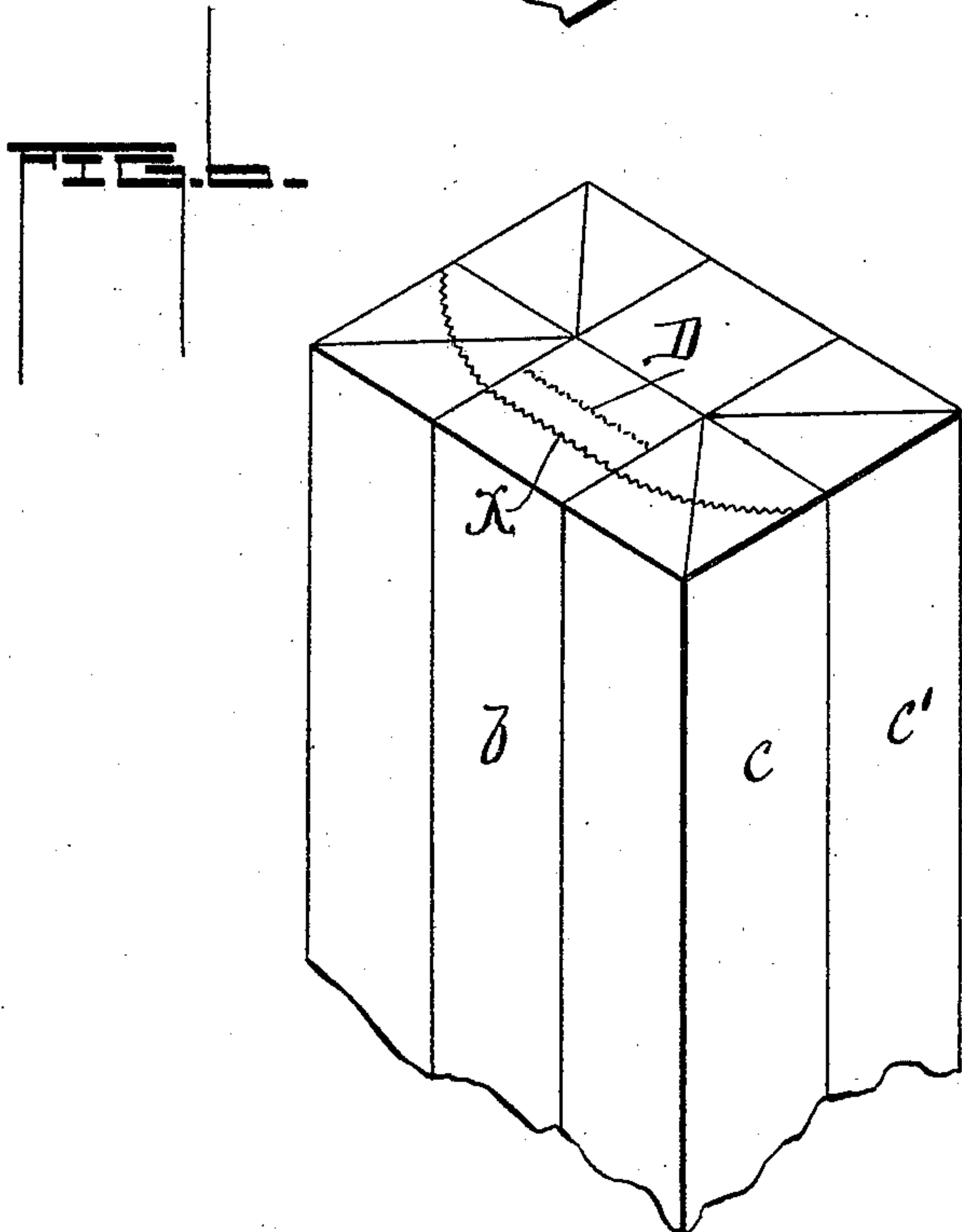
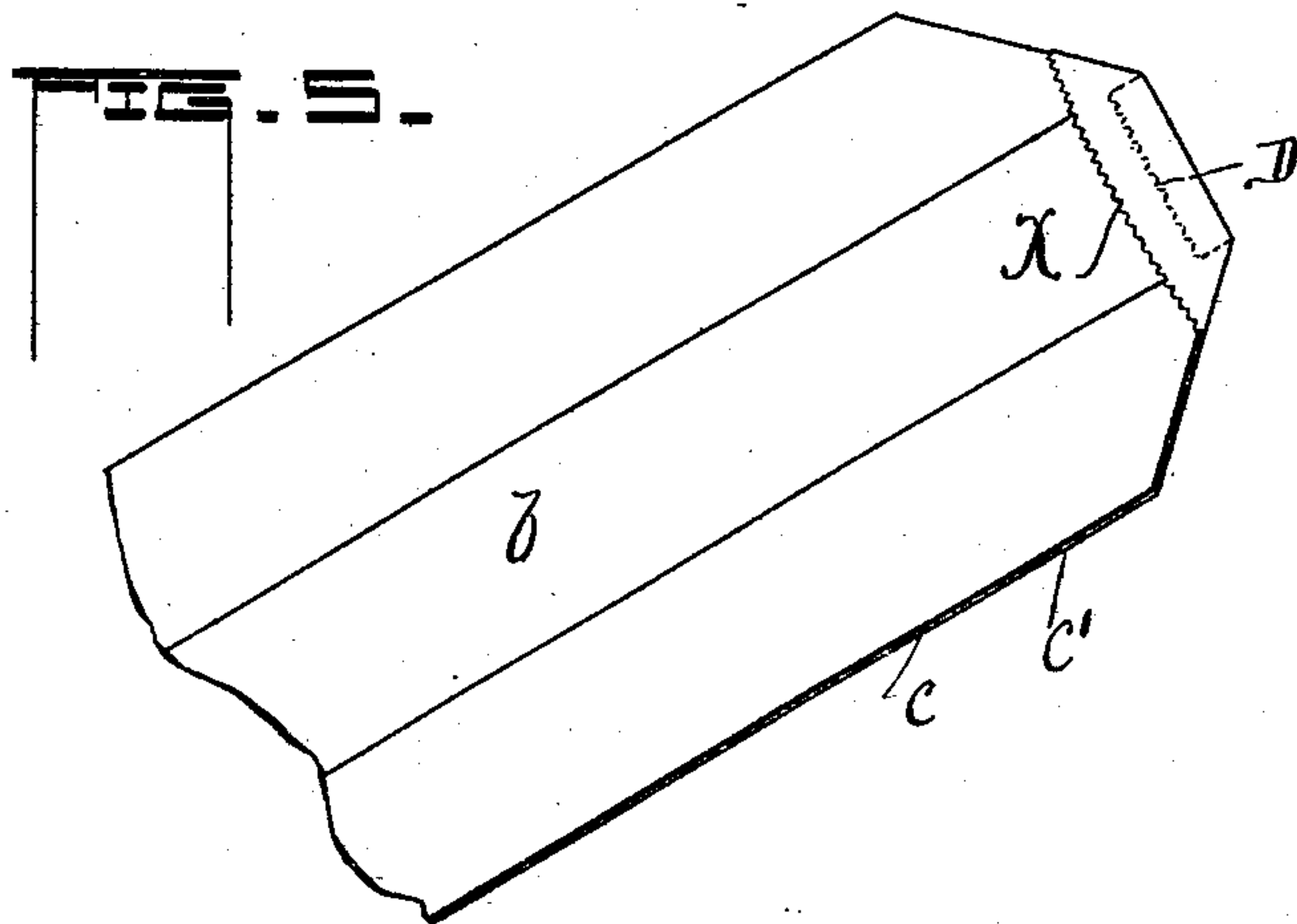
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APPLICATION FILED MAR. 30, 1906.

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2 SHEETS—SHEET 2.



Witnesses:
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UNITED STATES PATENT OFFICE.

LORENZO D. BENNER, OF PEORIA, ILLINOIS, ASSIGNOR TO THE UNION BAG & PAPER CO., OF NEW YORK, N. Y., A CORPORATION OF NEW JERSEY.

PAPER BAG.

No. 908,380.

Specification of Letters Patent.

Patented Dec. 29, 1903.

Application filed March 30, 1906. Serial No. 308,914.

To all whom it may concern:

Be it known that I, LORENZO D. BENNER, a citizen of the United States, residing at Peoria, in the county of Peoria and State of Illinois, have invented certain new and useful Improvements in Paper Bags; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention has reference to certain new improvements in paper bag construction and has for its object an improved square or satchel bottom bag which is reinforced, as fully described hereinafter.

The construction of bag herein shown and claimed is an improvement upon the paper bag patented by me in Sept. 1884 and numbered 304,403.

That the invention may be more fully understood reference is had to the accompanying drawings, in which:—

Figure 1 is a section of a continuous tube showing the manner in which the sides are folded, and the construction of the opposite end portions thereof;—Figs. 2, 3, 4, and 5 illustrate the successive foldings of the end, inclosing and sealing the same, and Fig. 6 is a perspective inverted view of the bag.

The bag is preferably made from a continuous tube A, cut into sections in the process of manufacture and infolded at the opposite sides to form the plicated or bellows sides *c* and *c'* of the bag.

In the process of manufacture, each section is severed from the tube in such a manner that the under layer or portion *a* which is separated from the upper layer or portion *b* by the intervening or folded sides *c* and *c'* projects beyond said upper layer, forming an approximately oval shaped lip or tongue extension X, extending between the edges Y, Y the full width of the sections *a* and *b*, and the gum or cement by which the bottom of the bag is sealed is applied to this projecting tongue or lip X; while the upper layer *b*, at the end of the section corresponding to that provided with the lip or tongue extension X is provided with the transverse lip or tongue extension D, disposed centrally thereof and projecting outwardly from the edge of the upper layer *b* to a suitable point, short of the outer edge of the lip X as shown in Fig. 1. The folded sides *c* of the section are preferably severed to correspond to the

length of the upper layer *b*, while the folded sides *c'* are severed so as to be somewhat longer, extending beyond the edge of the folded sides *c* and the upper layer *b* and are shaped, for a purpose to be described.

It is understood that in severing the sections of a bag from a continuous tube that that portion of the section which is cut to form the bottom, corresponds to the open end of an adjacent section forming a separate bag, from which the same is severed, thereby leaving at the opposite end of the bag the rectangular cut out portion D' in the upper layer *b* as shown in Fig. 1 of the drawing.

In the process of manufacturing paper bags as the tube A is moved or projected along a former, the upper layer *b* thereof is adapted to be severed as at *g*, from the opposite edges Y, Y to points W, from which extends outwardly the lip or tongue D as shown; and upon severing the upper layer in manner specified, the upper layer together with the side folds *c* beneath the same, are turned upwardly upon the lines *w'* extending longitudinally of the section, to assume a position extending at an incline or oblique to the body of the section, as shown in Fig. 2, forming the two inclined or oblique webs 3 and 4. In the further movement of the tube, the outer corners of each of the webs, 3 and 4, are then turned outwardly and downwardly upon the diagonal lines Z, Fig. 2, and the triangular tongues 5, thus formed are brought in juxtaposition to the webs 3 and 4 as shown in Fig. 3. The outer corners of the layer *a* and the folded sides *c'* above the layer, are now folded upwardly and inwardly upon the diagonal lines U, U and the triangular tongues 6 thus formed, are brought closely down upon the body portion of the section, while the extended lip portions of the folded sides *c'* are brought against the lower edge of the adjacent vertical tongues, 5, and the lip or tongue X is brought adjacent to the extended portions of the folded side *c*, just previously mentioned, bringing the lip D of the upper layer *b* and the lip X of the lower layer *a* into the position, somewhat as shown in Fig. 4, the said lip D and central body portion of the lip X being bent upwardly on the line S as shown. Each web 3 and 4 is now turned outwardly and flat upon the side fold beneath it, which will cause the lip D to which

the gum or cement has been applied and the lip X to bend down upon the face of the upper layer *b*, as shown in Fig. 5 to which they will adhere after pressure thereon. By this series of operations the projecting edge or lip X of the layer *a* and the projecting lip D of the layer *b* are folded down and cemented to each other and the layer *b* of the bag, while the corners or ends are infolded as shown, forming a square or satchel bottom when opened out as shown in Fig. 6.

In my former patent, which has been referred to, the bottom of the bag when completed was not reinforced and had a double bottom as is intended and is the case in the present invention. The transverse tongue X in the patent above mentioned was very short, in fact only long enough to extend over and be cemented to the edge of the opposite or shorter side of the bag. While in the present invention the lip or tongue X is made longer, because the upper layer *b* is cut much shorter and is provided with the lip or tongue D allowing the tongues to be intumed much farther than in the previous patent, which not only adapts the lip or tongue X to be folded much farther over onto the upper layer *b* of the bag, but is reinforced by means of the lip D and the arc shaped extensions of the side folds *c'* which also serve as a reinforcement for the bottom and provides a better means for securing the parts of the bottom when they are folded and cemented together, in the manner described.

Having thus fully described my invention, what I claim and desire to secure by Letters Patent of the United States, is:—

1. A paper bag having plicated sides and satchel bottom, one portion of the bottom projecting beyond the other so as to form a tongue X extending transversely across the same the full width thereof, the opposite portion having a tongue D extending only part way across the same and beyond the normal edge of that portion of said bag, both of said

tongues being folded on a line even with the edge of that portion of the bottom from which the tongue D extends, and the first having its corners folded inwardly between the plications.

2. A paper bag having plicated sides and satchel bottom, one portion of the bottom having a projecting tongue extending the full width of the bag, the opposite portion having a shorter and narrower tongue, the ends of the plication of that portion of the bag from which the narrower tongue extends being folded back upon themselves along diagonal lines, the ends of the opposite plications being folded over on oblique lines in such manner as to bring the two tongues adjacent each other, and the intumed portions of the plications first mentioned, and the tongues then correspondingly folded on a line even with the edge of that portion of the bag from which the narrower tongue extends, forming a reinforcement for the central bottom portion of said bag.

3. A paper bag having plicated sides, and a satchel bottom, one side of the bag adjacent the bottom end being extended beyond the other to form a tongue or flap, the full width of the bag, and the other side of the bag, together with the adjacent plications, being cut off normal to the edges at both sides of the center, the central uncut portion forming a projecting flap or tongue of less width than the first, the corners of the plications, on either side of the narrow flap being turned back against themselves, and both flaps being folded over along a line even with the edges of the cut portions on either side of the narrow flap, the wide flap overlying the intumed corners of the plications, and the narrow flap.

In testimony whereof I affix my signature in presence of two witnesses.

LORENZO D. BENNER.

Witnesses:

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ROBERT N. McCORMICK.