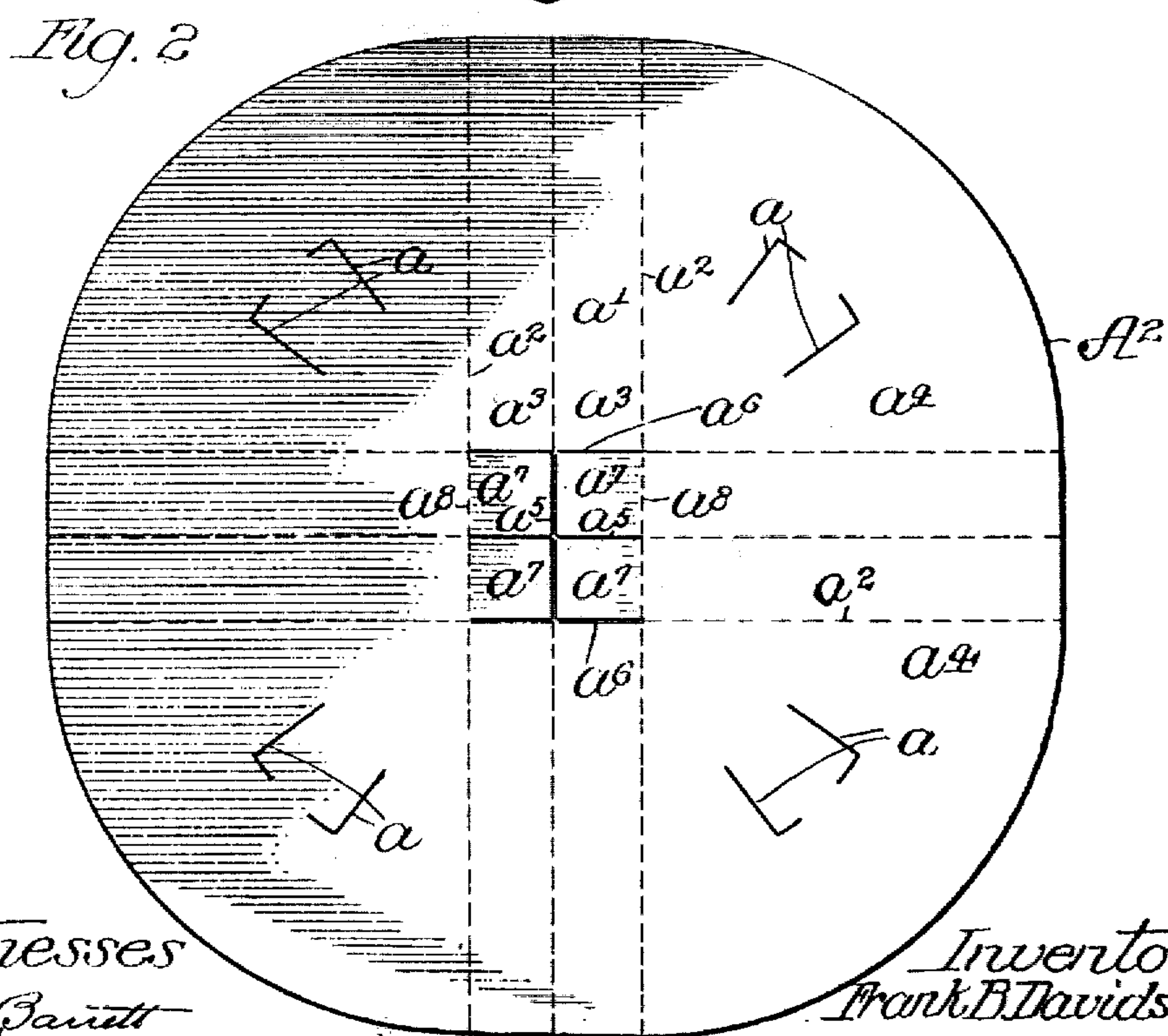
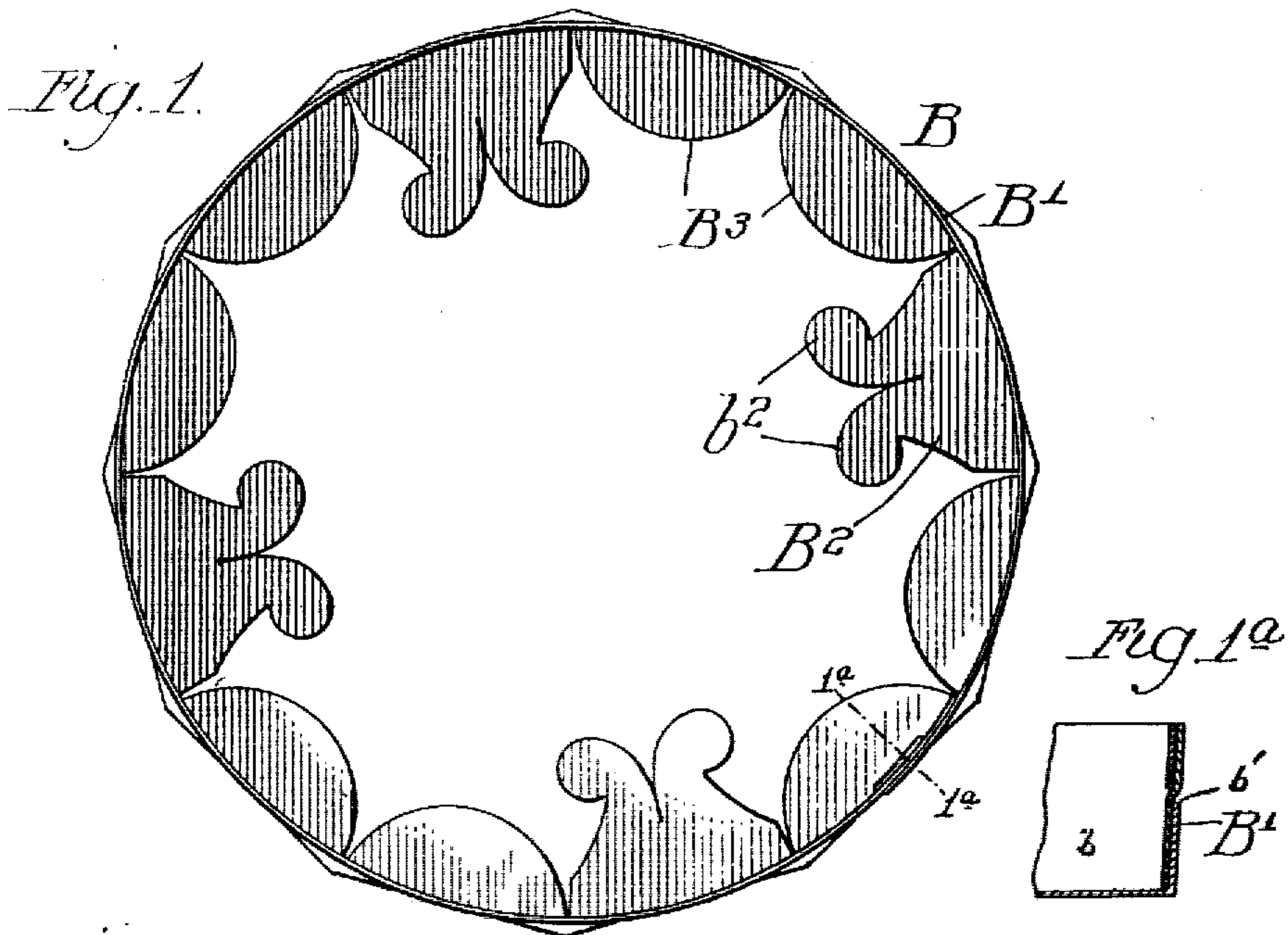


F. B. DAVIDSON.
PAPER TRAY.

APPLICATION FILED MAR. 31, 1904.

2 SHEETS—SHEET 1.



Witnesses
H. G. Barrett
W. H. Hall

Inventor:
Frank B. Davidson
by Poole & Brown
his Attys

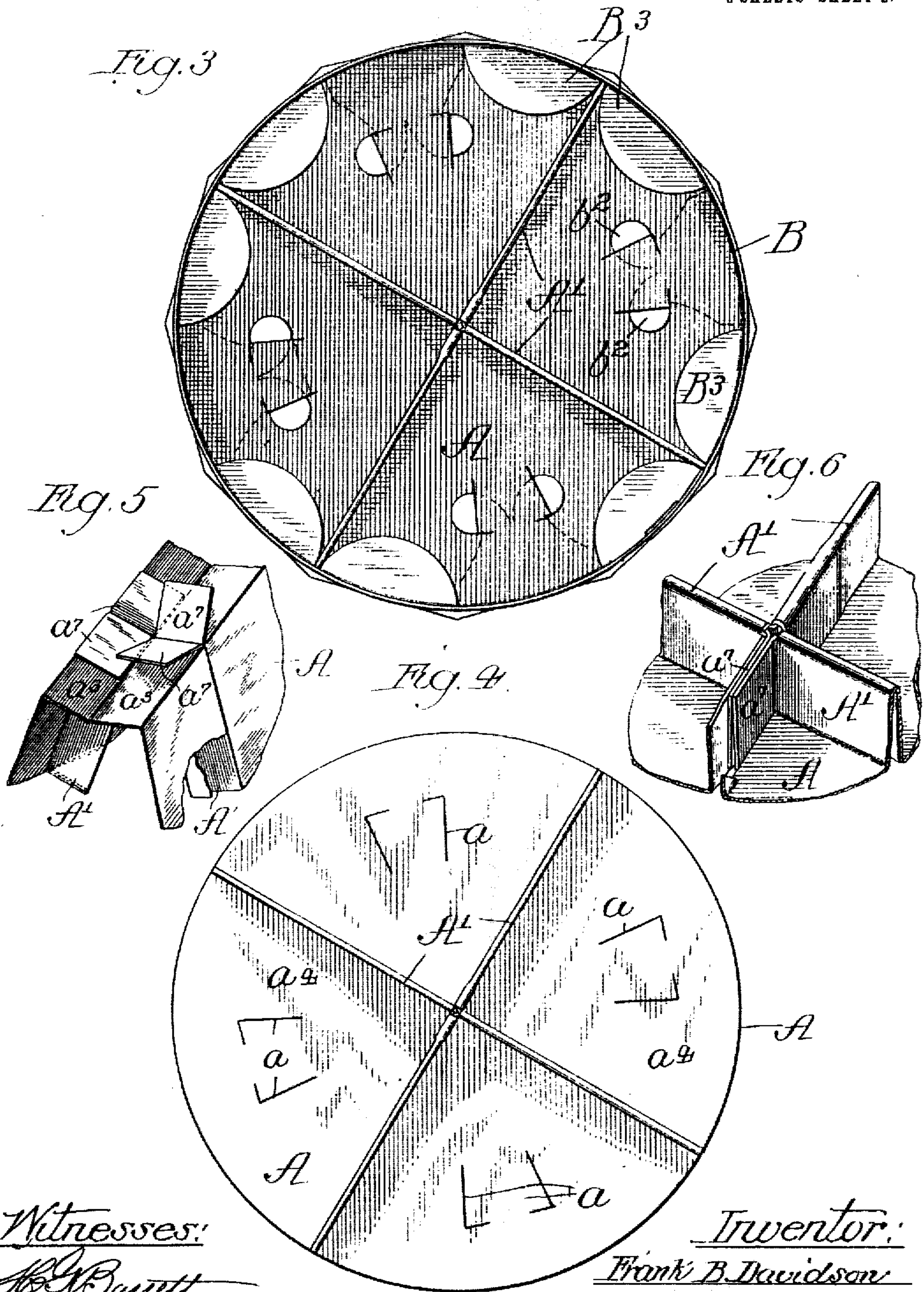
No. 815,007.

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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE

FRANK B. DAVIDSON, OF MARSEILLES, ILLINOIS, ASSIGNOR TO HOWE AND DAVIDSON COMPANY, OF EAST ORANGE, NEW JERSEY, A CORPORATION OF NEW JERSEY.

PAPER TRAY.

No. 815,007.

Specification of Letters Patent.

Patented March 13, 1906.

Application filed March 31, 1904. Serial No. 200,947.

To all whom it may concern:

Be it known that I, FRANK B. DAVIDSON, a citizen of the United States, residing at Marseilles, in the county of Lasalle and State of Illinois, have invented certain new and useful Improvements in Paper Trays; 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 improvements in trays or other like receptacles made of paper or other flexible sheet material and provided with a flat bottom, a rim surrounding said bottom, and a plurality of partitions extending inwardly from said rim, and also to an improved blank for making such article.

The device herein illustrated is especially applicable for use as a tray for packing in pails candies and like merchandise, and when used in this manner the trays are filled and placed in a candy-pail one over the other, said trays thus being supported one upon the other and serving as horizontal separators or partitions by which the layers of candy in the pail are separately supported. A device having the same features of construction may, however, be used for other purposes, as will hereinafter more fully appear.

In the drawings, Figure 1 is a plan view of the rim portion after it has been brought together and locked at its ends. Fig. 1^a is a fragmentary view of the rim, showing the manner of locking the same closed. Fig. 2 is a plan view of the blank from which is formed the bottom of the tray. Fig. 3 is a top plan view of the completed tray. Fig. 4 is a top plan view of the blank after it has been formed to constitute the bottom partitions of the tray. Fig. 5 is an enlarged fragmentary perspective view of the central portion of the blank in a partially-folded position, showing the manner in which the central part of the blank is brought together. Fig. 6 is an enlarged perspective view showing the central part of the blank when it is completely formed.

A tray made in accordance with my invention embraces a flat bottom A, a rim B, surrounding said bottom, and a plurality of partitions A', extending radially from the center of the tray toward the rim. The said bottom

and partitions are made from a blank A², (shown in Fig. 2,) consisting of a single flat sheet of material properly cut and scored to form said bottom and the partitions. The rim B is formed by a flat section or strip B', provided on its lower margin with a plurality of flaps B² B³, which when the strip is bent into circular form and connected with the bottom extend inwardly from the lower edge of said strip. In the form herein shown the bottom of the blank when complete is circular, and said strip B' is therefore of circular form when its ends are brought together and joined. The ends of the strip B are preferably secured together by means of a tongue b at one end of the strip, which enters a locking-slit b' at the other end thereof, Fig. 1^a. The flaps b² are provided at their inner or free ends with oppositely-directed locking-tongues b², which are adapted to enter suitably-shaped locking-slits a in the bottom blank, said slits being arranged in pairs for engagement with the pairs of oppositely-directed locking-tongues b². The flaps B³ of the rim section or strip are plain and are located in pairs between the locking-flaps B². In the completed tray the locking-flaps extend beneath the bottom, and the tongues b² thereof are inserted upwardly through the slits a in said bottom, while the plain flaps B³ are located above said bottom. The said bottom is therefore confined at its margin between the lower flaps B² and the upper flaps B³, the former flaps serving the function also of locking the rim to the bottom.

The partitions A' are preferably made integral with and formed from the blank A² of the tray. The blank from which the said bottom and portions are formed is shown in Fig. 2 and will now be described.

The blank is provided with two sets of score-lines a' a², extending entirely across the blank and intersecting each other at the center thereof. Each set embraces three parallel lines. Between the central score-line a' and the outside score-lines a² a² of each set are formed rectangular partition-sections a³, which constitute when folded upwardly into flatwise engagement the partitions. The said score-lines divide the blank into four sector-shaped parts a⁴, located in the four angles formed by said intersecting sets of score-lines. Said parts together constitute when the tray

is set up the bottom A of the tray. Each part a^4 is provided with one pair of locking-slits a . The rectangular part of the blank inclosed by the outside intersecting lines a^2 at the center of the blank is divided by two right-angle cuts a^5 a^5 and two side cuts a^6 into four rectangular tabs a^7 , which are joined to the partition-sections on opposite sides of the center of the blank and are separated from the other partition-sections by the lines of severance a^6 . Score-lines a^8 extend across the bases of said tabs.

When the blank A^2 is folded, the tabs a^7 a^7 are bent laterally outward and extend between the folded sections of the partitions which are at right angles to those to which the tabs are attached. The tabs may be readily folded in setting up the box by turning the blank bottom up and bending the previously-folded halves downwardly, so as to bring the blank into a U form, as shown in Fig. 4. At this time the tabs extend past the adjacent inner ends of the sections a^3 a^3 which are without tabs, and the tabs may be readily folded outwardly and into contact with said sections. When the halves of the bottom are then brought into the same plane, the partition-sections which are without tabs will be folded together with the tabs between them. The said tabs form an interlocking connection between the inner ends of the radial partitions, as set forth in my application for patent, Serial No. 200,946, filed simultaneously herewith.

After the bottom and partitions have been formed in the manner described the rim-section is fitted thereto and locked thereon in the manner shown in Fig. 3. Preferably two plain overlapping flaps B^3 are formed between each two adjacent locking-flaps B^2 , and desirably the ends of the partitions which extend to the rim are inserted between the plain flaps of each pair, as shown in Fig. 3, or, what amounts to the same construction, the two flaps B^3 may be considered as a single flap provided with a notch to receive the outer end of the partition.

The details of construction of the several parts of the tray may be varied without departing from the spirit of my invention, and I do not wish to be limited to the specific details thereof except as hereinafter made the subject of specific claims.

So far as the rim and the means for connecting it with the bottom are concerned the radial partitions formed by folding upward radial sections of the bottom may be without the interlocking connections at the center of the bottom, which are shown and herein de-

scribed, or in some cases the bottom may be unprovided with radial partitions.

I claim as my invention—

1. A tray comprising a flat bottom and a rim consisting of a strip provided with flaps which extend beneath said bottom, said flaps having laterally and oppositely extending tongues, the tongues of each flap being inserted upwardly through two adjacent slits in the bottom and said strip being provided with other flaps extending inwardly from the rim over the bottom.

2. A tray comprising a bottom provided with a plurality of radial partitions each formed by an upwardly-folded portion of said bottom, and a rim consisting of a strip the ends of which are secured together and which is provided with flaps that are folded beneath and have locking-tongues that enter slits in said bottom.

3. A tray comprising a bottom provided with a plurality of radial partitions, each formed by upwardly-folded partition-sections, and some of which have at their inner ends tabs which extend between the folded sections of other partitions, and a rim consisting of a strip provided at its lower margin with flaps some of which are folded inwardly and extend over said bottom and others of which are folded beneath the bottom and are provided with tongues which engage slits in the bottom.

4. A tray comprising a bottom provided with a plurality of radial partitions, each formed by upwardly-folded partition-sections, and a rim consisting of a strip provided at its lower margin with flaps, some of which have overlapping engagement with the margin of said bottom, and others of which have interlocking connection therewith.

5. A tray comprising a bottom provided with a plurality of radial partitions, and a rim consisting of a strip provided with a plurality of inwardly-folded flaps extending beneath the bottom and provided with locking-tongues which are adapted to enter slits in the said bottom; the rim being provided also between each two adjacent locking-flaps with other flaps which extend over the bottom, the ends of the partitions being inserted between two of the latter flaps.

In testimony that I claim the foregoing as my invention I affix my signature, in presence of two witnesses, this 21st day of March, A. D. 1904.

FRANK B. DAVIDSON.

Witnesses:

TAYLOR E. BROWN,
GERTRUDE BRYCE.