No. 762,624. PATENTED JUNE 14, 1904.

C. A. ECK.

CENTRIFUGAL SEPARATOR.

APPLICATION FILED DEC. 26, 1902.

NO MODEL.

Fig. 1

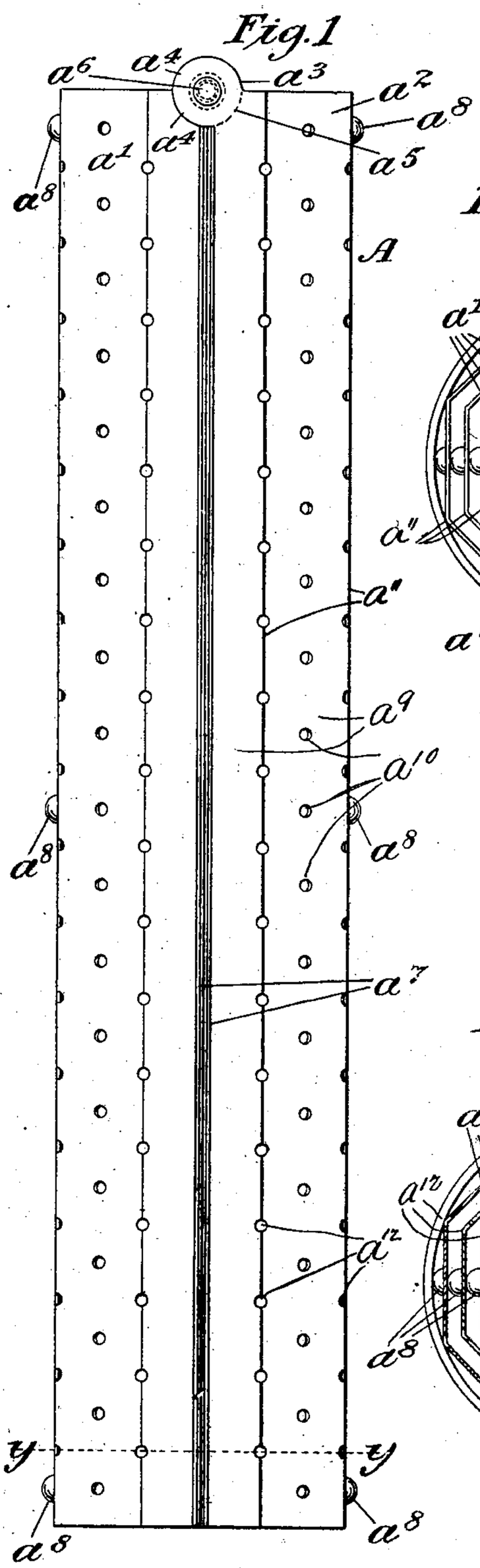

Fig. 2

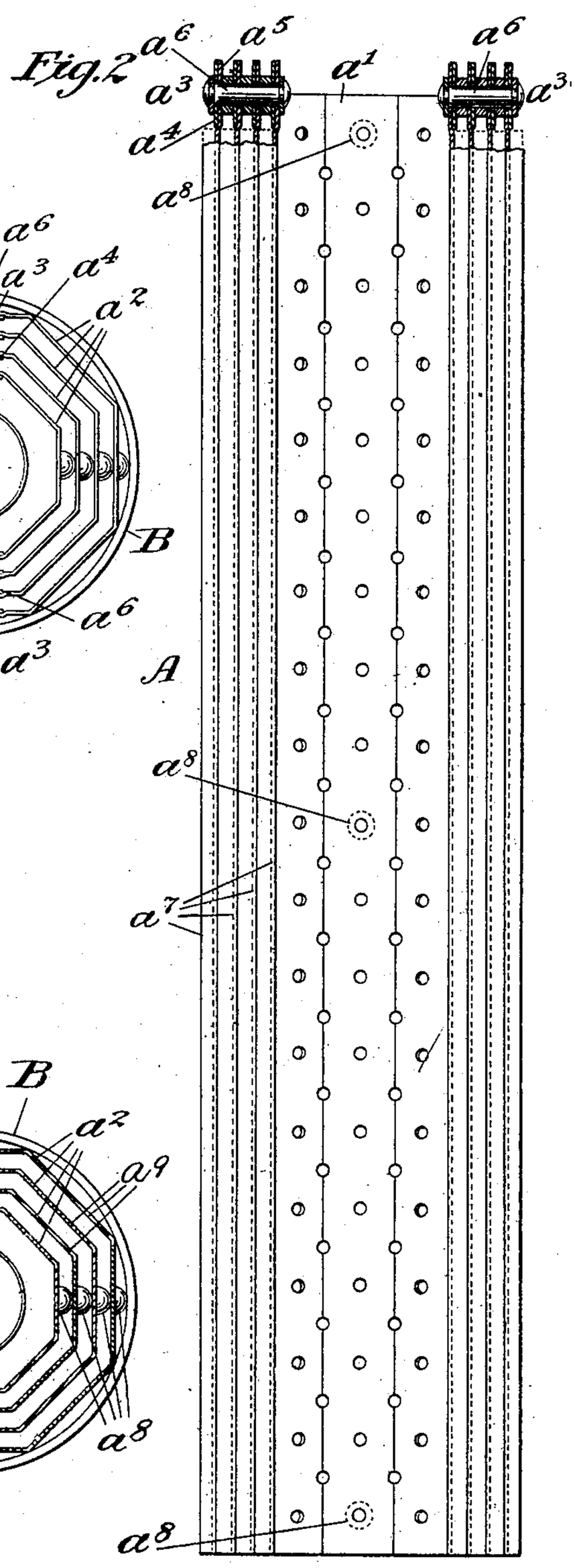

Fig. 3

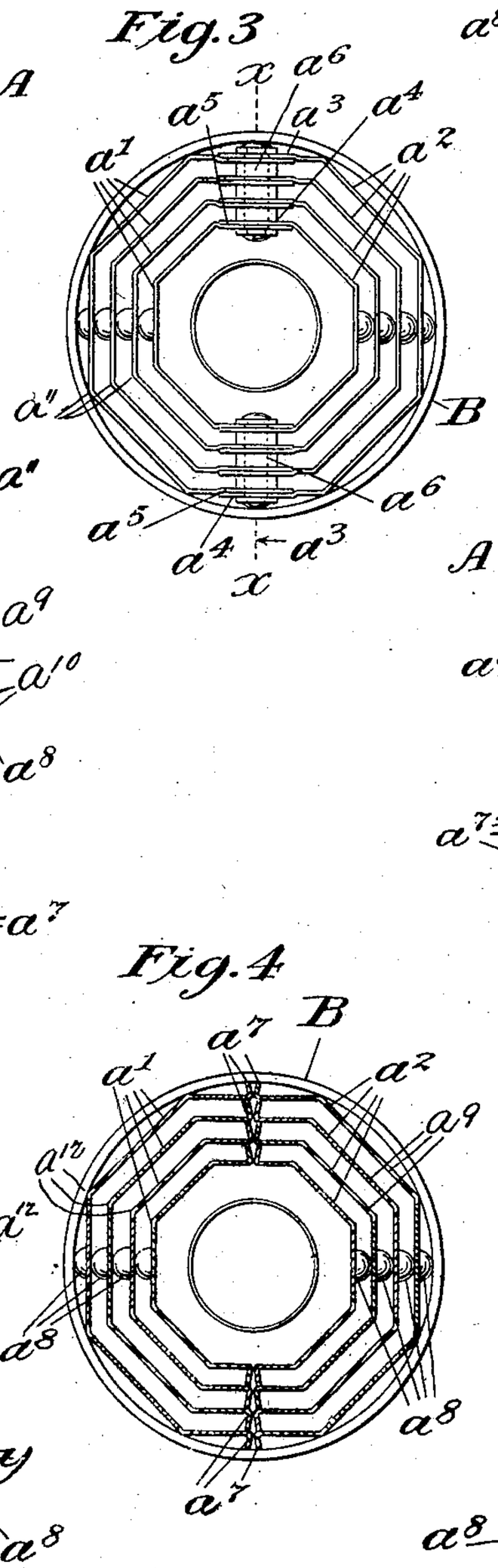

Fig. 4

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By his Attorney
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No. 762,624. Patented June 14, 1904.

UNITED STATES PATENT OFFICE.

CHARLES A. ECK, OF BELLEVILLE, NEW JERSEY.

CENTRIFUGAL SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 762,624, dated June 14, 1904.

Application filed December 26, 1902. Serial No. 136,576. (No model.)

To all whom it may concern.

Be it known that I, CHARLES A. ECK, a subject of the King of Sweden and Norway, and a resident of Belleville, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Centrifugal Separators, of which the following is a specification.

My invention relates generally to centrifugal cream-separators, and has more particularly reference to the skimming device or separating member contained in the bowl.

The object of my invention is to obtain a separating member which can easily be cleaned and which has a high separating efficiency.

I shall describe a separating member embodying my invention and afterward point out the novel features in the claims.

In the drawings I have embodied my invention in a suitable construction; but changes may of course be made without departing from the spirit of my invention.

In the said drawings, Figure 1 is a side elevation of a separating member embodying my invention. Fig. 2 is an inside elevation of one of the two longitudinal sections composing the separating member, with a section through the pivots at the top on the line $x\ x$ of Fig. 3, and showing also the construction when a number of separating members are used. Fig. 3 is a top view of Fig. 1, showing also the bowl of the separator. Fig. 4 is a view similar to Fig. 3, but taken on the sectional line $y\ y$ of Fig. 1.

Similar letters of reference indicate corresponding parts in the different views.

A designates the separating member, composed of two longitudinal sections a' and a^2, preferably hinged together at one end by some suitable means, as the pivots a^3 and a^4, so that the said sections can be swung apart or opened up when it is to be cleaned. Each longitudinal section in this instance is provided with an ear a^5 on each side, so that a rivet, as a^6, or other means can fasten the opposed ears of two sections together.

I preferably employ a plurality of separating members, as shown in Figs. 2, 3, and 4, arranged one inside the other. In that event a single rivet on either side is made to serve for all the sections, the arrangement being such that each section can be lifted up separately and cleaned. When this construction is used, each section at the edges contiguous with the other section is provided with outwardly-projecting lips, as a^7, which serve to properly space the parts, each lip touching the section next succeeding. At right angles to these lips a^7 the sections are provided with the beads a^8, which serve the purpose of spacing the parts in the other direction. These features are best seen in Figs. 3 and 4, where the separating member is shown contained in the bowl B.

The two longitudinal sections a' and a^2 may of course be of any shape or construction found suitable; but I prefer to make each separating member a regular polygon in cross-section, the several polygons being arranged concentrically, as best seen in Figs. 3 and 4, as I have found that a very high separating capacity is thereby obtained. I have further found it advantageous to provide the flat surfaces a^9 with perforations a^{10} and the corners a^{11} with perforations a^{12}. By this arrangement the cream will pass in through the perforations a^{10}, while the milk will pass out through the perforations a^{12}. When a number of separating members are used, they should be placed concentrically with relation to each other, so that each flat surface a^9 comes opposite to another flat surface and each corner a^{11} comes opposite to another corner. This arrangement can best be seen in Figs. 3 and 4.

Having thus described my invention, what I claim is—

1. In a centrifugal separator, a plurality of separating members composed each of two longitudinal sections, and means for fastening said sections together so that each section may be swung in and out separately.

2. In a centrifugal separator, a plurality of separating members composed each of two longitudinal sections, and means for fastening said sections together at one end only so that each section may be swung in and out separately.

3. In a centrifugal separator, a plurality of separating members composed each of two

longitudinal sections, means for fastening said sections together so that each section may be swung in and out separately, and means for properly spacing the said separating members.

4. In a centrifugal separator, a plurality of separating members composed each of two longitudinal sections, means for fastening said sections together at one end only so that each section may be swung in and out separately, and means for properly spacing the said separating members.

5. In a centrifugal separator, the combination with a separating member composed of two longitudinal sections, of pivots at one end mounting said sections so as to allow the same to be swung apart.

6. In a centrifugal separator, the combination with a plurality of separating members composed each of two longitudinal sections, of pivots at one end mounting said sections so as to allow each section to be separately and freely swung in and out.

7. In a centrifugal separator, a separating member composed of two longitudinal sections hinged together at one end.

8. In a centrifugal separator, a plurality of separating members composed each of two longitudinal sections hinged together at one end, so that each section may be separately and freely swung out.

9. In a centrifugal separator, a separating member composed of two longitudinal sections hinged together.

10. In a centrifugal separator, a plurality of separating members composed each of two longitudinal sections hinged together so that each section may be separately and freely swung out.

11. In a centrifugal separator, the combination of a plurality of separating members, regular polygons in cross-section, and arranged one inside the other concentrically so that the flat surfaces of the said members come opposite to each other, and so that the corners of the said members come opposite to each other.

12. In a centrifugal separator, the combination of a plurality of separating members, regular polygons in cross-section, and arranged one inside the other concentrically so that the flat surfaces of the said members come opposite to each other, and so that the corners of the said members come opposite to each other, perforations for the cream located on the flat surfaces of the said members, and perforations for the milk located on the corners of the said members.

Signed at Belleville this 17th day of December, 1902.

CHARLES A. ECK.

Witnesses:

JOHN J. CONNELL,

AXEL V. BEEKEN.