

J. McCULLOUGH.

Paper-Bag.

No. 224,934.

Patented Feb. 24, 1880.

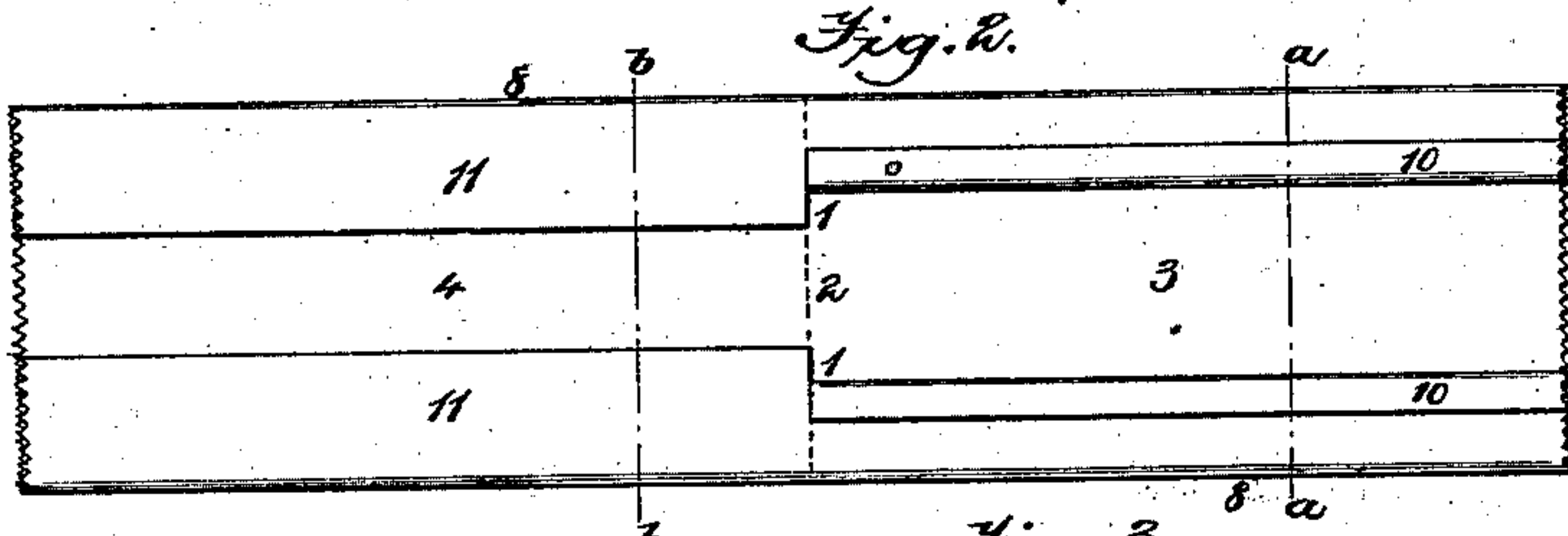
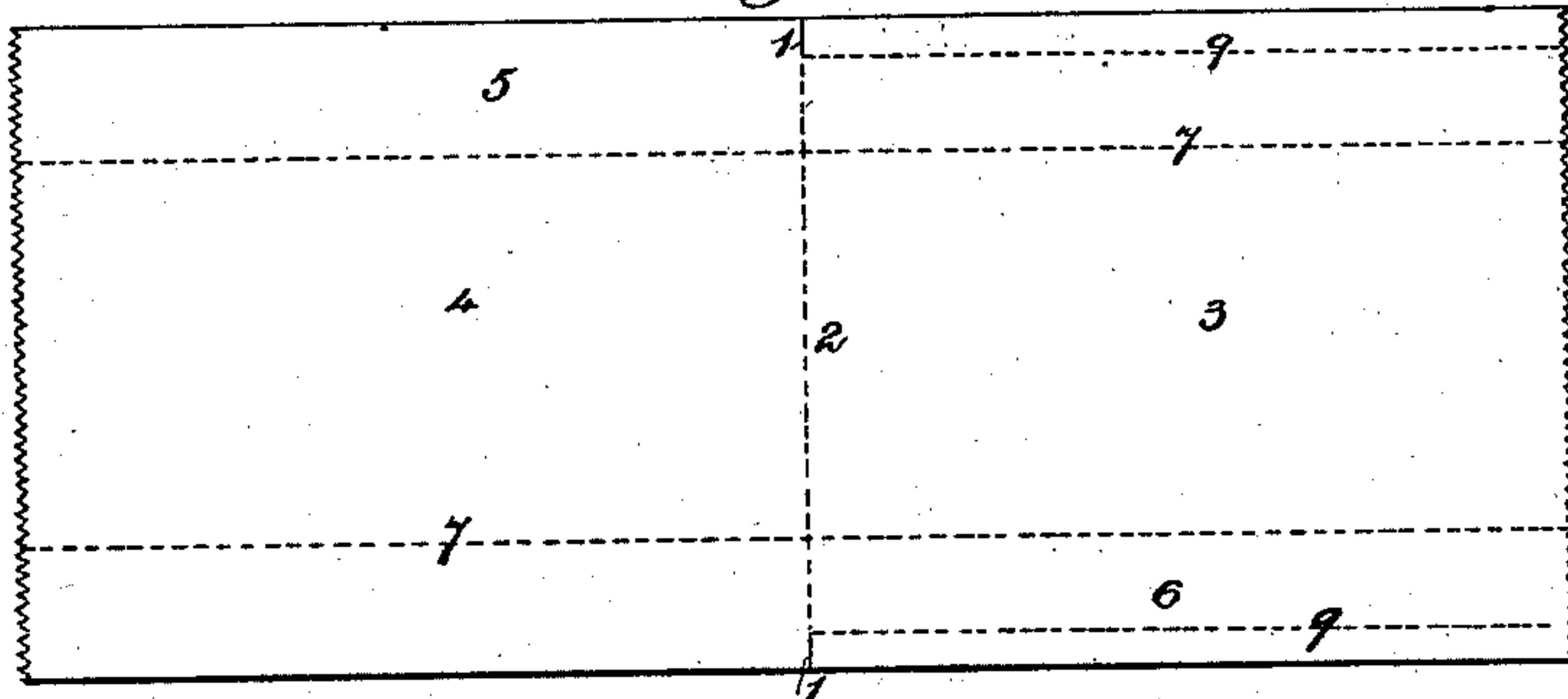


Fig. 5.

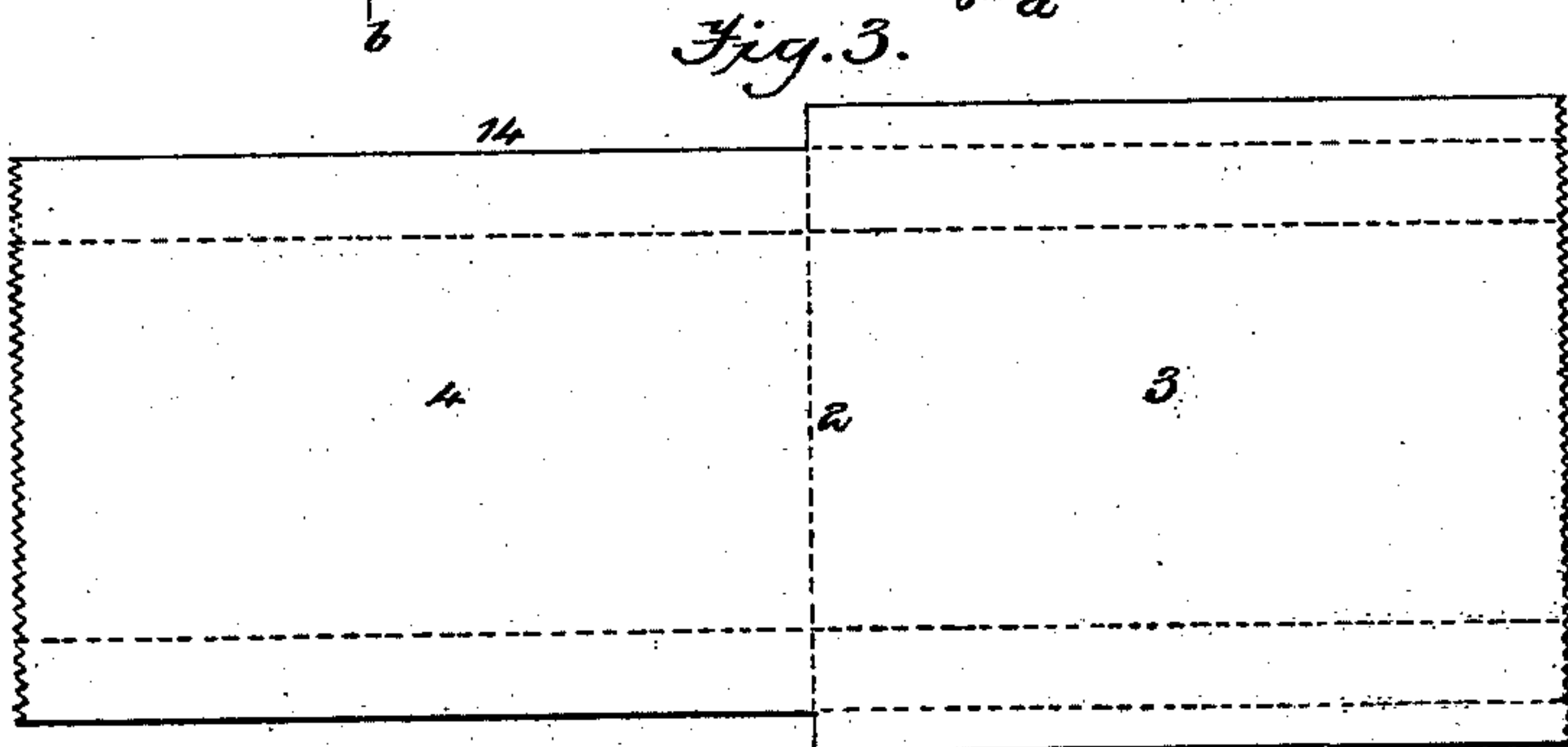
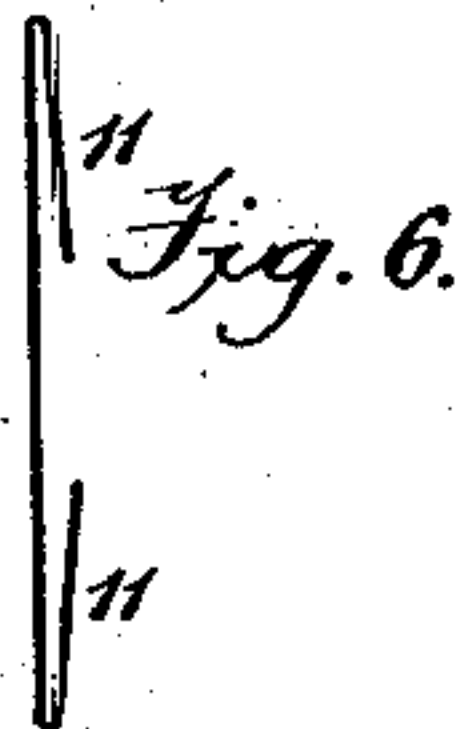


Fig. 3.

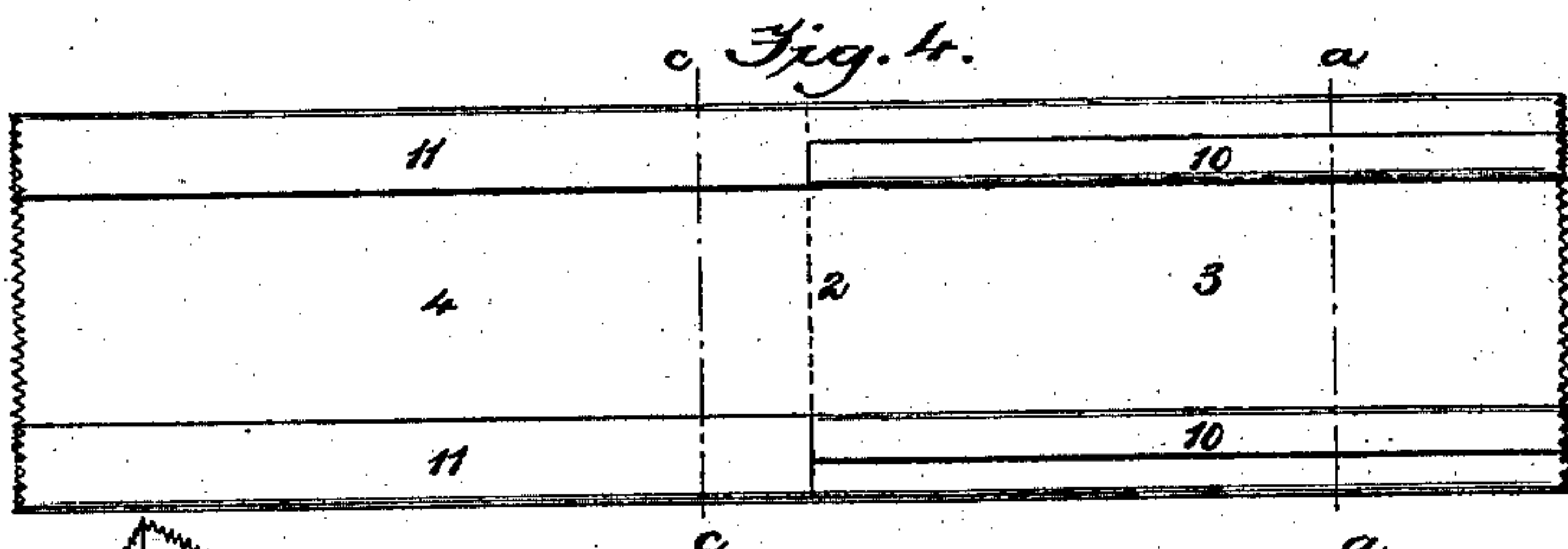


Fig. 4.

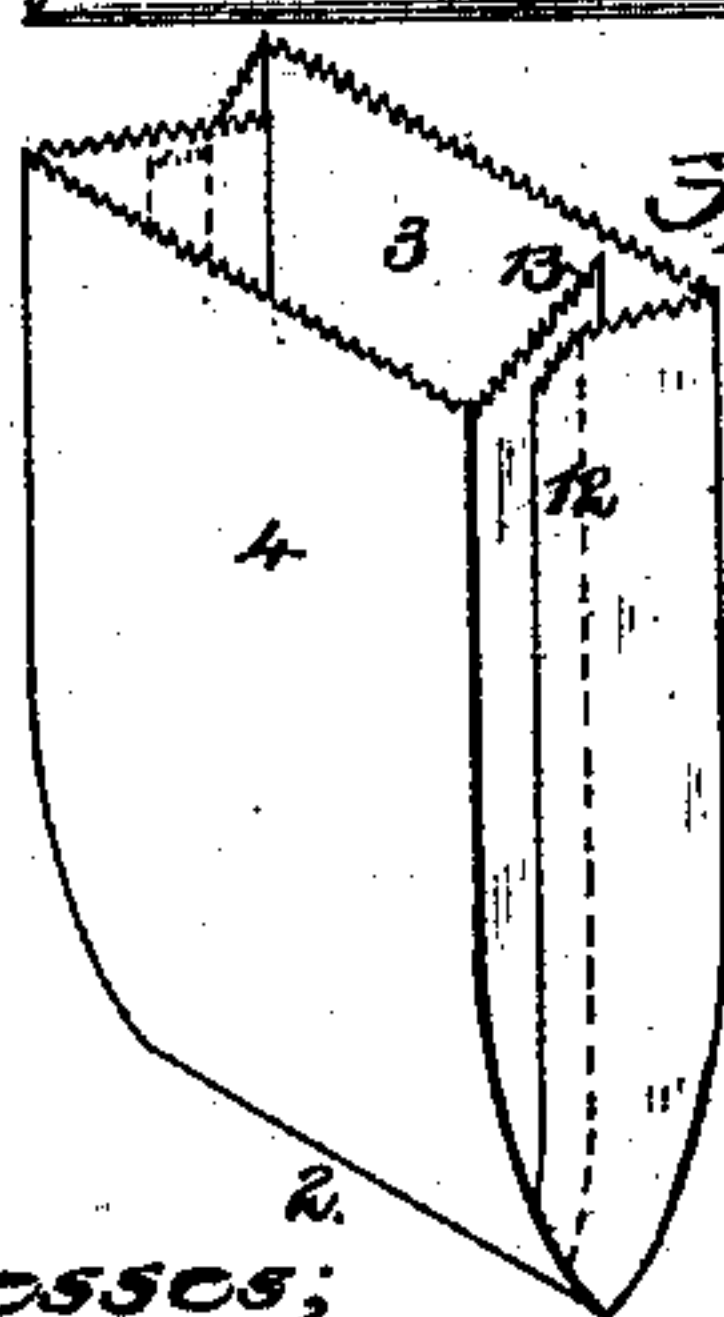
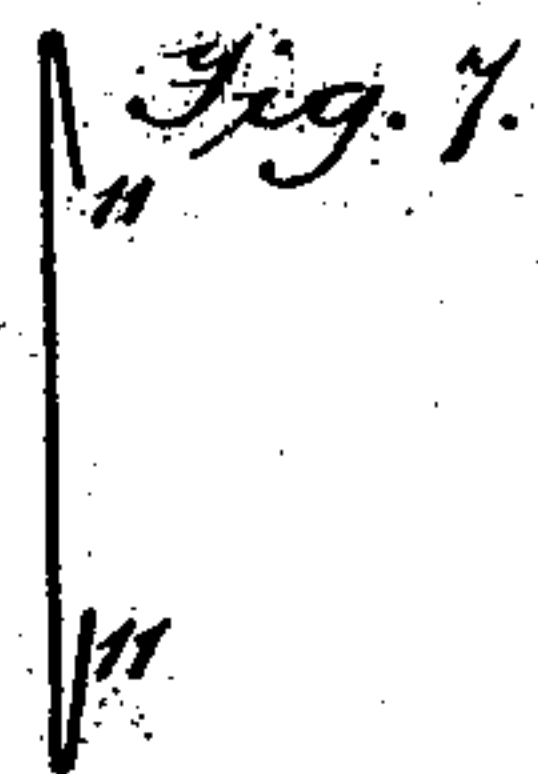


Fig. 8.

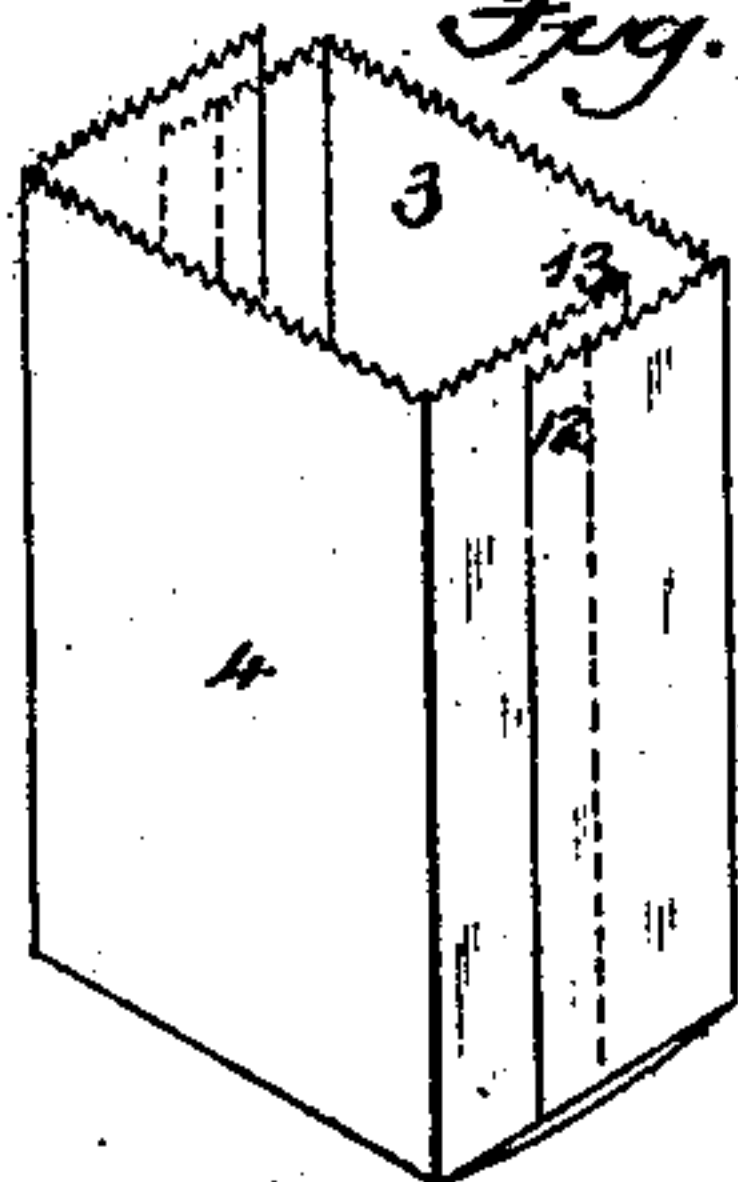


Fig. 9.

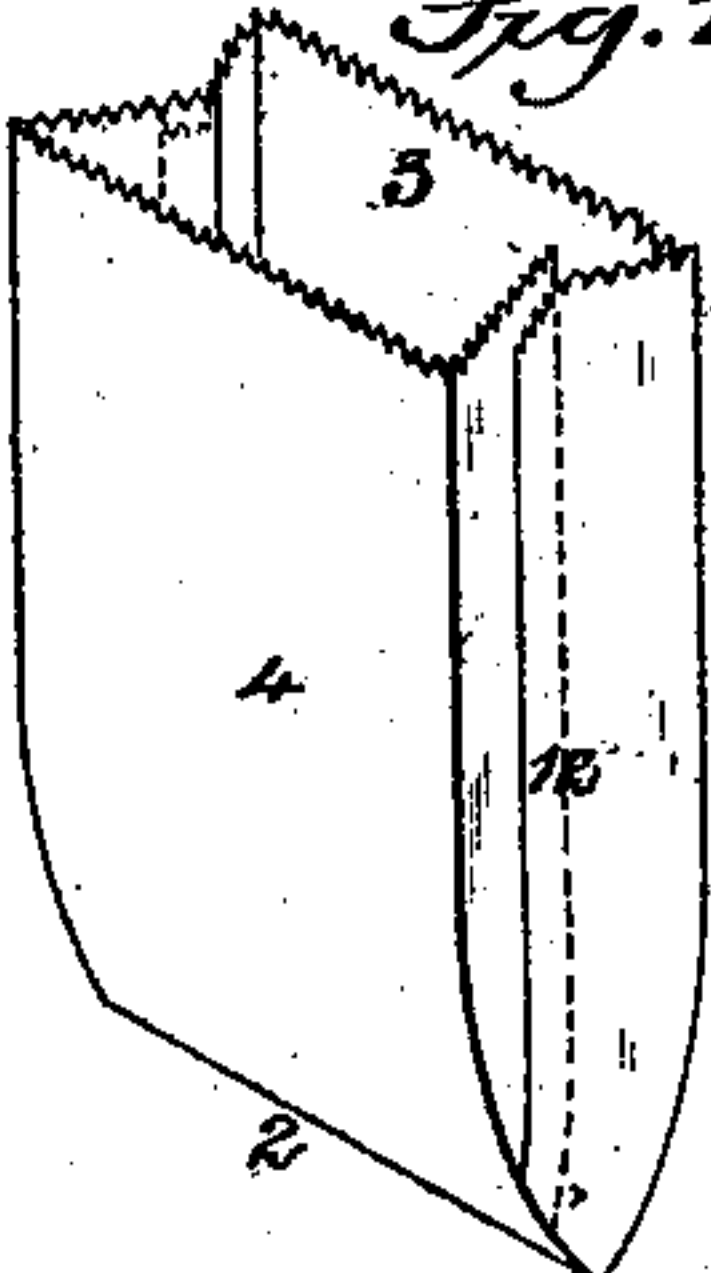


Fig. 10.

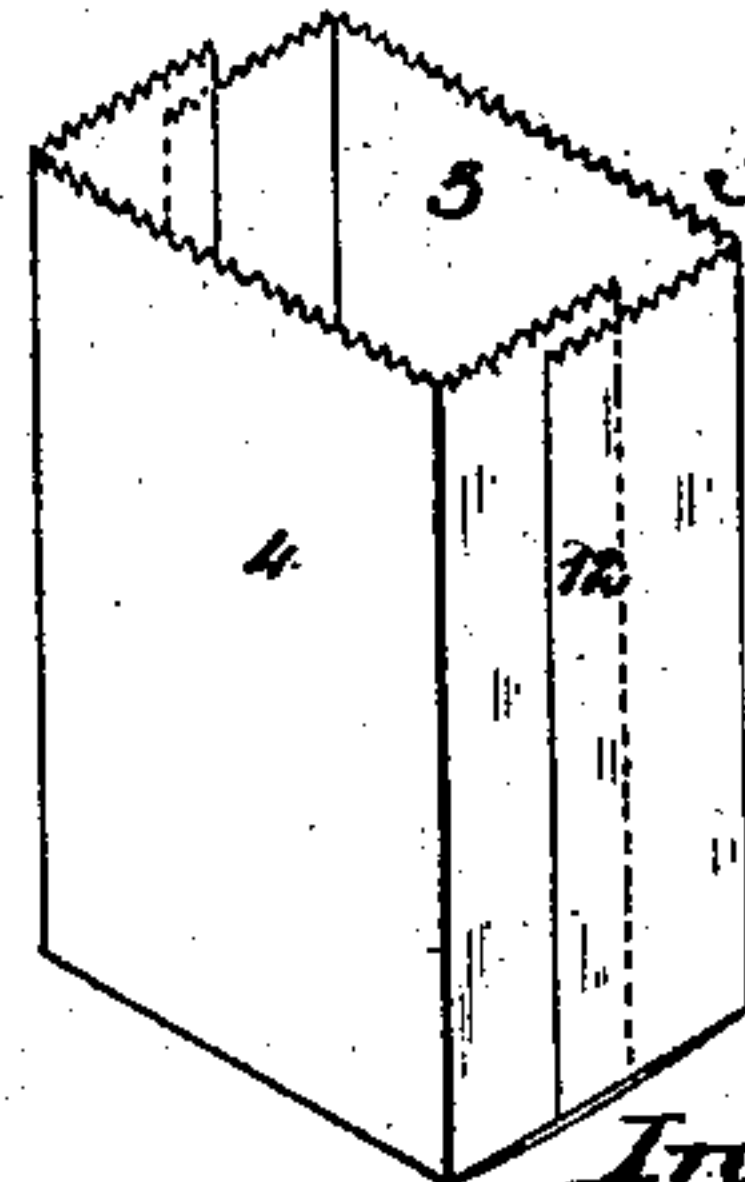


Fig. 11.

Witnesses;

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UNITED STATES PATENT OFFICE.

JOSEPH McCULLOUGH, OF PHILADELPHIA, PENNSYLVANIA.

PAPER BAG.

SPECIFICATION forming part of Letters Patent No. 224,934, dated February 24, 1880.

Application filed August 16, 1877.

To all whom it may concern:

Be it known that I, JOSEPH McCULLOUGH, of Philadelphia, Pennsylvania, have invented an Improvement in Paper Bags, of which the following is a specification.

This invention relates to that class of paper bags known as "satchel-bottoms"—that is, a bag which, when filled, will readily assume a square form at its bottom end; and the invention particularly relates to such bags when constructed from a rectangular blank or sheet of material having its two sides folded inwardly and their edges pasted so that when said blank is doubled upon itself on a transverse line said pasted edges will unite and form a bag with two side seams and bellows-like folded sides, whereby, when it is extended by being filled, said sides may expand and its bottom so fold as to transform its flat form into a cubical one. This form of bag is an exceedingly practical one to make, for the reason that it may be readily formed from a continuous web in the fast machines now in use, from which it may be delivered in flat form; but such bags are of objectionable structure in themselves, none existing which are free from all the defects known to this paper article.

One form of bag of this class has the edges of its inwardly-folded sides which form the bellows fold turned backward, so as to provide pasting-surfaces, which, when united by doubling the blank transversely, constitute the seam, uniting the parts in bag form. Such a bag presents the two parts forming its side walls united by an open-edged seam, which, as is obvious, will, when subjected to the strain incident to the use of such articles, be weak and liable to be drawn apart. Bags having this form of side seam have therefore been long since discarded as of faulty and inoperative construction.

It is the purpose of this invention to remedy these defects and to produce a bag of such a construction as will provide lapped seams uniting its sides, which seams extend throughout the length of its sides and to the line of its transverse folding at the bottom, thus forming a tight bag throughout the structure, all of which will be more fully hereinafter set forth.

In the drawings, Figure 1 shows the blank

from which the bag is made; Fig. 2, a blank with the longitudinal folds; Fig. 8, said blank when folded transversely and united in bag form; and Fig. 9, said bag with its bottom opened out and folded into square form, Figs. 3, 4, 10, and 11 being similar views of a modification, Fig. 5 showing a section on line *a* of Figs. 2 and 4; Figs. 6 and 7, similar views on line *b* of Fig. 2 and on line *c* of Fig. 4.

In carrying out my invention, a rectangular strip of paper or similar material (it may be cut from a web) is cut at the points 1 1 with short nicks, which are on the line 2, upon which the blank is to be folded to complete the bag. The sides 5 6 of this blank are then folded inwardly upon the lines 7 7, Fig. 1, thus forming the doubled edges 8-8, Fig. 2. The edges of these folded laps are then folded outwardly on the lines 9 9 to form the pasting-flaps 10 10, Fig. 2, which laps extend from the folding-line 2 to one end of the blank, the nicks 1 1 permitting this doubling. These flaps 10 10 are then coated with paste, and the blank is doubled transversely on the line 2, thus bringing the pasted flaps 10 onto the inwardly-lapped sides 11, to which they are united, thus forming a lapped and flat seam, 12, as in Figs. 8 and 9, the former showing the bellows fold formed by the lapped sides as opened or spread apart. These seams 12 thus extend from the line 2 of the bottom fold and unite the sides perfectly from end to end with a lapped and flat seam possessing great strength.

If it is desired to omit the projecting edge 13, as in Figs. 10 and 11, this may be accomplished by cutting off such portion, as at 14, at the same time that the nicks 1 are cut and while the material is flat, as in Fig. 2. Thus constructed, the bag may be made upon the common continuous machine and produced at very slight expense, as it is obvious that rotating cutters may sever the nicks 1 and remove the surplus edge 13, that the inward folds, 11, and outward folds, 10, may be accomplished by turning-guides, the paste applied to the flaps 10, the bag-lengths cut off, and the transverse fold 2 made while the web passes continuously through the machine.

The bag thus produced is provided with the strongest form of side seams, which are made to extend throughout the entire length of the

bag-sides, thus forming an article without weak points of union, and one which is whole throughout its structure.

What, therefore, is claimed is—

- 5 As a new article of manufacture, a square closed - bottom paper bag consisting of one sheet of paper, having the bottom and two opposite sides seamless, with the folds upon the bottom, and at each of the two other sides

a central seam, each seam of two thicknesses, 10 without loose flaps, as set forth.

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

JOSEPH McCULLOUGH.

Witnesses:

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