

(Model.)

2 Sheets—Sheet 1.

W. A. LORENZ.
PAPER BAG.

No. 380,264.

Patented Mar. 27, 1888.

Fig. 1

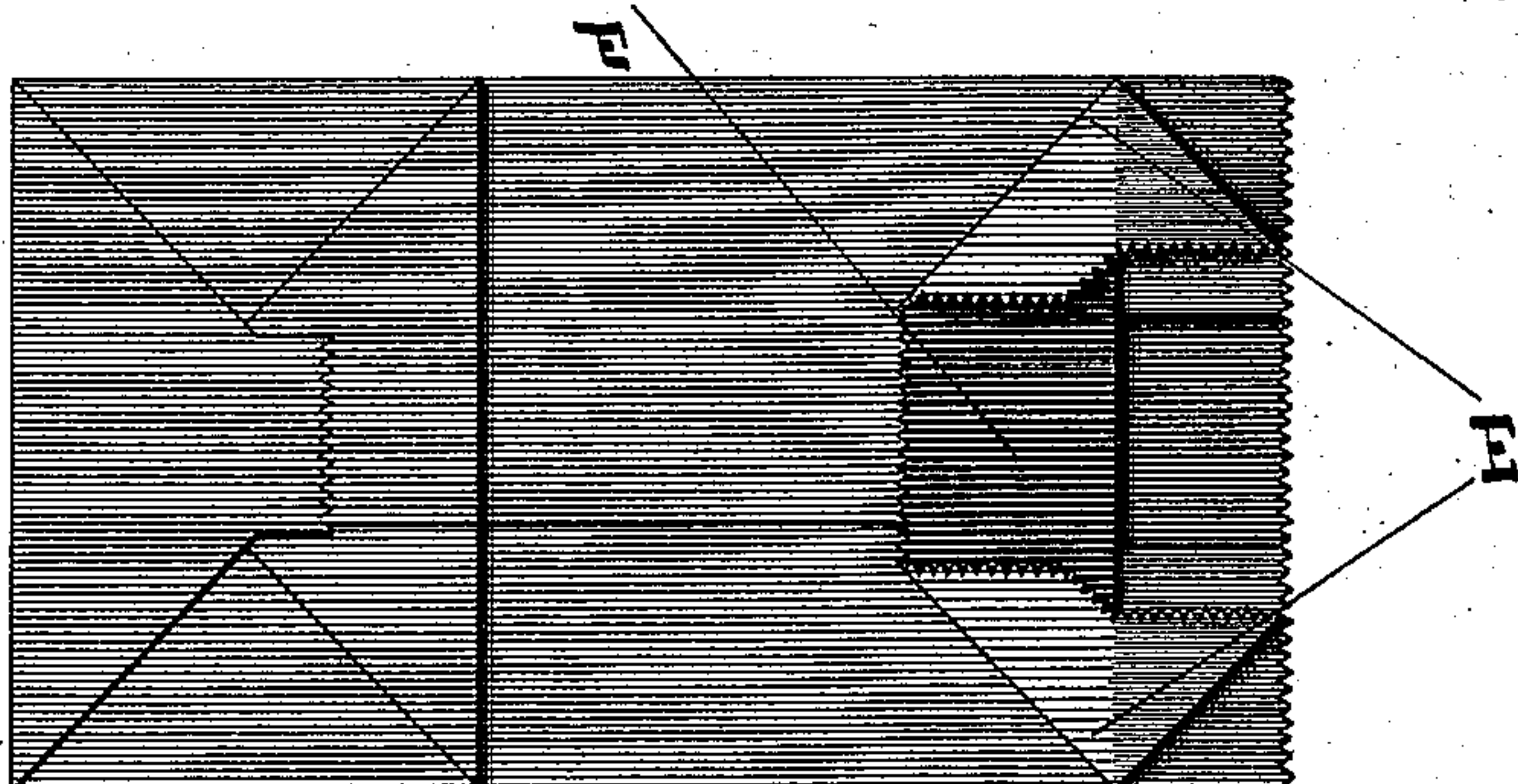


Fig. 2

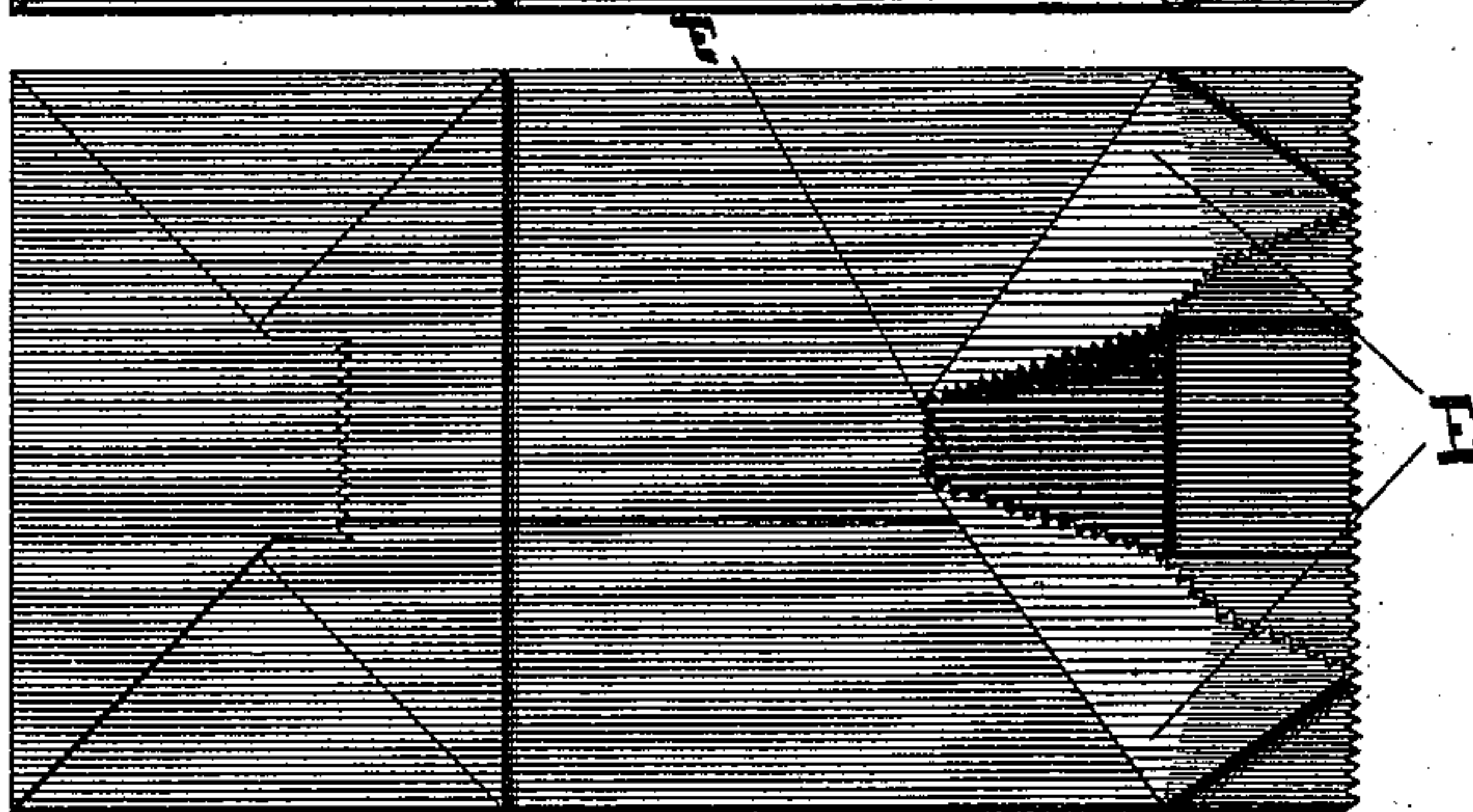


Fig. 3

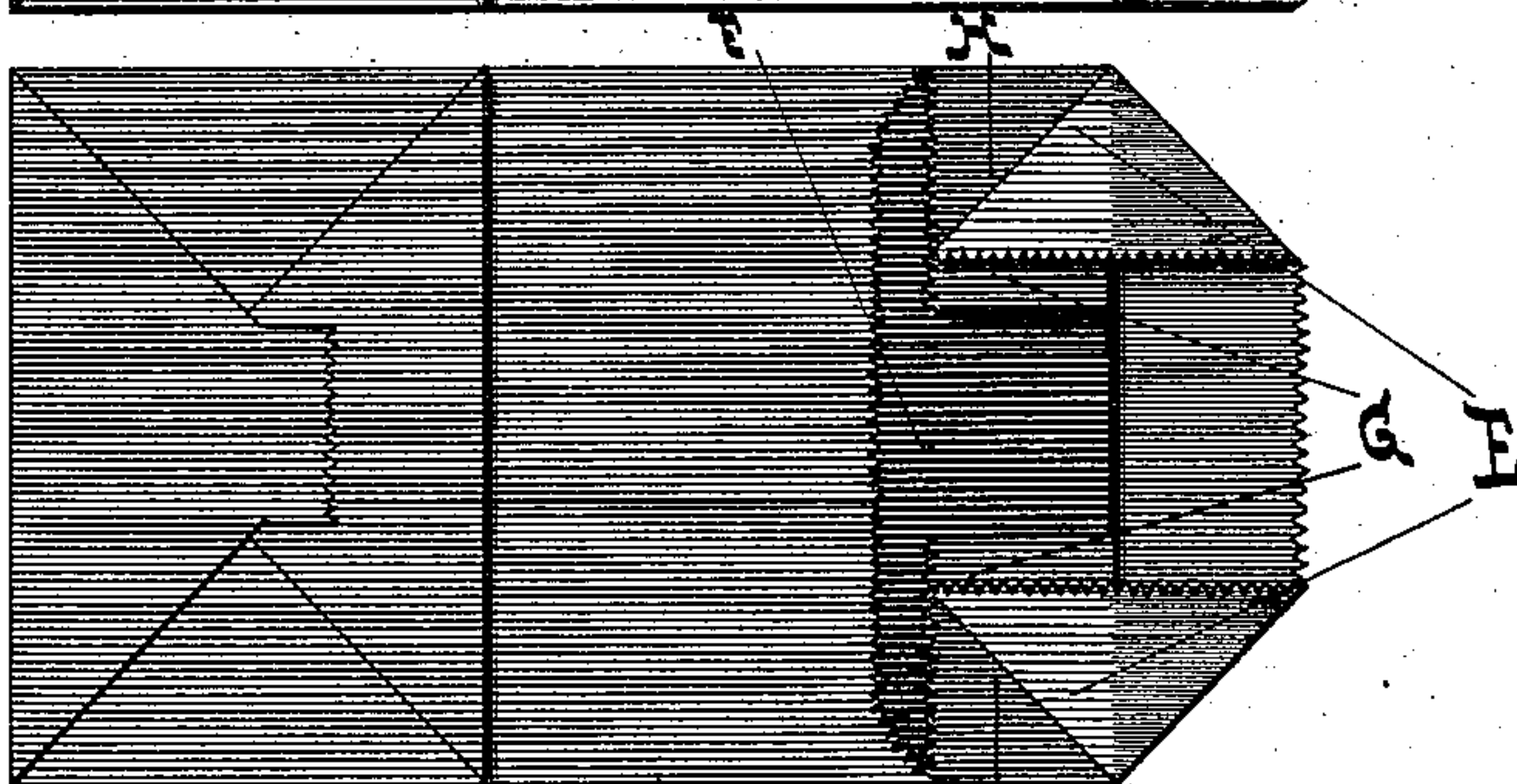
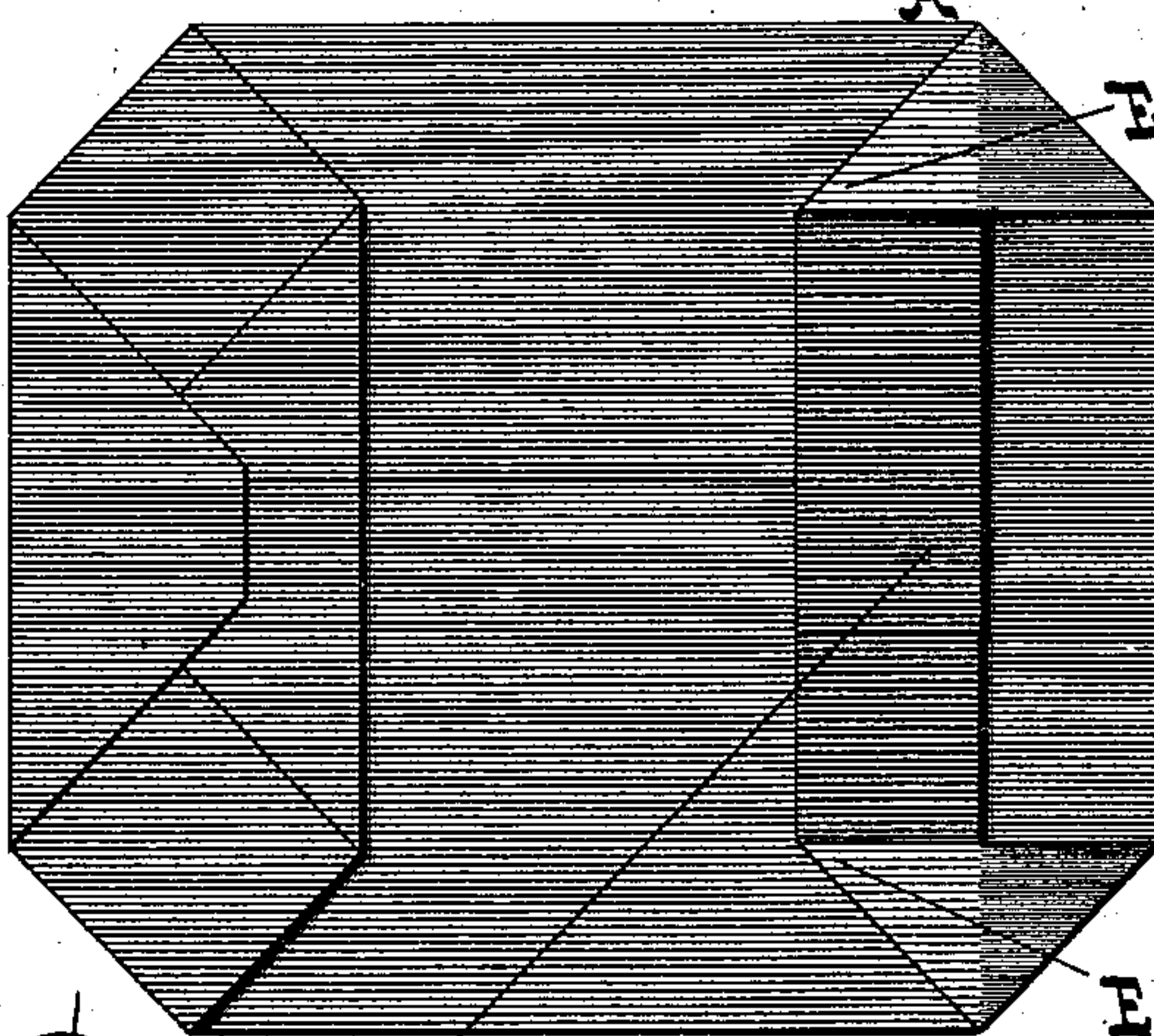


Fig. 4



Witnesses

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(Model.)

2 Sheets—Sheet 2.

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Fig. 6.

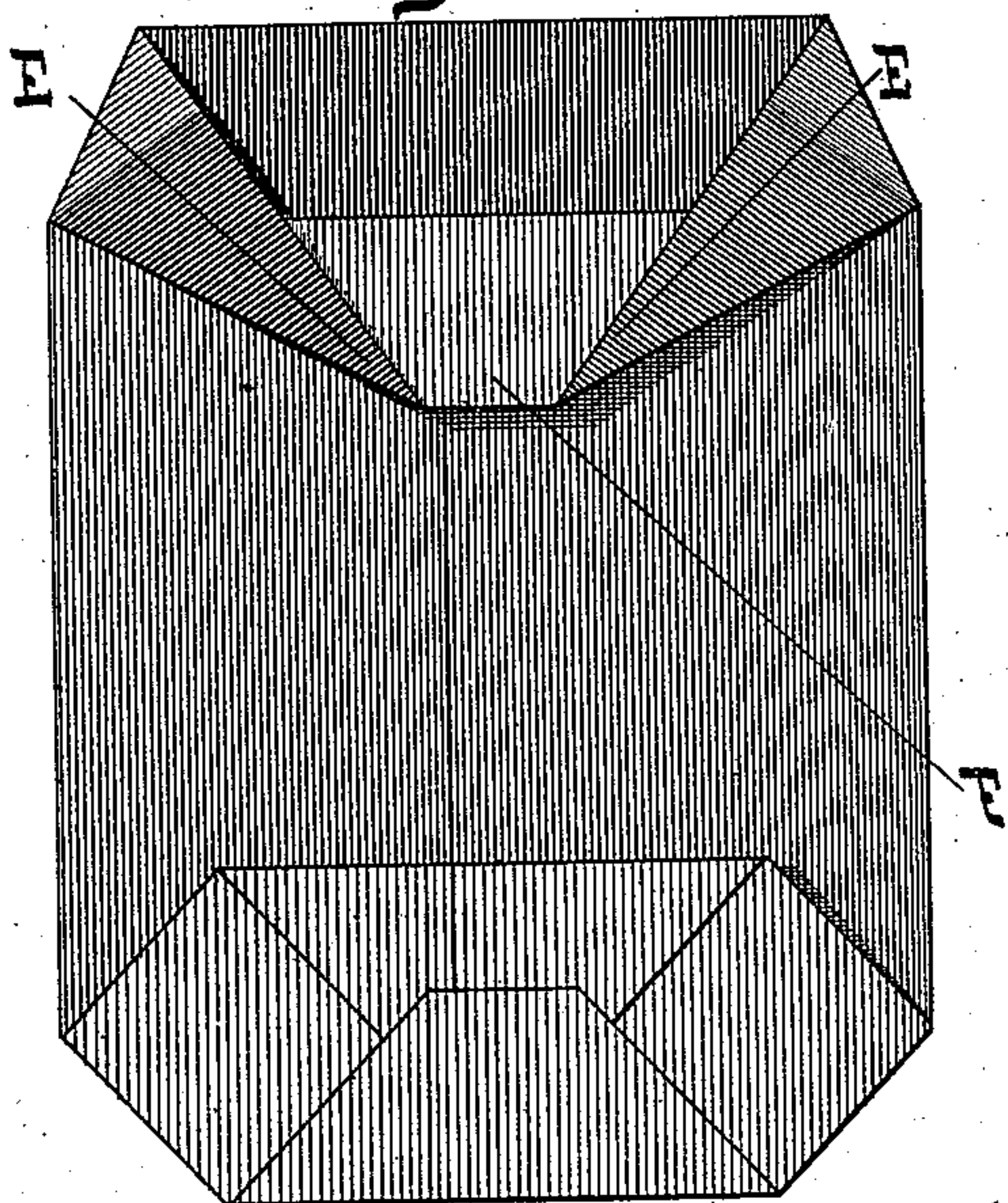


Fig. 5.

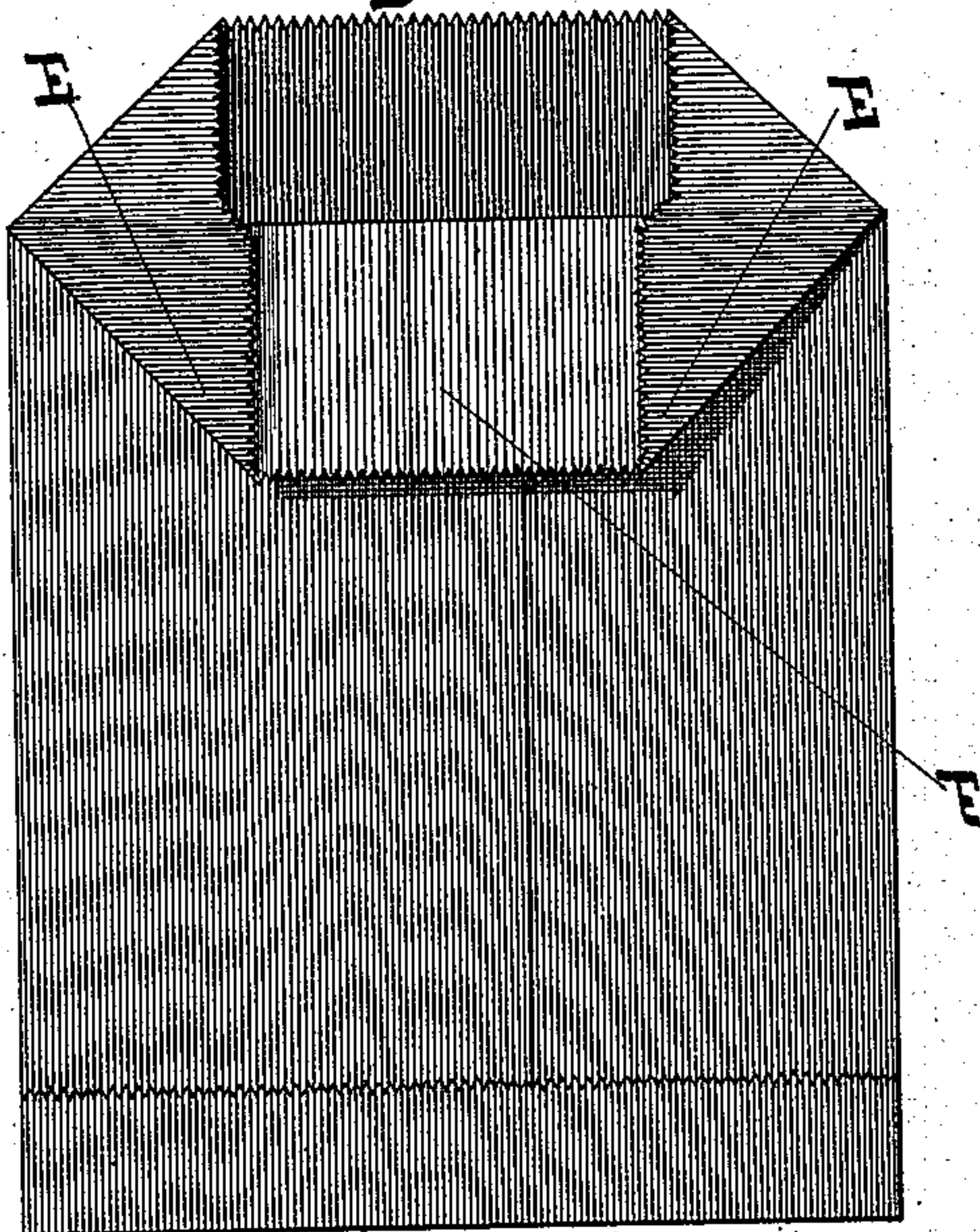


Fig. 7.

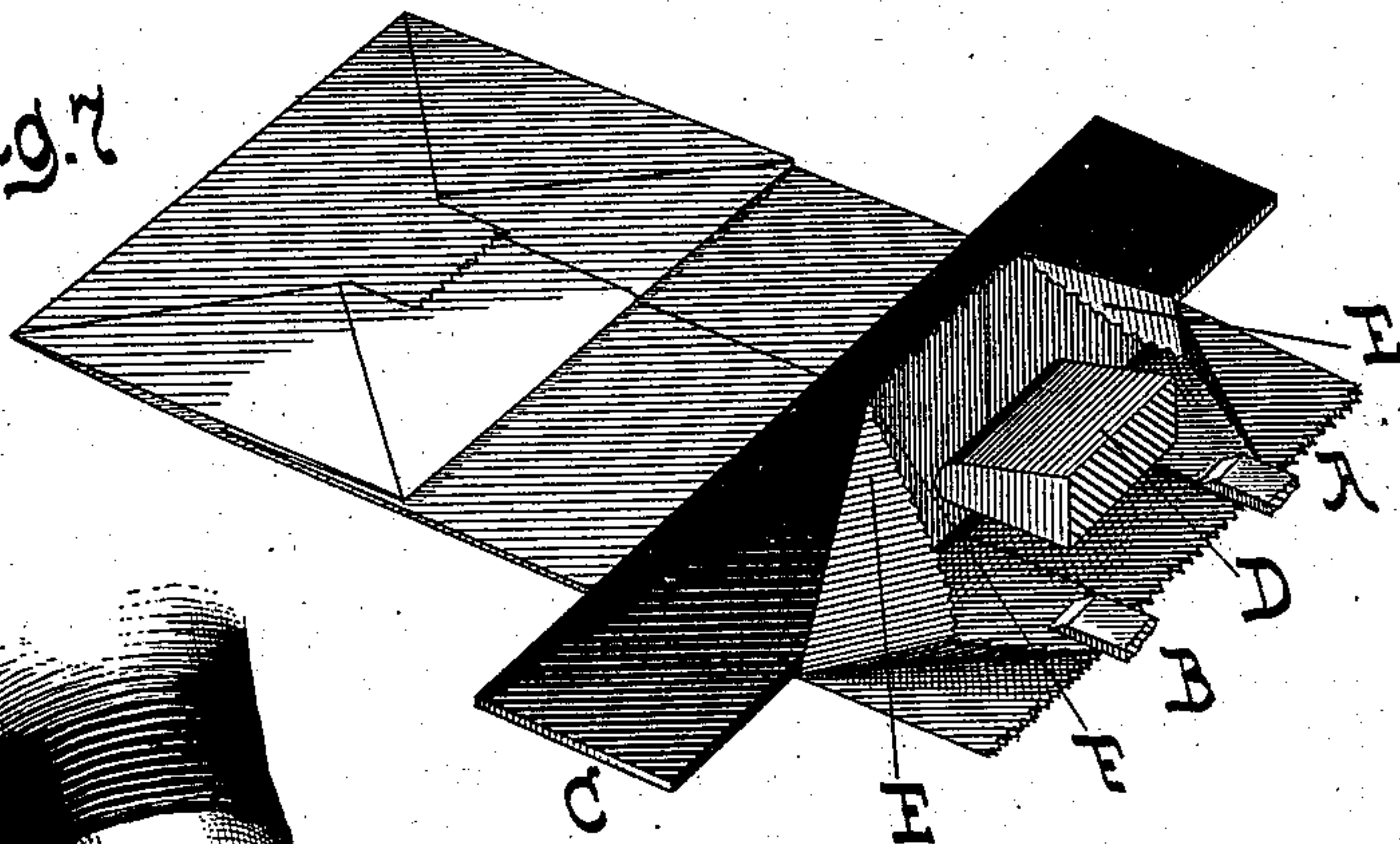
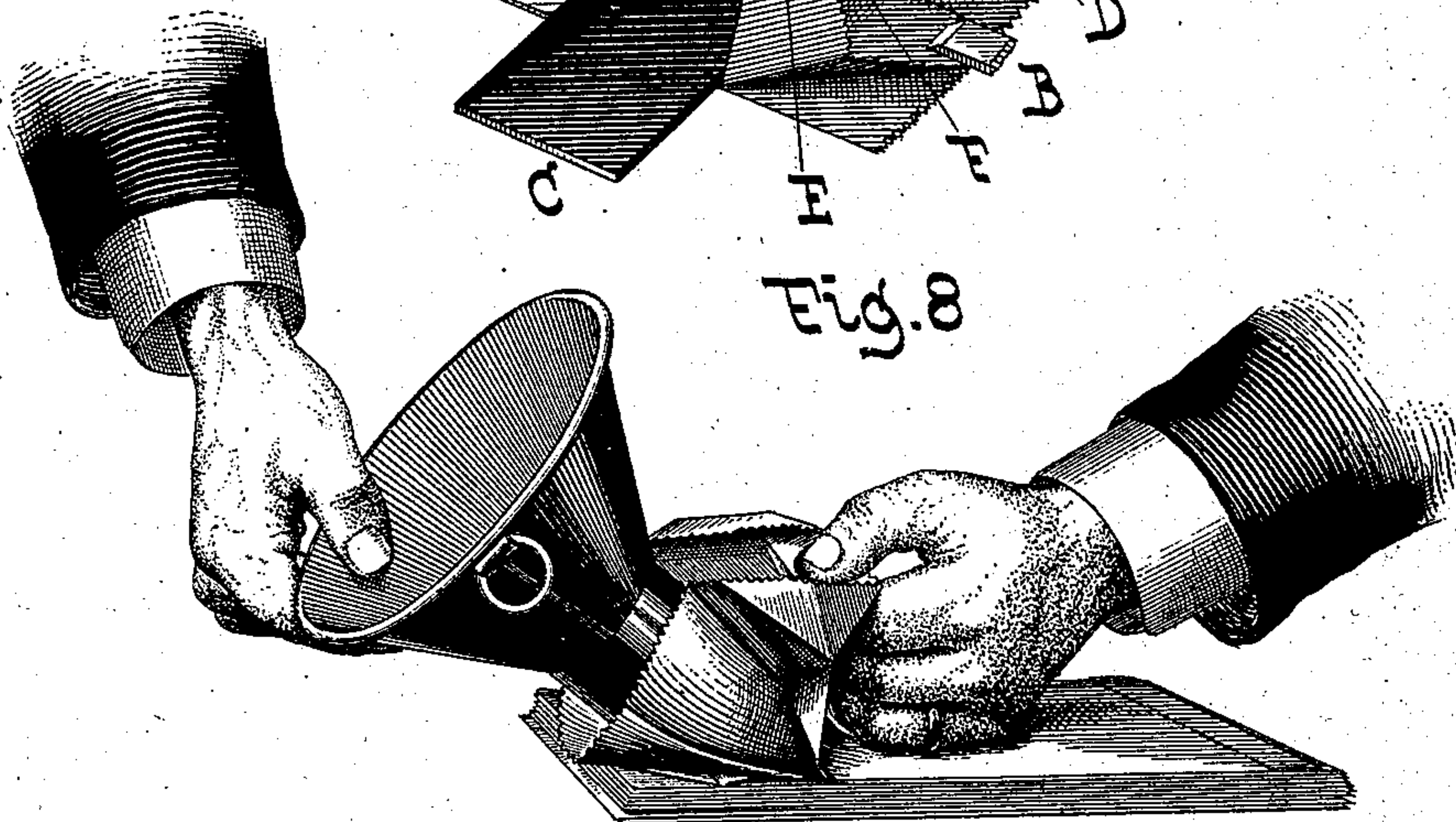


Fig. 8.



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UNITED STATES PATENT OFFICE.

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PAPER BAG.

SPECIFICATION forming part of Letters Patent No. 380,264, dated March 27, 1888.

Application filed December 5, 1887. Serial No. 257,046. (Model.)

To all whom it may concern:

Be it known that I, WILLIAM A. LORENZ, of Hartford, Connecticut, have invented a new and useful Improvement in Paper Bags, of which the following description and claim constitute the specification, and which is illustrated in the accompanying two sheets of drawings.

This invention relates to the mouths of paper bags, which mouths are so opened out when the bags are manufactured that they may be quickly and easily filled when they are used.

Figures 1, 2, and 3 of the drawings represent paper bags with inwardly-tucked sides and such bottoms as that covered by the Honiss patent, No. 353,307, granted November 30, 1886, and having three slightly-modified forms of my present improvement. Figs. 4, 5, and 6 represent paper bags, made of flat paper tubes with two different kinds of long-known bottoms, and having three slightly-modified forms of my present improvement as applied to such bags. Fig. 7 is a perspective view of the bag of Fig. 1, at an intermediate stage of the opening out of its mouth. Fig. 8 is a view of a pile of bags having mouths and sides like Fig. 1, and with the upper bag of that pile in a position about to be filled with sugar, grain, coffee, or other merchandise through a funnel inserted in the mouth of a bag.

The process of opening out and folding down the mouth of the bag of Fig. 1 is as follows: The bag, being otherwise completed, is placed upon any suitable surface, and the clips A and B are inserted in the end of the bag, under the upper thickness thereof and upon the inner borders of the two tucks, respectively, so as to hold those parts of those tucks, together with the lower thickness of the bag, down upon that surface; and the presser-plate C is placed crosswise of the bag, parallel to its upper end and at a distance from the shorter thickness of that upper end corresponding with the depth of the tucks in the sides of the bag, or somewhat less than that depth, as shown in the drawings, or somewhat greater than that depth, if desired. Thereupon a single implement, like that indicated by the letter D, is inserted lengthwise into the mouth of the bag, immediately over the space between the two clips; and that implement is then pushed backward

over the presser-plate C, and carries with it the upper thickness of the bag and the adjacent parts of the upper thicknesses of the tucks into the position shown in Fig. 1. The generic characteristics of the bag of Fig. 1 include the folds E, which folds, when the bag is pressed flat in a pile, are right-angled triangles, with curved bases and with their right angles pointing away from each other and separated by the same distance that separates the sides of the bag, and include also the fold F, which fold, in this instance, is a truncated triangle, the base of which extends across the bag, and the opposite angle of which is directed toward the bottom of the bag.

The mode of folding the mouth of the bag of Fig. 2 is the same as that of Fig. 3, except that the outer edges of the two clips are placed nearer the adjacent sides of the bag, respectively, and except that the implement D is narrower than the corresponding implement used in making the mouth of the bag of Fig. 1. The resulting differences in the folds of the mouth of the bag of Fig. 2, as compared with those of the bag of Fig. 1, consist in the fact that the folds E are longer and larger, and in the fact that the fold F is a truncated obtuse-angled triangle instead of a truncated right-angled triangle, and is smaller and shorter.

The mode of folding the mouth of the bag of Fig. 3 consists in inserting the clips A and B under the inner borders of the tucks and upon the lower thickness of the end of the bag, and otherwise in the same position as indicated in Fig. 7, and in thereupon inserting the implement D between the ends of the two outer thicknesses of the bag and pushing it backward over the presser-plate C, and then in flattening the thus partly-formed folds down into the completed bag-mouth of Fig. 3. The generic characteristics of the bag of Fig. 3 also include the folds E of that figure, which folds, when the bag is pressed flat in a pile, are right-angled triangles with their right angles pointing away from each other and separated by the same distance that separates the two sides of the bag, and also include the fold F, which fold is now a rectangle with its two lower corners rounded, and which extends across the bag, with its outer edge directed toward the bottom of the bag, and the specific character-

istics of the bag of Fig. 3 include the folds G, the right-angled triangular surfaces of which lie under the rearmost halves of the triangular folds E, respectively, and include also the 5 rectangular folds H, which lie partly under the folds E, respectively, and which are partly exposed to view from above.

The mode of folding the mouth of the bag of Fig. 4 is as follows: That portion of the 10 lower thickness of the upper end of the bag which is between the inner borders of the folds E is held down upon any suitable surface by any flat implement, and a flat implement of corresponding width is inserted between the 15 two thicknesses of the upper end of the bag and pushed backward over the presser-plate C, substantially as is shown in Fig. 7, in respect of the bag of Fig. 1.

The mode of folding the mouths of the bags 20 of Figs. 5 and 6 agrees with that of folding the mouth of the bag of Fig. 4, except that the upper one of the two implements inserted between the two thicknesses of the upper end of the bag of Fig. 5 is narrower than the lower 25 implement thus inserted, while the corresponding difference between the width of the two implements inserted in the upper end of the bag of Fig. 6 is greater still. The generic characteristics of the bags of Figs. 5, 6, and 7 30 include the folds E, which folds, when the bags are pressed flat in a pile, are right-angled triangles with their right angles pointing away from each other and separated by the same distance that separates the sides of the bags, and

include also the fold F, which fold is now a 35 truncated triangle, the base of which extends across the bag and the truncated angle of which is directed toward the bottom of the bag. The mouth of the bag of Fig. 5 differs from the mouth of the bag of Fig. 4 in that the upper 40 thickness of that bag is longer than the lower thickness thereof, and thus causes the fold F to be wider than that portion of the lower thickness of the bag which is above the upper 45 side of the fold F, and also causes the inner edges of the folds E to be curved, instead of straight. The mouth of the bag of Fig. 6 is identical with that of the bag of Fig. 4, except that its folds E are longer and larger, and its fold F is a truncated obtuse-angled triangle, 50 instead of a truncated right-angled triangle.

The bags of Figs. 1, 2, 3, 4, 5, and 6 are delineated as examples of bags to which my present improvement may be applied, and as examples of the various forms which that im- 55 provement may assume; but still other forms of mouths may embody the generic characteristics of my present invention.

I claim as my invention—

A paper bag the mouth of which is provided 60 with the outwardly-pointing triangular folds E and the downwardly-directed cross-fold F, all substantially as described.

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Witnesses:

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