

(No Model.)

4 Sheets—Sheet 1.

E. E. CLAUSSEN.

PAPER BAG.

No. 426,774.

Patented Apr. 29, 1890.

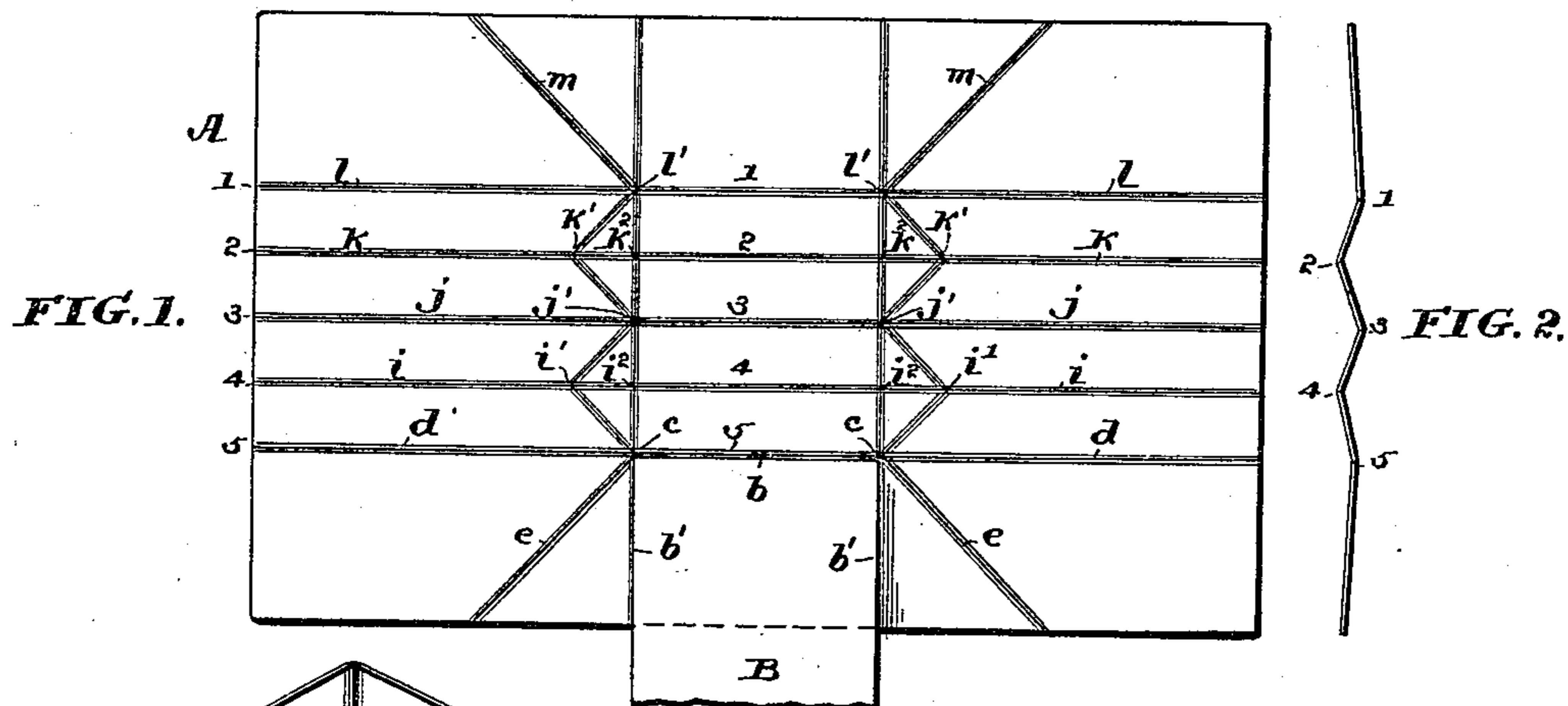


FIG. 3.

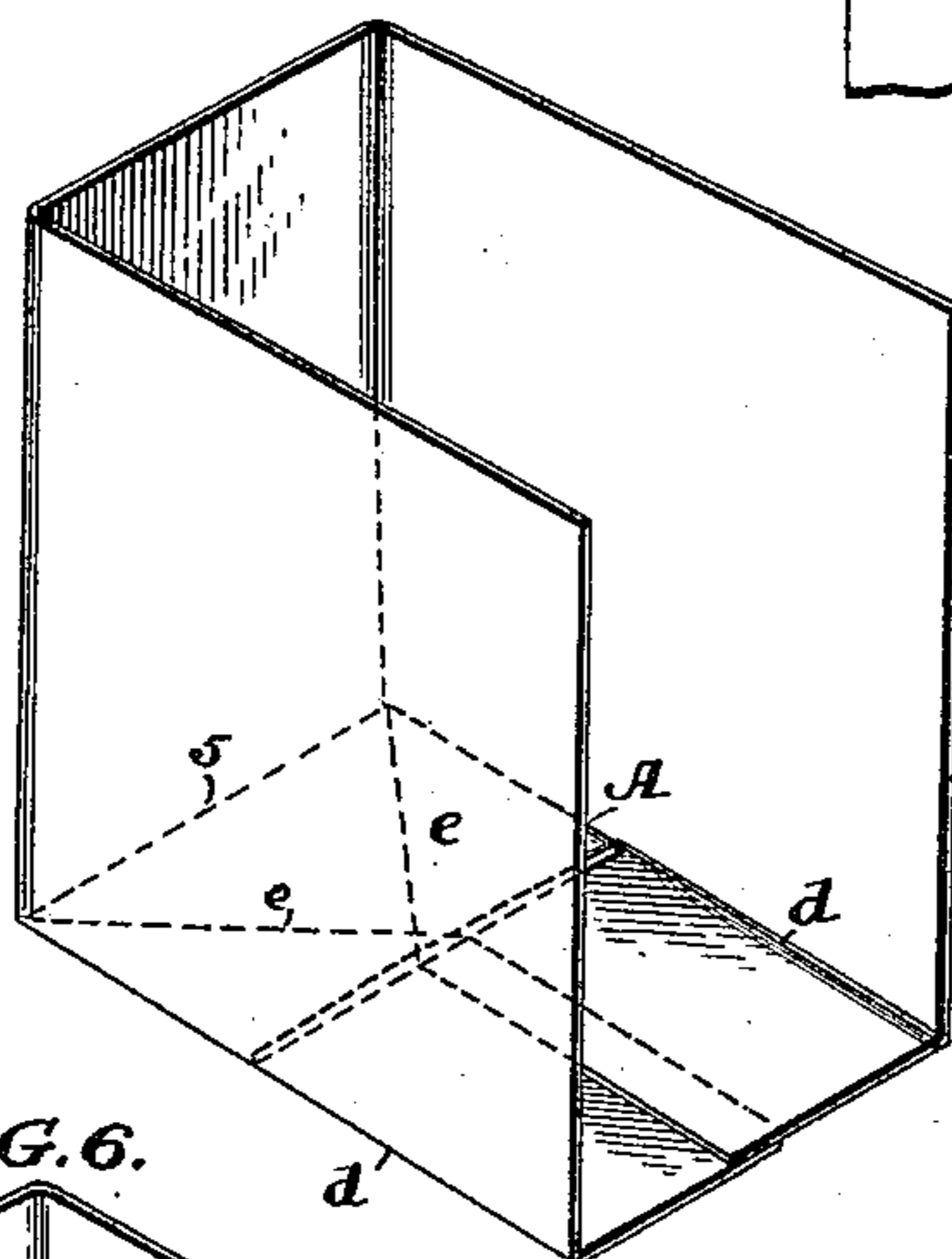


FIG. 4.

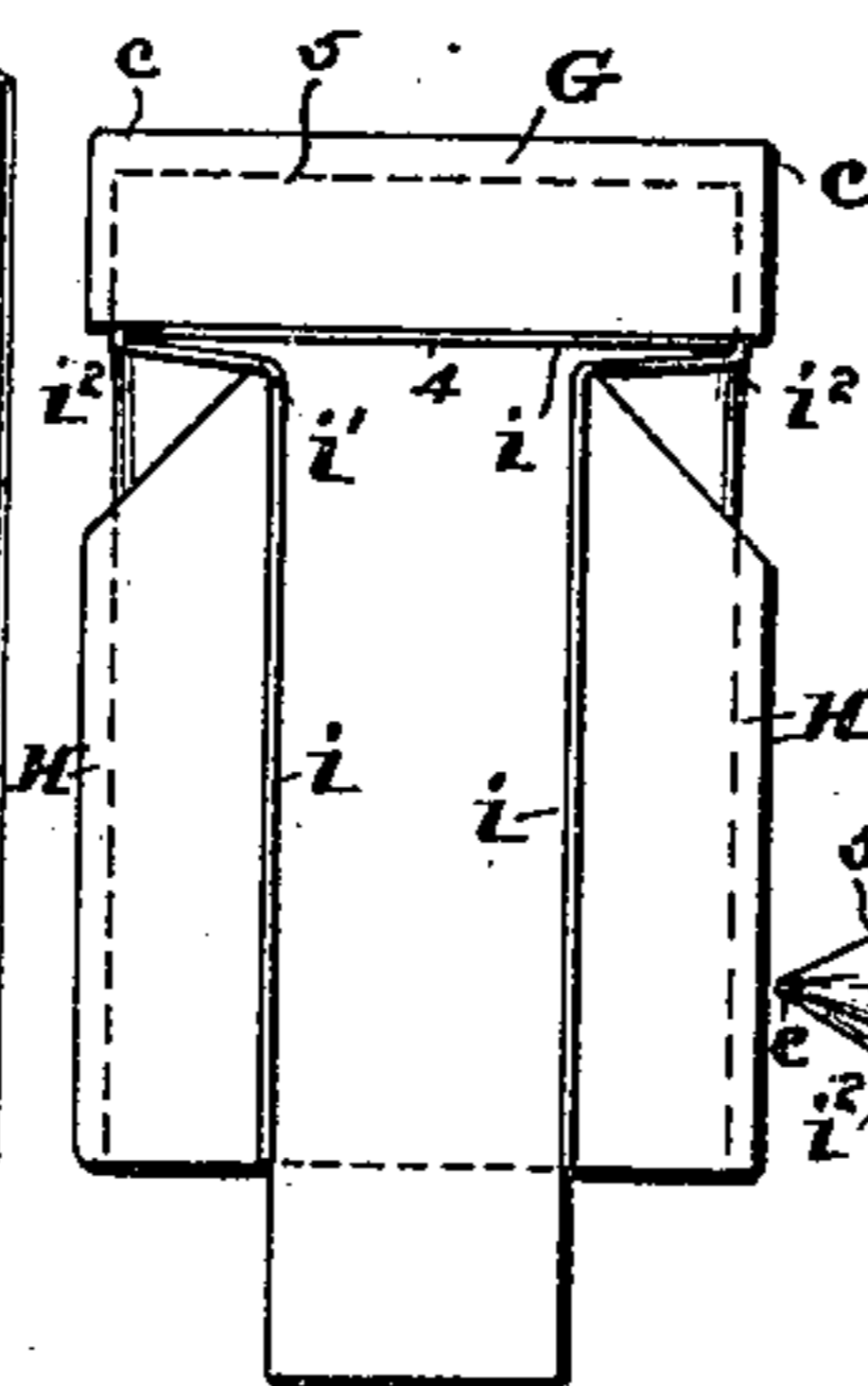


FIG. 5.

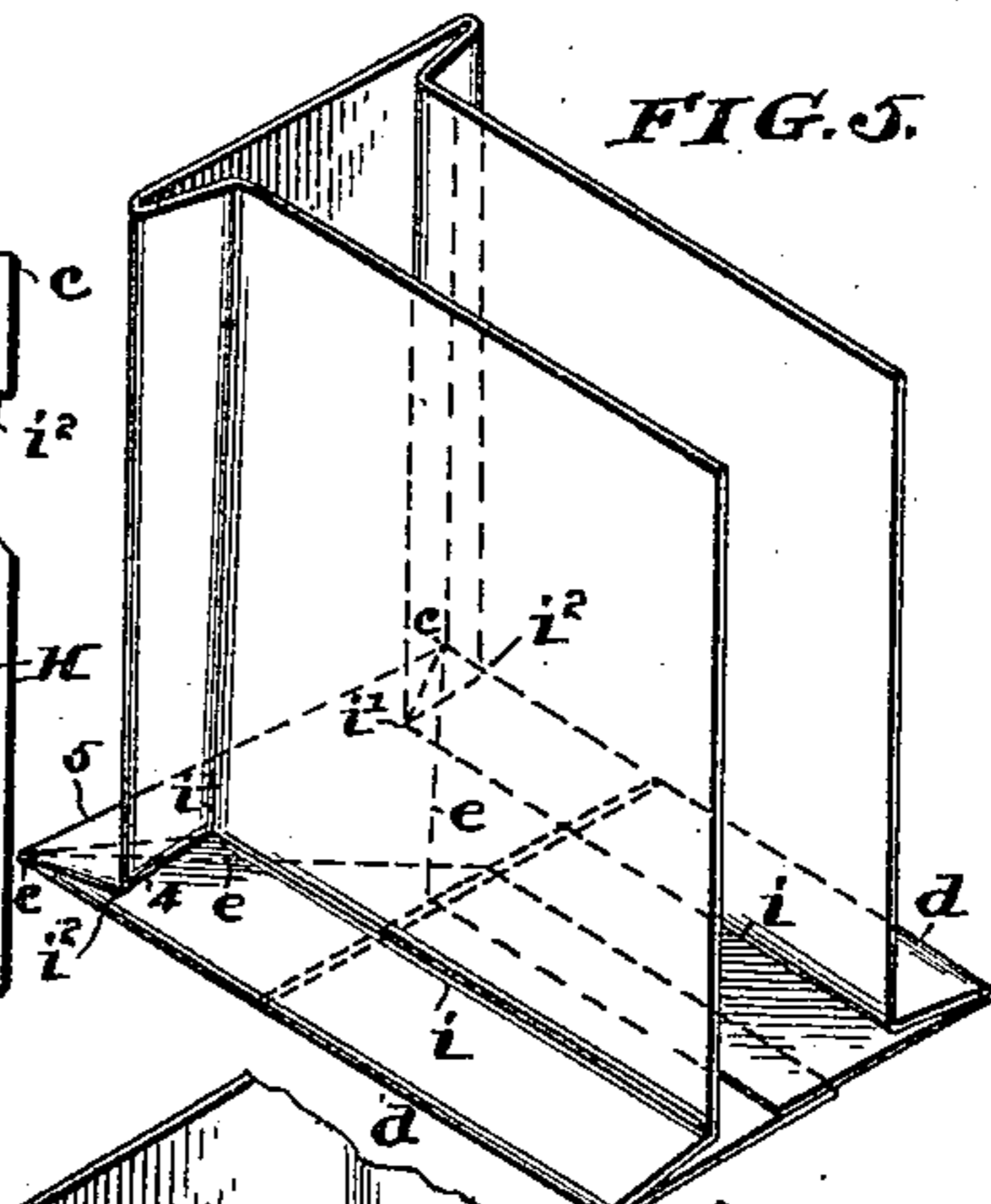


FIG. 6.

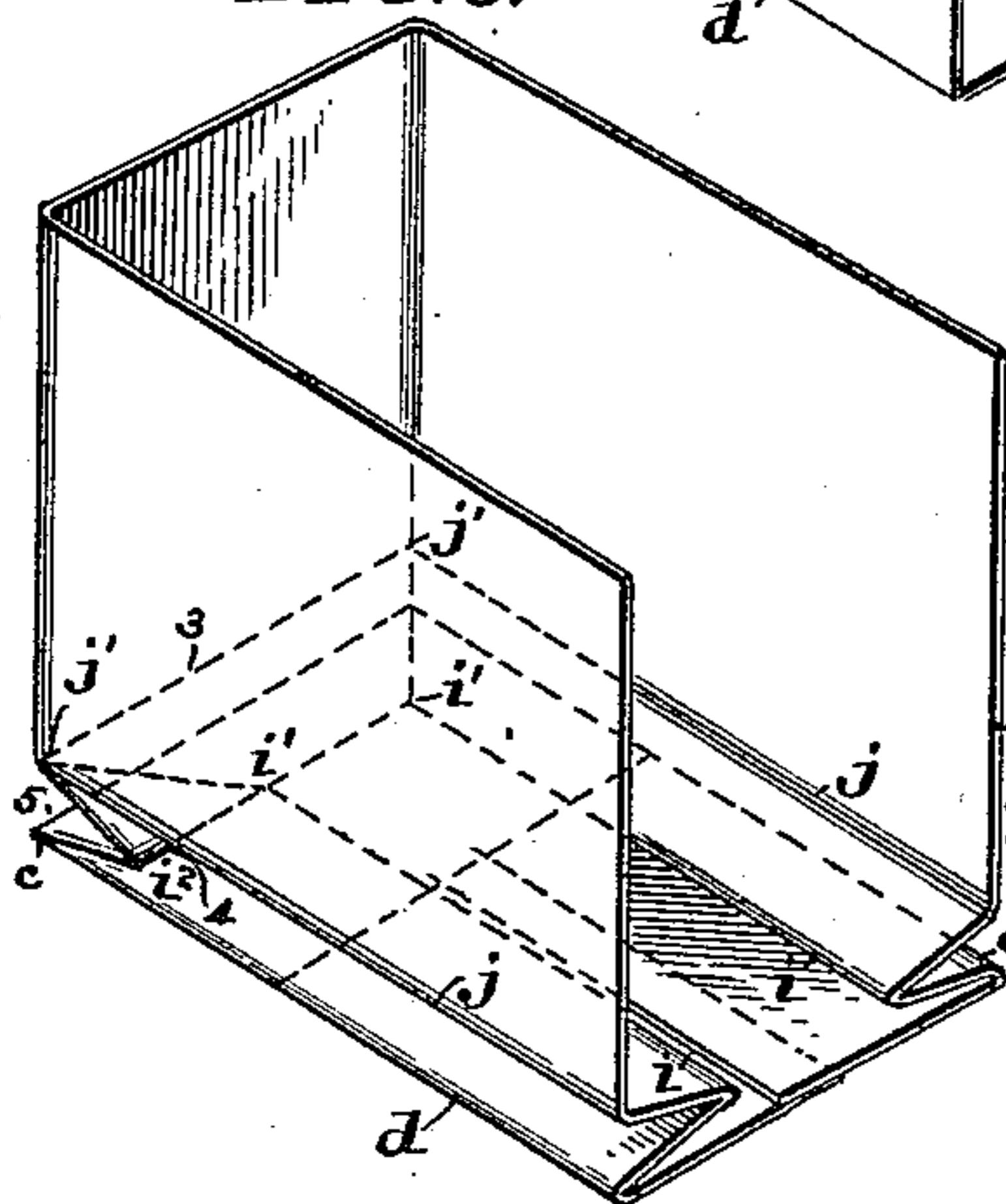


FIG. 7.

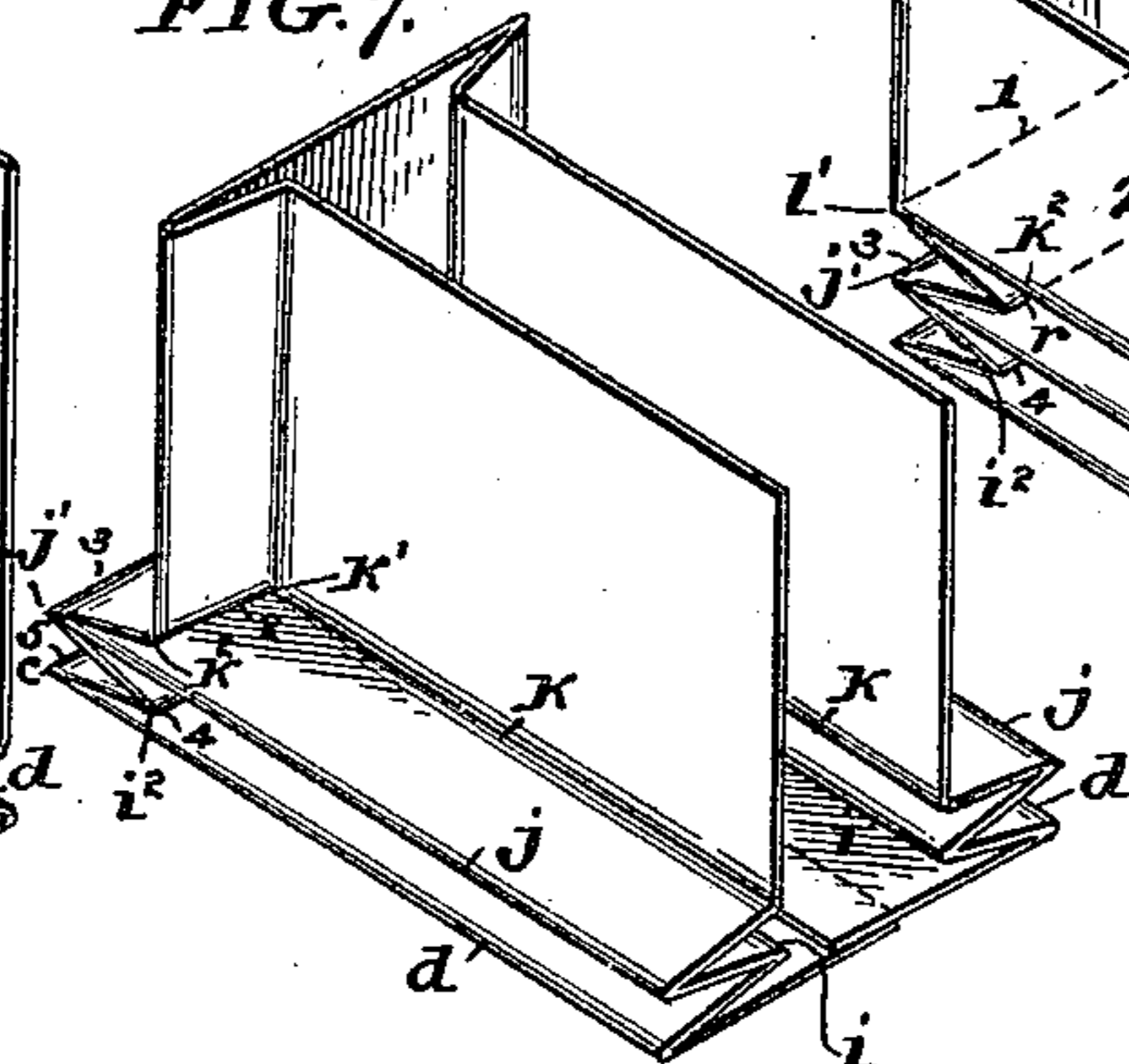


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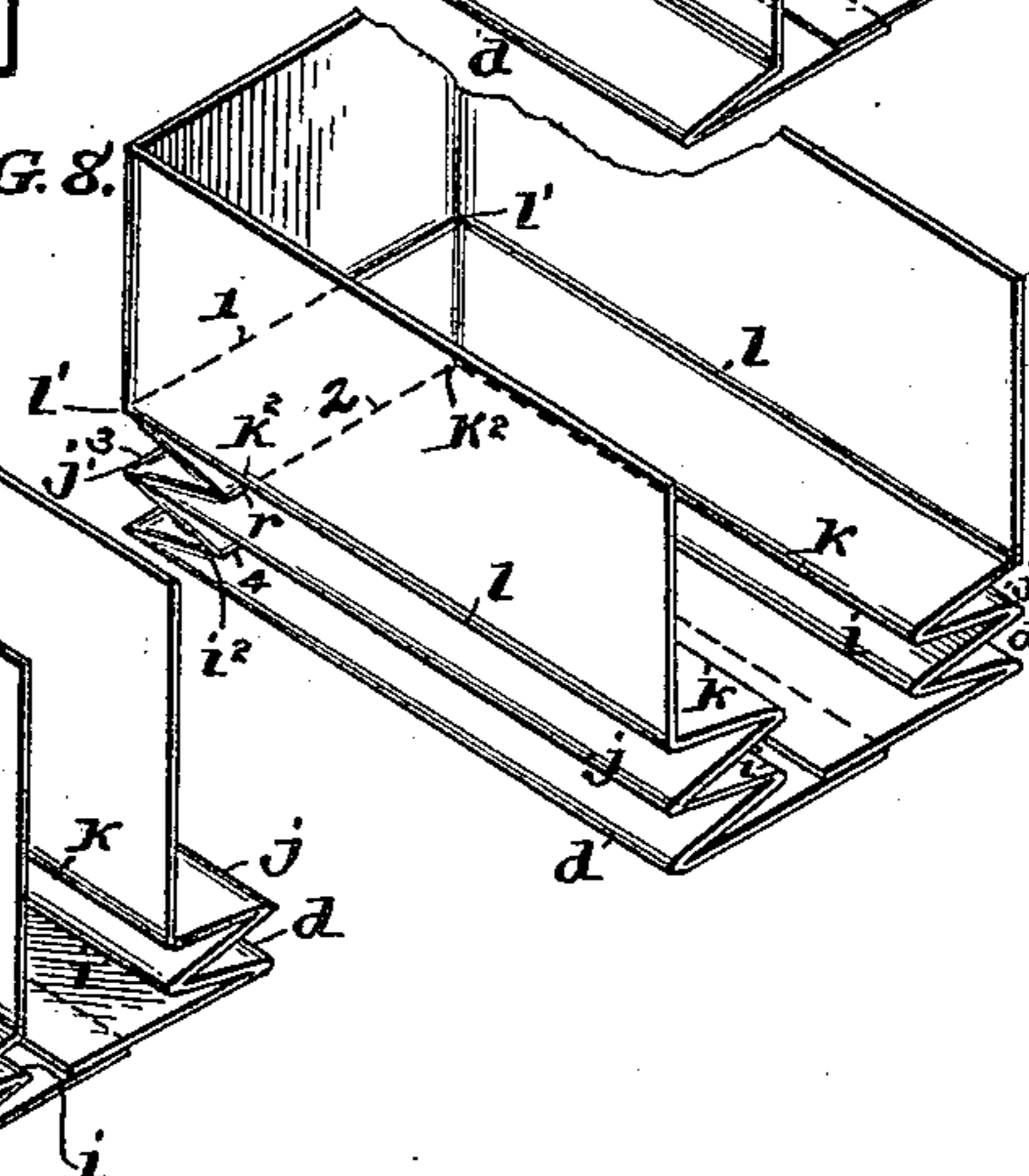
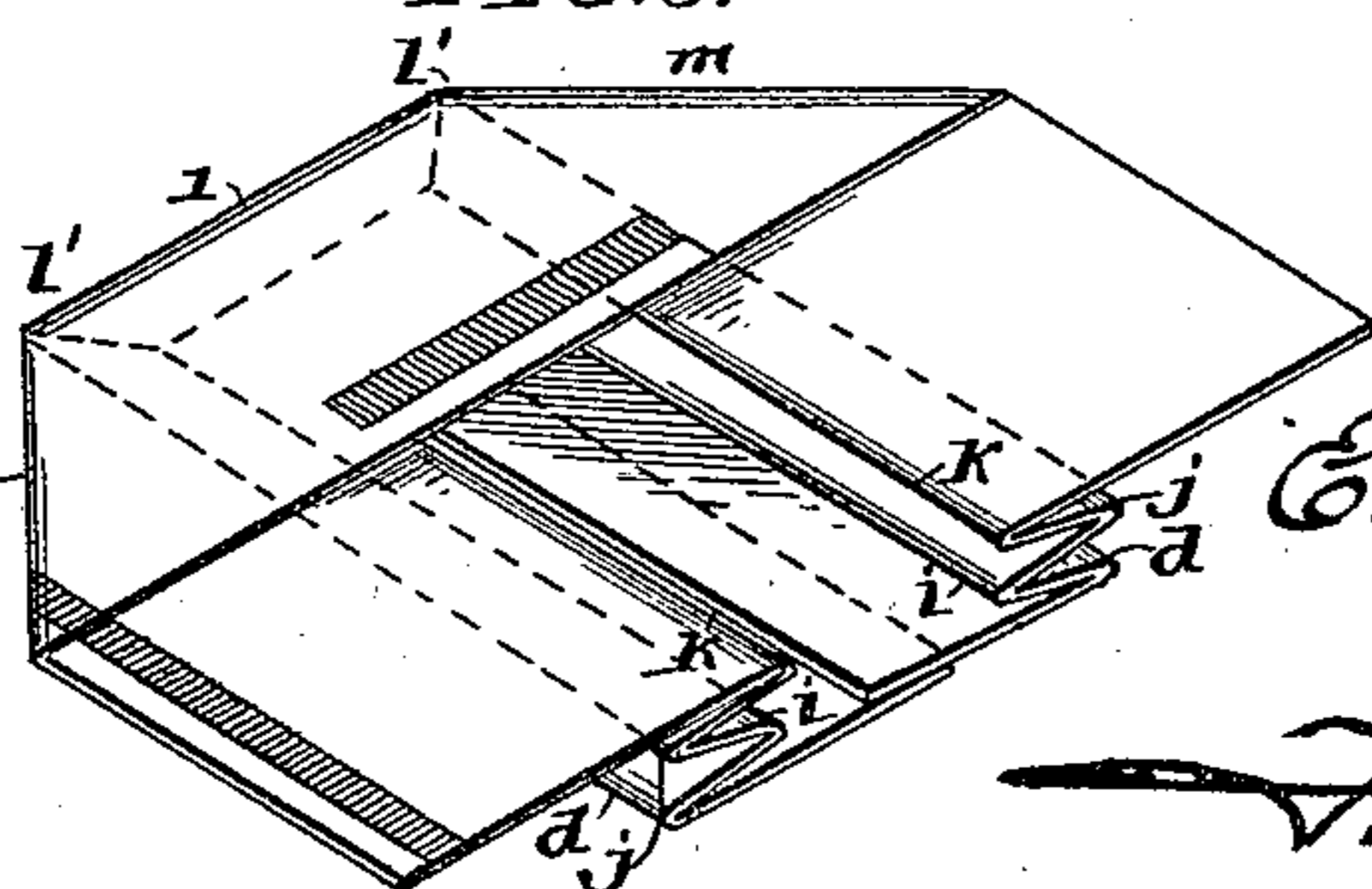


FIG. 9.



WITNESSES:

Henry Drury
Joshua M. Kach

INVENTOR:

Edward E. Clausen
by his attorney
Francis T. Charles

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FIG. 10.

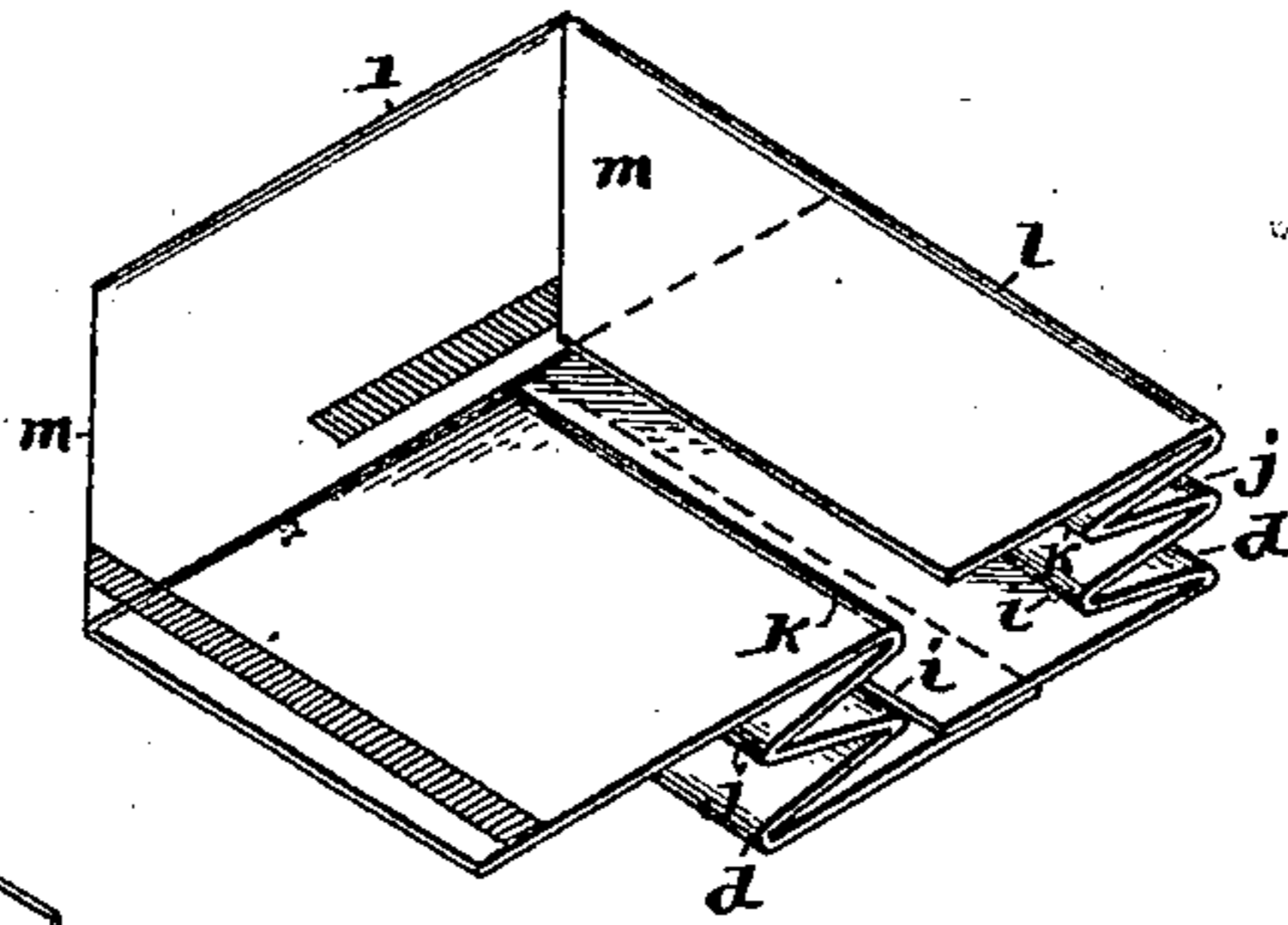


FIG. 3½

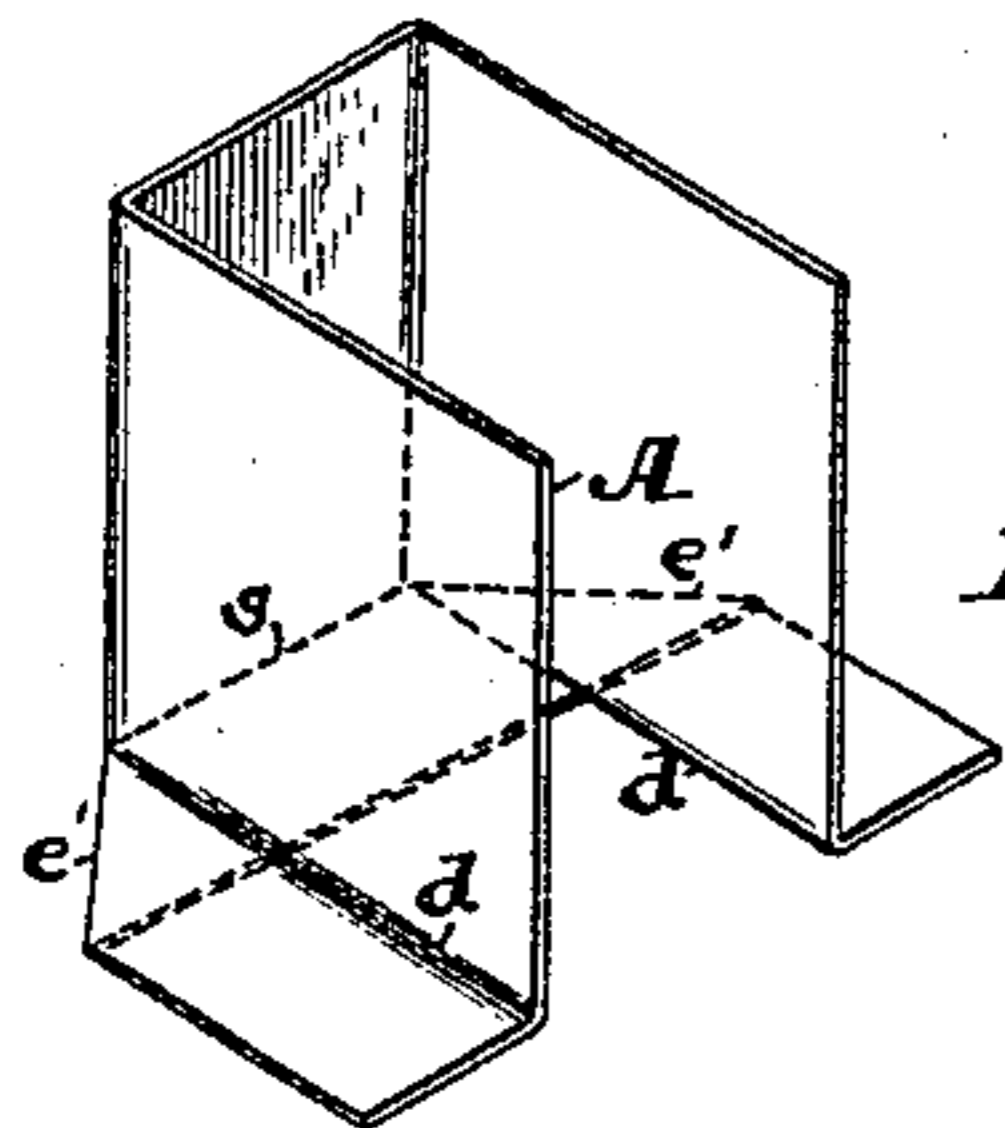


FIG. 11.

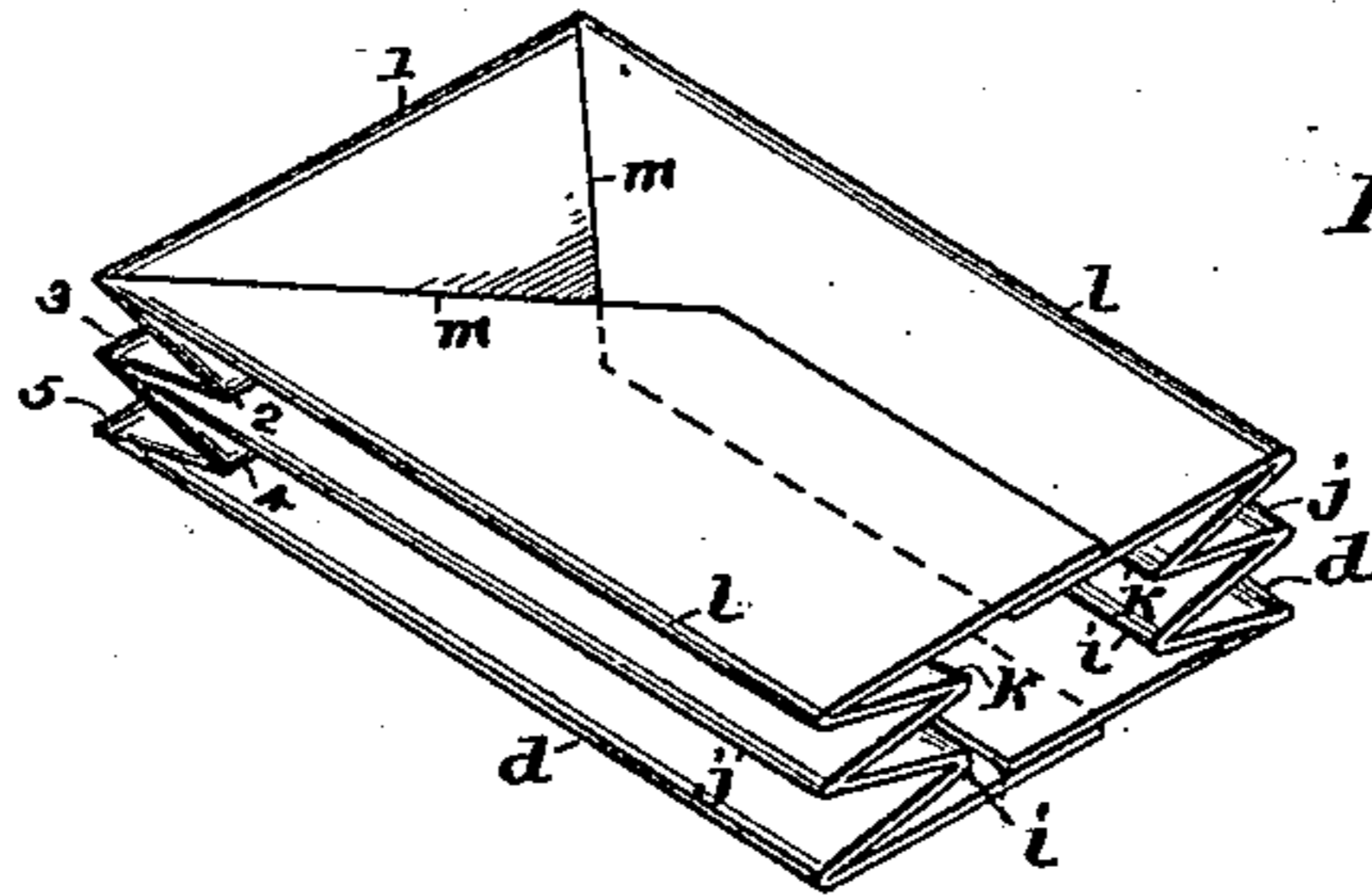
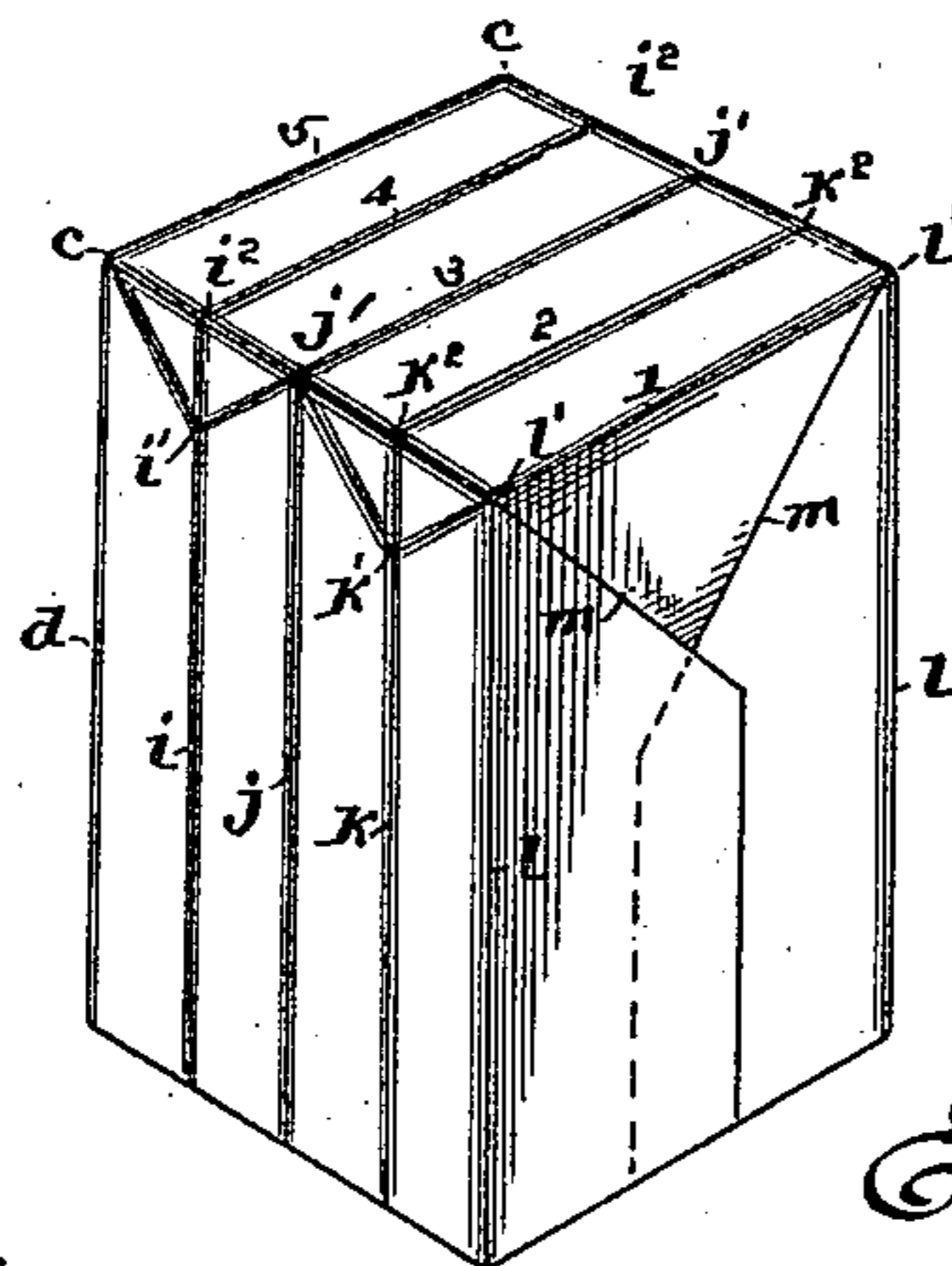


FIG. 12.



WITNESSES:

Henry D. Denny
Joshua M. Hatch, Jr.

INVENTOR:

Edward E. Claussen
by his attorney
F. T. Chamberlain

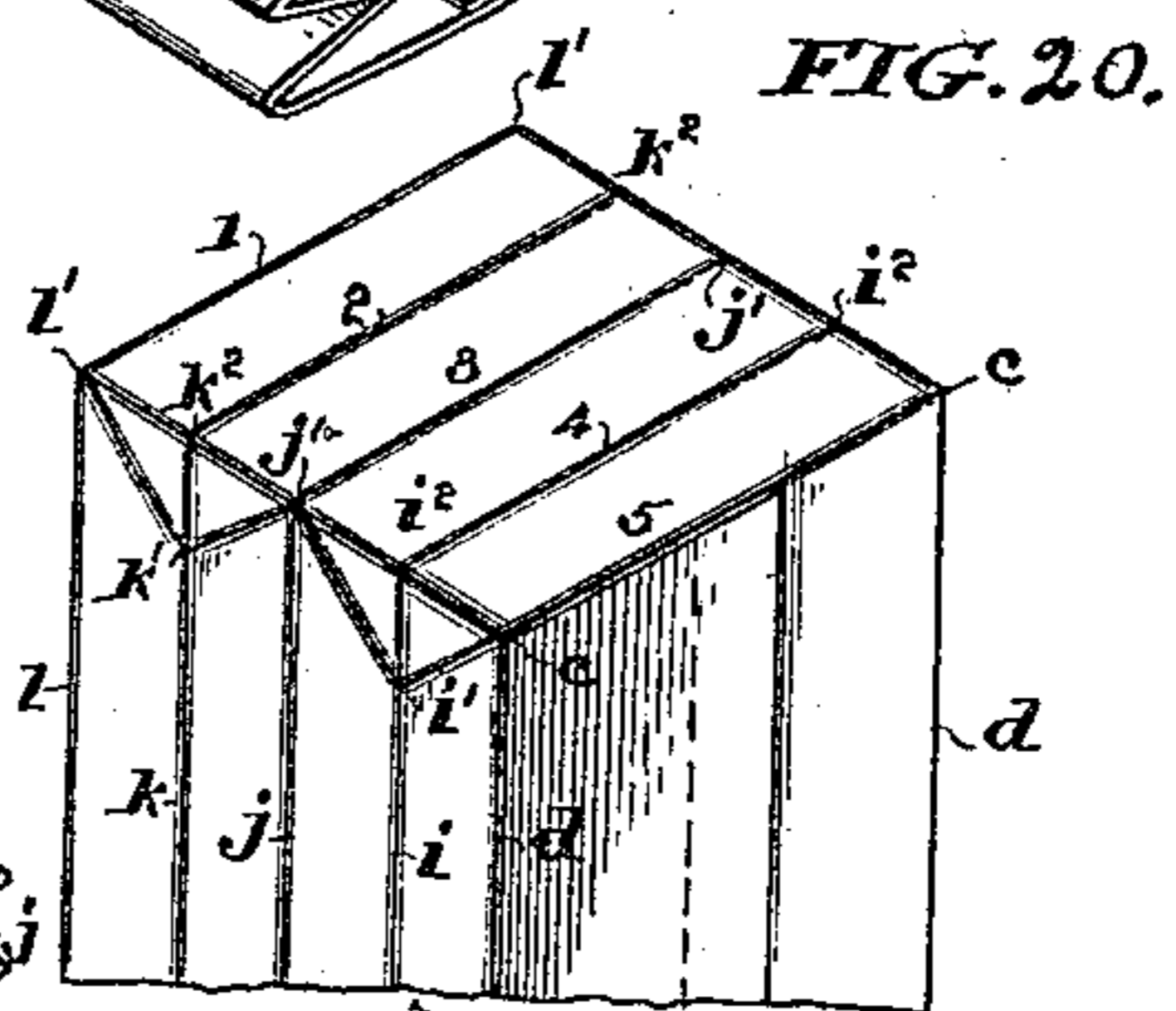
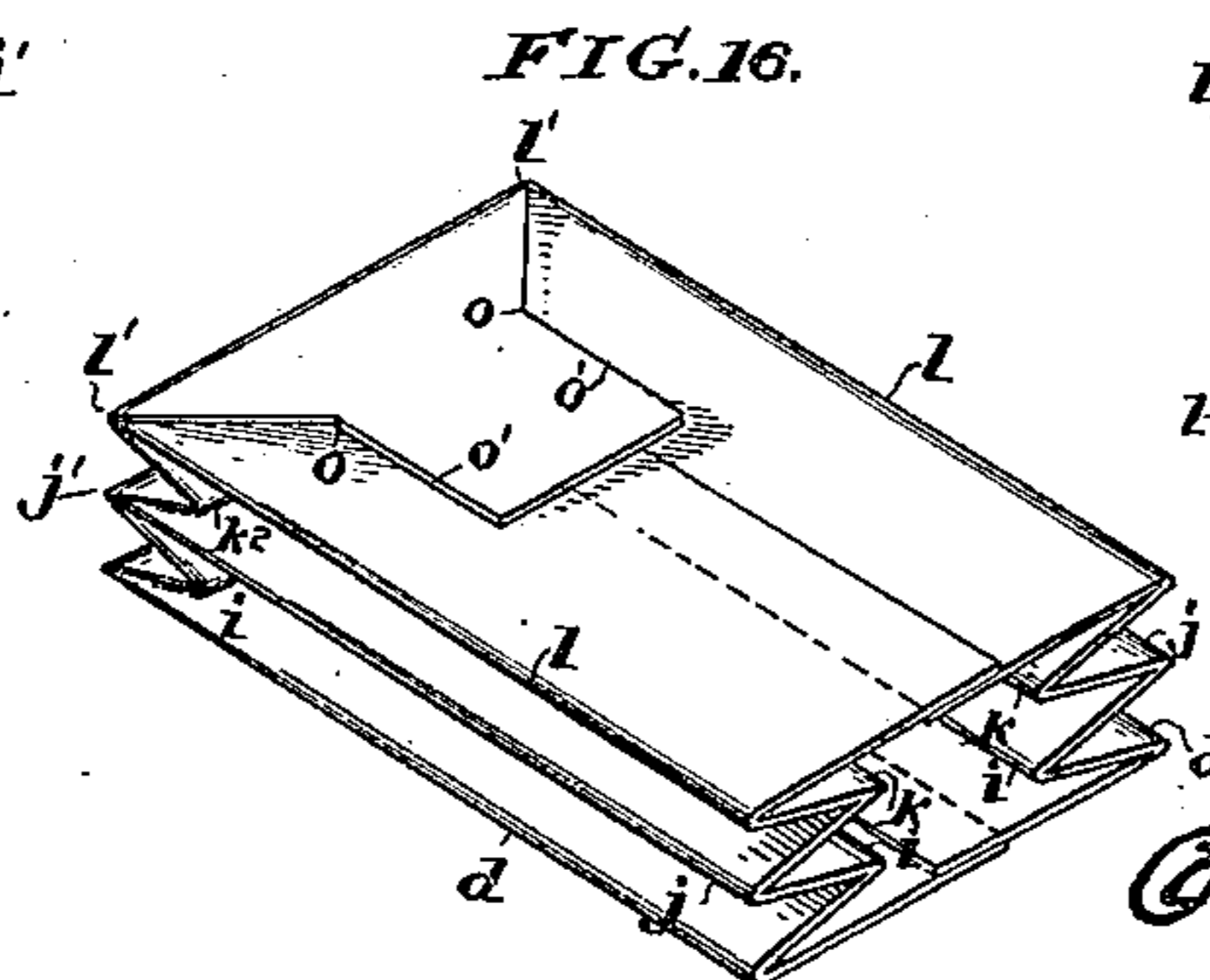
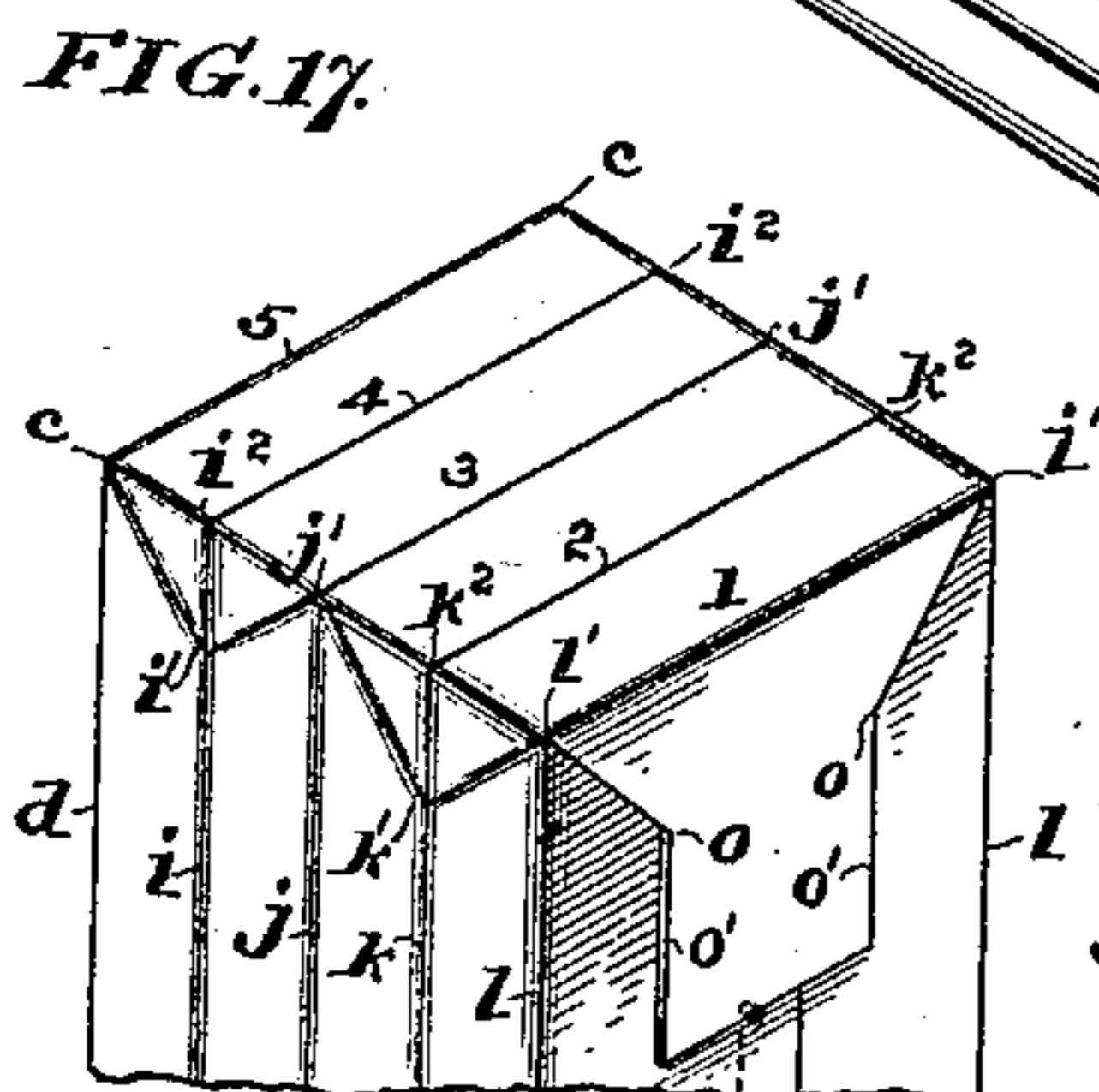
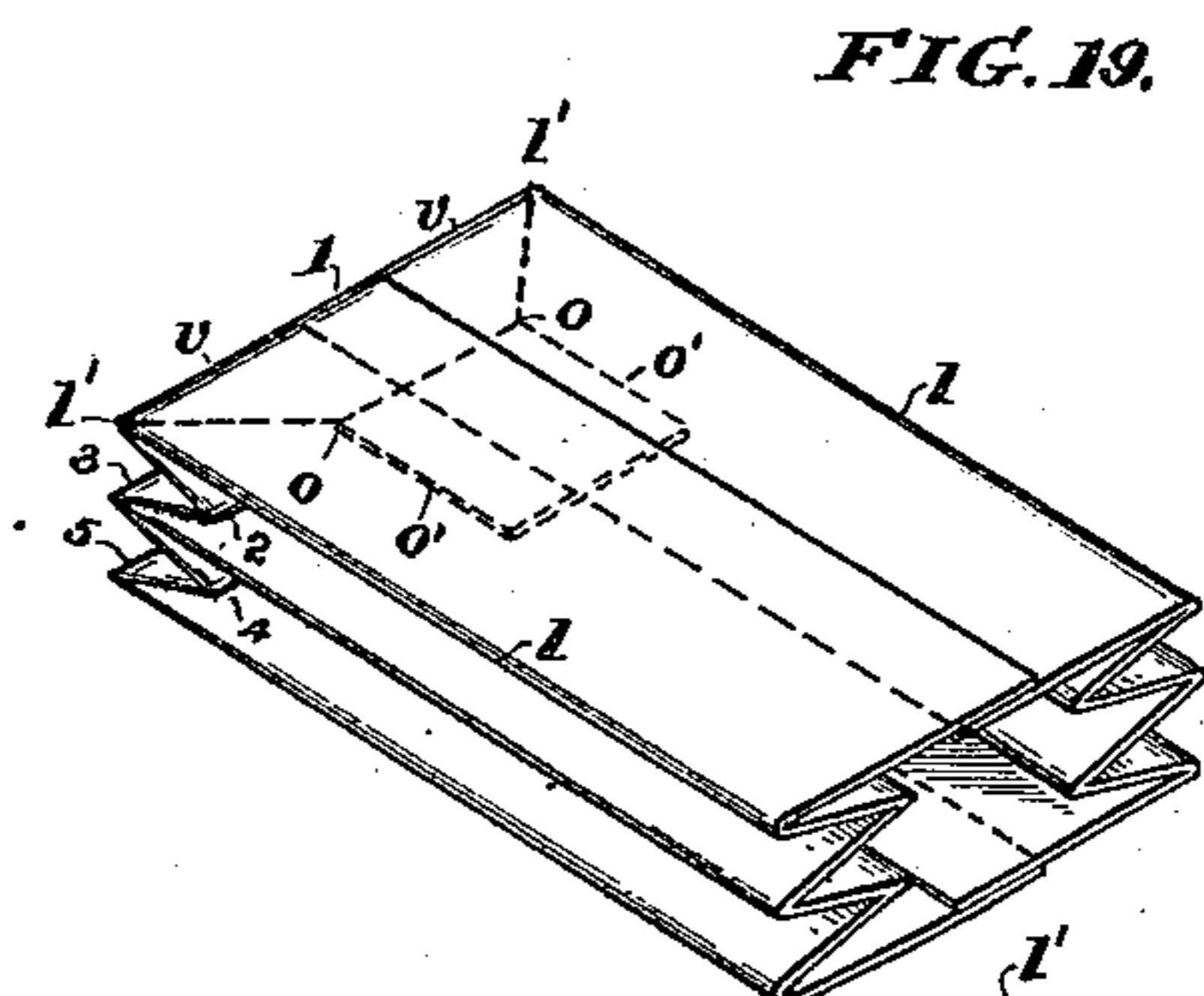
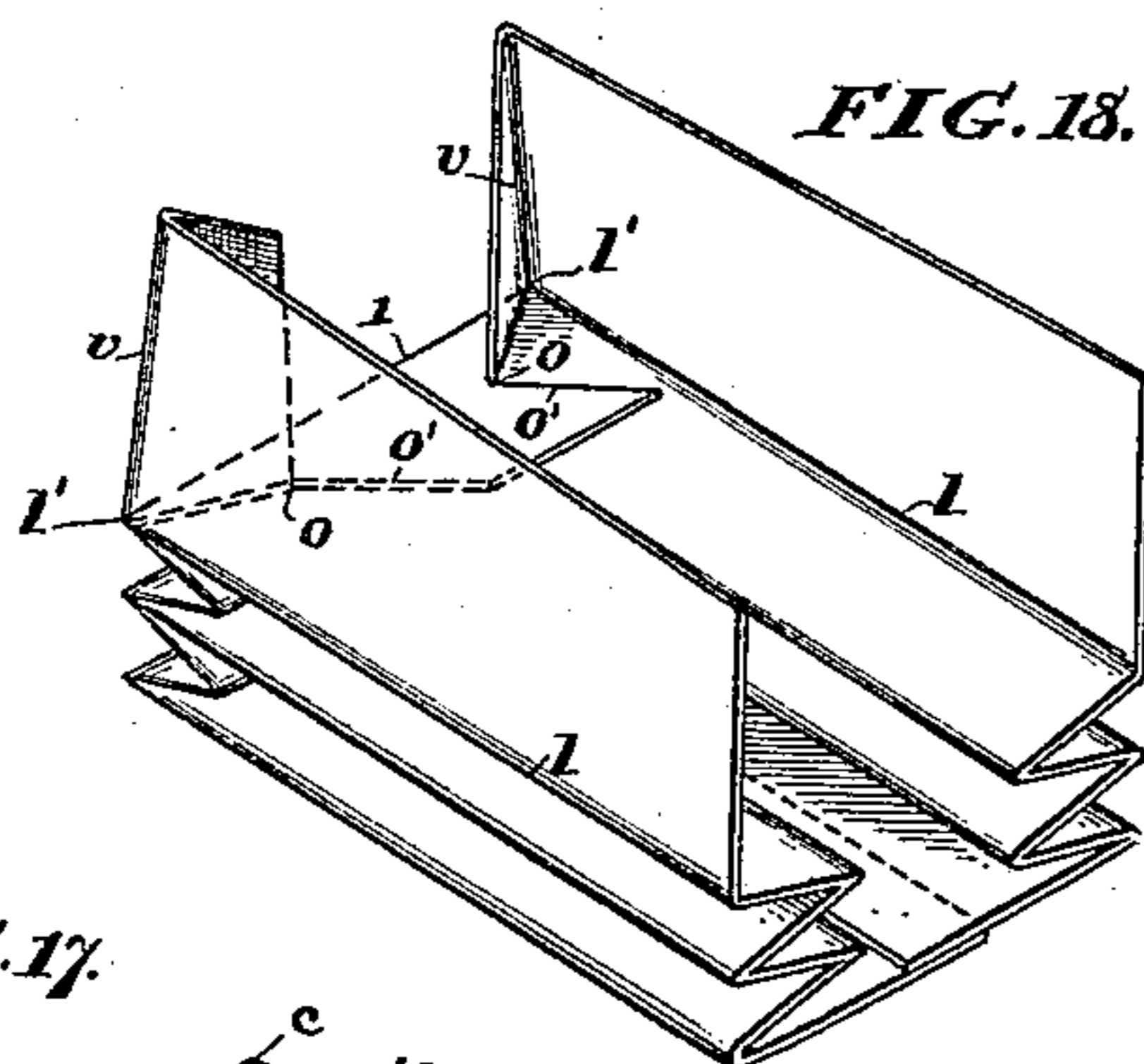
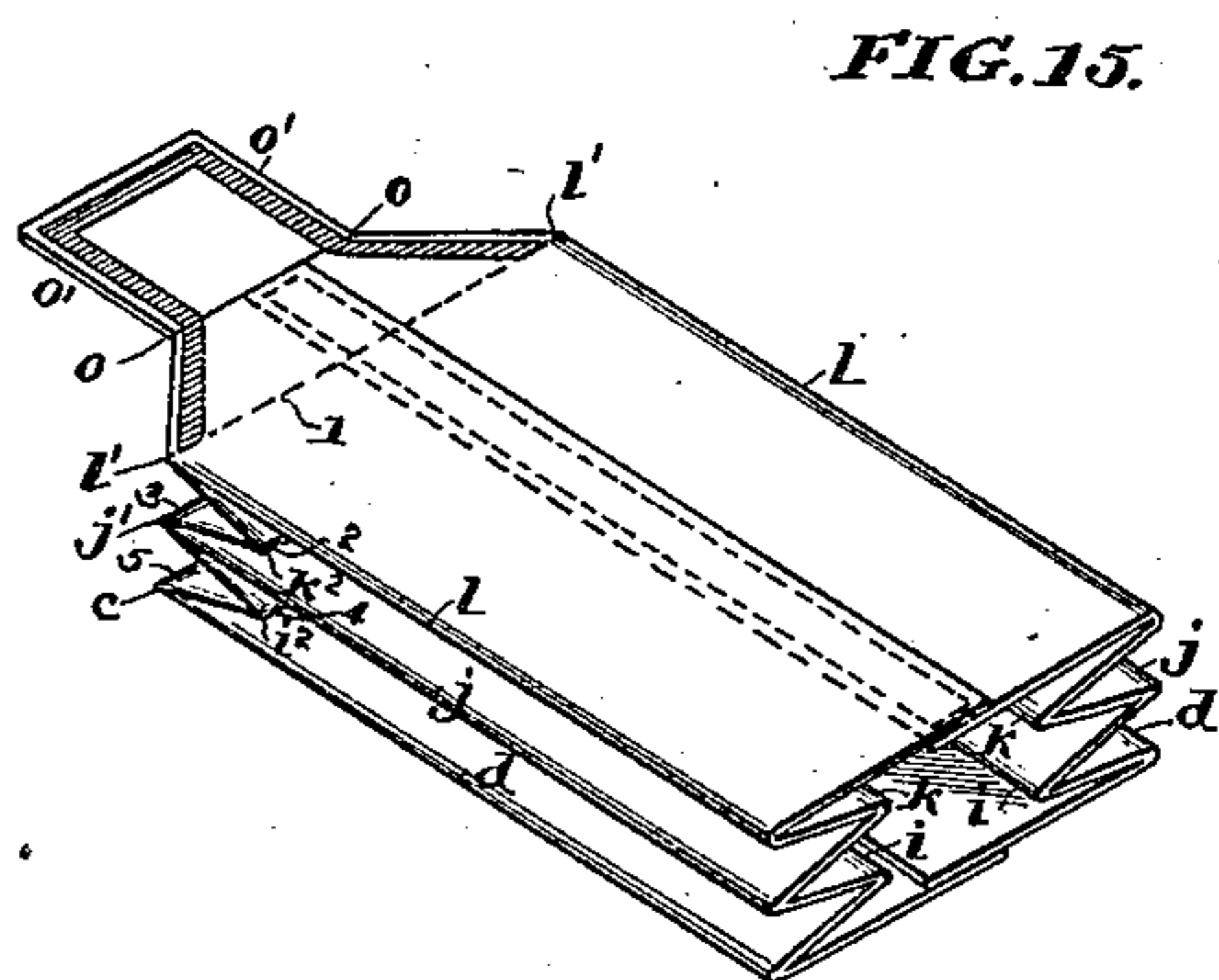
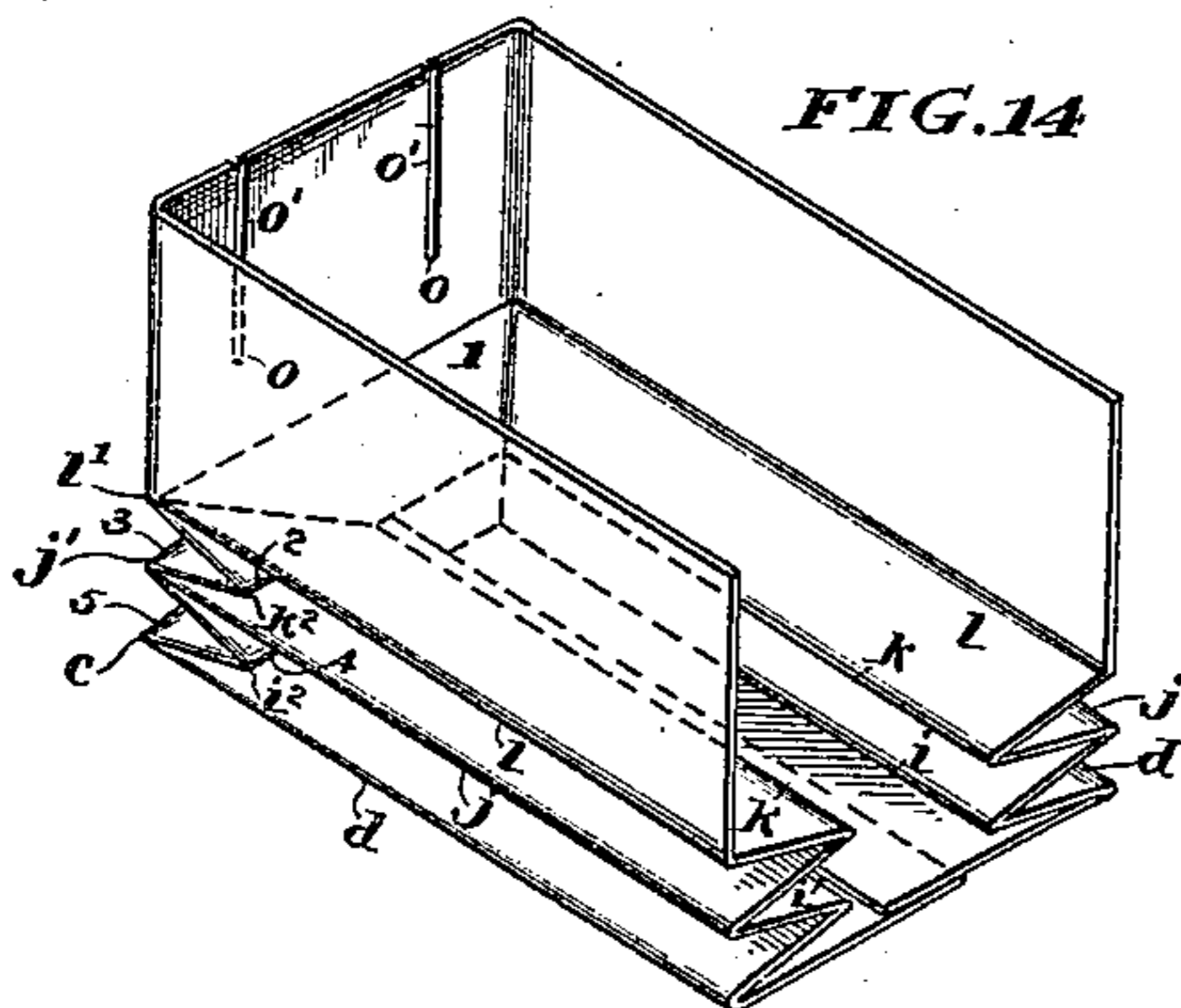
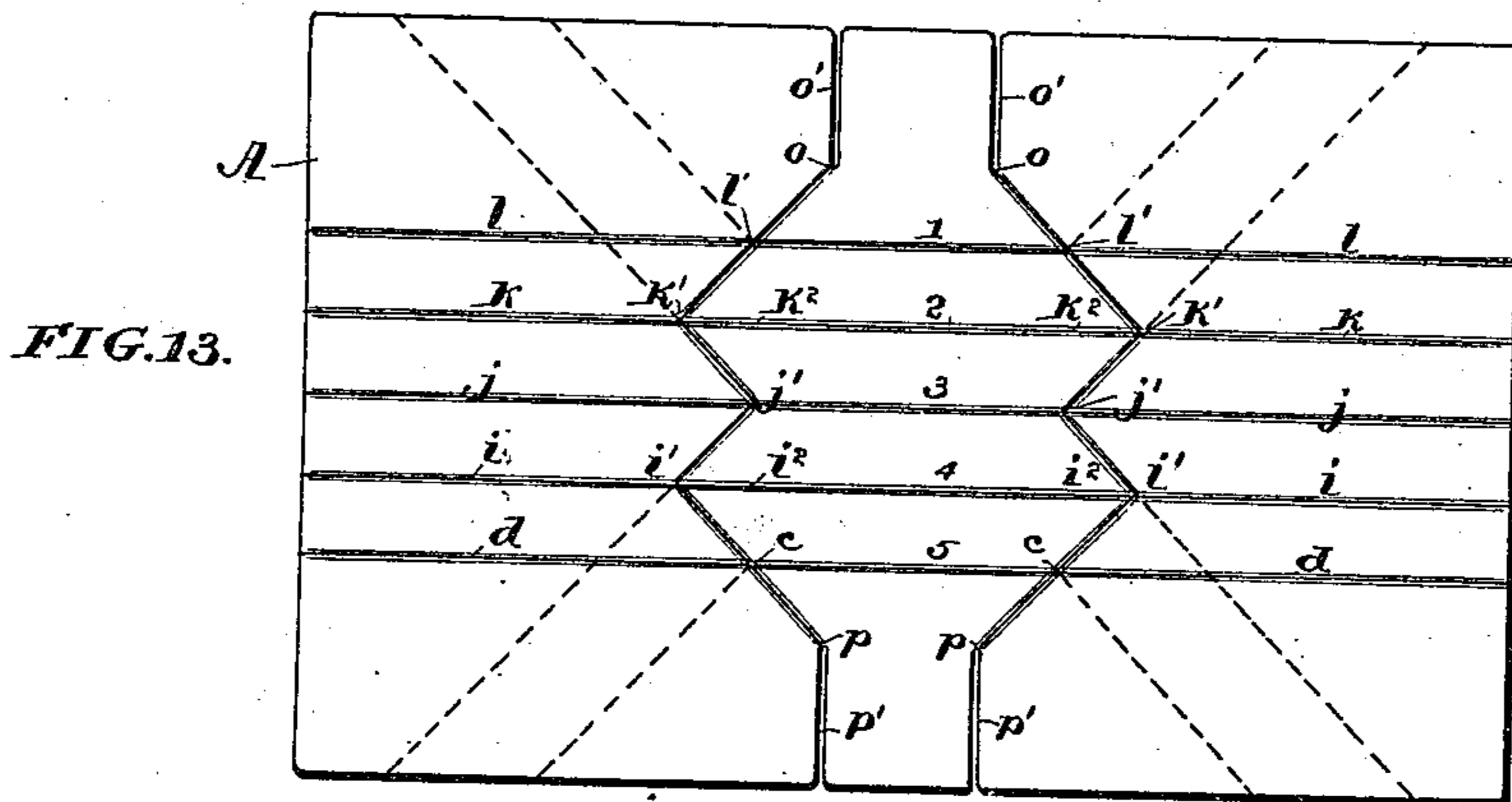
(No Model.)

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Patented Apr. 29, 1890.



WITNESSES:

Henry Denny
Joshua M. Ketchum, Jr.

INVENTOR:

Edward C. Claussen
by his attorney
Francis T. Chambers

(No Model.)

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No. 426,774.

Patented Apr. 29, 1890.

FIG. 21.

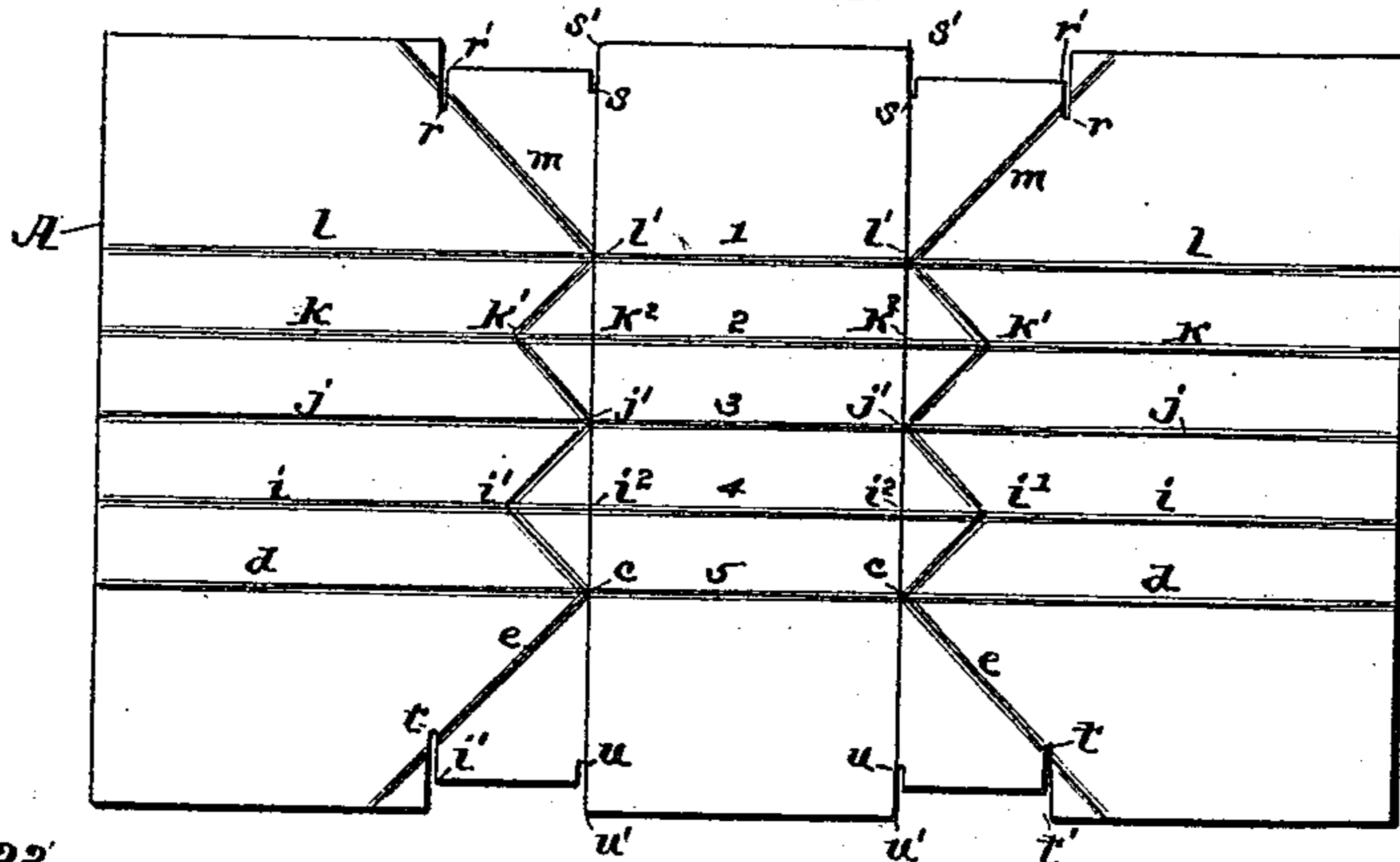


FIG. 22.

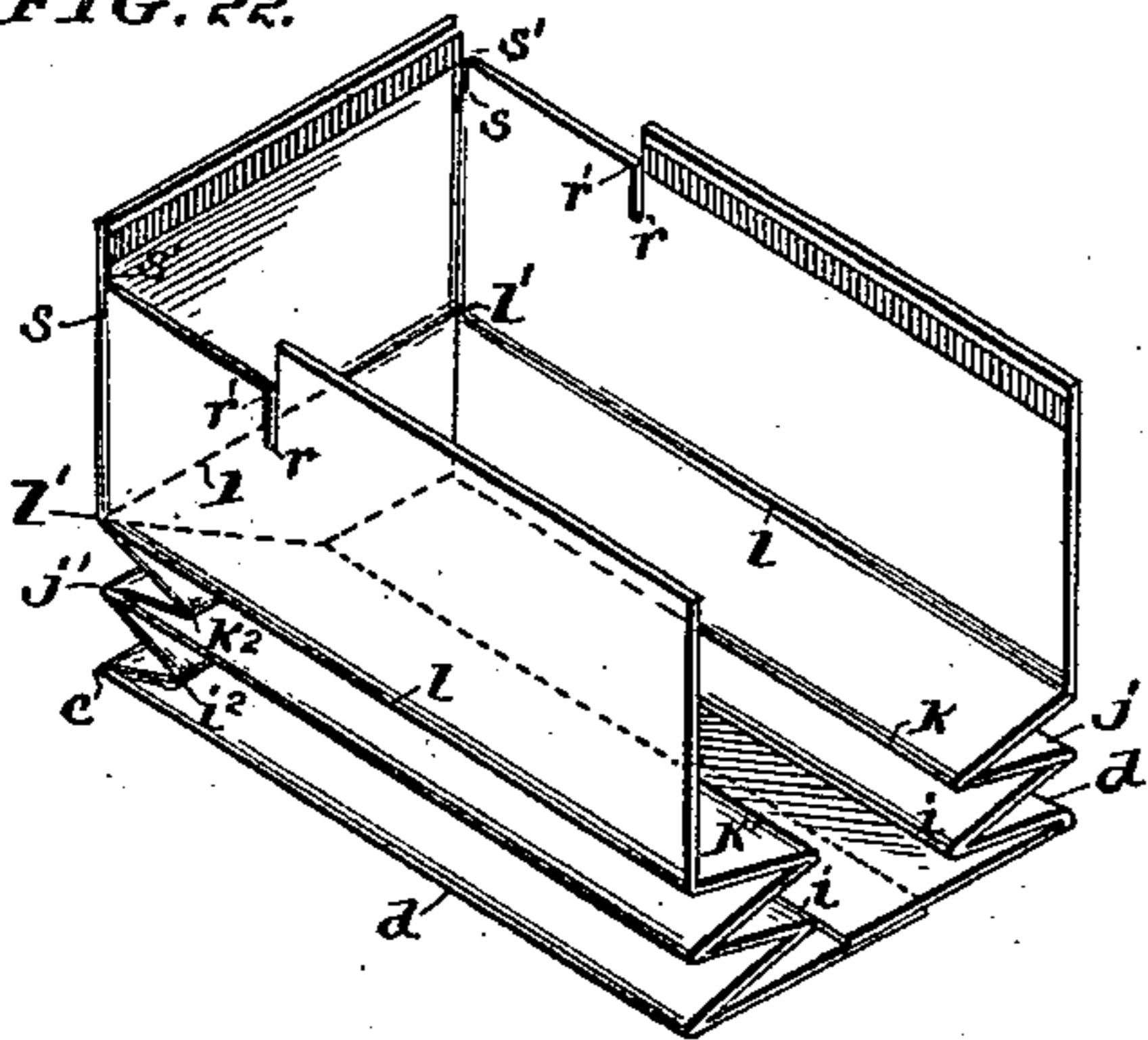


FIG. 23.

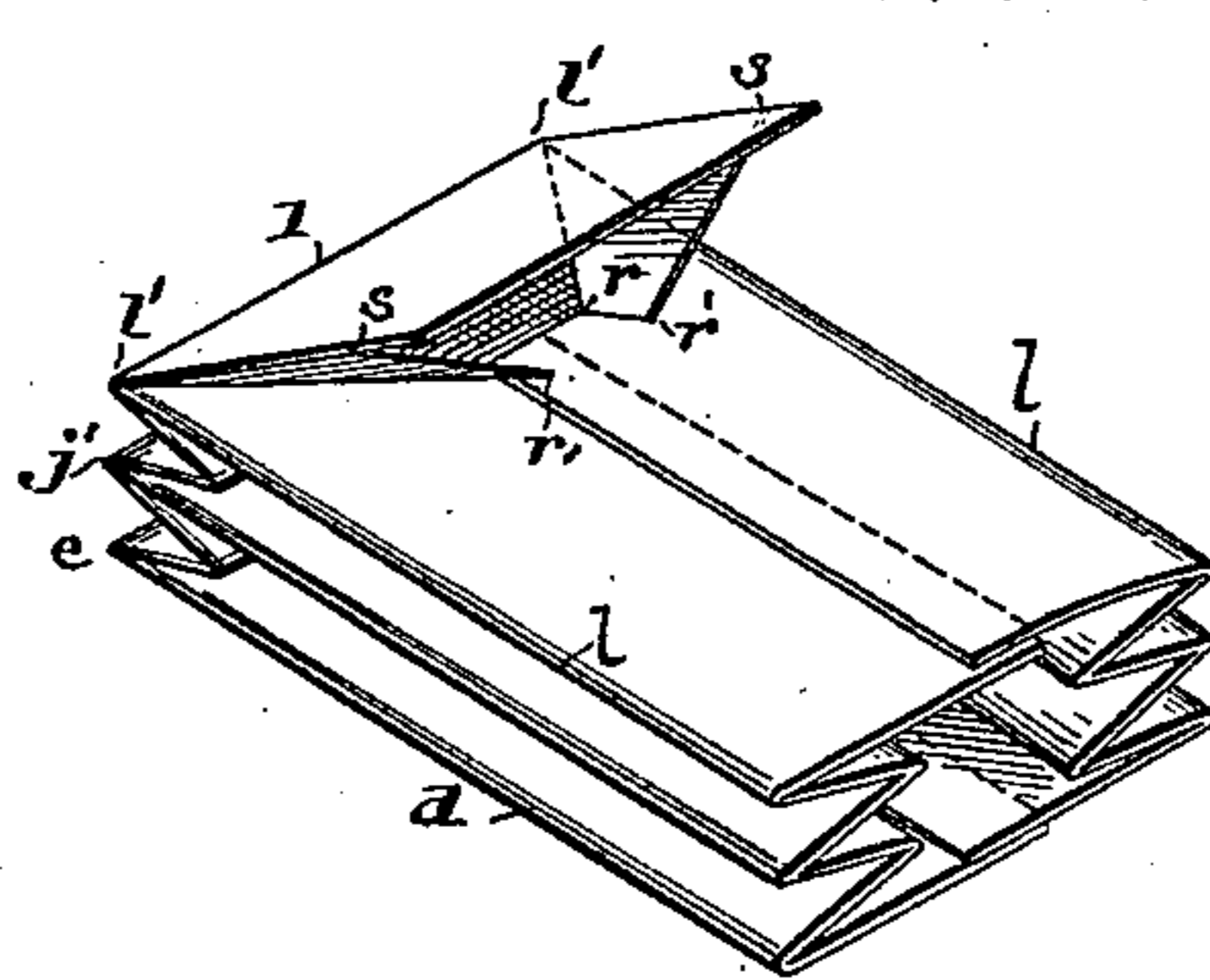


FIG. 24.

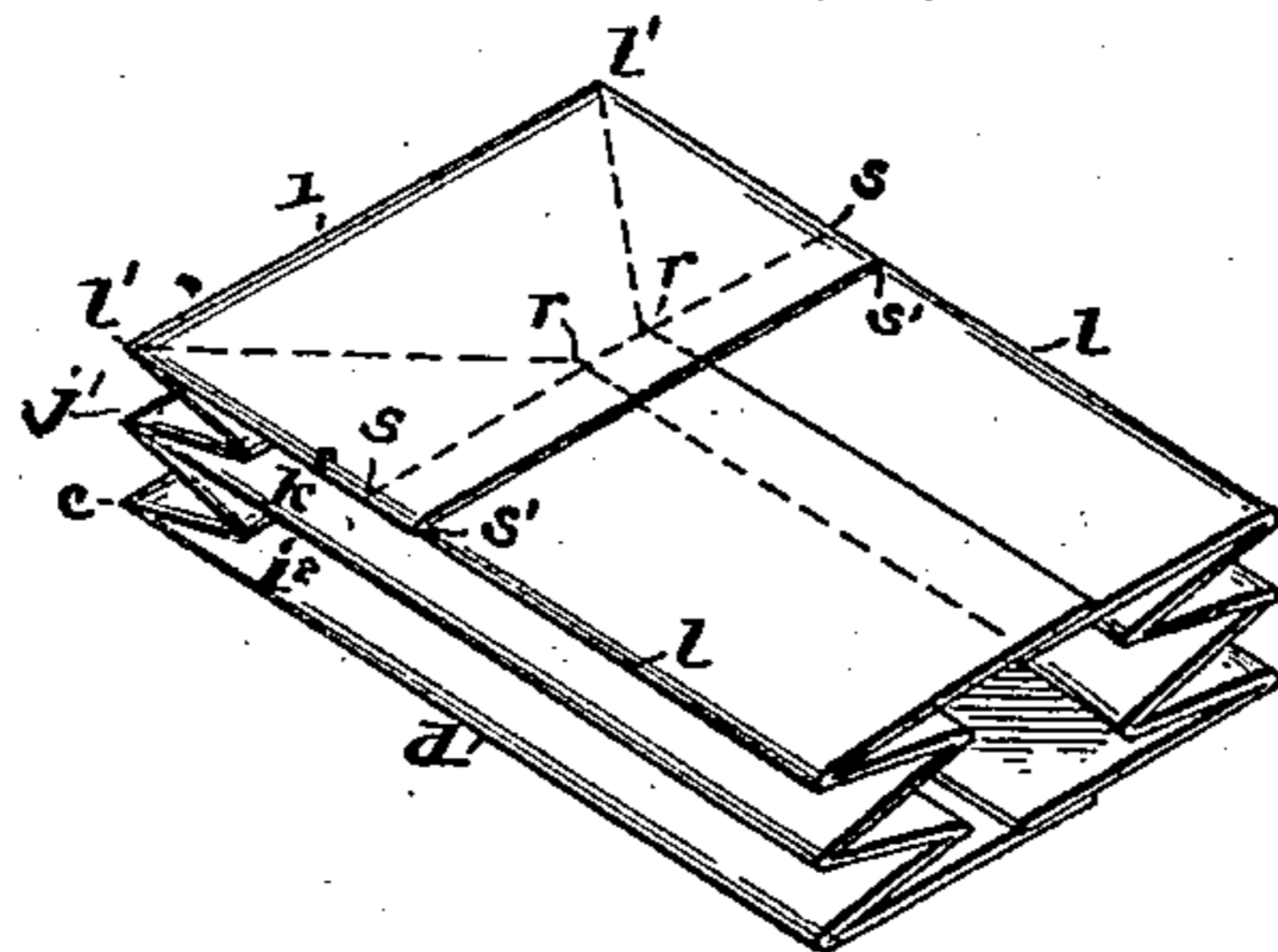
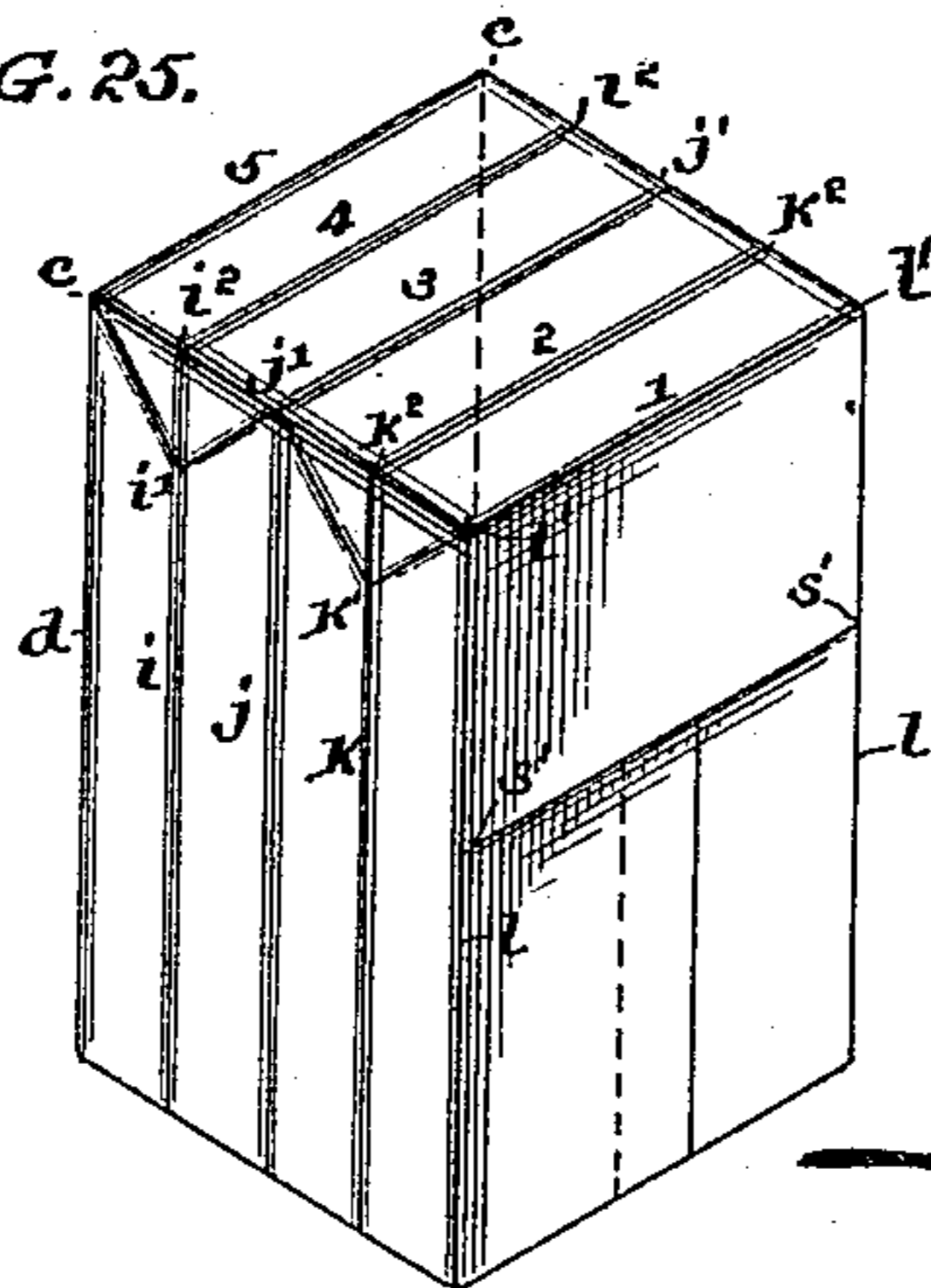


FIG. 25.



WITNESSES:

Harry D. Dwyer
Joshua M. Mather Jr.

INVENTOR:

Edward E. Claussen
by his attorney
Francis T. Chambers

UNITED STATES PATENT OFFICE.

EDWARD E. CLAUSSEN, OF HARTFORD, CONNECTICUT, ASSIGNOR TO THE UNION PAPER BAG MACHINE COMPANY, OF PHILADELPHIA, PENNSYLVANIA.

PAPER BAG.

SPECIFICATION forming part of Letters Patent No. 426,774, dated April 29, 1890.

Application filed February 11, 1890. Serial No. 339,968. (No model.)

To all whom it may concern:

Be it known that I, EDWARD E. CLAUSSEN, of the city and county of Hartford, State of Connecticut, have invented a new and useful 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 manufacture of paper bags; and it consists of a new form of bag collapsed into convenient form for shipment and readily expandible into a rectangular box-like form.

The nature of my invention will best be understood by an explanation of the various foldings by which a paper blank can be formed into my improved bag, and in the drawings I have illustrated each manipulation of the blank as well as the completed bag.

In the drawings, Figure 1 is a plan view of a blank suitable for use in the manufacture of my improved bag and having indicated on it the various lines of fold formed in the process of making the bag. Fig. 2 is an end view of the blank, showing certain of the creases preferably formed in it. Figs. 3, 3½, 4, 5, 6, 7, 8, 9, and 10 illustrate consecutive folds made in the blank in the process of making the bag. Fig. 11 shows the completed bag; Fig. 12, the completed bag opened up. Fig. 13 is a view of a blank adapted for use in making one modification of my improved bag. Figs. 14 and 15 illustrate the novel folding to which this blank is subjected in forming it into a bag. Fig. 16 shows the completed bag made from the blank of Fig. 13, and Fig. 17 shows the same bag opened up. Fig. 18 illustrates another method of folding the blank of Fig. 13 in the completion of the bag. Fig. 19 shows the bag made by this latter folding, and Fig. 20 the same bag opened up. Fig. 21 shows still another form of blank adapted for the manufacture of another modification of my improved bag. Figs. 22 and 23 illustrate the mode in which this blank is folded in the completion of the bag made from it. Fig. 24 shows the completed bag, and Fig. 25 the same bag opened up.

Fig. 1 shows a paper blank A, adapted for

the manufacture of my improved bag, the paper being preferably creased, as indicated at 1, 2, 3, 4, and 5. B is a rectangular plate of the breadth of the desired bag, which is laid on the center of the blank with its front edge *b* upon the line 5 and its sides *b' b'* extending at right angles to said line. The points *c c* on line 5 come at the corners of the bottom in the bag, as do also the corresponding points *l' l'* on line 1 and the portions of the lines 1 to 5 which lie outside of the bottom-defining lines. *c' l' c' l'* form folds in the bellows-folded sides of the bag, while those portions lying between said lines form folds of the bellows-folded bottom.

The first fold in the manipulation of the bag is best made as shown in Fig. 3½, Sheet 2, the lines *d d* being folded down along the edges *b'* of the plate B, and the paper creased on the oblique lines *e e*, as shown, so as to form the two outwardly-extending flaps with the rest of the paper erected thereon at right angles and in a box-like form. The outwardly-extending flaps may then be folded in upon the lines *d d*, as shown in Fig. 3, and paste being applied so as to hold the lapping edges together the back of the bag is formed. Preferably, however, this folding is not made until the sides and bottom of the bag are formed; but I have shown it as completed in the drawings to save space and because it is really immaterial at what time the edges are overlapped. The next folding is shown in plan in Fig. 4 and in perspective in Fig. 5. In making this folding flat plates G and H are convenient instrumentalities. The upwardly-extending parts of the blank are folded down on the lines 5 and *d d*, and at the same time folded upon the lines 4 and *i i*. The portion of lines *i* between *i'* and *i''* extends out at right angles to the rest of the fold, as shown, and an oblique fold is formed between the points *i'* and *c*. The next fold is made by pushing out and down the paper above the lines *i i* and 4, and at the same time turning it up upon the lines *j j* and 3, as is shown in Fig. 6. This folding also forms the oblique folds *i' j'* and completes one of the two bellows folds in the sides and bottom of

the bag, and it will be noticed that a triangular section of the bellows-folded plies of the sides bounded by the lines $c\ i'\ j'$ is turned up between the plies and folded over the bellows fold of the bottom along the line $i'\ i^2$. This is a characteristic fold of my bag. The next folding is made by pushing or folding the paper in and down about lines $j\ j$ and 3, and at the same time folding it up about lines $k\ k$ and 2, as shown in Fig. 7, folds $k' k^2$ being formed like $i'\ i^2$, and also an oblique fold $j' k'$, like fold $c\ l'$. The paper is then folded down and out about lines $k\ k$ and 2 and up about lines $l\ l$ and 1, forming oblique folds $k' l'$, being formed as were folds $i' j'$. (See Fig. 8.) Next the upturned ply of the paper is folded down flat on the lines $l\ l$ and $m\ m$, as shown in Fig. 9. The outwardly-extending flaps are then folded in upon the lines $l\ l$ and pasted together, where they overlap. (See Figs. 10 and 11.) Fig. 12 shows the completed bag opened out to a rectangular box-like form.

Figs. 13 to 20 show a modified form of blank and the way in which it may be folded into my bag. Slits $p' p' o' o'$ are made in blank A to points $p\ p$ and $o\ o$, said points being, respectively, in continuation of the oblique lines $i' c$ and $k' l'$. (See Fig. 13.) The folds made in this blank are identical with those already described, with the exception of the laps to form the front and back. As to these, the blank having been folded to the state shown in Fig. 14, the two upwardly-extending side laps may be folded in and down on lines $l\ l$, and the lap extending above line 1 folded out and down, as shown in Fig. 15. Oblique folds are thus formed on the lines $l' o' l' o$. The side laps having been pasted together, the flap bounded by the lines $1\ l' l' o$ $o' o' o'$ is turned over on line 1 and pasted

down, as shown in Fig. 16, the resultant bag opened out being shown in Fig. 17. Instead of thus folding the paper it may be folded from the form shown in Fig. 14 in the way shown in Fig. 18, the flap bounded by lines $1\ l' o' o' l' o' o'$ being first folded in and the side laps folded upon it on the lines $l\ l$ and $v\ v$. The resultant bag partially opened is shown in Fig. 19 and fully opened in Fig. 20.

In Figs. 21 to 25 I have illustrated another modification of my bag. The blank A (see Fig. 21) is slit at $t\ t$ and $r\ r$ to points lying in the lines $e\ e$ and $m\ m$. Slits $u' u' s' s'$ are made in the edges of the blank in the lines $c\ l' c\ l'$, as shown, and the paper cut away between said slits, as at $t' u'$ and $r' s'$. The blank having been folded as before to the form shown in Fig. 22 is then finished by pushing in and down the edges of the paper upon the lines $l\ l$ and 1, oblique folds $l' r$ being formed in doing so. The sides are pasted together, and a line of paste on the edge $s' s'$ fastens it to the sides, as shown. (See Figs. 23 and 24.) The complete bag opened out is shown in Fig. 25.

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

The described paper bag having its sides and bottom folded into double bellows folds, a triangular section of paper at the bottom of each bellows fold in the sides being turned up in the fold so as to overlie the ends of the corresponding bellows fold of the bottom, and its front and back being formed by folding down and pasting together the ends of the blank.

EDWARD E. CLAUSSEN.

Witnesses:

LEWIS R. DICK,
JOSHUA MATLACK, Jr.