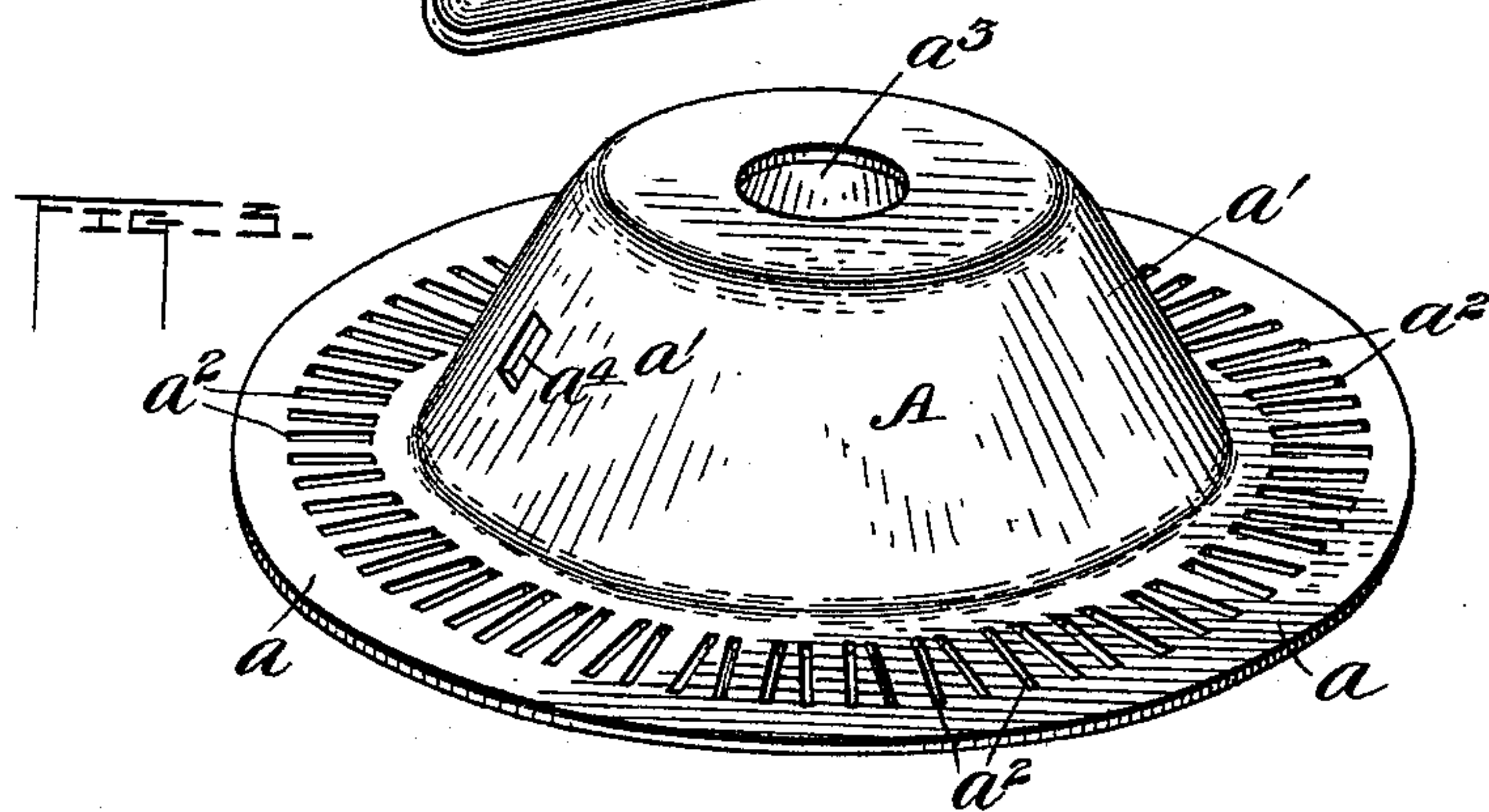
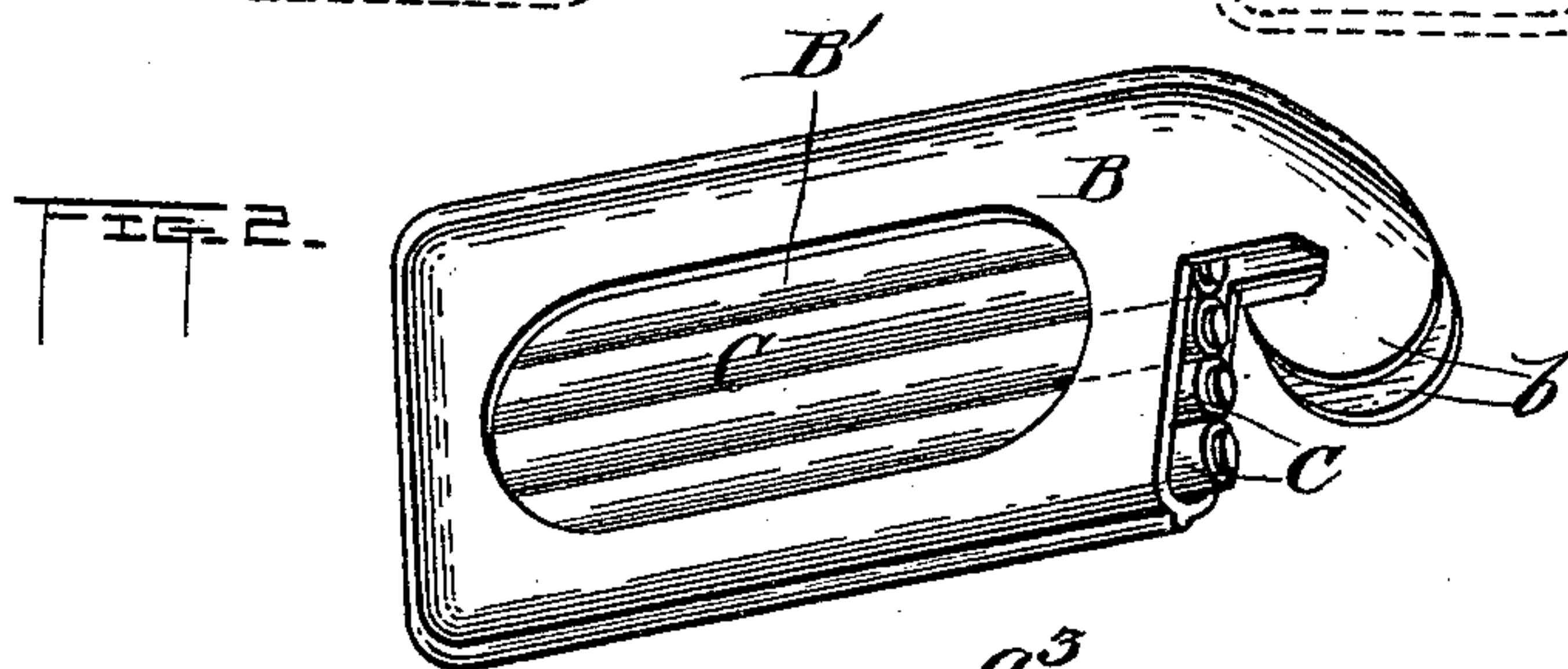
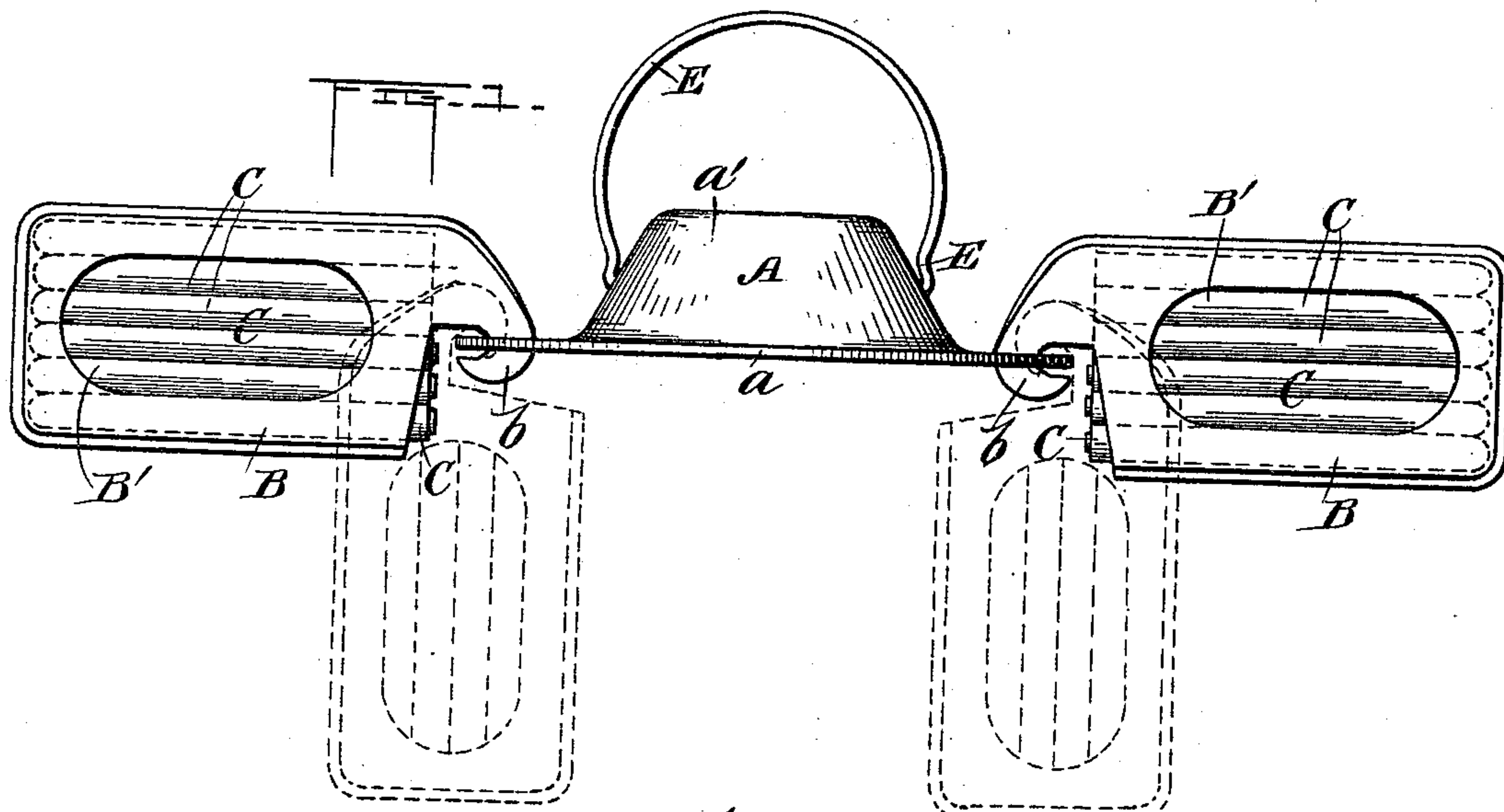


(No Model.)

P. V. P. BERG.
CENTRIFUGAL CREAM TESTER.

No. 486,390.

Patented Nov. 15, 1892.



Witnesses
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UNITED STATES PATENT OFFICE.

PETER VRA POOLSEN BERG, OF ASKOR-VEJEN STATION, DENMARK, ASSIGNOR,
BY MESNE ASSIGNMENTS, TO OVIDIUS K. WEEDFALD, OF PERTH AMBOY,
AND REINHOLDT J. PREISLER AND ADOLPH J. PREISLER, OF JERSEY CITY,
NEW JERSEY.

CENTRIFUGAL CREAM-TESTER.

SPECIFICATION forming part of Letters Patent No. 486,390, dated November 15, 1892.

Application filed November 27, 1891. Serial No. 413,341. (No model.) Patented in France March 17, 1887, No. 182,247; in Belgium March 21, 1887, No. 76,783; in Norway March 21, 1887, No. 521; in England March 25, 1887, No. 4,480, and in Sweden March 26, 1887, No. 1,458.

To all whom it may concern:

Be it known that I, PETER VRA POOLSEN BERG, a citizen of the Kingdom of Denmark, residing at Askor-Vejen Station, in the Province of Jutland, Denmark, have invented certain new and useful Improvements in Centrifugal Cream-Testers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The invention has been patented as follows: in France, No. 182,247, dated March 17, 1887; in Belgium, No. 76,783, dated March 21, 1887; in Norway, No. 521, dated March 21, 1887; in Great Britain, No. 4,480, dated March 25, 1887, and in Sweden, No. 1,458, dated March 26, 1887.

This invention relates to devices for testing the amount of cream in a number of vessels simultaneously by rotary motion; and it consists, chiefly, in the combination, with a rotary disk, of a series of removable cases or frames, each adapted to hold several testing-glasses, the rotation of the said disk causing the said frames or cases to take a radial and horizontal position and the said frames or cases dropping into a vertical position when this rotation ceases.

The said invention further consists in the particular construction and combination of parts hereinafter more specifically set forth and claimed.

In the accompanying drawings, Figure 1 represents a front elevation of the cream-testing devices embodying my invention. Fig. 2 represents a detail perspective view of one of the frames or cases, and Fig. 3 represents a similar view of the disk or shell.

A designates the main frame having a flat peripheral part a and a raised concavo-convex middle part a' , giving it the shape of a low-crowned hat. In the said peripheral part are a number of slots or openings a^2 , arranged in pairs to receive the hooks b of the frames or cases B. Each of these frames is provided with a pair of these hooks on its inner or upper

end and is open at this end for half or more than half its breadth. The other end of the said case or frame is closed. The sides are in great part cut away, leaving large openings B' , which allow convenient inspection of the testing-tubes C, that are set side by side in the said case or frame while it is in its vertical position. This cutting away also makes the cases lighter, and thereby lightens the cream-tester as a whole. Enough material is left around the said openings to hold the said tubes securely.

In the sides of the raised part a' of the main frame are two small openings a^4 for receiving the hooked ends of a bail E, whereby the said main frame may be lifted with any frames which may be attached thereto. When not in use the said bail hangs down on the said frame. The said frame is provided with a central aperture a^3 to enable it to fit on a vertical shaft or axis for support and to allow rotation. The hooks b and slots a^2 practically make a hinged connection for the said frames; but these last may easily be removed when desired, the length of the slots allowing the hooks to be turned through them when the cases take their vertical position, and afterward to be lifted out of them.

The operation is as follows: The testing-tubes being filled with cream and packed into the cases or frames and these latter being hung on the main frame in the position indicated by dotted lines in Fig. 1, the said frame is then briskly rotated. As a result, the frames or cases take the horizontal and radial position shown in Fig. 1 and the milk and cream separate, the latter, by reason of its greater weight and momentum, being thrown toward the outer ends of the tubes and the cream remaining at the inner end thereof. When this action has continued long enough for entire separation, the rotation is stopped, and, there being no longer any centrifugal force at work, the frames and testing-tubes fall into the vertical position again with the cream at the top of the said tubes. These tubes may then be inspected through the openings B' , or any one

of the frames or casings B may be removed with its contents, or all of them may thus be removed for comparison and refilling.

In the accompanying drawings, for greater clearness, only two of the frames are shown; but a complete set may be employed, radiating from every part of the shell A when in action; but the two hooks will hold the case or frame more firmly, guarding against any tendency to rock from side to side. Of course the shape of the frames and of the central part, which I have called the "main frame," may vary considerably.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In combination with a central rotary part, a set of frames or cases for holding cream-test-

ing tubes, the said frames being removably hinged to the said central part, and a bail also attached to the latter for lifting it, as described.

2. A tube-supporting case or frame provided with a hook or hooked end and an opening at this end and having openings in its sides for allowing the inspection of cream-testing tubes within the said frame or case, the said hooked end serving for attachment to a central part capable of rotation, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

PETER VRA POOLSEN BERG.

Witnesses:

FR. BOUPE,

F. PORTEFU BALMSIN.