

C. L. KNUDSEN.

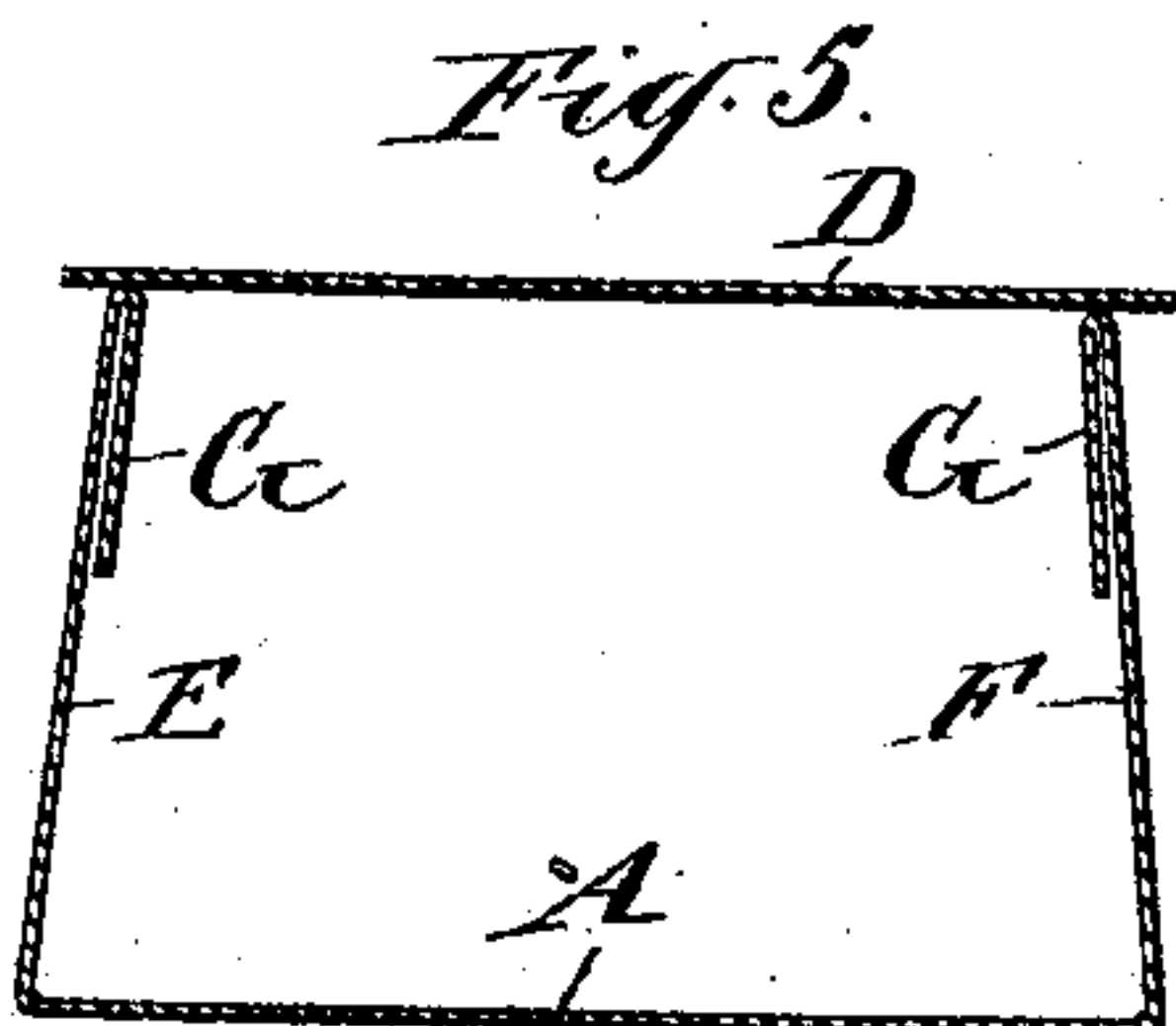
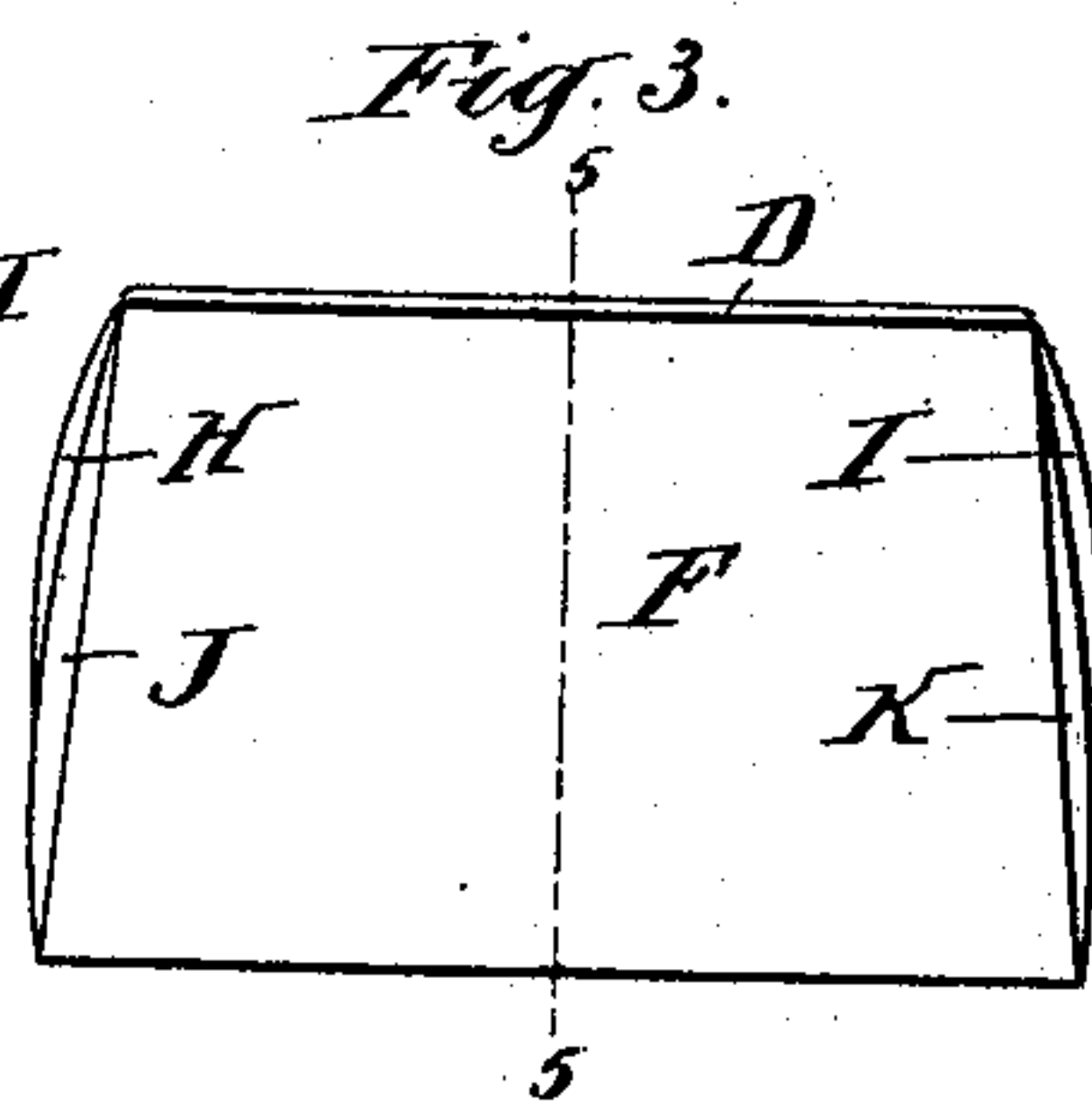
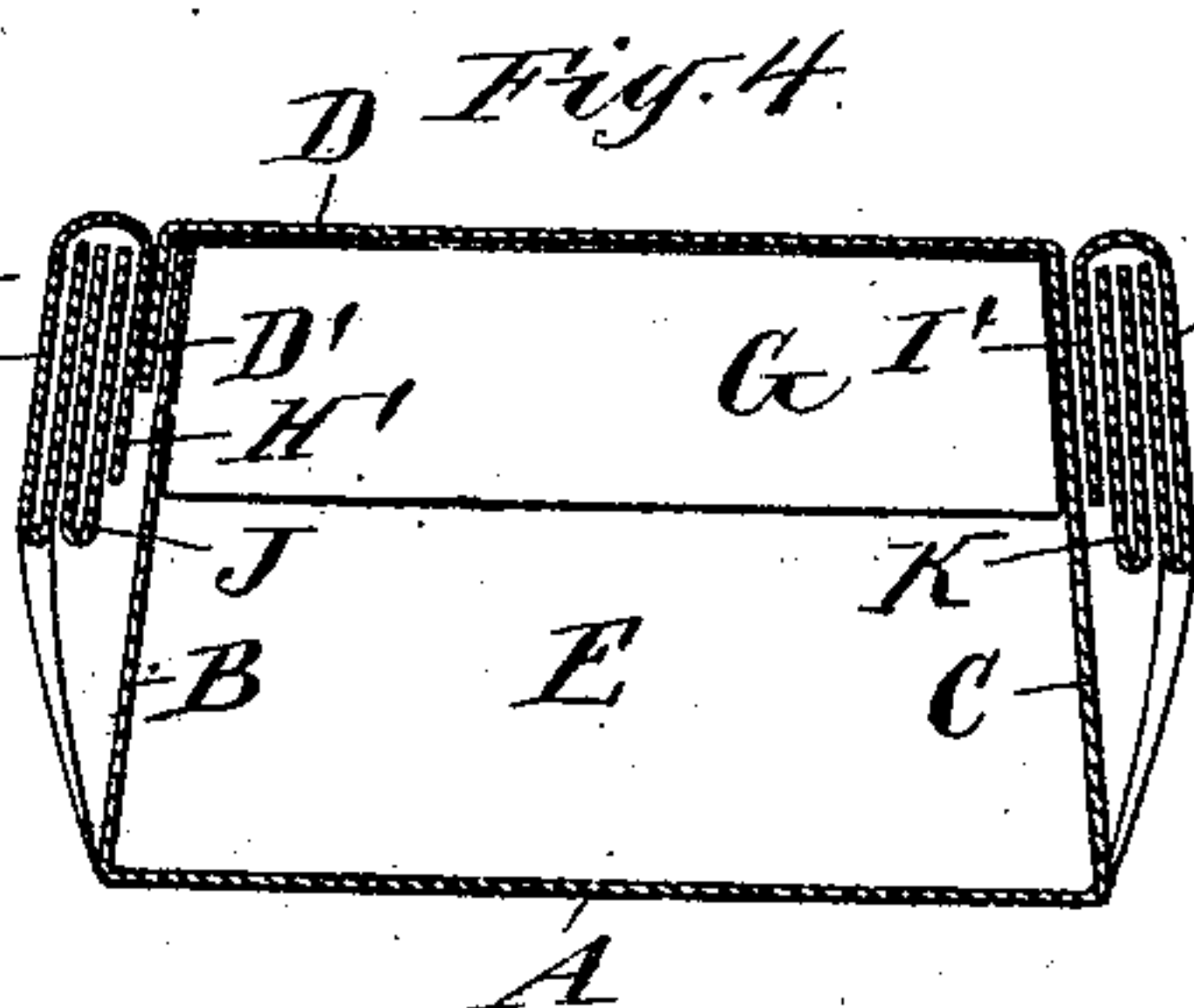
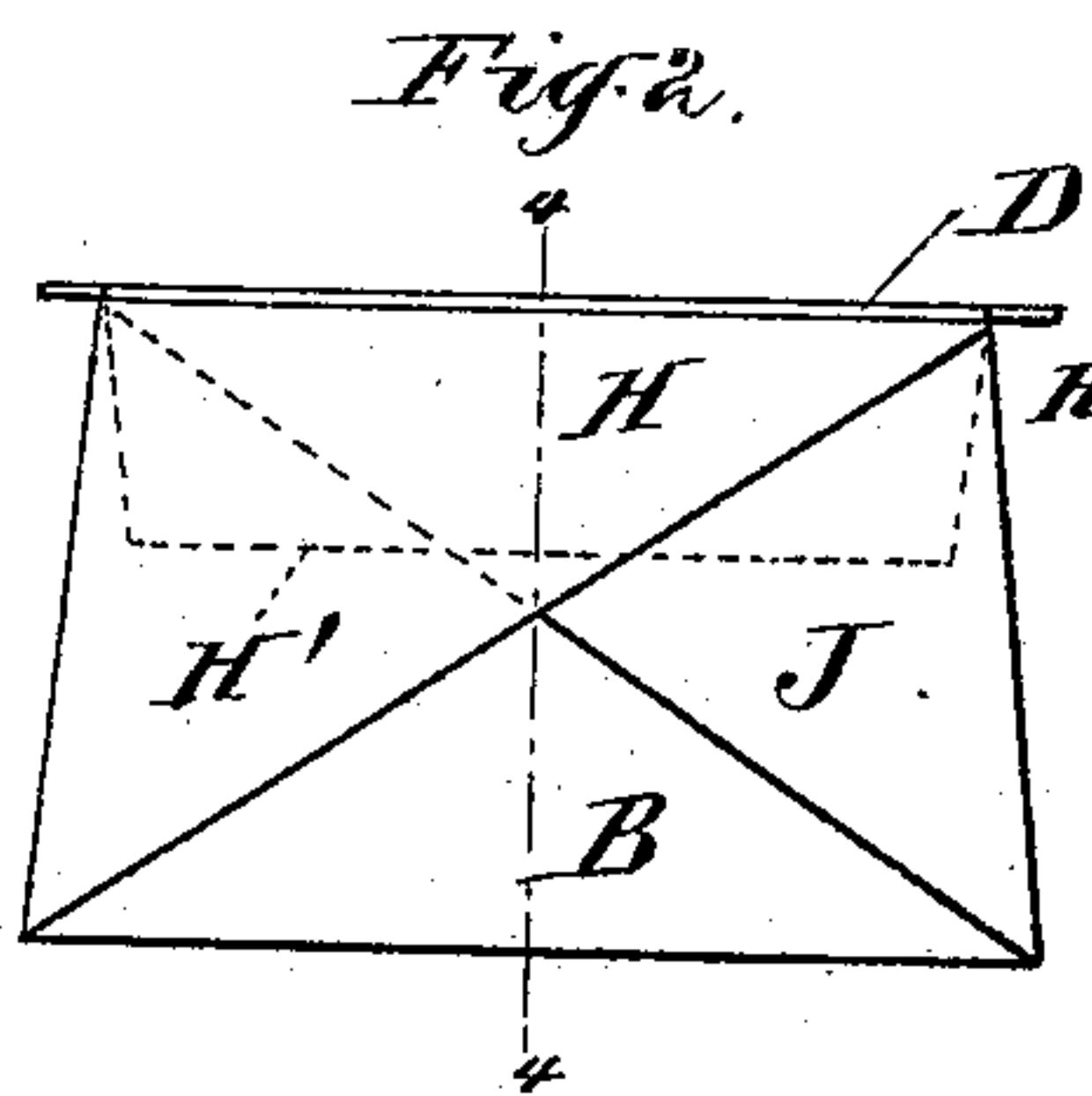
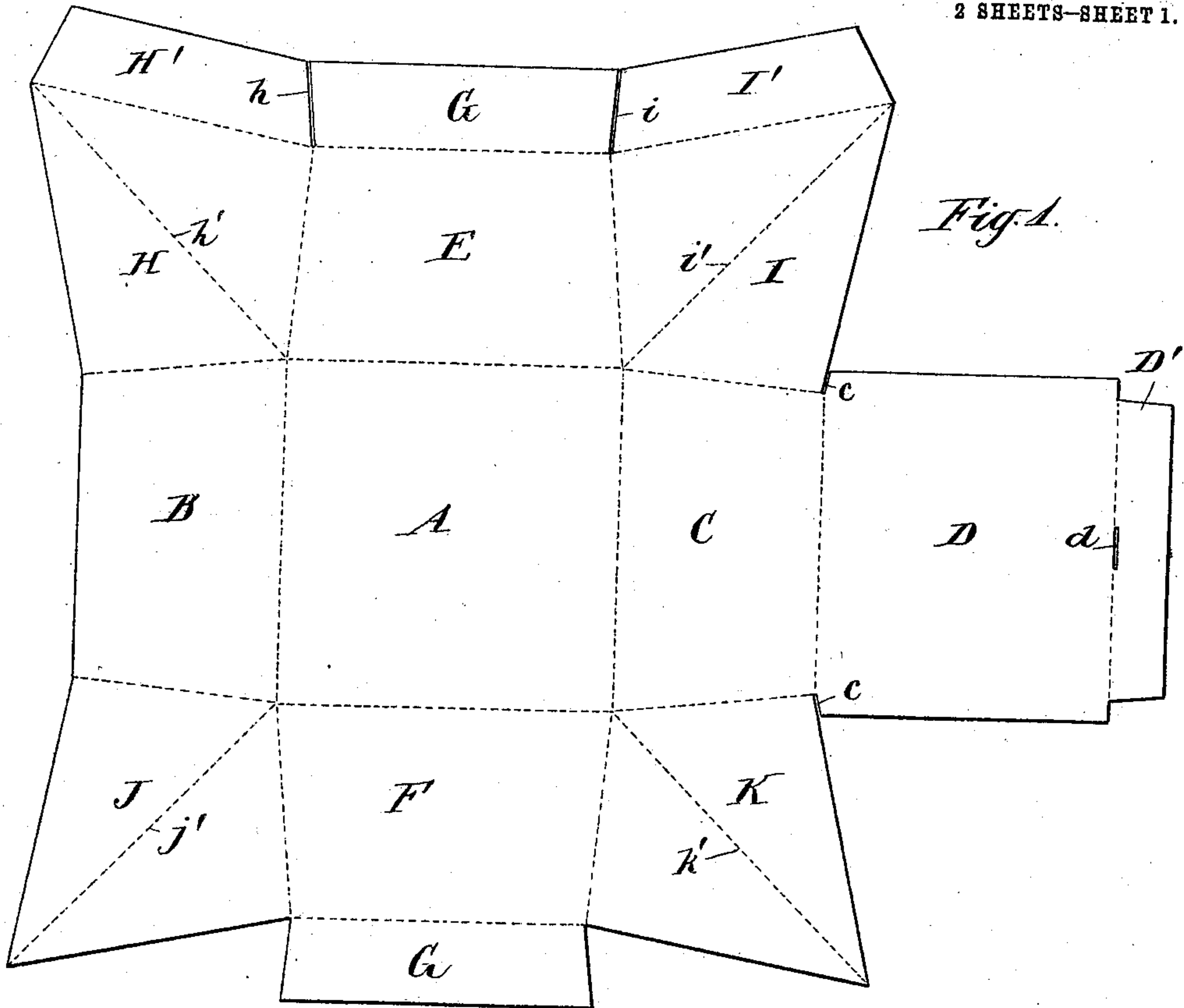
SPUTUM CUP.

APPLICATION FILED JAN. 17, 1908.

982,211.

Patented Jan. 17, 1911.

2 SHEETS—SHEET 1.



Witnesses:
J. J. Greene
W. J. Petersen

Inventor:
Charles L. Knudsen,
by his attorney,
Charles R. Searle.

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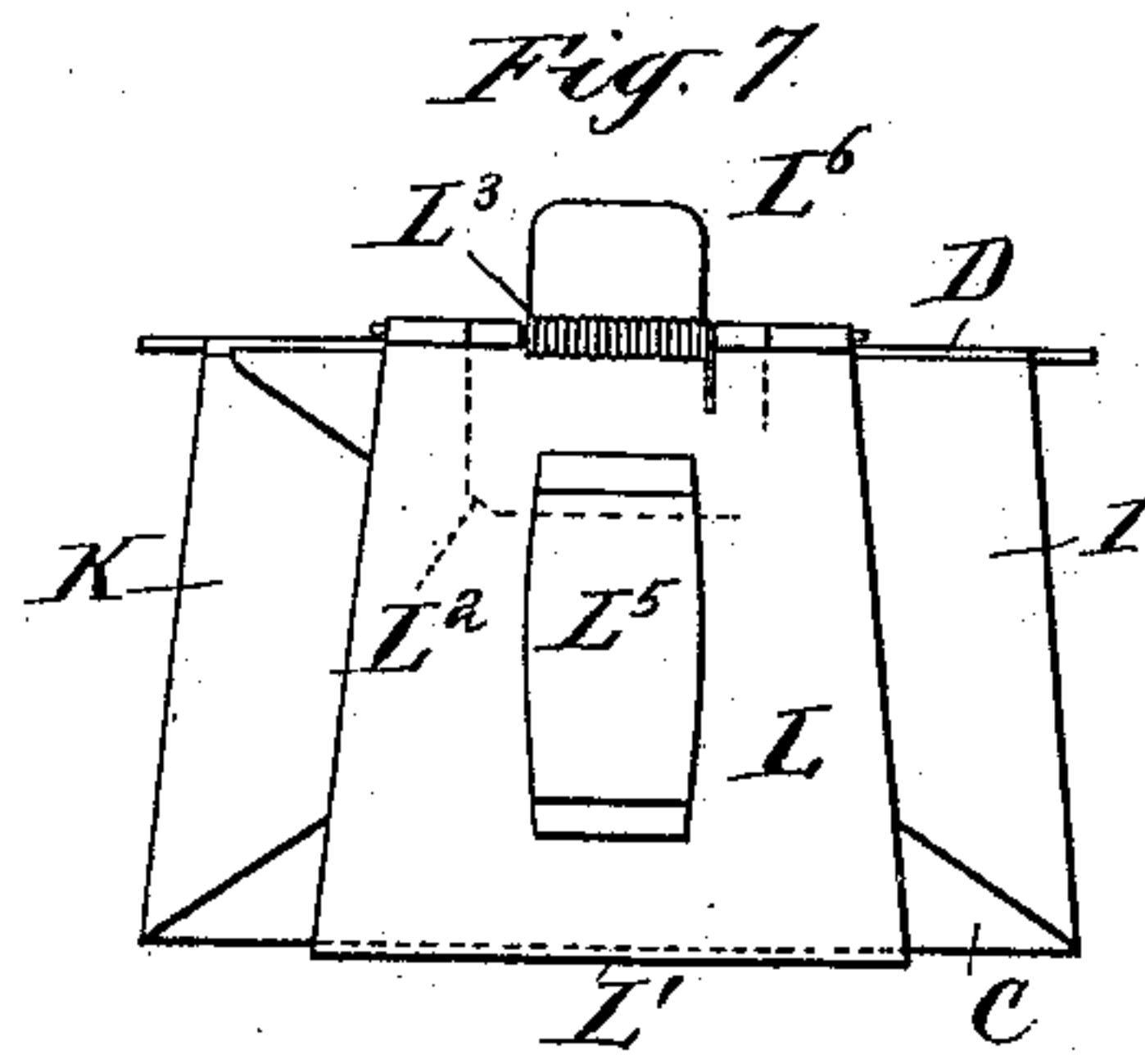
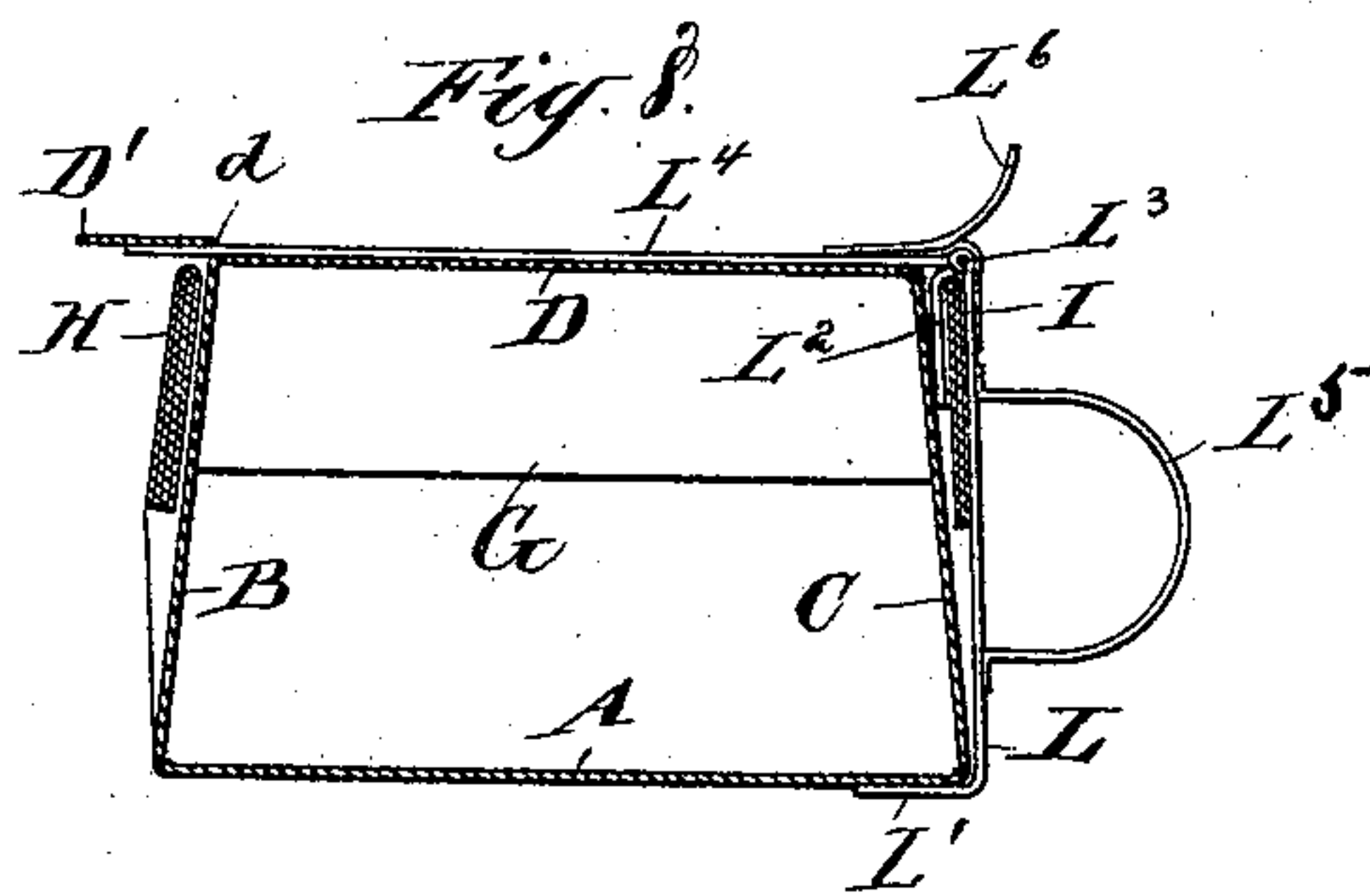
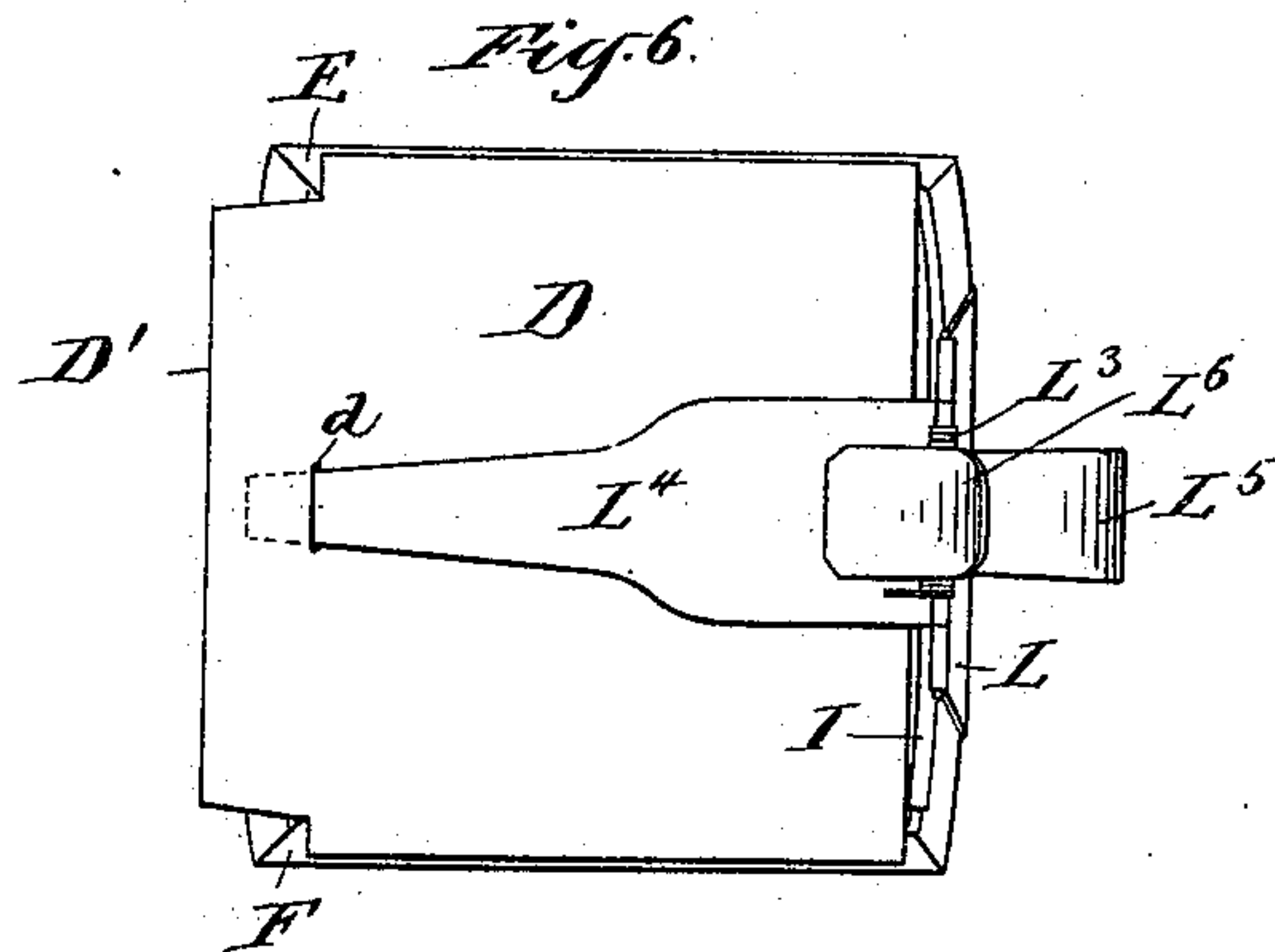
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2 SHEETS—SHEET 2.



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J. J. Greene.
H. J. Petersen.

Inventor:
Charles L. Knudsen,
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Charles R. Seale.

UNITED STATES PATENT OFFICE.

CHARLES L. KNUDSEN, OF NEW YORK, N. Y., ASSIGNOR TO ROWLAND H. HOWARD, OF YEADON, PENNSYLVANIA.

SPUTUM-CUP.

982,211.

Specification of Letters Patent. Patented Jan. 17, 1911.

Application filed January 17, 1908. Serial No. 411,344.

To all whom it may concern:

Be it known that I, CHARLES L. KNUDSEN, a citizen of the United States, residing in the city of New York, borough of Brooklyn, in the county of Kings and State of New York, have invented a certain new and useful Improvement in Sputum-Cups, of which the following is a specification.

The invention relates to receptacles formed of paper or like material, and more particularly to cups for sanitary purposes.

The object of the invention is to provide a simple inexpensive receptacle of paper folded from a single sheet into the form of a rectangular cup or box self-sustained and braced to provide the required strength, and having a cover with means for locking it in the closed condition when the cup and its contents are to be destroyed.

Another object of the invention is to provide means for returning the cover to the closed position after it has been raised, and for enabling the user to raise the cover easily by the same hand in which the cup is held.

The invention consists in certain novel features and arrangements, and details of construction, by which the above objects are attained, to be hereinafter described.

The accompanying drawings form a part of this specification and show the invention as it has been carried out in practice.

Figure 1 is a face view of the blank or sheet before folding. Fig. 2 is a front elevation of the completed cup in the closed and locked condition. Fig. 3 is a corresponding side view. Fig. 4 is a vertical section on the line 4—4 in Fig. 2. Fig. 5 is a vertical section on the line 5—5 in Fig. 3, the plane of section being at a right angle to that of Fig. 4. Fig. 6 is a plan or top view of the cup, equipped with a detachable holding and closing means, and conditioned for use. Fig. 7 is a corresponding rear elevation; Fig. 8 is a vertical section through the cup, showing the holding and closing means in side view.

The material of which the receptacle is formed may be understood to be water-proof paper of the thickness and strength required by the conditions of service. It is cut by dies or other means into a sheet of the form shown in Fig. 1 in which A is the bottom section of the cup, in the form of a square occupying the center of the sheet, on one margin is the front section B of trapezoidal

form and on the opposite margin is the similarly formed back section C having the rectangular piece D extending therefrom and forming the cover. On the remaining margins of the bottom are the trapezoidal side sections E and F each having a narrow flap G extending therefrom. In the angles between the front and sides and between the back and sides are corner or wing sections H, I, J and K completing the approximately rectangular main portion of the sheet. The corner sections H and I on the margins of the side section E have tucks H^1 I^1 extending therefrom similar to the flap G on such section, and separated therefrom by the cuts h i .

The cover D is approximately of the same dimensions as the bottom A and has a projecting locking flap or extension D^1 of a transverse length similar to the short edge of the back section C; the line of attachment to the latter is of the same length and is separated from the adjoining corner sections by cuts c c on each side.

To form the cup the front, back, and side sections are turned upwardly and inwardly on the dotted lines marking the outline of the bottom, the corner sections at the same time folding downwardly and outwardly each upon itself along the diagonal dotted lines h^1 , i^1 , j^1 and k^1 , thus permitting the front, back and sides to approach and assume the form of a truncated pyramid, with the corner sections extending radially from its four corners in the form of triangular wings. The wings J and K are then turned parallel with and against the front and back respectively, and the remaining corner sections or wings H and I are similarly turned to overlap the first and are held thereto by folding and inserting the tucks H^1 I^1 into the space between the wings J K and the adjacent faces of the front B and back C, as shown in Figs. 2 and 4. The side flaps G are then forced into the interior of the cup and folded down in contact with the interior of the sides E and F to which they are attached, and serve to stiffen or reinforce these portions by the bearing each affords at its ends against the interior faces of the front and back at the corners, as indicated in Figs. 4 and 5. The cover is then folded down, the extension D^1 projecting beyond the front, and the side margins of the cover overhanging the sides E and F, thus effectually cov-

ering the mouth of the cup. The receptacle thus formed may be used in this condition and when ready to be destroyed may be permanently closed by bending down the extension D¹ and inserting it between the wings H J and the front B as in Fig. 4.

It is preferable to equip the cup with a loop or handle for the fingers and with means for automatically holding the cover yieldingly closed, with means operable by the thumb of the same hand for raising it when required. This may be accomplished in various ways. Referring to the first form, L is a plate of thin metal adapted to apply on the exterior of the cup at the rear, having a flange L¹ extending a short distance beneath the bottom, and a flat hook L² on its inner face near the top detachably engaged between the back C and its wings I K, see Fig. 8. Hinged by a spring-hinge L³ at the upper end of the plate L is a tongue L⁴ of sheet metal extending along the center line of the cover D with its end received in a slit *d* provided in the latter for this purpose. On the rear face of the plate is a loop L⁵ of sheet metal of sufficient size to admit a finger of the hand, and on the tongue L⁴ at the rear is an overhung spur L⁶ located conveniently for contact by the thumb of the same hand and serving by such contact to raise the cover, the spring-hinge again closing it when the pressure on the spur is relaxed. The axis of the spring-hinge and that of the cover are not in exact coincidence, the slight difference in movement thus caused between the tongue and cover is permitted by the sliding of the tongue on the cover, the protrusion of the end of the tongue through the slit *d* being sufficient to prevent disengagement. This form is preferable in that the sheet metal braces the cup and renders it easy to handle and operate.

I claim:—

1. A receptacle of the character set forth, formed by folding a single sheet and comprising a rectangular bottom section, front, back, and side sections on the four margins of said bottom, corner sections folded to form triangular wings and laid in overlap-

ping pairs against said front and back sections, a tuck on the outer wing of each of said pairs inserted between the inner face of the inner wing and exterior face of said front and back sections respectively.

2. A receptacle of the character set forth, formed by folding a single sheet and comprising a rectangular bottom section, front, back, and side sections on the four margins of said bottom, corner sections folded to form triangular wings and laid in overlapping pairs against the exterior faces of said front and back, a tuck on the outer wing of each pair inserted between the inner wing of such pair and the adjacent face of said front and back sections respectively, a flap on each side section folded upon the interior face of its said side section, a cover section on said back, and an extension on said cover insertible between said front and the holding tuck of its adjacent pair of wings.

3. A receptacle of the character set forth, formed by folding a single sheet and comprising a rectangular bottom section, front, back, and side sections on the four margins of said bottom, corner sections folded to form triangular wings laid in overlapping pairs against the exterior faces of said front and back respectively, means for holding said wings in such positions, and a cover section on said back having a slit near its front edge, in combination with a detachable holder comprising a plate applied against the rear face of said receptacle, a flange on said plate extended beneath the bottom of said receptacle, a hook on said plate inserted between said back section and its adjacent pair of wings, a tongue hinged to the upper end of said plate and extended along said cover and through said slit, a spur on said tongue, and a spring actuating said tongue to hold said cover yieldingly closed.

In testimony that I claim the invention above set forth I affix my signature, in presence of two witnesses.

CHARLES L. KNUDSEN.

Witnesses:

CHARLES R. SEARLE,
H. J. PETERSEN.