

No. 609,266.

Patented Aug. 16, 1898.

F. B. DAVIDSON.

PAPER BOX.

(Application filed May 16, 1898.)

(No Model.)

2 Sheets—Sheet 1.

Fig-1

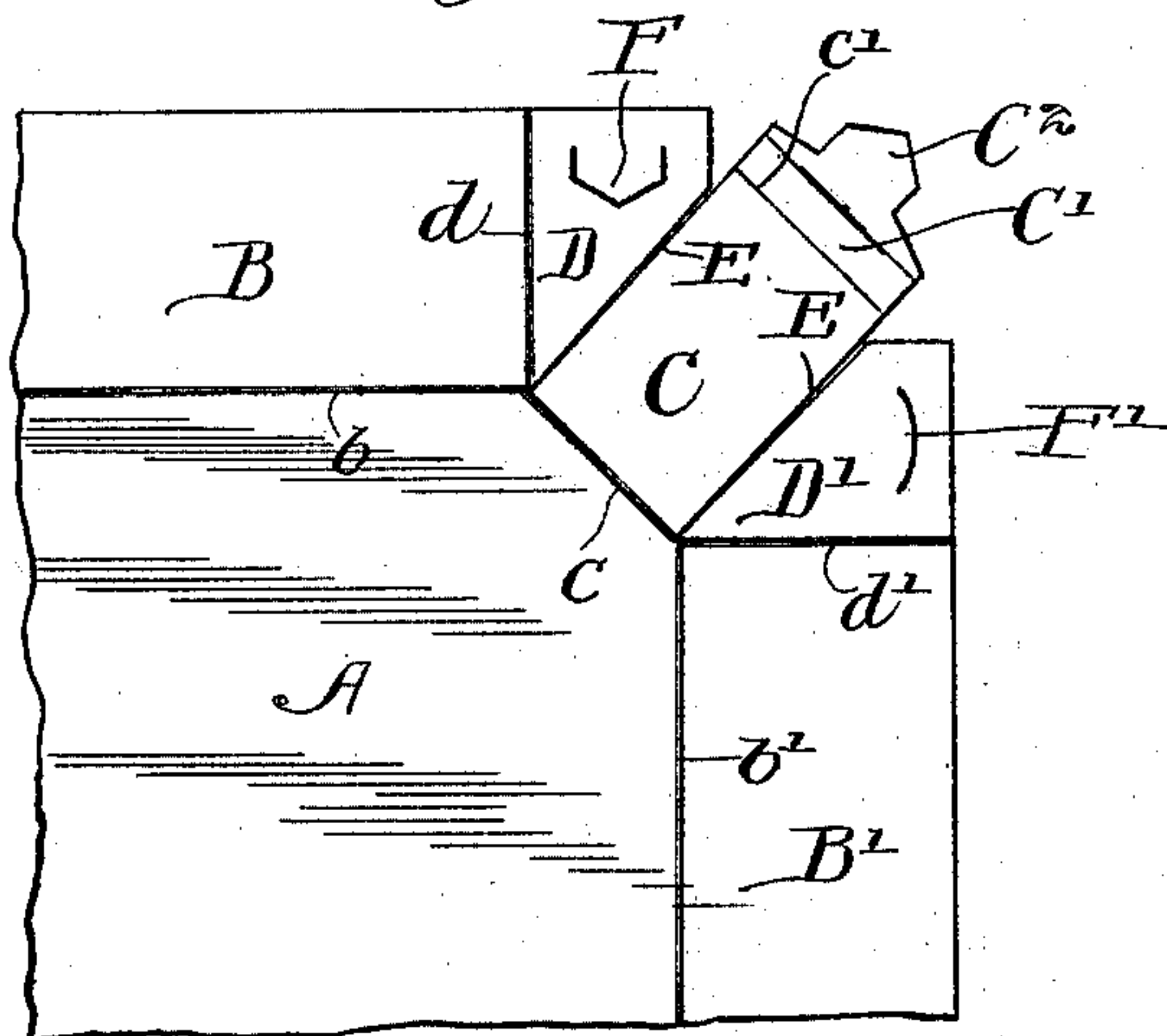


Fig-2

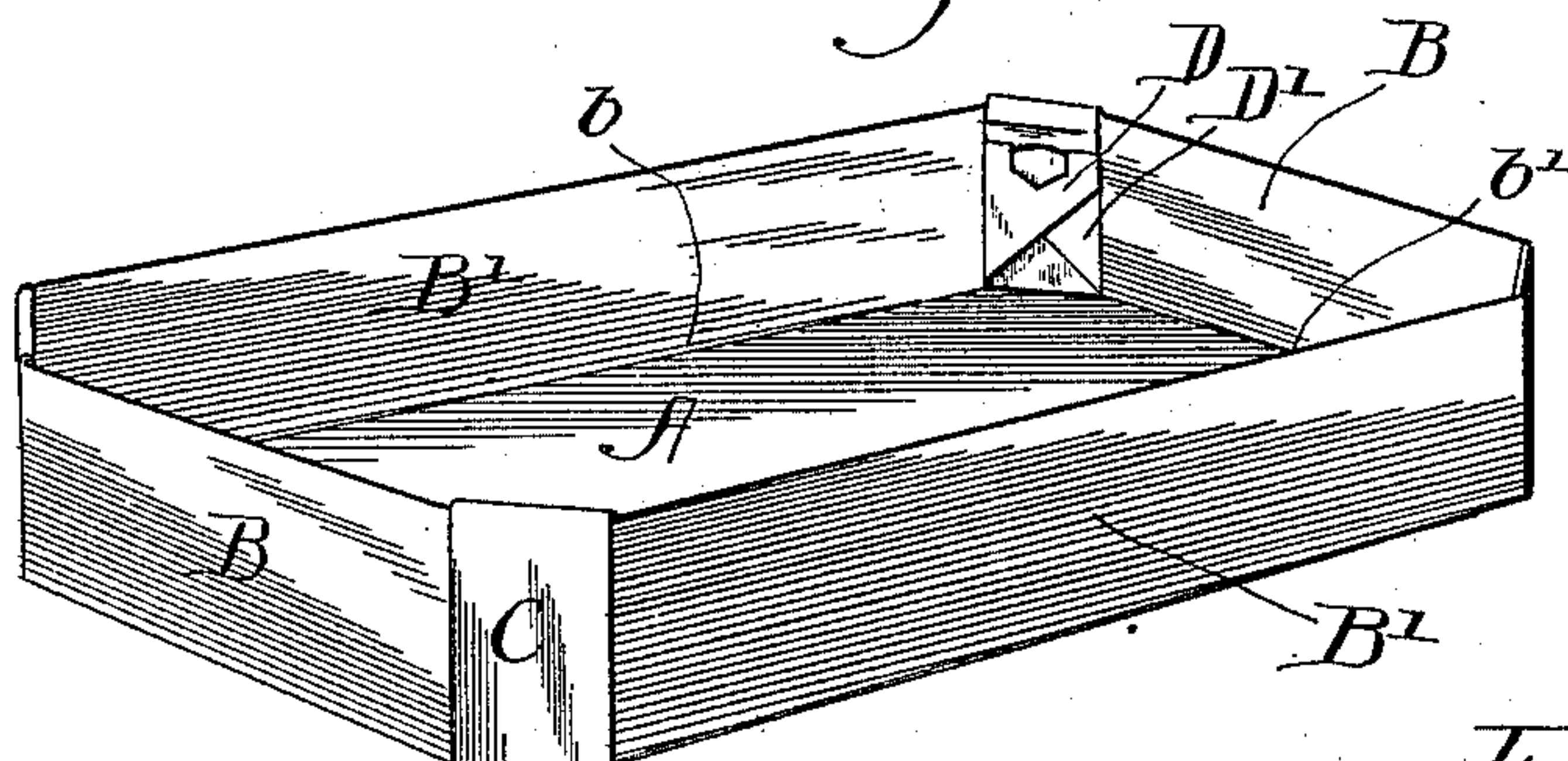


Fig-3

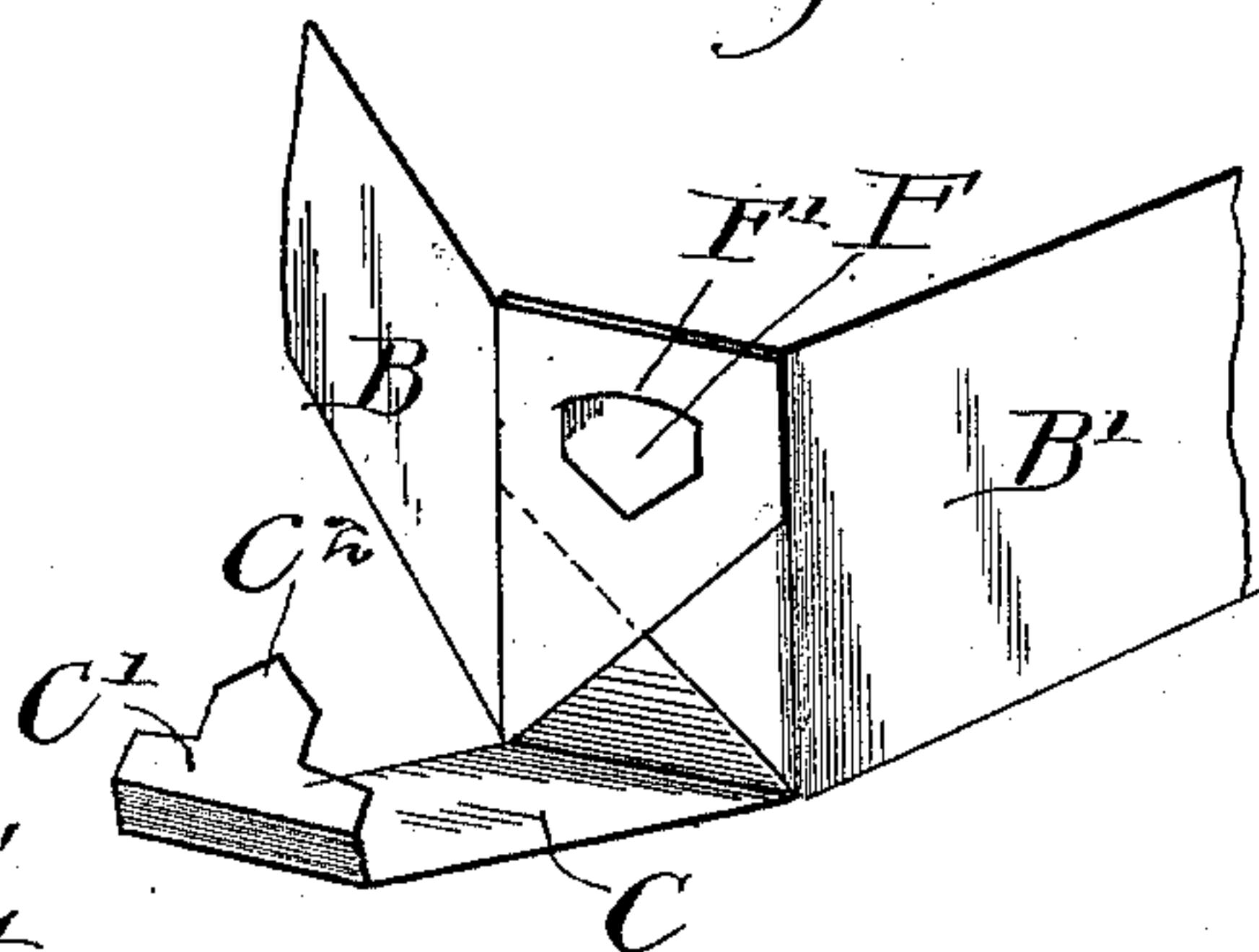
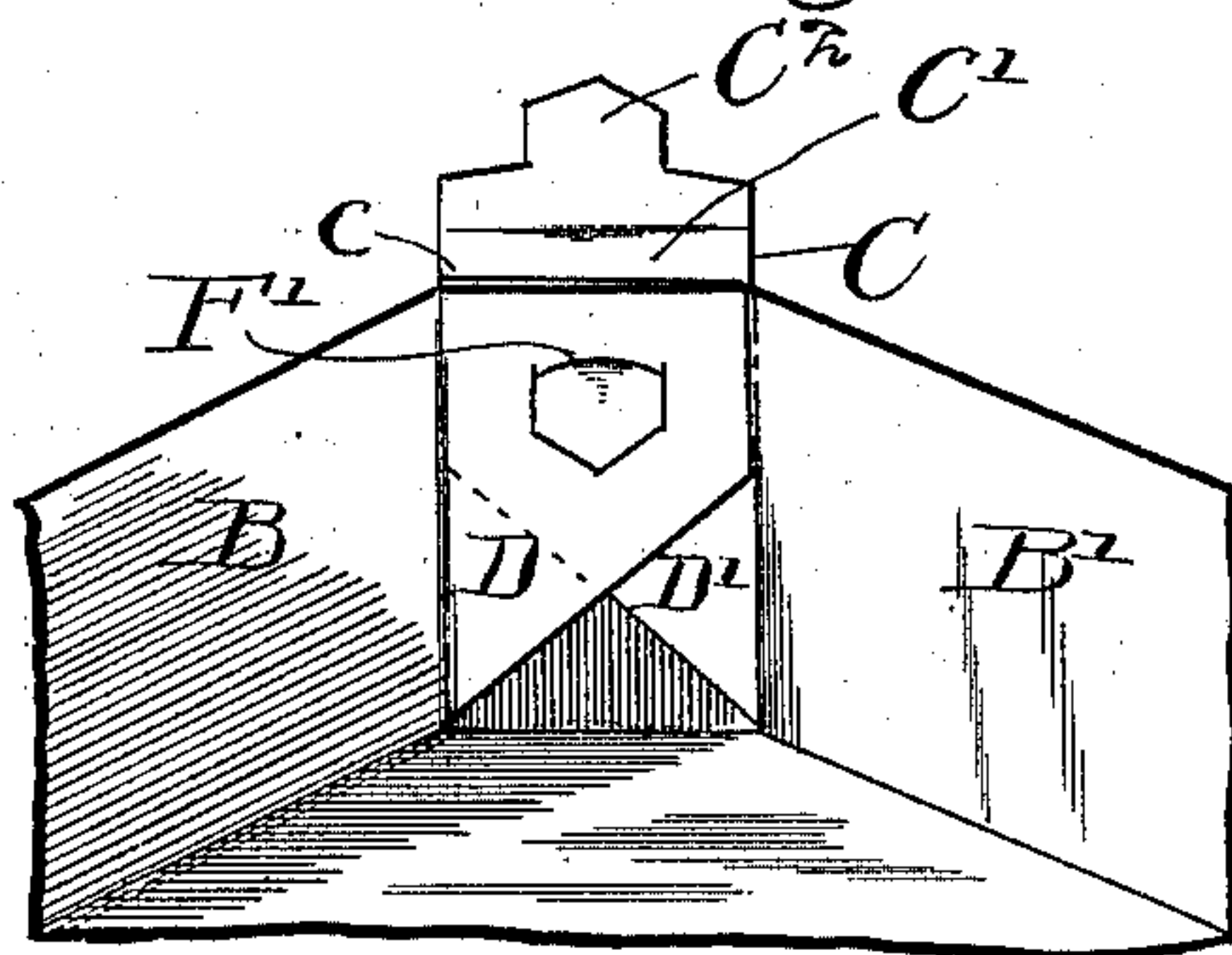


Fig-4



Witnesses:
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Inventor
Frank B. Davidson

by Poole & Brown, *his Atty's*

No. 609,266.

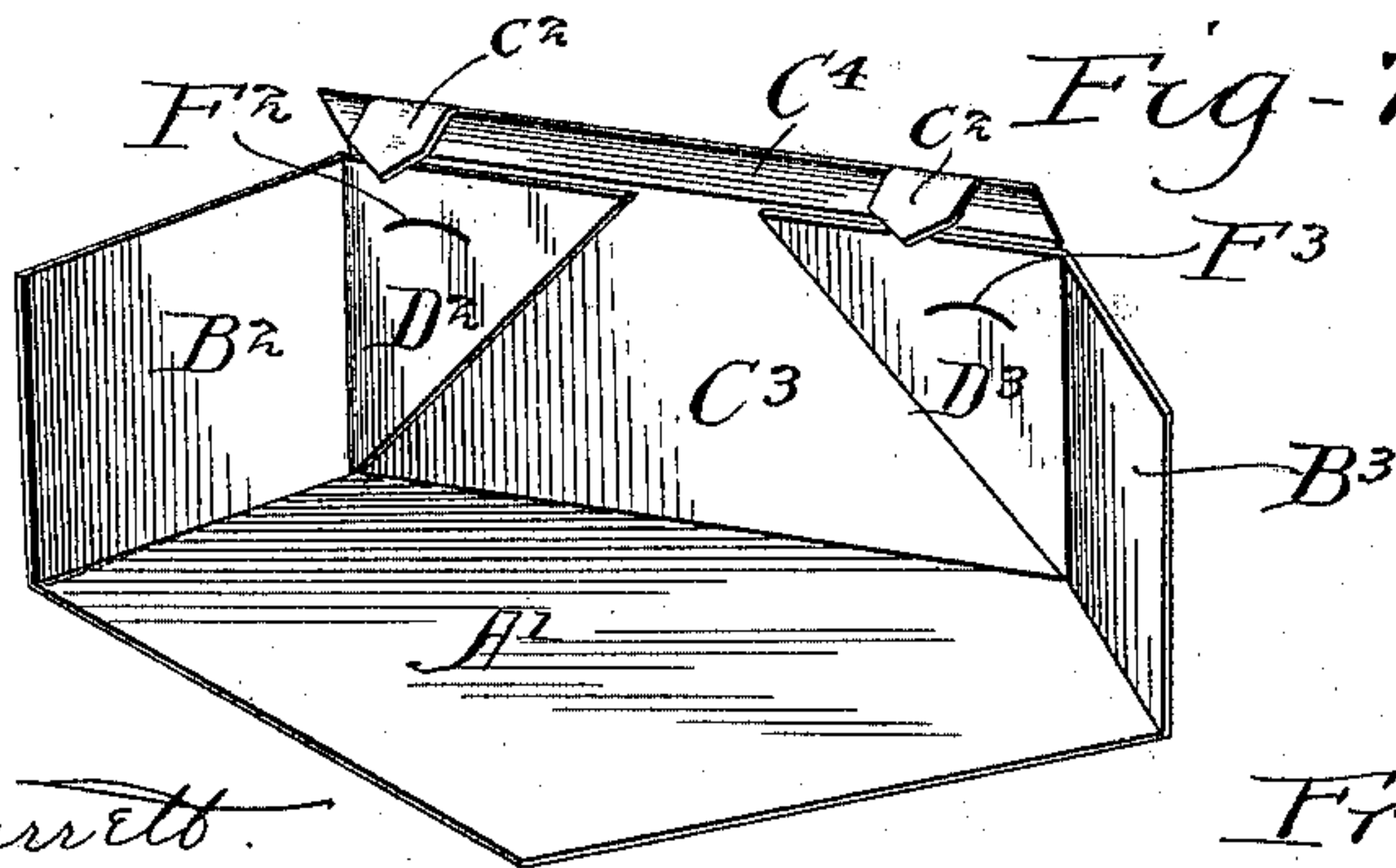
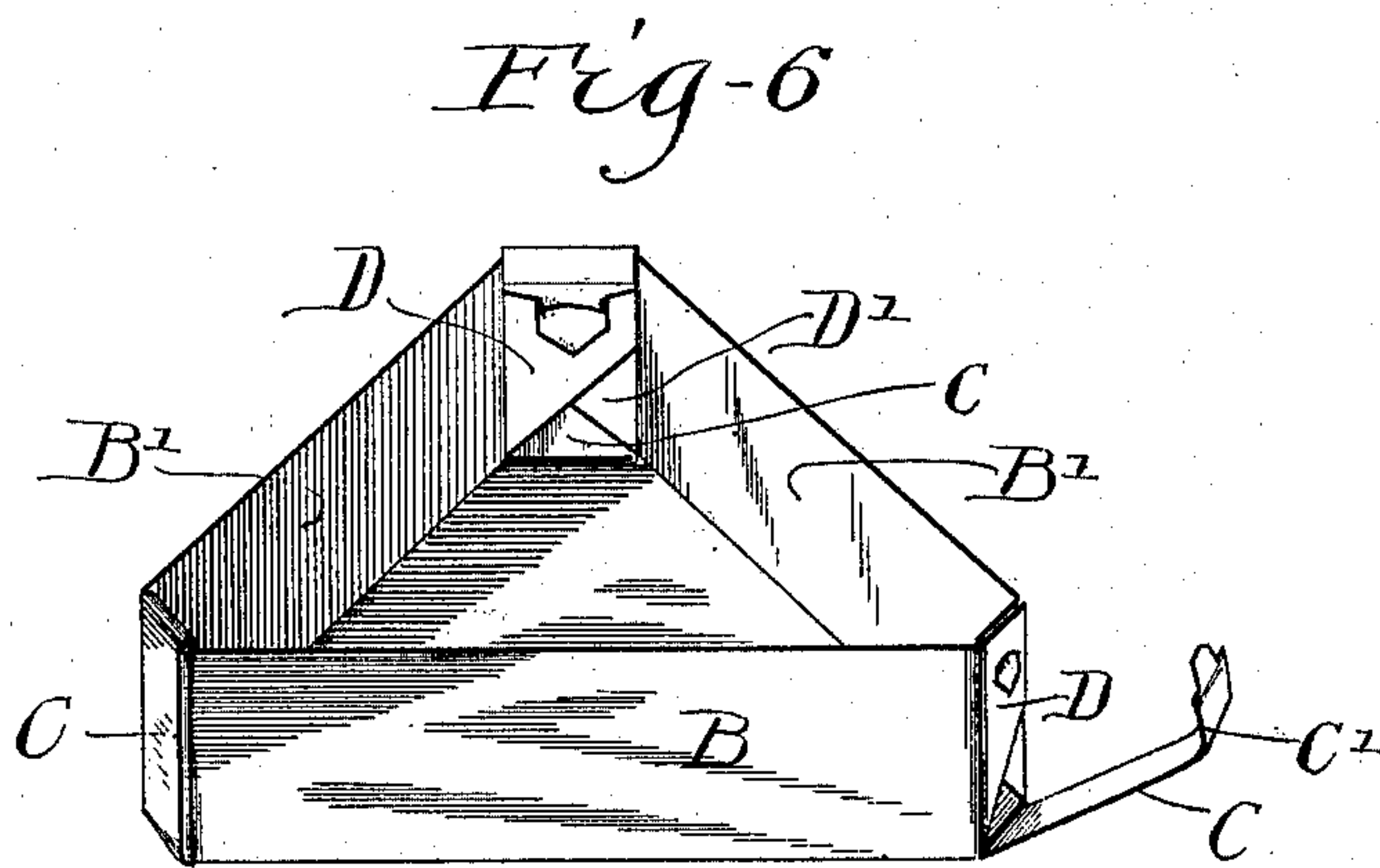
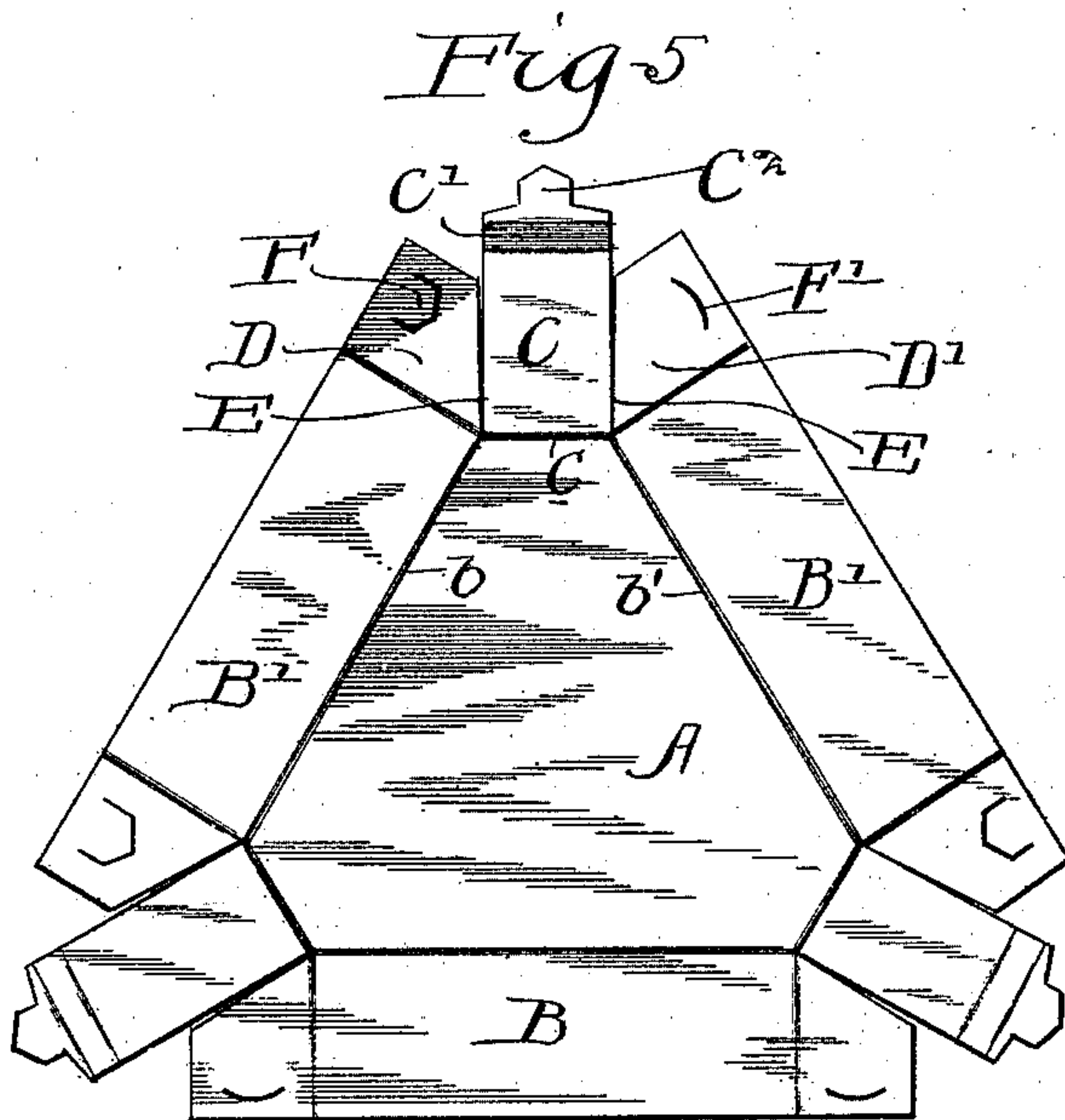
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2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

FRANK B. DAVIDSON, OF CHICAGO, ILLINOIS, ASSIGNOR TO THE HOWE & DAVIDSON, INCORPORATED, OF SAME PLACE.

PAPER BOX.

SPECIFICATION forming part of Letters Patent No. 609,266, dated August 16, 1898.

Application filed May 16, 1898. Serial No. 880,806. (No model.)

To all whom it may concern:

Be it known that I, FRANK B. DAVIDSON, of Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Paper Boxes; 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, which form a part of this specification.

This invention relates to an improvement in paper boxes of that class in which the bottom wall and side walls of the box are formed by means of a single blank or sheet and in which the side walls of the box are held or confined in proper position with respect to each other and the bottom wall by means of folding or overlapping parts or flaps which are secured to each other.

This invention consists in the matters hereinafter described, and pointed out in the appended claims.

As shown in the accompanying drawings, Figure 1 is a view of one corner of a blank for forming a rectangular box, showing the flaps by which the side walls of the box are joined to each other. Fig. 2 is a perspective view of a complete box made from the blank shown in Fig. 1. Fig. 3 is a perspective view from the exterior of one corner of the box shown in Fig. 2, illustrating the flaps when partially folded. Fig. 4 is a perspective view of one corner of the box shown in Fig. 2, as seen from the inside thereof, showing the lateral flaps folded together and the intermediate flap ready for insertion therein. Fig. 5 is a view of the blank for a box of a generally triangular shape. Fig. 6 is a perspective view of a box made from the blank shown in Fig. 5. Fig. 7 illustrates a modified form of the interlocking parts.

First referring to the form of box shown in Figs. 1 to 4, A indicates the bottom of the box and the central part of the blank forming the same.

B B' indicate integral marginal flaps and also the ends and side walls of the box formed thereby, said marginal flaps being folded along the lines *b b'* when bent or folded upwardly to form the box sides. The said flaps B B' do not extend to the corners of the

blank and box, but terminate short of said corners, and between the adjacent ends of said flaps are located the obliquely-arranged intermediate flaps C, which are integral with the bottom A and are folded on oblique lines *c*, which intersect at its ends the lines *b b'*. Said lines *b b'* and *c* will usually be defined by scoring or weakening the blank along the same, as common in the making of folding boxes. On the adjacent ends of the flaps B B' are formed secondary flaps D D', which are integral with and constitute lateral extensions of the main flaps B B' and which are adapted to be folded along lines *d d'*, which are at right angles to the inner and outer margins of said main flaps and intersect the folding lines *b b'* at the points at which the latter join the oblique line *c*. The said secondary flaps D D' are separated from the intermediate flap C by means of slits or cuts E E, which terminate at their inner ends at the intersection of the folding lines *b b'* and *c*.

In the construction of the box from a blank made as described the main flaps B B' are folded upwardly at right angles with the bottom. The secondary end flaps D D' are then brought together into overlapped relation and the intermediate or oblique flaps C folded upwardly against or outside of the said secondary flaps, the said intermediate flap C serving to close the space or opening which is left between the lower oblique margins of the said secondary flaps when the latter are folded together, as clearly seen in Figs. 3 and 4.

In connection with flaps constructed in the manner described suitable fastening devices will be employed for securing the flaps D D' and C in their proper overlapped relation, thereby holding the box sides in a position at right angles with the box-bottom. I have shown in the drawings a form of fastening device consisting of interlocking parts on the flaps themselves, which are so arranged that the sides of the box may be easily set up and held in position by the engagement of the interlocking parts with each other. The device shown for interlocking the secondary flaps D D' with each other consists of a tongue F on the flap D and a slit F' in the flap B', said

tongue being arranged with its side margins parallel with the line d , while the slit F' is generally parallel with the outer margin of the flap D' , so that when the tongue F is inserted through the said slit the flaps will be held firmly in their overlapped relation. The slit F' is shown as made of curved form; but the result would be practically the same if it were straight. A curved slit is herein preferred, as the tongue may be more readily inserted in a curved slit than a straight one.

As a means of engaging the free oblique end of the flap C with the overlapping secondary flaps said flap C is shown as provided at its end with an extension C' , which is adapted to fold along the line e' in such manner as to embrace the upper or adjacent edges of the secondary flaps, said extension C' being provided with a tongue C^2 , which is so located that it may be tucked into the slit F' along with the tongue F .

In Figs. 5 and 6 I have shown a blank and box which is in all respects like those above described, with the exception that in this instance both the blank and the box are of generally triangular form, the same having three main or principal sides and three intermediate narrower sides formed by the oblique flaps C . The several parts of the blank are in this instance constructed in the same manner as above described, and said parts are lettered in the drawings like the corresponding parts in Figs. 1 to 4.

In connection with the blanks and boxes illustrated it will be noted that the flaps D , D' , and C when folded together constitute, in effect, sides or side walls of the box, so that the box shown in Figs. 1 to 4 is in fact an eight-sided box, while that shown in Figs. 5 and 6 is a six-sided box, and it is also to be observed in this connection that the said flaps C , D , and D' need not necessarily form side walls which are short or narrow in proportion to the side walls between them; but the said flaps C may be made proportionately wider than illustrated herein in Figs. 1 to 6.

Fig. 7 illustrates a construction in which the body A' is provided with side flaps $B^2 B^3$, having auxiliary flaps $D^2 D^3$ and an intermediate flap C^3 . The flap C^3 in this instance is provided with an extension C^4 , adapted to fold over the upper edges of the flaps $D^2 D^3$, which latter do not meet, but are held or confined in place by interlocking parts thereon

and on the extension C^4 , herein shown as consisting of tongues $c^2 c^2$ on the extension C^4 , adapted to engage slits $F^3 F^4$ in the flaps $D^2 D^3$.

A box having more than four main or side flaps may be made on the same principles of construction that are embodied in the devices illustrated.

I have shown in the accompanying drawings a box consisting only of a bottom and side walls; but it will of course be understood that if a covered box be needed a suitable cover may be provided and that, if desired, such cover may be constructed in exactly the same manner as the box-body illustrated, such cover of course being made large enough to fit over the box-body.

I claim as my invention—

1. A blank for paper boxes consisting of a central or body part, integral main flaps which form the side walls of the box, said main flaps having integral secondary flaps at their ends, and integral intermediate flaps located obliquely with respect to the main flaps, said secondary flaps and intermediate or oblique flaps being adapted to be folded in overlapped relation.

2. A blank for paper boxes consisting of a central or body part, integral main flaps which form the side walls of the box, said main flaps having integral secondary flaps at their ends, integral intermediate flaps located obliquely with respect to the main flaps and interlocking means on said secondary and intermediate flaps.

3. A blank for paper boxes consisting of a central or body part, integral main flaps which form the side walls of the box, said main flaps having integral secondary flaps at their ends which are adapted to be folded together and are provided with interlocking tongues and slits and integral intermediate flaps located obliquely with respect to the main flaps and provided with extensions which fold over the secondary flaps and are provided with tongues for engagement with the secondary flaps.

In testimony that I claim the foregoing as my invention I affix my signature, in presence of two witnesses, this 12th day of May, A. D. 1898.

FRANK B. DAVIDSON.

Witnesses:

WILLIAM L. HALL,
R. CUTHBERT VIVIAN.