

(No Model.)

3 Sheets—Sheet 1.

G. MORTSON.
TRIANGULAR PAPER BAG.

No. 426,842.

Patented Apr. 29, 1890.

FIG. 1.

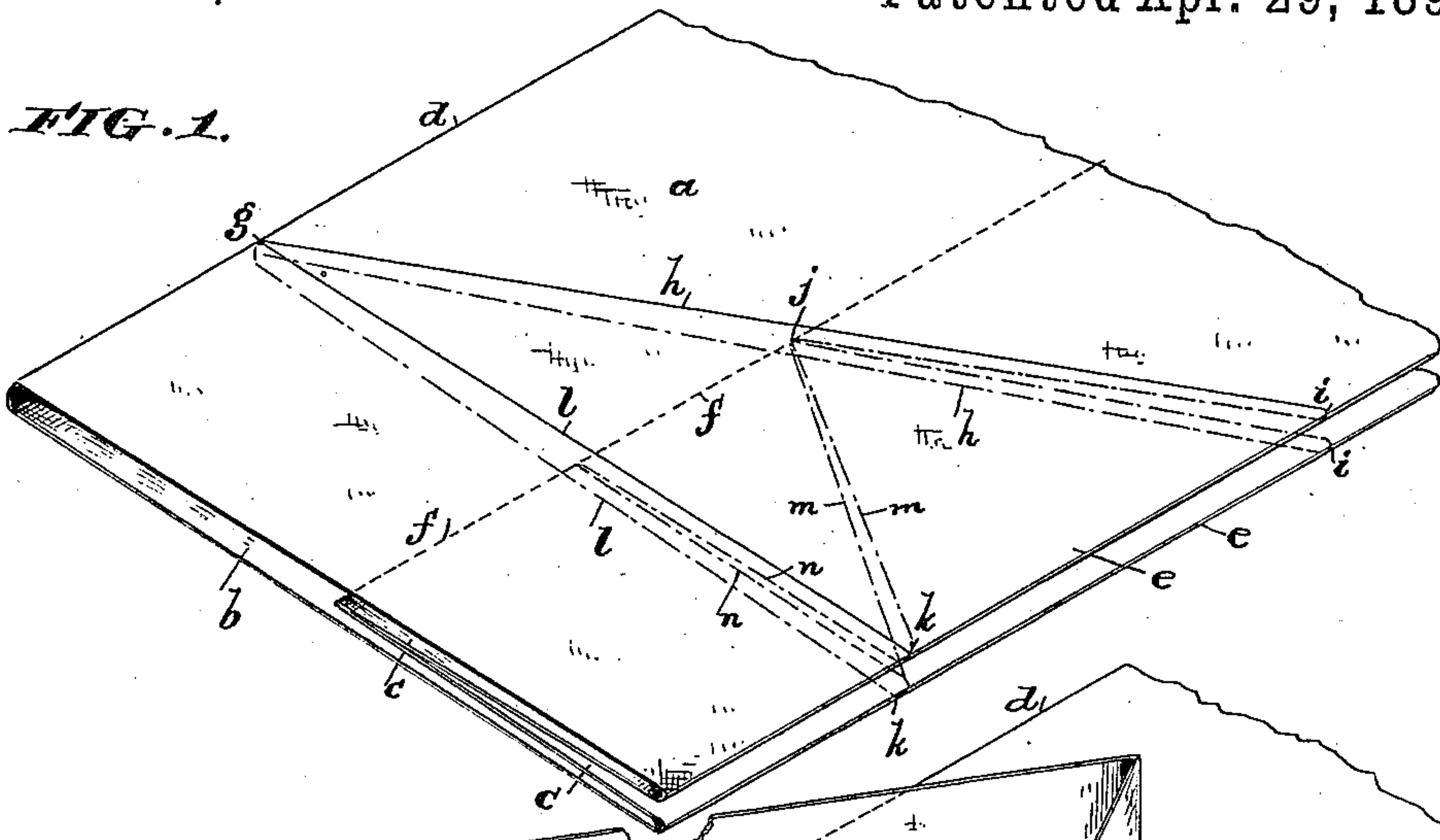


FIG. 2.

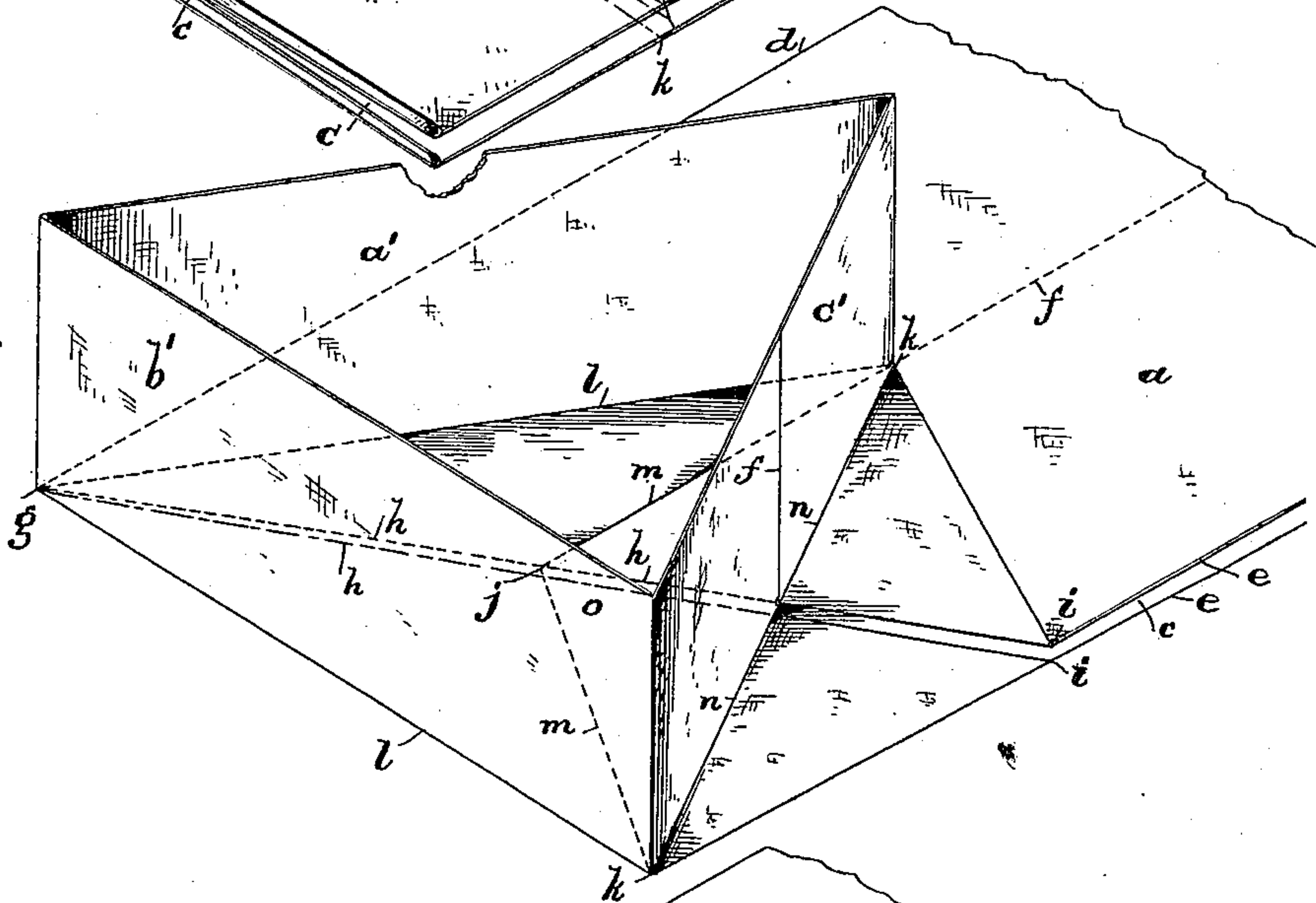
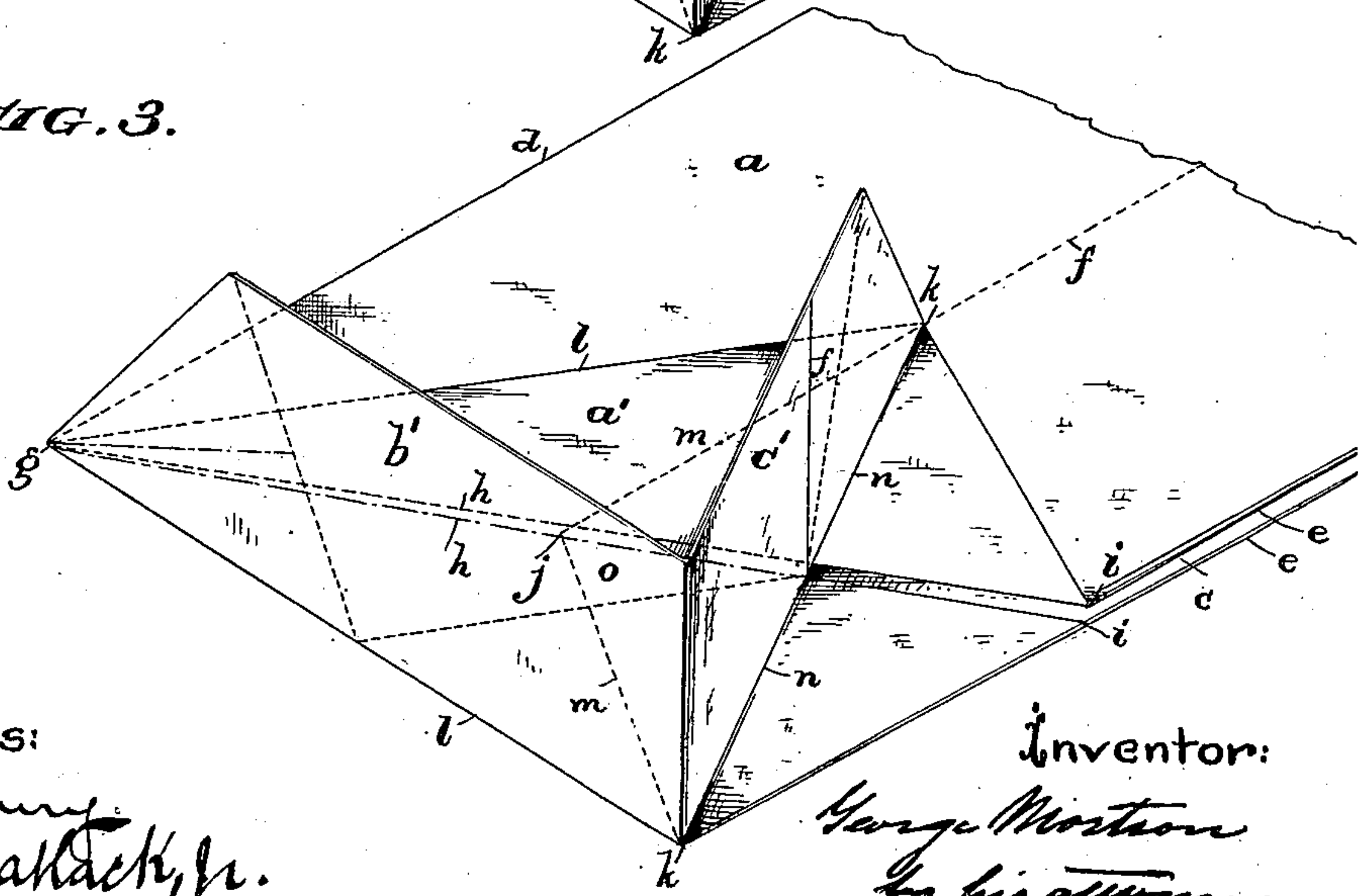


FIG. 3.



Witnesses:

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Inventor:

George Mortson
By his attorney
Francis T. Chambers

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FIG. 4.

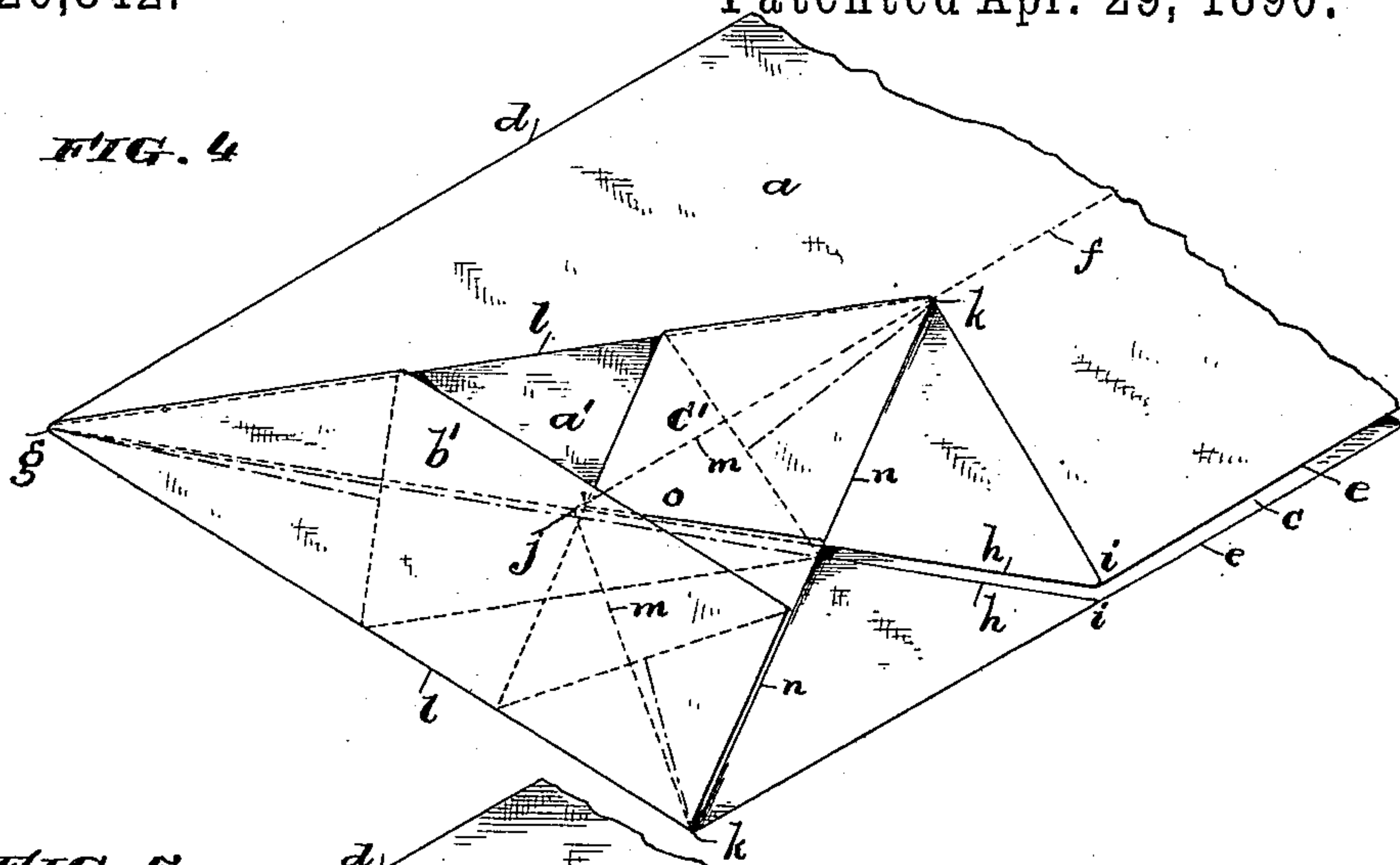


FIG. 5.

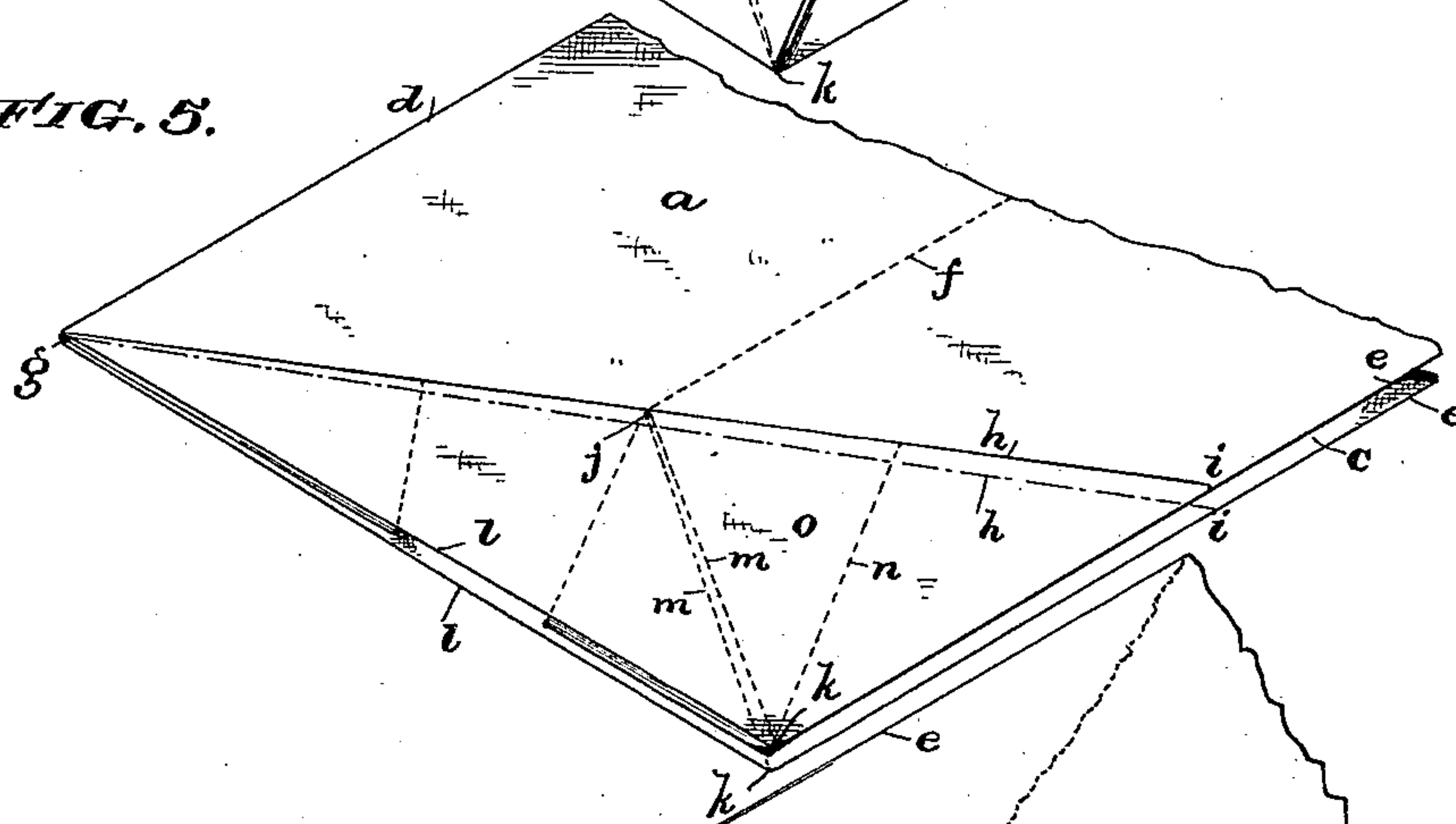
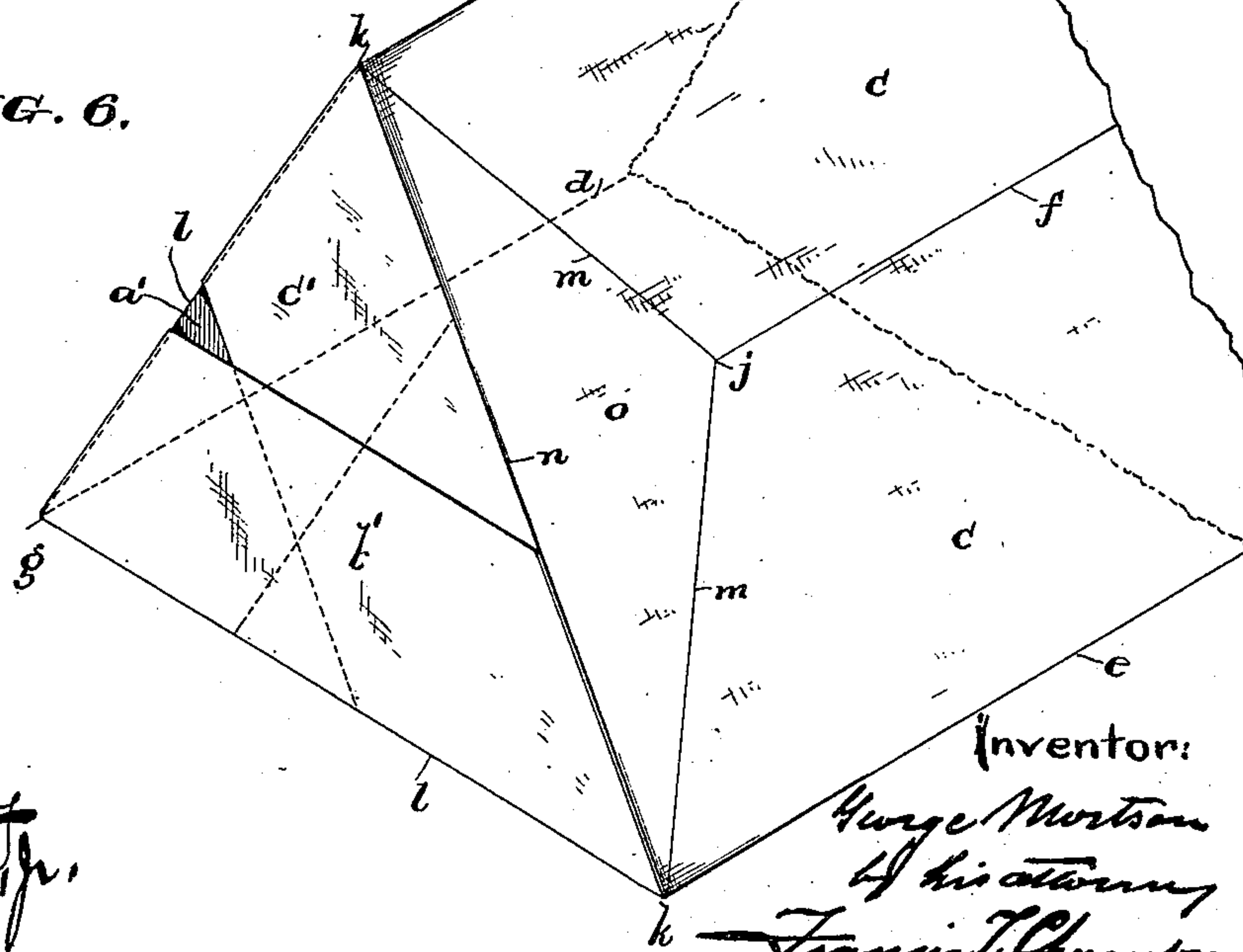


FIG. 6.



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FIG. 7.

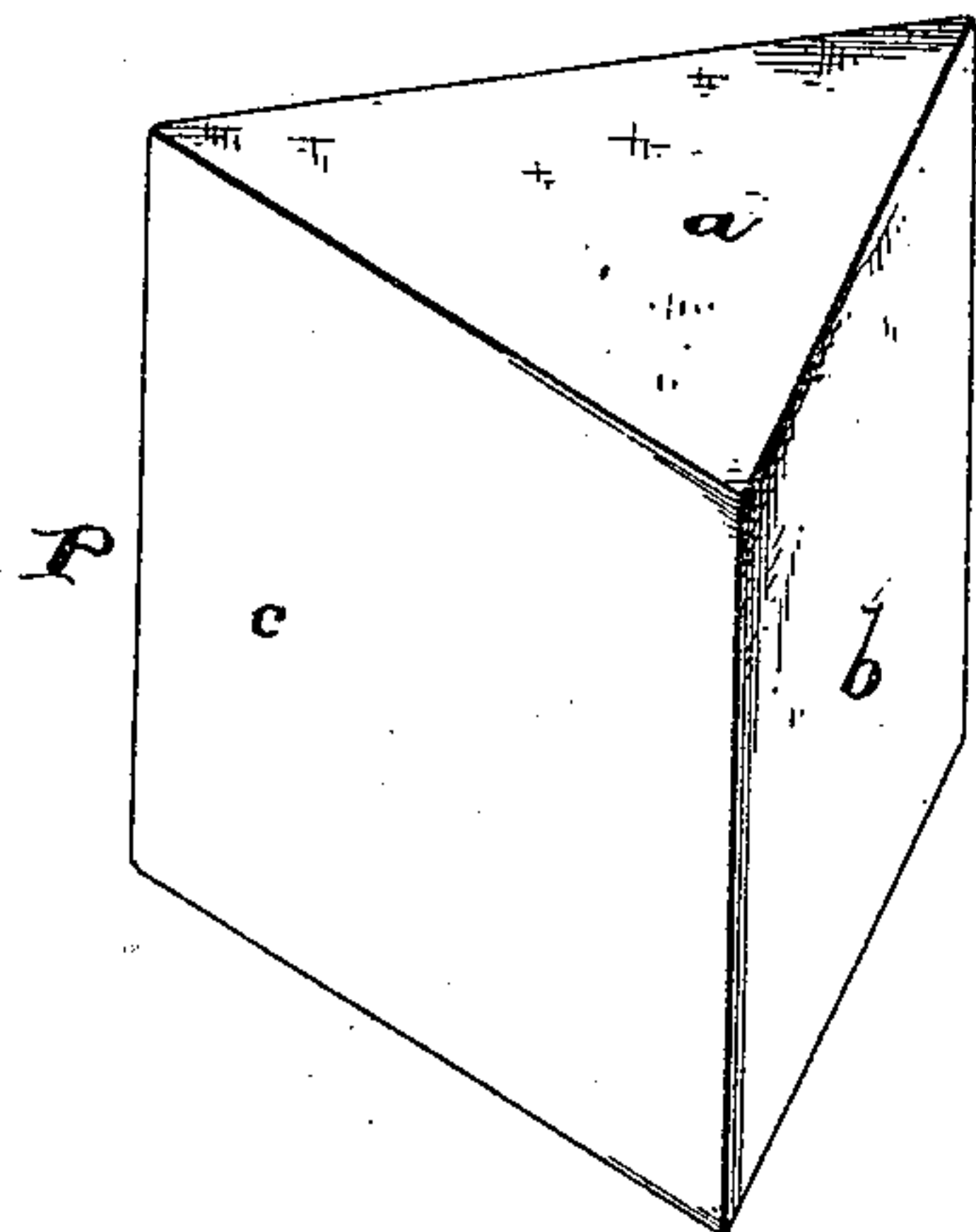


FIG. 8.

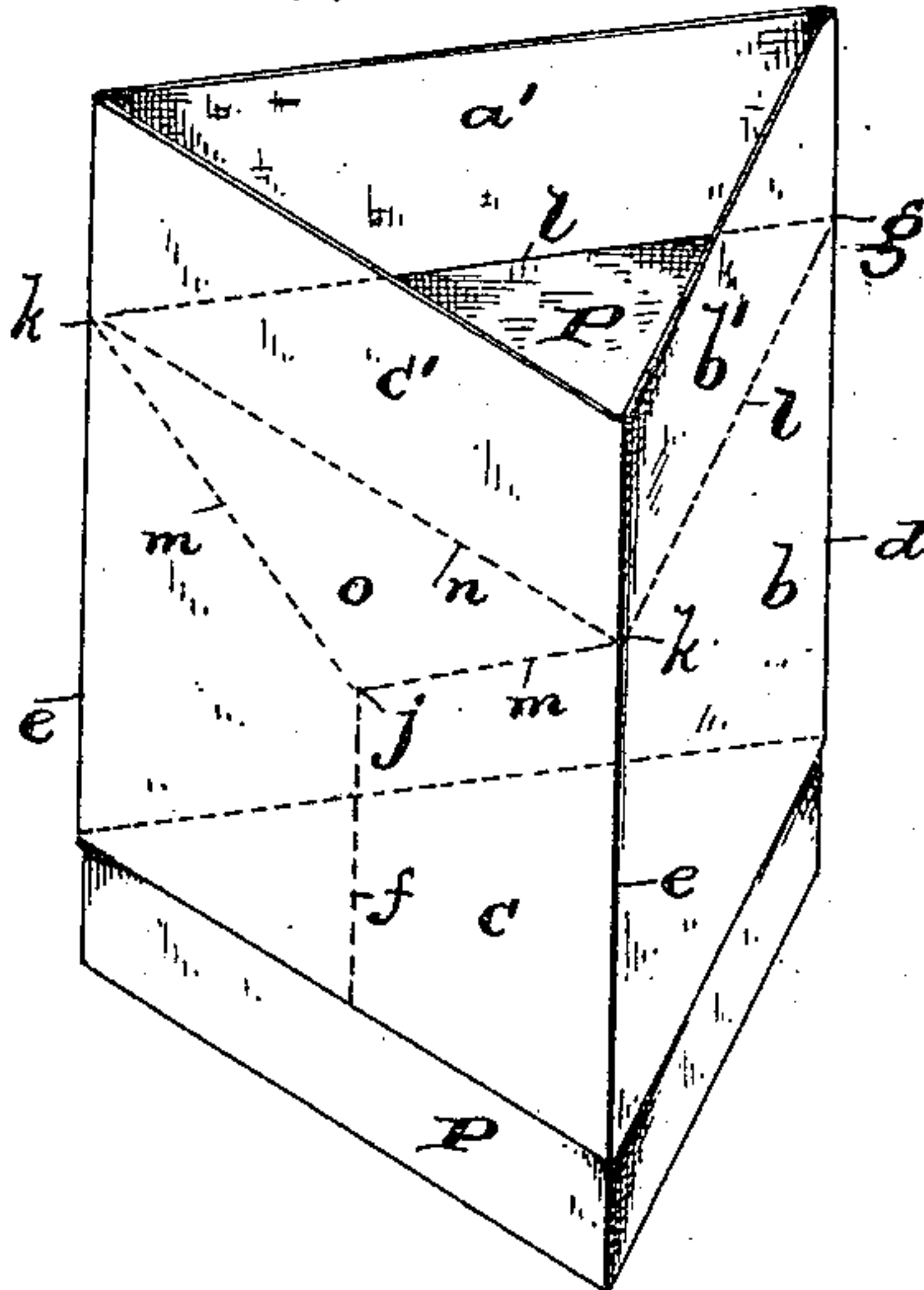


FIG. 9.

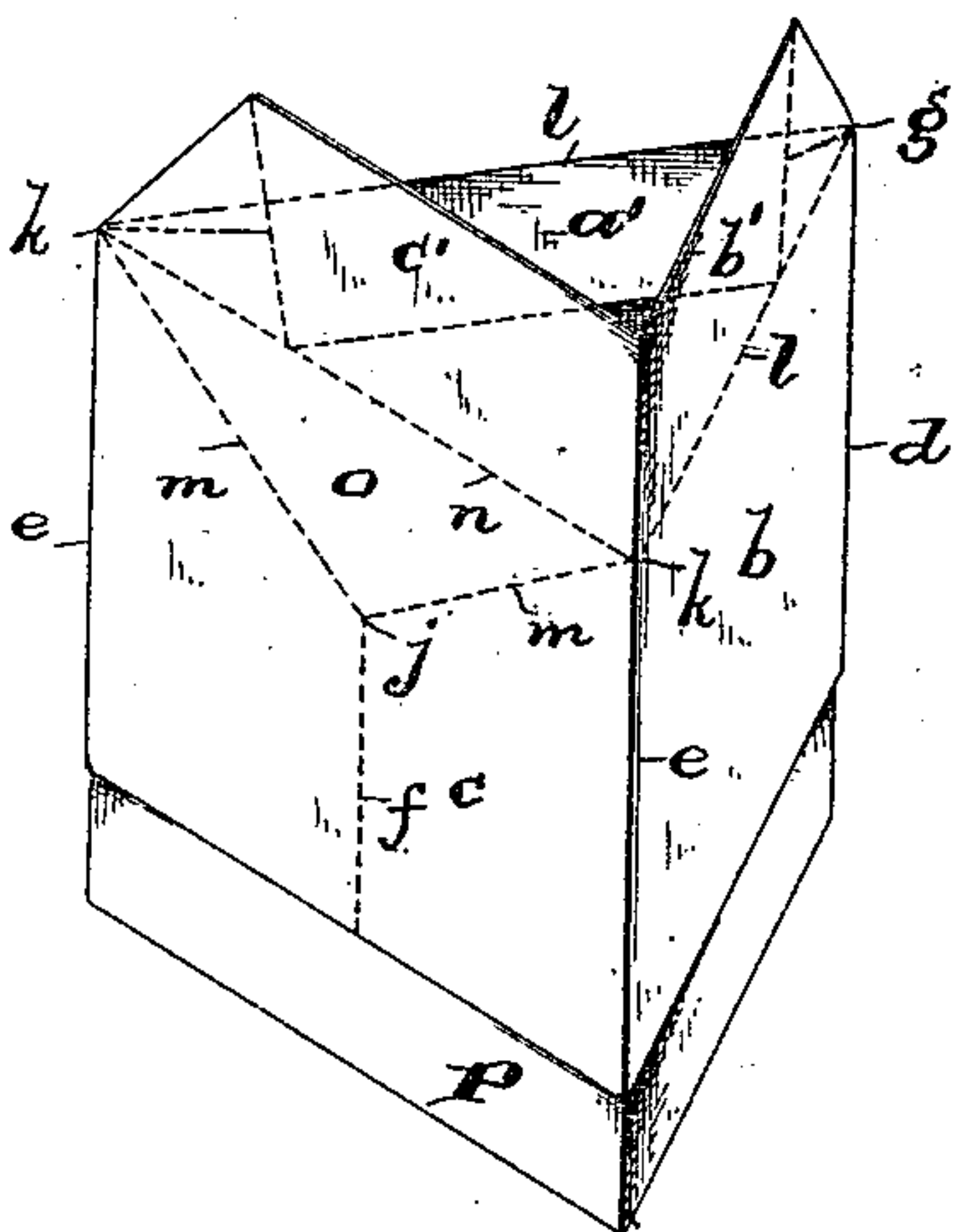
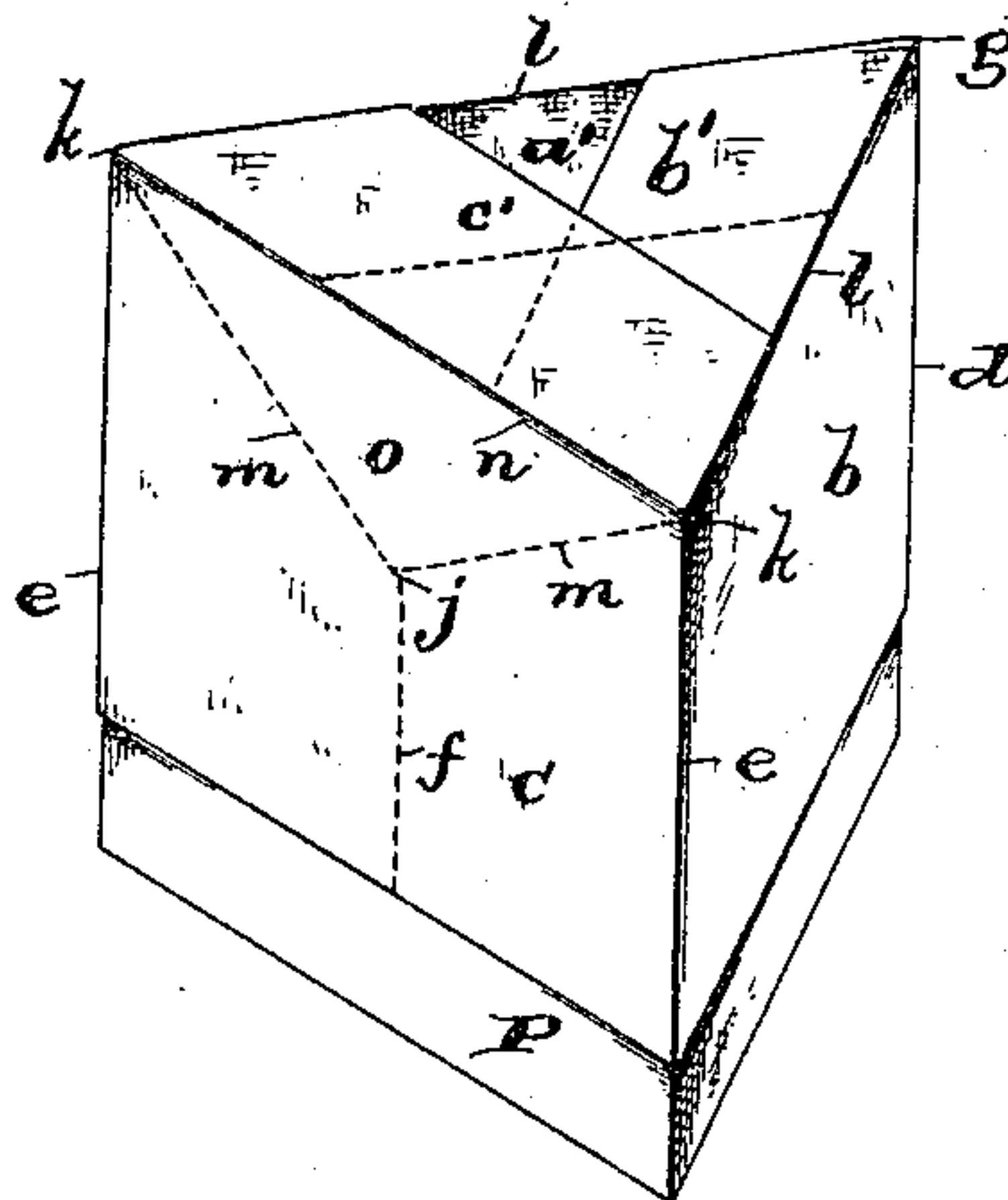


FIG. 10.



Witnesses:

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George Mortson
by his attorney
Francis T. Chambers

UNITED STATES PATENT OFFICE.

GEORGE MORTSON, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR TO THE UNION PAPER BAG MACHINE COMPANY, OF PHILADELPHIA, PENNSYLVANIA.

TRIANGULAR PAPER BAG.

SPECIFICATION forming part of Letters Patent No. 426,842, dated April 29, 1890.

Application filed January 2, 1890. Serial No. 335,609. (No model.)

To all whom it may concern:

Be it known that I, GEORGE MORTSON, a subject of the Queen of Great Britain, and a resident of Bridgeport, county of Fairfield, State of Connecticut, have invented a new and useful Triangular Paper Bag, of which the following is a true and exact description, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to the construction of triangular paper bags, my object being to provide a paper bag which shall have a triangular bottom and cross-section when opened out, which shall be collapsible in convenient form for shipment, which will open out readily, and which can be easily manufactured.

My invention consists in forming a paper bag with two plain sides and one bellows-folded or inwardly-tucked side, and with an inward triangular fold formed in the bellows-folded side in the manner hereinafter described, and for the purpose of permitting the bag to be collapsed without requiring the folding of the bottom.

The construction of my improved bag will be best understood as described in connection with the drawings, which represent two methods in which the said bag can be constructed.

In the drawings, Figure 1 represents the bellows-folded tube with the principal lines of fold indicated by solid and dotted lines. Fig. 2 represents the tube with one end distended into a triangular box. Figs. 3 and 4 show how the box is folded down to form the bottom of the bag. Fig. 5 shows how the bottom of the bag may be folded over together, if desired. Fig. 6 shows the completed bag distended for use. Figs. 7, 8, 9, and 10 show another way of forming my improved bag, Fig. 7 being a triangular tube, Fig. 8 showing said tube placed upon a triangular block, Fig. 9 showing the way in which the bottom can be folded down over the end of the block, and Fig. 10 the bag completed upon the block. In these figures dotted lines indicate how the bag can be collapsed for manufacture so as to embody my improved construction.

Referring first to the method of manufacture illustrated in Figs. 1 to 6, inclusive, I first form a tube or bag blank having two

plain sides *a* and *b*, united by the fold-line *d*, and one inwardly-tucked or bellows-folded side *c c*, united to the sides *a* and *b* by fold-lines *e e*, the bellows-fold line being indicated by *f*. The next step in the operation of forming my improved bag from such a collapsed tube is to define an oblique line *h*, upon which the bottom of the tube shall be distended. This line should begin at the point *g* of the fold-line *d*, and run obliquely upward to points *i i* on the fold-lines *e e*. The point *g*, at which the line begins, determines the amount of paper to be formed into the bottom of the bag, for all the paper lying below the line *h*, running across the blank from the point *g* at right angles to the fold-line *d*, is folded in to form the bottom. The line *h* having been determined, the bottom of the blank is opened, as shown in Fig. 2, the upward plain side *a* being folded back upon itself on said line *h*, and the bellows-folded side *c c* being fully distended on the line *n*, which connects the points *k k*, said points being those on which the line *l* intersects the fold-lines *e e*. In thus distending the bellows-folded sides an inward triangular fold *o* is formed, having for its base the line *n*, and equilateral sides *m m* running from the points *k k* to the point *j*, which point *j* is that in which the oblique line *h* intersects the fold-line *f*. In thus opening the bottom of the blank the portions of each side which lie beneath the lines *l*, and which are marked *a'*, *b'*, and *c'*, extend upward into a form of a triangular box, as shown in Fig. 2, and the bag is completed by folding these sides down and pasting them together, or, if desired, to an inserted false bottom to complete the bottom of the bag. The bag thus made is shown in its collapsed form in Fig. 4, and Fig. 5 shows how the bag can receive an additional fold by bending the bottom upon itself along the line *h*.

All the lines on which the completed and open bag is bent are defined by this construction, and the folded bag can be opened out, as shown in Fig. 6, readily, and will stand erect upon its bottom when so opened without requiring the user to manipulate it or make with his fingers any folds or creases in addition to those defined in the manufacture of the bag.

Another way in which my improved bag can be manufactured is illustrated in Figs. 7 to 10, inclusive. A triangular tube, such as is shown in Fig. 7, is placed upon or formed
5 around a triangular block P, a sufficient portion of the tube being permitted to extend above the top of the block, as shown in Fig. 8. The portions of the sides of the tube which extend above the block are then folded
10 down upon its end, as shown in Figs. 9 and 10, and pasted together to complete the bag. The bag is then withdrawn from the block P and collapsed to the form shown in Fig. 4, the bellows fold and the inward triangular fold on the
15 bellows-fold side being formed in the act of collapsing the bag.

Having now described my invention, what I claim as new, and desire to secure by Letters Patent, is—

A triangular paper bag having two plain 20 sides and one inwardly-tucked or bellows-folded side, and an inward triangular fold *o*, formed at the base of the bellows side with its apex on the vertical line of the bellows-fold line *f*, all substantially as specified, and 25 so as to allow the bag to be collapsed without requiring the folding of the bottom thereof.

GEORGE MORTSON.

Witnesses:

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ARLEY I. MUNSON.