

(Model.)

L. D. BENNER.

BAG.

No. 396,389.

Patented Jan. 22, 1889.

Fig. 1.

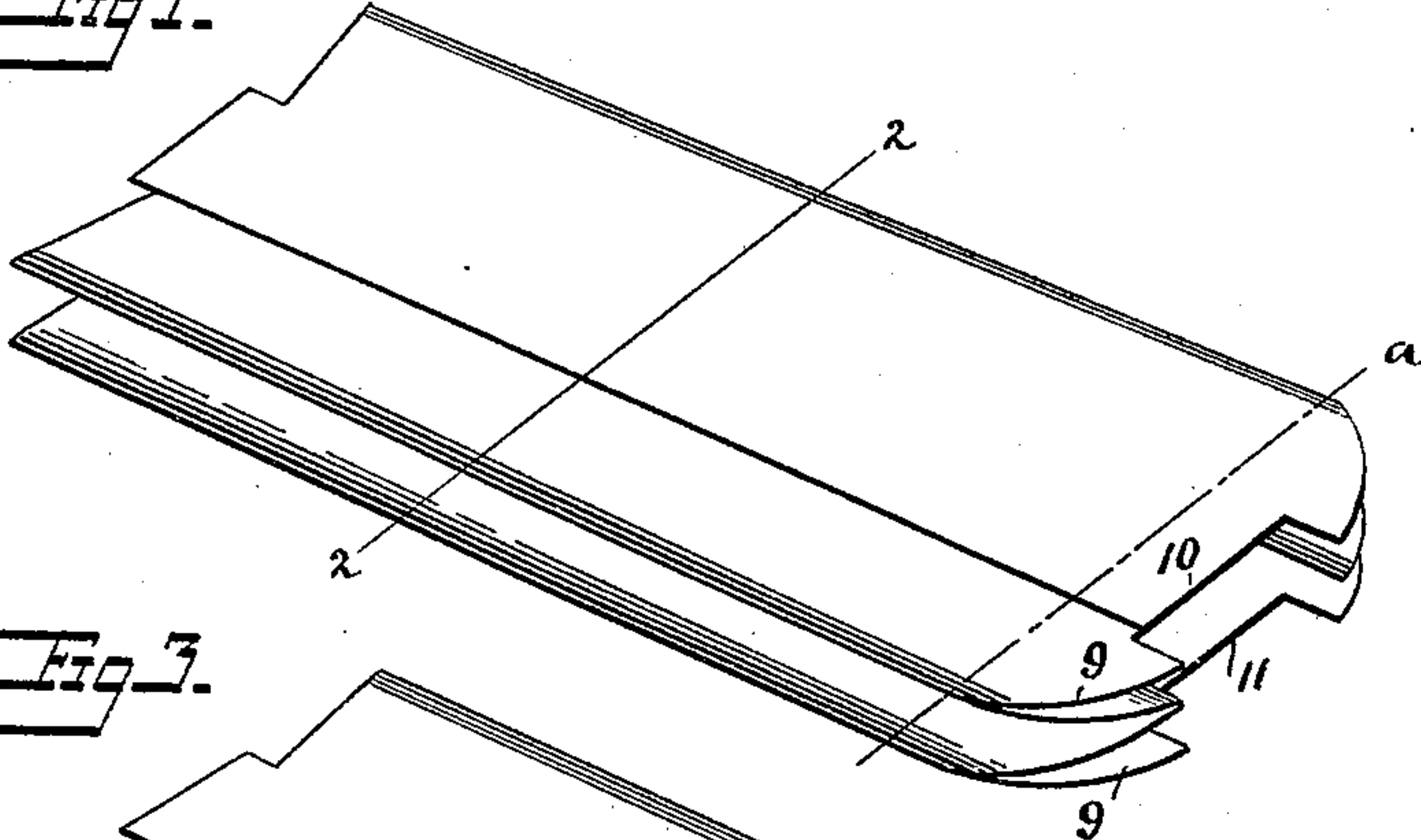


Fig. 3.

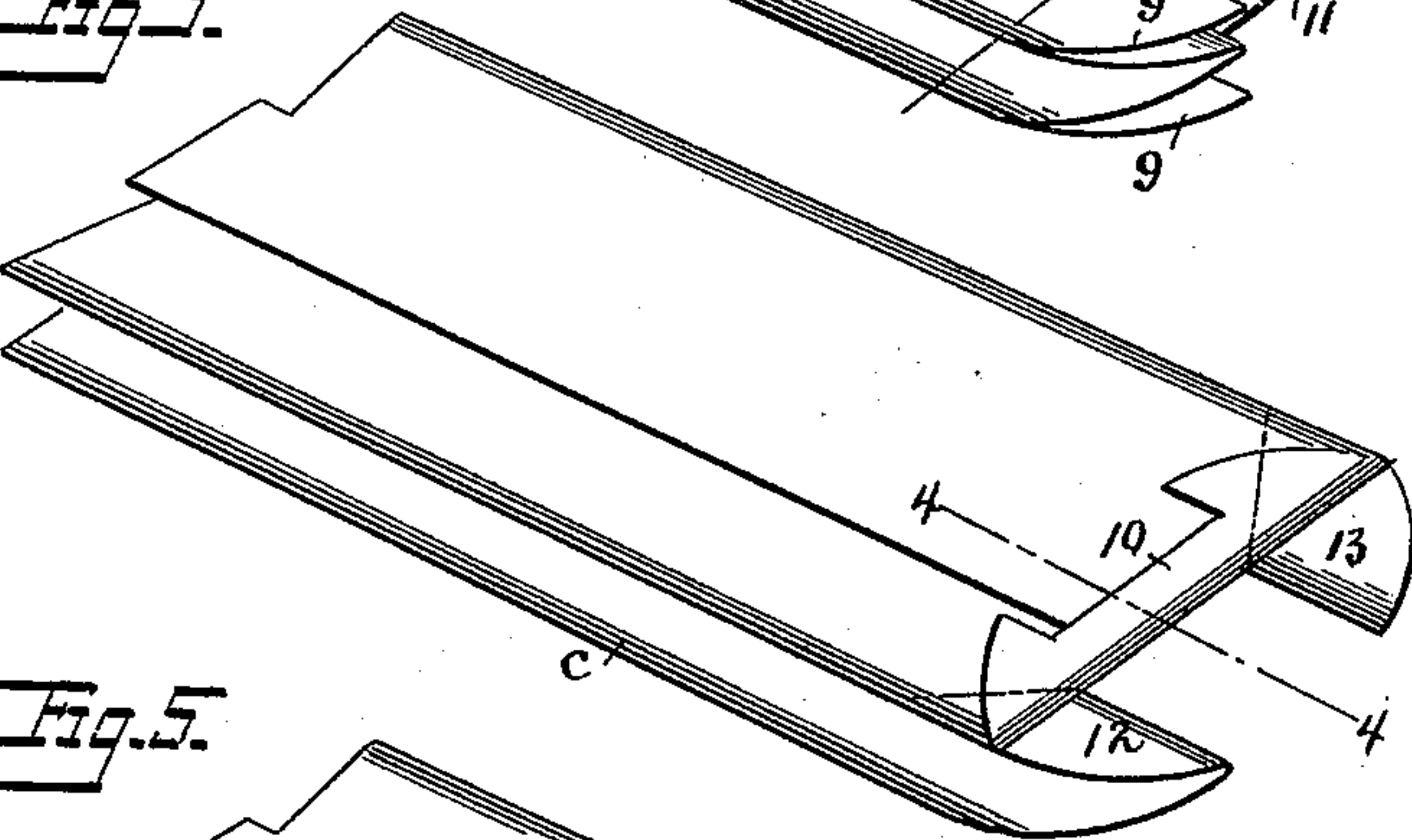


Fig. 5.

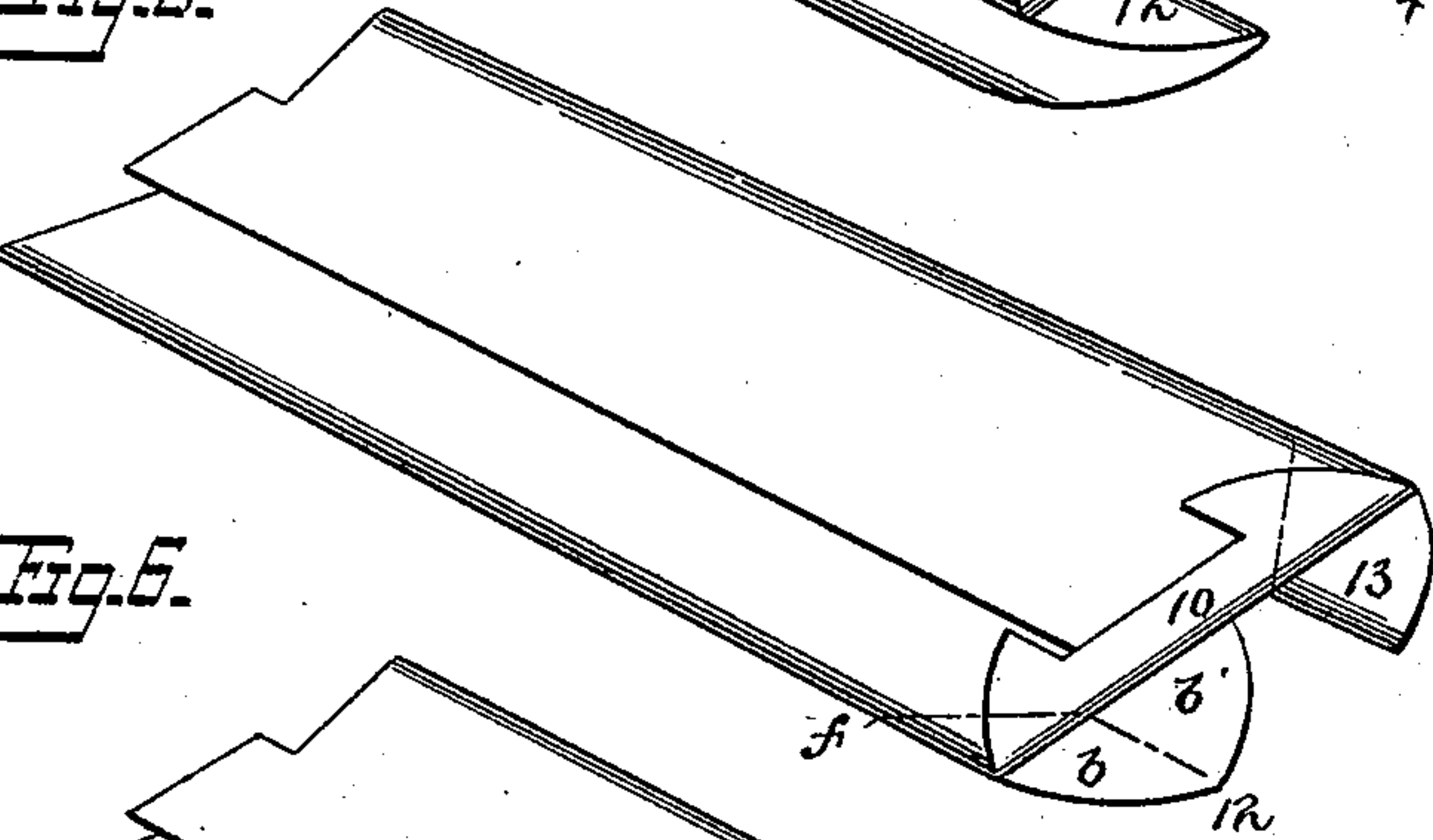


Fig. 6.

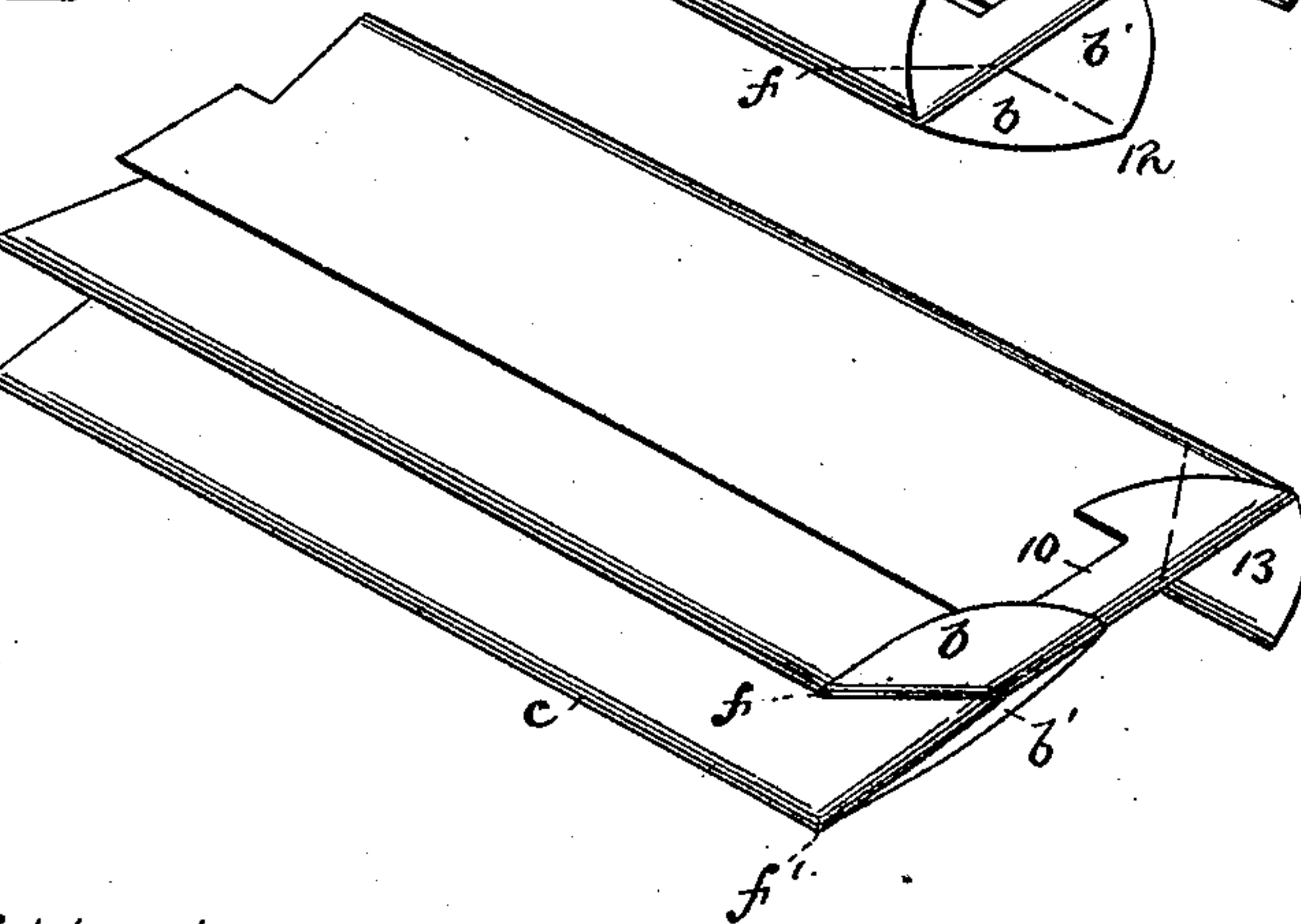


Fig. 2.

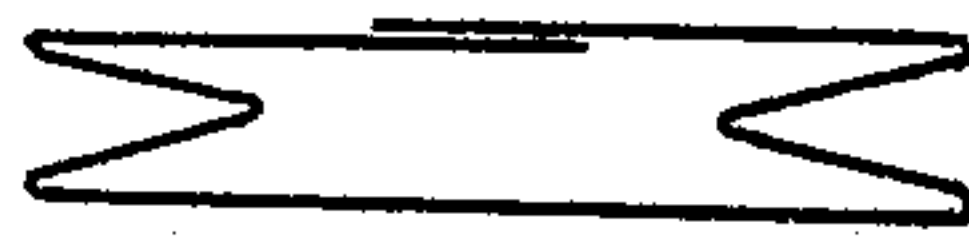


Fig. 4.

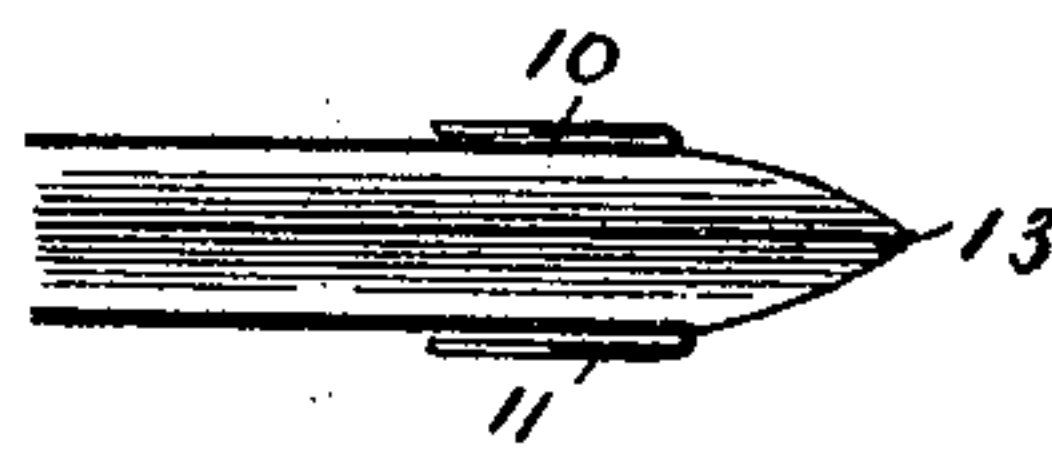


Fig. 7.

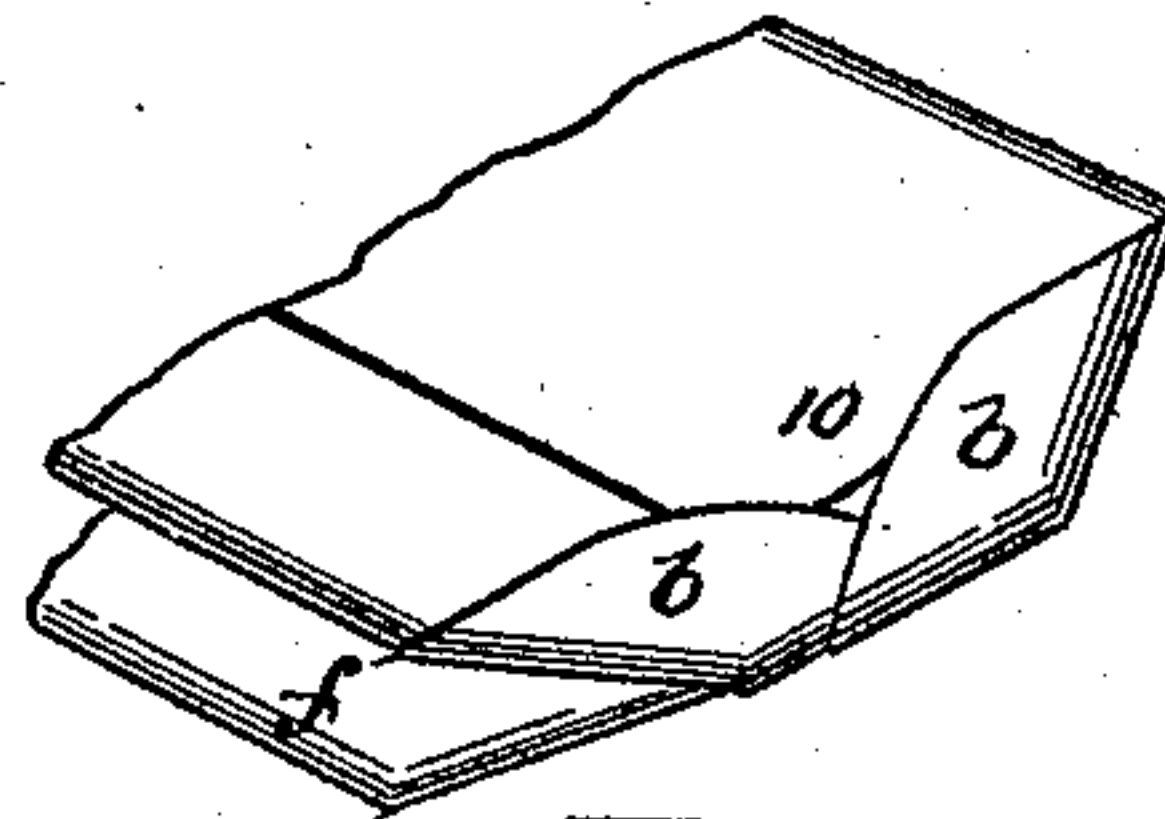
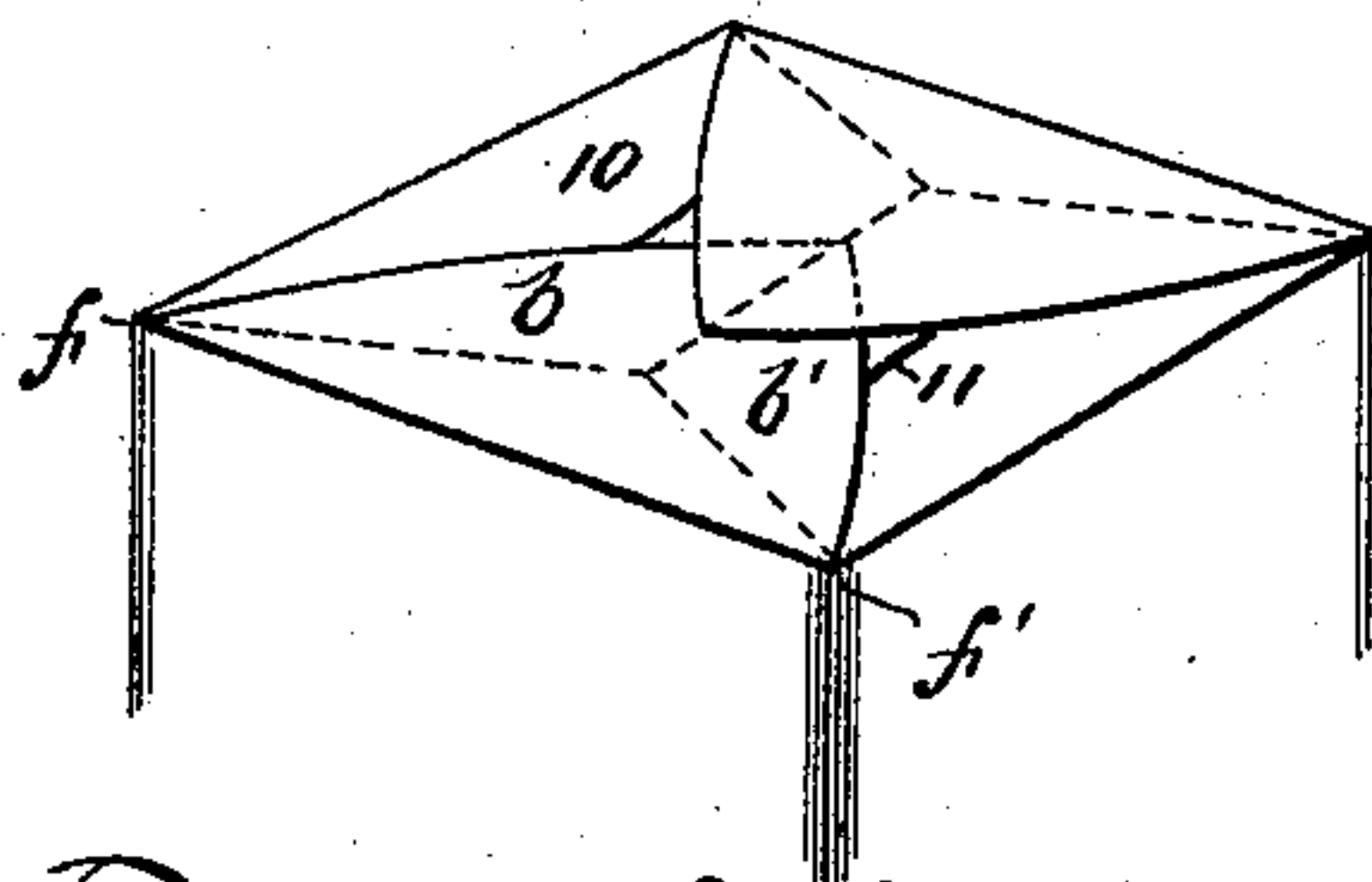


Fig. 8.



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# UNITED STATES PATENT OFFICE.

LORENZO D. BENNER, OF PEORIA, ILLINOIS.

## BAG.

SPECIFICATION forming part of Letters Patent No. 396,389, dated January 22, 1889.

Application filed February 3, 1888. Serial No. 262,890. (Model.)

*To all whom it may concern:*

Be it known that I, LORENZO D. BENNER, a citizen of the United States, residing at Peoria, Peoria county, State of Illinois, have invented certain new and useful Improvements in Bags, of which the following is a specification.

This invention relates to that class of paper bags known as "square" or "bellows-sided" bags; and it consists in a novel manner of forming the bottoms thereof, as will hereinafter fully appear.

In the accompanying drawings, Figure 1 is a perspective view of a bellows-sided tubular blank, the bottom-forming end of which is provided with certain incisions and otherwise adapted to be folded in the manner hereinafter set forth; and Fig. 2 is a cross-section of the same taken on the line 2 2. Fig. 3 is a perspective view of the said blank, having its two end flaps folded back onto the body of the blank; and Fig. 4 is a longitudinal section of the same taken on the line 4 4. Figs. 5, 6, and 7 are perspective views of the blank and completed bag, showing the manner of folding the material in forming the bottom, and Fig. 8 is a perspective view of the completed bag distended and looking at its bottom.

Bags of this class are commonly made 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 shown in Fig. 2, in such manner that the edges of the web meet over the center of the tube and are united by a longitudinal line of paste, said tube being afterward severed transversely into bag-blanks, as in Fig. 1, ready to be formed into bags by the formation of the bottoms. The manner of thus forming a bellows-sided tube or bag-blank is now too well known to need particular description thereof. It suffices to say that so far as the present invention is concerned it contemplates the employment in practice of an endless web or sheets or blanks, as the circumstances of manufacture may require. Thus, with the understanding that the bellows-sided tubular bag-blank shown in Fig. 1 may be formed in any of the well-known ways, the formation of the bottom thereof will now be described.

The bag-blank will preferably have its bottom-forming end transversely severed in the

manner shown in Fig. 1, to provide its upper and lower plies with central cut-away portions, as shown; but this, however, is not essential. It will be provided with short longitudinal incisions 9, extending on each of the folded edges of the blank from its end, so as to form free end flaps, 10 11, which for the length of the incisions are thus freed entirely from the bellows-sided folds. These incisions may, obviously, be formed by cutting the end of the blank on the curved lines shown, and serve precisely the same purpose to form the end flaps free from the bellows-sided folds.

Each of the end flaps, 10 11, will be folded back on a line, *a*, Fig. 1, onto the body of the blank, as in Figs. 3 and 4, thus leaving projecting from the end of the blank the freed ends 12 13 of the bellows-sided folds, which in practice should be of a length sufficient to entirely close the end of the blank, as will appear. The end flaps thus turned back, the side *c*, for instance, of the blank longitudinally will be folded over onto the body of the blank to spread open one of the bellows sides thereof, and thus also spread the projecting end 12, as seen in Fig. 5. The portion *b* of this projection will then be folded over onto the body of the blank on the folded line *f*, so as to bring said portion *b* down onto a portion of the end flap 10, as in Fig. 6. When this has been done, the longitudinal side *C* will be turned back to its original position, which will cause the other portion, *b'*, of the projection 12 to be folded on the line *f'* down upon the opposite side of the blank, so as to overlie a portion of the end flap, 11, on that side. This will also bring the material intermediate between the portions *b b'* over the end of the blank, as seen in said Fig. 6, and thus partially close its end. The longitudinal side of the blank containing the projection 13 will be similarly manipulated to cause similar portions *b b'* to be folded down onto the blank, and thus bring the material over the other portion of the end of the blank and complete the bottom, as in Fig. 7. Of course suitable lines of paste will be applied to these portions *b b'* of the projections 12 13 to cause them to be secured in position onto the body of the blank. So, too, the end flaps, 10 11, might be provided with lines of paste to cause



them to be united with the body of the blank, as is obvious.

By providing the blank with the side incisions, 9, so as to free the end flaps from the bellows-sided folds, considerable manipulation of the blank is obviated, as the transverse folding of the end flaps back onto the body of the blank is thus rendered much more easily performed. The material of the projections 12 13 between the portions *b* and *b'* will be of sufficient length to enable one projection to extend over the other, as is seen in Fig. 7 and in the distended view of the bag in Fig. 8, thus effectually closing the end of the blank and sealing it.

No claim is herein made covering the bag *per se*, as the same, broadly considered, is shown in my pending applications, filed May 13, 1882, Serial No. 61,304, and filed March 10, 1888, Serial No. 266,798, and specifically claimed in the latter. Neither is claim made covering, broadly, the bag shown, described, and claimed in my pending application, filed May 20, 1887, Serial No. 238,876.

What I claim is—

1. The herein-described bag provided with the side incisions, 9, forming free end flaps, and the ends of the sides of the blank folded back on oblique lines onto the opposite sides of the body of the bag to close the end of the bag.

2. The herein-described bag provided with the side incisions, 9, forming free end flaps, 10 11, and freed projections 12 13, which are folded back on oblique lines onto the opposite sides of the body of the bag to close the end of the bag.

3. The herein-described bag-blank the end of which is cut on curved lines to form free end flaps, 10 11, and freed projections 12 13, the two projections being of sufficient length to close the end of the blank.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

LORENZO D. BENNER.

Witnesses:

JAMES M. CARTRIGHT,  
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