

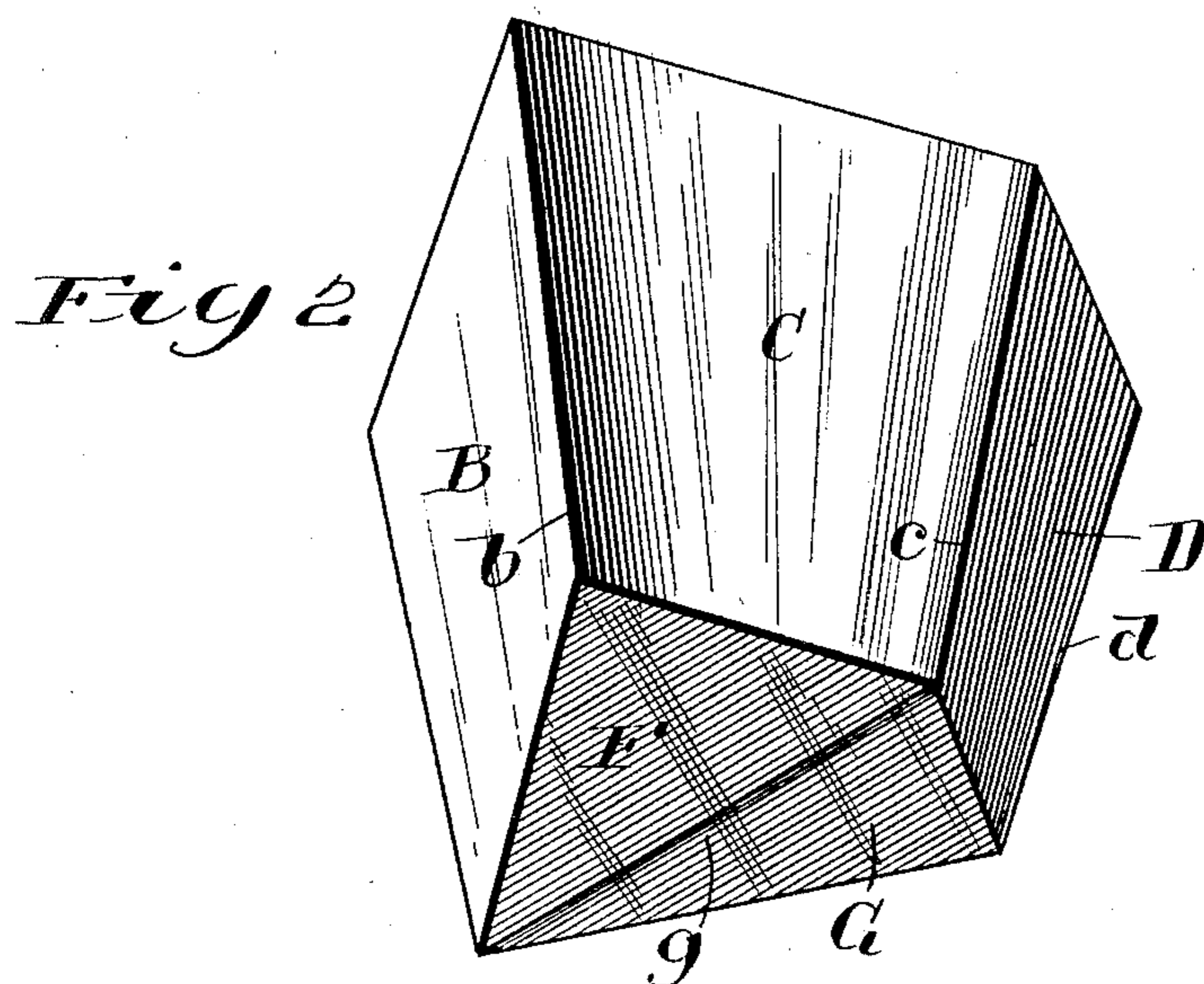
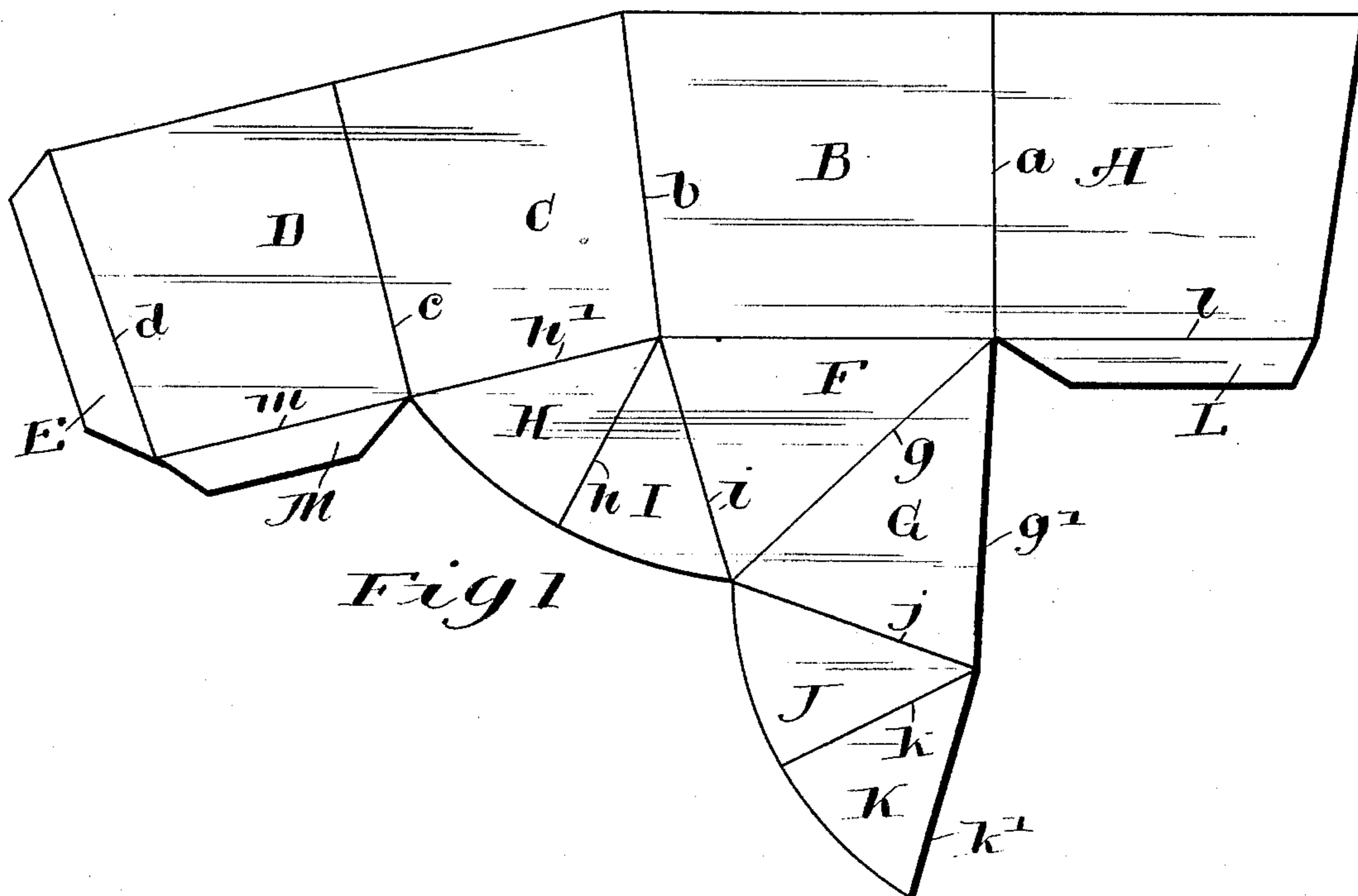
No. 756,494.

PATENTED APR. 5, 1904.

J. C. GRAHAM.
SECTOR SHAPED CARTON.
APPLICATION FILED AUG. 24, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



Witnesses:-
 Carl M. Crawford
 George R. Wilkins

Inventor

Joel C. Graham

by Poole & Brown
his Attorneys

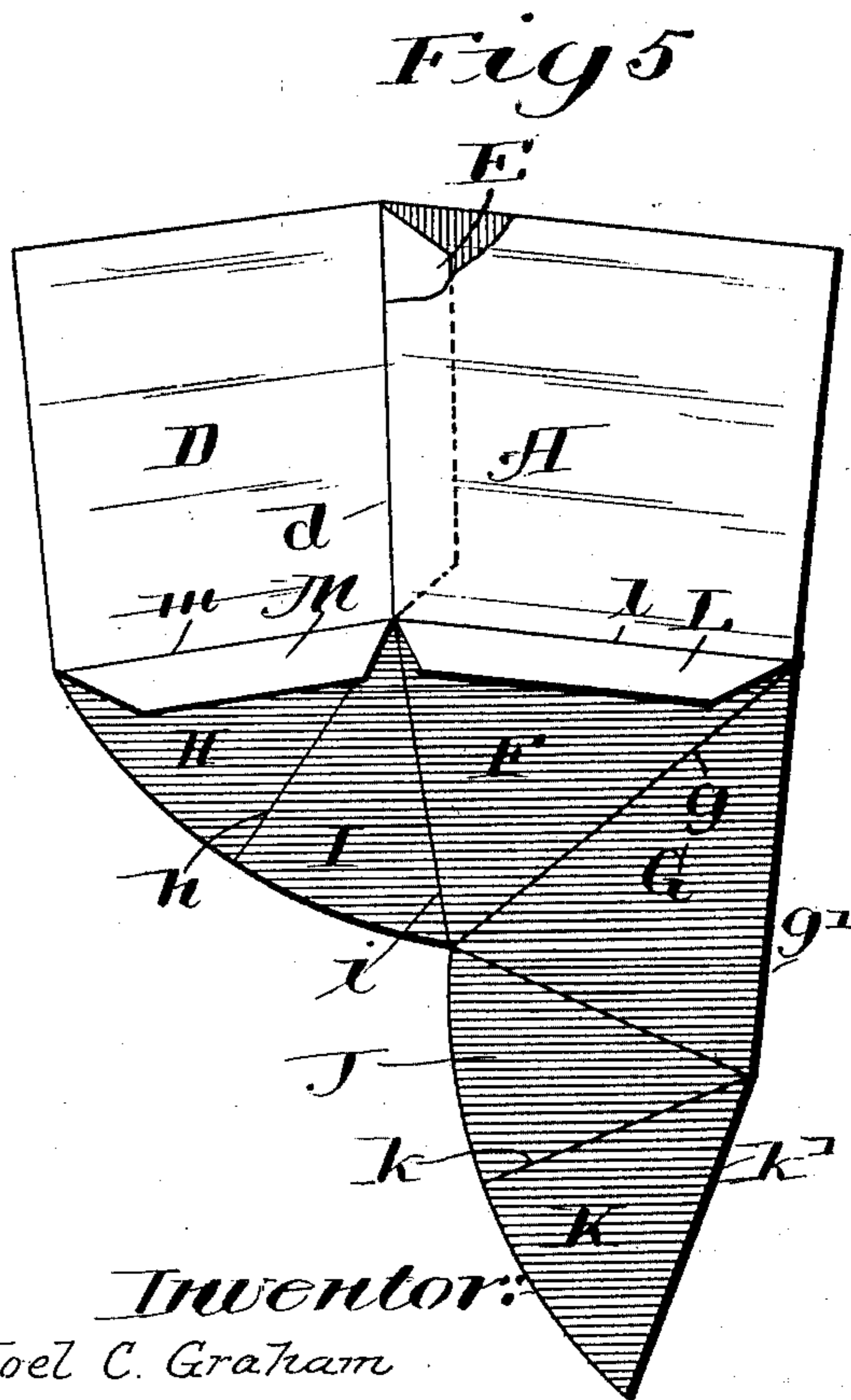
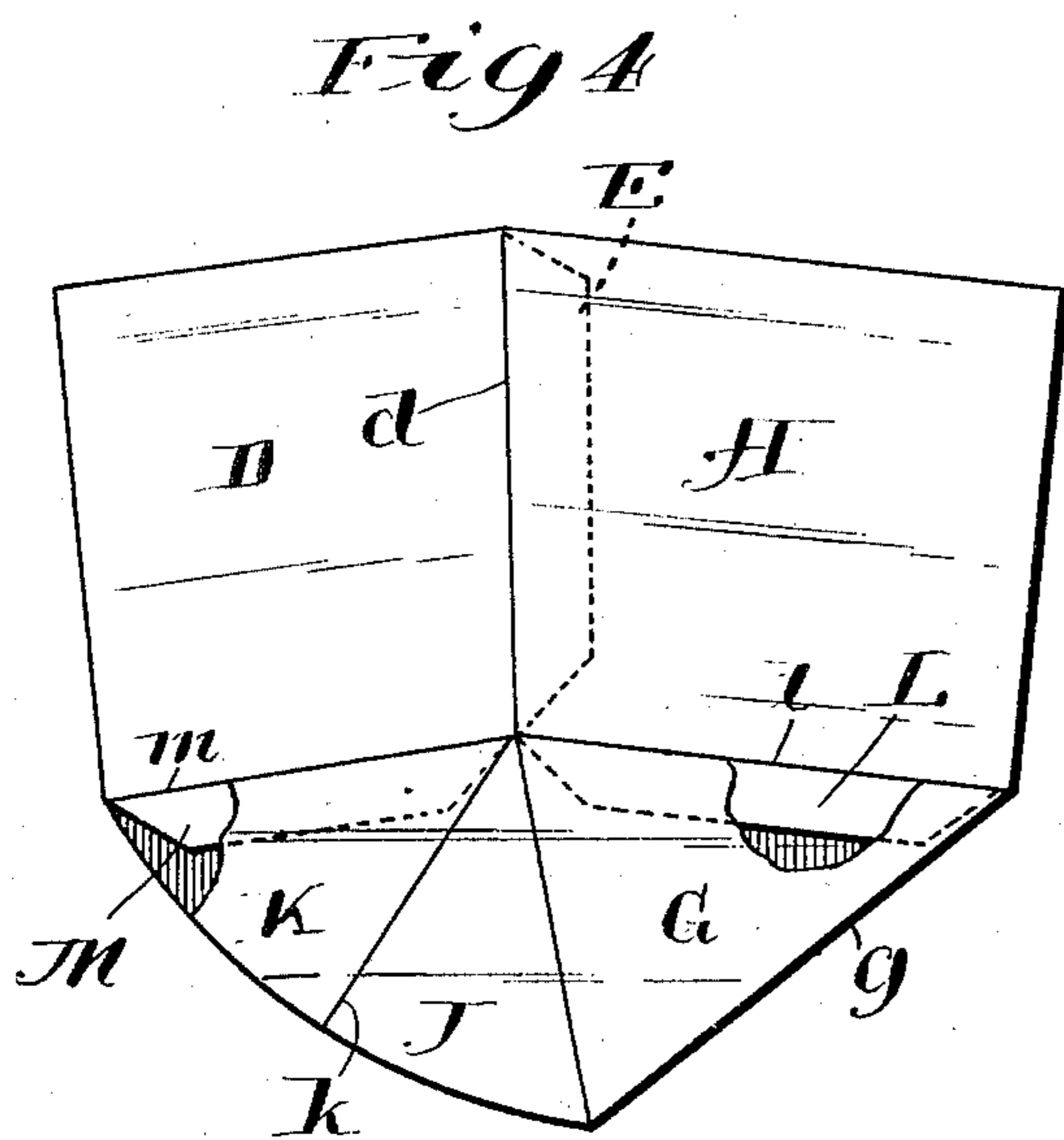
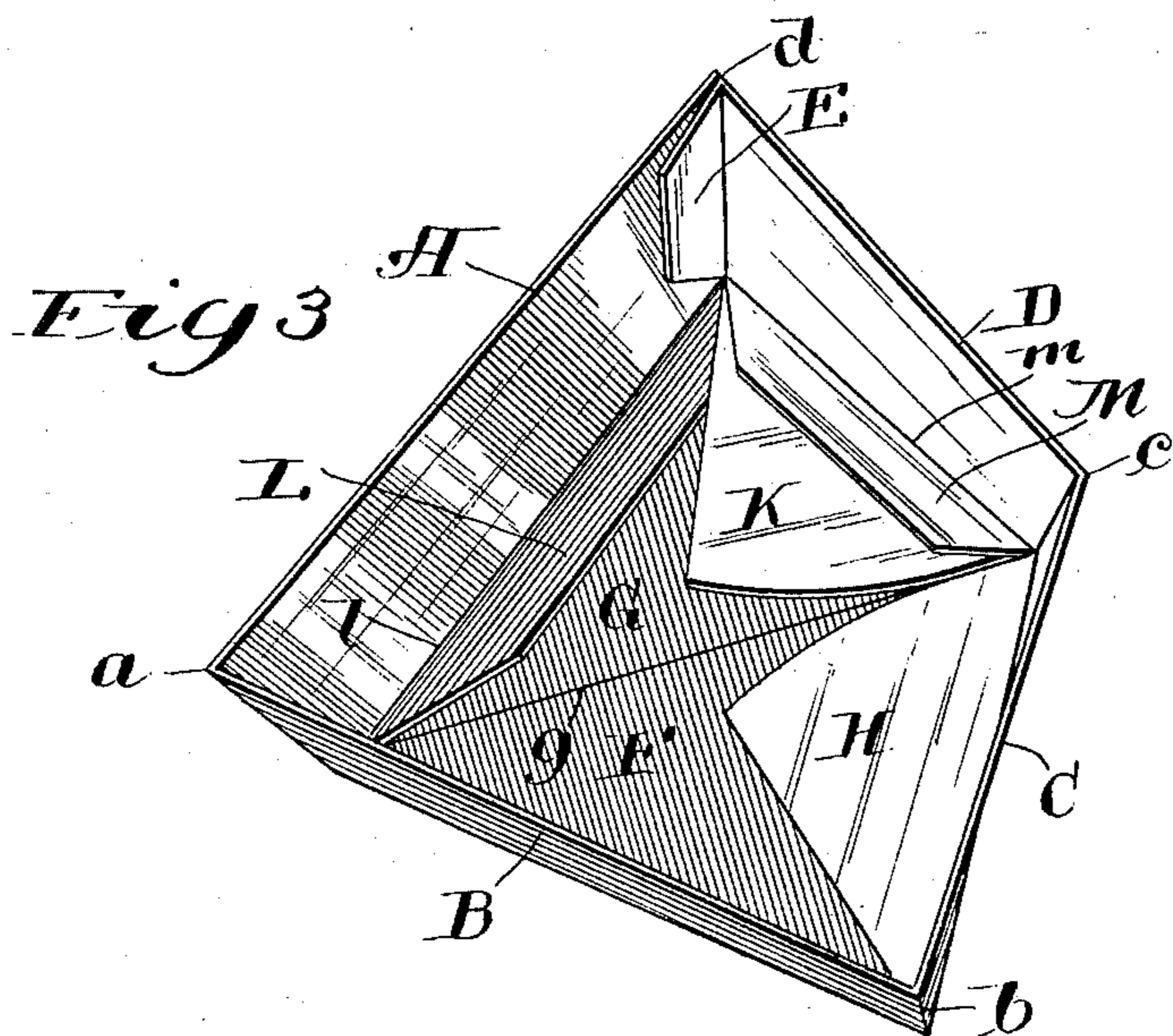
No. 756,494.

PATENTED APR. 5, 1904.

J. C. GRAHAM.
SECTOR SHAPED CARTON.
APPLICATION FILED AUG. 24, 1903.

NO MODEL.

2 SHEETS--SHEET 2.



Witnesses:

Carl S. Crawford

George R. Wilkins

by

Twentor!

Joel C. Graham

Pooler + Brown

his Attorneys

UNITED STATES PATENT OFFICE.

JOEL C. GRAHAM, OF MARSEILLES, ILLINOIS, ASSIGNOR TO HOWE AND DAVIDSON COMPANY, OF EAST ORANGE, NEW JERSEY, A CORPORATION OF NEW JERSEY.

SECTOR-SHAPED CARTON.

SPECIFICATION forming part of Letters Patent No. 756,494, dated April 5, 1904.

Application filed August 24, 1903. Serial No. 170,514. (No model.)

To all whom it may concern:

Be it known that I, JOEL C. GRAHAM, of Marseilles, in the county of LaSalle and State of Illinois, have invented certain new and useful
5 Improvements in Sector-Shaped Cartons; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon,
10 which form a part of this specification.

This invention relates to improvements in the construction of sector-shaped cartons—such, for instance, as are used for packing candy or the like in pails and which are made
15 of a single flat blank cut to the proper shape and having its parts joined by the use of paste or glue to form a tubular body and connected bottom wall, which may be folded flat for transportation, but which may be readily set up
20 for use.

The invention consists in the matters hereinafter set forth, and more particularly pointed out in the appended claims.

In the accompanying drawings, Figure 1
25 illustrates a blank for forming a carton made in accordance with my invention. Fig. 2 is a perspective view of the carton when folded and ready for use looking upwardly at the bottom thereof. Fig. 3 is a perspective view of
30 the carton when folded and ready for use looking downwardly into the interior of the same. Fig. 4 is a side view of the carton when the parts thereof are joined by pasting and the same is folded flat for transportation. Fig. 5
35 shows the blank after the ends of the tubular part or body have been joined by pasting and when the folding flaps or sections which constitute the bottom are in their extended or unfolded position.

40 The blank illustrated embraces four connected main sections A B C D, which constitute the tubular body of the finished carton and are separated by score-lines *a b c d*, an end or pasting flap E, joined to the section D and
45 separated therefrom by a score-line *d*, two triangular bottom-sections F and G, of which the section F is connected with the main section B and the section G is connected with

the section F, being separated therefrom by a score-line *g*, and two pairs of gusset-sections, 50 of which the sections H and I are joined to the body-section C, and the bottom-section F and the sections J and K are joined to and form an extension of the bottom flap G. The gusset-sections H and I are separated from the 55 body-section C and bottom-section F by score-lines *h'* and *i* and from each other by a score-line *h*. The gusset-section J is separated from the bottom-section G by a score-line *j* and from the gusset-section K by a score-line *k*. On the 60 bottom margin of the body-section A is a pasting-flap L, separated therefrom by a score-line *l*, and on the bottom margin of the body-section D is a pasting-flap M, which is separated from the same by a score-line *m*. The bot- 65 tom-sections F and G are alike in shape and together correspond in form with the bottom of the carton, and said sections constitute the bottom wall of the carton when the same is ready for use, as clearly seen in Figs. 2 and 3. 70 The gusset-sections H and I are also alike in shape and are joined to and fill the triangular space between the bottom margin of the body-section C and the adjacent margin of the bottom-section F, the side margins of said gus- 75 set-sections (indicated by the score-lines *h'* and *i*) being of corresponding length, while the score-line *h*, which divides the said gusset-sections H and I, subtends the angle between said score-lines *h'* and *i*. The gusset-sections 80 J and K correspond in shape with the said sections H and I, the side margin of the section J, which joins the section G, being of the same length as the side margin of the section I, which joins the section F, while the 85 score-line *k* subtends angle between the score-line *j* and the corresponding outer margin of the section K. The sections A and B constitute the diverging walls of the sector-shaped carton, while the sections C and D form the 90 outer or arc walls thereof, the width of the sections C and D being equal and the united widths of the sections B and C being equal to those of the sections A and D. The parts of the blank thus made are permanently joined or 95 pasted by folding the section D along the

score-lines *c* against the section C and likewise folding the section A along the score-line *a* against the section D and then securing the pasting-flap E to the outer margin of the section A. The parts will then be in the position shown in Fig. 5. The sections G, I, and K are then folded upwardly and against the sections F, H, and J along the score-line *g* and the pasting-flap M then pasted to the margin *h'* of the section K and the flap L on the section A also secured to the adjacent margin *g'* of the bottom-section G. The parts will then be in the position shown in Fig. 4, the blank then being in its "knockdown" or folded form and ready for shipment or transportation.

In setting up or placing in readiness for use the blank shaped, folded, and pasted in the manner described the sides of the tubular body of the blank are spread apart by drawing apart the same at the score-lines *d* and *b*, this movement tending to straighten out the bottom-sections F and G. Before the body of the blank reaches its fully-expanded form, however, and while the said bottom-sections F and G still stand at an angle to each other the triangular connecting parts or folding gussets formed in one instance by the gusset-sections H and I and in the other instance by the gusset-sections J and K are folded upwardly into the interior of the carton, this being accomplished by pressing inwardly on the parts at the score-lines *h* *k*. The gusset-sections are in this operation folded together or against each other along the said score-lines *h* and *k*, and said gusset-sections are bent into angular relation to the parts with which their outer margins are connected on the score-lines *h'* *i* and *j* *m*. After the triangular gusset-sections J K and H I have thus been folded inwardly the side walls are drawn farther out and the bottom-sections F and G pushed upwardly until said gusset-sections J K and H I are pressed flat against each other and rest closely against the upper or inner surfaces of the sections F and G, as clearly seen in Fig. 3, when the carton will be in condition for use.

It will be understood that the bottom of the carton made as described will be of ample

strength to resist the weight of the contents of the carton not only because the bottom-sections F and G cannot be depressed without collapse of the side walls, which will be prevented by the contents of the carton, but because downward pressure coming on the turned gusset-sections J K and H I will have little effect in forcing downwardly or outwardly the bottom-sections, in view of the fact that the sections K and H are directly attached to the walls C and D and are supported by said walls from downward movement, as will be readily understood from an inspection of Figs. 2 and 3.

I claim as my invention—

1. A blank for sector-shaped cartons embracing a body portion which is divided transversely by score-lines into four main sections adapted to form the radial walls and arc walls of the carton and is provided on two of said sections with a flap for forming the bottom of the carton consisting of two triangular sections, shaped to conform to the bottom of the carton and two pairs of gusset-sections forming extensions of the two triangular bottom-sections adapted to be folded inwardly inside of the bottom-sections; the said blank also having pasting-flaps for joining one of the bottom-sections to one of the body-sections and for joining one of the gusset-sections to one of said body-sections.

2. A sector-shaped carton comprising two radial walls and two arc walls, which walls are joined to form a tubular body, a bottom-wall embracing two triangular bottom-sections which are joined to each other and to the radial walls of the tubular body, and two triangular pairs of folding gusset-sections, each pair of which is attached at one edge to one of the bottom-sections, and at its other edge to one of the arc walls of the tubular body.

In testimony that I claim the foregoing as my invention I affix my signature, in presence of two witnesses, this 15th day of August, A. D. 1903.

JOEL C. GRAHAM.

Witnesses:

CHAS. W. WHITTAKER,
CHAS. HINCHMAN.