

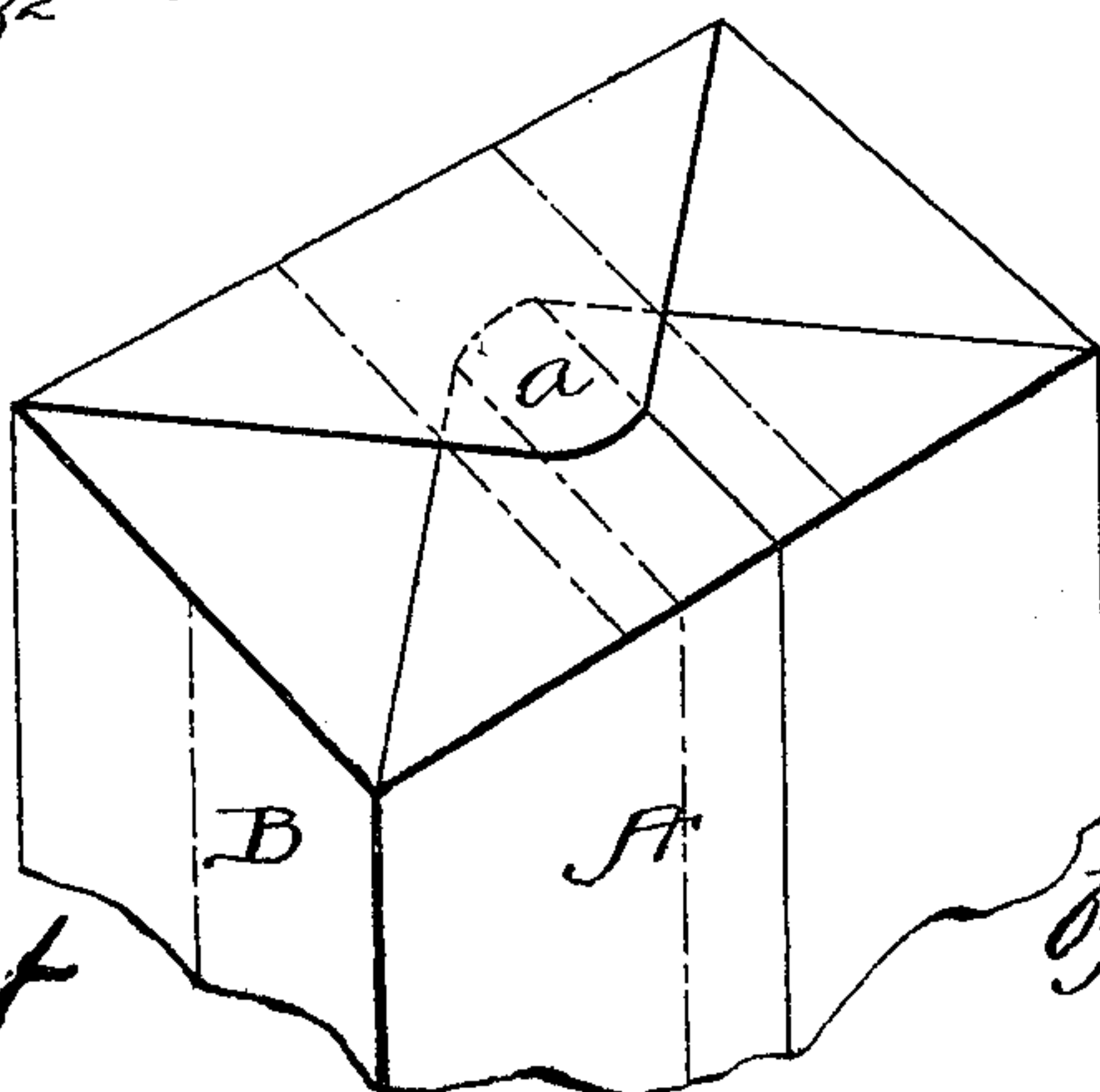
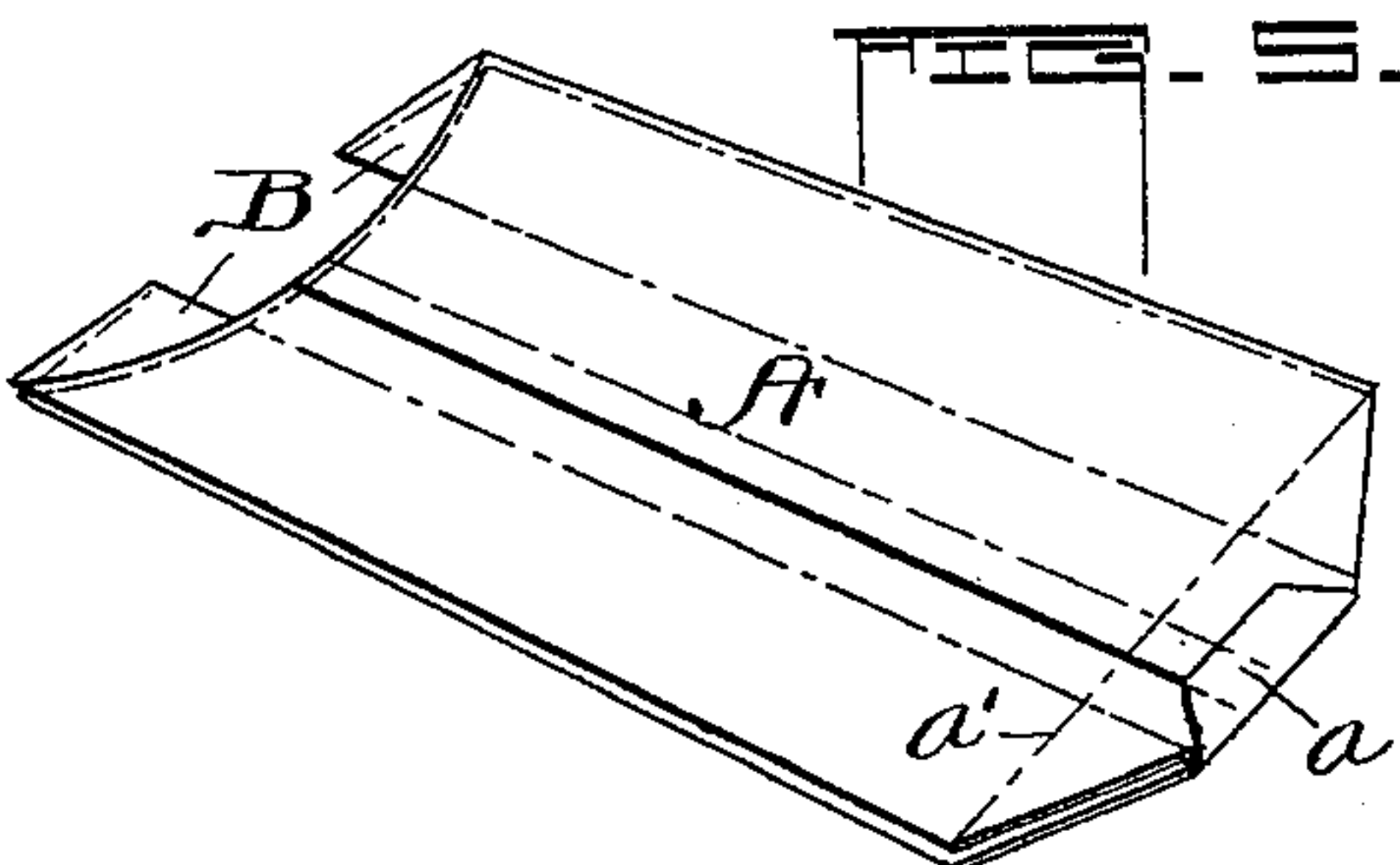
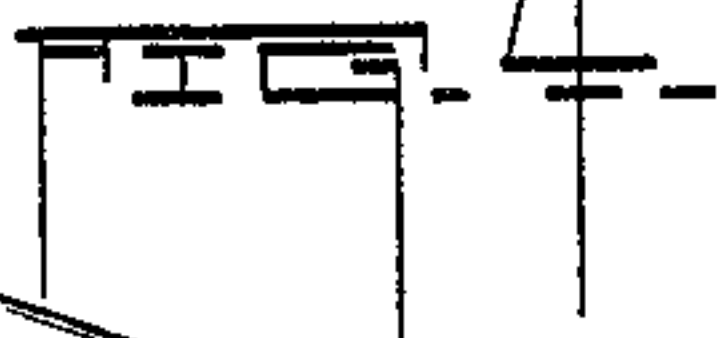
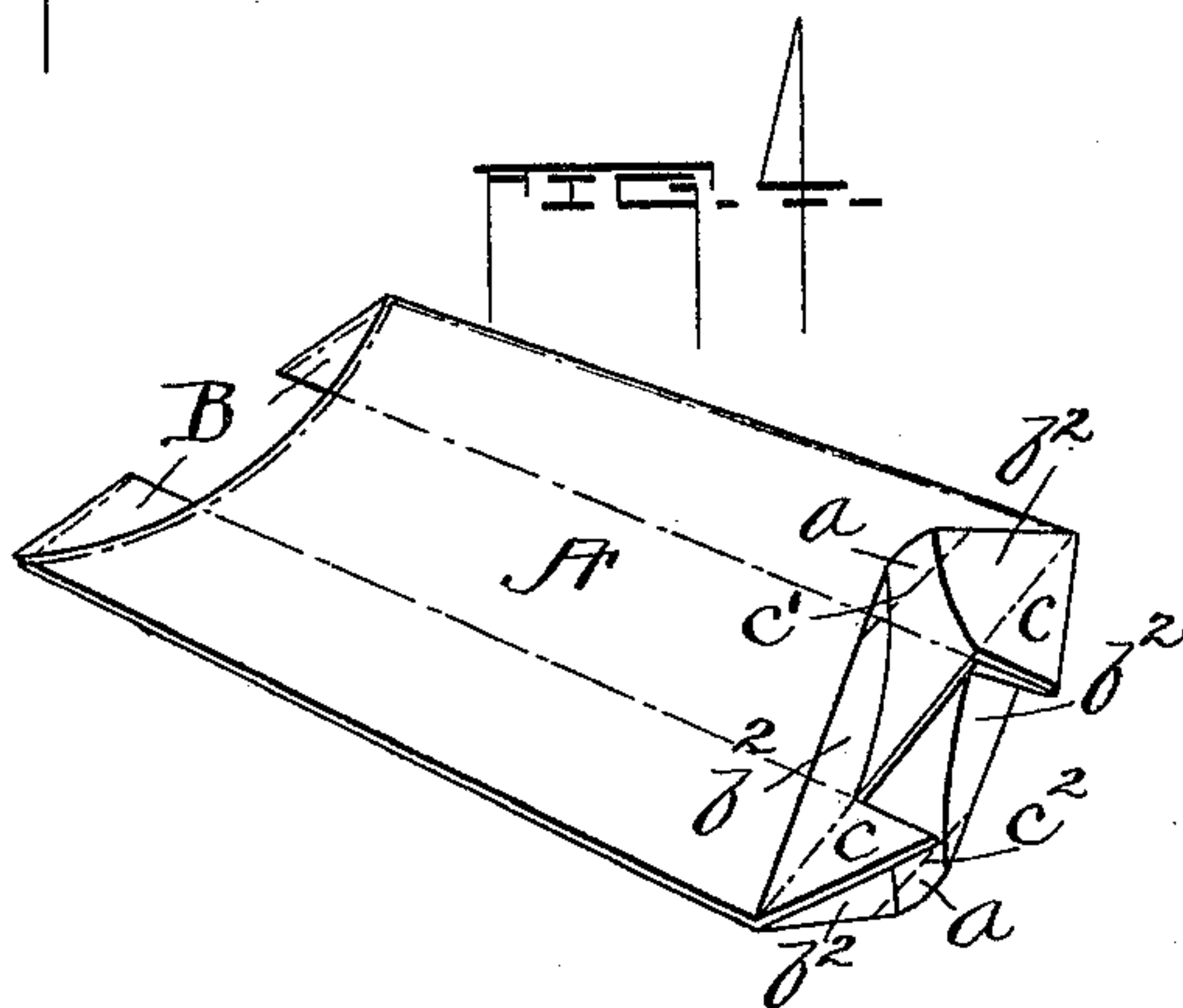
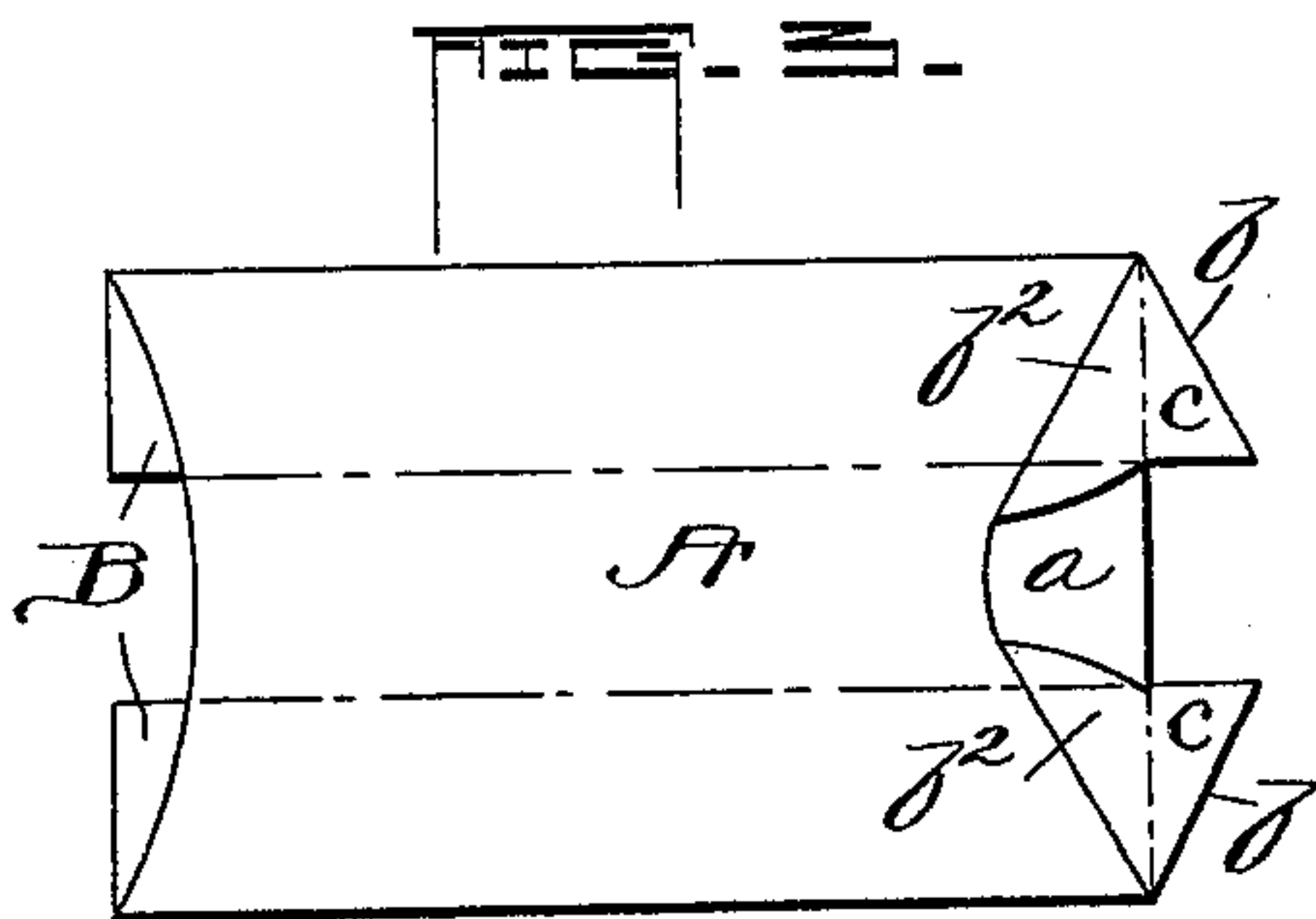
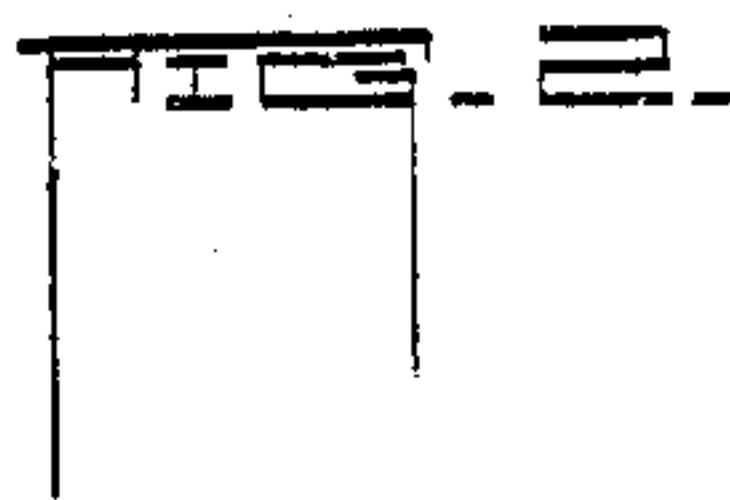
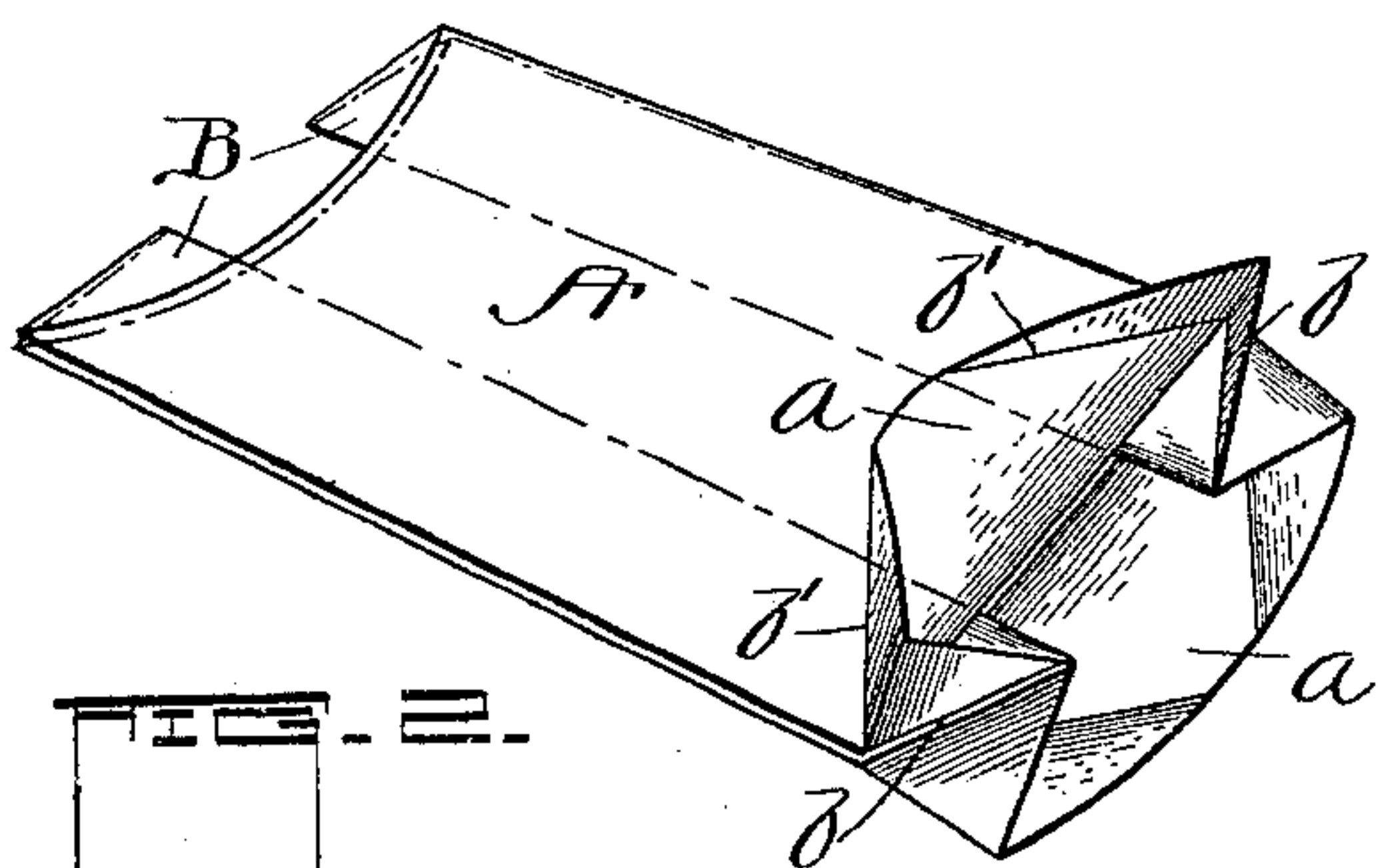
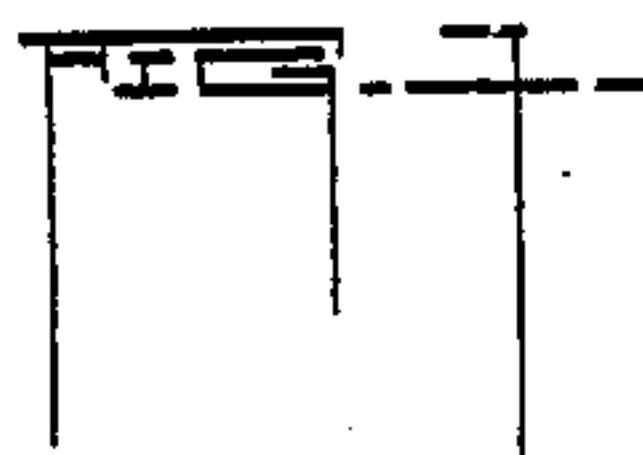
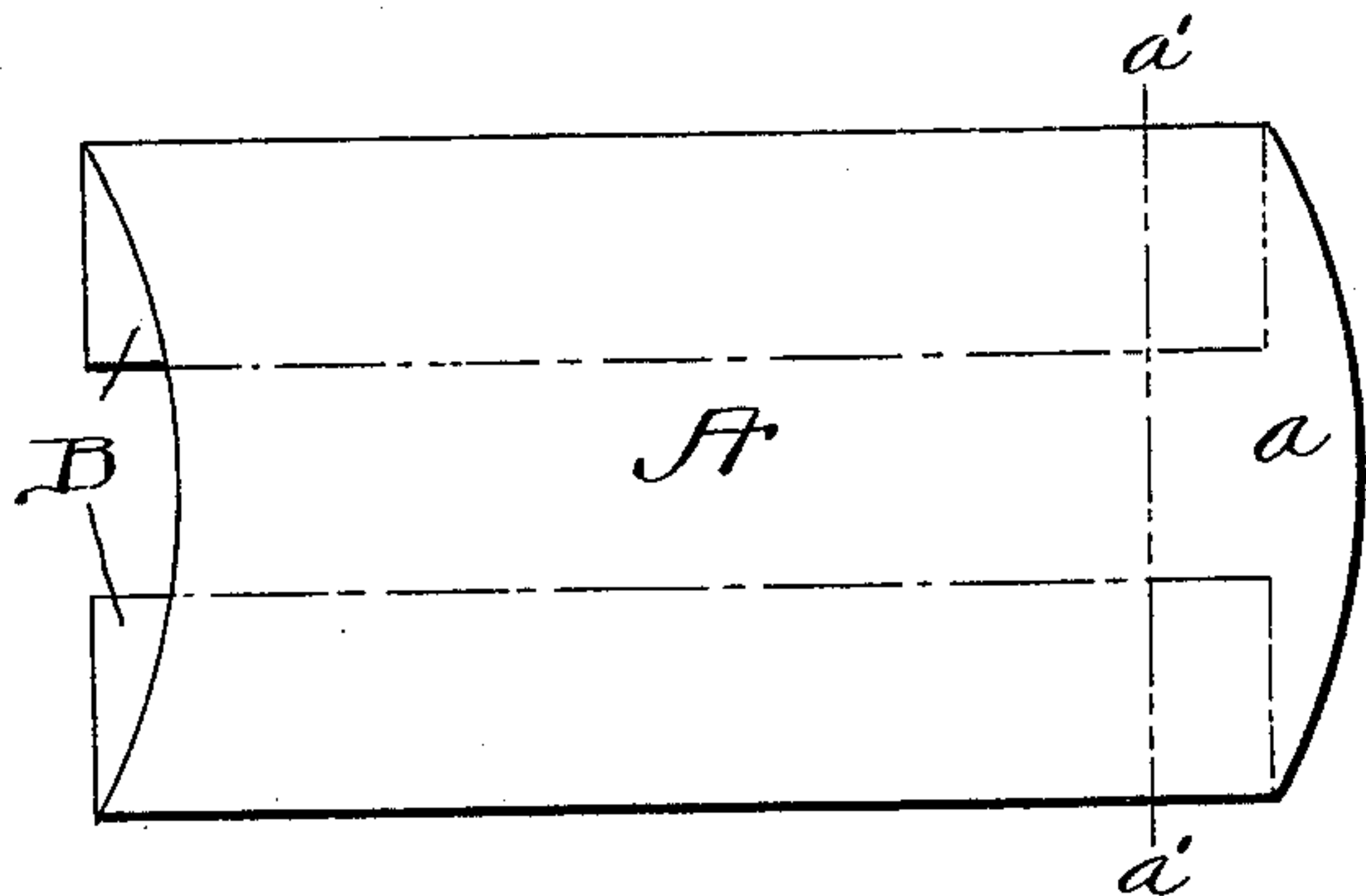
No. 640,173.

Patented Jan. 2, 1900.

L. D. BENNER.  
PAPER BAG.

(Application filed May 27, 1899.)

(No Model.)



Witnesses:  
J. M. Meus  
Charles Charvat

Inventor,  
Lorenzo Benner.  
Chas. H. LaPorte.  
Att'y.



# UNITED STATES PATENT OFFICE.

LORENZO D. BENNER, OF PEORIA, ILLINOIS, ASSIGNOR TO LUCIUS G. FISHER, OF CHICAGO, ILLINOIS.

## PAPER BAG.

SPECIFICATION forming part of Letters Patent No. 640,173, dated January 2, 1900.

Application filed May 27, 1899. Serial No. 718,575. (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 ap-  
10 pertains to make and use the same.

My invention relates to a new and novel construction of paper bags and the method of making the same, the object being to form a satchel-bottom bag collapsed into convenient  
15 form for shipment and readily expandible into a rectangular box-like form, the construction being such that in the manufacture of the same the waste of paper will be reduced to a minimum.

20 The construction of the bag will be best understood from a description of its mode of manufacture, in connection with the drawings, in which it is illustrated and in which the figures as they are numbered show in their  
25 order the various steps of the method of producing the bag, in which—

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  
30 showing the second step in the process of manufacture. Fig. 3 is a plan showing a further step in the process, wherein the side extensions are folded down upon themselves. Fig. 4 is a view showing the folds of the bag  
35 preparatory to being brought together and pasted. Fig. 5 shows a bag collapsed and as it appears when completed, and Fig. 6 is a view of the bottom as it appears when the bag is opened or filled.

40 In the drawings, A is a tubular section, made of suitable length, cut from a strip in such a manner as to provide the side extensions *a*. In separating the tube into suitable lengths, as is shown in Fig. 1, I form the overlapping  
45 sections of the bottom by cutting the sides only, so as to form an arc of a circle, the end extensions *a* of one bag being cut out of the adjacent strip of tube or bag of which it forms a part, which leaves at the opposite end of  
50 the bag the protruding end of the bellows sides B, as is shown in Fig. 1.

The first step in the operation is to grip the extensions *a* and fold them back upon themselves on the line *a'*, which will form a crease in the bellows sides B on the diagonal  
55 lines *b*, forming the crease *b'*, which forms a triangular fold *b<sup>2</sup>* of the sides *a* upon itself, the process of folding providing the triangular extensions *c*, which represent the folds of the bellows sides folded down upon themselves.  
60 The extensions *a* are purposed to be folded back on the lines *c' c<sup>2</sup>*, so that when they are brought together (the operation of which is well illustrated in Fig. 4) they may be over-  
65 lapped upon each other or folded back and then brought together and pasted. Figs. 5 and 6 illustrate the manner in which I prefer to paste the side extensions together, where-  
70 in the end of one side (which may be either of the folds folded back on the lines *c' c<sup>2</sup>*) is folded back against itself as the sides are brought together and the opposite side is caused to overlap the same and pasted down.

In the process of pasting the extensions *a* it may be found desirable to perforate the  
75 triangular fold *b<sup>2</sup>* or cut the same away when severing the tube preparatory to folding the same, which would enable me to secure the triangular extensions *c* to the outside lengths  
80 of the bag. This is not really necessary; but in the construction of the bag I do not wish to limit myself to the exact manner of retaining the parts together, as is shown in the draw-  
ings.

Having thus fully described my invention, 85 what I claim, and desire to secure by Letters Patent, is—

1. The method of making a bellows-folded satchel-bottom bag, which consists in severing the length of a bag from a plain tube in such  
90 a manner as to provide extended side portions from one end and protruding bellows-side extensions from the opposite end, folding the extensions back upon themselves forming tri-  
angular side extensions in the bellows sides, 95 redoubling the extensions over the triangular extensions and folding the ends of the side extensions in such a manner as to complete the bag by forming overlapping ends when  
100 pasted down.

2. The described method of making a pa- per bag, which consists in forming a blank



as to provide extended side portions at one end and protruding bellows sides at the opposite end, folding the extensions back upon themselves on the line  $a'$ , forming the triangular bellows-sides extensions  $c$ , causing the extensions to be redoubled upon themselves forming the triangular folds  $b^2, b^2$ , folding back the extensions  $a$ , as to overlap the extensions  $c$ , so as to bring the inner matching faces of the sides  $a$ , adjacent to each other and completing the bag by folding either of the end extensions  $a$ , and overlapping the opposite side and pasting it down.

3. The herein-described bellows-sided bag, the bottom when distended is formed by the end extensions  $a, a$ , the inturned and overlapping portions  $c$ , and  $b^2$ , which are contiguous, all substantially as described and shown.

4. The herein-described bellows-sided bag, the bottom of which is formed by cutting the

extended side portions  $a, a$ , from an extended tube and folding the same back on the line  $a', a'$ , the inturned bellows-sided portions  $c$ , the overlapping portions  $b'$ , contiguous therewith, and the matching and overlapping end extensions of the sides  $a$ , when pasted down completing the bottom of the bag.

5. The herein-described bag provided with the side extensions  $a$ , having protruding ends which are purposed to extend beyond and overlap the inturned portions  $c$ , and the overlapping portions  $b'$ , of the bellows sides, in such a manner as to complete the bag by forming overlapping ends when pasted down.

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

LORENZO D. BENNER.

Witnesses:

CHAS. W. LA PORTE,  
CHARLES CHARVAT.