

P. T. SUNDBERG.
 DEVICE FOR CLEANING CENTRIFUGALS.
 APPLICATION FILED FEB. 27, 1906.

966,265.

Patented Aug. 2, 1910.

Fig. 1.

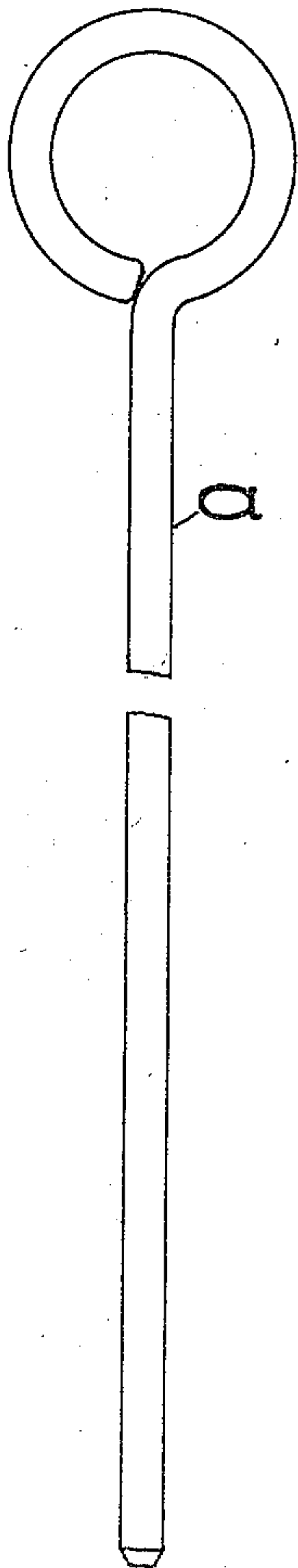


Fig. 2.

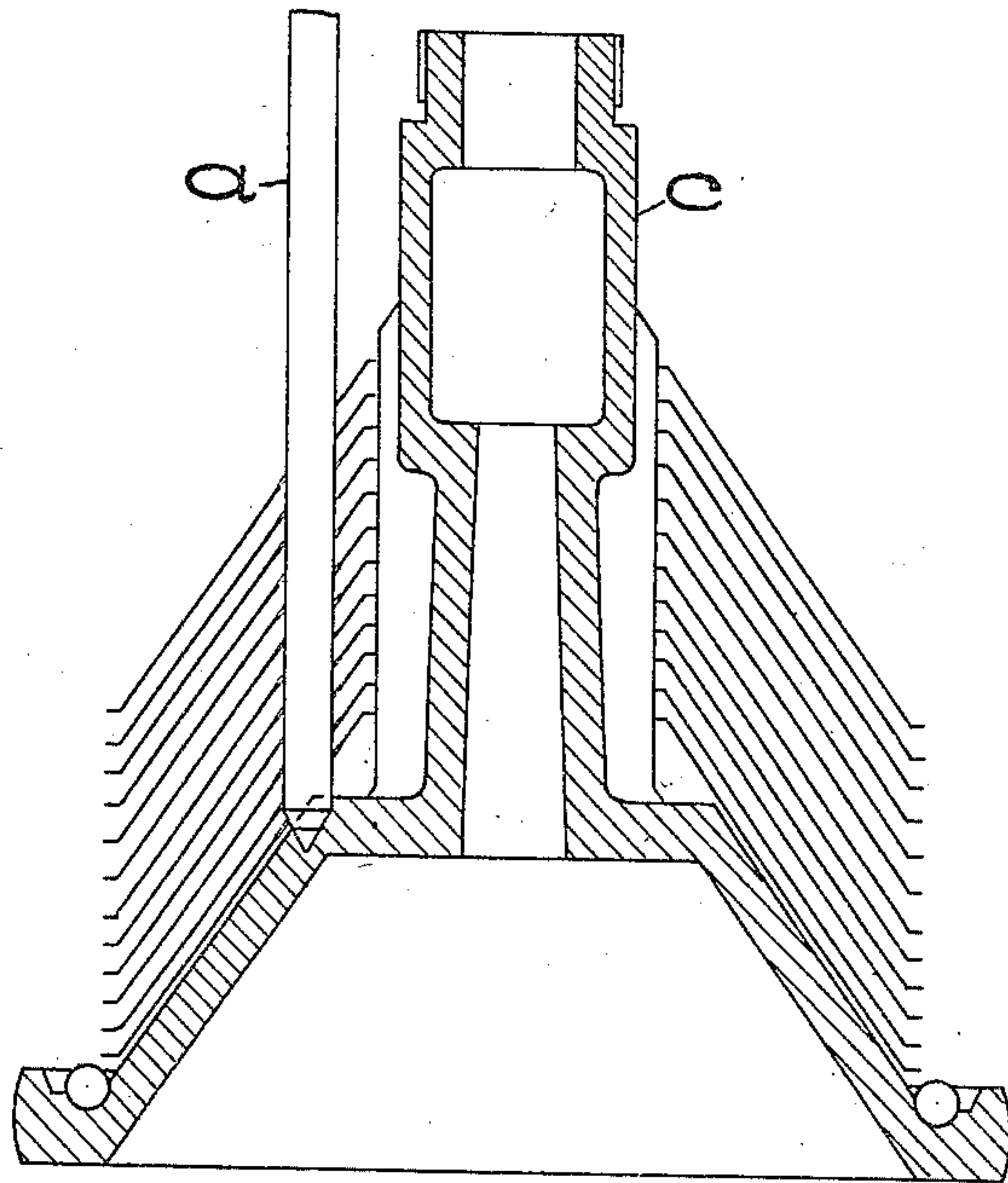
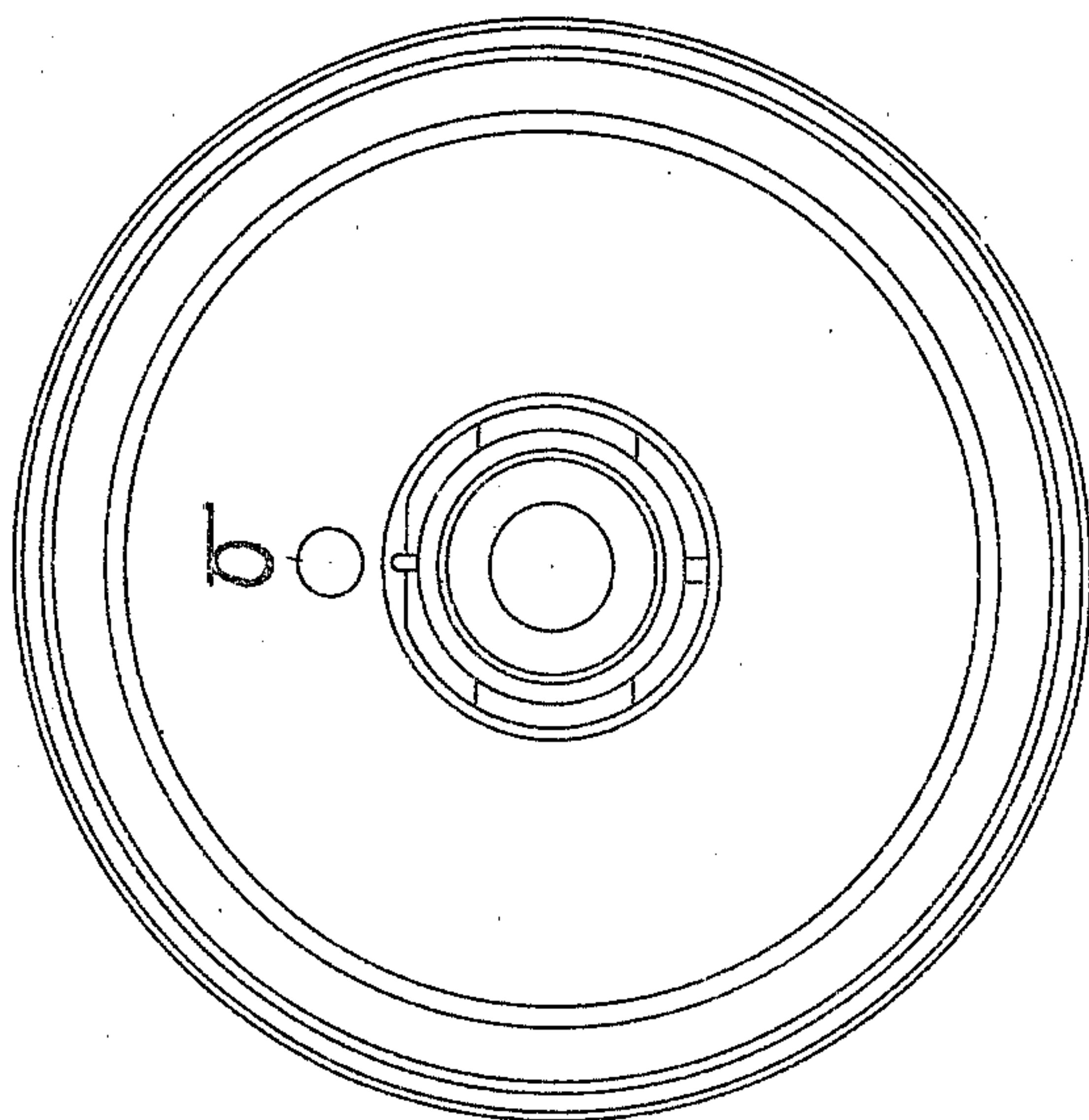


Fig. 3.



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UNITED STATES PATENT OFFICE.

PER THEODOR SUNDBERG, OF STOCKHOLM, SWEDEN, ASSIGNOR TO EXPRESS SEPARATOR EMIL G. LIND & CO., OF STOCKHOLM, SWEDEN.

DEVICE FOR CLEANING CENTRIFUGALS.

966,265.

Specification of Letters Patent.

Patented Aug. 2, 1910.

Application filed February 27, 1906. Serial No. 303,303.

To all whom it may concern:

Be it known that I, PER THEODOR SUNDBERG, a citizen of the Kingdom of Sweden, residing at Sibyllegatan 46/48, in the city of Stockholm and Kingdom of Sweden, have invented a new and useful Device for Cleaning Centrifugals, of which the following is a specification.

As well known the pile of plates used in centrifugal cream separators and the like must be removed and cleansed (washed) and dried every day after the work is finished. And when again inserting the plates care must be taken that they are brought in the same order and position as before not only with regard to each other but also relatively to the center or tubular shaft of the bowl, as the equilibrium will else be disturbed and the effect diminished. For this purpose there has generally been used a stick or a pipe or the like having one or more longitudinal ribs corresponding to the rib or ribs on the center of the bowl and adapted to engage the slot or slots on the inner edge of the plates, so that the latter, when passed on said stick or pipe, can not turn on it and not be brought in wrong order. There are, however, inconveniences connected with this method, resulting in that the cleansing of the plates is sometimes difficult and time-wasting. And for that reason I do not pass the stick through the central hole of the plates as heretofore but through an eccentric hole, so that the plates, thus being not suspended in the center of gravity, will turn or tend to turn automatically to the proper position relatively to each other when the stick is brought into inclined or horizontal position. The rib or ribs are thus dispensable and I can use a quite cylindrical simple rod, bar, wire, tube or the like instead of a ribbed one. Besides the diameter of the stick can be much smaller than the diameter of the hole, so that the plate can form very different angles with the stick and also be turned, each plate separately, on the stick for facilitating the cleansing. When eccentric holes for other purposes are already formed in the plates, these holes may be used for the new purpose also, provided that they are disposed so as to form a straight vertical channel through the entire pile.

Figure 1 is a side view of the stick. Fig. 2 is a vertical section showing the stick (up-

per part broken away for want of space) inserted in the pile of plates before their removal from the bowl. Fig. 3 is a plan view of Fig. 2 but the stick being removed.

The stick *a* may consist of a piece of wire or the like, the upper end of which is bent into the shape of a ring or otherwise provided with a suitable handle. The lower end may be rounded or pointed as shown so as to facilitate its insertion through the eccentric holes *b* formed in the plates and into a socket formed in the bottom of the bowl, as shown in Fig. 2. The holes *b* are situated the one above the other so as to form a vertical channel through the pile just above the said socket.

When the pile of plates is to be removed, the stick *a* is put down in the eccentric channel formed by the holes *b* so that the lower end of the stick will come to rest in the socket. Then the pile is lifted up from the bowl, thus sliding upward along the stick, on which it should remain during the cleansing, so that when again putting the pointed end of the stick into the socket and slipping the pile downward on the center of the bowl, the plates will retake the same position relatively to each other and to the bowl as before their removal. The cleansing may be effected by keeping the stick in horizontal position and moving it to and back under a jet of water, so that the water rushes through the pile between the plates, which may be previously separated from each other along the stick. Or the stick may be swung to and back in a vessel of water, or it may be laid down so that the ends of the stick rest on the edge of the vessel and then each plate may be wiped on both sides by means of a moist sponge or the like, this being easy to do as each plate can be not only swung within wide limits on an axis perpendicular to the stick but also be turned (rotated) on the stick without turning the stick itself.

It is evident that instead of one hole *b* each plate can have two (or more) holes so disposed that they counterbalance each other. In such case these extra holes may be so disposed or displaced that they do not form a straight channel and thus do not admit the insertion of the stick, which should be inserted only in the holes situated above the socket, so as to prevent the pile from being placed in a wrong position on the

center of the bowl, which could possibly destroy the balance (equilibrium) of the bowl and pile once adjusted.

What I claim as my invention and desire
5 to secure by Letters Patent, is:

In a centrifugal separator, a hollow shaft having a base with a keeper seat thereon, and a set of disks keyed on the shaft and each provided with an eccentric opening
10 registering with the keeper seat on the base,

in combination with a keeper rod adapted to enter the said openings of the disks and the keeper seat in the base.

In testimony whereof I have signed my name to this specification in the presence of 15 two subscribing witnesses.

PER THEODOR SUNDBERG.

Witnesses:

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