

No. 659,601.

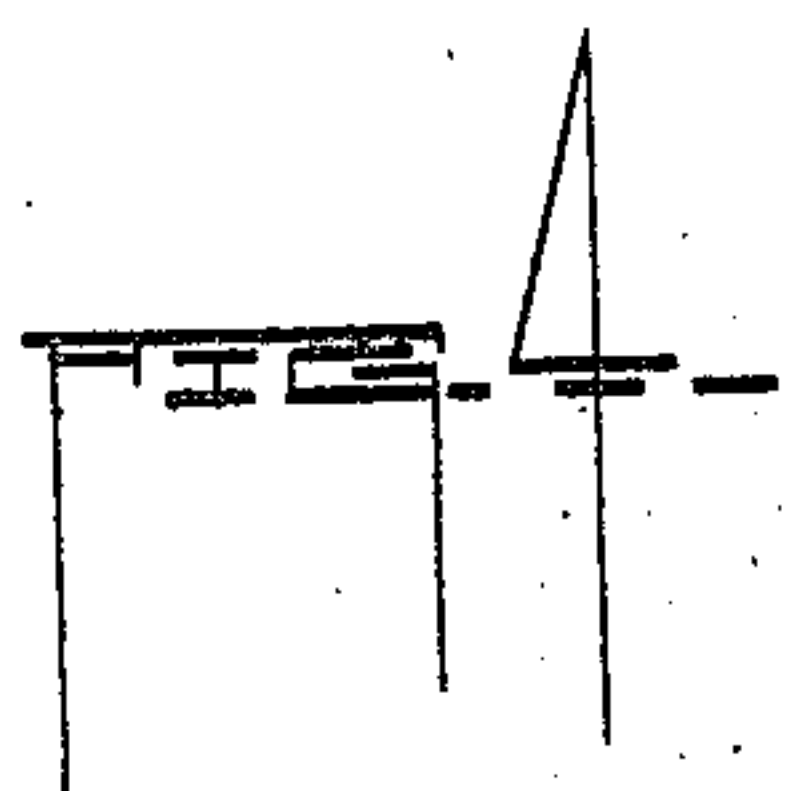
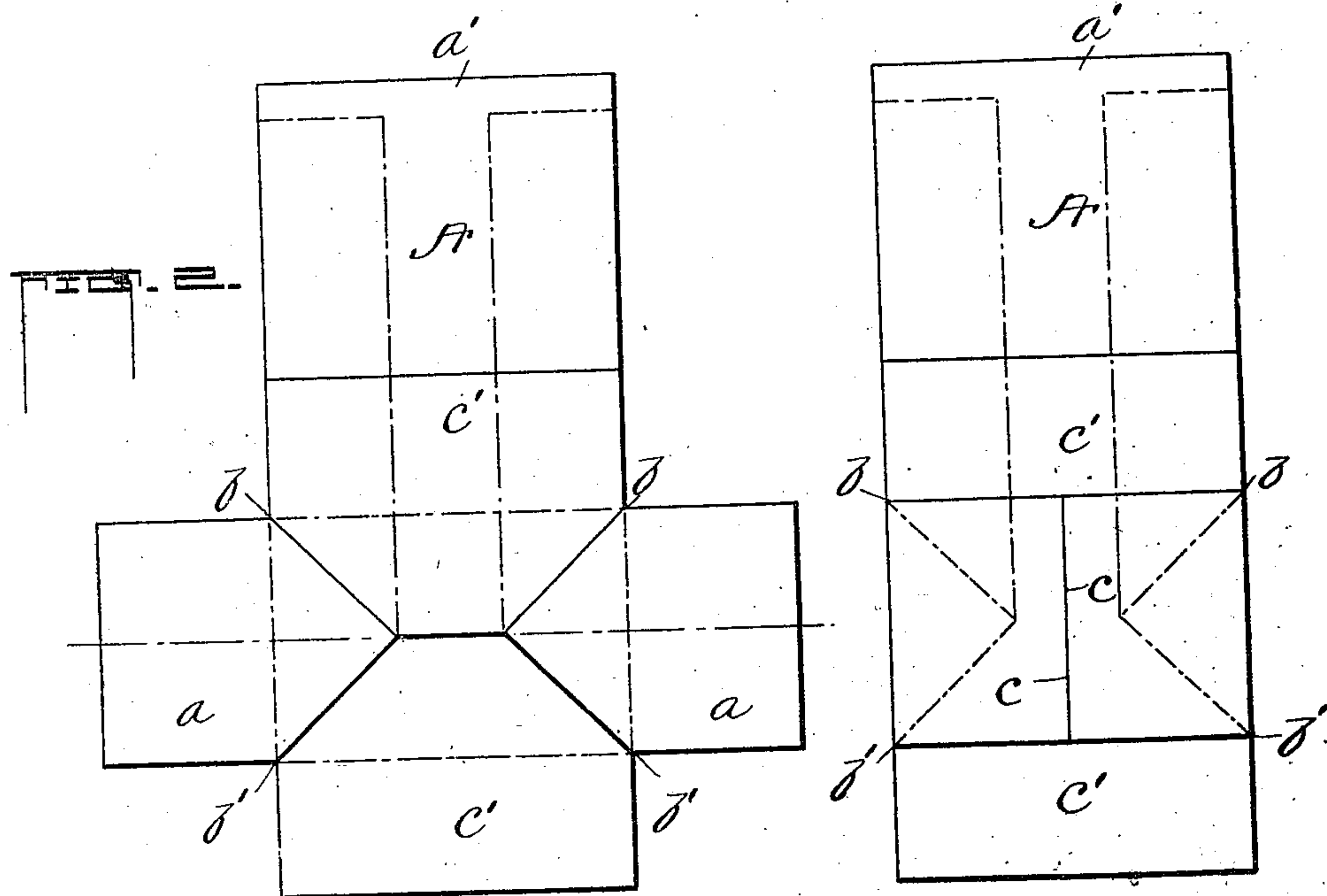
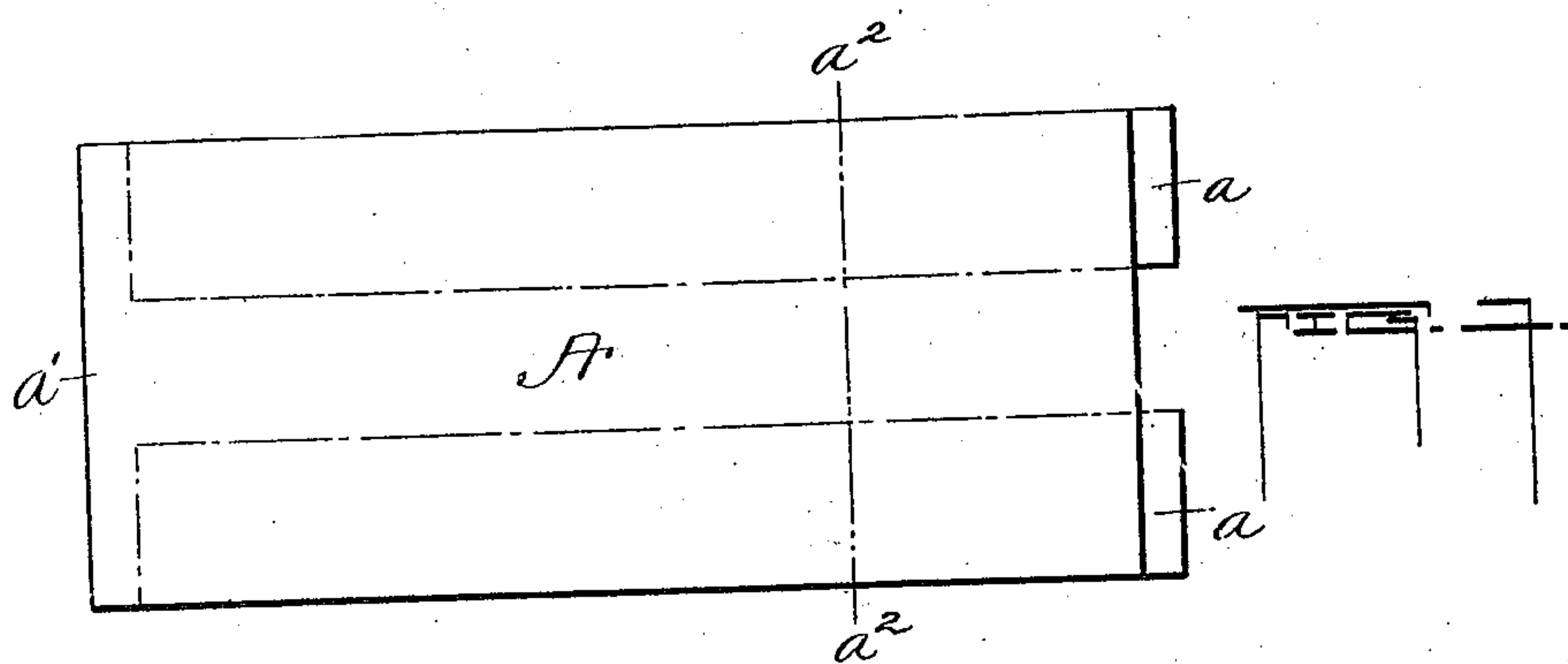
Patented Oct. 9, 1900.

L. D. BENNER.

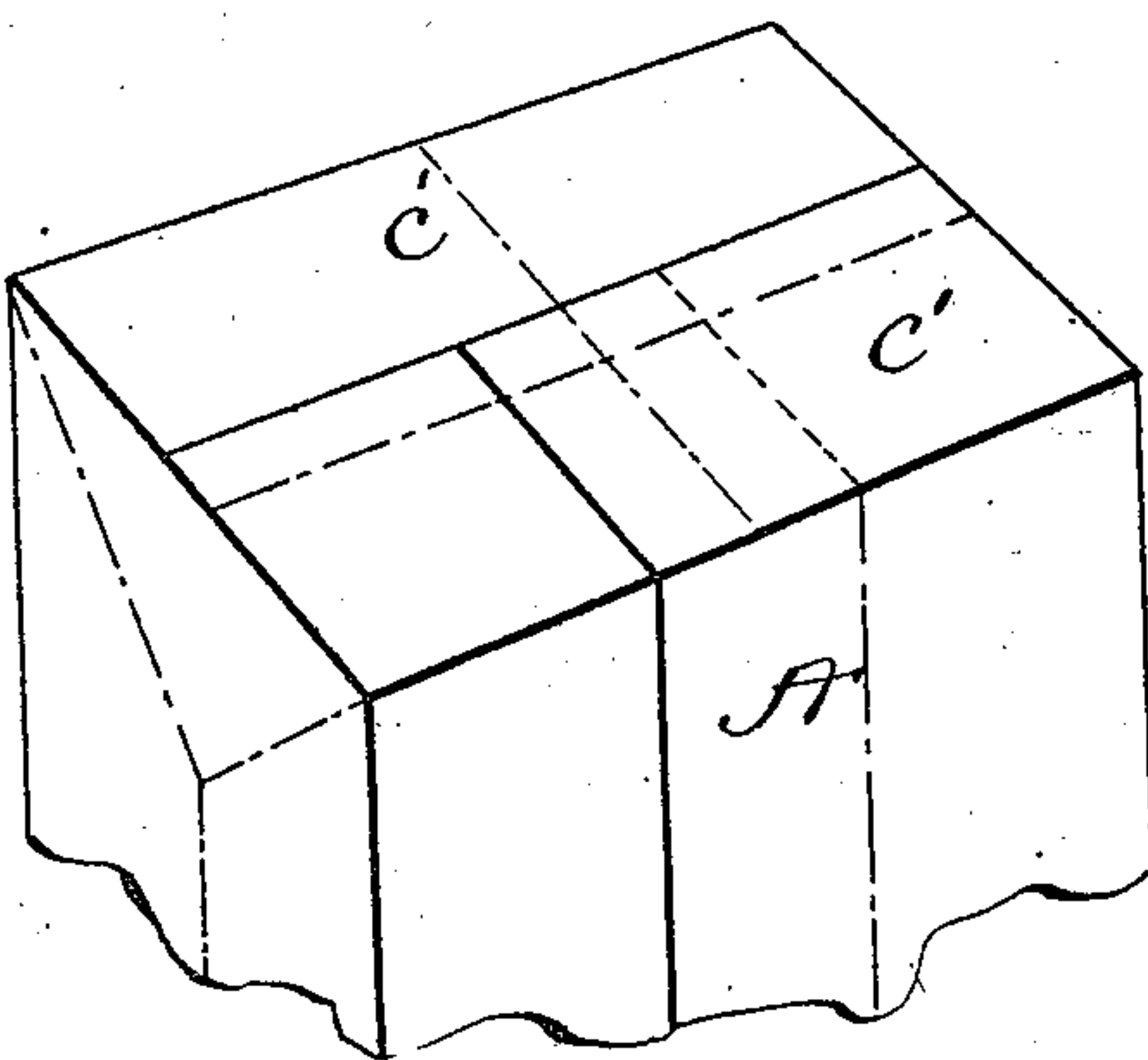
PAPER BAG.

(Application filed May 29, 1899.)

(No Model.)



Witnesses:
J. M. New
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UNITED STATES PATENT OFFICE.

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PAPER BAG.

SPECIFICATION forming part of Letters Patent No. 659,601, dated October 9, 1900.

Application filed May 29, 1899. Serial No. 718,696. (No model.)

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 the formation and separation of tubular bag-blanks preparatory to the formation of the bottoms therefor and separating the bag into suitable lengths so that the necessary creases may be imparted to the bag at its bottom, which will cause the bag when distended to be filled to assume a rectangular form.

More particularly my invention relates to a bag-blank arranged to be severed from an endless web of paper or other suitable material that is folded on longitudinal lines by suitable means into bellows-sided tubular form, as is shown in the drawings, and where in the formation of the bottom a waste of paper will be reduced to a minimum.

The invention consists, essentially, in severing a bag length from an endless web of paper, so as to leave at one end extended bellows-sided portions and at the opposite end shortened bellows sides equal to the extended end at the opposite end, forming the sides of the bag length, to have extended side portions opposite to the protruding bellows-sided extensions and with shortened sides at its opposite end equal to the side extensions at the opposite end of the bag length, the object being in severing the length from a web of paper that from each succeeding bag length the separation will be such as to leave protruding or end extensions of the bellows sides at one end and at the opposite end end extensions of the sides of the bag.

In the drawings I have illustrated the various steps of the method of producing this bag.

Figure 1 is a plan view showing the manner of cutting the tube or forming the same into convenient lengths. Fig. 2 is a view showing the manner of cutting the corners of

the bellows folds so as to form the sectional bottom portions. Fig. 3 is a further step in the process wherein the bellows side extensions are folded back toward the center and having matching end portions centrally disposed. Fig. 4 is a perspective view of the bottom portion of the bag as it appears when the bag is open or filled.

The bag-blank A, previous to the formation of the bottom, is suitably cut from a strip in such a manner as to leave at one end the protruding end extensions *aa* of the bellows folds and at the opposite end the side extensions *a'*, equal in length over the bellows sides to the protruding bellows side extensions at the opposite end. In the process of completing the bag after the same has been severed in length, as described, the same is creased on the line *a²* to aid in making the preliminary folds, and incisions or cuts are made in the corners of the inward bellows folds to a suitable point on their lengths, as at *b b'*, which will separate the sides from the bellows folds, as is shown in Fig. 2, the abutting extensions *aa* thus produced having the advantage of bracing the bottom of the bag. The next step in the operation is to return the bellows side extensions *aa*, inwardly folding them on parallel lines with the edges of the bag, the remainder of their lengths being such as to cause them to have the centrally-disposed abutting ends *cc* when folded down, which is clearly seen in Fig. 3, and then by folding over the side extensions *c' c'*, formed by the incisions made in the corners of the bellows sides on parallel lines with the lengths of the bellows folds extensions as they are laid down, the extensions *c' c'* will have overlapping portions a short distance from the center of the bottom on opposite sides. Thus it will be seen that by the preliminary step of so cutting the bag length as to leave protruding end extensions I am enabled when separating the sides from the bellows folds by making suitable incisions, as herein set forth, to form a single bottom by the matching ends *aa* and to form an auxiliary bottom therefor by folding over the side laps *c' c'*, which overspread the laps *aa*, which are purposed to overlap a short distance and be pasted down.

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

5 The herein, described bellows-sided bag-
blank, having the bellows-sided extensions a ,
and the oppositely-protruding side extensions
 a' , the crease on the line a^2 , the incisions or
cuts in the corners of the inward bellows folds
to a point as at b, b' , forming the overlapping

extensions c', c' , and the abutting extensions 10
 a, a , in the bellows and side portions, for the
purpose described.

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

LORENZO D. BENNER.

Witnesses:

CHARLES CHARVAT,
L. W. ALLISON.